





# RCP2 & RCP3

with dedicated controllers PCON and PSEL

# Catalogue Extract 4th revised Edition B







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				40mm width 50mm width	RCP3-SA4R RCP3-SA5R	21
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			Olds Man 1 114 : =	28mm width	RCP3-RA2BC	133
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	series		Side-Mounted Motor	65mm width 75mm width 36mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R	275 277 279
			Side-Mounted Motor	65mm width 75mm width 36mm width 40mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R	275 277 279 281
	series		Side-Mounted Motor	65mm width 75mm width 36mm width 40mm width 55mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA5R	275 277 279 281 283
	series		Side-Mounted Motor	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA5R RCP3-TA6R	275 277 279 281 283 285
	series		Side-Mounted Motor	65mm width 75mm width 36mm width 40mm width 55mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA5R	275 277 279 281 283
	series			65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 75mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA5R RCP3-TA6R RCP3-TA6R	275 277 279 281 283 285 287
	series	2-Finger-Gripper	Mini Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 75mm width 42 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA5R RCP3-TA6R RCP3-TA6R RCP3-TA7R	275 277 279 281 283 285
	series	2-Finger-Gripper		65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 75mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA5R RCP3-TA6R RCP3-TA6R	275 277 279 281 283 285 287
	series	2-Finger-Gripper	Mini Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 75mm width 42 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA5R RCP3-TA6R RCP3-TA6R RCP3-TA7R	275 277 279 281 283 285 287
	series	2-Finger-Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 47 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRLS RCP2-GRS	275 277 279 281 283 285 287 333 335 337 339
	Series Table	2-Finger-Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 416 mm width 416 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRM	275 277 279 281 283 285 287 333 335 337 339 340-1
	Table	2-Finger-Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 41 mm width 116 mm width 131 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRLS RCP2-GRS	275 277 279 281 283 285 287 333 335 337 339
	Series Table	2-Finger-Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 55mm width 65mm width 42 mm width 42 mm width 42 mm width 43 mm width 43 mm width 131 mm width 130 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRM	275 277 279 281 283 285 287 333 335 337 339 340-1
	Table	2-Finger-Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 41 mm width 116 mm width 131 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRM	275 277 279 281 283 285 287 333 335 337 339 340-1
	series  Table  RCP2 series		Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 55mm width 75mm width 75mm width 42 mm width 42 mm width 42 mm width 41 mm width 116 mm width 113 mm width 130 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRLS RCP2-GRL RCP2-GRM RCP2-GRM RCP2-GRHM RCP2-GRHM	275 277 279 281 283 285 287 333 335 337 339 340-1 340-3
	series  Table  RCP2 series	2-Finger-Gripper  3-Finger Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 43 mm width 131 mm width 130 mm width 130 mm width 190 mm width 62 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA5R RCP3-TA6R RCP3-TA7R RCP2-GRS RCP2-GRLS RCP2-GRLS RCP2-GRM RCP2-GRHM RCP2-GRHB	275 277 279 281 283 285 287 333 335 337 339 340-1 340-3
	series  Table  RCP2 series		Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Lever Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 65mm width 42 mm width 42 mm width 42 mm width 43 mm width 43 mm width 131 mm width 130 mm width 130 mm width 130 mm width 62 mm width 62 mm width 80 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA5R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRHM RCP2-GRHM RCP2-GRHB RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST	275 277 279 281 283 285 287 333 335 337 339 340-1 340-3 341 343 345
	series  Table  RCP2 series		Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 41 mm width 116 mm width 116 mm width 130 mm width 130 mm width 62 mm width 80 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA7C RCP3-TA4R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRHM RCP2-GRHM RCP2-GRHB RCP2-GRHM RCP2-GRHM RCP2-GRHM RCP2-GRHM RCP2-GRHM RCP2-GRHM RCP2-GRHM RCP2-GRHM	275 277 279 281 283 285 287 333 335 337 339 340-1 340-3 341 343 345 347
	series  Table  RCP2 series		Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Lever Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 65mm width 42 mm width 42 mm width 42 mm width 43 mm width 43 mm width 131 mm width 130 mm width 130 mm width 130 mm width 62 mm width 62 mm width 80 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA5R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRHM RCP2-GRHM RCP2-GRHB RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST	275 277 279 281 283 285 287 333 335 337 339 340-1 340-3 341 343 345
	series  Table  RCP2 series	3-Finger Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Lever Type Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 13 mm width 131 mm width 130 mm width 20 mm width 62 mm width 62 mm width 62 mm width 62 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-GRST RCP2-GRSS RCP2-GRSSS RCP2-GR3LS RCP2-GR3LS RCP2-GR3LS RCP2-GR3LS	275 277 279 281 283 285 287 333 335 337 339 340-1 340-3 341 343 345 347
	series  Table  RCP2 series		Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-lorce Slider Type Large High-force Slider Type Long Stroke Slider Type Lever Type Slider Type Small Vertical Type	65mm width 75mm width 36mm width 40mm width 55mm width 55mm width 55mm width 75mm width 42 mm width 42 mm width 42 mm width 41 mm width 116 mm width 131 mm width 130 mm width 62 mm width 62 mm width 80 mm width 80 mm width 80 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-GRST RCP2-GRSS RCP2-GRSSM	275 277 279 281 283 285 287 333 335 337 340-1 340-3 341 343 345 347 349
	series  Table  RCP2 Series Gripper	3-Finger Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Long Stroke Slider Type Long Type Lever Type Slider Type Small Vertical Type Small Flat Type	65mm width 75mm width 36mm width 40mm width 55mm width 55mm width 55mm width 75mm width 75mm width 42 mm width 42 mm width 42 mm width 41 mm width 116 mm width 131 mm width 130 mm width 62 mm width 62 mm width 62 mm width 63 mm width 64 mm width 65 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRM RCP2-GRM RCP2-GRM RCP2-GRM RCP2-GRM RCP2-GRM RCP2-GRM RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRSL RCP3-RCS-RCS-RCS-RCS-RCS-RCS-RCS-RCS-RCS-RCS	275 277 279 281 283 285 287 333 335 337 340-1 340-3 341 343 345 347 349
	RCP2 Series Gripper	3-Finger Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium Slider-Typ Medium High-force Slider Type Long Stroke Slider Type Long Stroke Slider Type Slider Type  Small Vertical Type  Medium Vertical Type	65mm width 75mm width 36mm width 40mm width 55mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 43 mm width 131 mm width 130 mm width 130 mm width 62 mm width 62 mm width 63 mm width 64 mm width 65 mm width 65 mm width 67 mm width 67 mm width 68 mm width 69 mm width 69 mm width 60 mm width 60 mm width 61 mm width 61 mm width 62 mm width	RCP3-TAGC RCP3-TAGC RCP3-TAGC RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-RRS/RTGS/RTGS/RTGS/RTGS/RTGS/RTGS/RTBS/RTBS/RTBS/RTBS/RTBS/RTBS/RTBS/RTB	275 277 279 281 283 285 287 333 335 337 340-1 340-3 341 343 345 347 349
	series  Table  RCP2 Series Gripper	3-Finger Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Lever Type Slider Type Small Vertical Type Medium Vertical Type Medium Flat Type Medium Flat Type	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 14 mm width 116 mm width 113 mm width 130 mm width 130 mm width 62 mm width 80 mm width 80 mm width 45 mm width 50 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA6R RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-RTGS/RTGSI	275 277 279 281 283 285 287 333 340-1 340-3 341 343 345 347 349 353 355 357 359
	RCP2 Series Gripper	3-Finger Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Lever Type Slider Type Small Vertical Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Vertical Type	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 41 mm width 116 mm width 131 mm width 130 mm width 130 mm width 62 mm width 62 mm width 62 mm width 63 mm width 64 mm width 65 mm width 75 mm width 80 mm width 80 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRM RCP2-GRHM RCP2-RTB/RTBS/RCP2-RTB/RTBS/RTBS/RTBS/RCP2-RTB/RTBS/RTBS/RCP2-RTB/RTBB/RTBS/RTBS/RTBS/RTBS/RTBS/RTBS/R	275 277 279 281 283 285 287 333 335 340-1 340-3 341 343 345 347 349 353 355 355 357 359 361
	RCP2 Series Gripper  RCP2 Series	3-Finger Gripper	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Lever Type Sider Type Small Vertical Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Vertical Type	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 14 mm width 116 mm width 113 mm width 130 mm width 130 mm width 62 mm width 80 mm width 80 mm width 45 mm width 50 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA6R RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-RTGS/RTGSI	275 277 279 281 283 285 287 333 335 340-1 340-3 341 343 345 347 349 353 355 355 357 359 361
	RCP2 Series Gripper  RCP2 Series	3-Finger Gripper Rotary	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Lever Type Slider Type Small Vertical Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Vertical Type	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 41 mm width 116 mm width 131 mm width 130 mm width 130 mm width 62 mm width 62 mm width 62 mm width 63 mm width 64 mm width 65 mm width 75 mm width 80 mm width 80 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRM RCP2-GRHM RCP2-RTB/RTBS/RCP2-RTB/RTBS/RTBS/RTBS/RCP2-RTB/RTBS/RTBS/RCP2-RTB/RTBB/RTBS/RTBS/RTBS/RTBS/RTBS/RTBS/R	275 277 279 281 283 285 287 333 335 340-1 340-3 341 343 345 347 349 353 355 355 357 359 361
	RCP2 Series Gripper  RCP2 Series	3-Finger Gripper Rotary	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Lever Type Slider Type Small Vertical Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Vertical Type	65mm width 75mm width 36mm width 40mm width 55mm width 55mm width 55mm width 75mm width 75mm width 75mm width 42 mm width 42 mm width 42 mm width 43 mm width 116 mm width 130 mm width 62 mm width 62 mm width 62 mm width 62 mm width 63 mm width 64 mm width 74 mm width 75 mm width 76 mm width	RCP3-TAGC RCP3-TAGC RCP3-TAGC RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-GRHM RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GR3LS RCP2-RTGS/RTGS RCP2-RTGS/RTGS	275 277 279 281 283 285 287 333 335 340-1 340-3 341 343 345 347 349 353 355 355 357 359 361
	RCP2 Series Gripper  RCP2 Series RCP2 Series Rotary	3-Finger Gripper Rotary	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-lorce Slider Type Long Stroke Slider Type Long Stroke Slider Type Long Stroke Slider Type Small Vertical Type Small Flat Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Flat Type Large Flat Type	65mm width 75mm width 36mm width 40mm width 55mm width 55mm width 55mm width 75mm width 75mm width 42 mm width 42 mm width 69 mm width 116 mm width 131 mm width 130 mm width 62 mm width 62 mm width 80 mm width 80 mm width 80 mm width 50 mm width 72 mm width 50 mm width 72 mm width 73 mm width 74 mm width 75 mm width 76 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRM RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-RTS/RTSI RCP2-RTS/RTSI RCP2-RTCS/RTCSI RCP2-RTC / RTCI RCP2-RTC / RTCI RCP2-RTCS / RTCBI	275 277 279 281 283 285 287 333 335 340-1 340-3 341 343 345 347 349 353 355 357 359 361 363
	RCP2 Series Gripper  RCP2 Series	3-Finger Gripper Rotary	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-lorce Slider Type Long Stroke Slider Type Long Stroke Slider Type Long Stroke Slider Type Small Vertical Type Small Flat Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Flat Type Large Flat Type	65mm width 75mm width 36mm width 40mm width 55mm width 55mm width 55mm width 75mm width 75mm width 75mm width 42 mm width 42 mm width 42 mm width 43 mm width 116 mm width 130 mm width 62 mm width 62 mm width 62 mm width 62 mm width 63 mm width 64 mm width 74 mm width 75 mm width 76 mm width	RCP3-TAGC RCP3-TAGC RCP3-TAGC RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-GRHM RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GR3LS RCP2-RTGS/RTGS RCP2-RTGS/RTGS	275 277 279 281 283 285 287 333 335 337 339 340-1 340-3 341 343 345 347 349 353 355 357 359 361 363
	RCP2 Series Gripper  RCP2 Series RCP2 Series Rotary	3-Finger Gripper  Rotary  Slider Coupling Type  A	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-lorce Slider Type Long Stroke Slider Type Long Stroke Slider Type Long Stroke Slider Type Small Vertical Type Small Flat Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Flat Type Large Flat Type	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 42 mm width 116 mm width 116 mm width 130 mm width 130 mm width 62 mm width 62 mm width 80 mm width 45 mm width 50 mm width 45 mm width 45 mm width 74 mm width 75 mm width 75 mm width 75 mm width 76 mm width 76 mm width 76 mm width 76 mm width	RCP3-TAGC RCP3-TAGC RCP3-TAGC RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-RTGS/RTGSI RCP2-RTGS/RTGSI RCP2-RTGS/RTGSI RCP2-RTGS/RTGSI RCP2-RTGS/RTGSI RCP2-RTGS/RTGSI	275 277 279 281 283 285 287 333 340-1 340-3 341 343 345 347 349 353 355 357 359 363 399 401
	RCP2 Series Gripper  RCP2 RCP2 RCP2 RCP2 ROTATION RCP2 RCP2 RCP2 ROTATION RCP2 RCP2 RCP2 RCP2 RCP2 RCP2 RCP2 RCP2	3-Finger Gripper  Rotary  Slider Coupling Type  A	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type  Lever Type  Slider Type  Small Vertical Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Flat Type Large Flat Type Large Flat Type Large Flat Type Luminum Base	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 75mm width 75mm width 42 mm width 42 mm width 42 mm width 116 mm width 116 mm width 131 mm width 130 mm width 62 mm width 62 mm width 62 mm width 63 mm width 64 mm width 74 mm width 75 mm width 76 mm width 76 mm width 77 mm width 78 mm width 78 mm width 79 mm width 70 mm width	RCP3-TAGC RCP3-TAGC RCP3-TAGC RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP2-GRSS RCP2-GRSS RCP2-GRSM RCP2-GRSM RCP2-GRHM RCP2-RTS/RTSI RCP2-RTS/RTSI RCP2-RTS/RTSI RCP2-RTG/RTSI	275 277 279 281 283 285 287 333 340-1 340-3 341 345 347 349 353 355 357 359 361 361 361 361 361 361 361 361
	RCP2 Series Gripper  RCP2 RCP2 RCP2 RCP2 ROTATION RCP2 RCP2 RCP2 ROTATION RCP2 RCP2 RCP2 RCP2 RCP2 RCP2 RCP2 RCP2	3-Finger Gripper  Rotary  Slider Coupling Type A	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type  Lever Type  Slider Type  Small Vertical Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Flat Type Large Flat Type Large Flat Type Large Flat Type Luminum Base	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 42 mm width 131 mm width 130 mm width 130 mm width 62 mm width 62 mm width 62 mm width 80 mm width 50 mm width 45 mm width 45 mm width 45 mm width 72 mm width 85 mm width 58 mm width 76 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRSS RCP2-GRS RCP2-GRS RCP2-GRM RCP2-GRS RCP2-GRM RCP2-GRS RCP2-GRM RCP2-RTG/RTCSI RCP2-RTG/RTCSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI	275 277 279 281 283 285 287 333 340-1 340-3 341 343 345 347 349 353 355 357 359 361 363 399 401 403 405
	RCP2 Series Gripper  RCP2 RCP2 Series Rotary  RCP2CR Series	3-Finger Gripper  Rotary  Slider Coupling Type A	Mini Slider Type Mini Lever Type Small Slider Type Medium High-lorce Slider Type Large High-lorce Slider Type Long Stroke Slider Type Long Stroke Slider Type  Lever Type  Small Vertical Type Small Flat Type Medium Vertical Type Medium Flat Type Large Flat Type Large Flat Type Large Flat Type Large Flat Type	65mm width 75mm width 36mm width 40mm width 55mm width 55mm width 65mm width 75mm width 75mm width 42 mm width 42 mm width 42 mm width 43 mm width 116 mm width 131 mm width 130 mm width 62 mm width 72 mm width 80 mm width 72 mm width 72 mm width 73 mm width 73 mm width 74 mm width 75 mm width 76 mm width 77 mm width 77 mm width 78 mm width 79 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRSS RCP2-GRM RCP2-GRS RCP2-GRM RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GRST RCP2-GR3LS RCP2-RTS/RTSR	275 277 279 281 283 285 287 333 335 340-1 340-3 341 343 345 347 349 353 355 357 359 361 363 399 401 403 405 407
	RCP2 Series Gripper  RCP2 RCP2 Series Rotary  RCP2CR Series	3-Finger Gripper  Rotary  Slider Coupling Type A  Gripper Type M	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Long Stroke Slider Type Small Vertical Type Medium Vertical Type Medium Flat Type Medium Flat Type Large Vertical Type Large Flat Type Large Flat Type Large Flat Type Large Flat Type	65mm width 75mm width 36mm width 40mm width 55mm width 55mm width 65mm width 75mm width 75mm width 75mm width 42 mm width 69 mm width 69 mm width 116 mm width 131 mm width 130 mm width 62 mm width 80 mm width 80 mm width 80 mm width 72 mm width 74 mm width 75 mm width 75 mm width 76 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRSS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRS RCP2-GRST RCP2-RTS/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTG/RTGSI RCP2-RTGS/RTGSI RCP2-RTGS/RTGS/RTGSI RCP2-RTGS/RTGSI RCP2-RTGS/RTGS/RTGSI RCP2-RTGS/RTGS/RTGSI RCP2-RTGS/RTGS/RTGS/RTGS/RTGS/RTGS/RTGS/RTGS/	275 277 279 281 283 285 287 333 335 340-1 340-3 341 343 345 347 349 353 355 357 359 361 363 401 405 407 409
	RCP2 Series Gripper  RCP2 RCP2 Series Rotary  RCP2CR Series	3-Finger Gripper  Rotary  Slider Coupling Type A  Gripper Type M	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Long Stroke Slider Type Long Stroke Slider Type Small Vertical Type Small Vertical Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Flat Type Long Stroke Slider Type Large Flat Type	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 116 mm width 116 mm width 130 mm width 130 mm width 62 mm width 62 mm width 80 mm width 45 mm width 45 mm width 72 mm width 74 mm width 80 mm width 75 mm width 75 mm width 75 mm width 75 mm width 76 mm width 76 mm width 76 mm width 76 mm width 77 mm width 77 mm width 78 mm width 79 mm width 70 mm width 70 mm width 710 mm width	RCP3-TAGC RCP3-TAGC RCP3-TAGC RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-RTGS/RTGSI RCP2-RTSSRC RCP2-RTSSRC RCP2-RTSSRC RCP2-RTSSRC RCP2-RTSSRC	275 277 279 281 283 285 287 333 340-1 340-3 341 343 345 347 349 353 355 357 359 401 403 405 407 409 411
	RCP2 Series Gripper  RCP2 RCP2 Series Rotary  RCP2CR Series	3-Finger Gripper  Rotary  Slider Coupling Type A  Gripper Type M	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Long Stroke Slider Type Long Stroke Slider Type Small Vertical Type Small Vertical Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Flat Type Long Stroke Slider Type Large Flat Type	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 116 mm width 116 mm width 130 mm width 130 mm width 62 mm width 62 mm width 80 mm width 45 mm width 45 mm width 72 mm width 74 mm width 80 mm width 75 mm width 75 mm width 75 mm width 75 mm width 76 mm width 76 mm width 76 mm width 76 mm width 77 mm width 77 mm width 78 mm width 79 mm width 70 mm width 70 mm width 710 mm width	RCP3-TAGC RCP3-TAGC RCP3-TAGC RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-RTGS/RTGSI RCP2-RTSSRC RCP2-RTSSRC RCP2-RTSSRC RCP2-RTSSRC RCP2-RTSSRC	275 277 279 281 283 285 287 333 340-1 340-3 341 343 345 347 349 353 355 357 359 401 403 403 405 407 409 411
	RCP2 Series Gripper  RCP2 Series Rotary  RCP2CR Series Rotary	3-Finger Gripper  Rotary  Slider Coupling Type A  Gripper Type N  N  Slider Type	Mini Slider Type Mini Lever Type Small Slider Type Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Long Stroke Slider Type  Lever Type  Small Vertical Type Small Flat Type Medium Vertical Type Medium Vertical Type Large Flat Type Large Flat Type Large Flat Type Liminum Base  teel Base tigh-Speed Type Lini Slider Type Lini Lever Type Coupled	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 116 mm width 116 mm width 130 mm width 130 mm width 62 mm width 50 mm width 61 mm width 62 mm width 63 mm width 64 mm width 65 mm width 65 mm width 66 mm width 67 mm width 68 mm width 69 mm width 60 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRSS RCP2-GRM RCP2-GRS RCP2-GRM RCP2-GRS RCP2-GRM RCP2-GRS RCP2-GRM RCP2-GRS RCP2-GRM RCP2-GRS RCP2-GRM RCP2-GRS RCP2-RTG-/RTG RCP2-RTG RCP2-RTG-/RTG RCP2-RTG-/RTG RCP2-RTG-/RTG RCP2-RTG-/RTG RCP2-RTG-/RTG RCP2-	275 277 279 281 283 285 287 333 340-1 340-3 341 343 345 347 349 353 355 355 355 361 363 399 401 403 405 407 409 409 401 403 405 407 409 401 403 404 405 407 409 401 403 404 405 407 409 401 403 404 405 407 409 401 403 404 405 407 409 409 401 403 404 405 407 409 409 401 403 404 405 407 407 409 409 409 409 409 409 409 409
	RCP2 Series Gripper  RCP2 Series Rotary  RCP2CR Series Cleanroom	3-Finger Gripper  Rotary  Slider Coupling Type A  S  Gripper Type M  N	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Lever Type Small Vertical Type Small Flat Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Flat Type Large Flat Type Liminum Base teel Base ligh-Speed Type lini Slider Type	65mm width 75mm width 36mm width 40mm width 55mm width 65mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 42 mm width 131 mm width 131 mm width 130 mm width 62 mm width 62 mm width 62 mm width 80 mm width 55 mm width 45 mm width 45 mm width 45 mm width 72 mm width 73 mm width 74 mm width 75 mm width 80 mm width 75 mm width 76 mm width 77 mm width 78 mm width 79 mm width 80 mm width 81 mm width 82 mm width 83 mm width 84 mm width 85 mm width 85 mm width 86 mm width 87 mm width 87 mm width 88 mm width 89 mm width 80 mm width	RCP3-TA6C RCP3-TA7C RCP3-TA7C RCP3-TA3R RCP3-TA4R RCP3-TA6R RCP3-TA6R RCP3-TA6R RCP3-TA7R RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRS RCP2-GRM RCP2-GRST RCP2-GRSS RCP2-GRSS-GRS-GRS-GRS-GRS-GRS-GRS-GRS-GRS-GR	275 277 279 281 283 285 287 333 335 340-1 340-3 341 343 345 347 349 353 355 357 359 361 363 401 403 405 407 409 411 413 443 444
	RCP2 Series Gripper  RCP2 Series Rotary  RCP2CR Series Rotary	3-Finger Gripper  Rotary  Slider Coupling Type A  Gripper Type N  N  Slider Type	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Type Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Long Stroke Slider Type Small Vertical Type Small Flat Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Vertical Type Large Flat Type Large Flat Type Long Stroke Slider Type Large Flat Type Large Flat Type Long Stroke Slider Type Long Stroke Slider Slider Stroke Slider Stroke Slider	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 116 mm width 116 mm width 130 mm width 130 mm width 62 mm width 62 mm width 80 mm width 80 mm width 45 mm width 150 mm width 72 mm width 150 mm width 150 mm width 50 mm width 6124 mm width 62 mm width 63 mm width 64 mm width 65 mm width 65 mm width 66 mm width 67 mm width 68 mm width 6124 mm width 6124 mm width 6135 mm width 6136 mm width	RCP3-TAGC RCP3-TAGC RCP3-TAGC RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRS RCP2-GRHM RCP2-GRH	275 277 279 281 283 285 287 333 340-1 340-3 341 343 345 347 349 353 355 357 359 361 361 363 399 401 403 405 407 409 411 413 443 444 444 444
	RCP2 Series Gripper  RCP2 RCP2 Series Gripper  RCP2CR Series Rotary  RCP2CR Series Rotary	3-Finger Gripper  Rotary  Slider Coupling Type A  Gripper Type N  N  Slider Type  Rod Type	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Typ Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Small Vertical Type Small Vertical Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Flat Type Large Flat Type luminum Base teel Base teel Base tigh-Speed Type Lini Slider Type Coupled Coupled High-thrust Type	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 42 mm width 116 mm width 113 mm width 130 mm width 62 mm width 62 mm width 80 mm width 80 mm width 45 mm width 150 mm width 74 mm width 150 mm width 50 mm width 6124 mm width 624 mm width 65mm width 65mm width 65mm width 65mm width 66mm width 67mm width	RCP3-TAGC RCP3-TAGC RCP3-TAGC RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP2-GRSS RCP2-GRS RCP2-GRS RCP2-GRM RCP2-GRHM RCP2-RTGS/RTGSI RCP2-RTGS/RTGS/RTGSI RCP2-RTGS/RTGS/RTG	275 277 279 281 283 285 287 333 340-1 340-3 341 343 345 347 349 355 357 359 401 403 405 407 409 411 413 444 444 444 444 444 444
	RCP2 Series Gripper  RCP2 Series Rotary  RCP2CR Series Cleanroom	3-Finger Gripper  Rotary  Slider Coupling Type A  Gripper Type N  N  Slider Type	Mini Slider Type Mini Lever Type Small Slider Type Medium Slider-Type Medium High-force Slider Type Large High-force Slider Type Long Stroke Slider Type Long Stroke Slider Type Small Vertical Type Small Flat Type Medium Vertical Type Medium Flat Type Large Vertical Type Large Vertical Type Large Flat Type Large Flat Type Long Stroke Slider Type Large Flat Type Large Flat Type Long Stroke Slider Type Long Stroke Slider Slider Stroke Slider Stroke Slider	65mm width 75mm width 36mm width 40mm width 40mm width 55mm width 65mm width 65mm width 75mm width 42 mm width 42 mm width 42 mm width 116 mm width 116 mm width 130 mm width 130 mm width 62 mm width 62 mm width 80 mm width 80 mm width 45 mm width 150 mm width 72 mm width 150 mm width 150 mm width 50 mm width 6124 mm width 62 mm width 63 mm width 64 mm width 65 mm width 65 mm width 66 mm width 67 mm width 68 mm width 6124 mm width 6124 mm width 6135 mm width 6136 mm width	RCP3-TAGC RCP3-TAGC RCP3-TAGC RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP3-TAGR RCP2-GRSS RCP2-GRLS RCP2-GRS RCP2-GRS RCP2-GRHM RCP2-GRH	275 277 279 281 283 285 287 333 340-1 340-3 341 343 345 347 349 353 355 357 359 361 361 363 399 401 403 405 407 409 411 413 443 444 444 444

Slider Type

Controllers

Roo Type

Standard

Controllers Integrated

> Table/Arn /Flat Type

Crinnor

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Туре

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PMEC

PSEP /ASEP

ERC2

ACON

PSEI

ASEL

XSEL

Pulse Motor

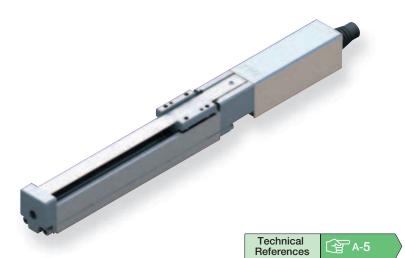
Servo Motor (24V)

Servo Motor (230V)

inear Motor

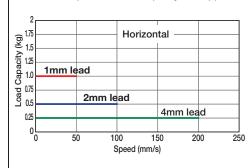
# RCP3-SA2AC RoboCylinder Mini Slider Type Coupled Motor 22mm Width Pulse Medical Screw

■ Configuration: RCP3 — SA2AC **20P** Encoder Compatible Controllers Cable Length Option Type Lead Stroke P1: PCON N : None P : 1m I: Incremental 20P: Pulse motor 4S: 4mm lead screw 25: 25mm NM: Reversed-home The Simple absolute encoder is also considered 20 🗌 size 2S: 2mm lead screw RPCON S : 3m M : 5m 1S:1mm lead screw 100: 100mm PSEL (25mm pitch P3: PMEC X  $\square\square$  : Custom Length type "I".
\* See page Pre-35 for explanation of each code that make up the configuration name. increments) PSEP



■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor,
the RCP3 series' load capacity decreases at
high speeds. In the table below, check if your
desired speed and load capacity are supported.



(1) The load capacity is based on operation at an acceleration of 0.2G. This the upper limit for the acceleration.

- (2) The actuator cannot be used on its side or in a vertical orientation.
- (3) If used in a dusty environment, the service life will decrease significantly.
- (4) This model uses a lead screw, therefore please ensure that your usage is appropriate for its characteristics. (See page Pre-42.)

## Actuator Specifications Lead and Load Capacity

Max. Load Capacity
Horizontal (kg) Vertical (kg)
Positioning Repeatability (mm) Feed Stroke Lead Model Screw (mm) RCP3-SA2AC-I-20P-4S-1-2-3-4 4 25~100 (25 RCP3-SA2AC-I-20P-2S-1 - 2 - 3 - 4 2 0.5 ±0.05 Lead screv \_ RCP3-SA2AC-I-20P-1S-1 - 2 - 3 - 4 1 Legend ① Stroke ② Compatible Controller ③ Cable Length ④ Options

			•
Lead	Stroke	25 (mm)	50 ~ 100 (mm)
we	4	180	200
d screw	2	10	00
Lead	1	5	0

■ Stroke and Maximum Speed

(Unit: mm/s)

Cable List					
Туре	Cable Symbol				
Standard (Robot Cables)	P (1m) S (3m) M (5m)				
Special Lengths	X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m)				
	X16 (16m) ~ X20 (20m)				

- \* The standard cable for the RCP3 is the robot cable.
- $^{\ast}$  See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Reversed-home	NM	→ V-33	

Actuator Specifications				
Item	Description			
Drive System	Lead screw (Ø4mm, C10 grade)			
Lost Motion	0.3mm or less (initial value)			
Base	Material: Aluminum (white alumite treated)			
Guide	Slide guide			
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)			
Service Life	10 million cycles			

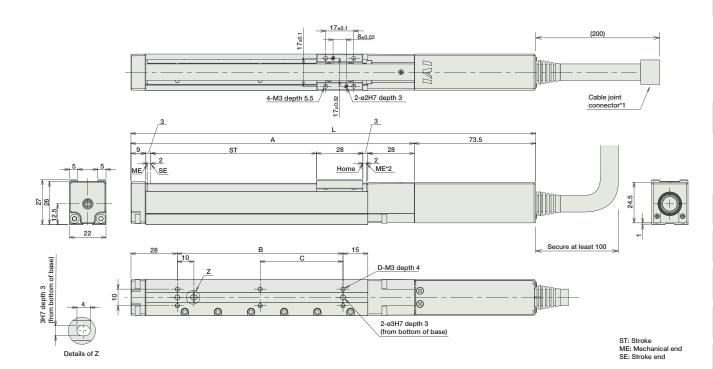
<sub>ebsite.</sub> www.robocylinder.de

For Special Orders





- \*1: A motor-encoder cable is connected here. See page A-39 for details on cables.
- \*2: During the homing operation, the slider moves to actuator's mechanical end, and then reverses. Therefore, watch for any interference with its surroundings.



### ■ Dimensions/Weight by Stroke

■ Dimensions/weight by Stroke						
Stroke	25	50	75	100		
L	169.5	194.5	219.5	244.5		
Α	96	121	146	171		
В	25	50	75	100		
С	0	0	0	50		
D	4	4	4	6		
Weight (kg)	0.25	0.27	0.29	0.3		

Name External View Model Description Max. Positioning Points Input Voltage Power Supply Capacity See Page							
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Pag
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P47
olehold valve type		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double	3 points			
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	solenoid types.			→ P4	
Positioner Type		PCON-C-20PI-NP-2-0	Positioning is possible for up	512 points			
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	to 512 points	312 points			
Pulse Train Input Type Differential Line Driver)	ė i	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support		DC24V		→ P5
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(=)			
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P5
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible. Can operate up to 2 axes	1500 points			→ P5

Controllers

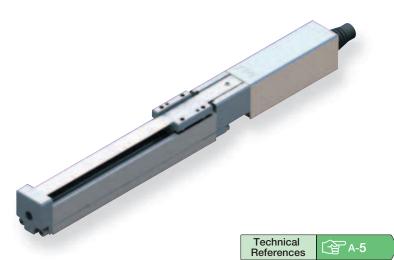
PMEC
//AMEC
//ASEP
ROBO
NET
ERC2

PCON
ACON
SCON

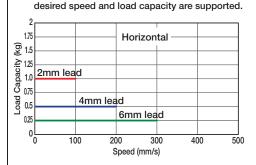
PSEL
SSEL

## CP3-SA2BC Lead Screw

 $\blacksquare$  Configuration: RCP3 - SA2BC -**20P** Encoder Lead Compatible Controllers Cable Length Option Type Stroke I: Incremental P1: PCON N : None P : 1m 20P: Pulse motor 6S: 6mm lead screw 25: 25mm NM: Reversed-home The Simple absolute encoder is also considered 20 🗌 size 4S: 4mm lead screw RPCON S : 3m M : 5m 2S: 2mm lead screw 150: 150mm PSEL (25mm pitch P3: PMEC X 🗆 : Custom Length type "I".
\* See page Pre-35 for explanation of each code that make up the configuration name. increments) PSEP



Speed vs. Load Capacity Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your



(1) The load capacity is based on operation at an acceleration of 0.2G. This the upper limit for the acceleration.

- (2) The actuator cannot be used on its side or in a vertical orientation.
- (3) If used in a dusty environment, the service life will decrease significantly.
- (4) This model uses a lead screw, therefore please ensure that your usage is appropriate for its characteristics. (See page Pre-42.)

### Actuator Specifications ■ Lead and Load Capacity ■ Stroke and Maximum Speed

Model	Feed	Lead	Max. Load		Positioning Repeatability	Stroke	
1110001	Screw	(mm)	Horizontal (kg)	Vertical (kg)	(mm)	(mm)	
RCP3-SA2BC-I-20P-6S-①-②-③-④		6	0.25	ı		25~150	
RCP3-SA2BC-I-20P-4S-①-②-③-④	Lead screw	4	0.5	ı	±0.05	(25 increments)	
RCP3-SA2BC-I-20P-2S-①-②-③-④		2	1	ı		increments)	
Legend ① Stroke ② Compatible Controller ③ Cable Length ④ Options							İ,

Lead		25 (mm)	50 (mm)	75~150 (mm)
We	6	180	280	300
d screw	4	180	20	00
Lead	2		100	
				(Unit: mm/s)

Cable List		
Туре	Cable Symbol	
Standard	P (1m)	
	<b>S</b> (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

<sup>\*</sup> See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Reversed-home	NM	→ V-33	

Actuator Specifications				
Item	Description			
Drive System	Lead screw Ø6mm C10 grade			
Lost Motion	0.3mm or less (initial value)			
Base	Material: Aluminum (white alumite treated)			
Guide	Slide guide			
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)			
Service Life	10 million cycles			

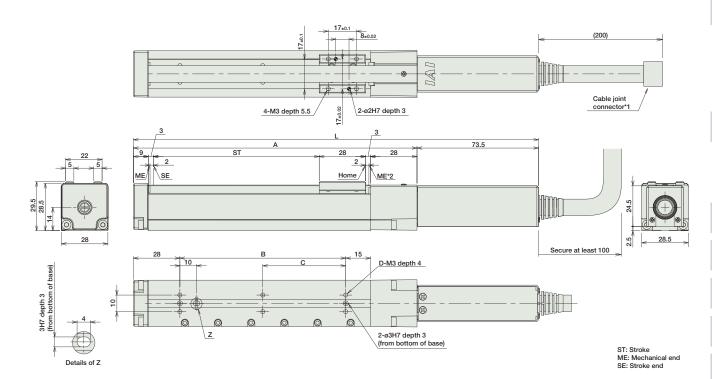
### <sub>ebsite.</sub> www.robocylinder.de

For Special Orders





- \*1: A motor-encoder cable is connected here. See page A-39 for details on cables.
- \*2: During the homing operation, the slider moves to actuator's mechanical end, and then reverses. Therefore, watch for any interference with its surroundings.



### ■ Dimensions/Weight by Stroke

Differsions/Weight by Stroke						
Stroke	25	50	75	100	125	150
L	169.5	194.5	219.5	244.5	269.5	294.5
Α	96	121	146	171	196	221
В	25	50	75	100	125	150
С	0	0	0	50	62.5	75
D	4	4	4	6	6	6
Weight (kg)	0.3	0.32	0.35	0.37	0.4	0.42

The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.						
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	

Compatible Controllers

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page			
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners			See P481	→ P477			
Colonida valve Type		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double	3 points			. 0.407			
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	solenoid types. No homing necessary with simple absolute type.				→ P487			
Positioner Type	É	PCON-C-20PI-NP-2-0	Positioning is possible for up	512 points						
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	to 512 points	512 points						
Pulse Train Input Type (Differential Line Driver)		PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(-)	(-)		DC24V	2A max.	→ P525	
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support				(-)			
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points				ts		
Field Network Type		RPCON-20P	Dedicated to field network	768 points				→ P503		
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible. Can operate up to 2 axes	1500 points			→ P557			

\* This is for the single-axis PSEL.

Controllers

PMEC
(AMEC
PSEP
(ASEP
ROBO
NET
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL

Slider Type

Mini
Standard
Introllers tegrated

Rod
Type

Mini
Standard

PMEC /AMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON PSEL ASEL XSEL

## RCP3-SA3C RoboCylinder Slider Type 32mm Width Pulse Motor Coupled

■ Configuration: RCP3 — SA3C **28P** Encoder Type 28P: Pulse motor I: Incremental 28 🗌 size

The Simple absolute encoder models are labeled as "I". \* See page Pre-35 for explanation of each code that make up the configuration name.

Lead 6:6mm 4:4mm 2:2mm

Stroke 50: 50mm 300: 300mm (50mm pitch

PSEL P3: PMEC increments) PSEP

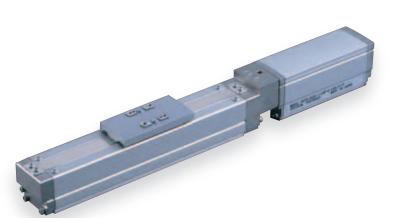
Compatible Controllers Cable Length P1: PCON RPCON

N: None P:1m S:3m M:5m

X 🗆 : Custom Length

Option

See Options below



Technical References

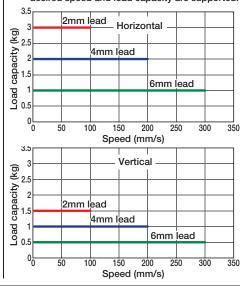




- (1) Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 2mm-lead model, or when used vertically). These values are the upper limits for the acceleration.

### Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications

### ■ Lead and Load Capacity

Model	Lead (mm)	Max. Load Horizontal (kg)	. ,	Maximum Push Force (N)	Stroke (mm)
RCP3-SA3C-I-28P-6-①-②-③-④	6	1	0.5	15	
RCP3-SA3C-I-28P-4-①-②-③-④	4	2	1	22	50~300 (50mm increments)
RCP3-SA3C-I-28P-2-①-②-③-④	2	3	1.5	44	moromentaj

### ■ Stroke and Maximum Speed

Stroke Lead	$50\sim300$ (50mm increments)
6	300
4	200
2	100

Odbie List			
Туре	Cable Symbol		
Standard	P (1m)		
	<b>S</b> (3m)		
(Robot Cables)	M (5m)		
Special Lengths	X06 (6m) ~ X10 (10m)		
	X11 (11m) ~ X15 (15m)		
	X16 (16m) ~ X20 (20m)		

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

### Option List

Name	Option Code	See Page	
Brake-Equipped	В	→ <b>A-25</b>	
Cable Exit Direction (Top)	CJT	→ <b>A-25</b>	
Cable Exit Direction (Right)	CJR	→ <b>A-25</b>	
Cable Exit Direction (Left)	CJL	→ <b>A-25</b>	
Cable Exit Direction (Bottom)	CJB	$\rightarrow$ A-25	
No Cover	NCO	→ A-33	
Reversed-home	NM	→ A-33	

### Actuator Specifications

Item	Description		
Drive System	Ball screw Ø6mm C10 grade		
Positioning Repeatability	±0.02mm		
Lost Motion	0.1mm or less		
Base	Material: Aluminum (special alumite treated)		
Allowable Static Moment	Ma: 5.0N·m Mb: 7.1N·m Mc: 7.9 N·m		
Allowable Dynamic Moment(*)	Ma: 1.96N·m Mb: 2.84N·m Mc: 3.14N·m		
Overhang Load Length	100mm or less		
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)		

(\*) Based on 5,000km travel life.

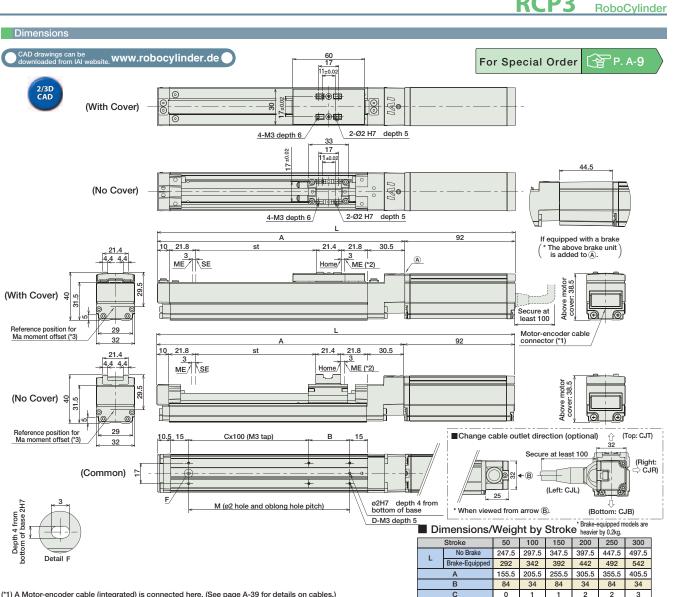
**Directions of Allowable Load Moment** 







(Unit: mm/s)



(\*1) A Motor-encoder cable (integrated) is connected here. (See page A-39 for details on cables.)

(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

ME: Mechanical end

SE: Stroke end

(\*3) Reference position for calculating the moment Ma

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page	
Solenoid Valve Type		PMEC-C-28PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477	
ooienoid valve Type		PSEP-C-28PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487	
Splash-Proof Solenoid Valve Type		PSEP-CW-28PI-NP-2-0	No homing necessary with simple absolute type.				→ F467	
Positioner Type	É	PCON-C-28PI-NP-2-0	Positioning is possible for up to	512 points				
Safety-Compliant Positioner Type		PCON-CG-28PI-NP-2-0	512 points 512 points					
Pulse Train Input Type Differential Line Driver)		PCON-PL-28PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525	
ulse Train Input Type (Open Collector)		PCON-PO-28PI-NP-2-0	Pulse train input type with open collector support	(-)	(=)			
Serial Communication Type	ĺ	PCON-SE-28PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-28P	Dedicated to field network	768 points			→ P503	
Program Control Type	8	PSEL-C-1-28PI-NP-2-0	Programmed operation is possible.  Can operate up to 2 axes	1500 points			→ P557	

IAI

10

334

0.8 0.9

4 6 6 8

84

0.7

0.6 0.7

Weight With Cover (kg) No Cover

134 184 234

0.7

8.0 0.9 0.9

0.7 0.8

Slider Type

Mini
Standard
Introllers
tegrated

Rod
Type

Mini
Standard
Introllers
tegrated
Introllers
Table/Arm
/Flat Type

ontrollers

PMEC /AMEC

PSEP /ASEP

ROBO NET

ERC2

PCON

ACON

SCON

PSEL

SSEL

XSEL

### 3-SA4C RoboCylinder Slider Type 40mm Width Pulse Motor Coupled $\blacksquare$ Configuration: RCP3 — SA4C 35P Encoder Lead Compatible Controllers Cable Length Option Type Stroke 10:10mm P1: PCON N : None P : 1m I: Incremental 35P: Pulse motor 50: 50mm See Options below The Simple absolute encoder models are 5 : 5mm RPCON 35 🗌 size S : 3m M : 5m 2.5 : 2.5mm 500: 500mm PSEL labeled as "I" (50mm pitch P3: PMEC

increments)



\* See page Pre-35 for explanation of each code that make up the configuration name.

Technical References



(1) Since the RCP3 series use a pulse motor, a load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

(2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 2.5 mm-lead model, or when used vertically).

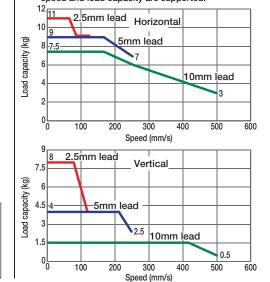
The maximum acceleration is 0.7G (0.3G when used vertically), however, note that the load capacity decreases at high accelerations. For more information, see the table of load capacity by acceleration, on page A-50.

### Speed vs. Load Capacity

PSEP

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

X 🗆 🗆 : Custom Length



### Actuator Specifications

### ■ Lead and Load Capacity

Model	Lead (mm)	Max. Load Horizontal (kg)		Maximum Push Force (N)	Stroke (mm)
RCP3-SA4C-I-35P-10-①-②-③-④	10	∼ <b>7.5</b>	∼ <b>1.5</b>	34	
RCP3-SA4C-I-35P-5-①-②-③-④	5	~ 9	~ 4	68	50~500 (50mm increments)
RCP3-SA4C-I-35P-2.5-①-②-③-④	2.5	~ 11	~ 8	136	inorements

### ■ Stroke and Maximum Speed

Stroke Lead	$50\sim500$ (50mm increments)
10	500
5	250
2.5	125

Cable List		
Туре	Cable Symbol	
Standard	P (1m) S (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

\* See page A-39 for cables for maintenance.

### Option List

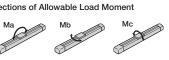
Name	Option Code	See Page	
Brake-Equipped	В	→ A-25	
Cable Exit Direction (Top)	CJT	→ A-25	
Cable Exit Direction (Right)	CJR	→ A-25	
Cable Exit Direction (Left)	CJL	$\rightarrow$ A-25	
Cable Exit Direction (Bottom)	CJB	→ A-25	
No Cover	NCO	→ A-33	
Reversed-home	NM	→ A-33	

### Actuator Specifications

Item	Description				
Drive System	Ball screw Ø8mm C10 grade				
Positioning Repeatability	±0.02mm				
Lost Motion	0.1mm or less				
Base	Material: Aluminum (special alumite treated)				
Allowable Static Moment	Ma: 6.8N·m Mb: 9.7N·m Mc: 13.3 N·m				
Allowable Dynamic Moment(*)	Ma: 3.04N·m Mb: 4.31N·m Mc: 5.00N·m				
Overhang Load Length	120mm or less				
Ambient Operating Temp./Humidity	0~40°C, 85%RH or less (Non-condensing)				

(\*) Based on 5,000km travel life.

**Directions of Allowable Load Moment** 







(Unit: mm/s)



PMEC (AMEC PSEP (ASEP ROBO NET ERC2 PCON ACON PSEL ASEL SSEL

Dimensions													
CAD drawings can be downloaded from IAI website. WWW.roboo	cylinder.de	65 21 1 <u>4±0.0</u> 2				Fo	r Spe	ecial	Orde	r 3	<b>₽</b> P.	A-9	
(With Cover)	© 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	⊕⊕⊕	epth 5										
(No Cover)	2 depth 6	40 21 14-0.02 14-0.02 2-02.5H7 de	-				_			40.5	5		
26	A 10, 23 , st	26 23 33	.5 .		93.5						a brake		
(With Cover) State of the control of	ME/ SE	Home ME (*2)		<u>a)</u>			Secure least 1	at 00	Above motor cover: 51	e ded to	e unit		
Ma moment offset (*3) 40 26	A 1023st	L 26 _ 23 _ 33	5 **		93.5	-	- N	Motor-end connector	coder cab (*1)	ole			
(No Cover) (No Cover)	ME SE	Home ME (*2)					=		Above motor cover: 51	<b>⊕</b>	•		
Reference position for Ma moment offset (*3) 40	10,515 Cx100 (M3 tap)	B 15		//	■Ch	ange ca	ble outl	et direct	ion (opti	ional) 🔐	(Top: C	JT)	ì
2		+ +	_				<b>○</b> 8 8 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	(Left: ←® <del>[</del>	CJL) Secure a least 10		<b>6</b> (F	light: CJR)	
Detail F	M (ø2.5 hole and oblong h	\\from	7 depth 5 bottom o depth 5	of base	* Wi	nen view	ed from	arrow ®		(Bottom			_
to t		■ Dimensions/										ier by 0.3	kg.
5H7 c botto		Stroke No Brake	50 259	100 309	150 359	200 409	250 459	300 509	350 559	400 609	450 659	500 709	
(*1) A Motor-encoder cable (integrated) is conne	noted have	Brake-Equipped A	299.5 165.5	349.5 215.5	399.5 265.5	449.5 315.5	499.5 365.5	549.5 415.5	599.5 465.5	649.5 515.5	699.5 565.5	749.5 615.5	
(See page A-39 for details on cables.)	tota nord.	В	91	41	91	41	91	41	91	41	91	41	
(*2) After homing, the slider moves to the ME, the	nerefore, please watch for any	С	0	1	1	2	2	3	3	4	4	5	
interference with surrounding objects.	•	D M	4 91	6 141	6 191	8 241	8 291	10 341	10 391	12 441	12 491	14 541	
ME : Mechanical end		Weight With Cover	0.9	141	11	1.2	1.3	14	1.5	16	17	1.8	

ME: Mechanical end

(\*3) Reference position for calculating the moment Ma.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page		
olenoid Valve Type		PMEC-C-35PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477		
olenoid valve type		PSEP-C-35PI-NP-2-0-H	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points	3 points			→ P487	
Splash-Proof olenoid Valve Type		PSEP-CW-35PI-NP-2-0-H  No homing necessary with simple absolute type.				71407			
Positioner Type		PCON-C-35PI-NP-2-0-H	Positioning is possible for up to 512	512 points	512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0-H	points 5:						
ulse Train Input Type ifferential Line Driver)	á	PCON-PL-35PI-NP-2-0-H	Pulse train input type with differential line driver support	(-) 64 points	DC24V	2A max.	→ P525		
ulse Train Input Type (Open Collector)		PCON-PO-35PI-NP-2-0-H	Pulse train input type with open collector support		(-)				
Serial ommunication Type		PCON-SE-35PI-N-0-0-H	Dedicated to serial communication						
ield Network Type		RPCON-35P-H	Dedicated to field network	768 points			 → P503		

0.9

(kg) No Cover 0.9 0.9

1.1

1.2 1.3

1.4

1.1 1.2 1.2 1.3 1.4

1.5 1.6

1.7 1.8

Weight With Cover

\* This is for the single-axis PSEL.

Slider Type

Mini
Standard
ntrollers
tegrated

Rod
Type

Mini
Standard
ntrollers
tegrated

Table/Arm
/Flat Type

### RCP3-SA5C RoboCylinder Slider Type 50mm Width Pulse Motor Coupled ■ Configuration: RCP3 — SA5C **42P** Encoder Motor Lead Compatible Controllers Cable Length Option Type Stroke P1: PCON N: None P:1m I: Incremental 42P: Pulse motor 20 : 20mm 50: 50mm See Options below The Simple absolute encoder RPCON 42 🗌 size 12:12mm S : 3m M : 5m 800: 800mm PSEL 6:6mm

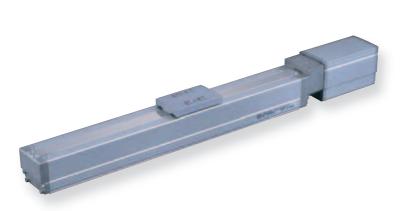
3:3mm

(50mm pitch

increments)

P3: PMEC

PSEP



models are labeled

as "I".
\* See page Pre-35 for explanation of each code that make up the configuration name.

Technical References

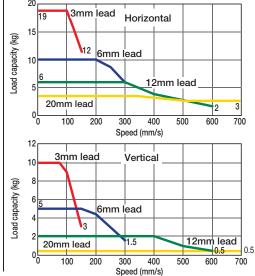
Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported. (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 3mm-lead

model, or when used vertically). The maximum acceleration is 0.7G (0.3G when used vertically), however, note that the load capacity decreases at high accelerations. For more information, see the table of load capacity by acceleration, on page A-50.

### Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

X  $\square\square$  : Custom Length



### Actuator Specifications

### ■ Lead and Load Capacity

Model	Lead (mm)	Max. Loa Horizontal (kg)		Maximum Push Force (N)	Stroke (mm)
RCP3-SA5C-I-42P-20-①-②-③-④	20	~4	~0,5	28	
RCP3-SA5C-I-42P-12-①-②-③-④	12	~6	~2	47	50 ~ 800
RCP3-SA5C-I-42P-6- ①-②-③-④	6	~10	~5	95	(50-mm increments)
RCP3-SA5C-I-42P-3- ①-②-③-④	3	~19	~10	189	

### Stroke and Maximum Speed

Stroke Lead	50 ~ 550 (50 mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	1000	1000	910	790	690	610
12	600	570	490	425	370	330
6	300	285	245	210	185	165
3	150	140	120	105	90	80

(Unit: mm/s)

Cable List						
Туре	Cable Symbol					
Standard (Robot Cables)	P (1m) S (3m) M (5m)					
Special Lengths	X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m)					

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

\* See page A-39 for cables for maintenance.

### Option List

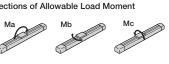
Name	Option Code	See Page	
Brake-Equipped	В	→ A-25	
Cable Exit Direction (Top)	CJT	→ A-25	
Cable Exit Direction (Right)	CJR	→ A-25	
Cable Exit Direction (Left)	CJL	→ A-25	
Cable Exit Direction (Bottom)	CJB	→ A-25	
No Cover	NCO	→ A-33	
Reversed-home	NM	→ A-33	

### Actuator Specifications

Item	Description
Drive System	Ball screw Ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum (special alumite treated)
Allowable Static Moment	Ma: 10.2N·m Mb: 14.6N·m Mc: 22.4N·m
Allowable Dynamic Moment(*)	Ma: 3.92N·m Mb: 5.58N·m Mc: 8.53N·m
Overhang Load Length	130mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

(\*) Based on 5.000km travel life.

**Directions of Allowable Load Moment** 







WIIII

Controller Integrated

Rod Type

Mini

Standard

Table/Arm

Mini

Standard

Rotary Type

Linear Motor Type

Controllers

/AMEC

ROBO NET

ERC2

20

796 846

3.3 3.4

2.9 3.0

2.8

ACON

SCON

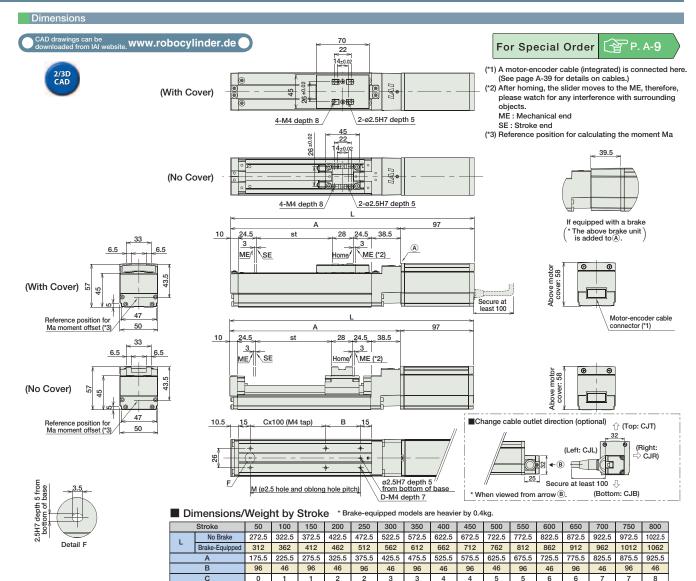
ASEL

SSEL

Servo Moto (24V)

> Servo Moto (230V)

Linear Mo



Compatible Controllers	
------------------------	--

The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.

Weight With Cover

(kg) No Cover

6 6

146 196

1.5 1.6

1.4 1.5

4

96

1.4

1.3

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page											
Solenoid Valve Type	411	PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477											
Solellold valve Type	1	PSEP-C-42PI-NP-2-0-H	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points				→ P487										
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0-H	No homing necessary with simple absolute type.						→ F407									
Positioner Type		PCON-C-42PI-NP-2-0-H	Positioning is possible for up to	512 points														
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0-H	512 points	312 points														
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0-H	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525											
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0-H	Pulse train input type with open collector support		,													
Serial Communication Type		PCON-SE-42PI-N-0-0-H	Dedicated to serial communication	64 points					İ									
Field Network Type		RPCON-42P-H	Dedicated to field network	768 points			→ P503											
Program Control Type		PSEL-C-1-42PI-NP-2-0-H	Programmed operation is possible. Can operate up to 2 axes	1500 points			→ P557											

8

8

246 296

1.8 1.9

1.6 1.7

10 10

346 396

1.8

12

446 496

2.3

2.1

12

14 14

546

2.6

2.3

16 16 18 18

646 696 746

2.9 3.0 3.2

2.5

\* This is for the single-axis PSEL.

Slider Type

Mini
Standard
ntrollers
tegrated

Rod
Type

Mini
Standard
ntrollers
tegrated

Table/Arm
/Flat Type

CP3-SA6C RoboCylinder Slider Type 60mm Width Pulse Motor Coupled ■ Configuration: RCP3 — SA6C **42P** Encoder Motor Compatible Controllers Cable Length Option

42P: Pulse motor

42 🗌 size

Lead

20:20mm

12:12mm

6:6mm

3:3mm

Stroke

50: 50mm

800: 800mm

(50mm pitch

increments)

P1: PCON

RPCON

PSEL

PSEP

P3: PMEC

I: Incremental

models are

labeled as "I"

The Simple absolute encoder

Technical References



Type

\* See page Pre-35 for explanation of each code that make up the configuration name

Speed vs. Load Capacity

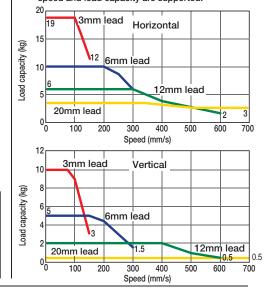
N: None P:1m

S : 3m M : 5m

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

X 🗌 : Custom Length

See Options below



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

(2) Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds.

Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.3G (0.2G for 3mm lead model and when using vertically). The maximum acceleration is 0.7G (0.3G when used vertically), however, note that the load capacity decreases at high accelerations. For more information, see the table of load capacity by acceleration, on page A-50.

### Actuator Specifications

■ Lead and Load Capacity

Model	Lead (mm)	Max. Loa Horizontal (kg)		Maximum Push Force (N)	Stroke (mm)
RCP3-SA6C-I-42P-20-①-②-③-④	20	~4	~0,5	28	
RCP3-SA6C-I-42P-12-①-②-③-④	12	~6	~2	47	50 ~ 800
RCP3-SA6C-I-42P-6- ①-②-③-④	6	~10	~5	95	(50-mm increments)
RCP3-SA6C-I-42P-3- ①-②-③-④	3	~19	~10	189	
Legend ① Stroke ② Compatible controller ③ Cable length	4 Option	s			

### Stroke and Maximum Speed

Stroke Lead	50 ~ 550 (50 mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	1000	1000	910	790	690	610
12	600	570	490	425	370	330
6	300	285	245	210	185	165
3	150	140	120	105	90	80

Туре	Cable Symbol	
Standard (Robot Cables)	P (1m) S (3m) M (5m)	
Special Lengths	X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m)	

\* See page A-39 for cables for maintenance.

Option Code	See Page	
В	→ A-25	
CJT	→ A-25	
CJR	→ A-25	
CJL	→ A-25	
CJB	→ A-25	
NCO	→ A-33	
NM	→ A-33	
	CJT CJR CJL CJB NCO	$\begin{array}{ccc} B & \rightarrow A\text{-}25 \\ \text{CJT} & \rightarrow A\text{-}25 \\ \text{CJR} & \rightarrow A\text{-}25 \\ \text{CJL} & \rightarrow A\text{-}25 \\ \text{CJL} & \rightarrow A\text{-}25 \\ \text{CJB} & \rightarrow A\text{-}25 \\ \text{NCO} & \rightarrow A\text{-}33 \\ \end{array}$

~5	95	increments)		6	300	285	245	210	185	165	
~10	189			3	150	140	120	105	90	80	
		_							(Unit:	mm/s)	
Actu	uator Spe	cifications	;								
	lk		ı		D-						
Item					De	escript	lion				
Drive Sy:	stem		Г	Ball scre	w Ø10mm	C10	grade				
			-								_

Positioning Repeatability ±0.02mm Lost Motion 0.1mm or less Material: Aluminum (special alumite treated) Base Allowable Static Moment Ma: 17.6N·m Mb: 25.2N·m Mc: 44.5N·m Allowable Dynamic Moment(\*) Ma: 4.31N·m Mb: 6.17N·m Mc: 10.98N·m Overhang Load Length 150mm or less Ambient Operating Temp./Humidity 0 ~ 40°C, 85% RH or less (non-condensing)

(\*) Based on 5,000km travel life.

**Directions of Allowable Load Moment** 









Mini

Standard

Pod

Mini

Standard

Table/Arm /Flat Type

Mini

Gripper/ Rotary Type

Linear Motor

Туре

Controllers

PSEP /ASEP

NET

851

4.0 4.2

PCON

ACUN

PSEL

ASEL

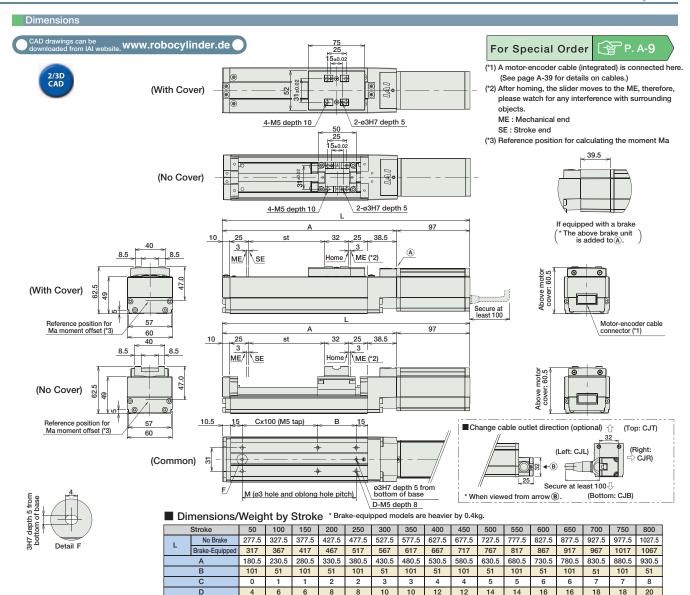
SSEL

ılse Motor

Servo Moto (24V)

> Servo Moto 230V)

Linear Mo



		(kg) No Cover	1.5   1.7   1.8   2	2.1 2.3 2	.4 2.6	2.7 2.8 3 3.	.1 3.3 3.4 3.6	3.7	
Compatible	<ul><li>Controllers</li></ul>	;							
The RCP3 serie	s actuators can	operate with the controlle	rs below. Select the controller a	ccording to your	usage.				
					-				
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Pag	
		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for		AC115V	See P481		→ P47	
Solenoid Valve Type	PIMEC	1 10120-0-421 1-101-2-2	beginners		AC230V	0001 401		7 [4]	
Solelloid valve Type		PSEP-C-42PI-NP-2-0-H	Operable with same signal as	0					
	b b	F3EF-U-42FI-NF-2-U-FI	solenoid valve. Supports both	3 points					
Splash-Proof	<b>F</b>	DOED ON ADDING A ALL	single and double solenoid types.  No homing necessary with simple	No homing necessary with simple					→ P4
Solenoid Valve Type	1	PSEP-CW-42PI-NP-2-0-H	absolute type.						
	וייע				•				
Positioner Type		PCON-C-42PI-NP-2-0-H	Positioning is possible for up to 512						
Cofety Compliant			points	512 points				+	
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0-H							
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0-H	Pulse train input type with differential line driver support		DC24V	2A max.		→ P52	
, ,				(_)				1	

251 301

2.1 2.3

351 401

2.5 2.7

451 501

2.8 3

551 601

3.2 3.3

651 701 751 801

3.5 3.7 3.9

101

1.6

Weight With Cover

PCON-PO-42PI-NP-2-0-H

PCON-SE-42PI-N-0-0-H

PSEL-C-1-42PI-NP-2-0-H

RPCON-42P-H

Pulse Train Input Type (Open Collector)

Field Network Type

Program Control Type

Serial munication Type

151 201

1.8 2

Pulse train input type with open

collector support

Dedicated to serial communication

Dedicated to field network

Programmed operation is possible. Can operate up to 2 axes 64 points

768 points

1500 points

→ P503

\* This is for the single-axis PSEL

Slider Type

Mini

Standard

negrateu

Ro Typ

Standard

Integrated

/Flat Typ

Gripper

Linear Motor

Cleanroom Type

Splash-Proof

Controllers

PSEP /ASEP

NET ERC2

PCON

SCON

ASEL

XSEL

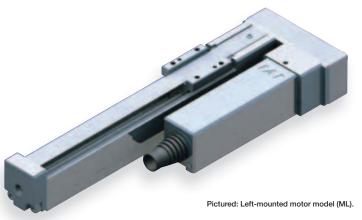
Servo Motor (24V)

Servo Motor (230V)

inear Motor

# RCP3-SA2AR RoboCylinder Mini Slider Type Side-Mounted Motor Unit 22mm Width Pulse Motor Lead Screw

 $\blacksquare$  Configuration: RCP3 - SA2AR -**20P** Туре Encoder Motor Lead Compatible Controllers Cable Length Option Stroke I: Incremental 20P: Pulse motor 4S: 4mm lead screw P1: PCON N : None P : 1m 25: 25mm See Options below The Simple absolute encoder \* Be sure to specify which side the motor 20 size 2S: 2mm lead screw RPCON S : 3m M : 5m 1S:1mm lead screw 100: 100mm PSEL models are labeled as "I". is to be mounted (25mm pitch P3: PMEC X  $\square\square$  : Custom Length (ML/MR). \* See page Pre-35 for explanation of each code that make up the configuration name. increments) PSEP



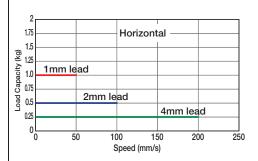
Technical References



- (1) The load capacity is based on operation at an acceleration of 0.2G. This the upper limit for the acceleration.
- (2) The actuator cannot be used on its side or in a vertical orientation.
- (3) If used in a dusty environment, the service life will decrease significantly.
- (4) This model uses a lead screw, therefore please ensure that your usage is appropriate for its characteristics. (See page Pre-42.)

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications

### ■ Lead and Load Capacity

Model	Feed Lead		Max. Load		Positioning Repeatability	Stroke
Wodel	Screw	(mm)	Horizontal (kg)	Vertical (kg)	(mm)	(mm)
RCP3-SA2AR-I-20P-4S-①-②-③-④		4	0.25	ı		05 400
RCP3-SA2AR-I-20P-2S-①-②-③-④	Lead screw	2	0.5	-	±0.05	25~100 (25mm
RCP3-SA2AR-I-20P-1S-①-②-③-④		1	1	-		increments)
Legend ①Stroke ②Compatible controller ③Cable length ④Options						

### ■ Stroke and Maximum Speed

Stroke Lead		25 (mm)	50 ~ 100 (mm)
ew	4	180	200
Lead screw	2	10	00
Lec	1	5	0

(Unit: mm/s)

Cable List		
Туре	Cable Symbol	
Standard	P (1m)	
	<b>S</b> (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

- \* The standard cable for the RCP3 is the robot cable.
- $^{\ast}$  See page A-39 for cables for maintenance.

### Option List

Option List			
		0 5	1
Name	Option Code	See Page	
Left-mounted motor (Standard)	ML	→ A-33	
Right-mounted motor	MR	→ A-33	
Reversed-home	NM	→ A-33	

### Actuator Specifications

Item	Description
Drive System	Lead screw Ø4mm C10 grade
Lost Motion	0.3mm or less (initial value)
Base	Material: Aluminum (white alumite treated)
Guide	Slide guide
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)
Service Life	10 million cycles

Dimensions

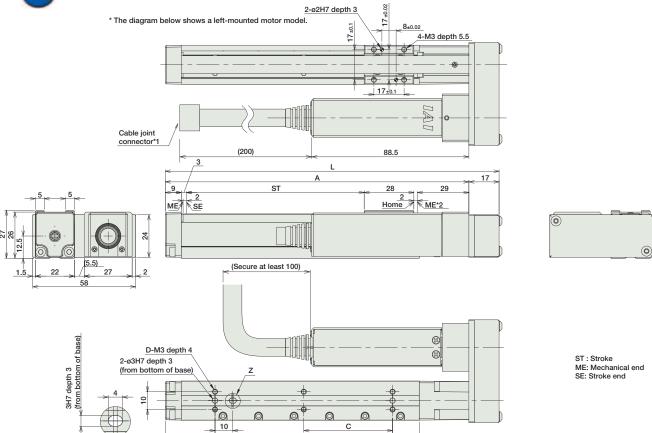
### <sub>ebsite.</sub> www.robocylinder.de

For Special Orders

(译 A-9

2/3D CAD

- \*1 A motor-encoder cable is connected here. See page A-39 for details on cables.
  \*2 During the homing operation, the slider moves to actuator's mechanical end; therefore, please watch for any interference with the surrounding objects.



■ Dimensions/weight by Stroke					
Stroke	25	50	75	100	
L	113	138	163	188	
Α	96	121	146	171	
В	25	50	75	100	
С	0	0	0	50	
D	4	4	4	6	
Weight (kg)	0.28	0.3	0.32	0.33	

### Compatible Controllers

Details of Z

The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page	
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477	
Solenoid valve type	1	PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487	
Splash-Proof Solenoid Valve Type	I	PSEP-CW-20PI-NP-2-0	No homing necessary with simple absolute type.				→ F407	
Positioner Type	Í	PCON-C-20PI-NP-2-0	Positioning is possible for up to 512	512 points				
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	points	512 points	OTZ points			
Pulse Train Input Type (Differential Line Driver)	e i	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	DC24V - (-) 64 points	()	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support					
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication					
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503	
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible. Can operate up to 2 axes	1500 points			→ P557	

\* This is for the single-axis PSEL.

RCP3-SA2AR

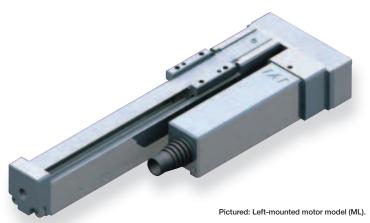
Controllers

PMEC
(AMEC
PSEP
(ASEP
ROBO
NET
ERC2
PCON
ACON
SCON
PSEL
ASEL

## RCP3-SA2BR RoboCylinder Mini Slider Type Side-Mounted Motor Unit 28mm Width Pulse Motor Lead Screw

 $\blacksquare$  Configuration: RCP3 - SA2BR -**20P** Encoder Motor Lead Compatible Controllers Cable Length Option Type Stroke N: None P:1m S:3m M:5m I: Incremental 20P: Pulse motor 6S: 4mm lead screw P1: PCON See Options below 25: 25mm \* The Simple absolute encoder \* Be sure to specify which side the motor 20 size 4S: 4mm lead screw RPCON 2S: 2mm lead screw 150: 150mm PSEL models are labeled as "I".
\* See page Pre-35 for explanation of each code that make up the configuration name is to be mounted (25mm pitch P3: PMEC X  $\square\square$  : Custom Length (ML/MR).

increments)



Technical References

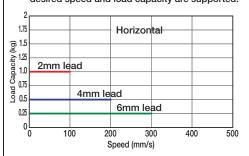


- (1) The load capacity is based on operation at an acceleration of 0.2G. This the upper limit for the acceleration.
- (2) The actuator cannot be used on its side or in a vertical orientation.
- (3) If used in a dusty environment, the service life will decrease significantly.
- (4) This model uses a lead screw, therefore please ensure that your usage is appropriate for its characteristics. (See page Pre-42.)

### Speed vs. Load Capacity

PSEP

 $\overset{\cdot}{\text{Due}}$  to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications

### ■ Lead and Load Capacity

Model		Lead	Max. Load Capacity		Positioning Repeatability	Stroke	
Wiodei	Feed Screw	(mm)	Horizontal (kg)	Vertical (kg)	(mm)	(mm)	
RCP3-SA2BR-I-20P-6S-①-②-③-④		6	0.25	ı		05. 450	
RCP3-SA2BR-I-20P-4S-①-②-③-④	Lead screw	4	0.5	-	±0.05	25~150 (25mm	
RCP3-SA2BR-I-20P-2S-①-②-③-④		2	1	-		increments)	
egend ①Stroke ②Compatible controller ③Cable length ④Options							

### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50 (mm)	75~150 (mm)		
ew	6	180	280	300		
ad screw	4	180	200			
Lead	2		100			

(Unit: mm/s)

Cable List		
Туре	Cable Symbol	
Standard (Robot Cables)	P (1m) S (3m) M (5m)	
C	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m)	

- \* The standard cable for the RCP3 is the robot cable.
- \* See page A-39 for cables for maintenance.

### Option List

Name	Option Code	See Page	
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
Reversed-home	NM	→ A-33	

### Actuator Specifications

Item	Description
Drive System	Lead screw ø6mm C10 grade
Lost Motion	0.3mm or less (initial value)
Base	Material: Aluminum (white alumite treated)
Guide	Slide guide
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)
Service Life	10 million cycles

For Special Orders

(译 A-9



Mini

Standard

Rod Type

Mini

Standard

Table/Arm

Mini

Gripper/

notary rype

Туре

Snlash-Proof

Controllers

/AMEC

ROBO NET

ERC2

ACON

SCON

ASEL

SSEL

XSEL

ılse Motor

Servo Moto (24V)

Servo Moto (230V)

Linear M

CAD drawings can be downloaded from IAI website. WWW.robocylinder.de

2/3D \* The diagram below shows a left-mounted motor model.

\*1 A motor-encoder cable is connected here. See page A-39 for details on cables.

\*2 During the homing operation, the slider moves to actuator's mechanical end; therefore, please watch for any interference with the surrounding objects.

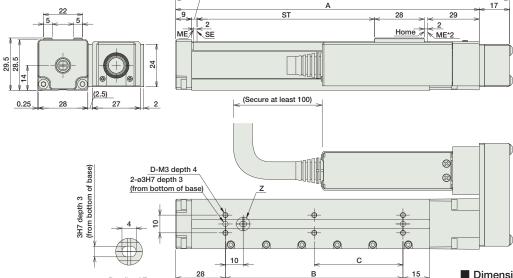
ected here. ables. he slider all end; connector\*1

(200)

8 ±0.02

4-M3 depth 5.5

2-ø2H7 depth 3



> ST : Stroke ME: Mechanical end SE: Stroke end

■ Dimensions/Weight by Stroke

- Dillicits	10113/	vvcigi	IL Dy v	Juon	_	_
Stroke	25	50	75	100	125	150
L	113	138	163	188	213	238
Α	96	121	146	171	196	221
В	25	50	75	100	125	150
С	0	0	0	50	62.5	75
D	4	4	4	6	6	6
Weight (kg)	0.32	0.34	0.37	0.39	0.42	0.46

### Compatible Controllers

The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page						
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P4						
Solenoid valve Type		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P4						
Splash-Proof Solenoid Valve Type	T .	PSEP-CW-20PI-NP-2-0	No homing necessary with simple absolute type.	g necessary with simple									
Positioner Type		PCON-C-20PI-NP-2-0	Positioning is possible for up to 512	512 points									
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	points										
Pulse Train Input Type (Differential Line Driver)	ei .	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ Pŧ						
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)	(-)	(-)	( )	.,					
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points		ı				l			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P\$						
Program Control Type	1	PSEL-C-1-20PI-NP-2-0	Programmed operation is possible. Can operate up to 2 axes	1500 points			→ Pŧ						

Slider Type

Mini
Standard
Introllers tegrated

Rod Type

Mini
Standard
Introllers tegrated

Mini
Table/Arm
/Flat Type

PMEC /AMEC /

CP3-SA3R RoboCylinder Slider Type 32mm Width Pulse Motor Side-Mounted Motor  $\blacksquare$  Configuration: RCP3 — SA3R **28P** П Encoder Motor Lead Compatible Controllers Cable Length Option Type Stroke I: Incremental 6:4mm P1: PCON N: None P:1m See Options below 28P: Pulse motor 50: 50mm The Simple absolute encoder \* Be sure to specify which side the motor 4:4mm RPCON 28 🗌 size S : 3m M : 5m 2 : 2mm 300: 300mm PSEL models are is to be mounted (50mm pitch P3: PMEC labeled as "I".

\* See page Pre-35 for explanation of each code that make up the configuration name. X  $\square\square$  : Custom Length (ML/MR). increments) PSEP



Technical References



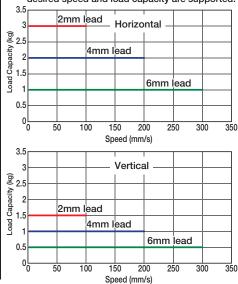


- (1) Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- 2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2mm-lead model, or when used vertically).

These values are the upper limits for the acceleration.

### Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications

### ■ Lead and Load Capacity

Model	Lead (mm)	Max. Load Horizontal (kg)	. ,	Maximum Push Force (N)	Stroke (mm)
RCP3-SA3R-I-28P-6-①-②-③-④	6	1	0.5	15	50000
RCP3-SA3R-I-28P-4-①-②-③-④	4	2	1	22	50~300 (50mm
RCP3-SA3R-I-28P-2-①-②-③-④	2	3	1.5	44	increments)

### ■ Stroke and Maximum Speed

Stroke	$50\sim300$ (50mm increments)
6	300
4	200
2	100

(Unit: mm/s)

Cable List	
Type	

Odbie List					
Туре	Cable Symbol				
Standard	P (1m)				
	<b>S</b> (3m)				
(Robot Cables)	M (5m)				
	X06 (6m) ~ X10 (10m)				
Special Lengths	X11 (11m) ~ X15 (15m)				
	X16 (16m) ~ X20 (20m)				

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

\* The standard cable is the motor-encoder integrated robot cable.

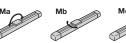
### Option List

Name	Option Code	See Page	
Brake-Equipped	В	→ A-25	
Cable Exit Direction (Top)	CJT	→ A-25	
Cable Exit Direction (Outside)	CJO	→ A-25	
Cable Exit Direction (Bottom)	CJB	→ A-25	
Left-Mounted Motor (Standard)	ML	$\rightarrow$ A-33	
Right-Mounted Motor	MR	→ A-33	
No Cover	NCO	→ A-33	
Reversed-home	NM	→ A-33	

### Actuator Specifications

Item	Description
Drive System	Ball screw Ø6mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum (special alumite treated)
Allowable Static Load Moment	Ma: 5.0N·m Mb: 7.1N·m Mc: 7.9N·m
Allowable Dynamic Load Moment	Ma: 1.96N·m Mb: 2.84N·m Mc: 3.14N·m
Overhang Load Length	100mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

**Directions of Allowable Load Moment** 

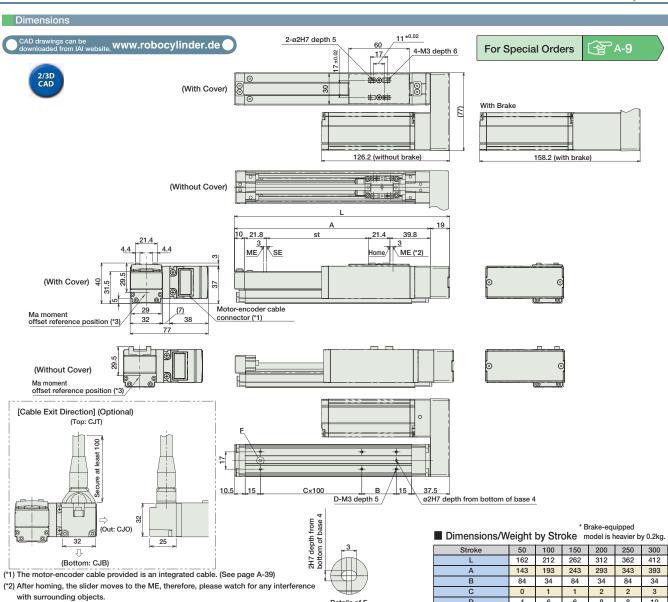






5,000 km service life

<sup>\*</sup> See page A-39 for cables for maintenance.



with surrounding objects.			U						0
	Details of F	D		4	6	6	8	8	10
ME : Mechanical end		Weight	With Cover	0.8	0.8	0.9	1.0	1.0	11
SE: Stroke end									4.0
		(kg)	g) No Cover	0.7	0.8	0.8	0.9	0.9	1.0
Reference position for calculating the moment Ma									
Compatible Controllers									

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-28PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
soleliold valve Type	1	PSEP-C-28PI-NP-2-0 Operable with same signal as solenoid valve. Supports both single and				→ P487	
Splash-Proof Solenoid Valve Type		PSEP-CW-28PI-NP-2-0	double solenoid types. No homing necessary with simple absolute type.				→ F407
Positioner Type		PCON-C-28PI-NP-2-0 PCON-CG-28PI-NP-2-0	Positioning is possible for up to 512	512 points			
Safety-Compliant Positioner Type			points	012 pointo			
rulse Train Input Type Differential Line Driver)		PCON-PL-28PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
ulse Train Input Type (Open Collector)		PCON-PO-28PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial communication Type	Í	PCON-SE-28PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-28P	Dedicated to field network	768 points			→ P503
Program Control Type	É	PSEL-C-1-28PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points			→ P557

Slider Type

Mini
Standard
Introllers
tegrated

Rod
Type

Mini
Standard
Introllers
tegrated

PMEC /AMEC /

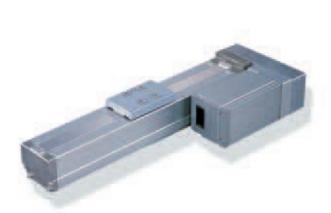
P3-SA4R RoboCylinder Slider Type 40mm Width Pulse Motor Side-Mounted Motor  $\blacksquare$  Configuration: RCP3 - SA4R 35P П Encoder Motor Lead Stroke Compatible Controllers Cable Length Option Type 10:10mm P1: PCON N : None P : 1m See Options below I: Incremental 35P: Pulse motor 50: 50mm The Simple absolute encoder \* Be sure to specify which side the motor 5 : 5mm RPCON 35 ☐ size S : 3m M : 5m 2.5 : 2.5mm 500: 500mm PSEL

(50mm pitch

increments)

P3: PMEC

PSEP



models are

labeled as "I".

\* See page Pre-35 for explanation of each code that make up the configuration name.

Technical References





- (1) Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model, or when used vertically).

These values are the upper limits for the acceleration.

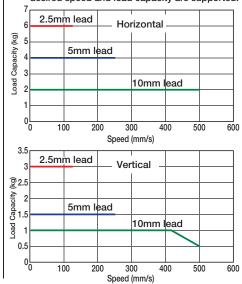
### Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

X  $\square\square$  : Custom Length

is to be mounted

(ML/MR).



### Actuator Specifications

### ■ Lead and Load Capacity

Model	Lead	Max. Load	. ,	Maximum	Stroke		
Model	(mm)	Horizontal (kg)	Vertical (kg)	Push Force (N)	(mm)		
RCP3-SA4R-I-35P-10-①-②-③-④	10	2	~ 1	34	50. 500		
RCP3-SA4R-I-35P-5-①-②-③-④	5	4	1.5	68	50~500 (50mm increments)		
RCP3-SA4R-I-35P-2.5-①-②-③-④	2.5	6	3	136	increments)		
Legend ① Stroke ② Compatible controller ③ Cable length ④ Options							

### ■ Stroke and Maximum Speed

Stroke Lead	$50\sim 500$ (50mm increments)
10	500
5	250
2.5	125

(Unit: mm/s)

Cable List						
Туре	Cable Symbol					
Standard (Robot Cables)						
Special Lengths	X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m)					

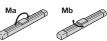
- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

Name	Option Code	See Page	
Brake-Equipped	В	→ A-25	
Cable Exit Direction (Top)	CJT	→ A-25	
Cable Exit Direction (Outside)	CJO	→ A-25	
Cable Exit Direction (Bottom)	CJB	→ A-25	
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
No Cover	NCO	→ A-33	
Reversed-home	NM	→ A-33	

### Actuator Specifications

Item	Description
Drive System	Ball screw Ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum (special alumite treated)
Allowable Static Load Moment	Ma: 6.8N·m Mb: 9.7N·m Mc: 13.3N·m
Allowable Dynamic Load Moment	Ma: 3.04N·m Mb: 4.31N·m Mc: 5.00N·m
Overhang Load Length	120mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

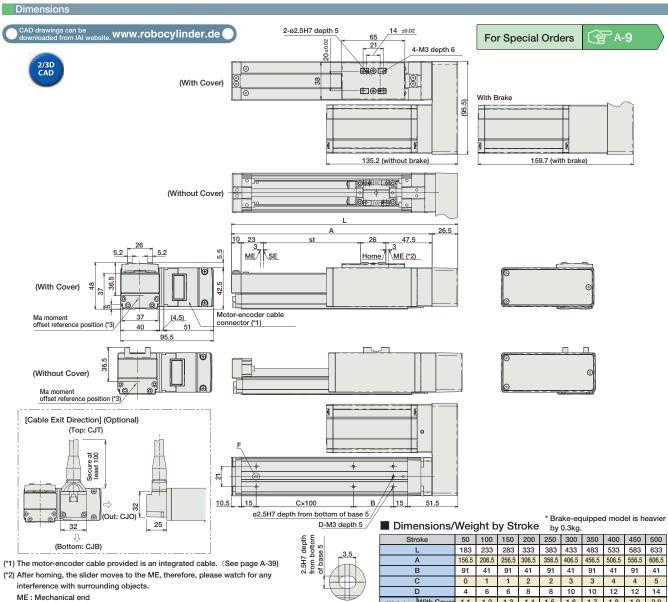
**Directions of Allowable Load Moment** 







5,000 km service life



SE : Stro

(\*3) Reference

otor-encoder cable provided is an integrated cable. (See page A-39)	om b	Α		156.5	206.5	256.5	306.5	356.5	406.5	456.5	506.5	556.5	606.5
oming, the slider moves to the ME, therefore, please watch for any	of fo	E	В	91	41	91	41	91	41	91	41	91	41
rence with surrounding objects.		С		0	1	1	2	2	3	3	4	4	5
· .	'\	[	)	4	6	6	8	8	10	10	12	12	14
echanical end		Weight	With Cover	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
roke end	Details of F	(kg)	No Cover	1.1	1.1	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.7
nce position for calculating the moment Ma	L												

Com	patible	Controllers

The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Page
Solenoid Valve Type		PMEC-C-35PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P477
		PSEP-C-35PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points				→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-35PI-NP-2-0	No homing necessary with simple absolute type.					→ P467
Positioner Type	Í	PCON-C-35PI-NP-2-0	Positioning is possible for up to 512 points	512 points				
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0	r contorning to possible for up to 512 points					
Pulse Train Input Type (Differential Line Driver)		PCON-PL-35PI-NP-2-0  Pulse train input type with differential indiversupport		(-)	DC24V	2A max.		→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-NP-2-0	Pulse train input type with open collector support	(-)				
Serial Communication Type		PCON-SE-35PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-35P	Dedicated to field network	768 points				→ P503
Program Control Type PSEL-C-1-35PI-NP-2-0 Programmed operation is possible Can operate up to 2 axes		1500 points			* This is foundly a final	→ P557		

\* This is for the single-axis PSEL.

PMEC (AMEC)
PSEP (ASEP)
ROBO NET
ERC2
PCON
ACON
SCON
PSEL
ASEL

Slider Type

Mini
Standard
Introllers tegrated

Rod
Type

Mini
Standard
Introllers tegrated

Mini
Table/Arm
/Flat Type

PMEC /AMEC /

RCP3-SA5R RoboCylinder Slider Type 50mm Width Pulse Motor Side-Mounted Motor  $\blacksquare$  Configuration: RCP3 - SA5R **42P** Encoder Motor Lead Compatible Controllers Cable Length Option Type Stroke I: Incremental N : None P : 1m 42P: Pulse motor 12:12mm 50: 50mm P1: PCON See Options below The Simple absolute encoder \* Be sure to specify which side the motor 6: 6mm RPCON 42 🗌 size S : 3m M : 5m 3: 3mm 800: 800mm PSEL models are is to be mounted

(50mm pitch

increments)

P3: PMEC

PSEP



labeled as "I".

\* See page Pre-35 for explanation of each code that make up the configuration name.

Technical References





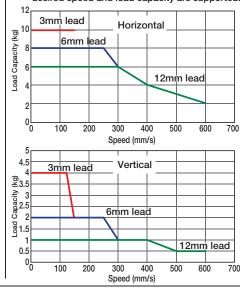
- (1) Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). These values are the upper limits for the acceleration.

Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

X  $\square\square$  : Custom Length

(ML/MR).



### Actuator Specifications

■ Lead and Load Capacity

Model	Lead (mm)	Max. Load Horizontal (kg)		Maximum Push Force (N)	Stroke (mm)
RCP3-SA5R-I-42P-12-①-②-③-④	12	~ 6	~ 1	47	F0 000
RCP3-SA5R-I-42P-6-①-②-③-④	6	~ 8	~ <b>2</b>	95	50~800 (50mm increments)
RCP3-SA5R-I-42P-3-①-②-③-④	3	10	~ 4	189	increments)

### ■ Stroke and Maximum Speed

				-		
Stroke Lead	$50\sim550$ (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
12	600	570	490	425	370	330
6	300	285	245	210	185	165
3	150	140	120	105	90	80

(Unit: mm/s)

Cable List				
Туре	Cable Symbol			
Standard	P (1m) S (3m)			
(Robot Cables)	M (5m)			
	X06 (6m) ~ X10 (10m)			
Special Lengths	X11 (11m) ~ X15 (15m)			
	X16 (16m) ~ X20 (20m)			

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

### Ontion List

Option List			
Name	Option Code	See Page	
Brake-Equipped	В	→ A-25	
Cable Exit Direction (Top)	CJT	→ A-25	
Cable Exit Direction (Outside)	CJO	→ A-25	
Cable Exit Direction (Bottom)	CJB	→ A-25	
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
No Cover	NCO	→ A-33	
Reversed-home	NM	→ A-33	

### Actuator Specifications

Item	Description				
Drive System	Ball screw Ø10mm C10 grade				
Positioning Repeatability	±0.02mm				
Lost Motion	0.1mm or less				
Base	Material: Aluminum (special alumite treated)				
Allowable Static Load Moment	Ma: 10.2N·m Mb: 14.6N·m Mc: 8.53N·m				
Allowable Dynamic Load Moment	Ma: 3.92N·m Mb: 5.58N·m Mc: 8.53N·m				
Overhang Load Length	130mm or less				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				

Directions of Allowable Load Moment



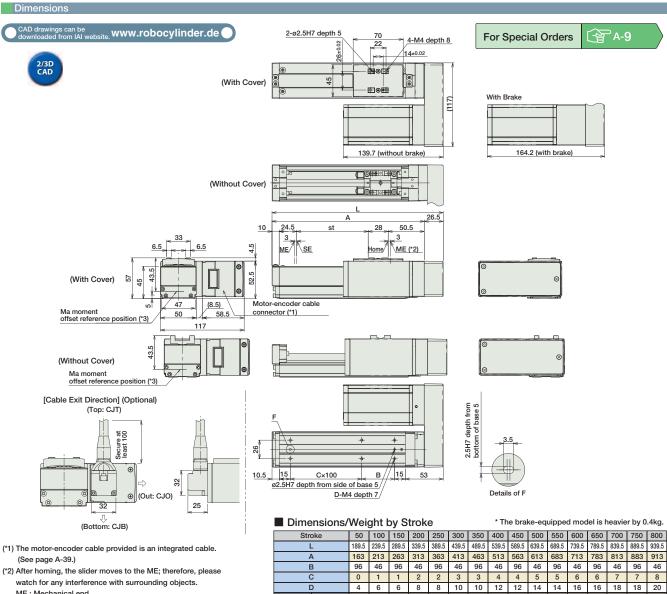




5,000 km service life



PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL SSEL SSEL



watch for any interference with surrounding objects.

SE : Stroke end

(\*3) Reference position for calculating the moment Ma

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners	ners AC115V AC230V		See P481	→ P47
Solenoid valve Type	1	PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.				. D40
Splash-Proof Solenoid Valve Type	I	PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.				→ P487
Positioner Type	Í	PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	Positioning is possible for up to 512 points	0.2 politic			
Pulse Train Input Type Differential Line Driver)	á	PCON-PL-42PI-NP-2-0	PI-NP-2-0 Pulse train input type with differential line driver support		DC24V	DC24V 2A max.	→ P52
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	()			
erial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P50
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points			→ P55

Weight (kg) | With Cover | 1.7 | 1.8 | 1.9 | 2.1 | 2.2 | 2.3 | 2.5 | 2.6 | 2.8 | 2.9 | 3.0 | 3.2 | 3.3 | 3.4 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.7

Slider Type

Mini
Standard
Introllers tegrated

Rod
Type

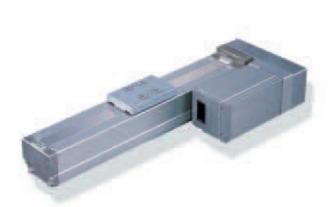
Mini
Standard
Introllers tegrated

Mini
Table/Arm
/Flat Type

RCP3-SA6R RoboCylinder Slider Type 60mm Width Pulse Motor Side-Mounted Motor  $\blacksquare$  Configuration: RCP3 — SA6R **42P** Encoder Motor Lead Compatible Controllers Cable Length Option Type Stroke N: None P:1m See Options below I: Incremental 42P: Pulse motor 12:12mm 50: 50mm P1: PCON The Simple absolute encoder \* Be sure to specify which side the motor 6: 6mm RPCON 42 🗌 size S : 3m M : 5m 3: 3mm 800: 800mm PSEL models are is to be mounted (50mm pitch P3: PMEC

increments)

PSEP



labeled as "I".

\* See page Pre-35 for explanation of each code that make up the configuration name.

Technical References



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.

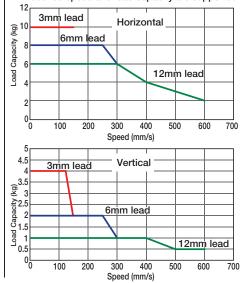
- Use the actuator specification table below to check the maximum speed at the stroke you desire. (2) Since the RCP3 series use the pulse motor, the load capacity decreases at high speeds.
- Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). These values are the upper limits for the acceleration.

## Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

X  $\square\square$  : Custom Length

(ML/MR).



## Actuator Specifications ■ Lead and Load Capacity

Model	Lead (mm)	Max. Load Horizontal (kg)		Maximum Push Force (N)	Stroke (mm)
RCP3-SA6R-I-42P-12-①-②-③-④	12	~ 6	~ 1	47	F0 000
RCP3-SA6R-I-42P-6-①-②-③-④	6	~ 8	~ 2	95	50~800 (50mm
RCP3-SA6R-I-42P-3-①-②-③-④	3	10	~ 4	189	increments)
Legend ① Stroke ② Compatible controller ③ Cable length	4 Option	ıs			

### ■ Stroke and Maximum Speed

Stroke Lead	$50\sim550$ (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
12	600	570	490	425	370	330
6	300	285	245	210	185	165
3	150	140	120	105	90	80
					/I I : A.	/->

Cable List					
Туре	Cable Symbol				
Standard	P (1m)				
(Robot Cables)	S (3m) M (5m)				
, ,	X06 (6m) ~ X10 (10m)				
Special Lengths	X11 (11m) ~ X15 (15m)				
	X16 (16m) ~ X20 (20m)				

- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

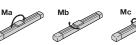
### Ontion List

Option List			
Name	Option Code	See Page	
Brake-Equipped	В	→ A-25	
Cable Exit Direction (Top)	CJT	→ A-25	
Cable Exit Direction (Outside)	CJO	→ A-25	
Cable Exit Direction (Bottom)	CJB	→ A-25	
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
No Cover	NCO	→ <b>A-33</b>	
Reversed-home	NM	→ A-33	

### Actuator Specifications

Item	Description		
Drive System	Ball screw Ø10mm C10 grade		
Positioning Repeatability	±0.02mm		
Lost Motion	0.1mm or less		
Base	Material: Aluminum (special alumite treated)		
Allowable Static Load Moment	Ma: 17.6N·m Mb: 25.2N·m Mc: 44.5N·m		
Allowable Dynamic Load Moment	Ma: 4.31N·m Mb: 6.17N·m Mc: 10.98N·m		
Overhang Load Length	150mm or less		
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)		

**Directions of Allowable Load Moment** 



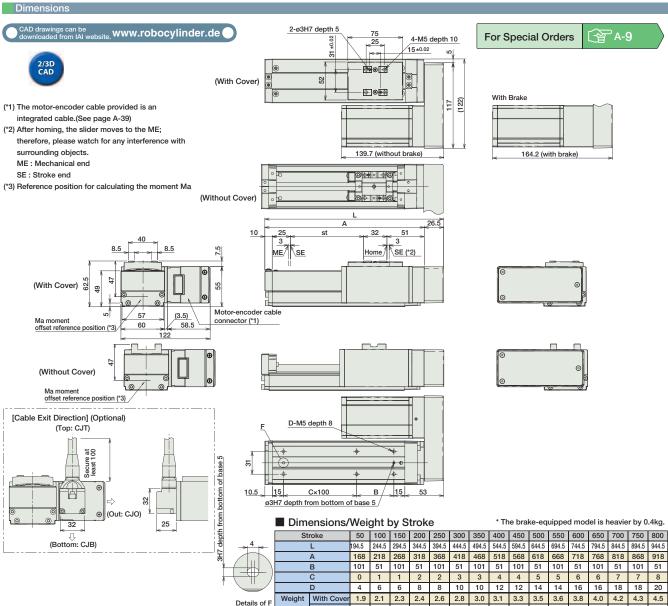




5,000 km service life



PMEC JAMEC
PSEP JASEP
ROBO NET
ERC2
PCON
ACON
SCON
PSEL
ASEL



The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.								
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Pag
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P477
Soleliold valve Type	1	PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points				→ P487
Splash-Proof Solenoid Valve Type	1	PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.					→ P46/
Positioner Type	Í	PCON-C-42PI-NP-2-0	Positioning is possible for up to 512	512 points				
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	points	012 points	DC24V	2A max.		
Pulse Train Input Type (Differential Line Driver)	í	PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support					→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)				
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-42P	Dedicated to field network	768 points				→ P500
Program Control Type	- I	PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points				→ P557

(kg)

No Cover 1.8 2.0 2.1 2.3 2.4 2.6 2.7 2.9 3.0 3.1 3.3 3.4 3.6 3.7 3.9 4.0

Slider Type

Mini
Standard
Introllers
tegrated

Rod
Type

Mini
Standard
Introllers
tegrated

Table/Arm
/Flat Type

# RCP2-SA5C RoboCylinder Slider Type 52mm Width Pulse Motor Straight Type Coupled

■ Configuration: RCP2 — SA5C — **42P** Encoder Stroke Compatible Controllers Option 42P: Pulse motor P1:PCON BE : Brake (Cable exiting end) 20:20mm N: None 50: 50mm BL: Brake (Cable exiting left)
BR: Brake (Cable exiting right) 12:12mm RPCON 42 🗌 size PSEL 6:6mm 800:800mm

I: Incremental
\* The Simple
absolute encoder
models are
labeled as "I". P:1m S:3m M:5m NM: Reversed-home 3:3mm (50mm pitch P3:PMEC X : Custom Length R : Robot cable SR : Slider Roller increments) PSEP



Technical References



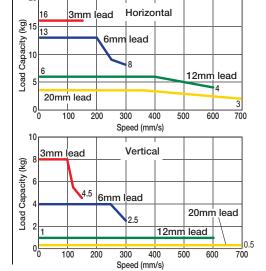
(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire. (2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.

3)The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). The maximum acceleration is 0.7G (0.3G when used vertically), however, note that the load capacity decreases at high accelerations. For more information, see the table of load capacity by acceleration, on page A-53.

Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications

### ■ Lead and Load Capacity

Model	Lead	Max. LoadCa	Stroke	
Wodel	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2-SA5C-I-42P-20- ①-②-③-④	20	~ 4	~ 0,5	
RCP2-SA5C-I-42P-12- ①-②-③-④	12	~ 6	~ 1	50-800
RCP2-SA5C-I-42P-6- ①-②-③-④	6	~ 13	~ 4	(50mm increments)
RCP2-SA5C-I-42P-3- ①-②-③-④	3	~16	~ 8	
Legend ① Stroke ② Compatible controller ③ Cable length	4 Option	ns		

### Stroke and Maximum Speed

Stroke Lead	50 ~ 550 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	1000	1000 980 850		740	650	580
12	600	540	460	400	360	300
6	300	270	230	200	180	150
3	150	135	115	100	90	75

Cable List

Oubic List		
Туре	Cable Symbol	
	P (1m)	
Standard	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	

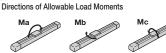
\* See page A-39 for cables for maintenance.

	_		
Name	Option Code	See Page	
Brake (Cable-exit end)	BE	→ A-25	
Brake (Cable exiting left)	BL	→ A-25	
Brake (Cable exiting right)	BR	→ A-25	
Reversed-home	NM	→ A-33	
Slider Roller	SR	→ A-36	

### Actuator Specifications

Item	Description					
Drive System	Ball screw Ø10mm C10 grade					
Positioning Repeatability	±0.02mm					
Lost Motion	0.1mm or less					
Base	Material: Aluminum (special alumite treated)					
Allowable Static Moment	Ma: 18.6 N·m Mb: 26.6 N·m Mc: 47.5 N·m					
Allowable Dynamic Moment (*)	Ma: 4.9 N·m Mb: 6.8 N·m Mc: 11.7 N·m					
Overhang Load Length	Ma direction: 150mm or less; Mb·Mc direction: 150mm or less					
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-condensing)					

(\*) Based on 5,000km travel life.









(Unit: mm/s)

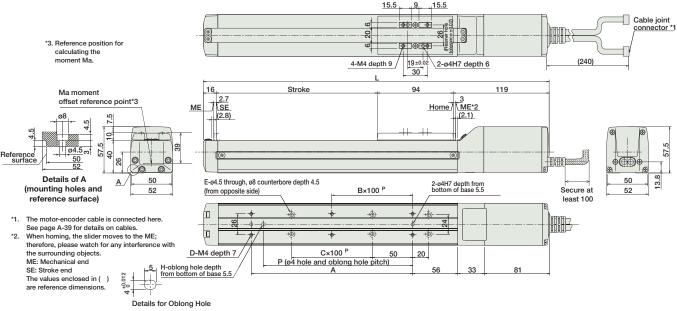
<sub>ebsite.</sub> www.robocylinder.de

For Special Orders





\*For the Reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.



Dimensions of BR: Brake cable the brake section exiting from right BE: Brake cable **★** exiting from rear : Brake cable exiting from left 5.1 ⊕ ⊚ ⊕ BL: Brake cable 13,3 41.5 14.5 ME 7 SE (2.8)

Adding a brake increases the actuator's overall length by 40mm (53.3mm with the cable coming out its end), and its weight by 0.4kg

■ Dimensions/Weight by Stroke																
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800

	Olloke	50	100	130	200	230	300	000	400	430	300	550	000	030	700	750	000
	L	279	329	379	429	479	529	579	629	679	729	779	829	879	929	979	1029
	Α	73	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
,	В	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
_	С	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
	D	4	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18
	E	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
	Н	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Р	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
	Weight (kg)	1.5	1.6	1.7	1.8	1.9	2.1	2.2	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.1	3.2

### Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Pag
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P477
Soletiola valve Type	1	PSEP-C-42PI-NP-2-0-H	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points				→ P48
Splash-Proof Solenoid Valve Type	<b>I</b>	PSEP-CW-42PI-NP-2-0-H	No homing necessary with simple absolute type.					7140
Positioner Type	i i	PCON-C-42PI-NP-2-0-H	Positioning is possible for up to 512 points	512 points				
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0-H	To state ming is possible for up to 012 points	orz pointo				
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0-H	Pulse train input type with differential line driver support	(-)	DC24V	2A max.		→ P52
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0-H	Pulse train input type with open collector support	(-)				
Serial Communication Type		PCON-SE-42PI-N-0-0-H	Dedicated to serial communication	64 points				
Field Network Type		RPCON-42P-H	Dedicated to field network	768 points				→ P50
Program Control Type		PSEL-C-1-42PI-NP-2-0-H	Programmed operation is possible Can operate up to 2 axes	1500 points				→ P55
							* This is for the single-	axis PS

Slider Type

Mini

Standard

Introllers
tegrated

Rod
Type

Mini

Standard

Introllers
tegrated

Table/Arm
/Flat Type

# RCP2-SA6C RoboCylinder Slider Type 58mm Width Pulse Motor Straight Type Coupled

■ Configuration: RCP2 — SA6C — **42P** Encoder Motor Stroke — Compatible Controllers Cable Length Option P1:PCON BE : Brake (Cable exiting end) 42P: Pulse motor I: Incremental 20 : 20mm 50: 50mm N: None P:1m S:3m BL: Brake (Cable exiting left)
BR: Brake (Cable exiting right) The Simple absolute encoder 42 🗌 size RPCON 12:12mm PSEL 800:800mm models are labeled as "I". 6:6mm M:5m NM : Reversed-home 3 : 3mm (50mm pitch P3:PMEC X : Custom Length SR : Slider Roller R : Robot cable \* See page Pre-35 for explanation of each code that makes up the configuration name. increments) PSEP



Technical References



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.

Use the actuator specification table below to check the maximum speed at the stroke you desire.

Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.

Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

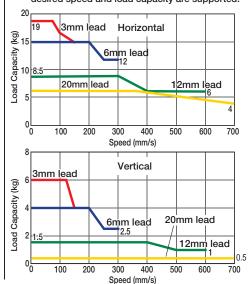
(3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used

The load capacity is based on operation at an acceleration of 0.3G (0.2G for the shifth-lead model, or when vertically).

The maximum acceleration is 0.7G (0.3G when used vertically), however, note that the load capacity decreat high accelerations. For more information, see the table of load capacity by acceleration, on page A-53.

### ■ Speed vs. Load Capacity

 $\overset{\cdot}{\text{Due}}$  to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications

### Lead and Load Capacity

Model	Lead	Max. LoadCa	pacity (Note 1)	Stroke
Model	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2-SA6C-I-42P-20- ①-②-③-④	20	~ 6	~ 0,5	
RCP2-SA6C-I-42P-12- ①-②-③-④	12	~ 8.5	~ 1.5	50-800
RCP2-SA6C-I-42P-6- ①-②-③-④	6	~ 15	~ 4	(50mm increments)
RCP2-SA6C-I-42P-3- ①-②-③-④	3	~19	~ 6	
Legend Stroke Compatible controller Cable length	4 Option	ıs		

### Stroke and Maximum Speed

Stroke Lead	50 ~ 550 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	20 1000		850	740	650	580
12 600		540	460	400	360	300
6	6 300		230	200	180	150
3 150		135	115	100	90	75

(Unit: mm/s)

Cable List									
Туре	Cable Symbol								
	P (1m)								
Standard	<b>S</b> (3m)								
	M (5m)								
	X06 (6m) ~ X10 (10m)								
Special Lengths	X11 (11m) ~ X15 (15m)								
	X16 (16m) ~ X20 (20m)								
	R01 (1m) ~ R03 (3m)								
	R04 (4m) ~ R05 (5m)								
Robot Cable	R06 (6m) ~ R10 (10m)								
	R11 (11m) ~ R15 (15m)								
	R16 (16m) ~ R20 (20m)								

<sup>\*</sup> See page A-39 for cables for maintenance.

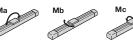
### Option List

Name	Option Code	See Page	
Brake (Cable-exit end)	BE	→ A-25	
Brake (Cable exiting left)	BL	→ A-25	
Brake (Cable exiting right)	BR	→ A-25	
Reversed-home	NM	→ A-33	
Slider Roller	SR	→ A-36	

### Actuator Specifications

Item	Description
Drive System	Ball screw Ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum (special alumite treated)
Allowable Static Moment	Ma: 38.3 N·m Mb: 54.7 N·m Mc: 81.0 N·m
Allowable Dynamic Moment (*)	Ma: 8.9 N·m Mb: 12.7 N·m Mc: 18.6 N·m
Overhang Load Length	Ma direction: 220mm or less; Mb·Mc direction: 220mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-condensing)

(\*) Based on 5,000km travel life. Directions of Allowable Load Moments







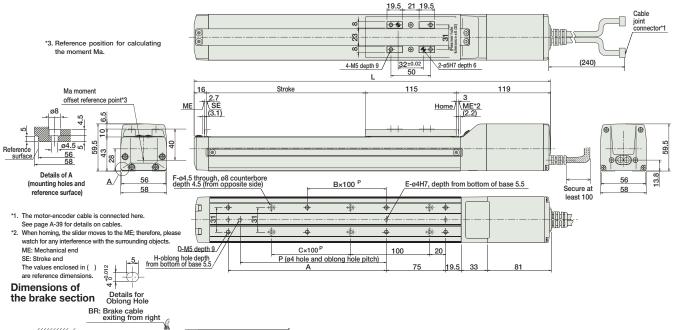
CAD drawings can be downloaded from IAI website. www.robocylinder.de

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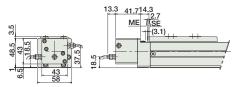




\*For the Reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.



# Extung from right S BE: Brake cable exiting from rear BL: Brake cable exiting from left 13.3 41.714.3



\* Adding a brake increases the actuator's overall length by 40mm (53.3mm with the cable coming out its end), and its weight by 0.4kg.

### ■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
П	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
Α	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
В	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
O	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
D	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
Е	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
Н	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Р	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight (kg)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	2.9	3.1	3.2	3.4	3.5	3.6	3.8	3.9

### Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solenold valve type		PSEP-C-42PI-NP-2-0-H	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0-H	No homing necessary with simple absolute type.				→ F407
Positioner Type	Í	PCON-C-42PI-NP-2-0-H	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0-H	. containing to possible for up to 0.12 points	012 pointe			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0-H	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0-H	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-42PI-N-0-0-H	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P-H	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0-H	Programmed operation is possible Can operate up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

, po

Standard

Rod

Туре

Mini

Standard

Controllers Integrated

able/Arm Flat Type

Mini

Gripper/

notary rype

Cleanroom

Splash-Proof

Controllers

/AMEC

ROBO

ERC2

PCON

ACON

SCON

PSEL

ASEL

SSEL

XSEL

ulse Moto

Servo Motor

Servo Moto

Linear Mot

PMEC /AMEC /AMEC /AMEC /AMEC /AMEC /AMEC /AMEC /ASEP /

## CP2-SA7C RoboCylinder Slider Type 73mm Width Pulse Motor Straight Type Coupled

■ Configuration: RCP2 — SA7C — **56P** Cable Length Motor Stroke - Compatible Controllers Option BE : Brake (Cable exiting end)

I: Incremental
\* The Simple
absolute encoder
models are
labeled as "I". 56P: Pulse motor 56 🗌 size

16:16mm 8: 8mm 4: 4mm

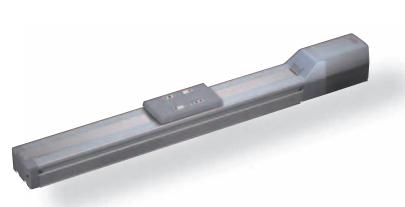
50: 50mm 800:800mm (50mm pitch increments)

P1:PCON RPCON PSEL P3:PMEC PSEP

N: None P:1m S:3m M:5m

BL: Brake (Cable exiting left)
BR: Brake (Cable exiting right) NM : Reversed-home

X : Custom Length SR : Slider Roller R : Robot cable

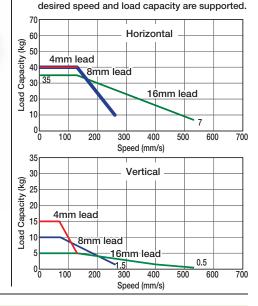


Technical References



- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational Use the actuator specification table below to check the maximum speed at the stroke you desire
- (2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 4mm-lead model, or when used vertically). These values are the upper limits for the acceleration.

■ Speed vs. Load Capacity Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your



### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Cap	pacity (Note 1)	Stroke
Wiodei	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2-SA7C-I-56P-16-①-②-③-④	16	~ 35	$\sim$ 5	
RCP2-SA7C-I-56P-8-①-②-③-④	8	~ 40	~ 10	50 ~ 800 (50mm increments)
RCP2-SA7C-I-56P-4-①-②-③-④	4	40	$\sim$ 15	indicinents)
Legend ① Stroke ② Compatible controller ③ Cable length	4 Options			

Stroke Lead	$50 \sim 700 \\ \text{(50mm increments)}$	~ 800 (mm)
16	533	480
8	266	240
4	133	120
		(Unit: mm/s)

Cable Symbol
P (1m)
S (3m)
M (5m)
X06 (6m) ~ X10 (10m)
X11 (11m) ~ X15 (15m)
X16 (16m) ~ X20 (20m)
R01 (1m) ~ R03 (3m)
R04 (4m) ~ R05 (5m)
R06 (6m) ~ R10 (10m)
R11 (11m) ~ R15 (15m)
R16 (16m) ~ R20 (20m)

\* See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Brake (Cable-exit end)	BE	→ A-25	
Brake (Cable exiting left)	BL	→ A-25	
Brake (Cable exiting right)	BR	→ A-25	
Reversed-home	NM	→ A-33	
Slider Roller	SR	→ A-36	
		•	•

### Actuator Specifications

Item Description						
Drive System	Ball screw ø12mm C10 grade					
Positioning Repeatability	±0.02mm					
Lost Motion	0.1mm or less					
Base	Material: Aluminum (special alumite treated)					
Allowable Static Moment	Ma: 50.4 N·m Mb: 71.9 N·m Mc: 138.0 N·m					
Allowable Dynamic Moment (*)	Ma: 13.9 N·m Mb: 19.9 N·m Mc: 38.3 N·m					
Overhang Load Length	Ma direction: 230mm or less; Mb·Mc direction: 230mm or less					
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-condensing)					

(\*) Based on 5,000km travel life Directions of Allowable Load Moments











Dimensions <sub>bsite.</sub> www.robocylinder.de For Special Orders \*For the Reversed-home model, the dimensions 2/3D CAD (distance to home) on the motor-side and that on the opposite side are flipped. \*3. Reference position for calculating the moment Ma. Cable joint connector \*1 ● ● ● 90 32±0.02 50 4-M5 depth 10 / 2-ø5H7 depth 10 18 Stroke 126 159 ME / SE (4.8) offset reference point \*3 Home / ME\*2 33 0 Reference surfac 20 **•** <u>)</u> <u>@</u> Details of A F-ø6 through, ø9.5 counterbore depth 5.5 (from opposite side) Α 71 B×100 P (mounting holes and E-ø4H7, depth from bottom of base 6 Secure at reference surface) \* Adding a brake will increase the actuator's overall 4 length by 43mm (56.3mm with the cable coming out the end), and its weight by 0.6kg. 40 + + + +

C×100 P 100
P (ø4 hole and oblong hole pitch)

BR: Brake cable exiting from right **∳**-**∳**|**⊕**|**∳** BE: Brake cable exiting from rear **♦** ⊕**♦** 5.1 BL: Brake cable exiting from left 13.3 44.716.3 ME 7 SE (4.8)

Details for Oblong Hole

H-oblong hole depth from bottom of base 6

0

D-M5 depth 9

The motor-encoder cable is connected here. See page A-39 for details on cables.

When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.

ME: Mechanical end

103.5

SE: Stroke end
The values enclosed in "( )" are reference dimensions.

■ Dimensions/Weight by Stroke

- Dillicits	10113/	vvcigi	it by	Olion	-											
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	353	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103
Α	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
В	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
С	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
D	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
Н	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Р	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight (kg)	3.1	3.3	3.6	3.8	4.0	4.2	4.5	4.7	4.9	5.1	5.4	5.6	5.8	6.0	6.3	6.5

30

51.5

### Compatible Controllers

**Dimensions of** 

the brake section

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-56PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Colonial Valve Type		PSEP-C-56PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-56PI-NP-2-0	No homing necessary with simple absolute type.				71407
Positioner Type	Í	PCON-C-56PI-NP-2-0	Positioning is possible for up to 512 points	512 points		2A max.	
Safety-Compliant Positioner Type		PCON-CG-56PI-NP-2-0	residenting is possible for up to 672 points	012 points	DC24V		
Pulse Train Input Type (Differential Line Driver)	ē	PCON-PL-56PI-NP-2-0	Pulse train input type with differential line driver support	()			→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-56P	Dedicated to field network	768 points			 → P503
Program Control Type	Í	PSEL-C-1-56PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points			→ P557

RoboCylinder Slider Type 60mm Width Pulse Motor Straight Type Coupled  $\blacksquare$  Configuration: RCP2 - SS7C -**42P** Encode I: Incremental
\* The Simple
absolute encoder P1:PCON B : Brake 42P: Pulse motor 12:12mm N: None 50: 50mm P:1m S:3m M:5m NM : Reversed-home RPCON 42 🗌 size 6: 6mm PSEL SR: Slider Roller 3: 3mm 600:600mm models are labeled as "I". (50mm pitch P3:PMEC

increments)

PSEP

I Capacity (kg) 20 15

pg 10

0 0

14

12

중 10

Capacity

Load

100

100

200

3mm lead

200

300

6mm.lead



\* See page Pre-35 for explanation of each code that makes up the configuration name.

Technical References



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.

Use the actuator specification table below to check the maximum speed at the stroke you desire.

(2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

(3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically).
These values are the upper limits for the acceleration.

Lead

(mm)

12

6

3

(Note 1) Please note that the maximum load capacity decreases as the speed increases.

300 Speed (mm/s)

Custom Length

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

> Horizontal 6mm lead

> > 400

Speed (mm/s)

Vertical

12mm lead

500

12mm lead

6

700

600

600

(Unit: mm/s)

■ Speed vs. Load Capacity

3mm lead

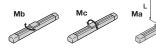
			_ ~
Max. Load Ca	pacity (Note 1)	Stroke	
Horizontal (kg)	Vertical (kg)	(mm)	Lead
~ 30	~ 4		
~ 30	~ 8	50 ~ 600 (50mm increments)	
~ 30	∼ <b>12</b>	increments)	

Stroke Lead	$50 \sim 500$ (50mm increments)	~ 600 (mm)
12	600	470
6	300	230
3	150	115

Actuator Specifications

Cable List			
Туре	Cable Symbol		
Type	Cable Symbol		
	P (1m)		
Standard	<b>S</b> (3m)		
	M (5m)		
	X06 (6m) ~ X10 (10m)	06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)		
_	X16 (16m) ~ X20 (20m)		
	R01 (1m) ~ R03 (3m)		
	R04 (4m) ~ R05 (5m)		
Robot Cable	R06 (6m) ~ R10 (10m)		









### Option List

Actuator Specifications Lead and Load Capacity

Model

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

RCP2-SS7C-I-42P-12-10-20-30-4

RCP2-SS7C-I-42P-6- 1 - 2 - 3 - 4

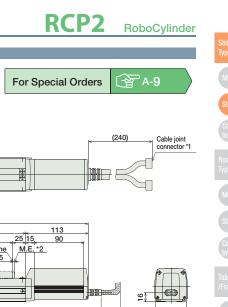
RCP2-SS7C-I-42P-3-1-2-3-4

R11 (11m)  $\sim$  R15 (15m)

R16 (16m) ~ R20 (20m)

See page A-39 for cables for maintenance.

•			
Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	
Slider Roller	SR	→ A-36	



3 3

3

6.1 6.4

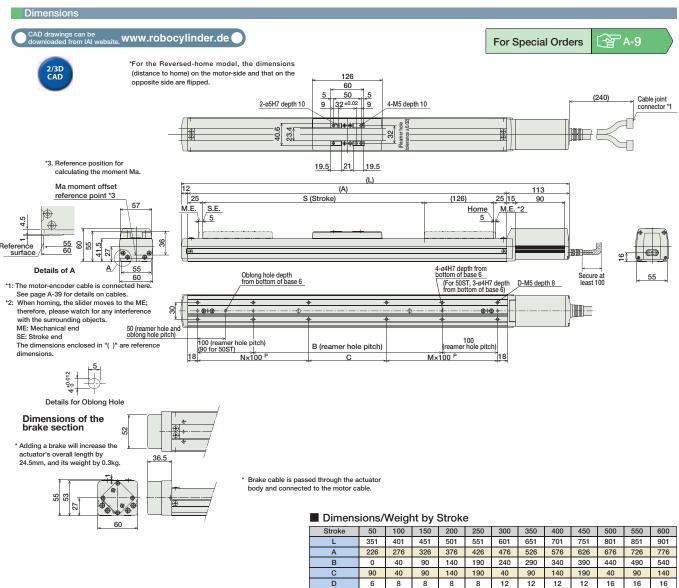
3

3

3

6.7

RCP2-SS7C **34** 



The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.											
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Pag			
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P47			
Colciloid Valve Type		PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points				→ P48			
Splash-Proof Solenoid Valve Type	Ţ.	PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.					→ P40			
Positioner Type	ĺ	PCON-C-42PI-NP-2-0		512 points							
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points							
Pulse Train Input Type (Differential Line Driver)	É	PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V	2A max.		→ P525			
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)							
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points							
Field Network Type		RPCON-42P	Dedicated to field network	768 points				→ P50			
Program Control Type	Í	PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points				→ P55			

М

N

Weight (kg)

1 1

0 1

3.1

3.4 3.7 4.0 4.3

1 1

1 1 1 2

1 2 2 2 2

> 4.7 5.0 5.4 5.7

2 2 2

Slider Type

Mini

Standard

Introllers
tegrated

Rod
Type

Mini

Standard

## RoboCylinder Slider Type 80mm Width Pulse Motor Straight Type Steel Base Coupled

 $\blacksquare$  Configuration: RCP2 - SS8C -**56P** Motor Encoder B : Brake N: None

I: Incremental
\* The Simple
absolute encoder 56P: Pulse motor 20:20mm 50: 50mm 56 🗌 size 10:10mm

5: 5mm models are labeled as "I". \* See page Pre-35 for explanation of each code that makes up the configuration name.

1000:1000mm (50mm pitch

increments)

P1:PCON RPCON PSEL P3:PMEC PSEP

P:1m S:3m M:5m NM : Reversed-home SR: Slider Roller

X : Custom Length R : Robot cable



Technical References

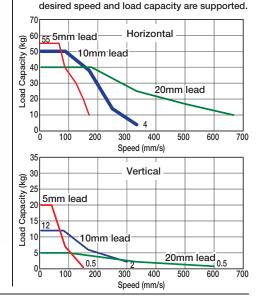


(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.

Use the actuator specification table below to check the maximum speed at the stroke you desire (2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.

Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported. (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 5mm-lead model, or when used vertically). These values are the upper limits for the acceleration.

### ■ Speed vs. Load Capacity Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your



### Actuator Specifications

### ■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Ca	Stroke	
Model	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2-SS8C-I-56P-20-①-②-③-④	20	~ 40	$\sim$ 5	
RCP2-SS8C-I-56P-10-①-②-③-④	10	~ 50	~ 12	50 ~ 1000 (50mm increments)
RCP2-SS8C-I-56P-5-①-②-③-④	5	~ 55	$\sim$ 20	inorements)
Legend ① Stroke ② Compatible controller ③ Cable length	4 Options			

Stroke Lead	$50 \sim 800$ (50mm increments)	~ 900 (mm)	~ 1000 (mm)		
20	666 〈600〉	625 〈600〉	515		
10	333 〈300〉	310 〈300〉	255		
5	165 〈150〉	155 〈150〉	125		

\* The values enclosed in < > apply to (Unit: mm/s) vertical setting.

Туре	Cable Symbol	
	P (1m)	
Standard	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	

Special Lengths X11 (11m) ~ X15 (15m) **X16** (16m) ~ X20 (20m) R03 (3m) R01 (1m) ~ R04 (4m) ~ R05 (5m) Robot Cable R06 (6m) R10 (10m) R11 (11m) ~ R15 (15m) R16 (16m) ~ R20 (20m)

\* See page A-39 for cables for maintenance.

### Actuator Specifications

Item	Description
Drive System	Ball screw ø16mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Special alloy steel
Allowable Static Moment	Ma: 198.9 N·m Mb: 198.9 N·m Mc: 416.7 N·m
Allowable Dynamic Moment (*)	Ma: 36.3 N·m Mb: 36.3 N·m Mc: 77.4 N·m
Overhang Load Length	Ma direction: 450mm or less; Mb·Mc direction: 450mm or less
Ambient Operating Temp /Humidity	0~40°C 85% RH or less (Non-condensing)

(\*) Based on 10,000km travel life. Directions of Allowable Load Moments









Ontion Liet

Cable List

Option List			
Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	
Slider Boller	SB	→ Δ-36	

138

30 14 M.E. \*2

D-M8 depth 10

### <sub>bsite.</sub> www.robocylinder.de

For Special Orders



(240)



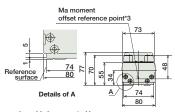
\*For the reversed-home model, the dimensions

(distance to home) on the motor-side and that on the opposite side are flipped.

30 M.E.

S.E. 5

\*3. Reference position for calculating the moment Ma.



- \*1: The motor-encoder cable is connected here.
- See page A-39 for details on cables.

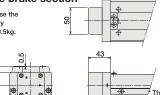
  When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.
  ME: Mechanical end
  SE: Stroke end

The dimensions enclosed in "( )" are reference

### Dimensions of the brake section

\* Adding a brake will increase the actuator's overall length by 26mm, and its weight by 0.5kg.

70 59





N×100 P

100 (reamer hole pitch)
50 (reamer and oblong hole pitch)

he brake cable is passed through the actuator body and connected to the motor cable.

90 75 15 45 ±0.02 15

35 20 35

S (Stroke)

Oblong hole depth from bottom of base 6

(A)

B (reamer hole pitch)

4-M8 depth 10

2-ø8H7 depth 10

(170)

N×100 P 100 (reame

Home

15

45 Teamer h

(L)

### ■ Dimensions/Weight by Stroke

			~,	0	_															
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385
Α	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
В	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
Weight (kg)	6.6	7.1	7.6	8.1	8.6	9.2	9.7	10.2	10.7	11.3	11.7	12.3	12.8	13.4	13.9	14.5	15.0	15.5	16.1	16.6

### Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Page	
Solenoid Valve Type		PMEC-C-56PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P477	
Colonola varo type	1	PSEP-C-56PI-NP-2-0	Operable with same signal as solenoid valve.	3 points					
Splash-Proof Solenoid Valve Type	Ţ,	PSEP-CW-56PI-NP-2-0	Supports both single and double solenoid types.  No homing necessary with simple absolute type.				→ P487		
Positioner Type	Ĭ	PCON-C-56PI-NP-2-0	Positioning is possible for up to 512 points	512 points					
Safety-Compliant Positioner Type		PCON-CG-56PI-NP-2-0	Todalorating is possible for up to 012 points	312 points					
Pulse Train Input Type (Differential Line Driver)	Í	PCON-PL-56PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.		→ P525	
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Pulse train input type with open collector support		(-)				
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points					
Field Network Type		RPCON-56P	Dedicated to field network	768 points					→ P503
Program Control Type		PSEL-C-1-56PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points				→ P557	
* This is for the single-axis F					axis PS				

IAI

RCP2-SS8C

### 2-HS8C RoboCylinder High-Speed Slider Type 80mm Width Pulse Motor Straight Type Steel Base Coupled

RCP2 - HS8C -**P2** 86P ■ Configuration: Compatible Controllers -Туре P2:PCON-CF 86P: Pulse motor 30:30mm I: Incremental 50: 50mm

56 🗌 high

output

1000:1000mm (50mm pitch increments)

B : Brake N: None P:1m S:3m M:5m NM: Reversed-home SR: Slider Roller

X .: Custom Length R .: Robot cable



Technical References



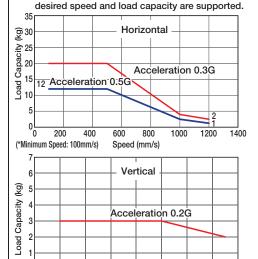
(1) Due the large lead of the ball screw in high-speed actuators, operating at low speeds may cause vibration and/or noise. Therefore, use the actuator at speeds over 100mm/s. (2) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.

\* See page Pre-35 for explanation of each code that makes up the configuration name.

Use the actuator specification table below to check the maximum speed at the stroke you desire. (3) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are

(4) The load capacity is based on operation at an acceleration of 0.3G (0.2G when used vertically). The upper limit for the acceleration is 0.5G for horizontal use and 0.2G for vertical use

### ■ Speed vs. Load Capacity Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your



### Actuator Specifications

supported.

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead (mm)	Max. Load Ca Horizontal (kg)	vertical (kg)	Stroke (mm)
RCP2-HS8C-I-86P-30-①-P2-②-③	30	~ 20	~ 3	50 ~ 1000 (50mm increments)
Legend ① Stroke ② Cable length ③ Options				

300 400

200

(\*Minimum Speed: 100mm/s)

Stroke Lead	$50 \sim 800$ (50mm increments)	~ 900 (mm)	~ 1000 (mm)
30	1200 〈750〉	1000 〈750〉	800 <750>

Speed (mm/s)

500

\* The values enclosed in < > apply to (Unit: mm/s) vertical setting.

Cable List					
Туре	Cable Symbol				
	P (1m)				
Standard	S (3m)				
	M (5m)				
	X06 (6m) ~ X10 (10m)				
Special Lengths	X11 (11m) ~ X15 (15m)				
	X16 (16m) ~ X20 (20m)				
	R01 (1m) ~ R03 (3m)				
	R04 (4m) ~ R05 (5m)				
Robot Cable	R06 (6m) ~ R10 (10m)				
	R11 (11m) ~ R15 (15m)				
	R16 (16m) ~ R20 (20m)				

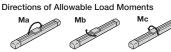
\* See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	
Slider Roller	SR	→ A-36	

## Actuator Specifications

Item	Description		
Drive System	Ball screw ø16mm C10 grade		
Positioning Repeatability	±0.02mm		
Lost Motion	0.1mm or less		
Base	Material: Special alloy steel		
Allowable Static Moment	Ma: 198.9 N·m Mb: 198.9 N·m Mc: 416.7 N·m		
Allowable Dynamic Moment (*)	Ma: 36.3 N·m Mb: 36.3 N·m Mc: 77.4 N·m		
Overhang Load Length	Ma direction: 450mm or less; Mb·Mc direction: 450mm or less		
Ambient Operating Temp /Humidity	0~40°C 85% RH or less (Non-condensing)		

(\*) Based on 10,000km travel life.





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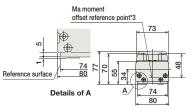


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(distance to home) on the motor-side and that on the opposite side are flipped.

\*3. Reference position for calculating the moment Ma.



\*1: The motor-encoder cable is connected here

See page A-39 for details on cables.

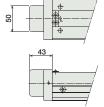
\*2: When homing, the slider moves to the ME; therefore please watch for any interference with the surrounding objects ME: Mechanical end SE: Stroke end

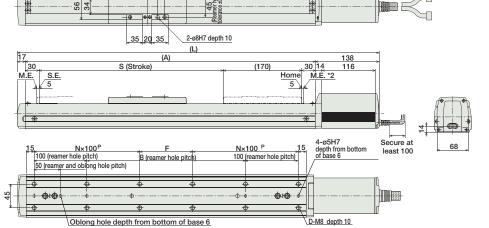
The dimensions enclosed in "( )" are reference dimensions

#### **Dimensions of** the brake section

\* Adding a brake will increase the actuator's overall length by 26mm, and its weight by 0.5kg.







4-M8 depth 10

Details for Oblong Hole

The brake cable is passed through the actuator body and connected to the motor cable.

75

### ■ Dimensions/Weight by Stroke

Γ	Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
	L	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385
	Α	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
	В	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Ī	D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
Ī	F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
	N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
	Weight (kg)	6.6	7.1	7.6	8.1	8.6	9.2	9.7	10.2	10.7	11.3	11.7	12.3	12.8	13.4	13.9	14.5	15.0	15.5	16.1	16.6

#### Compatible Controllers

The controller for the RCP2-HS8C type is a dedicated controller.

	Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Po	ositioner Type		PCON-CF-86PI-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	6A max.	→ <b>P525</b>

• Please note that the encoder cable is a dedicated CF-type cable that is different from the PCON-C/CG/CY/PL/PO/SE controllers.

• Note that a simple absolute unit cannot be used.

Туре

Slider Type

Mini

Standard

Introllers
tegrated

Rod
Type

Mini

Standard

## P2-SA5R RoboCylinder Slider Type 52mm Width Pulse Motor Side-Mounted Motor RCP2 - SA5R -**42P** ■ Configuration:

Encoder I: Incremental
\* The Simple
absolute encoder 42P: Pulse motor 12:12mm 42 🗌 size 6: 6mm

models are labeled as "I".

3: 3mm \* See page Pre-35 for explanation of each code that makes up the configuration name.

50: 50mm 800:800mm (50mm pitch increments)

P1:PCON RPCON PSEL P3:PMEC PSEP

N: None P:1m S:3m M:5m **Custom Length** 

See Options below \* Be sure to specify which side the motor is to be mounted (ML/MR).



Technical References



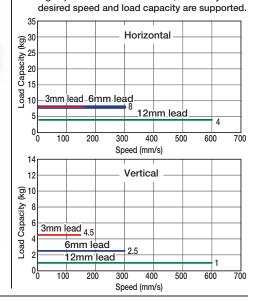


(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.

Use the actuator specification table below to check the maximum speed at the stroke you desire.

- (2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). These values are the upper limits for the acceleration.

■ Speed vs. Load Capacity Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your



## Actuator Specifications ■ Lead and Load Capacity

(Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Ca	pacity (Note 1)	Stroke	
Wiodei	(mm)	Horizontal (kg)	Vertical (kg)	(mm)	
RCP2-SA5R-I-42P-12-①-②-③-④	12	4	1		
RCP2-SA5R-I-42P-6-①-②-③-④	6	8	2.5	50 ~ 800 (50mm increments)	
RCP2-SA5R-I-42P-3-①-②-③-④	3	8	4.5	increments)	
Legend ① Stroke ② Compatible controller ③ Cable length	4 Options				

	Stro	ke	and M	laxim	ium s	Spee	d
$\overline{}$	Stroko						

Stroke Lead	$50 \sim 550$ (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
12	600	540	460	400	360	300
6	300	270	230	200	180	150
3	150	135	115	100	90	75
					/Llni+	mm/e)

Туре	Cable Symbol	
	P (1m)	
Standard	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	

R16 (16m)  $\sim$  R20 (20m)

	*	See	page	A-39	for	cables	for	maintenance
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#### Option List

Cable List

Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
Slider Roller	SR	→ A-36	

#### Actuator Specifications

Item	Description
Drive System	Ball screw Ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum (white alumite treated)
Allowable Static Moment	Ma: 18.6 N·m Mb: 26.6 N·m Mc: 47.5 N·m
Allowable Dynamic Moment (*)	Ma: 4.9 N·m Mb: 6.8 N·m Mc: 11.7 N·m
Overhang Load Length	Ma direction: 150mm or less; Mb·Mc direction: 150mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-condensing)

(\*) Based on 5,000km travel life.

**Directions of Allowable Load Moments** 









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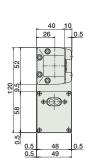


\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

- \*1. The motor-encoder cable is connected here
- See page A-39 for details on cables.
  When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.
  ME: Mechanical end

SE: Stroke end
The values enclosed in "( )" are reference dimensions.

\* The offset reference position for the moment Ma is the same as the SA5 type. (See P28)



Stroke 67 Home 3 ME\*2 5 30 5 5.5 19±0.02 5.5 2-ø4H7 depth 6 8 9 9 120 法細盟 Cable joint connector \*1 6 24 (240)76

2-ø4H7, depth from bottom of base 5.5

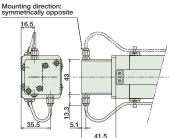
32

B×100 P



#### Dimensions of the brake section

\* Adding a brake will increase the actuator's overall length by 40mm, and its weight by 0.4kg



\* For brake cable exiting from the side, it can only exit from the motor side.

C-M4 depth 7 H-oblong hole, depth from bottom of base 5.5



Details for Oblong Hole

### ■ Dimensions/Weight by Stroke

		_	•													
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	227	277	327	377	427	477	527	577	627	677	727	777	827	877	927	977
Α	73	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
В	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
С	4	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18
Н	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Р	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight (kg)	2.0	2.1	2.2	2.3	2.4	2.6	2.7	2.8	2.9	3.0	3.1	3.3	3.4	3.5	3.6	3.7

P (ø4 hole and oblong hole pitch)

#### Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solellolu valve lype		PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type	Valve Type  PSEP-CW-42PI-NP-2-0  ositioner Type  PCON-C-42PI-NP-2-0  fety-Compliant  PCON-C-42PI-NP-2-0		No homing necessary with simple absolute type.				→ F407
Positioner Type			Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type			Toolius inig is possible for up to 012 points	OTZ points			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type	PCON-SE-42PI-N-0-0		Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

■ Configuration:

Slider Type

Mini
Standard
Introllers
tegrated

Rod
Type

Mini
Standard

Introllers
tegrated

PMEC //AMEC //AM

# P2-SA6R RoboCylinder Slider Type 58mm Width Pulse Motor Side-Mounted Motor

RCP2 - SA6R -**42P** Туре Encode

\* See page Pre-35 for explanation of each code that makes up the configuration name.

I: Incremental 42P: Pulse motor 12:12mm The Simple absolute encoder models are labeled as "I". 42 🗌 size

6: 6mm 3: 3mm

50: 50mm 800:800mm (50mm pitch increments)

P1:PCON RPCON PSEL P3:PMEC PSEP

N: None P:1m S:3m M:5m

See Options below \* Be sure to specify which side the motor is to be mounted (ML/MR).

Custom Length



Technical References

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.

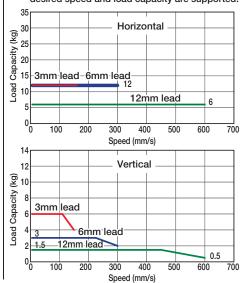
Use the actuator specification table below to check the maximum speed at the stroke you desire.

(2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

(3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically).
These values are the upper limits for the acceleration.

■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Cap	, ,	Stroke
INICUCI	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2-SA6R-I-42P-12-①-②-③-④	12	6	$\sim$ 1.5	
RCP2-SA6R-I-42P-6-①-②-③-④	6	12	~ 3	50 ~ 800 (50mm increments)
RCP2-SA6R-I-42P-3-①-②-③-④	3	12	~ 6	indicinents)
Legend ①Stroke ②Compatible controller ③Cable length	4 Options			

## ■ Stroke and Maximum Speed

Stroke Lead	$50\sim550$ (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)							
Leau	,	()	(	()	(*******)	(,							
12	600	540	460	400	360	300							
6	300	270	230	200	180	150							
3	150	135	115	100	90	75							
		(Unit: mm/s)											

Cable Symbol
P (1m)
S (3m)
M (5m)
X06 (6m) ~ X10 (10m)
X11 (11m) ~ X15 (15m)
X16 (16m) ~ X20 (20m)
R01 (1m) ~ R03 (3m)
R04 (4m) ~ R05 (5m)
R06 (6m) ~ R10 (10m)
R11 (11m) ~ R15 (15m)
R16 (16m) ~ R20 (20m)

<sup>\*</sup> See page A-39 for cables for maintenance.

#### Option List

<u> </u>			
Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
Slider Roller	SR	→ A-36	

#### Actuator Specifications

Item	Description							
Drive System	Ball screw Ø10mm C10 grade							
Positioning Repeatability	±0.02mm							
Lost Motion	0.1mm or less							
Base	Material: Aluminum (white alumite treated)							
Allowable Static Moment	Ma: 38.3 N·m Mb: 54.7 N·m Mc: 81.0 N·m							
Allowable Dynamic Moment (*)	Ma: 8.9 N·m Mb: 12.7 N·m Mc: 18.6 N·m							
Overhang Load Length	Ma direction: 220mm or less; Mb·Mc direction: 220mm or less							
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-condensing)							

(\*) Based on 5,000km travel life.

**Directions of Allowable Load Moments** 









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\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

- The motor-encoder cable is connected here. See page A-39 for details on cables. When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding

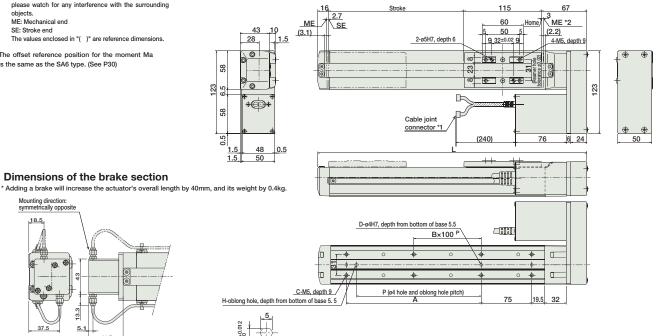
objects. ME: Mechanical end

> Mounting direction: symmetrically opposite 18.5

SE: Stroke end
The values enclosed in "( )" are reference dimensions.

Dimensions of the brake section

\*The offset reference position for the moment Ma is the same as the SA6 type. (See P30)



 $<sup>^{\</sup>star}$  For brake cable exiting from the side, it can only exit from the motor side.

#### ■ Dimensions/Weight by Stroke

Details for Oblong Hole

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998
Α	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
В	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
С	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Н	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Р	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight (kg)	2.3	2.5	2.6	2.7	2.9	3.0	3.2	3.3	3.4	3.6	3.7	3.9	4.0	4.1	4.3	4.4

#### Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Soleliold valve Type	1	PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.				→ F407
Positioner Type		PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	r containing to possible for apr a 612 points	ove positio			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P	Dedicated to field network	768 points			 → P503
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

■ Configuration:

Slider Type

Mini

Standard

ntrollers
tegrated

Rod
Type

Mini

Standard

ntrollers
tegrated

# 2-SA7R RoboCylinder Slider Type 73mm Width Pulse Motor Side-Mounted Motor

RCP2 - SA7R -**56P** Туре Encoder

\* See page Pre-35 for explanation of each code that makes up the configuration name.

I: Incremental
\* The Simple
absolute encoder 56P: Pulse motor 16:16mm 56 🗌 size models are labeled as "I".

8: 8mm 4: 4mm

50: 50mm 800:800mm (50mm pitch increments)

P1:PCON RPCON PSEL P3:PMEC PSEP

N: None P:1m S:3m M:5m

See Options below Be sure to specify which side the motor is to be mounted (ML/MR).

Custom Length

Pictured: Left-mounted motor model (ML).

Technical References 译 A-5



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.

Use the actuator specification table below to check the maximum speed at the stroke you desire.

(2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.

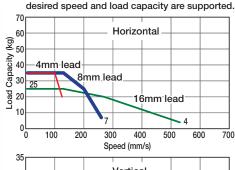
Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

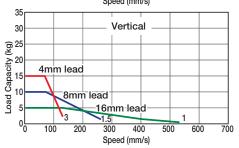
(3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 4mm-lead model, or when used

These values are the upper limits for the acceleration.

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

#### ■ Speed vs. Load Capacity Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your





#### Actuator Specifications

#### ■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Cap	Stroke	
Model	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2-SA7R-I-56P-16-①-②-③-④	16	∼ <b>25</b>	$\sim$ 5	
RCP2-SA7R-I-56P-8-①-②-③-④	8	~ 35	~ 10	50 ~ 800 (50mm increments)
RCP2-SA7R-I-56P-4-①-②-③-④	4	~ 35	$\sim$ 15	incremental

#### ■ Stroke and Maximum Speed

L	Stroke	$50 \sim 700 \\ \text{(50mm increments)}$	~ 800 (mm)
	16	533〈400〉	480 〈400〉
	8	266	240
	4	133	120

<sup>\*</sup> The values enclosed in < > apply to vertical setting. (Unit: mm/s)

#### Cable List

<sup>\*</sup> See page A-39 for cables for maintenance.

#### Option List Name Option Code See Page Brake В → A-25 Reversed-home NM → A-33 Left-Mounted Motor (Standard) → A-33 Right-Mounted Motor MR → A-33 Slider Roller SR → A-36

#### Actuator Specifications

Item	Description								
Drive System	Ball screw ø12mm C10 grade								
Positioning Repeatability	±0.02mm								
Lost Motion	0.1mm or less								
Base	Material: Aluminum (white alumite treated)								
Allowable Static Moment	Ma: 50.4 N·m Mb: 71.9 N·m Mc: 138.0 N·m								
Allowable Dynamic Moment (*)	Ma: 13.9 N·m Mb: 19.9 N·m Mc: 38.3 N·m								
Overhang Load Length	Ma direction: 230mm or less; Mb·Mc direction: 230mm or less								
Ambient Operating Temp./Humidity 0~40°C, 85% RH or less (Non-condensing)									

(\*) Based on 5,000km travel life. Directions of Allowable Load Moments











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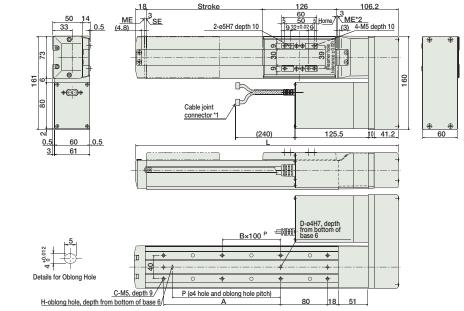
\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

- \*1. The motor-encoder cable is connected here
- See page A-39 for details on cables.
  When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.

ME: Mechanical end

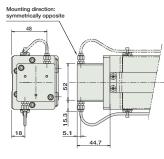
SE: Stroke end
The values enclosed in "( )" are reference dimensions.
\*The offset reference position for the moment Ma

is the same as the SA7 type. (See P32)



#### Dimensions of the brake section

Adding a brake will increase the actuator's overall length by 43mm, and its weight by 0.6kg.



\* For brake cable exiting from the side, it can only exit from the motor side.

#### ■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	300.2	350.2	400.2	450.2	500.2	550.2	600.2	650.2	700.2	750.2	800.2	850.2	900.2	950.2	1000.2	1050.2
Α	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
В	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
С	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Н	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Р	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight (kg)	4.5	4.7	5.0	5.2	5.4	5.6	5.9	6.1	6.3	6.5	6.8	7.0	7.2	7.4	7.7	7.9

#### Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page				
Solenoid Valve Type		PMEC-C-56PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477				
Soleliold valve Type		PSEP-C-56PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487				
Splash-Proof Solenoid Valve Type		PSEP-CW-56PI-NP-2-0	No homing necessary with simple absolute type.						→ F407		
Positioner Type		PCON-C-56PI-NP-2-0	Positioning is possible for up to 512 points	512 points							
Safety-Compliant Positioner Type		PCON-CG-56PI-NP-2-0	1 osnoving is possible for up to 012 points								
Pulse Train Input Type (Differential Line Driver)		PCON-PL-56PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525				
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Pulse train input type with open collector support	(-)	(-)	( )	( )	( )			
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points							
Field Network Type		RPCON-56P	Dedicated to field network	768 points			→ P503				
Program Control Type		PSEL-C-1-56PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points			→ P557				

\* This is for the single-axis PSEL.

\* See page Pre-35 for explanation of each code that makes up the configuration name.

RCP2 - SS7R -**42P** ■ Configuration: Encode Type

I: Incremental
\* The Simple
absolute encoder 42P: Pulse motor 12:12mm 42 🗌 size models are labeled as "I".

6: 6mm 3: 3mm

P1:PCON 50: 50mm RPCON 600:600mm PSEL (50mm pitch P3:PMEC increments) PSEP

N: None P:1m S:3m M:5m

See Options below \* Be sure to specify which side the motor is to be mounted (ML/MR).

Custom Length



Technical References

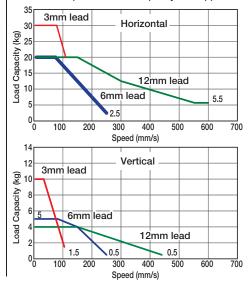
(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.
Use the actuator specification table below to check the maximum speed at the stroke you desire.

(2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported. (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used

vertically).
These values are the upper limits for the acceleration.

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Ca	Stroke	
Wiodei	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2-SS7R-I-42P-12-①-②-③-④	12	~ 20	$\sim$ 4	
RCP2-SS7R-I-42P-6-①-②-③-④	6	~ 20	~ 5	50 ~ 600 (50mm increments)
RCP2-SS7R-I-42P-3-①-②-③-④	3	~ 30	$\sim$ 10	indicinents)
Legend Stroke Compatible controller Cable length	4 Options			

#### ■ Stroke and Maximum Speed

Stroke Lead	$50 \sim 500$ (50mm increments)	~ 600 (mm)	
12	600〈440〉	470 〈440〉	
6	250	230	
3	105	105	

<sup>\*</sup> The values enclosed in < > apply to vertical setting. (Unit: mm/s)

#### Cable List

Cable List							
Туре	Cable Symbol						
	P (1m)						
Standard	<b>S</b> (3m)						
	<b>M</b> (5m)						
	X06 (6m) ~ X10 (10m)						
Special Lengths	X11 (11m) ~ X15 (15m)						
	X16 (16m) ~ X20 (20m)						
	R01 (1m) ~ R03 (3m)						
	R04 (4m) ~ R05 (5m)						
Robot Cable	R06 (6m) ~ R10 (10m)						
	R11 (11m) ~ R15 (15m)						
	R16 (16m) ~ R20 (20m)						

<sup>\*</sup> See page A-39 for cables for maintenance.

#### Option List Name Option Code See Page Brake В → A-25 Reversed-home NM → A-33 Left-Mounted Motor (Standard) → A-33 Right-Mounted Motor MR → A-33 Slider Roller SR → A-36

#### Actuator Specifications

Item	Description			
Drive System	Ball screw Ø10mm C10 grade			
Positioning Repeatability	±0.02mm			
Lost Motion	0.1mm or less			
Base	Material: Special alloy steel			
Allowable Static Moment	Ma: 79.4 N·m Mb: 79.4 N·m Mc: 172.9 N·m			
Allowable Dynamic Moment (*)	Ma: 14.7 N·m Mb: 14.7 N·m Mc: 33.3 N·m			
Overhang Load Length	Ma direction: 300mm or less; Mb·Mc direction: 300mm or less			
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-condensing)			

(\*) Based on 10,000km travel life.

**Directions of Allowable Load Moments** 









## CAD drawings can be downloaded from IAI website. www.robocylinder.de

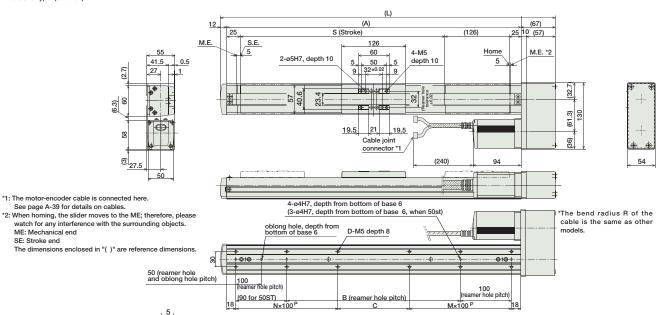
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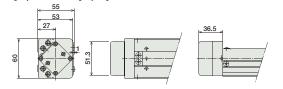
\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

- \* The reference surface is the same as the SS7C type. (See P34)
- \* The offset reference position for the moment Ma is the same as the SS7C type. (See P34)



# Dimensions of the brake section

Adding a brake increases the actuator's overall length by 24.5mm and its weight by 0.3kg.



\* The brake cable is passed through the actuator body and connected to the motor cable.

#### ■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	305	355	405	455	505	555	605	655	705	755	805	855
Α	226	276	326	376	426	476	526	576	626	676	726	776
В	0	40	90	140	190	240	290	340	390	440	490	540
С	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
Weight (kg)	3.8	4.1	4.4	4.7	5.1	5.4	5.8	6.1	6.4	6.7	7.1	7.4

Compatible	Controllors

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Pag				
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P477				
Solellold valve Type		PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points				→ P487				
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.					→ F40				
Positioner Type		PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points								
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	Positioning is possible for up to 312 points	012 pointe			·	·				
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.		→ P52				
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)								
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points	64 points							
Field Network Type		RPCON-42P	Dedicated to field network	768 points				→ P503				
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points				→ P55				
						·	* This is for the single-	axis PS				

Slider Type ■ Configuration:

PMEC /AMEC /

# RoboCylinder Slider Type 80mm Width Pulse Motor Side-Mounted Motor Steel Base

RCP2 - SS8R -**56P** Туре Encoder

I: Incremental
\* The Simple
absolute encoder 56P: Pulse motor 20:20mm 10:10mm 56 🗌 size 5: 5mm

models are labeled as "I".

50: 50mm 1000:1000mm (50mm pitch increments)

P1:PCON RPCON PSEL P3:PMEC PSEP

N: None P:1m S:3m M:5m

See Options below Be sure to specify which side the motor is to be mounted (ML/MR).

Custom Length



\* See page Pre-35 for explanation of each code that makes up the configuration name.

Technical References



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical

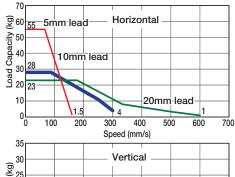
rotational speed.
Use the actuator specification table below to check the maximum speed at the stroke you desire.

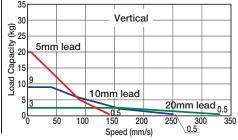
(2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported. (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 5mm-lead model, or when

These values are the upper limits for the acceleration.

#### ■ Speed vs. Load Capacity Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your

desired speed and load capacity are supported.





#### Actuator Specifications

#### ■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead (mm)	Max. Load Ca Horizontal (kg)	, ,	Stroke (mm)
RCP2-SS8R-I-56P-20-①-②-③-④	20	~ 23	$\sim$ 3	
RCP2-SS8R-I-56P-10-①-②-③-④	10	~ 28	~ 9	50 ~ 1000 (50mm increments)
RCP2-SS8R-I-56P-5-①-②-③-④	5	~ 55	$\sim$ 20	indicinents)

# Stroke 50 ~ 800 ~ 900 ~ 1000

■ Stroke and Maximum Speed

Lead	(50mm increments)	(mm)	(mm)	
20	600	600	515	
20	⟨333⟩	⟨333⟩	⟨333⟩	
10	300	300	255	
10	⟨250⟩	⟨250⟩	⟨250⟩	
5	160	155	125	
5	<b>〈140</b> 〉	<b>〈140</b> 〉	⟨140⟩	

<sup>\*</sup> The values enclosed in < > apply to vertical setting. (Unit: mm/s)

Cable List		
Туре	Cable Symbol	
	P (1m)	
Standard	S (3m)	
	<b>M</b> (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	

Legend Stroke Compatible controller Cable length Options

*	See	page	A-39	for	cables	for	maintenance.
	Jee	page	M-09	101	Cables	101	mannenance

Option List			
Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
Slider Roller	SR	→ A-36	

#### Actuator Specifications

Item	Description
Drive System	Ball screw ø16mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Special alloy steel
Allowable Static Moment	Ma: 198.9 N·m Mb: 198.9 N·m Mc: 416.7 N·m
Allowable Dynamic Moment (*)	Ma: 36.3 N·m Mb: 36.3 N·m Mc: 77.4 N·m
Overhang Load Length	Ma direction: 450mm or less; Mb·Mc direction: 450mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-condensing)

(\*) Based on 10,000km travel life **Directions of Allowable Load Moments** 









## <sub>bsite.</sub> www.robocylinder.de

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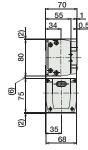


\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

\* The reference surface is the same as the SS8C type. (See P36)

\* The reference surface is the same as

\* The offset reference position for the moment Ma is the same as



(A) (67) 30 S (Stroke) (170)30 10 (57) 170 <u>S.E.</u> 90 4-M8 depth 10 Home 2-ø8H7 depth 10 5 15 165 (28) 35 20 35

20000000 20000000

(L)

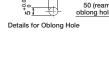
- \*1: The motor-encoder cable is connected here. See page A-39 for details on cables.

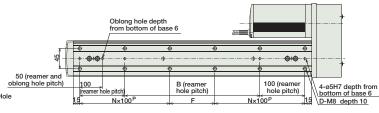
  \*2: When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.

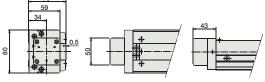
  ME: Mechanical end
- SE: Stroke end
  - The dimensions enclosed in "( )" are reference dimensions.

#### Dimensions of the brake section

\* Adding a brake will increase the actuator's length by 26mm and its weight by 0.5kg.







\*The brake cable is passed through the actuator body and connected to the motor cable.

### ■ Dimensions/Weight by Stroke

			~,	0	_															
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	364	414	464	514	564	614	664	714	764	814	864	914	964	1014	1064	1114	1164	1214	1264	1314
Α	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
В	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
Weight (kg)	7.4	7.9	8.5	9.0	9.5	10	10.5	11.1	11.6	12.1	12.7	13.2	13.7	14.3	14.8	15.3	15.8	16.4	16.9	17.4

#### Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-56PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Sciencia valve Type	1	PSEP-C-56PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-56PI-NP-2-0	No homing necessary with simple absolute type.				→ F407
Positioner Type	Í	PCON-C-56PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-56PI-NP-2-0	Positioning is possible for up to 312 points	312 points			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-56PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-56P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-56PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points			→ P557

RCP2-SS8R

■ Configuration:

# 2-HS8R RoboCylinder High-Speed Slider Type 80mm Width Pulse Motor Side-Mounted Motor Steel Base

RCP2 - HS8R -**86P** Туре

\* See page Pre-35 for explanation of each code that makes up the configuration name.

Encoder I: Incremental
\* The Simple
absolute encoder

models are labeled as "I".

86P: Pulse motor 30:30mm 56 Inhigh output

increments)

50: 50mm 1000:1000mm (50mm pitch

Compatible Controllers -P2:PCON-CF

**P2** 

N: None M:5m

BE : Brake (Cable exiting end) BL: Brake (Cable exiting left)
BR: Brake (Cable exiting right) NM : Reversed-home

X : Custom Length SR : Slider Roller R : Robot cable

Pictured: Left-mounted motor model (ML).

Technical References





and/or noise. Therefore, use the actuator at speeds over 100mm/s. (2) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.

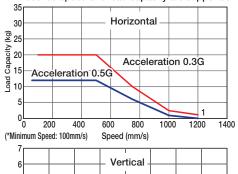
Use the actuator specification table below to check the maximum speed at the stroke you desire. (3) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

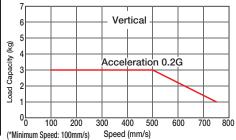
(4) The load capacity is based on operation at an acceleration of 0.3G (0.2G when used vertically).

The upper limit for the acceleration is 0.5G for horizontal use and 0.2G for vertical use.

### ■ Speed vs. Load Capacity

 $\overset{\cdot}{\text{Due}}$  to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





#### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead (mm)	Max. Load Car Horizontal (kg)	Stroke (mm)	
RCP2-HS8R-I-86P-30-1 -P2-2 - 3	30	~ 20	~ 3	50 ~ 1000 (50mm increments)
Legend ① Stroke ② Cable length ③ Options				

Stroke	$50 \sim 800$	~ 900	~ 1000
Lead	(50mm increments)	(mm)	(mm)
30	1200 〈750〉	1000 〈750〉	

<sup>\*</sup> The values enclosed in < > apply to vertical setting. (Unit: mm/s)

#### Cabla List

Cable List		
Туре	Cable Symbol	
	P (1m)	
Standard	S (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	
* 0	11 6 11	<u> </u>

<sup>\*</sup> See page A-39 for cables for maintenance.

#### Option List Name Option Code See Page Brake → A-25 Reversed-home NM → A-33 Left-Mounted Motor (Standard) → A-33 Right-Mounted Motor MR → A-33 Slider Roller SR → A-36

#### Actuator Specifications

	D 11
Item	Description
Drive System	Ball screw ø16mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Special alloy steel
Allowable Static Moment	Ma: 198.9 N·m Mb: 198.9 N·m Mc: 416.7 N·m
Allowable Dynamic Moment (*)	Ma: 36.3 N·m Mb: 36.3 N·m Mc: 77.4 N·m
Overhang Load Length	Ma direction: 450mm or less; Mb·Mc direction: 450mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-condensing)

(\*) Based on 10,000km travel life.

**Directions of Allowable Load Moments** 











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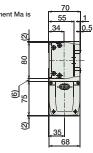




\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

\* The reference surface is the same as the HS8C type. (See P38)

The offset reference position for the moment Ma is the same as the HS8C type. (See P38)



(A) (67)S (Stroke) (170) 30 10 (57) 170 4-M8 2-ø8H7 M.E. \*2 <u>S.E.</u> 90 Home depth 10 depth 10 75 15 45±0.02 (78) Cable joint (240)138

\*1: The motor-encoder cable is connected here.

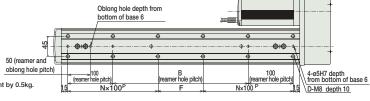
See page A-39 for details on cables.
\*2 When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end

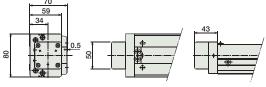
SE: Stroke end

The dimensions enclosed in ( ) are reference dimensions.

Dimensions of

Details for Oblong Hole the brake section
Adding a brake will increase the actuator's length by 26mm and its weight by 0.5kg.





The brake cable is passed through the actuator body and connected to the motor cable.

### ■ Dimensions/Weight by Stroke

	Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Ī	L	364	414	464	514	564	614	664	714	764	814	864	914	964	1014	1064	1114	1164	1214	1264	1314
Ī	Α	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
Ī	В	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Ī	D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
Ī	F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
	N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
	Weight (kg)	7.4	7.9	8.5	9.0	9.5	10	10.5	11.1	11.6	12.1	12.7	13.2	13.7	14.3	14.8	15.3	15.8	16.4	16.9	17.4

#### Compatible Controllers

The controller for the RCP2-HS8R type is a dedicated controller.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Positioner Type		PCON-CF-86PI-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	6A max.	→ P525

• Please note that the encoder cable is a dedicated CF-type cable that is different from the PCON-C/CG/CY/PL/PO/SE controllers.

• Note that a simple absolute unit cannot be used.

■ Configuration:

# RCP2-BA6/BA6U

BA6 :Belt type Top-mounted motor Top-moul BA6U:Belt type Botom-m motor

\* See page Pre-35 for explanation of each code that makes up the configuration name.

RCP2-

I: Incremental
\* The Simple
absolute encoder
models are
labeled as "I". 42P: Pulse motor 54:54mm 42 🗌 size

**42P** 

equivalent

54

Compatible Controllers 500: 500mm 1000:1000mm (50mm pitch increments)

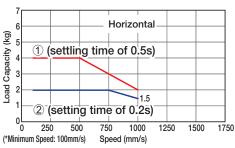
P1: PCON N: None RPCON PSEL P3: PMEC **PSEP** 

Custom Length Robot cable

# ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

NM: Reversed-home



#### Note:

Graph ① is for standard specifications, with settling time of 0.5s for calculating the positioning time.

 $\label{eq:Graph Q} \textbf{Graph } @ \text{ reflects some changes in the controller}$ settings. The load capacity is lower, however the settling time is decreased to 0.2s.

If the load capacity is lower than graph  $\ensuremath{\mathfrak{D}}$ , and you want to shorten the positioning time, change the controller settings. (See the manual for details.)

(Vertical operation is not possible.)



Encoder

(1) Operating the belt type actuator at low speeds may cause vibration and/or resonance. Therefore, please set the speed at 100mm/s or faster.

References

- (2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are
- (3) The load capacity is based on operation at an acceleration of 0.5G. 0.5G is the upper limit for the acceleration.

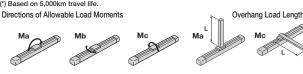
Actuator Specifications							
■ Lead and Load Capacity (Note 1) Please r	note that the maxi	mum load capacit	y decreases as the	speed increases.		Stroke and M	laximum Speed
Model	Motor Mounting			pacity (Note 1)	Stroke	Stroke	500 ∼ 1000
	Direction	(mm)	Horizontal (kg)	Vertical (kg)	(mm)	Lead	(50mm increments)
RCP2-BA6-I-42P-54-①-②-③-④	Тор	54 equivalent		Not Allowed	500 ∼ 1000 (50mm	54	1000
RCP2-BA6U-I-42P-54-①-②-③-④	Bottom	54 equivalent	~ 4	Not Allowed	increments)	equivalent	1000
Legend ①Stroke ②Compatible controller ③Cable length	4 Options						(Unit: mm/s)

Cable Symbol
P (1m)
<b>S</b> (3m)
<b>M</b> (5m)
X06 (6m) ~ X10 (10m)
X11 (11m) ~ X15 (15m)
X16 (16m) ~ X20 (20m)
R01 (1m) ~ R03 (3m)
R04 (4m) ~ R05 (5m)
R06 (6m) ~ R10 (10m)
R11 (11m) ~ R15 (15m)
R16 (16m) ~ R20 (20m)

* See page A-39 for cables for maintenance.	*	See	page	A-39	for	cables	for	maintenance.
---	---	-----	------	------	-----	--------	-----	--------------

Option List			
Name	Option Code	See Page	
Reversed-home	NM	→ A-33	

Item	Description
Drive System	Timing Belt
Positioning Repeatability	±0.1mm
Lost Motion	0.1mm or less
Allowable Dynamic Moment (*)	Ma: 8.9 N·m Mb: 12.7 N·m Mc: 18.6 N·m
Overhang Load Length	Ma direction: 150mm or less; Mb·Mc direction: 150mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-condensing)
(*) Based on 5,000km travel life.	0 40 0, 00 /0 Till Of less (Non-condensing)
D' I' CAIL LL LAG	



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8 23 8

63.5

55 53

Reference 1.5

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0

55

58

Details of A (mounting hole and reference surface)

Compatible Controllers

Program Control Type

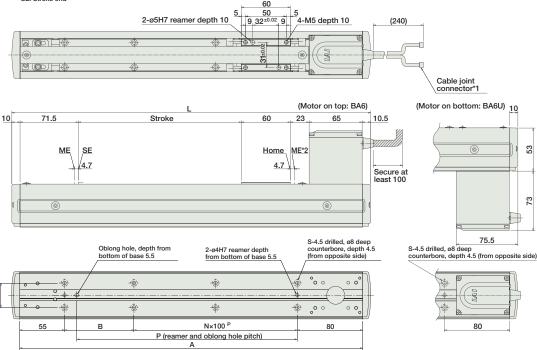
118.5

- \*1 The motor-encoder cable is connected here. See page A-39 for details on cables.
- \*2 When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.

ME: Mechanical end SE: Stroke end

Details for Oblong Hole

PSEL-C-1-42PI-NP-2-0



Dimens	■ Dimensions/Weight by Stroke										
Stroke	500	550	600	650	700	750	800	850	900	950	1000
L	740	790	840	890	940	990	1040	1090	1140	1190	1240
Α	720	770	820	870	920	970	1020	1070	1120	1170	1220
В	85	35	85	35	85	35	85	35	85	35	85
N	5	6	6	7	7	8	8	9	9	10	10
Р	570	620	670	720	770	820	870	920	970	1020	1070
S	14	16	16	18	18	20	20	22	22	24	24
Weight (kg)	2.8	2.9	3.0	3.2	3.3	3.4	3.5	3.7	3.8	3.9	4.1

#### The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage. AC115V PMEC-C-42PI-NP-2-2 Easy-to-use controller, even for beginners See P481 → P477 AC230V Solenoid Valve Type ١ PSEP-C-42PI-NP-2-0 3 points Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type → P487 Splash-Proof Solenoid Valve Type PSEP-CW-42PI-NP-2-0 PCON-C-42PI-NP-2-0 Positioner Type Positioning is possible for up to 512 points 512 points Safety-Compliant Positioner Type PCON-CG-42PI-NP-2-0 Pulse Train Input Type (Differential Line Driver) Pulse train input type with differential line driver support PCON-PL-42PI-NP-2-0 DC24V → P525 (-) Pulse Train Input Type (Open Collector) Pulse train input type with open collector support PCON-PO-42PI-NP-2-0 Serial Communication Type PCON-SE-42PI-N-0-0 Dedicated to serial communication 64 points RPCON-42P Dedicated to field network Field Network Type 768 points → P503

\* This is for the single-axis PSEL.

RCP2-BA6/BA6U

1500 points

Programmed operation is possible Can operate up to 2 axes

■ Configuration:

RCP2-

# **2-BA7/BA7U**

RoboCylinder Belt Type 68mm Width Pulse Motor Top-Mounted Motor / Bottom-Mounted Motor

BA7 : Belt type Top-mounted motor BA7U: Belt type

\* See page Pre-35 for explanation of each code that makes up the configuration name.

I: Incremental
\* The Simple
absolute encoder 42P: Pulse motor 54:54mm 42 🗌 size models are labeled as "I".

**42P** 

54

Compatible Controllers 600: 600mm 1200:1200mm (50mm pitch increments)

P1: PCON RPCON PSEL P3: PMEC **PSEP** 

N: None NM: Reversed-home P:1m S:3m M:5m

X : Custom Length R : Robot cable



Technical References



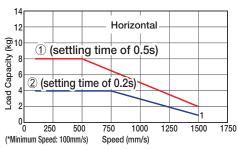
(1) Operating the belt type actuator at low speeds may cause vibration and/or resonance. Therefore, please set the speed at 100mm/s or faster.

(2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are

(3) The load capacity is based on operation at an acceleration of 0.5G. 0.5G is the upper limit for the acceleration.

#### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Note:

Graph ① is for standard specifications, with settling time of 0.5s for calculating the positioning time.

Graph 2 reflects some changes in the controller settings. The load capacity is lower, however the settling time is decreased to 0.2s.

If the load capacity is lower than graph ②, and you want to shorten the positioning time, change the controller settings. (See the manual for details.)

(Vertical operation is not possible.)

Description

#### Actuator Specifications Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed incre Stroke and Maximum Speed Max. Load Capacity (Note 1) Motor Mounting Stroke 600 ~ 1200 Lead Stroke Model Direction (mm) Horizontal (kg) Vertical (kg) (50mm increments) RCP2-BA7-I-42P-54-1-2-3-4 Top $600 \sim 1200$ 54 54 equivalent Not Allowed (50mm 1500 $\sim$ 8 equivalent RCP2-BA7U-I-42P-54- 1 - 2 - 3 - 4 **Bottom** (Unit: mm/s) Legend ① Stroke ② Compatible controller ③ Cable length 4 Options

Cable List		
Type	Cable Symbol	
	P (1m)	
Standard	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
İ	<b>B16</b> (16m) ~ <b>B20</b> (20m)	

k	See	page	A-39	for	cables	for	maintenance.

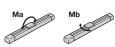
	P (1m)								
Standard	<b>S</b> (3m)								
	<b>M</b> (5m)								
	X06 (6m) $\sim$	X10 (10m)							
Special Lengths	X11 (11m) $\sim$	X15 (15m)							
	X16 (16m) $\sim$	X20 (20m)							
	R01 (1m) $\sim$	R03 (3m)							
	R04 (4m) $\sim$	R05 (5m)							
Robot Cable	R06 (6m) $\sim$	R10 (10m)							
	R11 (11m) $\sim$	R15 (15m)							
	R16 (16m) $\sim$	R20 (20m)							
See page A-39 f	See page A-39 for cables for maintenance.								

Allowable Dynamic Moment (*)	Ma: 13.8 N·m Mb: 19.7 N·m	Mc: 29.0 N·m
Overhang Load Length	Ma direction: 150mm or less;	Mb·Mc direction: 150mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-	condensing)
(*) Based on 5,000km travel life.		
Directions of Allowable Load Mor	ments .	Overhang Load Length

Actuator Specifications

Drive System

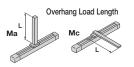
Positioning Repeatability Lost Motion





Timing Belt

0.1mm or less



Option List			
Name	Option Code	See Page	
Reversed-home	NM	→ A-33	

Dimensions

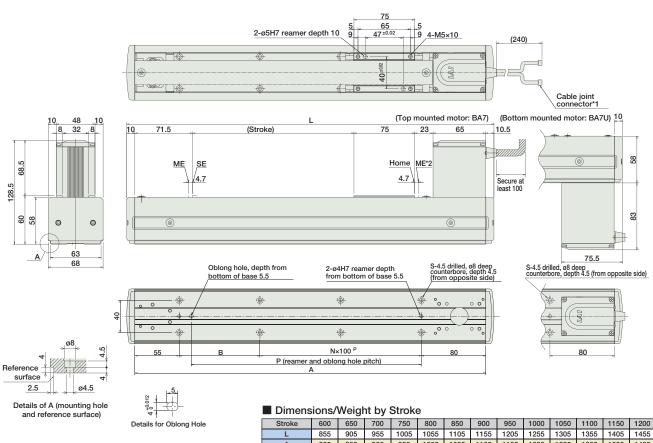
## CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders





- \*1 The motor-encoder cable is connected here.
- See page A-39 for details on cables.
  \*2 When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end SE: Stroke end



#### 835 885 935 985 1035 1085 1135 1185 1235 1285 1335 1385 1435 100 50 50 100 50 100 100 50 100 50 100 50 100 В 6 8 9 9 10 10 11 12 12 11 Р 685 735 785 835 885 935 985 1035 1085 1135 1185 1235 1285 S 16 18 18 20 20 22 22 24 24 26 26 28 28 Weight (kg) 3.6 3.7 3.9 4.0 4.2 4.3 4.4 4.6 4.7 4.9 5.0 5.2 5.3

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Soletioid valve Type	1	PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.				→ P40
Positioner Type	Í	PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	E10 points		2A max.	
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V		→ P52
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P50
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points			→ P55

\* This is for the single-axis PSEL.

RCP2-ВАТ/ВАТИ **54** 

PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON ASEL SSEL

\* See page Pre-35 for details on the model descriptions

■ Configuration

# P3-RA2AC

RoboCylinder Mini Rod Type Motor Unit Coupling Type 22mm Width Pulse Motor Ball Screw/Lead Screw

RCP3 - RA2AC -

I: Incremental specification Model number is "I" when used with simple absolute unit.

20P: Pulse Motor 20 size
Standard type
P: Pulse Motor
20 size
High-load type

4: Ball screw 4mm 4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm 4S: Lead screw 4mm 2S: Lead screw 2mm 1S: Lead screw 1mm

25: 25mm 100: 100mm (every 25mm)

■ Correlation Diagrams of Speed and Load Capacity

P1: PCON RPCON PSEL P3: PMEC PSEP

Compatible Controllers

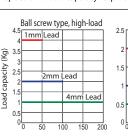
N: None B: Bi P: 1m NM: S: 3m M: 5m X □ : Custom Length

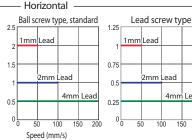
NM: Reversed-home specification

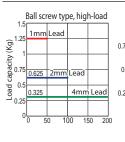
4mm Lead

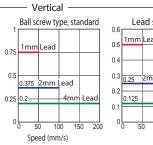
150

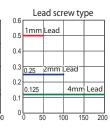
With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.











# References (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2 G for the lead screw specification, if used vertically). The acceleration limit is the

[全 P. A-5

Technical

value indicated above. (2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

(3) The maximum pushing force is the value when the actuator is operated at a speed of

(4) Service life decreases significantly if used in a dusty environment.

#### Actuator Specifications

lotes or

#### ■ Lead and Load Capacity

			Lead	Maximun	n payload	Maximum	Positionina	G. 1
Model	type			Horizontal (kg)	Vertical (kg)	pushing force (N)	Repeatability (mm)	Stroke (mm)
RCP3-RA2AC-I-20SP-4- ① - ② - ③ - ④			4	1	0.325			
RCP3-RA2AC-I-20SP-2- ① - ② - ③ - ④	High- load		2	2	0.625			
RCP3-RA2AC-I-20SP-1- ① - ② - ③ - ④	Ball	1	4	1.25		±0.02		
RCP3-RA2AC-I-20P-4- ① - ② - ③ - ④		screw	4	0.5	0.2		10.02	25 to 100
RCP3-RA2AC-I-20P-2- ① - ② - ③ - ④	Standard		2	1	0.375	See page A-68		(every
RCP3-RA2AC-I-20P-1- ① - ② - ③ - ④			1	2	0.75	A-06		25mm)
RCP3-RA2AC-I-20P-4S- ① - ② - ③ - ④			4	0.25	0.125			
RCP3-RA2AC-I-20P-2S- ① - ② - ③ - ④	Standard	Lead	2	0.5	0.25		±0.05	
RCP3-RA2AC-I-20P-1S- ① - ② - ③ - ④			1	1	0.5			

#### ■ Stroke and Maximum Speed

Stroke		25 (mm)	50 to 100 (mm)			
W	4	180	200			
Ball screw	2	10	00			
B	1	5	50			
W	4	180	200			
Lead screw	2	100				
Le	1	50				

(Unit = mm/s)

### Cable List

Туре	Cable Symbol	
Standard (Robot Cables)	P (1m) S (3m) M (5m)	
Special Lengths	X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m)	

Legend 1 Stroke 2 Compatible Controllers 3 Cable length 4 Option

- \* The RCP3 comes standard with a robot cable.
- See page A-39 for cables for maintenance

### Option List

Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	

#### Actuator Specifications

lt.	em	Description	
Drive System		Ball screw/Lead screw, Ø4 mm, rolled C10	
Lost motion		Ball screw: 0.1 mm or less/Lead screw: 0.3 mm or less (default value)	
Base		Material: Aluminum, white alumite treated	
Guide		Slide guide	
Ambient operating temperature, humidity		0 to 40 °C, 85% RH or less (Non-condensing)	
Service life Lead screw specification		Horizontal: 10 million cycles Vertical: 5 million cycles	
Service life Ball screw specification		5000 km	

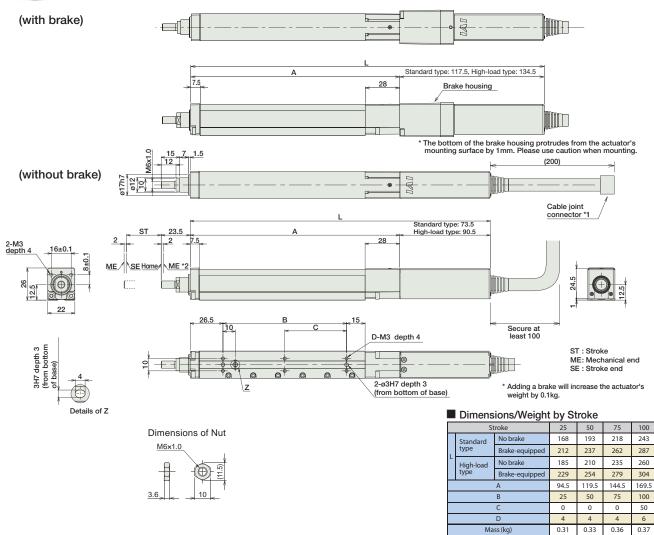
### <sub>osite.</sub> www.robocylinder.de

For Special Orders



2/3D CAD

- \*1 A motor-encoder cable is connected here. See page A-39 for details on cables.
- \*2 When homing, the slider moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.



Compatible	Controllers
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The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-20PI-NP-2-2			AC115V AC230V	See P481	→ P477
Soleliold valve Type		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve.	3 points			→ P487
Splash-Proof Solenoid Valve Type	P	PSEP-CW-20PI-NP-2-0	Supports both single and double solenoid types.  No homing necessary with simple absolute type.				→ F407
Positioner Type	Í	PCON-C-20PI-NP-2-0 Positioning is possible for up to 512 points 512 points		512 points			
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	r containing is possible for up to 012 points	OTZ points			
Pulse Train Input Type (Differential Line Driver)	á	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

\*See page Pre-35 for details on the model descriptions

Standard
Introllers
tegrated

Rod
Type

Mini

Standard
Introllers
tegrated

Table/Arm
/Flat Type

#### P3-RA2BC RoboCylinder Mini Rod type Motor Unit Coupling type 28mm Width Pulse Motor Ball Screw/Lead Screw **■**Configuration RCP3 - RA2BC -Cable Length Compatible Controllers I: Incremental 20P: Pulse Motor 6: Ball screw 6mm 25: 25 mm P1: PCON N: None B: Brake 4: Ball screw 6mm 4: Ball screw 2mm 2: Ball screw 2mm 1: Ball screw 1mm 6S: Lead screw 6mm 4S: Lead screw 4mm P: 1m S: 3m M: 5m X : Custom Length specification 20∏ size RPCON NM: Reversed-home Standard type P: Pulse Motor 20 size High-load type PSEL P3: PMEC PSEP Model number 150:150 mm (every 25mm) is "I" when used with simple absolute unit.

2S: Lead screw 2mm

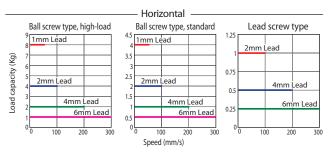


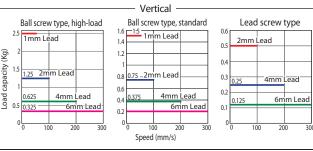
References (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G

- (0.2 G for the lead screw specification, if used vertically). The acceleration limit is the value indicated above. (2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.
- (3) The maximum pushing force is the value when the actuator is operated at a speed of 5 mm/s
- (4) Service life decreases significantly if used in a dusty environment.

#### ■ Correlation Diagrams of Speed and Load Capacity

With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.





#### Actuator Specifications

#### ■Lead and Load Capacity

	Model	Motor type	Feed screw	Lead (mm)	Maximun Horizontal (kg)	payload Vertical (kg)	Maximum pushing force (N)	Positioning Repeatability (mm)	Stroke (mm)
RCP3-R	RA2BC-I-20SP-6- ① - ② - ③ - ④			6	1	0.325			
RCP3-R	RA2BC-I-20SP-4- ① - ② - ③ - ④	High-		4	2	0.625			
RCP3-R	RA2BC-I-20SP-2- ① - ② - ③ - ④	load		2	4	1.25			
RCP3-R	RA2BC-I-20SP-1- ① - ② - ③ - ④		Ball	1	8	2.5		±0.02	
RCP3-R	RA2BC-I-20P- 6 - ① - ② - ③ - ④		screw	6	0.5	0.2		±0.02	25 to 150
RCP3-R	RA2BC-I-20P- 4 - ① - ② - ③ - ④	Standard		4	1	0.375	See page A-68		(every
RCP3-R	RA2BC-I-20P- 2 - ① - ② - ③ - ④	Standard		2	2	0.75	A-00		25mm)
RCP3-R	RA2BC-I-20P- 1 - ① - ② - ③ - ④			1	4	1.5			
RCP3-R	RA2BC-I-20P-6S- ① - ② - ③ - ④			6	0.25	0.125			
RCP3-R	RA2BC-I-20P-4S- ① - ② - ③ - ④	Standard	Lead screw	4	0.5	0.25		±0.05	
RCP3-F	RA2BC-I-20P-2S-① - ② - ③ - ④			2	1	0.5			

=31	roke and i	viaximum	Speea	
Lead	Stroke	25 (mm)	50 (mm)	75 to 150 (mm)
	6	180	280	300
crew	4	180	20	00
Ball screw	2		100	
	1		50	
W	6	180	280	300
Lead screw	4	180	20	00
Le	2		100	
			(	(Unit = mm/s

Stroke and Maximum Speed

Cable list		
Туре	Cable symbol	
Standard type	<b>P</b> (1m)	
,,	<b>S</b> (3m)	
(Robot cable)	M (5m)	
	X06 (6m) to X10 (10m)	
Special length	X11 (11m) to X15 (15m)	
	X16 (16m) to X20 (20m)	

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

- \* The RCP3 comes standard with a robot cable.
- \* See page A-39 for cables for maintenance.

Title	Option code	See page	
Brake	В	→ A-25	
Reversed - home specification	NM	→ A-33	

#### Actuator Specifications

It	em	Description		
Drive System		Ball screw/Lead screw, Ø6 mm, rolled C10		
Lost motion		Ball screw: 0.1 mm or less/Lead screw: 0.3 mm or less (default value)		
Base		Material: Aluminum, white alumite treated		
Guide		Slide guide		
Ambient operating temperature, humidity		0 to 40 °C, 85% RH or less (Non-condensing)		
Lead screw specification		Horizontal: 10 million cycles Vertical: 5 million cycles		
Service ille	Ball screw specification	5000 km		

RoboCylinder

<sub>site.</sub> www.robocylinder.de

For Special Orders



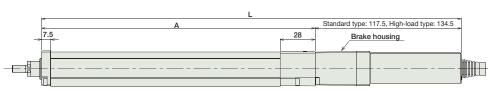
2/3D CAD

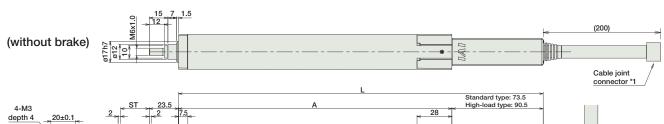
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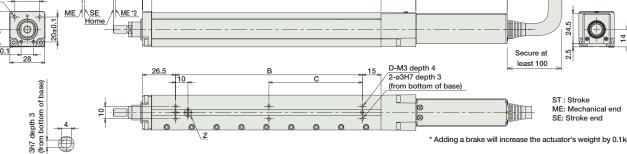
Dimensions

- \*1 A motor-encoder cable is connected here. See page A-39 for details on cables.
  \*2 When homing, the slider moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.

(with brake)







\* Adding a brake will increase the actuator's weight by 0.1kg. ■ Dimensions and Weight by Stroke

Dimensions of Nut

Stroke			25	50	75	100	125	150
	Standard	No brake	168	193	218	243	268	293
ı	type	Brake-equipped	212	237	262	287	312	337
L	High-load	No brake	185	210	235	260	285	310
	type	Brake-equipped	229	254	279	304	329	354
	A		94.5	119.5	144.5	169.5	194.5	219.5
	В		25	50	75	100	125	150
	С		0	0	0	50	62.5	75
D		4	4	4	6	6	6	
	Ma	ss (kg)	0.36	0.39	0.42	0.45	0.48	0.51

Compatible Controllers
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Details of Z

M6×1.0

The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page	
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477	
Solellold valve Type	1	PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve.	3 points			→ P487	
Splash-Proof Solenoid Valve Type	I	PSEP-CW-20PI-NP-2-0	No homing necessary with simple absolute type.	upports both single and double solenoid types. to homing necessary with simple absolute type.			→ F407	
Positioner Type	Í	PCON-C-20PI-NP-2-0	Positioning is possible for up to 512	512 points				
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	points	OTZ points				
Pulse Train Input Type (Differential Line Driver)		PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support			2A max.	→ P525	
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)	(-)			
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503	
Program Control Type	Í	PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557	

PMEC (AMEC PSEP / ASEP ROBO NET ERC2 PCON ACON SCON PSEL ASEL SSEL

■Configuration

ntrollers
tegrated

Rod
Type

Mini
Standard

ntrollers
tegrated

# P3-RA2AR

RoboCylinder Mini Rod type Side-Mounted Motor Type 22mm Width Pulse Motor Ball Screw/Lead Screw

RCP3 - RA2AR -

I: Incremental specification \* Model number is "I" when used with simple absolute unit.

20P: Pulse Motor 20∏ size Standard type Pulse Motor 20 size High-load type

4: Ball screw 4mm 4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm 4S: Lead screw 4mm 2S: Lead screw 2mm 1S: Lead screw 1mm

25: 25 mm 100:100 mm (every 25mm) P1: PCON

Cable Length Compatible N: None RPCON PSEL P3: PMEC PSEP

X□□: Custom Length

See options table below. Be sure to specify which side the motor is to be mounted (ML/MR)

Technical [ P. A-5 References

\*See page Pre-35 for details on the model descriptions

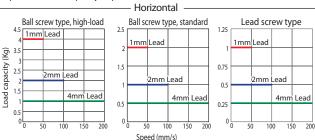


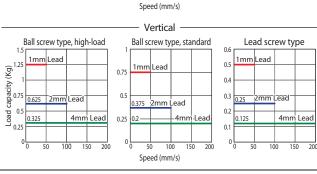
Photo above shows specification with motor reversing to the left (ML Option).

- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2 G for the lead screw specification, if used vertically). The acceleration limit is the value indicated above.
- (2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.
- 3) The maximum pushing force is the value when the actuator is operated at a speed of 5 mm/s.
- (4) Service life decreases significantly if used in a dusty environment

#### ■ Correlation Diagrams of Speed and Load Capacity

With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.





#### Actuator Specifications

#### ■Lead and Load Capacity

		- 1		Maximun	n payload	Maximum	Positioning	C. I		
Model	Motor type	Feed screw	Lead (mm)	Horizontal (kg)	Vertical (kg)	pushing force (N)	Repeatability (mm)	Stroke (mm)		
RCP3-RA2AR-I-20SP-4- ① - ② - ③ - ④			4	1	0.325					
RCP3-RA2AR-I-20SP-2- ① - ② - ③ - ④	High- load		2	2	0.625					
RCP3-RA2AR-I-20SP-1- ① - ② - ③ - ④	loud			Ball	1	4	1.25		+0.02	
RCP3-RA2AR-I-20P-4- ① - ② - ③ - ④		screw	4	0.5	0.2		10.02	25 to 100		
RCP3-RA2AR-I-20P-2- ① - ② - ③ - ④	Standard	Standard	Standard	Standard	2	1	0.375	See page A-68		(every
RCP3-RA2AR-I-20P-1- ① - ② - ③ - ④			1	2	0.75	A-00		25mm)		
RCP3-RA2AR-I-20P-4S- ① - ② - ③ - ④			4	0.25	0.125					
RCP3-RA2AR-I-20P-2S- ① - ② - ③ - ④	Standard	Lead screw	2	0.5	0.25		±0.05			
RCP3-RA2AR-I-20P-1S-①-②-③-④		Scien	1	1	0.5					

#### ■Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50 to 100 (mm)		
W	4	180	200		
Ball screw	2	100			
- A	1	50			
Ņ	4	180	200		
Lead screw	2	00			
Le	1	60			

(Unit = mm/s)

Cable List		
Туре	Cable Symbol	
Standard	P (1m)	
	<b>S</b> (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

Legend 1 Stroke 2 Compatible Controllers 3 Cable length 4 Option

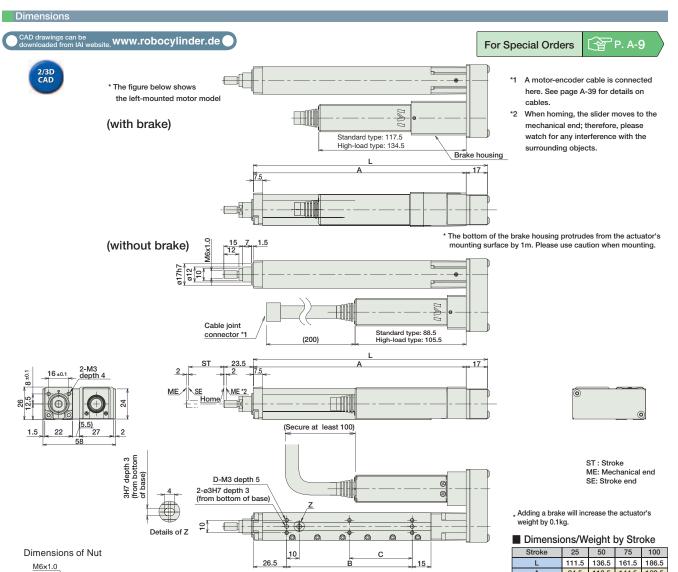
- The RCP3 comes standard with a robot cable.
- See page A-39 for cables for maintenance.

### Option List

Title	Option code	See page	
Brake	В	→ A-25	
Side-mounted motor to the left (standard)	ML	→ A-33	
Side-mounted motor to the right	MR	→ A-33	
Reversed-home specification	NM	→ A-33	

#### Actuator Specifications

Item		Description		
Drive Syster	m	Ball screw/Lead screw, Ø4 mm, rolled C10		
Lost motion	1	Ball screw: 0.1 mm or less/Lead screw: 0.3 mm or less (default value)		
Base		Material: Aluminum, white alumite treated		
Guide		Slide guide		
Ambient operating temperature, humidity		0 to 40 °C, 85% RH or less (Non-condensing)		
Lead screw specification		Horizontal: 10 million cycles Vertical: 5 million cycles		
Service life	Ball screw specification	5000 km		



Differisions/ weight by Stroke							
Stroke	25	50	75	100			
L	111.5	136.5	161.5	186.5			
Α	94.5	119.5	144.5	169.5			
В	25	50	75	100			
С	0	0	0	50			
D	4	4	4	6			
Weight (kg)	0.34	0.36	0.39	0.4			

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Pag
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P47
Solenoid valve Type			3 points			→ P487	
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	No homing necessary with simple absolute type.				7140
Positioner Type	Í	PCON-C-20PI-NP-2-0	Positioning is possible for up to 512 points	512 points		2A max.	
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	Toshlorning is possible for up to 512 points	OTZ politics	DC24V		
Pulse Train Input Type Differential Line Driver)		PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(-)			→ P52
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support				
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P50
Program Control Type	Į.	PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P55

Controllers Integrated

Rod Type

Mini

Standard

# P3-RA2BR

RoboCylinder Mini Rod type Side-Mounted Motor Type 28mm Width Pulse Motor Ball Screw/Lead Screw

■ Configuration RCP3 - RA2BR -

> I: Incremental specification \* Model number is "I" when used

20P: Pulse Motor 20

☐ size

6: Ball screw 6mm 4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm

25: 25 mm 150:150 mm (every 25mm)

Stroke

Compatible Controllers P1: PCON **RPCON** PSEL P3: PMEC PSEP

Cable Length N: None See options table P: 1m X :: Custom Length

Be sure to specify which side the motor is to be mounted (ML/MR)

Option

\*See page Pre-35 for details on the model descriptions.

译 P. A-**5** 

**Technical** 

References

with simple absolute unit.

П

Standard type

20SP: Pulse Motor

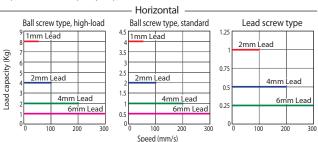
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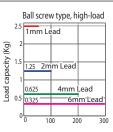
High-load type

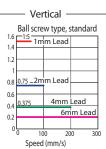
6S: Lead screw 6mm 4S: Lead screw 4mm 2S: Lead screw 2mm

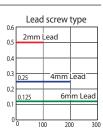
■ Correlation Diagrams of Speed and Load Capacity

With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.









#### (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2 G for the lead screw specification, if used vertically). The acceleration limit is the value indicated above. (2) The horizontal payload is the value when used in combination with an external

to the left (ML Option).

- guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.
- 3) The maximum pushing force is the value when the actuator is operated at a speed of 5 mm/s.
- (4) Service life decreases significantly if used in a dusty environment.

#### Actuator Specifications

#### ■ Lead and Load Capacity

	Motor Feed		Lead	Maximum payload		Maximum	Positioning	Stroke		
Model	type	screw	(mm)	Horizontal (kg)	Vertical (kg)	pushing force (N)	Repeatability (mm)	(mm)		
RCP3-RA2BR-I-20SP-6- ① - ② - ③ - ④			6	1	0.325					
RCP3-RA2BR-I-20SP-4- ① - ② - ③ - ④	High-		4	2	0.625					
RCP3-RA2BR-I-20SP-2- ① - ② - ③ - ④	load	load  Ball screw  Standard	load	2	4	1.25		±0.02	25 to 150	
RCP3-RA2BR-I-20SP-1- ① - ② - ③ - ④			Ball	1	8	2.5				
RCP3-RA2BR-I-20P- 6 - ① - ② - ③ - ④	Standard		screw	6	0.5	0.2				
RCP3-RA2BR-I-20P- 4 - ① - ② - ③ - ④			Standard		4	1	0.375	See page A-68		(every
RCP3-RA2BR-I-20P- 2 - ① - ② - ③ - ④				2	2	0.75	A-00		25mm)	
RCP3-RA2BR-I-20P- 1 - ① - ② - ③ - ④			1	4	1.5	Ī				
RCP3-RA2BR-I-20P-6S- ① - ② - ③ - ④			6	0.25	0.125					
RCP3-RA2BR-I-20P-4S- ① - ② - ③ - ④	Standard	Lead screw	4	0.5	0.25		±0.05			
RCP3-RA2BR-I-20P-2S-①-②-③-④		sciew	2	1	0.5	]				

Photo above shows specification with motor reversing

#### ■Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50 (mm)	75 to 150 (mm)		
	6	180	280	300		
crew	4	180 200				
Ball screw	2	100				
	1					
W	6	180	280	300		
ead screw	4	180	180 200			
Leš	2	100				

(Unit = mm/s)

#### Cable List

Туре	Cable Symbol	
Standard	P (1m)	
	<b>S</b> (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

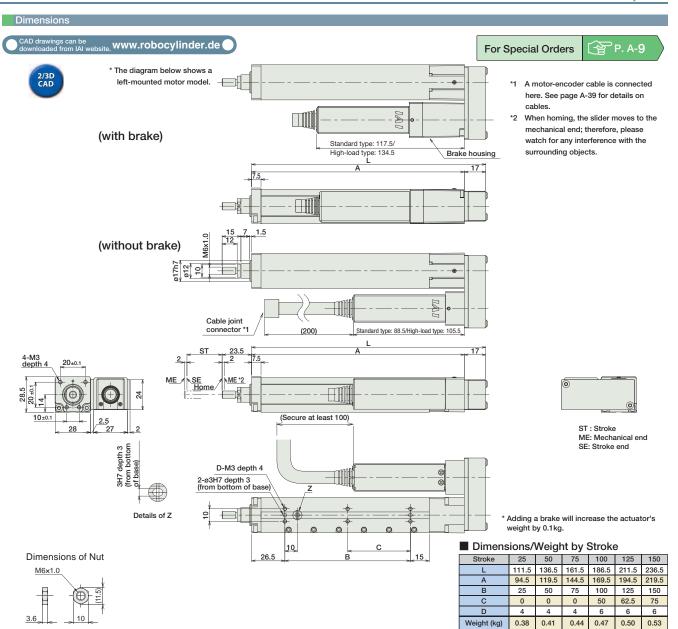
- The RCP3 comes standard with a robot cable.
- \* See page A-39 for cables for maintenance.

#### Option List

Name	Option Code	See Page	
Brake	В	→ A-25	
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
Reversed-home	NM	→ A-33	

#### Actuator Specifications

Item		Description		
Drive Syster	m	Ball screw/Lead screw, Ø6 mm, rolled C10		
Lost motion	1	Ball screw: 0.1 mm or less/Lead screw: 0.3 mm or less (default value)		
Base		Material: Aluminum, white alumite treated		
Guide		Slide guide		
Ambient operating temperature, humidity		0 to 40 °C, 85% RH or less (Non-condensing)		
Service life	Lead screw specification	Horizontal: 10 million cycles Vertical: 5 million cycles		
Service ille	Ball screw specification	5000 km		



Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
0.1	1	PMEC-C-20PI-NP-2-2	Easy-to-use controller,even for beginners		AC115V AC230V	See P481	→ P477
Solenoid Valve Type	1	PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve.	3 points			
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	Supports both single and double solenoid types.  No homing necessary with simple absolute type.				→ P487
Positioner Type	Í	PCON-C-20PI-NP-2-0					
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Pulse Train Input Type (Differential Line Driver)	6	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

Silder Type

Mini

Chandow

Integrated

Rod Tyne

Mini

Controllers

Table/Arm /Flat Type

Mini

WIIII

Gripper/

Rotary Type

Type

Cleanroom Type

Splash Proof

Controllers

PMEC

PSEP /ASEP

ROBO NET

FRC2

VOEL

Servo Moto

. ..

ontrollers
ntegrated

Rod
Type

Mini

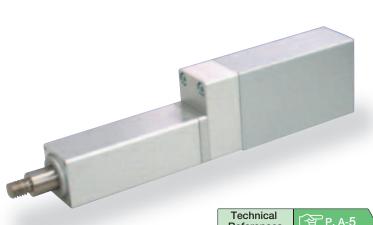
Standard

Controllers
Integrated

Table/Arr
/Flat Type

PMEC / AMEC PSEP / ASEP ROBO NET ERC2 PCON ACON SCON PSEL SSEL XSEL

#### RCP2-RA2C RoboCylinder Rod Type 25mm Width Pulse Motor Straight Type ■ Configuration: RCP2 — RA2C **20P** Encoder Compatible Controllers Cable Length Option Type Lead Stroke P1: PCON N: None P:1m I: Incremental 20P: Pulse motor 25: 25mm FL:Flange 1:1mm The Simple absolute encoder is also considered 20 🗌 size RPCON FT:Foot bracket S : 3m M : 5m 100: 100mm PSEL (25mm pitch P3: PMEC type "I". : Custom Length increments) PSEP R .: Robot cable



´字 P. A-5 References

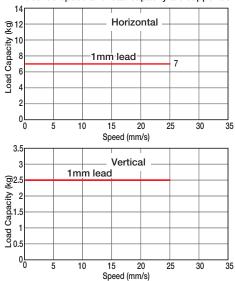
(1) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

(2) The load capacity is based on operation at an acceleration of 0.05G.

0.05G is the upper limit of the acceleration.
In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.

#### Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Actuator Specifications

#### ■ Lead and Load Capacity

Model	Lead (mm)	Max. Load Horizontal (kg)		Maximum Push Force (N)(Note 1)	Stroke (mm)
RCP2-RA2C-I-20P-1-①-②-③-④	1	7	2.5	100	$\begin{array}{c} 25 \sim 100 \\ \text{(25mm} \\ \text{increments)} \end{array}$
Legend: ①Stroke ②Compatible controller ③ Cable length ④	Options	(Note 1) S	ee page A-69	for the pushing	force graphs.

# ■ Stroke and Maximum Speed

Stroke	$25 \sim 100$ (25mm increments)
1	25

(Unit: mm/s)

Odbie List		
Туре	Cable Symbol	
	P (1m)	
Standard	<b>S</b> (3m)	
	<b>M</b> (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
Robot Cable	R04 (4m) ~ R05 (5m)	
	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) $\sim$ R20 (20m)	

See page A-39 for cables for maintenance.

#### Option List

Name	Option Code	See Page	
Flange	FL	→ A-27	
Foot bracket	FT	→ A-29	

#### Actuator Specifications

Item	Description			
Drive System	Ball screw ø6mm C10 grade			
Positioning Repeatability	±0.02mm			
Lost Motion	0.1mm or less			
Rod Diameter	ø12mm			
Non-rotating accuracy of rod	±2.1 deg			
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)			

#### Dimensions

Note:

### <sub>bsite.</sub> www.robocylinder.de

2/3D CAD

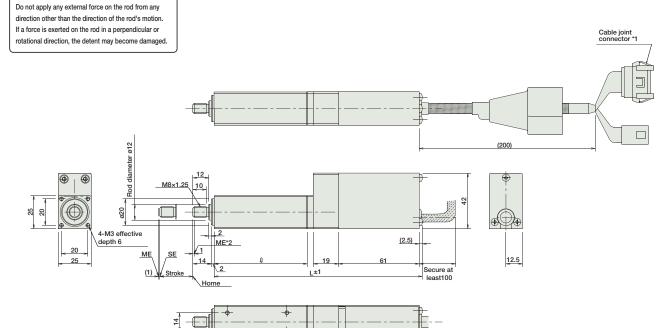
\* The RA2C is not available in reversed-home configuration, due to its construction.

For Special Orders



- The motor-encoder cable is connected here. See page A-39 for details on cables.
- When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end

SE: Stroke end



#### ■ Dimensions/Weight by Stroke

Difficiations/ Weight by Stroke						
Stroke	25	50	75	100		
R	70	95	120	145		
L	157.5	182.5	207.5	232.5		
Р	45	70	95	120		
Weight (kg)	0.4	0.5	0.6	0.7		

#### Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage

4-M3 effective depth 5

10

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
solenoid valve type	1	PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	No homing necessary with simple absolute type.				→ F407
Positioner Type	Í	PCON-C-20PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	To silioning to possible for up to 612 points	OTZ points			
Pulse Train Input Type Differential Line Driver)		PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulso train input typo with	(7	64 points 768 points		
erial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503
rogram Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

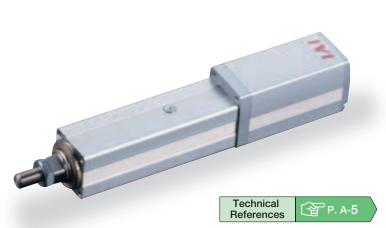
PMEC (AMEC PSEP / ASEP ROBO NET ERC2 PCON ACON SCON PSEL ASEL SSEL

PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL ASEL

#### RCP2-RA3C RoboCylinder Rod Type 35mm Width Pulse Motor Straight Type ■ Configuration: RCP2 — RA3C 28P Encoder Lead Compatible Controllers Cable Length Option Type Stroke FL: Flange FT: Foot bracket NM: Reversed-home N : None P : 1m I: Incremental 28P: Pulse motor 5 : 5mm 50: 50mm P1: PCON The Simple absolute encoder 28 🗌 size 2.5 : 2.5mm RPCON S : 3m M : 5m 200: 200mm PSEL is also considered (50mm pitch P3: PMEC type "I". X .: Custom

increments)

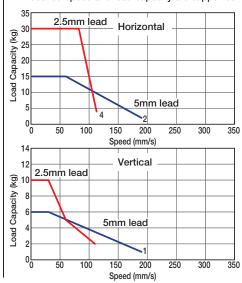
PSEP



Speed vs. Load Capacity

 $\overset{\cdot}{\text{Due}}$  to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

R .: Robot cable



When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.

Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.
Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.2G.
0.2G is the upper limit of the acceleration.
In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.

## Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead (mm)	Max. Load Cap	,, ,	Maximum Push Force (N)(Note 2)	Stroke (mm)
RCP2-RA3C-I-28P-5-①-②-③-④	5	~ 15	~ 6	73.5	50 ∼ 200
RCP2-RA3C-I-28P-2.5-①-②-③-④	2.5	~ 30	~10	156.8	(50mm increments)
Legend: ①Stroke ②Compatible controller ③Cable length ④	Options	(Note 2) S	ee page A-69	for the pushing	force graphs.

■ Stroke and Maximum Speed					
Stroke Lead	$50 \sim 200$ (50mm increments)				
5	187				
2.5	114				

(Unit: mm/s)

Cable List					
Туре	Cable Symbol				
	P (1m)				
Standard	<b>S</b> (3m)				
	M (5m)				
	X06 (6m) ~ X10 (10m)				
Special Lengths	X11 (11m) ~ X15 (15m)				
	X16 (16m) ~ X20 (20m)				
	R01 (1m) ~ R03 (3m)				
	R04 (4m) ~ R05 (5m)				
Robot Cable	R06 (6m) ~ R10 (10m)				
	R11 (11m) ~ R15 (15m)				
	R16 (16m) ~ R20 (20m)				

\* See page A-39 for cables for maintenance.

#### Option List

Name	Option Code	See Page	
Flange	FL	→ A-27	
Foot bracket	FT	→ A-29	
Reversed-home	NM	→ <b>A-33</b>	

Actuator Specifications	
Item	Description
Drive System	Ball screw ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Rod Diameter	ø22mm
Non-rotating accuracy of rod	±1.5 deg
Ambient Operating Temp./Humidity	$0\sim40^{\circ}\text{C}$ , 85% RH or less (non-condensing)

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders

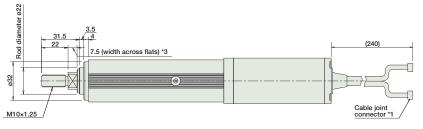


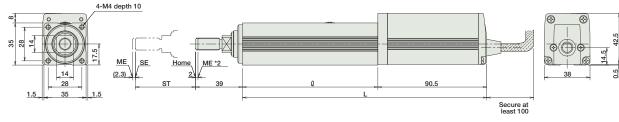
2/3D CAD

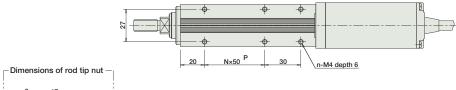
Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged. \*1. The motor-encoder cable is connected here. See page A-39 for details on cables.

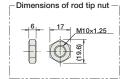
When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.
ME: Mechanical end SE: Stroke end

\*3. The orientation of the bolt will vary depending on the product.









#### ■ Dimensions/Weight by Stroke

Dillielisi	J115/ VV	eigiiti	by Siii	JKE
Stroke	50	100	150	200
R	112.5	162.5	212.5	262.5
L	203	253	303	353
N	1	2	3	4
n	6	8	10	12
Weight (kg)	0.8	0.95	1.1	1.25

Compatible Co	ntrollers
---------------	-----------

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-28SPI-NP-2-2	Easy-to-use controller, even for beginners	AC115V AC230V	See P481	→ P477	
Soleliold valve type		PSEP-C-28SPI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.	3 points			→ P487
Splash-Proof Solenoid Valve Type	I	PSEP-CW-28SPI-NP-2-0					→ P487
Positioner Type	Í	PCON-C-28SPI-NP-2-0	Positioning is possible for up to 512	512 points			
Safety-Compliant Positioner Type		PCON-CG-28SPI-NP-2-0	points				
Pulse Train Input Type (Differential Line Driver)		PCON-PL-28SPI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-28SPI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-28SPI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-28SP	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-28SPI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

RCP2-RA3C

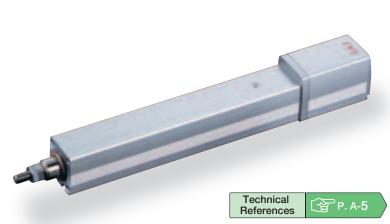
IAI

PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL SSEL SSEL

PMEC //AMEC //AMEC PSEP ROBO NET PERC2 PCON ACON SCON SSEL SSEL

#### 2-RA4C RoboCylinder Rod Type 45mm Width Pulse Motor Straight Type ■ Configuration: RCP2 — RA4C **42P** П Encoder Motor Lead Compatible Controllers Cable Length Option Type Stroke B : Brake FL : Flange FT : Foot bracket 10:10mm P1: PCON N : None P : 1m I: Incremental 42P: Pulse motor 50: 50mm The Simple absolute encoder is also considered 5 : 5mm RPCON 42 🗌 size S : 3m M : 5m 2.5 : 2.5mm 300: 300mm PSEL (50mm pitch P3: PMEC type "I". : Custom

increments)



When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.

Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.
Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.2G.

0.2G is the upper limit of the acceleration.

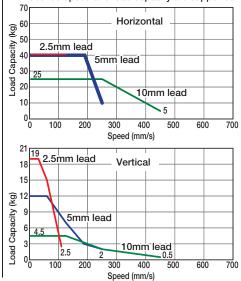
In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.

#### Speed vs. Load Capacity

PSEP

 $\overset{\cdot}{\text{Due}}$  to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

R .: Robot cable



#### Actuator Specifications ■ Lead and Load Capacity

(Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model		Max. Load Ca Horizontal (kg)		Maximum Push Force (N)(Note 2)	Stroke (mm)
RCP2-RA4C-I-42P-10-1 - 2 - 3 - 4	10	~ 25	~ 4.5	150	
RCP2-RA4C-I-42P-5-①-②-③-④	5	~ 40	~ 12	284	50 ~ 300 (50mm increments)
RCP2-RA4C-I-42P-2.5-①-②-③-④	2.5	40	~ 19	358	increments)

Stroke Lead	$50 \sim 200$ (50mm increments)	250 (mm)	300 (mm)
10	458	458	350
5	250	237	175
2.5	125 <114>	118 <114>	87

(Note 2) See page A-69 for the pushing force graphs. \* The values enclosed in < > apply for vertical usage. (Unit: mm/s)

Cable List					
Type	Cable Symbol				
	P (1m)				
Standard	<b>S</b> (3m)				
	<b>M</b> (5m)				
	X06 (6m) ~ X10 (10m)				
Special Lengths	X11 (11m) ~ X15 (15m)				
	X16 (16m) $\sim$ X20 (20m)				
	R01 (1m) ~ R03 (3m)				
	R04 (4m) ~ R05 (5m)				
Robot Cable	R06 (6m) ~ R10 (10m)				
	R11 (11m) ~ R15 (15m)				
	R16 (16m) ~ R20 (20m)				

Legend: ① Stroke ② Compatible controller ③ Cable length ④ Options

\* See page A-39 for cables for maintenance.

#### Ontion List

Option List			
Name	Option Code	See Page	
Brake	В	→ A-25	
Flange	FL	→ A-27	
Foot bracket	FT	→ A-29	
Reversed-home	NM	→ A-33	

Actuator Specifications	
Item	Description
Drive System	Ball screw ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Rod Diameter	ø22mm
Non-rotating accuracy of rod	±1.5 deg
Ambient Operating Temp /Humidity	$0 \sim 40^{\circ}$ C 85% BH or less (non-condensing)

#### Dimensions

CAD drawings can be downloaded from IAI website. www.robocylinder.de

### For Special Orders



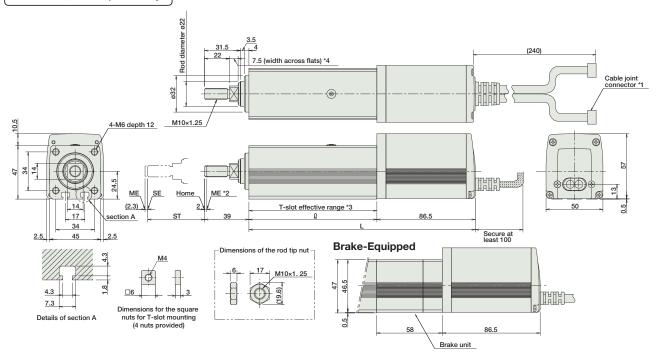


Note:

Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

- The motor-encoder cable is connected here. See page A-39 for details on cables.
- When homing, the rod moves to the M.E.; therefore, please watch for any interference with the surrounding objects.

  ME: Mechanical end
  - SE: Stroke end
- The values enclosed in "( )" are reference dimensions. \*3. Please note that there is no T-slot on the base of the brake unit.
- \*4. The orientation of the bolt will vary depending on the product.



\* Compared to the standard model, the brake-equinodel is longer by 58mm and heavier by 0.4kg.

#### ■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300
R	112.5	162.5	212.5	262.5	312.5	362.5
L	199	249	299	349	399	449
Weight (kg)	1.35	1.6	1.85	2.1	2.35	2.6

#### Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Colonaid Volus Torra		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solenoid Valve Type	1	PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type	I	PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.				→ P467
Positioner Type	Í	PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0					
Pulse Train Input Type (Differential Line Driver)	É	PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support				
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

RCP2-RA4C

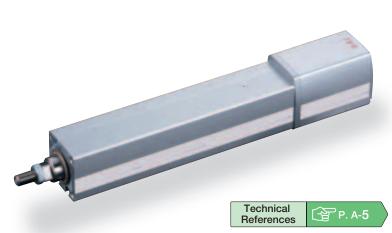
PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL ASEL

Standard
Introllers
Integrated
Rod
Type
Mini
Standard
Controllers
Integrated
Table/Arm
/Flat Type

PMEC /AMEC /

#### RCP2-RA6C RoboCylinder Rod Type 64mm Width Pulse Motor Straight Type ■ Configuration: RCP2 — RA6C П **56P** Encoder Motor Lead Compatible Controllers Cable Length Option Type Stroke N : None P : 1m B : Brake FL : Flange FT : Foot bracket 16:16mm P1: PCON I: Incremental 56P: Pulse motor 50: 50mm The Simple absolute encoder is also considered RPCON 56 🗌 size 8:8mm S : 3m M : 5m 300: 300mm PSEL 4:4mm (50mm pitch P3: PMEC

increments)



type "I".

When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.

Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.
Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.2G.

0.2G is the upper limit of the acceleration.

In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.

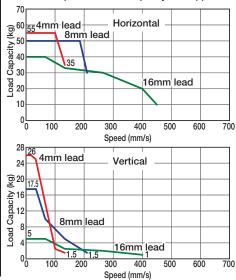
#### Speed vs. Load Capacity

PSEP

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

: Custom

R .: Robot cable



#### Actuator Specifications ■ Lead and Load Capacity

(Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Cap	,, ,	Maximum Push	Stroke
model	(mm)	Horizontal (kg)	Vertical (kg)	Force (N)(Note 2)	(mm)
RCP2-RA6C-I-56P-16-①-②-③-④	16	~ 40	~ 5	240	
RCP2-RA6C-I-56P-8-①-②-③-④	8	~ 50	∼ <b>17.5</b>	470	50 ~ 300 (50mm increments)
RCP2-RA6C-I-56P-4-1 -2 -3 -4	4	~ 55	~ 26	800	morements)

Stroke Lead	$50 \sim 300$ (50mm increments)
16	450 <400>
8	210
4	130

■ Stroke and Maximum Speed

(Note 2) See page A-69 for the pushing force graphs.

_			
	* The values enclosed in <	> apply for vertical usage.	(Unit: mm/s

Cable Symbol
Subject Symbol
1)
n)
n)
(6m) ~ <b>X10</b> (10m)
(11m) ~ <b>X15</b> (15m)
(16m) ~ <b>X20</b> (20m)
(1m) ~ <b>R03</b> (3m)
(4m) ~ <b>R05</b> (5m)
(6m) ~ <b>R10</b> (10m)
(11m) ~ <b>R15</b> (15m)
(16m) ~ <b>R20</b> (20m)

Legend: ① Stroke ② Compatible controller ③ Cable length ④ Options

\* See page A-39 for cables for maintenance.

#### Option List

Name	Option Code	See Page	
Brake	В	→ A-25	
Flange	FL	→ A-27	
Foot bracket	FT	→ A-29	
Reversed-home	NM	→ A-33	

# Actuator Specifications

Drive System	Ball screw ø12mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Rod Diameter	ø30mm
Non-rotating accuracy of rod	±1.0 deg
Ambient Operating Temp./Humidity	0 ~ 40°C, 85% RH or less (non-condensing)

## CAD drawings can be downloaded from IAI website. www.robocylinder.de

## For Special Orders





Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged. \*1. The motor-encoder cable is connected here. See page A-39 for details on cables.

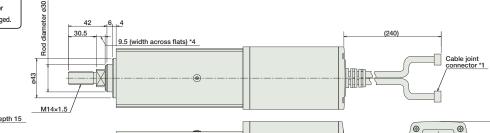
When homing, the rod moves to the M.E.; therefore, please watch for any interference with the surrounding objects.

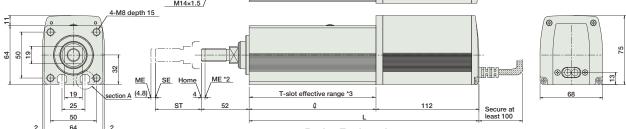
ME: Mechanical end

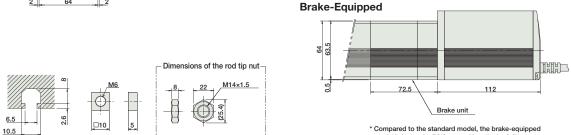
SE: Stroke end

The values enclosed in "( )" are reference dimensions.

- \*3. Please note that there is no T-slot on the base of the brake unit.
- \*4. The orientation of the bolt will vary depending on the product.







\* Compared to the standard model, the brake-equipped model is longer by 72.5mm and heavier by 0.9kg.

#### ■ Dimensions/Weight by Stroke

Differisions/ Weight by Stroke						
Stroke	50	100	150	200	250	300
l	138	188	238	288	338	388
L	250	300	350	400	450	500
Weight (kg)	3.1	3.6	4.1	4.6	5.1	5.6

### Compatible Controllers

Details of section A

Dimensions for the square

nuts for T-slot mounting (4 nuts provided)

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page		
Solenoid Valve Type		PMEC-C-56PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477		
coolida varo typo	1	PSEP-C-56PI-NP-2-0	Operable with same signal as solenoid valve.		3 points			→ P487	
Splash-Proof Solenoid Valve Type	I	PSEP-CW-56PI-NP-2-0	No homing necessary with simple absolute type.	oports both single and double solenoid types. homing necessary with simple absolute type.  ositioning is possible for up to 512 points  512 points		→ P487			
Positioner Type	i i	PCON-C-56PI-NP-2-0	Positioning is possible for up to 512 points						
Safety-Compliant Positioner Type		PCON-CG-56PI-NP-2-0	restroining is possible for up to ore points						
Pulse Train Input Type (Differential Line Driver)		PCON-PL-56PI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V	2A max.	→ P525		
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Pulse train input type with open collector support	(-)	(-)				
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points					
Field Network Type		RPCON-56P	Dedicated to field network	768 points			→ P503		
Program Control Type	Í	PSEL-C-1-56PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557		

\* This is for the single-axis PSEL.

ontrollers
integrated

Rod
Type

Mini

Standard

Controllers
Integrated

PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL SSEL

#### CP2-RA8C RoboCylinder Rod Type 85mm Width Pulse Motor Straight Type ■ Configuration: RCP2 — RA8C **60P P2** Encoder Lead Compatible Controllers Cable Length Option Type Stroke N : None P : 1m I: Incremental 60P: Pulse motor 10:10mm 50: 50mm See Options below P2: PCON-CF The Simple absolute encoder 60 □ size 5:5mm S : 3m M : 5m 300: 300mm is also considered

(50mm pitch

increments)



type "I".

Technical References

When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.

Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.
Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.2G for 10mm-lead and 0.1G for 5mm-lead.

This is the upper limit of the acceleration.

In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod

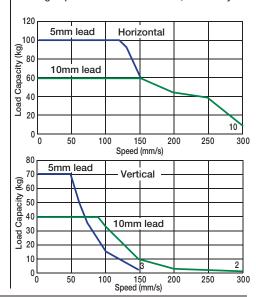
from a direction other than the motion of the rod, the detent may become damaged.

#### Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your

X .: Custom

R .: Robot cable



#### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model		Max. Load Capacity (Note 1)		Maximum Push	Stroke
Wiodei	(mm)	Horizontal (kg)	Vertical (kg)	Force (N)(Note 2)	(mm)
RCP2-RA8C-I-60P-10- ① - P2 - ② - ③	10	60	40	857	50 ∼ 300 (50mm
RCP2-RA8C-I-60P-5- ① - P2 - ③ - ③	5	100	70	1714	increments)
Legend: ① Stroke ② Compatible controller ③ Cable length ④	Options	(Note 2) S	ee page A-70	for the pushing	force graphs.

	Stroke Lead	$50 \sim 300$ (50mm increments)
	10	300
ĺ	5	150

■ Stroke and Maximum Speed

(Unit: mm/s)

#### Cable List

Cable List				
Туре	Cable Symbol			
	P (1m)			
Standard	<b>S</b> (3m)			
	M (5m)			
	X06 (6m) ~ X10 (10m)			
Special Lengths	X11 (11m) ~ X15 (15m)			
	X16 (16m) ~ X20 (20m)			
	R01 (1m) ~ R03 (3m)			
	R04 (4m) ~ R05 (5m)			
Robot Cable	R06 (6m) ~ R10 (10m)			
	R11 (11m) ~ R15 (15m)			
	R16 (16m) ~ R20 (20m)			

\* See page A-39 for cables for maintenance.

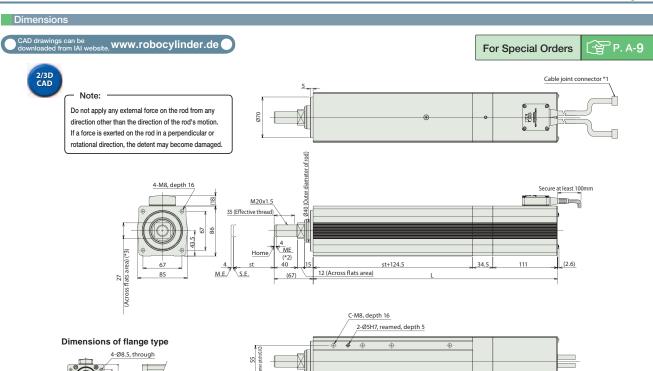
#### Option List

Name	Option Code	See Page	
Brake	В	→ A-25	
Flange	FL	→ A-27	
Foot bracket	FT	→ <b>A-29</b>	
Reversed-home	NM	→ A-33	
Cable exit direction	A1 ~ A3	→ A-25	

#### Actuator Specifications

Item	Description		
Drive System	Ball screw ø16mm C10 grade		
Positioning Repeatability	±0.02mm		
Lost Motion	0.1mm or less		
Rod Diameter	ø40mm		
Non-rotating accuracy of rod	±1.0 deg		
Ambient Operating Temp./Humidity	0 ~ 40°C, 85% RH or less (non-condensing)		
Service Life	5000km (*1)		

(\*1) See page 146-2 for vertical payload graphs.



Dimensions of foot bracket type 4-Ø8.5, through 

Dimensions of brake type

34.5 50 st+320 (Brake)

The motor-encoder cable is connected here. Please note that although the motor cable is the same as RCP2 series, the encoder cable is series-specific. See page A-39 for details on cables

\*2. When homing, the rod moves to the ME; therefore, please watch for any interference with the

surrounding objects.
ME: Mechanical end SE: Stroke end

The values enclosed in "( )" are reference dimensions.

The direction of two sides defining the across flat area varies depending on the product.

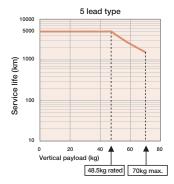
= Birrioriolorio, vvoigiti by otrotto							
	Stroke	50	100	150	200	250	300
	L	320	370	420	470	520	570
	Α	0	0	1	1	2	2
	В	39.5	89.5	39.5	89.5	39.5	89.5
	С	6	6	8	8	10	10
	D	100	100	200	200	300	300
Weight	No brake	6.5	7.4	8.2	9.1	9.9	10.7
(kg)	Brake- equipped	7.5	8.4	9.2	10.1	10.9	11.7

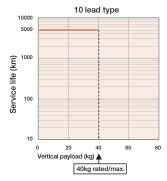
#### Vertical Payload and Service Life

Rod-type RoboCylinder actuators have a service life of 5000km, but the RCP2-RA8C/RA8R types with a lead of 5 may have a shorter service life depending on the

transferring mass because the applicable thrust is higher. Check the relationship of load capacity and service life for your actuator on the graph shown to the right.

Note: The rated value is the maximum value that car meet a service life of 5000km. The maximum value is the value at which it is still operable. Please note that operation with values exceeding the rated value will result in a decrease in the service life, as shown in the





#### Compatible Controllers

The contoller for the RCP2-RA8C type is the following dedicated controller.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Positioner Type		PCON-CF-60PI-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	6A max.	→ <b>P525</b>

Note: • Please note that the encoder cable is a dedicated cable for the CF model, which is different from the PCON-C/CG/CY/PL/PO/SE controllers.

• The simple absolute unit cannot be used.

IAI

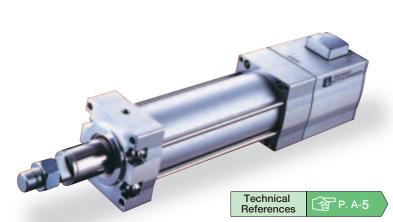
146-2

RCP2-RA8C

Standard
Introllers
Integrated
Rod
Type
Mini
Standard
Controllers
Integrated
Table/Arm
/Flat Type

PMEC //AMEG //AM

#### RCP2-RA10C RoboCylinder Rod Type 100mm Width Pulse Motor Straight Type ■ Configuration: RCP2 — RA10C — - 86P **P2** Encoder Stroke Compatible Controllers Cable Length Type N : None 10:10mm P2: PCON-CF I: Incremental 86P: Pulse motor 50: 50mm A1-A3: Connector cable exit direction : Brake : Flange : Foot bracket P:1m 86 🗌 size 5 : 5mm S : 3m M : 5m 2.5 : 2.5mm 300: 300mm (50mm pitch increments) R .: Robot cable



(1) Minimum speed is set per each lead. (10mm-lead: 10mm/s, 5mm-lead: 5mm/s, 2.5-lead: 1mm/s) Please note that if the actuator is operated below the minimum speed, vibration may occur.

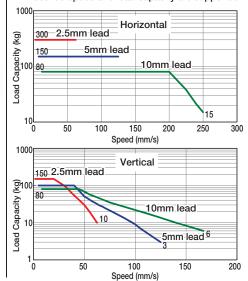
Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.04G for 10mm-lead, 0.02G for 5mm-lead, and 0.01G for 2.5mm-lead.

This is the upper limit of the acceleration. In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.

#### ■ Speed vs. Load Capacity

 $\overset{\cdot}{\text{Due}}$  to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Actuator Specifications

Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead (mm)	Max. Load Ca Horizontal (kg)	,, ,	Maximum Push Force (N)(Note 2)	Stroke (mm)
RCP2-RA10C-I-86P-10-①-P2-②-③	10	~ 80	~ 80	1500	
RCP2-RA10C-I-86P-5-①-P2-②-③	5	150	~ 100	3000	50 ~ 300 (50mm increments)
RCP2-RA10C-I-86P-2.5-① -P2-② -③	2.5	300	∼ <b>150</b>	6000	increments)
Legend Stroke Cable length Options (Note 2) See page A-70 for the pushing force graphs.				orce graphs.	

(Note 2) See page A-70 for the pushing force graphs. \* The values enclosed in < > apply for vertical usage. (Unit: mm/s)

Lead	$50 \sim 300$ (50mm increments)
10	250 <167>
5	125
2.5	63

■ Stroke and Maximum Speed

Cabla List

Cable List				
Cable Symbol				
P (1m)				
S (3m)				
<b>M</b> (5m)				
X06 (6m) ~ X10 (10m)				
X11 (11m) ~ X15 (15m)				
X16 (16m) ~ X20 (20m)				
R01 (1m) ~ R03 (3m)				
R04 (4m) ~ R05 (5m)				
R06 (6m) ~ R10 (10m)				
R11 (11m) ~ R15 (15m)				
R16 (16m) ~ R20 (20m)				

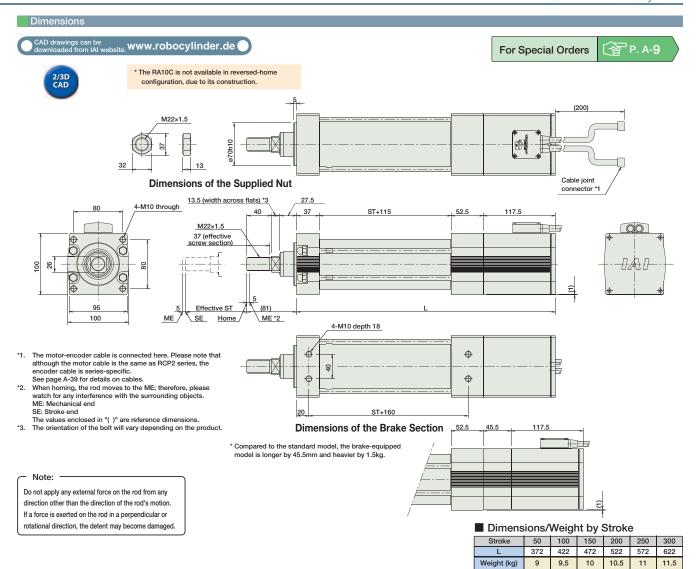
\* See page A-39 for cables for maintenance.

#### Option List

Name	Option Code	See Page	
Connector cable exit direction	A1 $\sim$ A3	→ A-25	
Brake	В	→ A-25	
Flange	FL	→ A-27	
Foot bracket	FT	→ A-29	

Lead	(50mm increments)
10	250 <167>
5	125
2.5	63

Actuator Specifications				
Item	Description			
Drive System	Ball screw C10 grade			
Positioning Repeatability	±0.02mm			
Lost Motion	0.1mm or less			
Rod Diameter	ø40mm			
Non-rotating accuracy of rod	±1.0 deg			
Ambient Operating Temp./Humidity	$0\sim40^{\circ}\text{C}$ , 85% RH or less (non-condensing)			



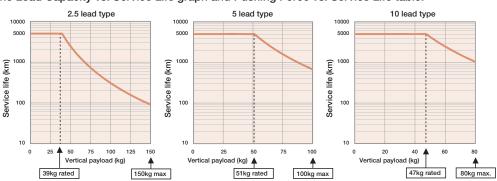
# Vertical Payload and Service Life

The service life of a rod-type RoboCylinder is 5000km. However, since the RCP2-RA10C has a larger maximum thrust compared to other types, its service life will largely depend on the load capacity and pushing force used.
Therefore, when selecting your product using the Speed vs. Load Capacity and Pushing Force vs. Current Limit graphs, check the service life using the Load Capacity vs. Service Life graph and Pushing Force vs. Service Life table.

Note:

The rated value is the maximum value that can meet a service life of 5000km. The maximum value is the value at which it is still operable. Please note that operation with values exceeding the rated value will result in a decrease in the service life, as shown in the graphs.

• The simple absolute unit cannot be used.



Compatible Controllers  The controller for the RCP2-RA10C type is the following dedicated controller.								
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Page
Positioner Type PCON-CF-86PI-NP-2-0 Positioning is possible for up to 512 points DC24V 6A max. → F							→ <b>P525</b>	
Note: • Please note that the encoder cable is a dedicated cable for the CF model, which is different from the PCON-C/CG/CY/PL/PO/SE controllers.								

IAI RCP2-RA10C 14

Slider Type

Mini

Standard

Rod

Туре

Mini

Standard

Controllers Integrated

fable/Arm /Flat Type

Mini

Gripper/ Rotary Type

Linear Motor Type

Cleanroom Type

Splash Prod

Controllers

AMEC

/ASEP

NET

ENUZ

AGEI

SSEL

XSEL

Pulsa Moto

Servo Moto

Servo Mot

LIIIGAI WIOU

ntrollers
stegrated

Rod
Type

Mini

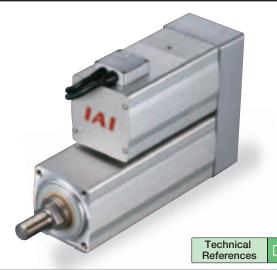
Standard

Controllers
Integrated

PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL SSEL

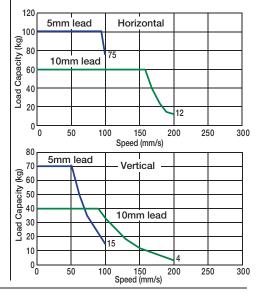
**2-RA8R** 

■ Configuration: RCP2 — RA8R **60P P2** Encoder Compatible Controllers Cable Length Option Type Lead Stroke N : None P : 1m I: Incremental 60P: Pulse motor 50: 50mm See Options below 10:10mm P2: PCON-CF The Simple absolute encoder 60 🗌 size 5:5mm S : 3m M : 5m 300: 300mm is also considered (50mm pitch type "I". X .: Custom increments) R .: Robot cable



Speed vs. Load Capacity

 $\overset{\cdot}{\text{Due}}$  to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your



When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.

Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.2G for 10mm-lead and 0.1G for 5mm-lead.

This is the upper limit of the acceleration.

In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod

from a direction other than the motion of the rod, the detent may become damaged.

# Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model		Max. Load Cap Horizontal (kg)	vertical (kg)	Maximum Push Force (N)(Note 2)	Stroke (mm)	
RCP2-RA8R-I-60P-10- ① - P2 - ② - ③	10	60	40	857	50 ~ 300	
RCP2-RA8R-I-60P-5- ① - P2-③ - ③	5	100	70	1714	increments)	
Legend: 1 Stroke 2 Compatible controller 3 Cable length 4 Options (Note 2) See page A-70 for the pushing force graphs						

Drive System

Lost Motion

Rod Diameter

Positioning Repeatability

Non-rotating accuracy of rod

Actuator Specifications Item

# ■ Stroke and Maximum Speed

Lead	$50 \sim 300$ (50mm increments)
10	200
5	100

Description

ø16mm C10 grade

(Unit: mm/s)

Ball screw

0.1mm or less

±0.02mm

ø40mm ±1.0 deg

# Cable List

Cable List							
Cable Symbol							
P (1m)							
<b>S</b> (3m)							
M (5m)							
X06 (6m) ~ X10 (10m)							
X11 (11m) ~ X15 (15m)							
X16 (16m) ~ X20 (20m)							
R01 (1m) ~ R03 (3m)							
R04 (4m) ~ R05 (5m)							
R06 (6m) ~ R10 (10m)							
R11 (11m) ~ R15 (15m)							
R16 (16m) ~ R20 (20m)							
	P (1m) S (3m) M (5m) X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m) R01 (1m) ~ R03 (3m) R04 (4m) ~ R05 (5m) R06 (6m) ~ R10 (10m) R11 (11m) ~ R15 (15m)						

	Ambient Operating Temp./Humidity	$0 \sim 40^{\circ}$ C, 85% RH or less (non-condensing)					
	Service Life	5000km (*1)					
(*1) See page 146-2 for vertical payload graphs.							

\* See page A-39 for cables for maintenance.

<u> </u>			
Name	Option Code	See Page	
Brake	В	→ A-25	
Top-mounted motor	MT1/MT2/MT3	→ 148-2	
Right-mounted motor	MR1/MR2	→ <b>148-2</b>	
Left-mounted motor	ML1/ML3	→ <b>148-2</b>	
Flange	FL	→ A-27	
Foot bracket	FT	→ A-29	
Reversed-home	NM	→ A-33	
Cable exit direction	A1 ~ A3	→ A-25	

148-1 RCP2-RA8R

<sub>bsite.</sub> www.robocylinder.de

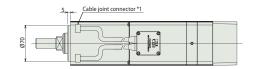
For Special Orders

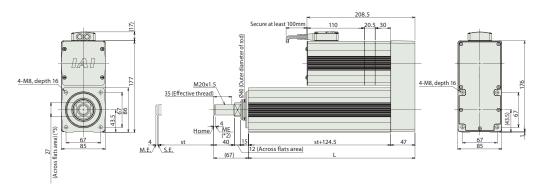




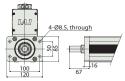
Note:

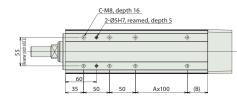
Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



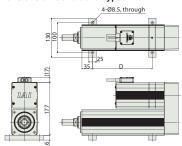


# Dimensions of flange type

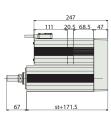




# Dimensions of foot bracket type



# Dimensions of brake type



- The motor-encoder cable is connected here. Please note that although the motor cable is the same as RCP2 series, the encoder cable is series-specific. See page A-39 for details on cables.
- \*2. When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects ME: Mechanical end SE: Stroke end
- The values enclosed in "( )" are reference dimensions.
- The direction of two sides defining the across flat area varies depending on the product.

# Dimensions/Weight by Stroke

= Birrierierie, weight by earene										
Stroke  L  A  B  C		50	100	150	200	250	300			
		221.5	271.5	321.5	371.5	421.5	471.5			
		0	0	1	1	2	2			
		39.5	89.5	39.5	89.5	39.5	89.5			
		6	6	8	8	10	10			
	D	100	100	200	200	300	300			
Weight	No brake	7.7	8.6	9.4	10.3	11.1	12			
(kg)	Brake- equipped	8.6	9.5	10.3	11.2	12	12.9			

# Motor-mounting direction / Cable exit direction (Options

# Note:

Please be sure to specify one of the codes for the motor mounting direction and the cable exit direction.













			_			
Sel.		/		2		
	-	d	G.		d	P
4	20	ø	6	1		

Option Code	MT1	MT2	МТЗ	MR1	ML1	MR2	ML3
Motor-mounting direction	Top (standard)	Тор	Тор	Right	Left	Right	Left
Cable exit direction	Top (standard)	Right	Left	Тор	Тор	Right	Left

# Compatible Controllers

The contoller for the RCP2-RA8R type is the following dedicated controller.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Positioner Type		PCON-CF-60PI-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	6A max.	→ P525

Note: • Please note that the encoder cable is a dedicated cable for the CF model, which is different from the PCON-C/CG/CY/PL/PO/SE controllers.

• The simple absolute unit cannot be used.

IAI

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RCP2-RA8R

Controllers

PMEC
(AMEC)

PSEP
(ASEP)

ROBO
NET

ERC2

PCON

ACON

SCON

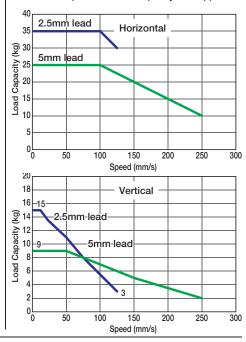
PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL ASEL SSEL





■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



(Unit: mm/s)

(1) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model, or when used vertically). This is the upper limit of the acceleration.

(3) The horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.

Actuator Specifications							
■ Lead and Load Capacity (Note 1) Please r	■ Stroke and	d Maximum Speed					
Model	Lead (mm)	Max. Load Ca Horizontal (kg)			Stroke (mm)	Stroke Lead	$20 \sim 200$ (10mm increments)
RCP2-SRA4R-I-35P-5-①-②-③-④	5	~ 25	~ 9	90	20 ~ 200 (10mm	5	250
RCP2-SRA4R-I-35P-2.5-1 2-3-4	2.5	~ 35	~ 15	170	increments) (Note 3)	2.5	125
Legend: Stroke Compatible controller Cable length	Options		page A-69 for m increments	the pushing fo over 100mm.	rce graphs.		(Ur

P. A-5

Cable List		
Туре	Cable Symbol	
Standard	P (1m)	
	<b>S</b> (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

*	The cable is a m	otor-encoder integrated cable,	and is
	provided as a ro	bot cable.	

<sup>\*</sup> See page A-39 for cables for maintenance.

Option List								
Name	Option Code	See Page						
Brake	В	→ A-25						
Flange bracket (front)	FL	→ A-27						
Flange bracket (back)	FLR	→ A-28						
Foot bracket 1 (base mounting)	FT	→ A-29						
Foot bracket 2 (right/left side mounting)	FT2/FT4	→ A-31						
Reversed-home	NM	→ A-33						

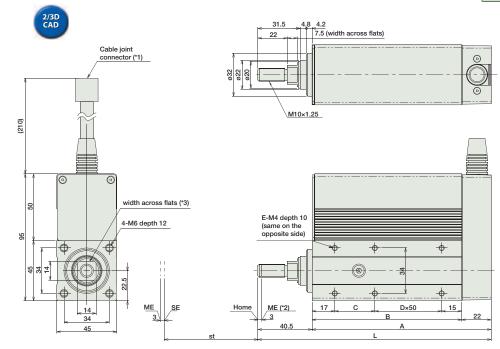
The brake is available for strokes of 70mm or more.

Description				
Ball screw ø8mm C10 grade				
±0.02mm				
0.1mm or less				
ø22mm				
-				
0 ~ 40°C, 85% RH or less (non-condensing)				

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders

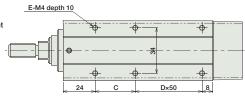




\* The exterior dimensions for the brake-equipped model is no different than the standard model.

However, 70mm is the minimum stroke of the brake-equipped models.

(i.e. The brake is not compatible at 60mm strokes and under.)



Dimensions of the Supplied Nut

ST : Stroke SE : Stroke end ME: Mechanical end

- (\*1) The motor-encoder cable is connected here. See page A-39 for details on cables.
- (\*2) When homing, the rod moves to the mechanical end position; therefore, please watch for any interference with the surrounding objects.
- (\*3) The orientation of the bolt will vary depending on the product.

# ■ Dimensions/Weight by Stroke (Add 0.2kg for brake equipped)

Stroke	20	30	40	50	60	70	80	90	100	150	200
L	124.5	134.5	144.5	154.5	164.5	174.5	184.5	194.5	204.5	254.5	304.5
Α	84	94	104	114	124	134	144	154	164	214	264
В	62	72	82	92	102	112	122	132	142	192	242
С	30	40	50	60	70	30	40	50	60	60	60
D	0	0	0	0	0	1	1	1	1	2	3
E	4	4	4	4	4	6	6	6	6	8	10
Weight (kg)	0.83	0.89	0.96	1.02	1.08	1.14	1.21	1.27	1.33	1.64	1.95

# Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-35PI-NP-2-2	Easy-to-use controller, even for beginners	ssy-to-use controller, even for beginners		See P481	→ P477
Soletiou valve type	1	PSEP-C-35PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			D497
Splash-Proof Sole- noid Valve Type		PSEP-CW-35PI-NP-2-0	No homing necessary with simple absolute type.				→ P487
Positioner Type	Í	PCON-C-35PI-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	2A max.	
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0	. containing to possible for up to 612 points	012 pointo			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-35PI-NP-2-0	Pulse train input type with differential line driver support	(-)			→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-NP-2-0	Pulse train input type with open collector support	(-)	( )		
Serial Communication Type	PCON-SE-35PI-N-0-0		Dedicated to serial communication	64 points			
Field Network Type	RPCON-35P		Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-35PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

This is for the single-axis PSEL.

уре

Mini

Standard

Rod

Туре

Mini

Standard

Controllers Integrated

Flat Type

Mini

Gripper/

Туре

PSEP

NET

PCON

ACON

SCON

PSEL

SSEL

XSEL

Pulse Motor

Servo Moto (24V)

> Servo Moto 230V)

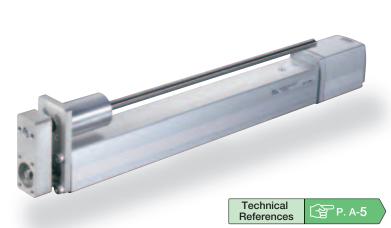
Linear Mot

PMEC CAMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL SSEL

### RCP2-RGS4C RoboCylinder Rod Type with Single Guide 45mm Width Pulse Motor Straight Type $\blacksquare$ Configuration: RCP2 - RGS4C -— 42P Encoder Compatible Controllers Cable Length Option Type Stroke N : None P : 1m I: Incremental 42P: Pulse motor 10:10mm 50: 50mm P1: PCON : Brake The Simple absolute encoder FT : Foot bracket NM: Reversed-home 5 : 5mm RPCON 42 🗌 size S : 3m M : 5m 2.5 : 2.5mm 300: 300mm PSEL is also considered (50mm pitch P3: PMEC type "I". X .: Custom

increments)

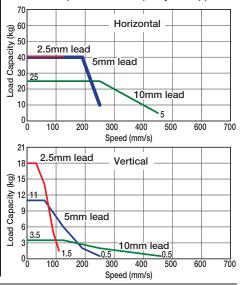
PSEP



Speed vs. Load Capacity

 $\overset{\cdot}{\text{Due}}$  to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

R .: Robot cable



When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.

Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.
Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.2G.

0.2G is the upper limit of the acceleration.

In addition, the horizontal load capacity is based on the use of an external guide. See the technical resources (page A-82) for the allowable weight using the supplied guide alone

# Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Capacity (Note 1)		Maximum Push	Stroke	
Wodei	(mm)	Horizontal (kg)	Vertical (kg)	Force (N)(Note 2)	(mm)	
RCP2-RGS4C-I-42P-10-①-②-③-④	10	~ 25	~ 3.5	150		
RCP2-RGS4C-I-42P-5-①-②-③-④	5	~ 40	~ 11	284	50 ~ 300 (50mm increments)	
RCP2-RGS4C-I-42P-2.5-①-②-③-④	2.5	40	~ 18	358	inorements)	

Stroke Lead	50 ~ 200 (50mm increments)	250 (mm)	300 (mm)
10	458	458	350
5	250	237	175
2.5	125 <114>	118 <114>	87

(Note 2) See page A-69 for the pushing force graphs. \* The values enclosed in < > apply for vertical usage. (Unit: mm/s)

# Cable List

Cable List					
Туре	Cable Symbol				
	P (1m)				
Standard	<b>S</b> (3m)				
	<b>M</b> (5m)				
	X06 (6m) ~ X10 (10m)				
Special Lengths	X11 (11m) ~ X15 (15m)				
	X16 (16m) ~ X20 (20m)				
	R01 (1m) ~ R03 (3m)				
	R04 (4m) ~ R05 (5m)				
Robot Cable	R06 (6m) ~ R10 (10m)				
	R11 (11m) ~ R15 (15m)				
	R16 (16m) ~ R20 (20m)				
nobol Odbie	R11 (11m) ~ R15 (15m)				

Legend: ① Stroke ② Compatible controller ③ Cable length ④ Options

*	See	page	A-39	for	cables	for	maintenance.

Name	Option Code	See Page	
Brake	В	→ A-25	
Foot bracket	FT	→ A-29	
Reversed-home	NM	→ A-33	
	•		•

Actuator Specifications				
Item	Description			
Drive System	Ball screw ø8mm C10 grade			
Positioning Repeatability	±0.02mm			
Lost Motion	0.1mm or less			
Guide	Single guide Guide rod diameter ø10mm Ball bush type			
Rod Diameter	ø22mm			
Non-rotating accuracy of rod	±0.05 deg			
Ambient Operating Temp./Humidity 0 ~ 40°C, 85% RH or less (non-condensing)				

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders

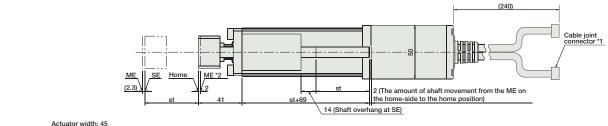


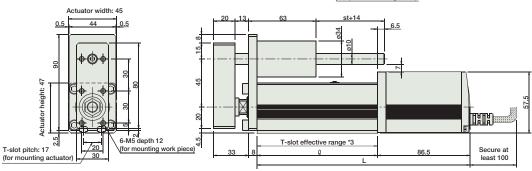
2/3D CAD

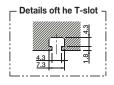
- \*1. The motor-encoder cable is connected here. See page A-39 for details on cables.
- When homing, the rod moves to the M.E.; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end SF: Stroke end

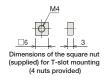
The values enclosed in "( )" are reference dimensions.

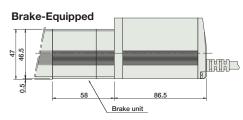
Please note that there is no T-slot on the bottom of the brake unit.











 $^{\star}$  Compared to the standard model, the brake-equipped model is longer by 58mm and heavier by 0.4kg.

# ■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300
Ł	112.5	162.5	212.5	262.5	312.5	362.5
L	199	249	299	349	399	449
Weight (kg)	1.8	2.1	2.4	2.7	2.9	3.2

# Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solelloid valve Type		PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ D497
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.			DC24V 2A max.	→ P487
Positioner Type		PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	rositioning is possible for up to 312 points	·			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	()	(-) DC24V		→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

Rod Type
Mini
Standard
Controllers
Integrated

PMEC
/AMEC

PSEP
/ASEP

ROBO
NET

ERC2

PCON

ACON

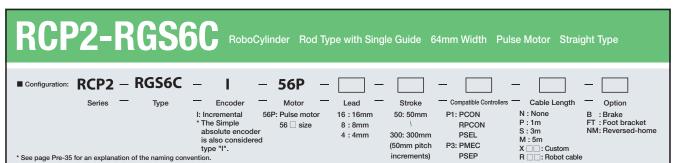
SCON

PSEL

ASEL

Standard
Introllers
Integrated
Rod
Type
Mini
Standard
Controllers
Integrated
Table/Arn
/Flat Type

PMEC //AMEC //AMEC PSEP ROBO NET PERC2 PCON ACON SCON SSEL SSEL





References (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.

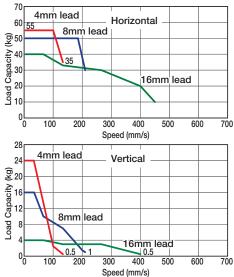
(2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

(3) The load capacity is based on operation at an acceleration of 0.2G. 0.2G is the upper limit of the acceleration.

In addition, the horizontal load capacity is based on the use of an external guide. See the technical resources (page A-82) for the allowable weight using the supplied guide alone

# Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



# Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Capacity (Note 1)		Maximum Push	Stroke	
	(mm)	Horizontal (kg)	Vertical (kg)	Force (N)(Note 2)	(mm	
RCP2-RGS6C-I-56P-16-①-②-③-④	16	~ 40	$\sim$ 4	240		
RCP2-RGS6C-I-56P-8-①-②-③-④	8	~ 50	~ 16	470	50 ~ 300 (50mm increments)	
RCP2-RGS6C-I-56P-4-①-②-③-④	4	~ 55	~ 24	800	increments)	
Legend: Stroke Compatible controller Cable length Options (Note 2) See page A-69 for the pushing force graphs						

### Stroke (50mm increments) 450 <400> 16 8 210

Stroke and Maximum Speed

\* The values enclosed in < > apply for vertical usage. (Unit: mm/s)

130

Cable List		
Туре	Cable Symbol	
	P (1m)	
Standard	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	

*	See	nage	Δ-39	for	cables	for	maintenance.
	See	paye	M-09	101	Cables	101	mamienance.

	Option List	
	Name	Optio
_		

Name	Option Code	See Page	
Brake	В	→ A-25	
Foot bracket	FT	→ A-29	
Reversed-home	NM	→ A-33	

Actuator Specifications							
Item	Description						
Drive System	Ball screw ø12mm C10 grade						
Positioning Repeatability	±0.02mm						
Lost Motion	0.1mm or less						
Guide	Single guide Guide rod diameter ø12mm Ball bush type						
Rod Diameter	ø30mm						
Non-rotating accuracy of rod	±0.05 deg						
Ambient Operating Temp./Humidity	$0\sim40^{\circ}\text{C}$ , 85% RH or less (non-condensing)						

4

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders

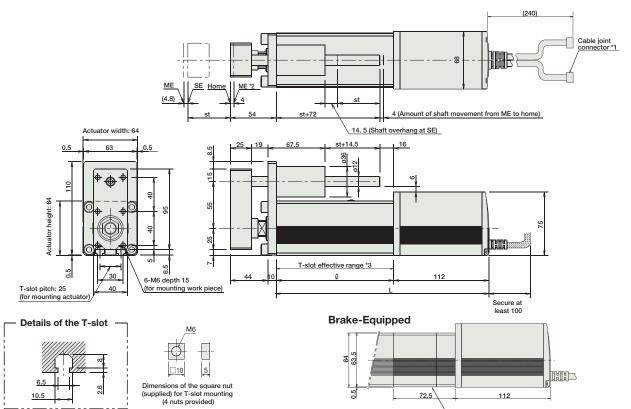


2/3D CAD

- The motor-encoder cable is connected here. See page A-39 for details on cables.
- \*2 When homing, the rod moves to the M.E.; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end SE: Stroke end

The values enclosed in "( )" are reference dimensions.

\*3. Please note that there is no T-slot on the bottom of the brake unit.



Brake unit \* Compared to the standard model, the brake-equipped model is longer by 72.5mm and heavier by 0.9kg.

# ■ Dimensions/Weight by Stroke

- Difficiliational Weight by Ottoke								
Stroke	50	100	150	200	250	300		
R	138	188	238	288	338	388		
L	250	300	350	400	450	500		
Weight (kg)	3.6	4.4	5.0	5.5	6.1	6.6		

	Con	npatible	Control	lers
--	-----	----------	---------	------

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page	
Solenoid Valve Type		PMEC-C-56PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477	
Solellold valve Type	1	PSEP-C-56PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487	
plash-Proof Solenoid Valve Type	Ī	PSEP-CW-56PI-NP-2-0	Supports both single and double solenoid types.  No homing necessary with simple absolute type.				→ P467	
Positioner Type	Í	PCON-C-56PI-NP-2-0	Positioning is possible for up to 512 points	512 points				
Safety-Compliant Positioner Type		PCON-CG-56PI-NP-2-0	Positioning is possible for up to 312 points	orz points		2A max.		
Pulse Train Input Type Differential Line Driver)	á	PCON-PL-56PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V		→ P525	
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Pulse train input type with open collector support	(-)	(-)			
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-56P	Dedicated to field network	768 points			→ P503	
Program Control Type		PSEL-C-1-56PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557	

IAI RCP2-RGS6C

PMEC (AMEC PSEP / ASEP ROBO NET ERC2 PCON ACON SCON PSEL ASEL SSEL

CP2-SRGS4R RoboCylinder Short Rod Type with Single Guide 45mm Width Pulse Motor Side-Mounted Motor

■ Configuration: RCP2 — SRGS4R — 35P Encoder Motor Lead Compatible Controllers Cable Length Option Type Stroke 5 : 5mm P1: PCON N: None P:1m I: Incremental 35P: Pulse motor 20: 20mm See options below The Simple absolute encoder 2.5 : 2.5mm **RPCON** 35 🗌 size S : 3m M : 5m 200: 200mm PSEL is also considered (10mm pitch increments) P3: PMEC
\* Set in 50mm increments type "I". X .: Custom PSEP



Technical References

P. A-5

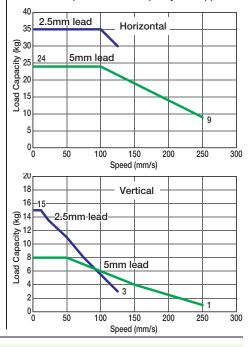
(1) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported. (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model, or when used vertically).

This is the upper limit of the acceleration.

(3) The horizontal load capacity is based on the use of an external guide. See the technical resources (page A-82) for the allowable weight using the supplied guide alone.

# ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



## Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases

Model	Lead		apacity (Note 1)	Maximum Push	Stroke
	(mm)	Horizontal (kg)	Vertical (kg)	Force (N) (Note 2)	(mm)
RCP2-SRGS4R-I-35P-5-①-②-③-④	5	~ 24	~ 8	90	$\begin{array}{c} 20 \sim 200 \\ \text{(10mm} \end{array}$
RCP2-SRGS4R-I-35P-2.5-①-②-③-④	2.5	~ 35	∼ <b>1</b> 5	170	(Note 3)
Legend: ① Stroke ② Compatible controller ③ Cable length	4 Optio			9 for the pushing for ents over 100mm.	rce graphs.

(Note 3) 50mm increments over 100mm.

Stroke	and	Maximum	Speed

Stroke Lead	$20 \sim 200$ (10mm increments)		
5	250		
2.5	125		

(Unit: mm/s)

Cable List

Туре	Cable Symbol	
Standard (Robot Cables)	P (1m)	
	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

- \* The cable is a motor-encoder integrated cable, and is
- provided as a robot cable.
- \* See page A-39 for cables for maintenance.

7	and in our	I to A
,		

Option List					
Name	Option Code	See Page			
Brake	В	→ A-25			
Flange bracket (back)	FLR	→ A-28			
Foot bracket 1 (base mounting)	FT	→ A-29			
Foot bracket 2 (right/left side mounting)	FT2/FT4	→ A-31			
Guide mounting direction	GS2 $\sim$ GS4	→ A-156			
Reversed-home	NM	→ Δ-33			

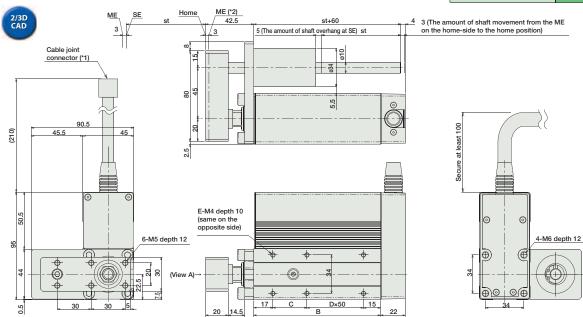
- \* The brake is available for strokes of 70mm or more.
- \* Please be sure that the mounting direction of the guide is specified in the
- product name.
  \* The guide and the foot bracket cannot be mounted in the same direction.

Actuator Specifications				
Item	Description			
Drive System	Ball screw ø8mm C10 grade			
Positioning Repeatability	±0.02mm			
Lost Motion	0.1mm or less			
Rod Diameter	ø22mm			
Non-rotating accuracy of rod	±0.05 deg			
Ambient Operating Temp /Humidity	0 ~ 40°C, 85% RH or less (non-condensing)			

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders





GS4
Leftmounted

Actuator

GS2
Rightmounted

GS3
Bottommounted

Guide mounting direction
(as viewed from view A)

E-M4 depth 10

24

C

Dx50

8

\* The exterior dimensions for the brake-equipped model is no different than the standard model. However, 70mm is the minimum stroke of the brakeequipped models. (i.e. The brake is not compatible at 60mm strokes and under.)

> ST : Stroke SE : Stroke end ME: Mechanical end

(\*1) The motor-encoder cable is connected here. See page A-39 for details on cables.

(\*2) When homing, the rod moves to the mechanical end position; therefore, please watch for any interference with the surrounding objects.

_	_	•									
Stroke	20	30	40	50	60	70	80	90	100	150	200
L	126.5	136.5	146.5	156.5	166.5	176.5	186.5	196.5	206.5	256.5	306.5
Α	84	94	104	114	124	134	144	154	164	214	264
В	62	72	82	92	102	112	122	132	142	192	242
С	30	40	50	60	70	30	40	50	60	60	60
D	0	0	0	0	0	1	1	1	1	2	3
E	4	4	4	4	4	6	6	6	6	8	10
Weight (kg)	1.2	1.27	1.34	1.41	1.48	1.54	1.61	1.68	1.75	2.09	2.43

■ Dimensions/Weight by Stroke (Add 0.2kg for brake equipped)

# Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page			
Solenoid Valve Type		PMEC-C-35PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477			
Soleliold valve Type	1	PSEP-C-35PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487			
Splash-Proof Solenoid Valve Type		PSEP-CW-35PI-NP-2-0	No homing necessary with simple absolute type.							→ F407
Positioner Type	É	PCON-C-35PI-NP-2-0	Positioning is possible for up to 512 points	512 points						
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0	1 ostavning is possible for up to 012 points	OTZ points						
Pulse Train Input Type (Differential Line Driver)		PCON-PL-35PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525			
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-NP-2-0	Pulse train input type with open collector support	(-)						
Serial Communication Type	1	PCON-SE-35PI-N-0-0	Dedicated to serial communication	64 points						
Field Network Type		RPCON-35P	Dedicated to field network	768 points			→ P503			
Program Control Type		PSEL-C-1-35PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557			

\* This is for the single-axis PSEL.

ype

Mini

Standard

Rod

Гуре

Mini

Standard

Controllers Integrated

Table/Arm /Flat Type

Mini

Cripport

notary rype

Linear Motor Type

Туре

Spiasn Proof

Controllers

AMEC

ROBO NET

ERC2

PCON

ACON

SCON

PSEL

ASEL

SSEL

XSEL

Pulse Moto

Servo Motoi (24V)

Servo Moto 230W

Linear Mot

Standard
Introllers
Integrated
Rod
Type
Mini
Standard
Controllers
Integrated
Table/Arr
//Flat Typ

RCP2-RGD3C RoboCylinder Rod Type with Double Guide 35mm Width Pulse Motor Straight Type ■ Configuration: RCP2 — RGD3C — 28P Encoder Lead Compatible Contr Cable Length Option Type Stroke

28P: Pulse motor

28 🗌 size

5 : 5mm

2.5 : 2.5mm

\* Pictured: RGD4C

I: Incremental

type "I".

The Simple absolute encoder

is also considered

Technical [全 P. A-5 References When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire. Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.

Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

In addition, the horizontal load capacity is based on the use of an external guide. See the technical resources (page A-83) for

The load capacity is based on operation at an acceleration of 0.2G.

0.2G is the upper limit of the acceleration.

the allowable weight using the supplied guide alone

# Speed vs. Load Capacity

N : None P : 1m

S : 3m M : 5m

: Custom

R .: Robot cable

P1: PCON

RPCON

PSEL

PSEP

P3: PMEC

50: 50mm

200: 200mm

(50mm pitch

increments)

Actuator Specifications Item

Drive System

Lost Motion

Guide Rod Diameter

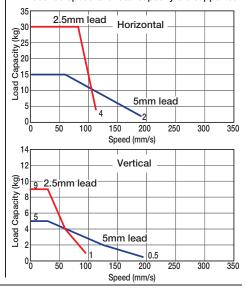
Positioning Repeatability

Non-rotating accuracy of rod

Ambient Operating Temp./Humidity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

FT : Foot bracket NM: Reversed-home



### Actuator Specifications Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases Lead Max. Load Capacity (Note 1) Maximum Push (mm) Vertical (kg) Force (N)(Note 2 RCP2-RGD3C-I-28P-5-1-2-3-4 5 $\sim$ 15 $\sim$ 5 73.5 $50 \sim 200$ (50mm RCP2-RGD3C-I-28P-2.5- 1 - 2 - 3 - 4 2.5 increments) $\sim$ 30 $\sim$ 9 156.8 Legend: ① Stroke ② Compatible controller ③ Cable length ④ Options (Note 2) See page A-69 for the pushing force graphs.

Stroke (50mm increments) 5 187 2.5 114 < 93> (Unit: mm/s)

Description

 $0\sim40^{\circ}\text{C}$ , 85% RH or less (non-condensing)

Double guide Guide rod diameter ø10mm Ball bush type

Ball screw ø8mm C10 grade

±0.02mm

ø22mm

±0.05 dea

0.1mm or less

■ Stroke and Maximum Speed

Cable List						
Туре	Cable Symbol					
	P (1m)					
Standard	<b>S</b> (3m)					
	M (5m)					
	X06 (6m) ~ X10 (10m)					
Special Lengths	X11 (11m) ~ X15 (15m)					
	X16 (16m) ~ X20 (20m)					
	R01 (1m) ~ R03 (3m)					
	R04 (4m) ~ R05 (5m)					
Robot Cable	R06 (6m) ~ R10 (10m)					
	R11 (11m) ~ R15 (15m)					
	R16 (16m) ~ R20 (20m)					

M (5m)	
X06 (6m) ~ X10 (10m)	
<b>X11</b> (11m) ~ <b>X15</b> (15m)	
X16 (16m) ~ X20 (20m)	
R01 (1m) ~ R03 (3m)	
R04 (4m) ~ R05 (5m)	
R06 (6m) ~ R10 (10m)	
R11 (11m) ~ R15 (15m)	
R16 (16m) ~ R20 (20m)	
	X06 (6m)         X10 (10m)           X11 (11m)         X15 (15m)           X16 (16m)         X20 (20m)           R01 (1m)         R03 (3m)           R04 (4m)         R05 (5m)           R06 (6m)         R10 (10m)           R11 (11m)         R15 (15m)

# See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Foot bracket	FT	→ A-29	
Reversed-home	NM	→ A-33	

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders



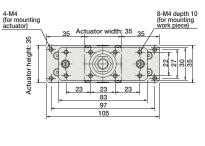
2/3D CAD

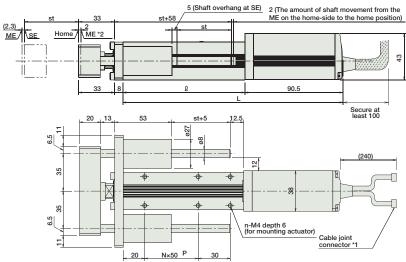
- The motor-encoder cable is connected here. See page A-39 for details on cables.
- When homing, the rod moves to the M.E.; therefore, please watch for any interference with the surrounding objects.

  ME: Mechanical end

SE: Stroke end

The values enclosed in "( )" are reference dimensions.





# ■ Dimensions/Weight by Stroke

Stroke	50	100	150	200			
٤	112.5	162.5	212.5	262.5			
L	203	253	303	353			
N	1	2	3	4			
n	6	8	10	12			
Weight (kg)	1.1	1.3	1.4	1.6			

Comp	atibla	Control	lare

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Page	
	PMEC-C-28SPI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P477	
1	PSEP-C-28SPI-NP-2-0	Operable with same signal as solenoid valve.	3 points				→ P487	
	PSEP-CW-28SPI-NP-2-0	No homing necessary with simple absolute type.					→ P487	
	PCON-C-28SPI-NP-2-0	Positionina is possible for up to 512 points	512 points					
	PCON-CG-28SPI-NP-2-0	r contouring to possible for up to 512 points	OTZ POINTS					
	PCON-PL-28SPI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V	2A max.		→ P525	
	PCON-PO-28SPI-NP-2-0	Pulse train input type with open collector support	(-)					
	PCON-SE-28SPI-N-0-0	Dedicated to serial communication	64 points					
	RPCON-28SP	Dedicated to field network	768 points					→ P503
	PSEL-C-1-28SPI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P557	
	External View	PMEC-C-28SPI-NP-2-0 PSEP-C-28SPI-NP-2-0 PSEP-CW-28SPI-NP-2-0 PCON-C-28SPI-NP-2-0 PCON-CG-28SPI-NP-2-0 PCON-PL-28SPI-NP-2-0 PCON-PC-28SPI-NP-2-0 PCON-PC-28SPI-NP-2-0 PCON-PC-28SPI-NP-2-0 PCON-PC-28SPI-NP-2-0	PMEC-C-28SPI-NP-2-0  PSEP-C-28SPI-NP-2-0  Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.  PCON-C-28SPI-NP-2-0  PCON-CG-28SPI-NP-2-0  PCON-PL-28SPI-NP-2-0  PCON-PL-28SPI-NP-2-0  PCON-PC-28SPI-NP-2-0  PUlse train input type with differential line driver support  PCON-PC-28SPI-NP-2-0  Pulse train input type with open collector support  PCON-SE-28SPI-N-0-0  Dedicated to serial communication  RPCON-28SP  Dedicated to field network  Programmed operation is possible	PMEC-C-28SPI-NP-2-0  PSEP-C-28SPI-NP-2-0  Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.  PCON-C-28SPI-NP-2-0  PCON-C-28SPI-NP-2-0  PCON-PL-28SPI-NP-2-0  PCON-PL-28SPI-NP-2-0  PCON-PC-28SPI-NP-2-0  PCON-PC-28SPI-NP-2-0  PCON-PC-28SPI-NP-2-0  Pulse train input type with differential line driver support  PCON-PC-28SPI-NP-2-0  Pulse train input type with open collector support  PCON-SE-28SPI-N-0-0  Dedicated to serial communication  RPCON-28SP  Dedicated to field network  768 points  Programmed operation is possible	PMEC-C-28SPI-NP-2-2 Easy-to-use controller, even for beginners  PSEP-C-28SPI-NP-2-0 Operable with same signal as solenoid valve. Supports both single and double solenoid vpes. No homing necessary with simple absolute type.  PCON-C-28SPI-NP-2-0 PCON-C-28SPI-NP-2-0 Positioning is possible for up to 512 points PCON-PL-28SPI-NP-2-0 Pulse train input type with differential line driver support PCON-PO-28SPI-NP-2-0 Pulse train input type with open collector support PCON-SE-28SPI-N-0-0 Dedicated to serial communication  RPCON-28SP Dedicated to field network  Programmed operation is possible  1500 series	PMEC-C-28SPI-NP-2-2 Easy-to-use controller, even for beginners  PSEP-C-28SPI-NP-2-0 Operable with same signal as solenoid valve. Supports both single and double solenoid valve. No horning necessary with simple absolute type.  PCON-C-28SPI-NP-2-0 PCON-C-28SPI-NP-2-0 Positioning is possible for up to 512 points PCON-PL-28SPI-NP-2-0 Pulse train input type with differential line driver support PCON-PO-28SPI-NP-2-0 Pulse train input type with open collector support PCON-SE-28SPI-N-0-0 Dedicated to serial communication  RPCON-28SP Dedicated to field network Programmed operation is possible Programmed operation is possible	PMEC-C-28SPI-NP-2-2 Easy-to-use controller, even for beginners  PSEP-C-28SPI-NP-2-0  Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.  PCON-C-28SPI-NP-2-0  PCON-C-28SPI-NP-2-0  PCON-C-28SPI-NP-2-0  PCON-PL-28SPI-NP-2-0  PCON-PL-28SPI-NP-2-0  PUlse train input type with differential line driver support  PCON-PO-28SPI-NP-2-0  Pulse train input type with open collector support  PCON-SE-28SPI-NP-2-0  Dedicated to serial communication  RPCON-28SPI-NP-3 Dedicated to field network  RPCON-28SPI-NP-3 Dedicated to field network  PCON-SE-28SPI-NP-3 Dedicated to field network  RPCON-28SPI-NP-3 Dedicated to field network  RPCON-38SPI-NP-3 Dedicated to fie	

Rod Type

Mini

Standard

Controllers
Integrated

PMEC AMEC
PSEP ASEP
ROBO NET
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL

PMEC /AMEC /

### RCP2-RGD4C RoboCylinder Rod Type with Double Guide 45mm Width Pulse Motor Straight Type ■ Configuration: RCP2 — RGD4C — — 42P Encoder Lead Compatible Contr Cable Length Option Type Stroke N : None P : 1m 10:10mm P1: PCON I: Incremental 42P: Pulse motor 50: 50mm : Brake The Simple absolute encoder is also considered FT : Foot bracket NM: Reversed-home 5 : 5mm RPCON 42 🗌 size S : 3m M : 5m 2.5 : 2.5mm 300: 300mm PSEL (50mm pitch P3: PMEC type "I". : Custom

increments)



When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.

Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.

Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.2G.

0.2G is the upper limit of the acceleration.

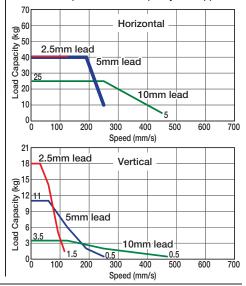
In addition, the horizontal load capacity is based on the use of an external guide. See the technical resources (page A-83) for the allowable weight using the supplied guide alone.

# Speed vs. Load Capacity

PSEP

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

R .: Robot cable



# Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases. Lead Max. Load Capacity (Note 1) Maximum Push Stroke

Model		Horizontal (kg)	Vertical (kg)	Force (N)(Note 2)	(mm)
RCP2-RGD4C-I-42P-10-①-②-③-④	10	~ 25	$\sim$ 3.5	150	
RCP2-RGD4C-I-42P-5-①-②-③-④	5	~ 40	~ 11	284	50 ~ 300 (50mm increments)
RCP2-RGD4C-I-42P-2.5-①-②-③-④	2.5	40	~ 18	358	ments
Legend: Stroke Compatible controller Cable length Options (Note 2) See page A-69 for the pushing force graphs.					

Stroke Lead	$50 \sim 200$ (50mm increments)	250 (mm)	300 (mm)
10	458	458	350
5	250	237	175
2.5	125 <114>	118 <114>	87

\* The values enclosed in < > apply for vertical usage. (Unit: mm/s)

■ Stroke and Maximum Speed

Actuator Specifications

Cable List			
Туре	Cable Symbol		
	P (1m)		
Standard	<b>S</b> (3m)		
	M (5m)		
	X06 (6m) ~ X10 (10m)		
Special Lengths	X11 (11m) ~ X15 (15m)		
	X16 (16m) ~ X20 (20m)		
	R01 (1m) ~ R03 (3m)		
	R04 (4m) ~ R05 (5m)		
Robot Cable	R06 (6m) ~ R10 (10m)		
	R11 (11m) ~ R15 (15m)		
	R16 (16m) $\sim$ R20 (20m)		

* See page A-39 for cable	es for maintenance.
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Option List			
Name	Option Code	See Page	
Brake	В	→ A-25	
Foot bracket	FT	→ A-29	
Reversed-home	NM	→ A-33	

Actuator Specifications			
Item	Description		
Drive System	Ball screw ø8mm C10 grade		
Positioning Repeatability	±0.02mm		
Lost Motion	0.1mm or less		
Guide	Double guide Guide rod diameter ø10mm Ball bush type		
Rod Diameter	ø22mm		
Non-rotating accuracy of rod	±0.05 deg		
Ambient Operating Temp./Humidity	0 ~ 40°C. 85% RH or less (non-condensing)		

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders



57.5

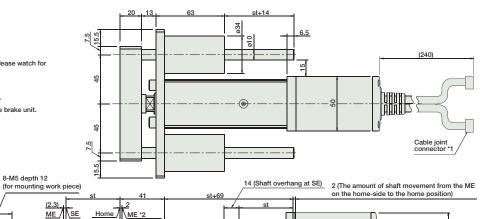


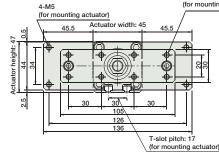
- \*1. The motor-encoder cable is connected here. See page A-39 for details on cables.
- When homing, the rod moves to the M.E.; therefore, please watch for any interference with the surrounding objects.

  ME: Mechanical end

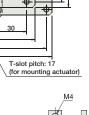
SE: Stroke end
The values enclosed in "( )" are reference dimensions.

\*3. Please note that there is no T-slot on the bottom of the brake unit.

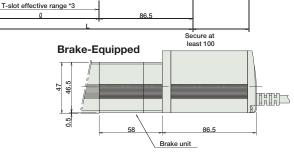




Details of the T-slot







\* Compared to the standard model, the brake-equipped model is longer by 58mm and heavier by 0.4kg.

# ■ Dimensions/Weight by Stroke

Difficilisions/ Weight by Ottoke						
Stroke	50	100	150	200	250	300
£	112.5	162.5	212.5	262.5	312.5	362.5
L	199	249	299	349	399	449
Weight (kg)	2.2	2.5	2.8	3.1	3.4	3.7

Comp	atible	Control	lers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solellold valve Type		PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type	Supports both single and double solenoid types. No homing necessary with simple absolute type.			→ P48/			
Positioner Type		PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	realisting to peccession for up to one period	O12 points			
Pulse Train Input Type (Differential Line Driver)	ė į	PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

PMEC /AMEC /

### RCP2-RGD6C RoboCylinder Rod Type with Double Guide 64mm Width Pulse Motor Straight Type $\blacksquare$ Configuration: RCP2 - RGD6C -- 56P Encoder Lead Compatible Contr Cable Length Option Type Stroke N : None P : 1m P1: PCON I: Incremental 56P: Pulse motor 16:16mm 50: 50mm : Brake The Simple absolute encoder is also considered FT : Foot bracket NM: Reversed-home RPCON 56 🗌 size 8:8mm S : 3m M : 5m 300: 300mm PSEL (50mm pitch P3: PMEC type "I". : Custom



Capacity (kg) Load

increments)

When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.

Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.

Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.2G.

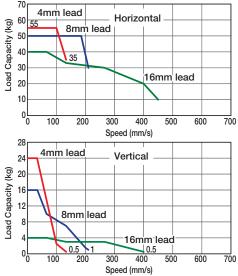
0.2G is the upper limit of the acceleration. In addition, the horizontal load capacity is based on the use of an external guide. See the technical resources (page A-83) for the allowable weight using the supplied guide alone

# Speed vs. Load Capacity

PSEP

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

R .: Robot cable



# Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

	Model		Max. Load Ca	,, ,	Maximum Push	Stroke
			Horizontal (kg)	Vertical (kg)	Force (N)(Note 2)	(mm)
RCP2-RC	GD6C-I-56P-16-①-②-③-④	16	~ 40	$\sim$ 4	240	
RCP2-RC	GD6C-I-56P-8-①-②-③-④	8	~ 50	$\sim$ 16	470	50 ~ 300 (50mm increments)
RCP2-RG	GD6C-I-56P-4-①-②-③-④	4	∼ <b>5</b> 5	$\sim$ 24	800	morements
Legend: Stroke Compatible controller Cable length Options (Note 2) See page A-69 for the pushing force graphs.						

# ■ Stroke and Maximum Speed

Stroke Lead	$50\sim300$ (50mm increments)
16	450 <400>
8	210
4	130

(Note 2) See page A-69 for the pushing force graphs. \* The values enclosed in < > apply for vertical usage. (Unit: mm/s)

# Cable List

Cable List							
Туре	Cable Symbol						
	P (1m)						
Standard	<b>S</b> (3m)						
	M (5m)						
	<b>X06</b> (6m) ~ <b>X10</b> (10m)						
Special Lengths	X11 (11m) ~ X15 (15m)						
	X16 (16m) ~ X20 (20m)						
	R01 (1m) ~ R03 (3m)						
	R04 (4m) ~ R05 (5m)						
Robot Cable	R06 (6m) ~ R10 (10m)						
	R11 (11m) ~ R15 (15m)						
	R16 (16m) ~ R20 (20m)						
	Tito (tom)						

*	See	nage	A-39	for	cables	for	maintenance.	
	OCC	page	7-03	101	Cabics	101	maintenance.	

Ontion	iet

o p a o a la la la la la la la la la la la la l			
Name	Option Code	See Page	
Brake	В	→ A-25	
Foot bracket	FT	→ A-29	
Reversed-home	NM	→ A-33	

# Actuator Specifications

riotaator opoomoanomo							
Item	Description						
Drive System	Ball screw ø12mm C10 grade						
Positioning Repeatability	±0.02mm						
Lost Motion	0.1mm or less						
Guide	Double guide Guide rod diameter ø12mm Ball bush type						
Rod Diameter	ø22mm						
Non-rotating accuracy of rod	±0.05 deg						
Ambient Operating Temp./Humidity	0 ~ 40°C, 85% RH or less (non-condensing)						

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders

936



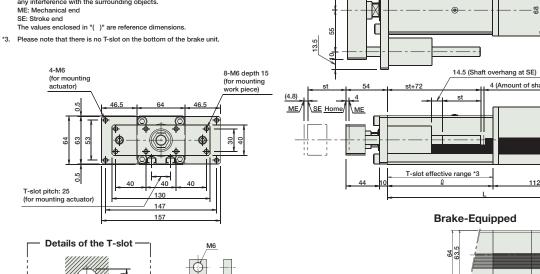
(240)

4 (Amount of shaft movement from ME to home)



- The motor-encoder cable is connected here. See page A-39 for details on cables.
- When homing, the rod moves to the M.E.; therefore, please watch for any interference with the surrounding objects.

  ME: Mechanical end



5

Dimensions of the square nut

(supplied) for T-slot mounting (4 nuts provided)

112 Brake unit

112

Compared to the standard model, the brake-equipped model is longer by 72.5mm and heavier by 0.9kg.

# ■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300
Ł	138	188	238	288	338	388
L	250	300	350	400	450	500
Weight (kg)	4.4	5.0	5.5	6.1	6.7	7.3

# Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Page
Solenoid Valve Type		PMEC-C-56PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V See P4	See P481		→ P477
Solellold valve Type	PSEP-C-56PI-NP-2-0		Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points				→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-56PI-NP-2-0	Supports both single and double solenoid types.  No homing necessary with simple absolute type.					71407
Positioner Type	Í	PCON-C-56PI-NP-2-0	Positioning is possible for up to 512 points	512 noints				
Safety-Compliant Positioner Type		PCON-CG-56PI-NP-2-0	r contoning to possible for up to 612 points	OTZ points				
Pulse Train Input Type (Differential Line Driver)		PCON-PL-56PI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V	2A max.		→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Pulse train input type with open collector support	(-)				
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-56P	Dedicated to field network	768 points				→ P503
Program Control Type		PSEL-C-1-56PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P557
							* This is for the single-a	axis PSE

CP2-SRGD4R RoboCylinder Short-Length Rod Type with Double Guide 45mm Width Pulse Motor Side-Mounted Motor

■ Configuration: RCP2 — SRGD4R — 35P Encoder Motor Lead Cable Length Option Type Stroke N: None P:1m I: Incremental 35P: Pulse motor 5 : 5mm 20: 20mm P1: PCON See Options below The Simple absolute encoder 2.5 : 2.5mm RPCON 35 ☐ size S : 3m M : 5m 200: 200mm PSEL is also considered (10mm pitch increments) P3: PMEC
\* Set in 50mm increments type "I". X .: Custom PSEP



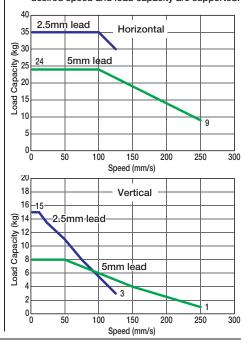
Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs Load Capacity graph to see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model, or when used vertically).

The horizontal load capacity is based on the use of an external guide. See the technical resources (page A-83) for the allowable weight using the supplied guide alone.

# ■ Speed vs. Load Capacity

 $\overset{\cdot}{\text{Due}}$  to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



# Actuator Specifications ■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Stroke
(mm)
20~200
(10mm
increments)
(Note 3)
rce graphs.

Stroke Lead	$20 \sim 200$ (10mm increments)
5	250
2.5	125
	(Unit: mm/s)

■ Stroke and Maximum Speed

Cable List		
Туре	Cable Symbol	
Standard	P (1m)	
	<b>S</b> (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

- The cable is a motor-encoder integrated cable, and is provided as a robot cable.
- See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Brake	В	→ A-25	
Foot bracket 1 (base mounting)	FT	→ A-29	
Reversed-home	NM	→ A-33	

- \* The brake can be used for strokes of 70mm or more.
- \* The foot bracket cannot be mounted on the side.

Actuator Specifications Item Description Drive System Ball screw ø8mm C10 grade Positioning Repeatability ±0.02mm Lost Motion 0.1mm or less Rod Diameter ø22mm Non-rotating accuracy of rod ±0.05 deg  $0\sim$  40°C, 85% RH or less (non-condensing) Ambient Operating Temp./Humidity

( P. A-**9** 

Slider

Mini

Standard

Integrat

Type

Mini

Stalluaru

Table/Arm

Mini

Gripper/

Туре

Splash Prod

Controllers

/AMEC

ROBO NET

PCON

ACON

SCON

AGEI

SSEL

ulse Motor

Servo Moto (24V)

> Servo Moto (230V)

Linear Mo

Dimensions

CAD drawings can be downloaded from IAI website. www.robocylinder.de

Tor Special Orders

SE Home ME (\*2)

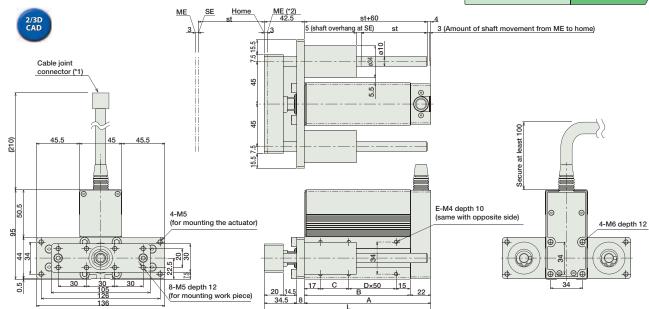
St 42.5 St +60

A 3 (Amount of shaft movement from ME)

To Special Orders

St 40.5 St +60

A 3 (Amount of shaft movement from ME)



\* The exterior dimensions for the brake-equipped model is no different than the standard model.

However, 70mm is the minimum stroke of the brake-equipped models. (i.e. The brake is not compatible at 60mm strokes and under.)

E-M4 depth 10

ST : Stroke
SE : Stroke end
ME : Mechanical end

Dimensions/	е	(+U.2K	y with b	iakej							
Stroke	20	30	40	50	60	70	80	90	100	150	200
L	126.5	136.5	146.5	156.5	166.5	176.5	186.5	196.5	206.5	256.5	306.5
Α	84	94	104	114	124	134	144	154	164	214	264
В	62	72	82	92	102	112	122	132	142	192	242
С	30	40	50	60	70	30	40	50	60	60	60
D	0	0	0	0	0	1	1	1	1	2	3
E	4	4	4	4	4	6	6	6	6	8	10
Weight (kg)	1.47	1.55	1.62	1.7	1.77	1.84	1.92	1.99	2.07	2.44	2.81

(*1) The motor-encoder cable is connected here. See page A-39 for
details on cables.

(\*2) When homing, the rod moves to the mechanical end position; therefore, please watch for any interference with the surrounding objects.

# Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Page		
Solenoid Valve Type		PMEC-C-35PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P477		
Solellold valve Type	1	PSEP-C-35PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points				→ D407		
Splash-Proof Solenoid Valve Type		PSEP-CW-35PI-NP-2-0	No homing necessary with simple absolute type.					→ P487		
Positioner Type	Í	PCON-C-35PI-NP-2-0	Positioning is possible for up to 512	512 points	512 points	512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0	points	312 points		2A max.				
Pulse Train Input Type (Differential Line Driver)		PCON-PL-35PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V			→ P525		
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-NP-2-0	Pulse train input type with open collector support	(-)	64 points 768 points					
Serial Communication Type	1	PCON-SE-35PI-N-0-0	Dedicated to serial communication	64 points						
Field Network Type		RPCON-35P	Dedicated to field network	768 points				→ P503		
Program Control Type	Í	PSEL-C-1-35PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P557		
							* This is for the single-	axis PSE		

RCP2-SRGD4R

### RCP3-TA3C RoboCylinder Mini Table Type Motor Unit Coupled 36mm Width Pulse Motor Ball Screw RCP3-TA<sub>3</sub>C ■ Configuration: I **20P** Туре Encoder Motor Stroke Compatible Controllers Cable Length Option 20P: Pulse motor 6: 6mm P1: PCON N : None I: Incremental 20: 20mm See Options below The simple absolute encoder is also considered 4: 4mm RPCON P:1m 20 🗌 size 2: 2mm 100: 100mm PSEL S : 3m (10mm pitch P3: PMEC M : 5m increments) PSEP X . : Custom



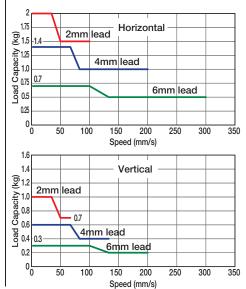
References



(1) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2mm-lead model, or when used vertically). 0.3G (0.2G for 2mm lead) is the upper limit of the acceleration.

# ■ Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases. Feed Screw Lead (mm) Max. Load Capacity (Note 1) Maximum Positioning Push Force (N) Repeatability orizontal (kg) Vertical (kg) (Note 2) (mm) RCP3-TA3C-I-20P-6-1 - 2 - 3 - 4 6 $\sim$ 0.7 $\sim$ 0.3 20~100 Rall RCP3-TA3C-I-20P-4- 1 - 2 - 3 - 4 4 14 ±0.02 $\sim 1.4$ $\sim$ 0.6 (10mm RCP3-TA3C-I-20P-2-1 - 2 - 3 - 4 2 ~ 2 $\sim$ 1 28

(Note 2) See page A-66 for pushing force graphs.

Lead	Stroke	20 $\sim$ 100 (mm)
Wé	6	300 <200>
Ball Screw	4	200 <133>
Ba	2	100 <67>

\* The values enclosed in "< >" apply to vertical usage. (Unit: mm/s)

■ Stroke and Maximum Speed

# Cable List

Туре	Cable Symbol	
Standard (Robot Cables)	P (1m) S (3m) M (5m)	
Special Lengths	X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m)	

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

- \* The RCP3 comes standard with a robot cable.
- \* See page A-39 for cables for maintenance.

## Actuator Specifications

Item	Description
Drive System	Ball screw ø6mm C10 grade
Lost Motion	0.1mm or less
Base	Material: Aluminum (white alumite treated)
Allowable Dynamic Moment (Note 3)	Ma: 3.2 N·m Mb: 4.6 N·m Mc: 5.1 N·m
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

(Note 3) Based on a 5,000km service life.

**Directions of Allowable Load Moments** 



Option List			
Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	

ST : Stroke ME : Mechanical end SE : Stroke end

The motor-encoder cable is connected directly to the motor cover of the actuator. See page A-39 for details on cables.

Dimensions

2/3D CAD

3-M4 depth 6

CAD drawings can be downloaded from IAI website. www.robocylinder.de

ø3H7 depth 3.5 (from top of table)

ST

SE

G×40

(between reamer hole and oblong hole)

10.5

28.5

0

0

50 (between reamer a oblong holes)

0

0

The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.

12

J-M3 depth 5

88

ø3H7 depth 3.5 (from bottom of base)

Compatible Controllers

H-M3 depth 5

3H7 (from

Moment offset reference position

depth 3.5 n bottom if base)

18.5

<u>o</u>o

\*2 When homing, the slider moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.

■ Dimensions/Weight by Stroke \* Adding a brake will increase the actuator's weight by 0.1kg.

102.5

	Stroke	20	30	40	50	60	70	80	90	100
_	No Brake	224	234	244	254	264	274	284	294	304
-	Brake-equipped	262	272	282	292	302	312	322	332	342
	Α	87.5	97.5	107.5	117.5	127.5	137.5	147.5	157.5	167.5
	В	95.5	105.5	115.5	125.5	135.5	145.5	155.5	165.5	175.5
	С	121.5	131.5	141.5	151.5	161.5	171.5	181.5	191.5	201.5
	D	91	101	111	121	131	141	151	161	171
	E	1	1	1	1	2	2	2	2	2
	F	28.5	38.5	48.5	58.5	18.5	28.5	38.5	48.5	58.5
	G	1	1	1	1	2	2	2	2	2
	Н	4	4	4	4	6	6	6	6	6
	J	6	6	6	6	8	8	8	8	8
	Weight (kg)	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Se
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	-
Solellold valve Type	1	PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	No homing necessary with simple absolute type.				
Positioner Type	Í	PCON-C-20PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	rostuoriing is possible for up to 312 points	312 points			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	-
				(-)			1

Pulse Train Input Type (Differential Line Driver)		PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503
Program Control Type	Í	PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

→ P477

→ P487

■ Configuration:

PMEC //AMEC PSEP //ASEP ROBO NET ERC2 PCON ACON ACON SCON ASEL SSEL XSEL

RCP3-

RCP3-TA4C RoboCylinder Mini Table Type Motor Unit Coupled 40mm Width Pulse Motor Ball Screw

TA4C **28P** I Encoder Motor 28P: Pulse motor 6: 6mm I: Incremental The simple absolute encoder is also considered 4: 4mm 28 🗌 size 2: 2mm

Stroke 20: 20mm 100: 100mm (10mm pitch increments)

Compatible Controllers P1: PCON RPCON PSEL P3: PMEC

N : None P:1m S:3m M : 5m

Due to the characteristics of the Pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

Cable Length

Option See Options below

PSEP X .: Custom

■ Speed vs. Load Capacity



2mm lead Horizontal 4mm lead pg 1.2 0.8 -1.0 6mm lead 0.4 50 100 200 300 350 Speed (mm/s) 1.6

-1.5 1.4 Vertical <u>9</u> 1.2 2mm lead 0.0 (apacity (l 4mm lead 0.4 Poq 0.4 6mm lead 0.3 0.2 50 100 150 200 250 300 350 Speed (mm/s)

(1) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2mm-lead model, or when used vertically).

0.3G (0.2G for 2mm lead) is the upper limit of the acceleration.

# Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Feed Screw		Max. Load Cap Horizontal (kg)	, , ,	Maximum Push Force (N) (Note 2)	Positioning Repeatability (mm)	Stroke (mm)
RCP3-TA4C-I-28P-6-①-②-③-④		6	~1	$\sim$ 0.5	15		00 400
RCP3-TA4C-I-28P-4-①-②-③-④	Ball Screw	4	~ 2	~ 1	22	±0.02	20~100 (10mm
RCP3-TA4C-I-28P-2-①-②-③-④		2	~ 3	$\sim$ 1.5	44		increments)
egend ①Stroke ②Compatible controller ③Ca	ble length	4 Opti	ons	(Note 2) Se	ee page A-66	for pushing f	orce graphs.

Lead	Stroke	20 ~ 100 (mm)
Wé	6	300
Ball Screw	4	200
Ba	2	100

Cable List					
Туре	Cable Symbol				
Standard	P (1m)				
(Robot Cables)	<b>S</b> (3m)				
	M (5m)				
	X06 (6m) ~ X10 (10m)				
Special Lengths	X11 (11m) ~ X15 (15m)				
	X16 (16m) ~ X20 (20m)				

\* The RCP3 comes standard with a robot cable.

\* See page A-39 for cables for maintenance.

# Actuator Specifications

Item	Description
Drive System	Ball screw ø6mm C10 grade
Lost Motion	0.1mm or less
Base	Material: Aluminum (white alumite treated)
Allowable Dynamic Moment (Note 3)	Ma: 4.2 N·m Mb: 6 N·m Mc: 8.2 N·m
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

(Note 3) Based on a 5,000km service life.

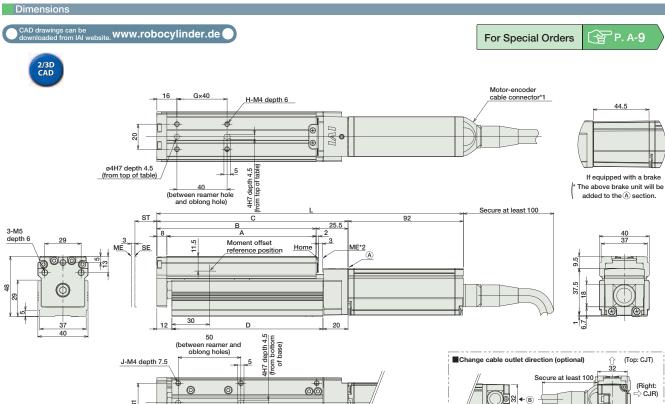
**Directions of Allowable Load Moments** 





(Unit: mm/s)

Option List			
Name	Option Code	See Page	
Brake	В	→ A-25	
Cable exit direction (Top)	CJT		
Cable exit direction (Right)	CJR	. 4 05	
Cable exit direction (Left)	CJL	→ <b>A-25</b>	
Cable exit direction (Bottom)	CJB		
Reversed-home	NM	→ A-33	



90

\*1 The motor-encoder cable is connected directly to the motor cover of the actuator. See page A-39 for details on cables.

ø4H7 depth 4.5 (from bottom of base)

0

0

\*2 When homing, the slider moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.

ST : Stroke ME : Mechanical end SE : Stroke end

■ Dimensions/Weight by Stroke \*Adding a brake will increase the actuator's weight by 0.2kg.

25

As viewed from arrow B.

(Left: CJL)

(Bottom: CJB)

	Stroke	20	30	40	50	60	70	80	90	100
	No Brake	214.5	224.5	234.5	244.5	254.5	264.5	274.5	284.5	294.5
_	Brake-equipped	259	269	279	289	299	309	319	329	339
	Α	89	99	109	119	129	139	149	159	169
	В	97	107	117	127	137	147	157	167	177
	С	122.5	132.5	142.5	152.5	162.5	172.5	182.5	192.5	202.5
	D	90.5	100.5	110.5	120.5	130.5	140.5	150.5	160.5	170.5
	Е	1	1	1	1	2	2	2	2	2
	F	30.5	40.5	50.5	60.5	20.5	30.5	40.5	50.5	60.5
	G	1	1	1	1	2	2	2	2	2
	Н	4	4	4	4	6	6	6	6	6
	J	6	6	6	6	8	8	8	8	8
	Weight (kg)	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
1		PMEC-C-28PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solenoid Valve Type	1	PSEP-C-28PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			. 0.407
Splash-Proof Solenoid Valve Type	<b>I</b>	PSEP-CW-28PI-NP-2-0	No homing necessary with simple absolute type.				→ P487
Positioner Type		PCON-C-28PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-28PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Pulse Train Input Type Differential Line Driver)		e i	PCON-PL-28PI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V	2A max.
Pulse Train Input Type (Open Collector)		PCON-PO-28PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type	Í	PCON-SE-28PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-28P	Dedicated to field network	768 points			→ P503
Program Control Type	B	PSEL-C-1-28PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

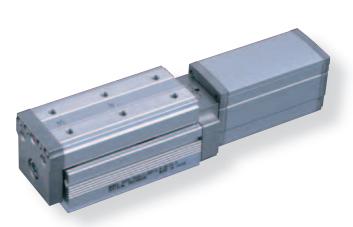
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IAI

ntrollers tegrated Rod Type Mini

PMEC //AMEC PSEP //ASEP ROBO NET ERC2 PCON ACON ACON SCON ASEL SSEL XSEL

RCP3-TA5C RoboCylinder Table Type Motor Unit Coupled 55mm Width Pulse Motor Ball Screw RCP3 - TA5C -■ Configuration: I 35P Type Encoder Motor Stroke Compatible Controllers Cable Length Option P1: PCON N : None I: Incremental 35P: Pulse motor 10: 10mm 25: 25mm See Options below The simple absolute encode 5: 5mm RPCON P:1m 35 🗌 size 2.5: 2.5mm 100: 100mm PSEL S:3m is also considered (25mm pitch P3: PMEC M : 5m type "I" \* See page Pre-35 for an explanation of the naming convention. increments) PSEP X .: Custom



**Technical** 



Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

Please note that the maximum speed is different when used horizontally versus vertically.

The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model, or when used vertically). This is the upper limit of the acceleration.

References

Horizontal Load Capacity (kg) 5mm lead 10mm lead 1.5 0.5 100 200 300 400 500 Speed (mm/s) Vertical 2.5mm lead Capacity 5mm lead 1.5 Load 10mm lead

Due to the characteristics of the Pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

Speed vs. Load Capacity

2.5mm lead

0.5

50 100 150 200 250

# ■ Stroke and Maximum Speed

■ Lead and Load Capacity	(Note 1) Please r	note that the maxi	num load capacit	y decreases as the	speed increases.
Model	Lead	Max. Load Ca	Max. Load Capacity (Note 1)		Stroke
Wiodel	(mm) Horizontal (kg) Vertical (kg) (mn (Note 2) (mn 2) - 33 - 4 34	(mm)			
RCP3-TA5C-I-35P-10-①-②-③-④	10	~ 2	~ 1	34	05. 100
RCP3-TA5C-I-35P-5-①-②-③-④	5	~ 4	∼ <b>1.5</b>	68	25~100 (25mm increments)
RCP3-TA5C-I-35P-2.5-①-②-③-④	2.5	~ 6	~ 3	136	increments)
Legend ① Stroke ② Compatible controller ③ Cable length	4 Option	ns (N	ote 2) See page	A-66 for pushin	g force graphs.

Lead	$25 \sim 100$ (25mm increments)
10	465 <400>
5	250
2.5	125
	(Unit: mm/s)

Speed (mm/s)

300 350

400 450

(Robot Cables)	<b>3</b> (3m)		
(HODOL Cables)	<b>M</b> (5m)		
	X06 (6m) $\sim$	X10 (10m)	
Special Lengths	X11 (11m) $\sim$	X15 (15m)	
	<b>X16</b> (16m) ~	X20 (20m)	

P (1m)

Cable Symbol

Actuator Specifications

Cable List

Type

Standard

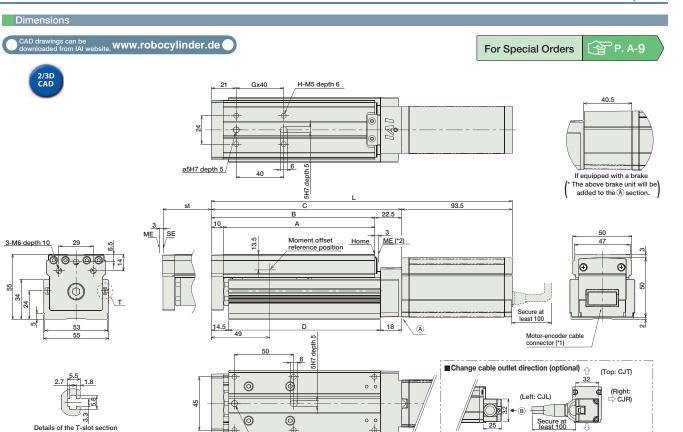
\* The standard cable is the motor-encoder integrated robot cable. \* See page A-39 for cables for maintenance.

Option List			
Name	Option Code	Standard Price	
Brake	В	→ A-25	
Cable exit direction (Top)	CJT	→ A-25	
Cable exit direction (Right)	CJR	→ A-25	
Cable exit direction (Left)	CJL	→ A-25	
Cable exit direction (Bottom)	CJB	→ A-25	
Reversed-home	NM	→ A-33	

Actuator Specifications	8
Item	Description
Drive System	Ball screw ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Material: Aluminum (special alumite treated)
Allowable Static Moment	Ma: 25.5 N·m Mb: 36.5 N·m Mc: 56.1 N·m
Allowable Dynamic Moment (*)	Ma: 6.57 N·m Mb: 9.32 N·m Mc: 14.32 N·m
Overhang Load Length	Within the load moment range
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

(\*) Based on a 5,000km service life. **Directions of Allowable Load Moments** 





■ Dimensions/Weight by Stroke

\* Adding a brake will increase the actuator's weight by 0.3kg.

\* As viewed from arrow B.

— the actuator's weight by 0.3kg.								
Stroke		25	50	75	100			
	No Brake	229	254	279	304			
_	Brake-Equipped	269.5	294.5	319.5	344.5			
-	4	103	128	153	178			
E	3	113	138	163	188			
С		135.5	160.5	185.5	210.5			
D		103	128	153	178			
		1	1	2	2			
I		43	68	43	68			
(	à	1	1	2	2			
H	Н		4	6	6			
	J	6	6	8	8			
Weigl	nt (kg)	1.2	1.4	1.5	1.7			

(\*1) The motor-encoder cable (integrated) is connected. (See page A-39 for details on cables.)

(\*2) After homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end

ø5H7 depth 5 J-M5 depth 10

SE: Stroke end

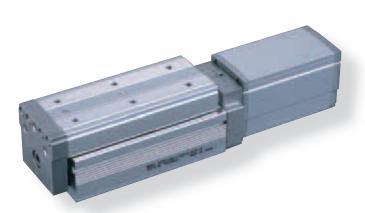
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page	
		PMEC-C-35PI-NP-2-2	Easy-to-use controller, even for beginners	made i condoming i conto	AC115V AC230V	See P481	→ P477	
Solenoid Valve Type	1	PSEP-C-35PI-NP-2-0	Operable with same signal as solenoid valve.	3 points			. 0.407	
Splash-Proof Solenoid Valve Type		PSEP-CW-35PI-NP-2-0	Supports both single and double solenoid types.  No homing necessary with simple absolute type.				→ P487	
Positioner Type			PCON-C-35PI-NP-2-0	Positioning is possible for up to 512 points	512 points	512 points		
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0	1 ostroning is possible for up to 572 points	312 points	012 points			
ulse Train Input Type lifferential Line Driver)		Í	PCON-PL-35PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
ulse Train Input Type (Open Collector)			PCON-PO-35PI-NP-2-0	Pulse train input type with open collector support	( )			
Serial ommunication Type		PCON-SE-35PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-35P	Dedicated to field network	768 points			→ P503	
Program Control Type		PSEL-C-1-35PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557	

ntrollers tegrated Rod Type Mini

ontrollers

PMEC
/AMEC
PSEP
PSEP
ROBO
NET
ERC2
PCON
ACON
SCON
PSEL
SSEL
XSEL

RCP3-TA6C RoboCylinder Table Type Motor Unit Coupled 65mm Width Pulse Motor Ball Screw RCP3 - TA6C -■ Configuration: **42P** Type Encoder Motor Lead Stroke Compatible Controllers Cable Length Option 42P: Pulse motor 12:12mm P1: PCON N : None I: Incremental 25: 25mm See Options below The simple absolute encode P : 1m 42 🗌 size 6:6mm RPCON 3:3mm 150: 150mm PSEL S:3m is also considered (25mm pitch P3: PMEC M : 5m type "I" \* See page Pre-35 for an explanation of the naming convention. increments) PSEP X .: Custom



**Technical** References

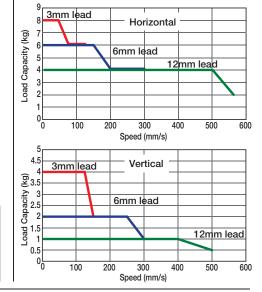
译 P. A-5

- Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- Please note that the maximum speed is different when used horizontally versus vertically.
- The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically).

This is the upper limit of the acceleration.

# Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



# Actuator Specifications Lead and Load Capacity

	Model		Widx. Loud ou	wax. Loud Oupdoity (Note 1)		Stroke	
			Horizontal (kg)	Vertical (kg)	Force (N)(Note 2)	(mm)	
	RCP3-TA6C-I-42P-12-①-②-③-④	12	~ 4	~ 1	47	05 450	
	RCP3-TA6C-I-42P-6-①-②-③-④	6	~ 6	~ 2	95	25~150 (25mm	
	RCP3-TA6C-I-42P-3-①-②-③-④	3	~ 8	~ 4	189	increments)	
	Legend ① Stroke ② Compatible controller ③ Cable length ④ Options (Note 2) See page A-66 for pushing force						

Stroke Lead	$25 \sim$ 150 (25mm increments)
12	560 <500>
6	300
3	150

(Unit: mm/s)

■ Stroke and Maximum Speed

Cable List	Cable List		Actuator Specifications	
Time	Cable Symbol		Item	
Type	Cable Symbol		Drive System	Τ
Standard	P (1m)		Positioning Repeatability	
	S (3m)		Lost Motion	Γ
(Robot Cables)	<b>M</b> (5m)		Base	
Special Lengths	X06 (6m) ~ X10 (10m)		Allowable Static Moment	
	X11 (11m) ~ X15 (15m)		Allowable Dynamic Moment (*)	
	X16 (16m) ~ X20 (20m)		Overhang Load Length	
* The standard cable	is the motor-encoder integrated robe	nt cable	Ambient Operating Temp./Humidity	

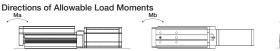
able is the motor-encoder integrated robot cable

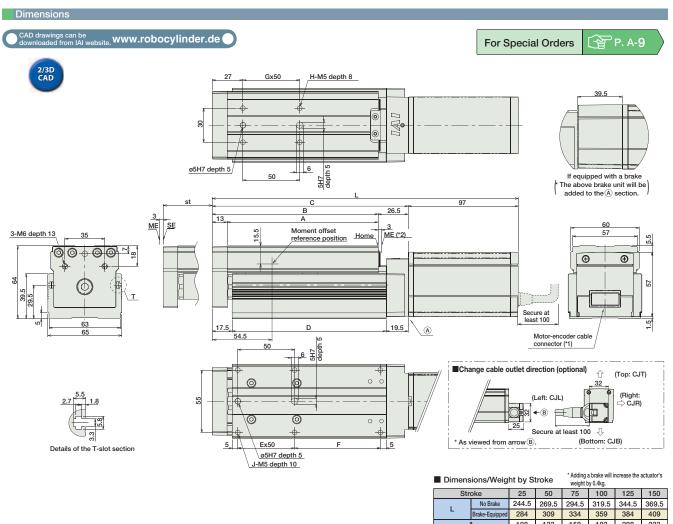
<sup>\*</sup> See page A-39 for cables for maintenance.

Option List			
Name	Option Code	Standard Price	
Brake	В	→ A-25	
Cable exit direction (Top)	CJT	→ A-25	
Cable exit direction (Right)	CJR	→ A-25	
Cable exit direction (Left)	CJL	→ A-25	
Cable exit direction (Bottom)	CJB	→ A-25	
Reversed-home	NM	→ A-33	

Actuator Specifications							
Item	Description						
Drive System	Ball screw ø10mm C10 grade						
Positioning Repeatability	±0.02mm						
Lost Motion	0.1mm or less						
Base	Material: Material: Aluminum (special alumite treated)						
Allowable Static Moment	Ma: 29.4 N·m Mb: 42.0 N·m Mc: 74.1 N·m						
Allowable Dynamic Moment (*)	Ma: 7.26 N·m Mb: 10.3 N·m Mc: 18.25 N·m						
Overhang Load Length	Within the load moment range						
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)						

(\*) Based on a 5,000km service life.





(\*1) The m

(\*2) After

ME: N

SE:

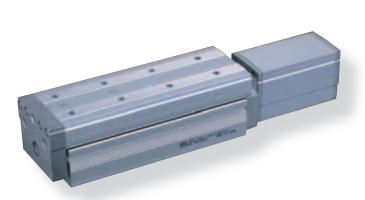
	Stroke		25	50	75	100	125	150
		No Brake	244.5	269.5	294.5	319.5	344.5	369.5
		Brake-Equipped	284	309	334	359	384	409
	-	A	108	133	158	183	208	233
		3	121	146	171	196	221	246
	(		147.5	172.5	197.5	222.5	247.5	272.5
	- 1	)	110.5	135.5	160.5	185.5	210.5	235.5
			1	1	2	2	3	3
e motor-encoder cable (integrated) is connected. (See page A-39 for details on cables.)			50.5	75.5	50.5	75.5	50.5	75.5
er homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.	(	3	1	1	2	2	3	3
E: Mechanical end		1	4	4	6	6	8	8
E: Stroke end		J	6	6	8	8	10	10
	Weigl	nt (kg)	1.8	2	2.2	2.4	2.6	2.8
Compatible Controllers								

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Sciencia vaive type	1	PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.				→ F407
Positioner Type	sitioner Type	PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	1 ostaoning is possible for up to 012 points	012 positio			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type Field Network Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points			
		RPCON-42P	Dedicated to field network	768 points			→ P503
Program Control Type	É	PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

ntrollers tegrated Rod Type Mini

PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON SCON ASEL SSEL XSEL

RCP3-TA7C RoboCylinder Table Type Motor Unit Coupled 75mm Width Pulse Motor Ball Screw RCP3- TA7C-■ Configuration: I **42P** Type Encoder Motor Lead Stroke Compatible Controllers Cable Length Option N : None I: Incremental 42P: Pulse motor 12: 12mm 25: 25mm P1: PCON See Options below The simple absolute encode 42 🗌 size RPCON P:1m 6: 6mm 200: 200mm PSEL S : 3m 3: 3mm is also considered (25mm pitch P3: PMEC M : 5m type "I" \* See page Pre-35 for an explanation of the naming convention. increments) PSEP X . Custom



**Technical** References

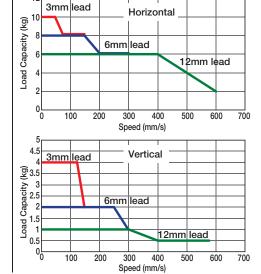
[全 P. A-5

- Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds.
- Check in the Speed vs. Load Capacity graph below to see if your desired speed and load capacity are supported. Please note that the maximum speed is different when used horizontally versus vertically.
- The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically).

This is the upper limit of the acceleration.

# ■ Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



Actuator Specifications					
■ Lead and Load Capacity	(Note 1) Please r	note that the maxir	num load capacit	y decreases as the	speed increase
Model		Max. Load Ca	pacity (Note 1)	Maximum Push Force (N)	Stroke
Wiodei	(mm)	Horizontal (kg)	Vertical (kg)	(Note 2)	(mm)
RCP3-TA7C-I-42P-12-①-②-③-④	12	~ 6	~ 1	47	05 000
RCP3-TA7C-I-42P-6-①-②-③-④	6	~ 8	~ <b>2</b>	95	25~200 (25mm

Model	Lead	Max. Load Ca	Max. Load Capacity (Note 1)		Stroke
model	(mm)	Horizontal (kg)	Vertical (kg)	Force (N) (Note 2)	(mm)
RCP3-TA7C-I-42P-12-①-②-③-④	12	~ 6	~ 1	47	05000
RCP3-TA7C-I-42P-6-①-②-③-④	6	~ 8	~ 2	95	25~200 (25mm increments)
RCP3-TA7C-I-42P-3-①-②-③-④	3	~ 10	~ 4	189	increments)
Legend Stroke Compatible controller Cable length	4 Option	ıs (N	ote 2) See page	A-66 for pushin	g force graphs.

Stroke Lead	$25 \sim 200$ (25mm increments)
12	600 <580>
6	300
3	150
	(Unit: mm/s)

Stroke and Maximum Speed

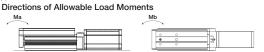
Cable List		
Туре	Cable Symbol	
Standard	P (1m)	
	<b>S</b> (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

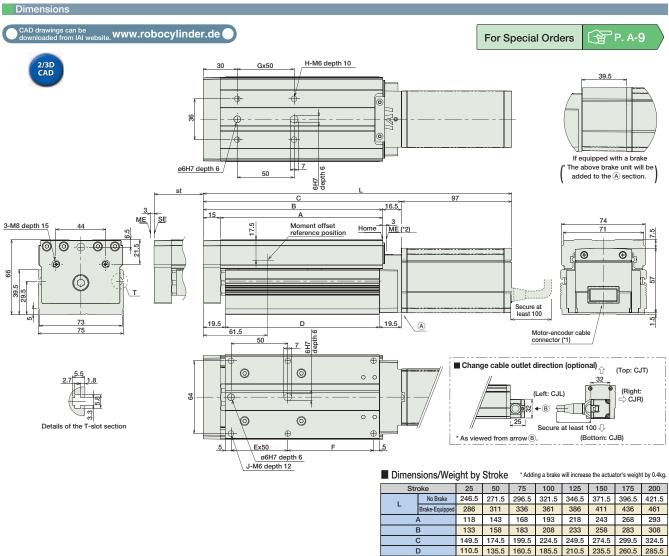
- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

Option List			
Name	Option Code	Standard Price	
Brake	В	→ A-25	
Cable exit direction (Top)	CJT	→ A-25	
Cable exit direction (Right)	CJR	→ A-25	
Cable exit direction (Left)	CJL	→ A-25	
Cable exit direction (Bottom)	CJB	→ A-25	
Reversed-home	NM	→ <b>A-33</b>	

Actuator Specifications					
Item	Description				
Drive System	Ball screw ø10mm C10 grade				
Positioning Repeatability	±0.02mm				
Lost Motion	0.1mm or less				
Base	Material: Material: Aluminum (special alumite treated)				
Allowable Static Moment	Ma: 42.6 N·m Mb: 60.8 N·m Mc: 123.2 N·m				
Allowable Dynamic Moment (*)	Ma: 9.91 N·m Mb: 14.13 N·m Mc: 28.65 N·m				
Overhang Load Length	Within the load moment range				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				

(\*) Based on a 5.000km service life.





(\*1) The n

(\*2) After

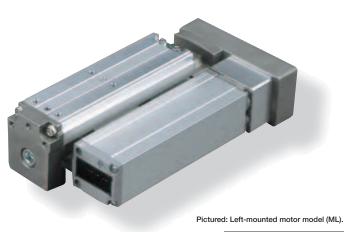
ME:

	Brake-Equipped	286	311	336	361	386	411	436	461
	Α	118	143	168	193	218	243	268	293
	В	133	158	183	208	233	258	283	308
	С	149.5	174.5	199.5	224.5	249.5	274.5	299.5	324.5
	D	110.5	135.5	160.5	185.5	210.5	235.5	260.5	285.5
	E	1	1	2	2	3	3	4	4
e motor-encoder cable (integrated) is connected. (See page A-39 for details on cables.)	F	50.5	75.5	50.5	75.5	50.5	75.5	50.5	75.5
er homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.	G	1	1	2	2	3	3	4	4
:: Mechanical end	Н	4	4	6	6	8	8	10	10
: Stroke end	J	6	6	8	8	10	10	12	12
	Weight (kg)	2.1	2.3	2.5	2.8	3	3.2	3.4	3.6

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Calanaid Value Time	1	PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solenoid Valve Type		PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.				→ P487
Positioner Type	Í	PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	- Positioning is possible for up to 312 points	312 points	312 points		
Pulse Train Input Type Differential Line Driver)	ė į	PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type	1	PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points	64 points		
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

### RCP3-TA3R RoboCylinder Mini Table Type Side-Mounted Motor 36mm Width Pulse Motor Ball Screw RCP3-TA3R **20P** ■ Configuration: I Туре Encoder Motor Stroke Compatible Controllers Cable Length Option P1: PCON N : None I: Incremental 20P: Pulse motor 6: 6mm 20: 20mm See Options below The simple absolute encoder is also considered \* Be sure to specify which side the RPCON P:1m 20 🗌 size 4: 4mm 2: 2mm 100: 100mm PSEL S : 3m motor is to be (10mm pitch P3: PMEC M : 5m type "I". mounted (ML/MR).

increments)



Technical References

P. A-5



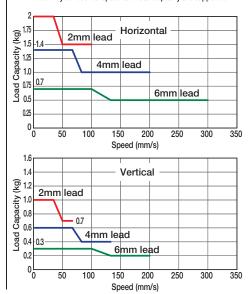
(1) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2mm-lead model, or when used vertically). 0.3G (0.2G for 2mm lead) is the upper limit of the acceleration.

### Speed vs. Load Capacity

PSEP

Due to the characteristics of the Pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

X .: Custom



### Actuator Specifications Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases. Max. Load Capacity (Note 1) Maximum Feed Screw Lead (mm) Maximum Positioning Push Force (N) Repeatability orizontal (kg) Vertical (kg) (Note 2) (mm) RCP3-TA3R-I-20P-6- 1 - 2 - 3 - 4 6 $\sim$ 0.7 $\sim$ 0.3 20~100 Rall RCP3-TA3R-I-20P-4- 1 - 2 - 3 - 4 4 14 ±0.02 $\sim 1.4$ $\sim$ 0.6 (10mm RCP3-TA3R-I-20P-2-1 - 2 - 3 - 4 2 ~ 2 $\sim$ 1 28

(Note 2) See page A-66 for pushing force graphs.

	nione an	a Maximum opeca
Stroke Lead		20 ~ 100 (mm)
We	6	300 <200>
Ball Screw	4	200 <133>
Ba	2	100 <67>

Stroke and Maximum Speed

Cable List		
Туре	Cable Symbol	
Standard (Robot Cables)	P (1m) S (3m) M (5m)	
Special Lengths	X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m)	

Legend ① Stroke ② Compatible controller ③ Cable length

- \* The RCP3 comes standard with a robot cable.
- \* See page A-39 for cables for maintenance.

## Option List

Option List	Option List							
Name	Option Code	See Page						
Brake	В	→ A-25						
Left-Mounted Motor (Standard)	ML	→ A-33						
Right-Mounted Motor	MR	→ A-33						
Reversed-home	NM	→ A-33						

## Actuator Specifications

Item	Description				
Drive System	Ball screw ø6mm C10 grade				
Lost Motion	0.1mm or less				
Base	Material: Aluminum (white alumite treated)				
Allowable Dynamic Moment (Note 3)	Ma: 3.2 N·m Mb: 4.6 N·m Mc: 5.1 N·m				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				

(Note 3) Based on a 5,000km service life.

**Directions of Allowable Load Moments** 





ST : Stroke ME : Mechanical end SE : Stroke end

PMEC (AMEC PSEP / ASEP ROBO NET ERC2 PCON ACON PSEL ASEL SSEL

Dimensions <sub>bsite.</sub> www.robocylinder.de **曾** P. A-**9** | 4 3H7 depth 3.5 (from top of table) For Special Orders \* Below is a drawing of the left-2/3D CAD ø3H7 depth 3.5 (from top of table) mounted motor model. 40 ⊕ ⊕ H-M3 depth 6 If brake-equipped: (See right for dimensions) 134 (standard) 157 (with brake) Secure at least 100 ST 31 2 ME 3 SE Home 0 12 Motor-encoder cable connector\*1 3H7 depth 3.5 (from bottom of base) 50 (between reamer and oblong holes) J-M3 depth 5

0

0

E×50

28

ø3H7 depth 3.5 (from bottom of base)

0

0

\*1 The motor-encoder cable is connected directly to the motor cover of the actuator. See page A-39 for details on cables.

The offset reference position of the moment is the same as TA3C (P270).

\*2 When homing, the slider moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.

■ Dimensions	Dimensions/Weight by Stroke				a brake wil	I increase t	he actuato	r's weight	by 0.1kg.
Stroke	20	30	40	50	60	70	80	90	100
L	126.5	136.5	146.5	156.5	166.5	176.5	186.5	196.5	206.5
Α	87.5	97.5	107.5	117.5	127.5	137.5	147.5	157.5	167.5
В	95.5	105.5	115.5	125.5	135.5	145.5	155.5	165.5	175.5
D	91	101	111	121	131	141	151	161	171
E	1	1	1	1	2	2	2	2	2
F	28.5	38.5	48.5	58.5	18.5	28.5	38.5	48.5	58.5
G	1	1	1	1	2	2	2	2	2
H	4	4	4	4	6	6	6	6	6
J	6	6	6	6	8	8	8	8	8
Weight (kg)	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7

00

<u></u>

7.5

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page		
Solenoid Valve Type	1	PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477		
Soleliold valve type		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points				→ P487	
Splash-Proof Solenoid Valve Type	Ţ.	PSEP-CW-20PI-NP-2-0	No homing necessary with simple absolute type.				7 (40)		
Positioner Type	Í	PCON-C-20PI-NP-2-0	Positioning is possible for up to 512 points	512 points					
Safety-Compliant Positioner Type				PCON-CG-20PI-NP-2-0	Positioning is possible for up to 312 points	512 politis			l
Pulse Train Input Type Differential Line Driver)	éi	PCON-PL-20PI-NP-2-0 Pulse train input type with different line driver support	2A max.	→ P525					
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(—)			Ī		
Serial Communication Type	1	PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			1		
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503		
Program Control Type	E .	PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557		

RCP3-TA4R RoboCylinder Mini Table Type Side-Mounted Motor 40mm Width Pulse Motor Ball Screw ■ Configuration: RCP3-TA4R **28P** Encoder Motor Туре Lead Stroke mpatible Controllers Cable Length Option I: Incremental
\* The simple
absolute encoder
is also considered P1: PCON N : None 28P: Pulse motor 6:6mm 20: 20mm See Options below \* Be sure to specify which side the P:1m 4:4mm RPCON 28 🗌 size 2 : 2mm 100: 100mm PSEL S : 3m motor is to be (10mm pitch P3: PMEC M : 5m type "I". mounted (ML/MR). increments) PSEP X .: Custom



Pictured: TA3R with left-mounted motor (ML).

Technical References

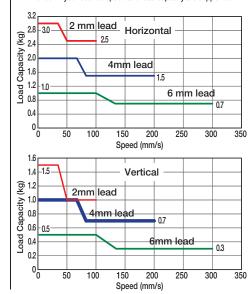




(1) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2mm-lead model, or when used vertically). 0.3G (0.2G for 2mm lead) is the upper limit of the acceleration.

### Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases. Feed Screw Lead (mm) Max. Load Capacity (Note 1) Maximum Maximum Positioning ush Force (N) Repeatability rizontal (kg) Vertical (kg) (Note 2) (mm) RCP3-TA4R-I-28P-6- 1 - 2 - 3 - 4 6 $\sim$ 0.5 $\sim$ 1 20~100 Rall RCP3-TA4R-I-28P-4- 1 - 2 - 3 - 4 4 22 ±0.02 $\sim$ 2 ~ 1 (10mm

RCP3-TA4R-I-28P-2-1 - 2 - 3 - 4 2 ~ 1.5 44  $\sim 3$ Legend ① Stroke ② Compatible controller ③ Cable length 4 Options

(Note 2) See page A-66 for pushing force graphs

		· · · · · · · · · · · · · · · · · · ·
	Stroke	20 ~ 100
Lead		(mm)
No.	6	300
Ball Screw	4	200
Ba	2	100
		(Unit: mm/s)

■ Stroke and Maximum Speed

Cable List		
Туре	Cable Symbol	
Standard (Robot Cables)	P (1m) S (3m) M (5m)	
Special Lengths	X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m)	

- X16 (16m) \* The RCP3 comes standard with a robot cable.
- \* See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Brake	В	→ A-25	
Cable exit direction (Top)	CJT		
Cable exit direction (Outside)	CJO	→ A-25	
Cable exit direction (Bottom)	CJB		
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
Reversed-home	NM	→ A-33	

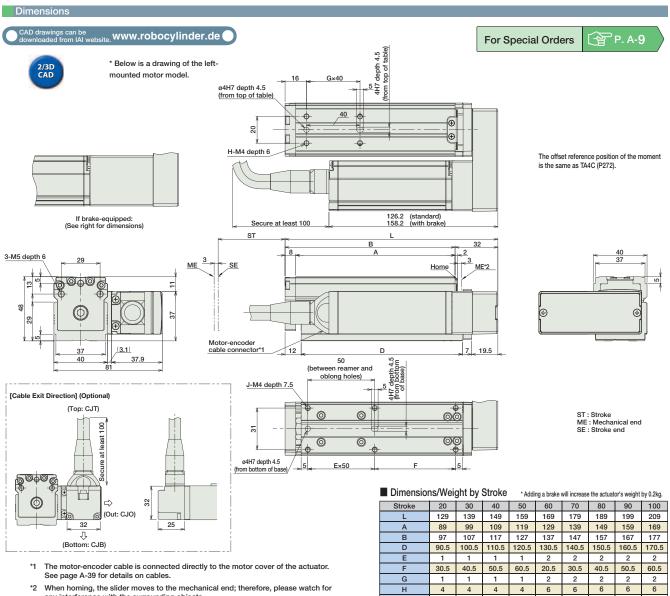
X20 (20m)

Actuator Specifications	
Item	Description
Drive System	Ball screw ø6mm C10 grade
Lost Motion	0.1mm or less
Base	Material: Aluminum (white alumite treated)
Allowable Dynamic Moment (Note 3)	Ma: 4.2 N·m Mb: 6 N·m Mc: 8.2 N·m
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

(Note 3) Based on a 5,000km service life.

**Directions of Allowable Load Moments** 





*2	When homing, the slider moves to the mechanical end; therefore, please watch for
	any interference with the surrounding objects.

Stroke         20         30         40           L         129         139         149           A         89         99         109           B         97         107         117           D         90.5         100.5         110.5           E         1         1         1           F         30.5         40.5         50.5	50 159 119 127 120.5	60 169 129 137 130.5	70 179 139 147 140.5 2	80 189 149 157 150.5	90 199 159 167 160.5	100 209 169 177 170.5
A 89 99 109 B 97 107 117 D 90.5 100.5 110.5 E 1 1 1	119 127 120.5	129 137 130.5	139 147 140.5	149 157 150.5	159 167 160.5	169 177 170.5
B 97 107 117 D 90.5 100.5 110.5 E 1 1 1	127 120.5	137 130.5	147 140.5	157 150.5	167 160.5	177 170.5
D 90.5 100.5 110.5 E 1 1 1	120.5	130.5	140.5	150.5	160.5	170.5
E 1 1 1	1					
	1	2	2	2	2	2
F 30.5 40.5 50.5						
	60.5	20.5	30.5	40.5	50.5	60.5
G 1 1 1	1	2	2	2	2	2
H 4 4 4	4	6	6	6	6	6
J 6 6 6	6	8	8	8	8	8
Weight (kg) 0.7 0.8 0.8	0.8	0.9	0.9	0.9	1.0	1.0

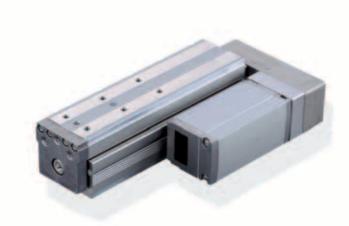
The RCP3 serie	es actuators car	n operate with the co	ntrollers below. Select the controller ac	cording to your usag	je.		
Name	See Page						
Solenoid Valve Type		PMEC-C-28PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Soleliolu valve Type	1	PSEP-C-28PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type	I	PSEP-CW-28PI-NP-2-0	No homing necessary with simple absolute type.				71407
Positioner Type	Í	PCON-C-28PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-28PI-NP-2-0					
Pulse Train Input Type Differential Line Driver)	ě	PCON-PL-28PI-NP-2-0	Pulse train input type with different line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-28PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-28PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-28P	Dedicated to field network	768 points			 → P503
Program Control Type	ř.	PSEL-C-1-28PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

See page Pre-35 for an explanation of the naming convention.

ntrollers tegrated Rod Type Mini

### RCP3-TA5R RoboCylinder Table Type Side-Mounted Motor 55mm Width Pulse Motor Ball Screw RCP3 TA5R -■ Configuration: 35P Type Encoder Motor Stroke Compatible Controllers Cable Length Option 10: 10mm P1: PCON N : None I: Incremental 35P: Pulse motor 25: 25mm See Options below The simple absolute encoder is also considered \* Be sure to specify which side the 5: 5mm **RPCON** P:1m 35 🗌 size 2.5: 2.5mm 100: 100mm PSEL S:3m motor is to be (25mm pitch P3: PMEC M : 5m type "I" mounted (ML/MR).

increments)



Technical References





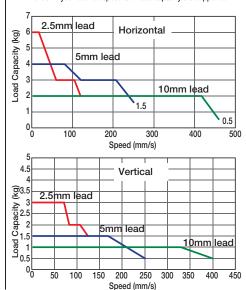
- Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. (1) Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (2) Please note that the maximum speed is different when used horizontally versus vertically.
- The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model, or when used vertically). This is the upper limit of the acceleration.

# ■ Speed vs. Load Capacity

X .: Custom

PSEP

Due to the characteristics of the Pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



# Actuator Specifications

# ■ Lead and Load Capacity

Model	Lead	Max. Load Capacity		Maximum	Ştroke	
Model	(mm)	Horizontal (kg)	Vertical (kg)	Push Force (N)	(mm)	
RCP3-TA5R-I-35P-10-①-②-③-④	10	~ 2	~ 1	34	05. 100	
RCP3-TA5R-I-35P-5-①-②-③-④	5	~ 4	$\sim$ 1.5	68	25~100 (25mm	
RCP3-TA5R-I-35P-2.5-①-②-③-④	2.5	~ 6	~ 3	136	increments)	
Legend ① Stroke ② Compatible controller ③ Cable length	4 Option	ıs				

# ■ Stroke and Maximum Speed

Stroke Lead	$25 \sim 100$ (25mm increments)
10	465 <400>
5	250
2.5	125

\* The values enclosed in "< >" apply to vertical usage. (Unit: mm/s)

# Cabla List

Cable List		
Туре	Cable Symbol	
Standard (Robot Cables)	P (1m) S (3m) M (5m)	
Special Lengths	X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m)	

- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

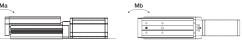
# Option List

•			
Name	Option Code	See Page	
Brake	В	→ A-25	
Cable exit direction (Top)	CJT		
Cable exit direction (Outside)	CJO	→ A-25	
Cable exit direction (Bottom)	CJB		
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
Reversed-home	NM	→ A-33	

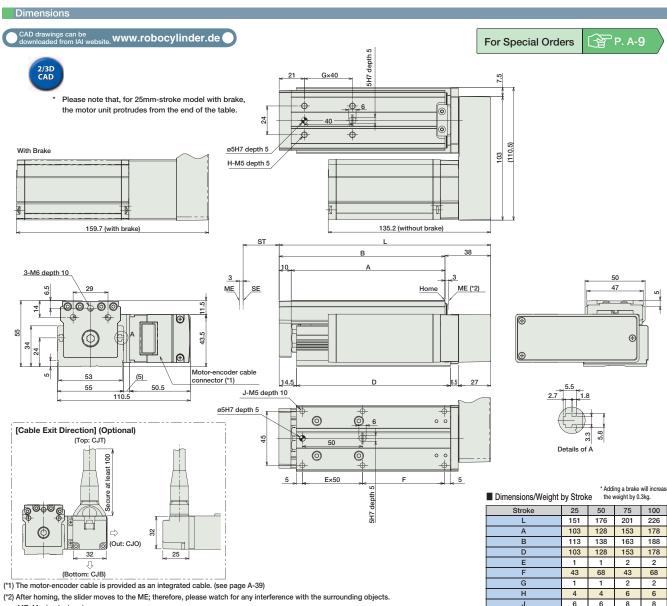
# Actuator Specifications

Item	Description				
Drive System	Ball screw ø8mm C10 grade				
	· ·				
Positioning Repeatability	±0.02mm				
Lost Motion	0.1 mm or less				
Base	Material: Material: Aluminum (special alumite treated)				
Allowable Static Load Moment	Ma: 25.5 N·m Mb: 36.5 N·m Mc: 56.1 N·m				
Allowable Dynamic Load Moment	Ma: 6.57 N·m Mb: 9.32 N·m Mc: 14.32 N·m				
Overhang Load Length	Within the load moment range				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				

**Directions of Allowable Load Moments** 







( 1) The motor-encoder cable is provided as an integrated cable, (see page A-59)
(*2) After homing, the slider moves to the ME: therefore, please watch for any interfer

ME: Mechanical end

SE: Stroke end

Name External View Model Description Max. Positioning Points Input Voltage Power Supply Capacity								
	External view	PMEC-C-35PI-NP-2-2	Easy-to-use controller, even for beginners	wax. Positioning Points	AC115V AC230V	See P481		See Page  → P477
Solenoid Valve Type	PSEP-C-35PI-NP-2-0		Operable with same signal as solenoid valve.	3 points				→ P487
Splash-Proof Solenoid Valve Type	PSEP-CW-35PI-NP-2-0	Supports both single and double solenoid types. No homing necessary with simple absolute type.					→ P487	
Positioner Type	PCON-C-35PI-NP	PCON-C-35PI-NP-2-0	Positioning is possible for up to 512 points	512 points				
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0						
Pulse Train Input Type Differential Line Driver)	PCON-PL-35PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.		→ P525	
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-NP-2-0  Pulse train input type with open collector support	(-)					
Serial Communication Type		PCON-SE-35PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-35P	35P Dedicated to field network 768 points				→ P503	
Program Control Type		PSEL-C-1-35PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P557

1.4 1.6 1.7 1.9

Weight (kg)

\* This is for the single-axis PSEL.

■ Configuration:

RCP3- TA6R-

\* See page Pre-35 for an explanation of the naming convention.

Type

ntrollers tegrated Rod Type Mini

PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON SCON ASEL SSEL XSEL

# RCP3-TA6R RoboCylinder Table Type Side-Mounted Motor 65mm Width Pulse Motor Ball Screw

**42P** 

Encoder I: Incremental The simple absolute encoder is also considered type "I".

Motor Lead 42P: Pulse motor 12: 12mm 42 🗌 size 3: 3mm

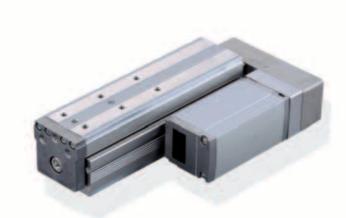
6: 6mm

25: 25mm 150: 150mm (25mm pitch increments)

Stroke

Compatible Controllers P1: PCON RPCON PSEL P3: PMEC PSEP

Cable Length Option N : None See Options below \* Be sure to specify which side the P:1m S:3m motor is to be M : 5m mounted (ML/MR). X .: Custom



Technical References

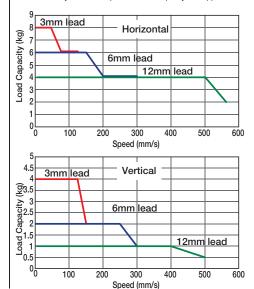




- Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. (1) Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (2) Please note that the maximum speed is different when used horizontally versus vertically.
- The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). This is the upper limit of the acceleration.

# Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



# Actuator Specifications

# ■ Lead and Load Capacity

= =====================================									
Model	Lead	Max. Load Capacity		Maximum	Stroke				
Model	(mm)	Horizontal (kg)	Vertical (kg)	Push Force (N)	(mm)				
RCP3-TA6R-I-42P-12-①-②-③-④	12	~ 4	~ 1	47	05. 150				
RCP3-TA6R-I-42P-6-①-②-③-④	6	~ 6	~ 2	95	25~150 (25mm				
RCP3-TA6R-I-42P-3-①-②-③-④	3	~ 8	~ 4	189	increments)				
Legend ① Stroke ② Compatible controller ③ Cable length	4 Option	s							

# ■ Stroke and Maximum Speed

Stroke	$25 \sim 150$ (25mm increments)
12	560 <500>
6	300
3	150

\*The values enclosed in "< >" apply to vertical usage. (Unit: mm/s)

Cable List					
Туре	Cable Symbol				
Standard (Robot Cables)	P (1m)				
	<b>S</b> (3m)				
	M (5m)				
Special Lengths	X06 (6m) ~ X10 (10m)				
	X16 (16m) ~ X20 (20m)				

\* The standard cable is the motor-encoder integrated robot cable.

# Option List

Name	Option Code	See Page	
Brake	В	→ A-25	
Cable exit direction (Top)	CJT		
Cable exit direction (Outside)	CJO	→ A-25	
Cable exit direction (Bottom)	CJB		
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
Reversed-home	NM	→ A-33	

# Actuator Specifications

Item	Description		
Drive System	Ball screw ø10mm C10 grade		
Positioning Repeatability	±0.02mm		
Lost Motion	0.1mm or less		
Base	Material: Material: Aluminum (special alumite treated)		
Allowable Static Load Moment	Ma: 29.4 N·m Mb: 42.0 N·m Mc: 74.1 N·m		
Allowable Dynamic Load Moment	Ma: 7.26 N·m Mb: 10.3 N·m Mc: 18.25 N·m		
Overhang Load Length	Within the load moment range		
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)		

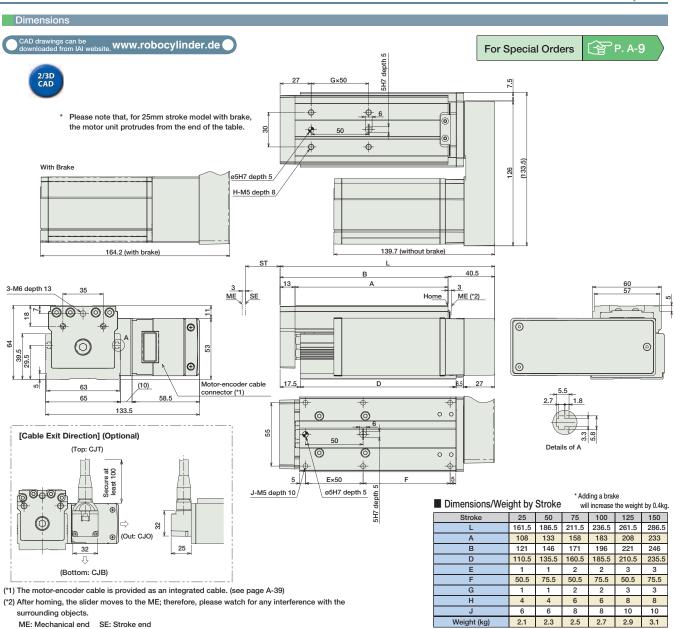
**Directions of Allowable Load Moments** 





5,000 km service life

<sup>\*</sup> See page A-39 for cables for maintenance.



The RCP3 series actuators can operate with the controllers below. Select the controller according to your usage.									
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Pag	
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P47	
Sciencia vaive Type		PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points				→ P487	
Splash-Proof Solenoid Valve Type	I	PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.						→ F40
Positioner Type		PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points					
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	. Sometime of position of the points	orz politica	orz points				
Pulse Train Input Type Differential Line Driver)	é	PCON-PL-42PI-NP-2-0	Pulse train input type with different line driver support		DC24V	2A max.		→ P52	
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(—)					
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points					
Field Network Type		RPCON-42P	Dedicated to field network	768 points				→ P50	
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P55	

otandard Introllers tegrated Rod Type Mini

# RCP3-TA7R RoboCylinder Table Type Side-Mounted Motor 75mm Width Pulse Motor Ball Screw

RCP3- TA7R-

\* See page Pre-35 for an explanation of the naming convention.

Type Encoder I: Incremental The simple absolute encoder is also considered type "I".

Motor Lead 42P: Pulse motor 12:12mm 42 🗌 size 6:6mm 3:3mm

**42P** 

Stroke 25: 25mm 200: 200mm (25mm pitch increments)

Compatible Controllers P1: PCON RPCON PSEL P3: PMEC PSEP

N : None P:1m S:3m M : 5m X .: Custom

Cable Length

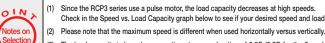
Option See Options below \* Be sure to specify which side the motor is to be mounted (ML/MR).



Technical References

P. A-5

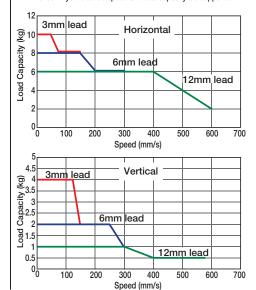




- Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds.
- Check in the Speed vs. Load Capacity graph below to see if your desired speed and load capacity are supported.
- The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). This is the upper limit of the acceleration.

#### ■ Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Actuator Specifications

#### ■ Lead and Load Capacity

Model	Lead	Max. Load	Capacity	Maximum	Stroke
Model	(mm)	Horizontal (kg)	Vertical (kg)	Push Force (N)	(mm)
RCP3-TA7R-I-42P-12-①-②-③-④	12	~ 6	~ 1	47	05 000
RCP3-TA7R-I-42P-6-①-②-③-④	6	~ 8	~ 2	95	25~200 (25mm
RCP3-TA7R-I-42P-3-①-②-③-④	3	~ 10	~ 4	189	increments)
Legend 1 Stroke 2 Compatible controller 3 Cable length	(4) Option	ıs			

#### ■ Stroke and Maximum Speed

Stroke Lead	$25 \sim 200$ (25mm increments)
12	600 <580>
6	300
3	150

\* The values enclosed in "< >" apply to vertical usage. (Unit: mm/s)

Cable List		
Туре	Cable Symbol	
Standard	P (1m) S (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

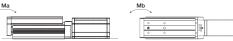
- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

Name	Option Code	See Page	
Brake	В	→ A-25	
Cable exit direction (Top)	CJT		
Cable exit direction (Outside)	CJO	→ A-25	
Cable exit direction (Bottom)	CJB		
Left-Mounted Motor (Standard)	ML	→ A-33	
Right-Mounted Motor	MR	→ A-33	
Reversed-home	NM	→ A-33	

#### Actuator Specifications

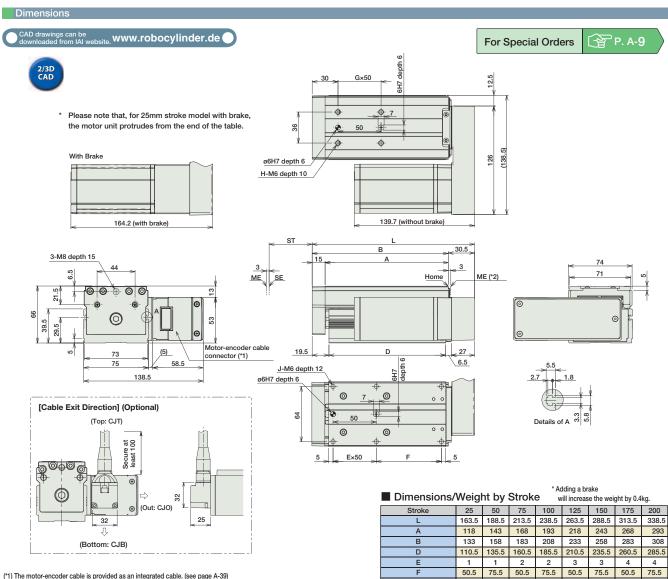
Item	Description				
Drive System	Ball screw ø10mm C10 grade				
Positioning Repeatability	±0.02mm				
Lost Motion	0.1mm or less				
Base	Material: Material: Aluminum (special alumite treated)				
Allowable Static Load Moment	Ma: 42.6 N·m Mb: 60.8 N·m Mc: 123.2 N·m				
Allowable Dynamic Load Moment	Ma: 9.91 N·m Mb: 14.13 N·m Mc: 28.65 N·m				
Overhang Load Length	Within the load moment range				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				

**Directions of Allowable Load Moments** 





5,000 km service life



(\*1) The

(\*2) Afte

ME:

SE:

<u></u>	_ D	110.5	100.0	100.5	100.0	210.5	200.0	200.5	200.0
	Е	1	1	2	2	3	3	4	4
ne motor-encoder cable is provided as an integrated cable. (see page A-39)	F	50.5	75.5	50.5	75.5	50.5	75.5	50.5	75.5
ter homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.	G	1	1	2	2	3	3	4	4
E: Mechanical end	Н	4	4	6	6	8	8	10	10
E: Stroke end	J	6	6	8	8	10	10	12	12
E: Stroke end	Weight (kg)	2.4	2.6	2.8	3.1	3.3	3.5	3.7	3.9
Compatible Controllers									
·								_	

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page	
0.1		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477	
Solenoid Valve Type		PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487	
Splash-Proof Solenoid Valve Type	<b>I</b>	PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.			512 points		→ P487
Positioner Type	Í	PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	istitioning is possible for un to 512 points				
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	Positioning is possible for up to 312 points	512 points				
Pulse Train Input Type Differential Line Driver)	ė	PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support		DC24V	2A max.	→ P525	
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)				
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P503	
Program Control Type	E I	PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557	

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Rod
Type

Mini
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PMEC (AMEC /AMEC /

# CP2-GRSS

Motor Encoder Deceleration Ratio — 30: 1/30 I: Incremental 20P : 20 □ size The Simple absolute e ncoder Pulse motor

**20P** 

ratio is also considered

30

Stroke - Compatible Controllers 8: 8mm deceleration (4mm per side)

8

P1: PCON RPCON PSEL P3: PMEC PSEP

Cable Length N : None P : 1m S : 3m S:3m M:5m X 🔲 : Custom

NM:Reversed-home FB:Flange bracket SB: Shaft bracket

Option

type "I". \* See page Pre-35 for an explanation of the naming convention.

RCP2- GRSS-



References



The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is twice this (1)

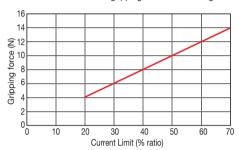
The maximum gripping force is the sum of the gripping forces of both fingers, at a gripping point where there is no offset or overhang distance. The work piece weight that can be actually moved depends on the friction coefficient between the gripper fingers and the work piece, as well as on the shape of the work piece. As a rough guide, a work piece's weight should not exceed 1/10 to 1/20 of the gripping force. (2) (See page A-74 for details.)

The rated acceleration while moving is 0.3G

### ■ Gripping Force Adjustment

The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.

\* The gripping forces in the following diagrams indicate the sums of gripping forces of both fingers.



\* The value of the gripping (pushing) in the graph is only reference. Please note that there is a maximum variation of about 15%.

\* Please note that, when gripping (pushing), the speed is fixed at 5mm/s.

#### Actuator Specifications

■ Lead and Load Capacity

Lead and Load Capacity							
Model	Deceleration	Max. Gripping	Stroke				
iviodei	Ratio	Force (N)	(mm)				
RCP2-GRSS-I-20P-30-8-①-②-③	30	14	8 (4 per side)				

■ Stroke and Maxi. Opening/Closing Speed

Stroke Deceleration Ratio	8 (mm)
30	78 (per side)

(Unit: mm/s)

Cable List		
Туре	Cable Symbol	
Standard Type (Robot Cables)	P (1m) S (3m)	
Special Lengths	M (5m) X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m)	
-	Y16 (16m) 04 Y20 (20m)	

Legend: ① Compatible controllers ② Cable length ③ Options

\* The standard cable is the motor-encoder integrated robot cable.

\* See page A-39 for cables for maintenance.

Option List		
Name	Option Code	See Page
Reversed-home	NM	→ A-33
Flange bracket	FB	→ A-26
Shaft bracket	SB	→ A-36

Actuator Specification	Actuator Specifications				
Item	Description				
Drive System	Worm gear + helical gear + helical rack				
Positioning Repeatability	±0.01mm				
Backlash	0.2mm or less per side (constantly pressed out by a spring)				
Lost Motion	0.05mm or less per side				
Guide	Linear guide				
Allowable Static Load Moment	Ma: 0.5 N·m Mb: 0.5 N·m Mc: 1.5 N·m				
Weight	0.2kg				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				

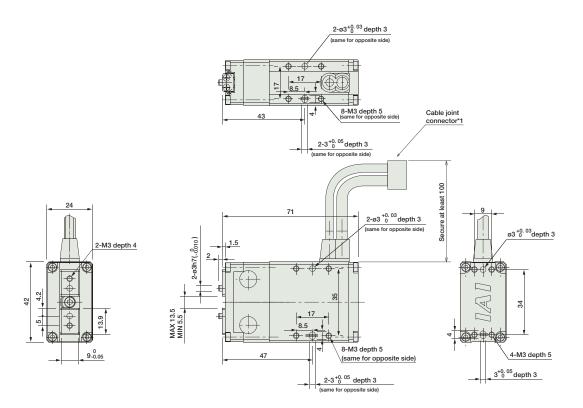
CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders



2/3D CAD

- \* The opening side of the slider is the home position.
- 1 The motor-encoder cable is connected here. See page A-39 for details on cables.



Weight (kg) 0.2

Name	External View	Model	ntrollers below. Select the controller a	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Pag		
мате	External view	Model	<u> </u>	wax. Positioning Points	AC115V	Power Supply Capacity P481			
Solenoid Valve Type	1	PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC230V	See	→ P477		
,,,		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487		
Splash-Proof Solenoid Valve Type	I	PSEP-CW-20PI-NP-2-0	No homing necessary with simple absolute type.				1 401		
Positioner Type	Í	PCON-C-20PI-NP-2-0	Destruction in annually former to 540 animals	512 points					
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	Positioning is possible for up to 512 points	512 points					
Pulse Train Input Type Differential Line Driver)	ė i	PCON-PL-20PI-NP-2-0  Pulse train input type with differential line driver support	()	DC24V	2A max.	→ P529			
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)					
Serial Communication Type	1	PCON-SE-20PI-N-0-0	Dedicated to communication	64 points		l			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503		
Program Control Type	E	PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557		

IAI

RCP2-GRSS 334

Controlle

Rod Type

Mini

Controllers

Table/Arm

.....

Mini

Gripper/

Rotary Type

Туре

PMEC

/ASEP

FRC2

ACON

SCON

DCEI

ACEL

0051

XSEL

Pulse Moto

Servo Moto (24V)

Servo Moto

Linear Moto

Slider Type

Mini

Standard

Integrated

Ro Typ

Standard

Integrated Table/Arr

Mini

Gripper Rotary Type

Linear Motor Type

Туре

Controllers

PSEP /ASEP

ERC2

ACON

PSEL

SSEL

Pulse Motor

Servo Motor (24V)

(230V)

inear Motor

# RCP2-GRLS

boCylinder 2-Finger Gripper Mini Lever Type 42mm Width Pulse Moto

RCP2 - GRLS - I - 20P
Series - Type - Encoder - Motor

I: Incremental
\* The Simple Pulse mot

I: Incremental 20F
\* The Simple absolute encoder is also considered type "I".

\* See page Pre-35 for an explanation of the naming convention.

20P − 30 − 180

Motor − Deceleration Ratio − Stroke

2: 20 □ size 30: 1/30 180: 180

Pulse motor deceleration degrees

ratio

tio — Stroke

180: 180
eration degrees

(90 degrees per side)

— Compatible Controllers
P1: PCON
RPCON
PSEL
P3: PMEC
PSEP

N: None P: 1m S: 3m M: 5m X : Custom

Cable Length

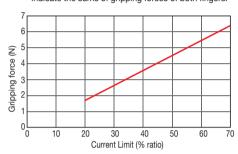
NM:Reversed-home FB:Flange bracket SB:Shaft bracket

Option

■ Gripping Force Adjustment
The gripping (pushing) force can be adjusted freely

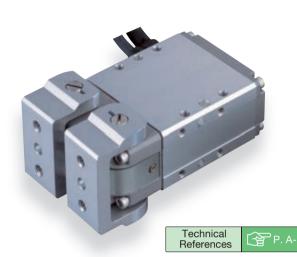
\* The gripping forces in the following diagrams indicate the sums of gripping forces of both fingers.

within the range of current limits of 20% to 70%.



\* The value of the gripping (pushing) in the graph is only reference. Please note that there is a maximum variation of about 15%.

\* Please note that, when gripping (pushing), the speed is fixed at 5 degrees/s.



(1) The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is twice this value.

(2) The maximum gripping force is the sum of the gripping forces of both fingers, at a gripping point where there is no offset or overhang distance. The work piece weight that can be actually moved depends on the friction coefficient between the gripper fingers and the work piece, as well as on the shape of the work piece. As a rough guide, a work piece's weight should not exceed 1/10 to 1/20 of the gripping force.

(See page A-77 for details.)

(3) The rated acceleration while moving is 0.3G.

#### Actuator Specifications

■ Lead and Load Capacity

Lead and Load Capacity					
Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (deg)		
RCP2-GRLS-I-20P-30-180- ①-②-③	30	6.4	180 (90 per side)		
Legend: ①Compatible controllers ②Cable length ③Options					

Stroke and Maxi. Opening/Closing Speed

Stroke Deceleration	180 (deg)
Ratio	(ueg)
30	600 (per side)

(Unit: degrees/s)

Cable List		
Туре	Cable Symbol	
Standard Type	<b>P</b> (1m)	
	<b>S</b> (3m)	
(Robot Cables)	<b>M</b> (5m)	
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	
Special Lengths	<b>X11</b> (11m) ~ <b>X15</b> (15m)	
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	

- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Reversed-home	NM	→ A-33	
Flange bracket	FB	→ A-26	
Shaft bracket	SB	→ A-36	

Actuator Specifications				
Item Description				
Drive System Worm gear + helical gear				
Positioning Repeatability ±0.01mm				
Backlash	1 degree or less per side (constantly pressed out by a spring)			
Lost Motion	1 degree or less			
Guide	-			
Allowable Static Load Moment –				
Weight 0.2kg				
Ambient Operating Temp /Humidity	0~40°C 85% BH or less (non-condensing)			

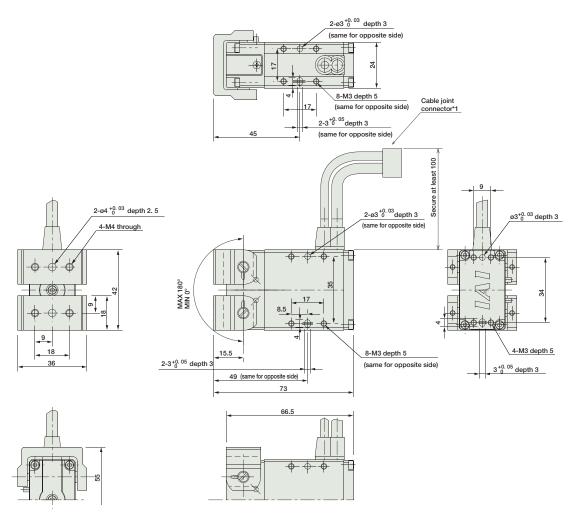
CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders





- \* The opening side of the slider is the home position.
- 1 The motor-encoder cable is connected here. See page A-39 for details on cables.



Weight (kg) 0.2

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.								
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page	
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477	
Soleliold valve type		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487	
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	Supports both single and double solehold types.  No homing necessary with simple absolute type.				→ F407	
Positioner Type	į.	PCON-C-20PI-NP-2-0	Positioning is possible for up to 512 points	512 points				
Safety-Compliant Positioner Type	PCON-CG-20PI-N	PCON-CG-20PI-NP-2-0						
Pulse Train Input Type Differential Line Driver)	ė į	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support		DC24V	2A max.	→ P525	
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support		(-)	(-)		
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503	
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557	

IAI

RCP2-GRLS 336

Туре

Mini

Standard

Rod

Mini

Standard

Integrated

Flat Type

Standard

Gripper/ Rotary Type

Linear Motor Type

гуре

GOITH OHEIS

PSEP /ASEP

EDOO

ACON

SCON

PSEL

ASEL

SSEL

XSEL

Pulse Moto

Servo Motoi

Servo Moto

Linear Moto

ontroller.

PMEC
/AMEC
/AMEC
/ASEP
/ASEP
/ASEP
/ASEP

ROBO
NET
/ASEP

ACON

ACON

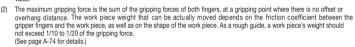
PSEL

ASEL

RCP2- GRS -**20P** 10 ■ Configuration: Motor Encoder Stroke Compatible Controllers Cable Length Option N: None
P: 1m
S: 3m
M: 5m
X : Custom
R : Robot cable 1: 1/1 P1: PCON I: Incremental 20P : 20 □ size 10: 10mm SB: Shaft bracket The Simple absolute encoder Pulse motor deceleration ratio (5mm per side) RPCON FB:Flange bracket PSEL is also considered P3: PMEC type "I". PSEP \* See page Pre-35 for an explanation of the naming convention.



The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is twice this (1)

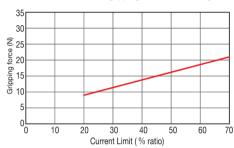


The rated acceleration while moving is 0.3G

### ■ Gripping Force Adjustment

The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.

\* The gripping forces in the following diagrams indicate the sums of gripping forces of both fingers.



\* The value of the gripping (pushing) in the graph is only reference. Please note that there is a maximum variation of about 15%.

\* Please note that, when gripping (pushing), the speed is fixed at 5mm/s.

#### Actuator Specifications

#### ■ Lead and Load Capacity

Legend: ① Compatible controllers

Ecad and Load Capacity			
Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (mm)
RCP2-GRS-I-20P-1-10-①-②-③	1	21	10 (5 per side)

② Cable length ③ Options

■ Stroke and Maxi. Opening/Closing Speed

Stroke Deceleration Ratio	10 (mm)
1	33.3 (per side)

(Unit: mm/s)

#### Cable List

Cable List				
Туре	Cable Symbol			
	<b>P</b> (1m)			
Standard Type	<b>S</b> (3m)			
	<b>M</b> (5m)			
	<b>X06</b> (6m) ~ <b>X10</b> (10m)			
Special Lengths	<b>X11</b> (11m) ~ <b>X15</b> (15m)			
	<b>X16</b> (16m) ~ <b>X20</b> (20m)			
	R01 (1m) ~ R03 (3m)			
	<b>R04</b> (4m) ~ <b>R05</b> (5m)			
Robot Cable	R06 (6m) ~ R10 (10m)			
	R11 (11m) ~ R15 (15m)			
	R16 (16m) ~ R20 (20m)			
	R16 (16m) ~ R20 (20m)			

* See page	A-39 tor	cables	tor	maint	enance	Э.

Option List			
Name	Option Code	See Page	
Flange bracket	FB	→ A-26	
Shaft bracket	SB	→ A-36	

/ totaator opcomodito	10113					
Item	Description					
Drive System	Timing belt + trapezoidal screw (1.5 lead)					
Positioning Repeatability	±0.01mm					
Backlash	0.15mm or less per side (constantly pressed out by a spring)					
Lost Motion	0.1mm or less per side					
Guide	Cross roller guide					
Allowable Static Load Moment	Ma: 6.3 N·m Mb: 6.3 N·m Mc: 7.0 N·m					
Weight	0.36kg					
Ambient Operating Temp /Humidity	0~40°C 85% BH or less (non-condensing)					

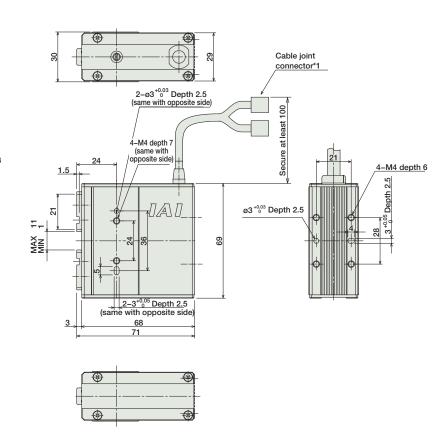
CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Order

會 P. A-9



- \* The opening side of the slider is the home position.
- \*1 The motor-encoder cable is connected here. See page A-39 for details on cables.



10-0.05 2-M4 depth 8

Note: -

The holes in the slider shown above, other than tapped holes, are used to install the slider onto the actuator. They cannot be used as finger positioning holes.

Use the key slots to position the fingers.

Weight (kg) 0.36

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.										
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Page		
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P477		
solchold valve type		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.  No homing necessary with simple absolute type.	3 points				→ P487		
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0					→ F407			
Positioner Type	Í	PCON-C-20PI-NP-2-0	- Positioning is possible for up to 512 points	512 points						
Safety-Compliant Positioner Type				PCON-CG-20PI-NP-2-0	Positioning is possible for up to 312 points	312 points				
Pulse Train Input Type Differential Line Driver)	Ó	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V	2A max.		→ P525		
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)						
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points						
Field Network Type		RPCON-20P	Dedicated to field network	768 points				→ P500		
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P557		

RCP2-GRS 338

IAI

Туре

Mini

Standard

Rod Vpe

Mini

Controllers

Table/Arm

Mini

Standard

Rotary Type

Туре

туре

PMEC:

PSEP /ASEP

ROBO NET

ERC2

DCON

ACON

SCON

FORL

ASEL

Pulse Moto

Servo Moto (24V)

Servo Mot

Linear Moto

Mini
tandard
ntrollers
tegrated
Rod
Type
Mini
tandard
ntrollers
tegrated

RCP2 - GRM -**28P** Motor Type Encoder

I: Incremental \* The Simple absolute encoder is also considered type "I".

\* See page Pre-35 for explanation of each code that makes up the configuration name.

- Deceleration Ratio-28P: 28 □ size 1: 1/1 Pulse motor deceleration ratio

Stroke 14: 14mm (7mm per side)

14

Compatible Controllers P1: PCON RPCON PSEL

Cable Length N : None P : 1m S : 3m S:3m M:5m X : Custom

Option SB: Shaft bracket FB : Flage bracket

P3: PMEC **PSEP** 



Technical References

The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is twice this (1) (2)

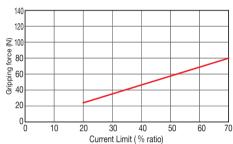
The maximum gripping force is the sum of the gripping forces of both fingers, at a gripping point where there is no offset or overhang distance. The work piece weight that can be actually moved depends on the friction coefficient between the gripper fingers and the work piece, as well as on the shape of the work pieces. As a rough guide, a work piece's weight should not exceed 1/10 to 1/20 of the gripping force. (See page A-74 for details.)

The rated acceleration while moving is 0.3G

#### ■ Gripping Force Adjustment

The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.

\* The gripping forces in the following diagrams indicate the sums of gripping forces of both fingers.



\* The value of the gripping (pushing) in the graph is only reference. Please note that there is a maximum variation of about 15%.

\* Please note that, when gripping (pushing), the speed is fixed at 5mm/s.

#### Actuator Specifications

#### ■ Lead and Load Capacity

Lead and Load Capacity			
Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (mm)
RCP2-GRM-I-28P-1-14- ① - ② - ③	1	80	14 (7 per side)

■ Stroke and Maxi. Opening/Closing Speed

Stroke Deceleration Ratio	14 (mm)
1	36.7 (per side)

(Unit: mm/s)

Cable Symbol	
<b>P</b> (1m)	
<b>S</b> (3m)	
<b>M</b> (5m)	
<b>X06</b> (6m) ~ <b>X10</b> (10m)	
<b>X11</b> (11m) ~ <b>X15</b> (15m)	
<b>X16</b> (16m) ~ <b>X20</b> (20m)	
R01 (1m) ~ R03 (3m)	
R04 (4m) ~ R05 (5m)	
<b>R06</b> (6m) ~ <b>R10</b> (10m)	
<b>R11</b> (11m) ~ <b>R15</b> (15m)	
R16 (16m) ~ R20 (20m)	
	P (1m) S (3m) M (5m) X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m) R01 (1m) ~ R03 (3m) R04 (4m) ~ R05 (5m) R06 (6m) ~ R10 (10m) R11 (11m) ~ R15 (15m)

Legend: ① Compatible controllers ② Cable length ③ Options

*	See	nage	Δ-39	for	cables	for	maintenance.	
	Jee	paye	M-09	101	Cables	101	mannenance.	

Option List			
Name	Option Code	See Page	
Flange bracket	FB	→ A-26	
Shaft bracket	SB	→ A-36	

Item	Description			
Drive System	Timing belt + trapezoidal screw (1.5 lead)			
Positioning Repeatability	±0.01mm			
Backlash	0.15mm or less per side (constantly pressed out by a spring)			
Lost Motion	0.1mm or less per side			
Guide	Cross roller guide			
Allowable Static Load Moment	Ma: 6.3 N·m Mb: 6.3 N·m Mc: 8.3 N·m			
Weight	0.5kg			
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)			

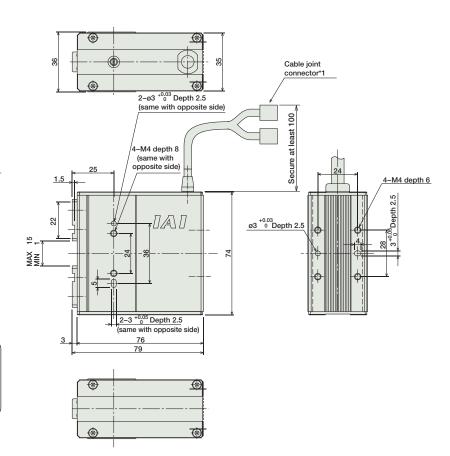
CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Order

會 P. A-9



- \* The opening side of the slider is the home position.
- \*1 The motor-encoder cable is connected here. See page A-39 for details on cables.



12-0.05 2-M5 depth 8

Note: -

The holes in the slider shown above, other than tapped holes, are used to install the slider onto the actuator. They cannot be used as finger positioning holes.

Use the key slots to position the fingers.

Weight (kg) 0.5

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Pag
Solenoid Valve Type		PMEC-C-28PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Soleliold valve Type		PSEP-C-28PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P48
Splash-Proof Solenoid Valve Type	1	PSEP-CW-28PI-NP-2-0  No homing necessary with simple absolute type.	No homing necessary with simple absolute			7140	
Positioner Type		PCON-C-28PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-28PI-NP-2-0	, containing to peccasio for up to 012 points	orz pomie			
Pulse Train Input Type Differential Line Driver)		PCON-PL-28PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P52
Pulse Train Input Type (Open Collector)		PCON-PO-28PI-NP-2-0	Pulse train input type with open collector support	(-)	(-) 64 points		
Serial Communication Type		PCON-SE-28PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-28P	Dedicated to field network	768 points			→ P50
Program Control Type	R	PSEL-C-1-28PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P55

RCP2-GRM **340** 

IAI

Mini

Chandow

Controllers Integrated

> Rod ype

Mini

Standard

Controllers Integrated

able/Arm Flat Type

Mini

Gripper/ Rotary Type

Linear Motor Type

Cleanroom Type

Splash-Proof

Controllers

AMEC

ROBO NET

ERC2

 $\equiv$ 

XSEL

ulse Moto

Servo Motor (24V)

Servo Moto

Linear Moto

Mini
ttandard
htrollers
tegrated

Mini
ttandard
htrollers
tegrated

RCP2-GRHM-Type Encoder

\* See page Pre-35 for explanation of each code that makes up the configuration name.

I: Incremental \* The Simple absolute encoder is also considered

type "I"

Motor - Deceleration Ratio-35P: 35 □ size 2: 1/2 Pulse motor deceleration

ratio

2

35P

Stroke Compatible Controllers 32: 32mm (16mm per side)

32

P1: PCON RPCON

Cable Length N : None P : 1m S : 3m S:3m M:5m

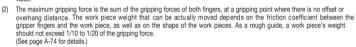
Option Refer to the options

PSEL P3: PMEC X :: Custom
R :: Robot cable **PSEP** 



Technical References

The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is twice this (1)

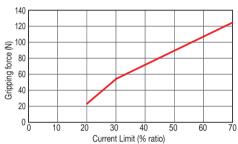


The rated acceleration while moving is 0.3G

#### ■ Gripping Force Adjustment

The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.

\* The gripping forces in the following diagrams indicate the sums of gripping forces of both fingers.



\* The value of the gripping (pushing) in the graph is only reference. Please note that there is a maximum variation of about 15%.

\* Please note that, when gripping (pushing), the speed is fixed at 5mm/s.

#### Actuator Specifications

■ Lead and Load Capacity

Edda dha Edda Gapaony					
Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (mm)		
RCP2-GRHM-I-35P-2-32- ① - ② - ③	2	125	32 (16 per side)		

■ Stroke and Maxi. Opening/Closing Speed

Stroke Deceleration Ratio	32 (mm)
2	100 (per side)

(Unit: mm/s)

Cable	List	

Cable List		
Туре	Cable Symbol	
	<b>P</b> (1m)	
Standard Type	<b>S</b> (3m)	
	<b>M</b> (5m)	
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	
Special Lengths	<b>X11</b> (11m) ~ <b>X15</b> (15m)	
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	
Robot Cable	<b>R04</b> (4m) ~ <b>R05</b> (5m)	
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	
	<b>R16</b> (16m) ~ <b>R20</b> (20m)	

Legend: ① Compatible controllers ② Cable length ③ Options

Actuator Specificatio	ns
Item	
Drive Cuetem	_

Item	Description
Drive System	Timing belt + trapezoidal screw (2 lead)
Positioning Repeatability	±0.01mm
Backlash	0.15mm or less per side (constantly pressed out by a spring)
Lost Motion	0.2mm or less per side
Guide	Cross roller guide
Allowable Static Load Moment	Ma: 11.7 N·m Mb: 16.7 N·m Mc: 46.5 N·m
Weight	1.14kg
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

\* See page A-39 for cables for maintenance.

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	Puon	LIST

Option List			
Name	Option Code	See Page	
Cable exit direction (Top)	CJT	→ A-25	
Cable exit direction (Right)	CJR	→ A-25	
Cable exit direction (Left)	CJL	→ A-25	
Cable exit direction (Bottom)	CJB	→ A-25	
Flange bracket	FB	→ A-26	
Shaft bracket	SB	→ A-36	

340-1 RCP2-GRHM

CAD drawings can be downloaded from IAI website. www.robocylinder.de

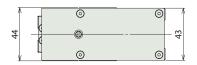


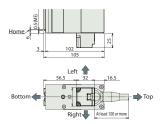
Cable Exit Direction

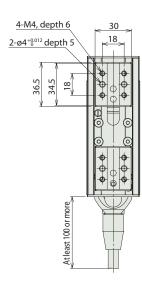


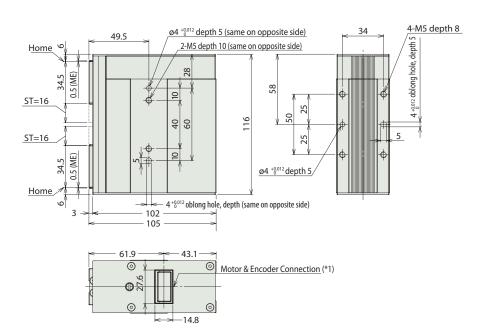


- The opening side of the slider is the home position.
- 1 The motor-encoder cable is connected here. See page A-39 for details on cables.
  2 ME: Mechanical end









Weight (kg) 1.14

Compatible Controllers	
------------------------	--

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
	1	PMEC-C-35PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V/ AC230V	See P481	→ P477
Solenoid Valve Type		PSEP-C-35PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type	I	PSEP-CW-35PI-NP-2-0	No homing necessary with simple absolute type.				→ P407
Positioner Type	pe PCON-PI	PCON-C-35PI-NP-2-0 Positioning is possible for up to 512 points 512 points					
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0	Positioning is possible for up to 312 points	512 points	orz points		
Pulse Train Input Type (Differential Line Driver)		PCON-PL-35PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-35PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-35P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-35PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

ntrollers
tegrated

Rod
Type

Mini
tandard
ntrollers
tegrated

RCP2-GRHB-

Encoder

\* See page Pre-35 for explanation of each code that makes up the configuration name.

I: Incremental \* The Simple absolute encoder is also considered 42P: 42 □ size Pulse motor deceleration ratio type "I"

**42P** 

Motor

- Deceleration Ratio-Stroke 2: 1/2 40: 40mm (20mm per side)

40

2

Compatible Controllers Cable Length N : None P : 1m S : 3m P1: PCON RPCON S : 3m M : 5m PSEL P3: PMEC

Option Refer to the options

X : Custom
R : Robot cable **PSEP** 



Technical References

The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is twice this (1)

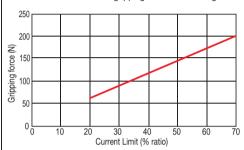


- The maximum gripping force is the sum of the gripping forces of both fingers, at a gripping point where there is no offset or overhang distance. The work piece weight that can be actually moved depends on the friction coefficient between the gripper fingers and the work piece, as well as on the shape of the work pieces. As a rough guide, a work piece's weight should not exceed 1/10 to 1/20 of the gripping force. (2) (See page A-74 for details.)
- The rated acceleration while moving is 0.3G

#### ■ Gripping Force Adjustment

The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.

\* The gripping forces in the following diagrams indicate the sums of gripping forces of both fingers.



- \* The value of the gripping (pushing) in the graph is only reference. Please note that there is a maximum variation of about 15%.
- \* Please note that, when gripping (pushing), the speed is fixed at 5mm/s.

#### Actuator Specifications

Cable List

■ Lead and Load Canacity

Lead and Load Capacity				
Model	Deceleration	Max. Gripping	Stroke	
	Ratio	Force (N)	(mm)	
RCP2-GRHB-I-42P-2-40- ①-②-③	2	200	40 (20 per side)	

■ Stroke and Maxi. Opening/Closing Speed

Stroke Deceleration Ratio	40 (mm)
2	100 (per side)

(Unit: mm/s)

Cable List		
Туре	Cable Symbol	
Standard Type	<b>P</b> (1m) <b>S</b> (3m)	
	M (5m) X06 (6m) ~ X10 (10m)	
Special Lengths	<b>X11</b> (11m) ~ <b>X15</b> (15m)	
	X16 (16m) ~ X20 (20m) R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m) R16 (16m) ~ R20 (20m)	

Legend: ① Compatible controllers ② Cable length ③ Options

\* See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Cable exit direction (Top)	CJT	→ A-25	
Cable exit direction (Right)	CJR	→ A-25	
Cable exit direction (Left)	CJL	→ A-25	
Cable exit direction (Bottom)	CJB	→ A-25	
Flange bracket	FB	→ A-26	
Shaft bracket	SB	→ A-36	

Actuator Specifications					
Item	Description				
Drive System	Timing belt + trapezoidal screw (2 lead)				
Positioning Repeatability	±0.01mm				
Backlash	0.15mm or less per side (constantly pressed out by a spring)				
Lost Motion	0.2mm or less per side				
Guide	Cross roller guide				
Allowable Static Load Moment	Ma: 15.7 N·m Mb: 26.4 N·m Mc: 59.8 N·m				
Weight	1.5kg				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				

CAD drawings can be downloaded from IAI website. www.robocylinder.de

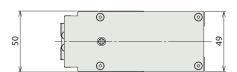


Cable Exit Direction

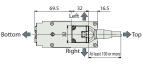


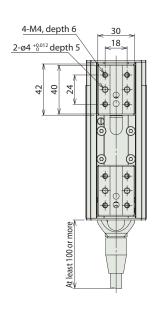


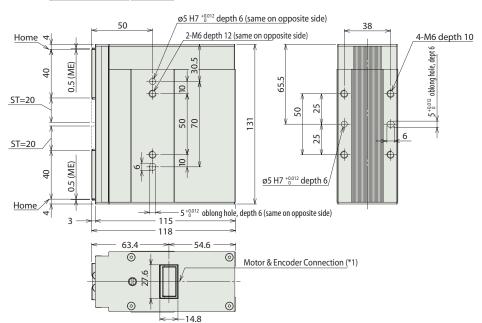
- The opening side of the slider is the home position.
- 1 The motor-encoder cable is connected here. See page A-39 for details on cables.
  2 ME: Mechanical end











Weight (kg) 1.5

Compatible Controllers

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V/ AC230V	See P481	→ P477
Sciencia vaive type	1	PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type	1	PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.				→ F407
Positioner Type	Í	PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			ĺ
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	, containing to possible for up to 0.2 points	o 12 pointe			I
Pulse Train Input Type Differential Line Driver)		PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)			Ī
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P50
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P55

Slider
Type

Mini

Standard

Controllers
Integrated

Rod
Type

Mini

Standard

Controllers
Integrated

Table/Arm
/Flat Type

Mini

Standard

RCP2- GRST-**20P** ■ Configuration: Encoder Motor - Deceleration Ratio -- Compatible Controllers Cable Length Option N : None P : 1m S : 3m P1: PCON 20P : 20 □ size 1: 1/1 deceleration 40: 40mm See Options below I: Incremental The Simple absolute encoder \* Be sure to specify the side from which you want the ratio High-Speed Type 60: 60mm RPCON Pulse motor S:3m M:5m 80: 80mm PSEL is also considered 2: 1/2 deceleration cable to exit (A0 or A1). 100: 100mm P3: PMEC ratio Standard Type type "I" X□□ : Custom \* See page Pre-35 for an explanation of the naming convention. PSEP



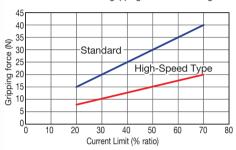
Technical References

- The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is
- The maximum gripping force is the sum of the gripping forces of both fingers, at a gripping point where there is no offset or overhang distance. The work piece weight that can be actually moved depends on the friction coefficient between the gripper fingers and the work piece, as well as on the shape of the work pieces. As a rough guide, a work piece's weight should not exceed 1/10 to 1/20 of the gripping force. (See page A-74 for details.) (2)
- The rated acceleration while moving is 0.3G.

### ■ Gripping Force Adjustment

The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.

\* The gripping forces in the following diagrams indicate the sums of gripping forces of both fingers.



- \* The value of the gripping (pushing) in the graph is only reference. Please note that there is a maximum variation of about 15%.
- \* Please note that, when gripping (pushing), the speed is fixed at 5mm/s.

### Actuator Specifications

#### ■ Lead and Load Capacity

Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (mm)
RCP2-GRST-I-20P-1- ①-②-③-④	1	20	40~100 (20~50 per side)
RCP2-GRST-I-20P-2- ①-②-③-④	2	40	(20mm increments)
Legend: ① Stroke ② Compatible controller ③ Cable length	Options		

■ Stroke and Maxi. Opening/Closing Speed

Stroke Deceleration Ratio	40~100 (mm)
1	75 (per side)
2	34 (per side)

(Unit: mm/s)

Cable List		
Type	Cable Symbol	
Standard Type (Robot Cables)	<b>P</b> (1m) <b>S</b> (3m)	
(HODOL Cables)	<b>M</b> (5m)	
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	
Special Lengths	<b>X11</b> (11m) ~ <b>X15</b> (15m)	
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	

- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

Cable exiting from the side

Option List			
Name	Option Code	See Page	
Reversed-home	NM	→ A-33	
Cable exiting from bottom	A0	→ A-25	

→ A-25

A1 \*Be sure to specify the side from which you want the cable to exit (A0 or A1).

Actuator Specifications				
Item	Description			
Drive System	Timing belt + worm/rack gear			
Positioning Repeatability	±0.01mm			
Backlash	0.2mm or less per side			
Lost Motion	-			
Guide	Linear guide			
Allowable Static Load Moment	Ma: 2.93 N·m Mb: 2.93 N·m Mc: 5.0 N·m			
Weight	0.51kg(40-stroke) ~ 0.66kg (100-stroke)			
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)			

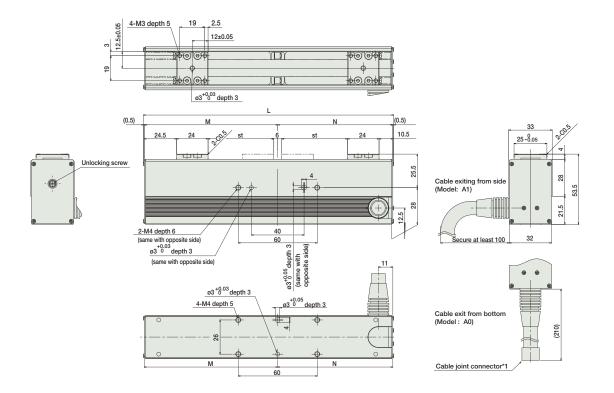
## CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders



2/3D CAD

- \* The opening side of the slider is the home position.
- 1 The motor-encoder cable is connected here. See page A-39 for details on cables.



### Dimensions and Weight by Stroke

Difficusions and weight by Stroke							
Stroke	40	60	80	100			
L	130	150	170	190			
М	71.5	81.5	91.5	101.5			
N	57.5	67.5	77.5	87.5			
Weight (kg)	0.51	0.56	0.61	0.66			

THE NOP2 Serie	es actuators ca	n operate with the co	ntrollers below. Select the controller a	ccording to your usa	age.		
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Pag
Solenoid Valve Type	10	PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P47
ociencia vaive type		PSEP-C-20PI-NP-2-0	PSEP-C-20PI-NP-2-0 Operable with same signal as solenoid valve. Supports both single and double solenoid		→ P48		
Splash-Proof Solenoid Valve Type	1	PSEP-CW-20PI-NP-2-0	types.  No homing necessary with simple absolute type.				7140
Positioner Type	Í	PCON-C-20PI-NP-2-0	PCON-C-20PI-NP-2-0 Positioning is possible for up to 512 points 512 points	Desitioning in possible for up to 510 exists			
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	Positioning is possible for up to 512 points	312 points			
Pulse Train Input Type Differential Line Driver)	e i	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P52
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P50
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P55

RCP2-GRST 342

IAI

;

Mini

Standard

Integrated

/Flat Type

ripper/ otary Type

Linear Motor

Cleanroom Type

Splash-Prod

Controllers

PMEC /AMEC

ROBO

ERC2

 $\equiv$ 

ACON

SCON

PSEL

ASEL

SSEL

XSEL

Pulse Moto

Servo Moto (24V)

Servo Moto (230V)

Linear Moto

Mini
Itandard
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# RCP2-GR3LS RoboCylinder 3-Finger Gripper Lever Type 62mm Width Pulse Motor

19

RCP2-GR3LS-Encoder

I: Incremental The Simple absolute encoder is also considered type "I" \* See page Pre-35 for an explanation of the naming convention.

28P 30 Motor — Deceleration Ratio—

Stroke 28P: 28 □ size 30: 1/30 Pulse motor deceleration

19: 19 degrees

P1: PCON RPCON PSEL P3: PMEC

Compatible Controllers

N : None P : 1m S : 3m M : 5m

Cable Length -Option FB:Flange bracket SB: Shaft bracket

X : Custom
R : Robot cable **PSEP** 



Technical References

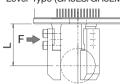




- (1) The maximum opening/closin g speed indicates the operating speed on one side. The relative operating speed is twice this value.
- (2) The maximum gripping force is the sum of the gripping forces of all fingers with gripping point distance of 10mm and no overhang distance. For the actual transportable work piece weight, see explanation on the right, or page A-77.
- (3) The rated acceleration while moving is 0.3G.

## ■ Gripping Force vs. Current Limit

Lever Type (GR3LS/GR3LM)



Please note that, when gripping (pushing), the speed is fixed at 5 degrees/s.

The values in the graph below are gripping forces at 10mm gripping point. The actual gripping force decreases inversely proportional to the distance

from the opening/closing point.

You can calculate the actual gripping force by the following equation.

Actual gripping force (type S)=Px24/(L+14) Actual gripping force (type M)=P×28.5/(L+18.5)

P=Gripping force on graph L=Distance from finger mounting surface to the gripping point.

35 30 **2** 25 20 Gripping f

30

40

50

60

#### Actuator Specifications

#### ■ Lead and Load Capacity

Lead the Edda Supporty								
Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (deg)					
RCP2-GR3LS-I-28P-30-19-①-②-③	30	18	19					

■ Stroke and Maxi. Opening/Closing Speed

Current Limit (% ratio)

- a	
Stroke	19
Deceleration Ratio	(deg)
30	200 (per side)

(Unit: degrees/s)

#### Cable List

Capie List				
Туре	Cable Symbol			
	<b>P</b> (1m)			
Standard Type	<b>S</b> (3m)			
	<b>M</b> (5m)			
	<b>X06</b> (6m) ~ <b>X10</b> (10m)			
Special Lengths	<b>X11</b> (11m) ~ <b>X15</b> (15m)			
	<b>X16</b> (16m) ~ <b>X20</b> (20m)			
	R01 (1m) ~ R03 (3m)			
	<b>R04</b> (4m) ~ <b>R05</b> (5m)			
Robot Cable	R06 (6m) ~ R10 (10m)			
	<b>R11</b> (11m) ~ <b>R15</b> (15m)			
	R16 (16m) ~ R20 (20m)			

Legend: ① Compatible controllers ② Cable length ③ Options

* See page A-39 for cables for	or maintenance.
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Option List					
Name	Option Code	See Page			
Flange bracket	FB	→ A-26			
Shaft bracket	SB	→ Δ-36			

#### Actuator Specifications

Item	Description
Drive System	Worm gear + worm wheel gear
Positioning Repeatability	±0.01 degrees
Backlash	1 degree or less per side (constantly pressed out by a spring)
Lost Motion	0.15 degrees or less per side
Weight	0.6kg
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

10

20

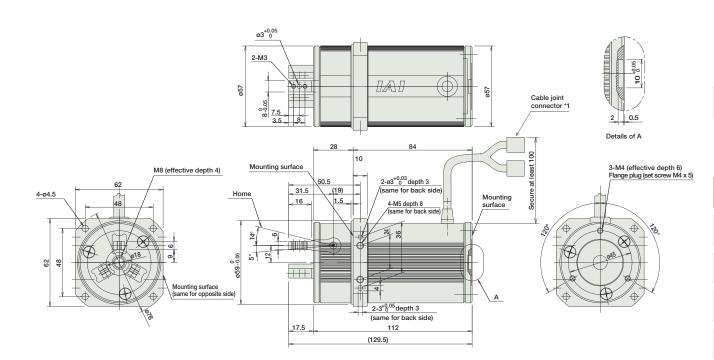
## CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders





- When homing, the actuator swings 1 degree past the home position before returning. Therefore, please watch for any interference with the surrounding objects.
   The motor-encoder cable is connected here. See page A-39 for details on
- cables.



Weight (kg) 0.6

Compa	tihla i	Control	lore

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-28PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solellold valve Type		PSEP-C-28PI-NP-2-0	Operable with same signal as solenoid valve.	3 points			→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-28PI-NP-2-0	Supports both single and double solenoid types. No homing necessary with simple absolute type.				→ P487
Positioner Type		PCON-C-28PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-28PI-NP-2-0	Positioning is possible for up to 512 points	312 points			
Pulse Train Input Type (Differential Line Driver)  Pulse Train Input Type (Open Collector)  Serial  Communication Type		PCON-PL-28PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
		PCON-PO-28PI-NP-2-0	Pulse train input type with open collector support	(-)			
		PCON-SE-28PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-28P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-28PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

PMEC (AMEC PSEP ROBO NET)

ROBO NET)

ERC2

PCON

ACON

PSEL

ASEL

# RCP2-GR3LM

\* See page Pre-35 for an explanation of the naming convention.

19

RCP2-GR3LM-Type Encoder

> I: Incremental The Simple absolute encoder is also considered type "I"

**42P** 30 Motor Stroke 42P: 42 □ size 30: 1/30

19: 19 degrees deceleration Pulse motor ratio

Compatible Controllers

P1: PCON RPCON PSEL P3: PMEC

Cable Length Option N:None P:1m S:3m FB:Flange bracket SB: Shaft bracket

S : 3m M : 5m : Custom **PSEP** 



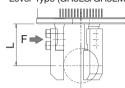
Technical References



- (1) The maximum opening/closin g speed indicates the operating speed on one side. The relative operating speed is twice this value.
- (2) The maximum gripping force is the sum of the gripping forces of all fingers with gripping point distance of 10mm and no overhang distance. For the actual transportable work piece weight, see explanation on the right, or page A-77.
- (3) The rated acceleration while moving is 0.3G.

### ■ Gripping Force vs. Current Limit

Lever Type (GR3LS/GR3LM)



Please note that, when gripping (pushing), the speed is fixed at 5 degrees/s.

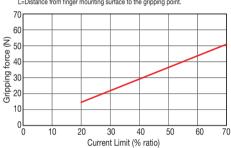
\* The values in the graph below are gripping forces at 10mm gripping point. The actual gripping force decreases inversely proportional to the distance from the opening/closing point.

You can calculate the actual gripping force by the following equation.

Actual gripping force (type S)=P×24/(L+14)

Actual gripping force (type M)=P×28.5/(L+18.5)

P=Gripping force on graph
L=Distance from finger mounting surface to the gripping point.



#### Actuator Specifications

■ Lead and Load Capacity

Lead the Load Supporty					
Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (deg)		
RCP2-GR3LM-I-42P-30-19-①-②-③	30	51	19		

■ Stroke and Maxi. Opening/Closing Speed

Stroke Deceleration Ratio	19 (deg)
30	200 (per side)

(Unit: degrees/s)

#### Cable List

Cable List				
Туре	Cable Symbol			
	<b>P</b> (1m)			
Standard Type	<b>S</b> (3m)			
	<b>M</b> (5m)			
	<b>X06</b> (6m) ~ <b>X10</b> (10m)			
Special Lengths	<b>X11</b> (11m) ~ <b>X15</b> (15m)			
	<b>X16</b> (16m) ~ <b>X20</b> (20m)			
	R01 (1m) ~ R03 (3m)			
	R04 (4m) ~ R05 (5m)			
Robot Cable	R06 (6m) ~ R10 (10m)			
	<b>R11</b> (11m) ~ <b>R15</b> (15m)			
	<b>R16</b> (16m) ~ <b>R20</b> (20m)			

Legend: ① Compatible controllers ② Cable length ③ Options

* See page A-39 for cables for	or maintenance.
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Option List			
Name	Option Code	See Page	
Flange bracket	FB	→ A-26	
Shaft bracket	SB	→ A-36	

Item	Description
Drive System	Worm gear + worm wheel gear
Positioning Repeatability	±0.01 degrees
Backlash	1 degree or less per side (constantly pressed out by a spring)
Lost Motion	0.15 degrees or less per side
Weight	1.1kg
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders

**曾** P. A-**9** 



Compatible Controllers

Pulse Train Input Type

(Open Collector)

Serial

Communication Type

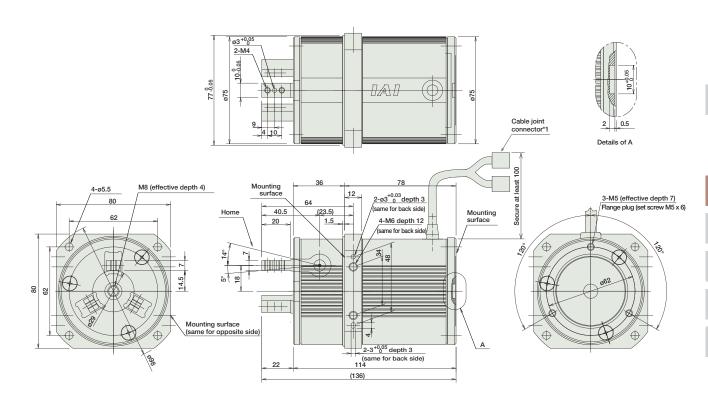
Field Network Type

Program Control

Type

- When homing, the actuator swings 1 degree past the home position before returning. Therefore, please watch for any interference with the surrounding
- objects.

  1 The motor-encoder cable is connected here. See page A-39 for details on cables.



Weight (kg) 1.1

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.							
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Sciencia vaive type	1	PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type	<b>I</b>	PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.				→ P407
Positioner Type	Ü	PCON-C-42PI-NP-2-0	Paritiraina is assault for such 540 a sint-	540 i-t-			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Pulse Train Input Type (Differential Line Driver)	éi	PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support		DC24V	2A max.	→ P525

Pulse train input type with

open collector support

Dedicated to serial communication

Dedicated to field network

Programmed operation is possible Operation is possible on up to 2 axes

PCON-PO-42PI-NP-2-0

PCON-SE-42PI-N-0-0

PSEL-C-1-42PI-NP-2-0

RPCON-42P

(-)

768 points

1500 points

	→ P503	

\* This is for the single-axis PSEL.

RCP2-GR3LM 346

IAI

Mini
Standard
Introllers
tegrated
Rod
Type
Mini
Standard
Introllers
tegrated
Table/Arm
/Flat Type

PMEC /AMEC /AMEC /AMEC /AMEC /ASEP ROBO NET ERC2 PCON ACON SCON PSEL ASEL XSEL XSEL

# RCP2-GR3SS RoboCylinder 3-Finger Gripper Slider Type 62mm Width Pulse Motor

\* See page Pre-35 for an explanation of the naming convention.

RCP2-GR3SS-

10

Encoder I: Incremental The Simple absolute encoder is also considered

type "I"

Motor Stroke 28P: 28 □ size 30: 1/30 Pulse motor

30

28P

 Compatible Controllers 10: 10mm deceleration (5mm per side)

P1: PCON RPCON PSEL P3: PMEC

Cable Length N : None
P : 1m
S : 3m
M : 5m
X \_ : Custom
R \_ : Robot cable

Option FB:Flange bracket SB: Shaft bracket

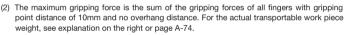
**PSEP** 



Technical References

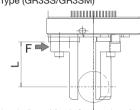


(1) The maximum opening/closin g speed indicates the operating speed on one side. The relative operating speed is twice this value.



(3) The rated acceleration while moving is 0.3G.

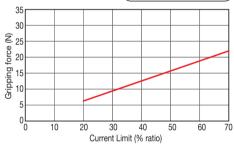
### ■ Gripping Force vs. Current Limit Slider Type (GR3SS/GR3SM)



\* Please keep the distance L from the finger mounting surface to the gripping point at less than the following dimensions.

GR3SS→50mm or less GR3SM→80mm or less

Please note that, when gripping (pushing), the speed is fixed at 5mm/s.



#### Actuator Specifications

#### ■ Lead and Load Capacity

Lead and Load Oapacity			
Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (mm)
RCP2-GR3SS-I-28P-30-10-①-②-③	30	22	10 (5 per side)

■ Stroke and Maxi. Opening/Closing Speed

Stroke Deceleration Ratio	10 (mm)
30	40 (per side)

(Unit: mm/s)

#### Cable List

Cable List		
Туре	Cable Symbol	
	<b>P</b> (1m)	
Standard Type	<b>S</b> (3m)	
	<b>M</b> (5m)	
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
Robot Cable	R04 (4m) ~ R05 (5m)	
	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	
, ,	X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m) R01 (1m) ~ R03 (3m) R04 (4m) ~ R05 (5m) R06 (6m) ~ R10 (10m) R11 (11m) ~ R15 (15m)	

Legend: ① Compatible controllers ② Cable length ③ Options

|--|

Option List		
	Option	List

Name	Option Code	See Page	
Flange bracket	FB	→ A-26	
Shaft bracket	SB	→ A-36	

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Item	Description
Drive System	Worm gear + worm wheel gear
Positioning Repeatability	±0.01mm
Backlash	0.3mm or less per side (constantly pressed out by a spring)
Lost Motion	0.1mm or less per side
Guide	Cross roller guide
Allowable Static Load Moment	Ma: 3.8 N·m Mb: 3.8 N·m Mc: 3.0 N·m
Weight	0.6kg
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

## CAD drawings can be downloaded from IAI website. www.robocylinder.de

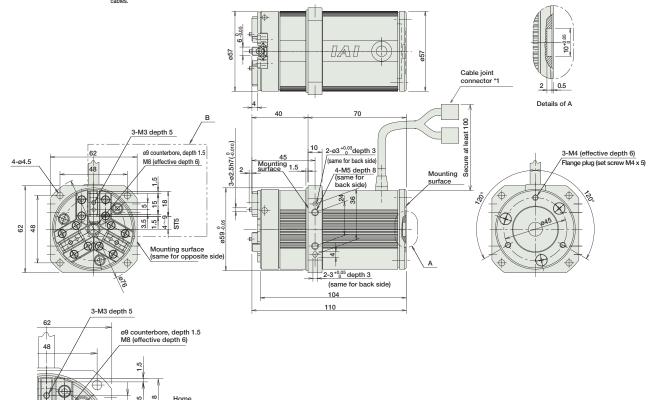
For Special Orders





- When homing, the actuator swings 0.5mm past the home position before returning. Therefore, please watch for any interference with the surrounding
- objects.

  1 The motor-encoder cable is connected here. See page A-39 for details on cables.



Details of section B

Weight (kg) 0.6

Com	natible	Controllers
COIL	patible	

4~9 ST5

3.5 1.5

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page	
Solenoid Valve Type		PMEC-C-28PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477	
orichold valve Type		PSEP-C-28PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ D497	
Splash-Proof colenoid Valve Type	I	PSEP-CW-28PI-NP-2-0	No homing necessary with simple absolute type.				→ P487	
Positioner Type		PCON-C-28PI-NP-2-0	Positioning is possible for up to 512 points	512 points - (-) 64 points	E10 points			
Safety-Compliant Positioner Type		PCON-CG-28PI-NP-2-0	r ostitoring is possible for up to 312 points		DC24V	2A max.		
Pulse Train Input Type Differential Line Driver)	Ó	PCON-PL-28PI-NP-2-0	Pulse train input type with differential line driver support				→ P525	
Pulse Train Input Type (Open Collector)		PCON-PO-28PI-NP-2-0	Pulse train input type with open collector support		(-)			
Serial Communication Type	1	PCON-SE-28PI-N-0-0	Dedicated to serial communication					
Field Network Type		RPCON-28P	Dedicated to field network	768 points			→ P503	
Program Control Type	Í	PSEL-C-1-28PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557	

This is for the single-axis PSEL

Mini
Standard
Introllers
tegrated
Rod
Type
Mini
Standard
Introllers
tegrated
Table/Arm
/Flat Type

PMEC //AMEC PSEP //ASEP ROBO NET ERC2 PCON ACON SCON SSEL XSEL XSEL

# RCP2-GR3SM

14

RCP2-GR3SM-Type Encoder

I: Incremental The Simple absolute encoder is also considered type "I" \* See page Pre-35 for an explanation of the naming convention.

**42P** 30 Motor - Deceleration Ratio -

14: 14mm 42P: 42 □ size 30: 1/30 Pulse motor deceleration (7mm per side) ratio

Stroke

P1: PCON RPCON PSEL P3: PMEC

Compatible Controllers -Cable Length N : None P : 1m S : 3m M : 5m

FB:Flange bracket SB: Shaft bracket

Option

X : Custom
R : Robot cable **PSEP** 

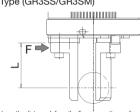
Technical References





- (1) The maximum opening/closin g speed indicates the operating speed on one side. The relative operating speed is twice this value.
- (2) The maximum gripping force is the sum of the gripping forces of all fingers with gripping point distance of 10mm and no overhang distance. For the actual transportable work piece weight, see explanation on the right or page A-74.
- (3) The rated acceleration while moving is 0.3G.

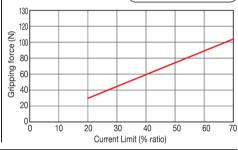
### ■ Gripping Force vs. Current Limit Slider Type (GR3SS/GR3SM)



\* Please keep the distance L from the finger mounting surface to the gripping point at less than the following dimensions.

GR3SS→50mm or less GR3SM→80mm or less

Please note that, when gripping (pushing), the speed is fixed at 5mm/s.



#### Actuator Specifications

### ■ Lead and Load Capacity

Lead and Load Capacity			
Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (mm)
RCP2-GR3SM-I-42P-30-14-①-②-③	30	102	14 (7 per side)

■ Stroke and Maxi. Opening/Closing Speed

Stroke  Deceleration Ratio	14 (mm)
30	50 (per side)

(Unit: mm/s)

#### Cabla List

Cable List		
Type	Cable Symbol	
	<b>P</b> (1m)	
Standard Type	<b>S</b> (3m)	
	<b>M</b> (5m)	
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	
Special Lengths	<b>X11</b> (11m) ~ <b>X15</b> (15m)	
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	
	R16 (16m) ~ R20 (20m)	

Legend: ① Compatible controllers ② Cable length ③ Options

* See page A-39 for cables for maintenan	ce.
--	-----

## Actuator Specifications

Item	Description		
Drive System	Worm gear + worm wheel gear		
Positioning Repeatability	±0.01mm		
Backlash	0.3mm or less per side (constantly pressed out by a spring)		
Lost Motion	0.1mm or less per side		
Guide	Cross roller guide		
Allowable Static Load Moment	Ma: 6.3 N·m Mb: 6.3 N·m Mc: 5.7 N·m		
Weight	1.2kg		
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)		

Option List			
Name	Option Code	See Page	
Flange bracket	FB	→ A-26	
Shaft bracket	SB	→ A-36	

CAD drawings can be downloaded from IAI website. www.robocylinder.de

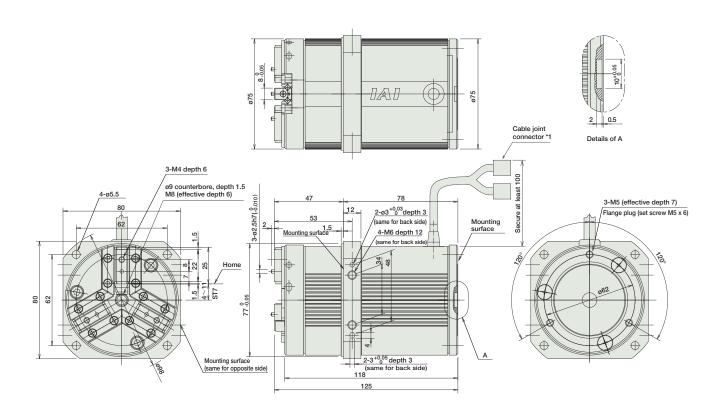
For Special Orders





- When homing, the actuator swings 0.5mm past the home position before returning. Therefore, please watch for any interference with the surrounding objects.

  The motor-encoder cable is connected here. See page A-39 for
- details on cables.



Weight (kg) 1.2

Compatible	Control	lers

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Colcitora varie Type	1	PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.  No homing necessary with simple absolute type.  Positioning is possible for up to 512 points  512 points	3 points			→ P487
Splash-Proof Solenoid Valve Type	I	PSEP-CW-42PI-NP-2-0					→ F40 <i>1</i>
Positioner Type	Í	PCON-C-42PI-NP-2-0					
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	rositioning is possible for up to 312 points	312 points			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V 2A max.	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

\* This is for the single-axis PSEL.

Standard
Introllers
tegrated
Rod
Type
Mini
Standard
Introllers
tegrated

# RCP2-RTBS/RTBSL

■ Configuration: RCP2-I **20P** Series Туре Encoder Motor - Deceleration Ratio-- Oscillation Angle-Compatible Controllers -Cable Length Option N : None P : 1m S : 3m M : 5m RTBS: 330-degree 20P: 20 □ size 30: 1/30 330: 330degrees P1: PCON NM :Reversed-rotation I: Incremental The Simple absolute encoder deceleration (RTBS only) **RPCON** SA: Shaft adapter rotation Pulse motor ratio 45: 1/45 RTBSL: Multiple 360: 360degrees PSEL TA: Table adapter is also considered rotation deceleration ratio (RTBSL P3: PMEC type "I". \* See page Pre-35 for an explanation of the naming convention. only) PSEP



(1) The output torque decreases as the rotational speed increases.

Check the output torque graph on the right to see whether the speed required for your desired motion is supported.

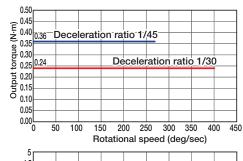
(2) The allowable moment of inertia of the rotated work piece varies with the rotational speed. Check the Allowable Moment of Inertia graph on the right to see if the moment of inertia required for your desired motion is within the allowable range.

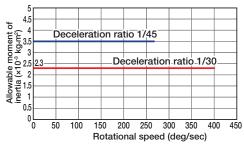
(3) The rated acceleration while moving is 0.2G.

(4) When using index mode with multiple rotation type, PMEC/PSEP controller is not available to operate.

#### ■ Speed vs. Load Capacity

Due to the characteristics of the Pulse Motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





#### Actuator Specifications

#### ■ Lead and Load Capacity

Model	Deceleration Ratio	Max. Torque (N·m)	Allowable Moment of Inertia (kg·m²)	Oscillation Angle (deg)		
RCP2-RTBS-I-20P-30-330-①-②-③	1/30	0.24	0.0023	330		
RCP2-RTBS-I-20P-45-330-①-②-③	1/45	0.36	0.0035	330		
RCP2-RTBSL-I-20P-30-360-①-②-③	1/30	0.24	0.0023	360		
RCP2-RTBSL-I-20P-45-360-①-②-③	1/45	0.36	0.0035	300		
Legend: ① Compatible controller ② Cable length ③ Options						

#### ■ Deceleration Ratio and Max. Speed

Stroke Deceleration Ratio	330/360 (deg)
1/30	400
1/45	266

(Unit: degrees/s)

## Cable List

Туре	Cable Symbol	
Standard Type	P (1m) S (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) $\sim$ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

\* The standard cable is the motor-encoder integrated robot cable.

### Option List

•			
Name	Option Code	See Page	
Reversed-rotation	NM	→ A-33	
Shaft adapter	SA	→ A-35	
Table adapter	TA	→ A-37	

Item	Description	
Drive System	Hypoid gear	
Positioning Repeatability	±0.05 degrees	
Homing Accuracy	±0.05 degrees	
Lost Motion	±0.1 degrees	
Allowable Thrust Load	30N	
Allowable Load Moment	3.6N·m	
Weight	0.52kg	
Ambient Operating Temp./Humidity	$0 \sim$ 40°C, 85% RH or less (non-condensing)	

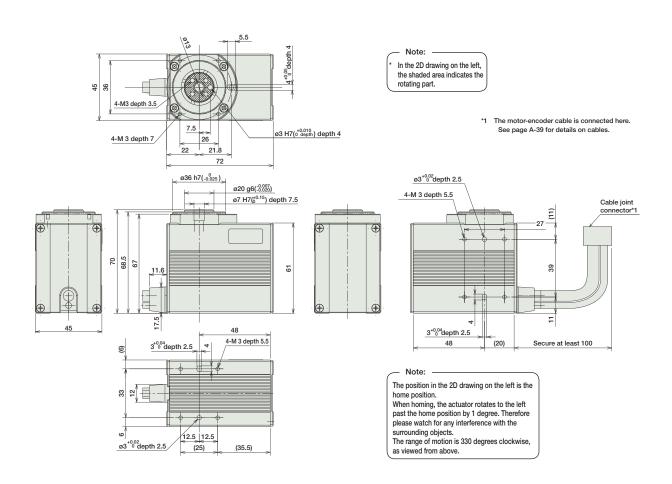
<sup>\*</sup> See page A-39 for cables for maintenance.

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders







Weight (kg) 0.52

	The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.							
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Page
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P477
ooichold valve type	1	PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve.	3 points				. 0.407
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	Supports both single and double solenoid types.  No homing necessary with simple absolute type.			2A max.		→ P487
Positioner Type	É	PCON-C-20PI-NP-2-0	Desiring in a solida for up to FdO original	540 i-t-				
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V			
Pulse Train Input Type Differential Line Driver)	ė	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	()				→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)				
Serial Communication Type	1	PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-20P	Dedicated to field network	768 points				→ P503
Program Control Type	É	PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P557

RCP2-RTBS/RTBSL 354 IAI

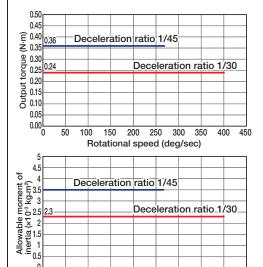
# RCP2-RTCS/RTCSL RoboCylinder Rotary Small Flat Type 72mm Width Pulse Motor

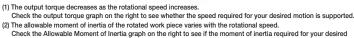
RCP2-**20P** Туре Encoder Motor - Deceleration Ratio - Oscillation Angle - Compatible Controllers Cable Length Option N : None P : 1m S : 3m M : 5m RTCS: 330 degree I: Incremental 28P: 28 🗆 size 30: 1/30 330: 330degrees P1: PCON NM :Reversed-rotation The Simple absolute encoder is also considered deceleration (RTCS only) **RPCON** SA: Shaft adapter rotation Pulse motor ratio 45: 1/45 RTCSL : Multi-360: 360degrees PSEL TA: Table adapter rotational (RTCSL only) P3: PMEC type "I". \* See page Pre-35 for an explanation of the naming convention. **PSEP** 



■ Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





motion is within the allowable range.

(3) The rated acceleration while moving is 0.2G.

(4) When using index mode with multiple rotation type, PMEC/PSEP controller is not available to operate

#### Actuator Specifications ■ Lead and Load Capacity

,							
Model	Deceleration Ratio	Max. Torque (N·m)	Allowable Moment of Inertia (kg·m²)	Oscillation Angle (deg)			
RCP2-RTCS-I-20P-30-330-①-②-③	1/30	0.24	0.0023	330			
RCP2-RTCS-I-20P-45-330-①-②-③	1/45	0.36	0.0035	330			
RCP2-RTCSL-I-20P-30-360-1 -2 -3	1/30	0.24	0.0023	360			
RCP2-RTCSL-I-20P-45-360-1-2-3	1/45	0.36	0.0035	300			

■ Deceleration Ratio and Max. Speed

Rotational speed (deg/sec)

150

Stroke  Deceleration Ratio	330/360 (deg)
1/30	400
1/45	266

(Unit: degrees/s)

200 250 300 350 400 450

Cable List		
Туре	Cable Symbol	
Standard Type (Robot Cables)	P (1m) S (3m) M (5m)	
Special Lengths	X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m)	

Legend: ①Compatible controller ②Cable length ③Options

\* The standard cable is the motor-encoder integrated robot cable.

<sup>\*</sup> See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Reversed-rotation	NM	→ A-33	
Shaft adapter	SA	→ A-35	
Table adapter	TA	→ A-37	

#### Actuator Specifications

Item	Description
Drive System	Hypoid gear
Positioning Repeatability	±0.05 degrees
Homing Accuracy	±0.05 degrees
Lost Motion	±0.1 degrees
Allowable Thrust Load	30N
Allowable Load Moment	3.6N·m
Weight	0.52kg
Ambient Operating Temp./Humidity	$0\sim40^{\circ}\text{C}$ , 85% RH or less (non-condensing)

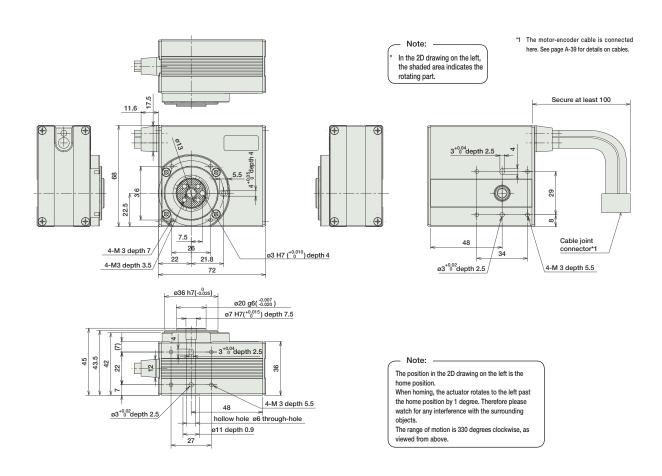
50

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders







Weight (kg) 0.48

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solenoid valve Type	1	PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			D407
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	No homing necessary with simple absolute type.				→ P487
Positioner Type	Ü	PCON-C-20PI-NP-2-0	Positioning is possible for up to 512 points	540i-t-			
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	Positioning is possible for up to 512 points	512 points		V 2A max.	
Pulse Train Input Type Differential Line Driver)	ė	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V		→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type	Í	PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503
Program Control Type	g i	PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

IAI

RCP2-RTCS/RTCSL 356

Slider
Type

Mini

Standard

Controllers
Integrated

Rod
Type

Mini

Standard

Controllers
Integrated

Table/Arm
/Flat Type

Mini

Standard

Standard
Introllers
tegrated
Rod
Type
Mini
Standard
Introllers
tegrated

RCP2-RTB/RTBL

\* See page Pre-35 for an explanation of the naming convention.

RCP2-**28P** Series Туре Encoder Motor - Deceleration Ratio - Oscillation Angle — Compatible Controllers Cable Length Option

RTB : 330-degree I: Incremental rotation \* The Simple absolute encoder is also considered type "I".

28P: 28 🗆 size 20: 1/20 330: 330degrees deceleration ratio (RTB only) Pulse motor 360: 360degrees 30: 1/30 decele ratio (RTBL only)

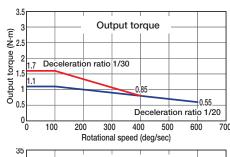
P1: PCON **RPCON** PSEL P3: PMEC **PSEP** 

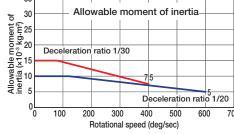
N:None
P:1m
S:3m
M:5m
X : Custom
R : Robot cable NM :Reversed-rotation SA: Shaft adapter TA: Table adapter

**Technical** P. A-5

■ Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





(1) The output torque decreases as the rotational speed increases

Check the output torque graph on the right to see whether the speed required for your desired motion is supported (2) The allowable moment of inertia of the rotated work piece varies with the rotational speed.

References

Check the Allowable Moment of Inertia graph on the right to see if the moment of inertia required for your desired motion is within the allowable range.

(3) The rated acceleration while moving is 0.3G.

(4) When using index mode with multiple rotation type, PMEC/PSEP controller is not available to operate.

#### Actuator Specifications

#### ■ Lead and Load Capacity

Model	Deceleration Ratio	Max. Torque (N·m)	Allowable Moment of Inertia (kg·m²)	Oscillation Angle (deg)	
RCP2-RTB-I-28P-20-330-①-②-③	1/20	1.1	0.01	330	
RCP2-RTB-I-28P-30-330-①-②-③	1/30	1.7	0.015	330	
RCP2-RTBL-I-28P-20-360-1 -2 -3	1/20	1.1	0.01	360	
RCP2-RTBL-I-28P-30-360-1 - 2 - 3	1/30	1.7	0.015	300	
Legend: ① Compatible controller ② Cable length ③ Optio	Legend: ① Compatible controller ② Cable length ③ Options				

#### ■ Deceleration Ratio and Max. Speed

Stroke Deceleration Ratio	330/360 (deg)
1/20	600
1/30	400

Description

(Unit: degrees/s)

## Cable List

Type	Cable Symbol	
	P (1m)	
Standard Type	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	

Drive System	Hypoid gear
Positioning Repeatability	±0.01 degrees
Homing Accuracy	±0.01 degrees
Lost Motion	±0.1 degrees
Allowable Thrust Load	50N
Allowable Load Moment	3.9 N·m
Weight	0.86kg
Ambient Operating Temp./Humidity	$0\sim40^{\circ}\text{C}$ , 85% RH or less (non-condensing)

**Actuator Specifications** Item

See page A-39 for cables for maintenance.

### Ontion List

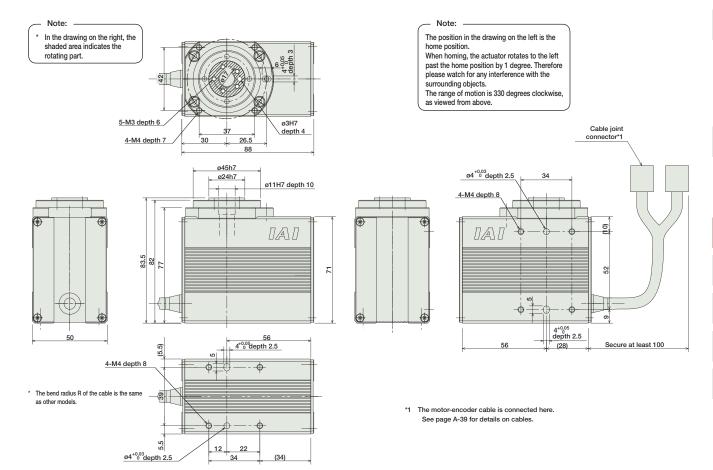
Option List			
	_		
Name	Option Code	See Page	
Reversed-rotation	NM	→ A-33	
Shaft adapter	SA	→ A-35	
Table adapter	TΔ	→ A 27	

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders







Weight (kg) 0.86

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.								
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Pag
Solenoid Valve Type		PMEC-C-28PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481		→ P47
Soletiola valve Type	1	PSEP-C-28PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points				→ P48
Splash-Proof Solenoid Valve Type		PSEP-CW-28PI-NP-2-0	No homing necessary with simple absolute type.					→ F40
Positioner Type	Í	PCON-C-28PI-NP-2-0	512 points					
Safety-Compliant Positioner Type		PCON-CG-28PI-NP-2-0	Positioning is possible for up to 512 points	512 points				
Pulse Train Input Type (Differential Line Driver)		PCON-PL-28PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.		→ P52
Pulse Train Input Type (Open Collector)		PCON-PO-28PI-NP-2-0	Pulse train input type with open collector support	(-)				
Serial Communication Type		PCON-SE-28PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-28P	Dedicated to field network	768 points				→ P50
Program Control Type	É	PSEL-C-1-28PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P55

IAI

RCP2-RTB/RTBL **358** 

Standard

Integrated

Туре

Mini

Controllers

Table/Arm

rial Type

Mini

-i----(

Rotary Type

Type

Туре

Spiasn-Proof

Controllers

/AMEC

ROB0

FRC2

ACON

SCON

PSEL

ASEL

SSEL

XSEL

Pulse Moto

Servo Moto (24V)

ervo Moto

\* See page Pre-35 for an explanation of the naming convention.

Standard
Introllers
tegrated
Rod
Type
Mini
Standard
Introllers
tegrated

PMEC //AMEC ### RCP2-RTC/RTCL RoboCylinder Rotary Medium Flat Type 88mm Width Pulse Motor ■ Configuration: RCP2-**28P** Series Туре Encoder Motor Deceleration Ratio Oscillation Angle - Compatible Controllers-Cable Length Option 330: 330degrees (RTC only) N : None P : 1m S : 3m M : 5m RTC: 330-degree 28P: 28 🗆 size 20: 1/20 P1: PCON NM :Reversed-rotation I: Incremental deceleration ratio 30: 1/30 deceleration ratio The Simple absolute encoder is also considered rotation Pulse **RPCON** SA: Shaft adapter 360: 360degrees (RTCL only) PSEL TA: Table adapter



type "I".

(1) The output torque decreases as the rotational speed increases. Check the output torque graph on the right to see whether the speed required for your desired motion is supported.

(2) The allowable moment of inertia of the rotated work piece varies with the rotational speed.

Check the Allowable Moment of Inertia graph on the right to see if the moment of inertia required for your desired motion is within the allowable range.

(3) The rated acceleration while moving is 0.3G.

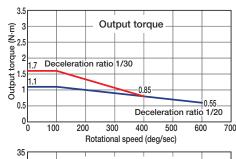
(4) When using index mode with multiple rotation type, PMEC/PSEP controller is not available to operate.

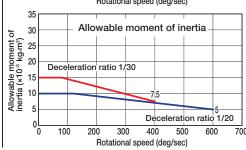
#### ■ Speed vs. Load Capacity

P3: PMEC

PSEP

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





#### Actuator Specifications

#### ■ Lead and Load Capacity

Model	Deceleration Ratio	Max. Torque (N·m)	Allowable Moment of Inertia (kg·m²)	Oscillation Angle (deg)	
RCP2-RTC-I-28P-20-330-①-②-③	1/20	1.1	0.01	330	
RCP2-RTC-I-28P-30-330-①-②-③	1/30	1.7	0.015	330	
RCP2-RTCL-I-28P-20-360-①-②-③ 1/20 1.1 0.01					
RCP2-RTCL-I-28P-30-360-①-②-③ 1/30 1.7 0.015					
Legend: ① Compatible controller ② Cable length ③ Options					

#### ■ Deceleration Ratio and Max. Speed

Stroke Deceleration Ratio	330/360 (deg)
1/20	600
1/30	400

(Unit: degrees/s)

Cable List		

Cable List		
Туре	Cable Symbol	
	P (1m)	
Standard Type	<b>S</b> (3m)	
	<b>M</b> (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	

*	See	page	A-39	for	cables	for	maintenance.
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#### Option List

•			
Name	Option Code	See Page	
Reversed-rotation	NM	→ A-33	
Shaft adapter	SA	→ A-35	
Table adapter	TA	→ A-37	

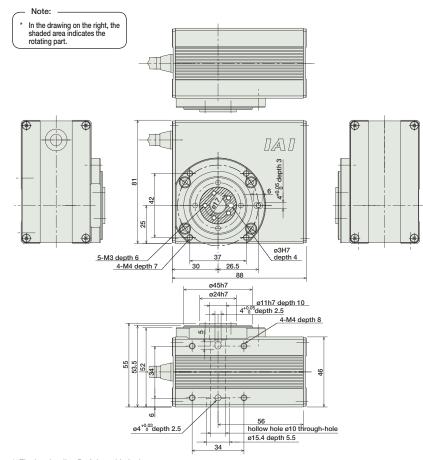
	5 1 11
Item	Description
Drive System	Hypoid gear
Positioning Repeatability	±0.01 degrees
Homing Accuracy	±0.01 degrees
Lost Motion	±0.1 degrees
Allowable Thrust Load	50N
Allowable Load Moment	3.9 N·m
Weight	0.92kg
Ambient Operating Temp./Humidity	$0 \sim$ 40°C, 85% RH or less (non-condensing)

CAD drawings can be downloaded from IAI website. www.robocylinder.de

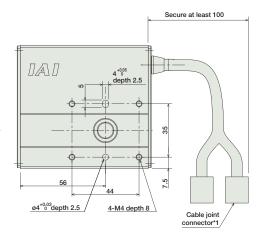
For Special Orders







\*1 The motor-encoder cable is connected here. See page A-39 for details on cables.



The position in the drawing on the left is the home position.

When homing, the actuator rotates to the left past the home position by 1 degree. Therefore please watch for any interference with the surrounding objects.

The range of motion is 330 degrees clockwise, as viewed from above.

\* The bend radius R of the cable is the same as

Weight (kg) 0.92

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-28PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solelloid valve Type		PSEP-C-28PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-28PI-NP-2-0	No homing necessary with simple absolute type.				→ F407
Positioner Type	Í	PCON-C-28PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-28PI-NP-2-0	rostioning is possible for up to 312 points				
Pulse Train Input Type Differential Line Driver)		PCON-PL-28PI-NP-2-0	Pulse train input type with differential line driver support		DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-28PI-NP-2-0	Pulse train input type with open collector support				
Serial Communication Type	1	PCON-SE-28PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-28P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-28PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

IAI

Note \*\* When using index mode with multiple rotation type, PMEC/PSEP controller is not available to operate

360 RCP2-RTC/RTCL

\* This is for the single-axis PSEL.

Slider Type

Mini

Standard

Controllers Integrated

Rod Type

Mini

Standard

Controllers Integrated

Standard
Introllers
tegrated
Rod
Type
Mini
Standard
Introllers
tegrated

RCP2-RTBB/RTBBL

RoboCylinder Rotary Large Vertical Type 76mm Width Pulse Motor

RCP2-35P Series Туре Encoder Motor - Deceleration Ratio -Oscillation Angle — Compatible Controllers Cable Length Option

RTBB: 330-degree I: Incremental The Simple absolute encoder is also considered rotation RTBBL : Multirotational type "I".

35P: 35 □ size 20: 1/20 deceleration ratio Pulse motor 30: 1/30 deceleration ratio 330: 330degrees P1: PCON (RTBB only) **RPCON** 360: 360degrees PSEL (RTBBL only) P3: PMEC **PSEP** 

N : None P : 1m S : 3m M : 5m

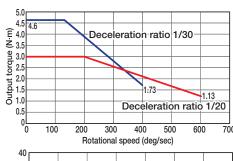
NM :Reversed-rotation SA: Shaft adapter TA: Table adapter

X□□ : Custom
R□□ : Robot cable

**Technical** P. A-5 References

■ Speed vs. Load Capacity

Due to the characteristics of the Pulse Motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



35 moment o 0-3 kg·m²) Deceleration ratio 1/30 <u>6</u> 20 Allowable n inertia (x10-c c c c 11:3-Deceleration ratio 1/20 400 100 300 500 600 200 Rotational speed (deg/sec)

(1) The output torque decreases as the rotational speed increases.

Check the output torque graph on the right to see whether the speed required for your desired motion is supported.

- (2) The allowable moment of inertia of the rotated work piece varies with the rotational speed.

  Check the Allowable Moment of Inertia graph on the right to see if the moment of inertia required for your desired motion is within the allowable range.
- (3) The rated acceleration while moving is 0.3G.
- (4) When using index mode with multiple rotation type, PMEC/PSEP controller is not available to operate.

#### Actuator Specifications

#### ■ Lead and Load Capacity

Model	Deceleration Ratio	Max. Torque (N·m)	Allowable Moment of Inertia (kg·m²)	Oscillation Angle (deg)	
RCP2-RTBB-I-35P-20-330-①-②-③	1/20	3.0	0.02	330	
RCP2-RTBB-I-35P-30-330-①-②-③	1/30	4.6	0.03	330	
RCP2-RTBBL-I-35P-20-360-① -② -③ 1/20 3.0 0.02					
RCP2-RTBBL-I-35P-30-360-① -② -③ 1/30 4.6 0.03					
Legend: ① Compatible controller ② Cable length ③ Options					

#### ■ Deceleration Ratio and Max. Speed

	•
Stroke Deceleration Ratio	330/360 (deg)
Deceleration hatio	1 0/
1/20	600
1/30	400

(Unit: degrees/s)

Cable List		
Туре	Cable Symbol	
	P (1m)	
Standard Type	<b>S</b> (3m)	
	M (5m)	
Special Lengths	X06 (6m) ~ X10 (10m)	
	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
Robot Cable	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) $\sim$ R20 (20m)	

Item	Description
Drive System	Hypoid gear
Positioning Repeatability	±0.01 degrees
Homing Accuracy	±0.01 degrees
Lost Motion	±0.1 degrees
Allowable Thrust Load	200N
Allowable Load Moment	17.7N·m
Weight	2.3kg
Ambient Operating Temp./Humidity	0 ~ 40°C, 85% RH or less (non-condensing)

Actuator Specifications

#### Option List

Name	Option Code	See Page	
Reversed-rotation	NM	→ A-33	
Shaft adapter	SA	→ A-35	
Table adapter	TA	→ A-37	

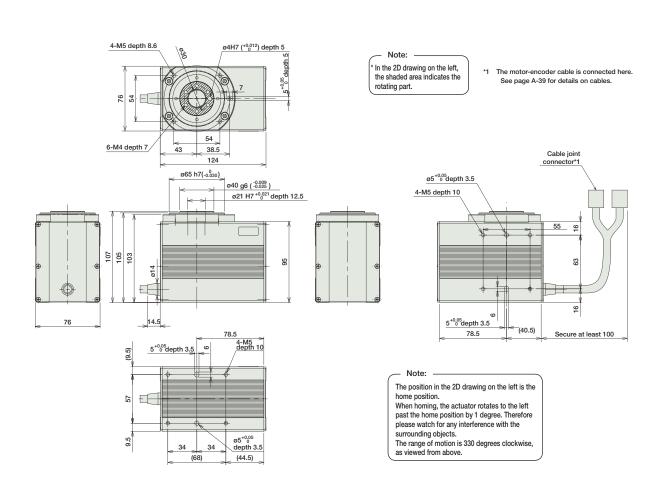
See page A-39 for cables for maintenance.

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders







Weight (kg) 2.3

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page	
	1	PMEC-C-35PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477	
Solenoid Valve Type		PSEP-C-35PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points				
Splash-Proof Solenoid Valve Type	Ţ.	PSEP-CW-35PI-NP-2-0	No homing necessary with simple absolute type.				→ P487	
Positioner Type	Í	PCON-C-35PI-NP-2-0	- Positioning is possible for up to 512 points	512 points	DC24V			
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0	rositioning is possible for up to 312 points	512 points				
Pulse Train Input Type (Differential Line Driver)	Ó	PCON-PL-35PI-NP-2-0	Pulse train input type with differential line driver support	(-)		2A max.	→ P525	
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-NP-2-0	Pulse train input type with open collector support	(-)				
Serial Communication Type	Ĩ.	PCON-SE-35PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-35P	Dedicated to field network	768 points				→ P503
Program Control Type	É	PSEL-C-1-35PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557	

IAI

362 RCP2-RTBB/RTBBL

Slider
Type

Mini

Standard

Controllers
Integrated

Rod
Type

Mini

Standard

Controllers
Integrated

Table/Arm
/Flat Type

Mini

\* See page Pre-35 for an explanation of the naming convention.

Standard
Introllers
tegrated
Rod
Type
Mini
Standard
Introllers
tegrated

PMEC //AMEC ### RCP2-RTCB/RTCBL RoboCylinder Rotary Large Flat Type 124mm Width Pulse Motor ■ Configuration: RCP2-35P Series Туре Encoder Motor - Deceleration Ratio - Oscillation Angle- Compatible Controllers Cable Length Option N : None P : 1m S : 3m M : 5m RTCB: 330-degree 35P: 35 ☐ size 20: 1/20 deceleration 330: 330 degrees P1: PCON I: Incremental NM :Reversed-rotation 235 ☐ SIZE 25.... ratio (RTB only) 30: 1/30 deceleration 360: 360degrees rotation \* The Simple absolute encoder is also considered **RPCON** SA: Shaft adapter



type "I".

Check the output torque graph on the right to see whether the speed required for your desired motion is supported. (2) The allowable moment of inertia of the rotated work piece varies with the rotational speed.

Check the Allowable Moment of Inertia graph on the right to see if the moment of inertia required for your desired motion is within the allowable range.

(3) The rated acceleration while moving is 0.3G.

(1) The output torque decreases as the rotational speed increases.

(4) When using index mode with multiple rotation type, PMEC/PSEP controller is not available to operate.

#### ■ Speed vs. Load Capacity

X : Custom

PSEL

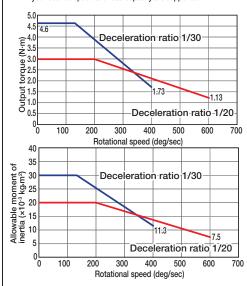
**PSEP** 

P3: PMEC

(RTBL only)

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

TA: Table adapter



#### Actuator Specifications

#### ■ Lead and Load Capacity

Model	Deceleration Ratio	Max. Torque (N·m)	Allowable Moment of Inertia (kg·m²)	Oscillation Angle (deg)
RCP2-RTCB-I-35P-20-330-①-②-③	1/20	3.0	0.02	330
RCP2-RTCB-I-35P-30-330-①-②-③	1/30	4.6	0.03	330
RCP2-RTCBL-I-35P-20-360-1 -2 -3	1/20	3.0	0.02	360
RCP2-RTCBL-I-35P-30-360-1 - 2 - 3	1/30	4.6	0.03	300
Legend: ① Compatible controller ② Cable length ③ Options				

#### ■ Deceleration Ratio and Max. Speed

Stroke Deceleration Ratio	330/360 (deg)
1/20	600
1/30	400

(Unit: degrees/s)

#### Cable List

Cable List		
Туре	Cable Symbol	
	P (1m)	
Standard Type	<b>S</b> (3m)	
	<b>M</b> (5m)	
Special Lengths	X06 (6m) ~ X10 (10m)	
	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
Robot Cable	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	

See page A-39 for cables for maintenance.

#### Option List

Name	Option Code	See Page	
Reversed-rotation	NM	→ A-33	
Shaft adapter	SA	→ A-35	
Table adapter	TA	→ A-37	

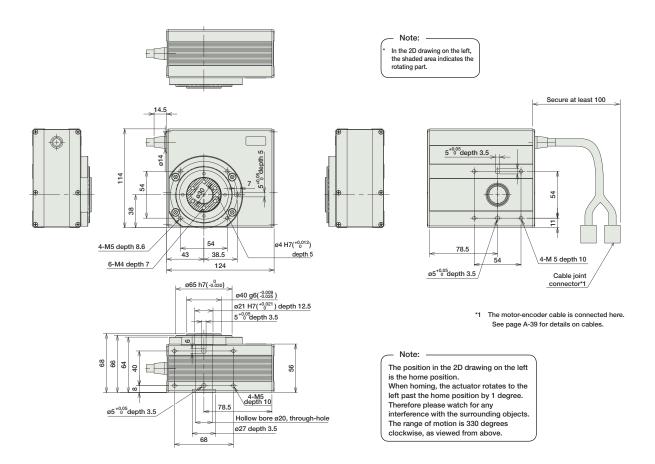
Item	Description
Drive System	Hypoid gear
Positioning Repeatability	±0.01 degrees
Homing Accuracy	±0.01 degrees
Lost Motion	±0.1 degrees
Allowable Thrust Load	200N
Allowable Load Moment	17.7N·m
Weight	2.2kg
Ambient Operating Temp./Humidity	0 ~ 40°C, 85% RH or less (non-condensing)

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders







Weight (kg) 2.2

The RCP2 series a	The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.							
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Page
Solenoid Valve Type		PMEC-C-35PI-NP-2-2	Easy-to-use controller, even for beginners	for beginners		See P481		→ P477
Sciencia valve Type	ype	PSEP-C-35PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points				→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-35PI-NP-2-0	No homing necessary with simple absolute type.					→ F407
Positioner Type		PCON-C-35PI-NP-2-0	Positioning is possible for up to 512 points	or up to 512 points 512 points				
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0	rositioning is possible for up to 312 points	512 points				
Pulse Train Input Type (Differential Line Driver)		PCON-PL-35PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	V 2A max.		→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-NP-2-0	Pulse train input type with open collector support	(-)				
Serial Communication Type		PCON-SE-35PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-35P	Dedicated to field network	768 points				→ P503
Program Control Type		PSEL-C-1-35PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P557

IAI

RCP2-RTCB/RTCBL 364

Mini

Mini

Standard

Rod Type

Mini

Controllers

Toble/Aum

Flat Type

Standard

Gripper/ Rotary Type

Linear Motor

Туре

Spiasn-Prod

Controllers

PSEP

ROBO NET

ERC2

PCON

ACON

 $\equiv$ 

XSEL

. . . . . .

Servo Moto

ervo Moto

ingar Moto

\* See page Pre-35 for an explanation of the naming convention.

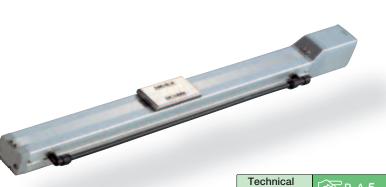
Standard
Introllers
tegrated
Rod
Type
Mini
Standard
Introllers
tegrated
Table/Arm

PMEC
/AMEC
PSEP
/ASEP
ROBO
NET
ERC2
PCON
ACON
SCON
PSEL
ASEL
XSEL

### RCP2CR-SA5C Cleanroom RoboCylinder Slider Coupling Type 52mm Width Pulse motor Aluminum Base RCP2CR- SA5C -**42P** ■ Configuration: Motor Туре Encoder Lead Stroke Compatible Controllers -Cable Length Option I: Incremental \* The simple absolute encoder is also considered type "I". N: None P:1m S:3m M:5m X : Custom R : Robot cable 50: 50mm P1: PCON BE: Brake (Cable exiting from end) 42P: Pulse motor 20: 20mm RPCON BL: Brake (Cable exiting from left) BR: Brake (Cable exiting from right) 42 🗌 size 12:12mm 800: 800mm

6 : 6mm

3:3mm



[全 P. A-5 References

When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire

Since the RCP2 series use the pulse motor, the load capacity decreases at high speeds.

In the Speed vs. Load Capacity graph on the right, see if your desired speed and load capacity are supported.

The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). The maximum acceleration is 0.7G (0.3G when used vertically), however, note that the load capacity decreases at high accelerations. For more information, see the table of load capacity by acceleration, on page A-53.

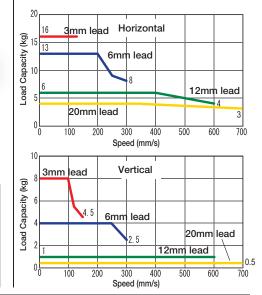
The ISO cleanliness class 4 is for horizontal usage Please note that the actuator may not support C10 when used on its side or in vertical orientation.

### ■ Speed vs. Load Capacity

P3: PMEC

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

NM: Reversed-home VR: Intake port on opposite side



### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Ca		Stroke			
Wiodei	(mm)	Horizontal (kg)	Vertical (kg)	(mm)			
RCP2CR-SA5C-I-42P-20-①-②-③-④	20	~ 4	0.5				
RCP2CR-SA5C-I-42P-12-①-②-③-④	12	~ 6	1	50 ~ 800 (50mm increments)			
RCP2CR-SA5C-I-42P-6-①-②-③-④	6	~ 13	~ 4	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
RCP2CR-SA5C-I-42P-3-①-②-③-④	3	16	~8				
Legend: ① Stroke ② Compatible controller ③ Cable length ④ Options							

### ■ Stroke, Max. Speed, and Suction Volume

		Stroke Lead	50 ~ 500 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction Volume (N l/min)
		20	1000	980	850	740	650	580	80
;)		12	600	540	460	400	360	300	50
		6	300	270	230	200	180	150	30
		3	150	135	115	100	90	75	15
_	-	(Unit: mn	n/s)						

### Cable List

Type	Cable Symbol	
	P (1m)	
Standard Type	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	

See page A-39 for cables for maintenance.

Name	Option Code	See Page	
Brake (Cable exiting from end)	BE	→ A-25	
Brake (Cable exiting from left)	BL	→ A-25	
Brake (Cable exiting from right)	BR	→ A-25	
Reversed-home	NM	→ A-33	
Intake port on opposite side	VR	→ A-38	

### Actuator Specifications

Item	Description			
Drive System	Ball screw ø10mm C10 grade			
Positioning Repeatability	±0.02mm			
Lost Motion	0.1mm or less			
Allowable Static Moment	Ma: 18.6N·m Mb: 26.6N·m Mc: 47.5N·m			
Allowable Dynamic Moment (*)	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m			
Overhang Load Length	Ma direction: 150mm or less Mb, Mc direction: 150mm or less			
Grease Type	Low dust generation grease (both ball screw and guide)			
Cleanliness	ISO class 4 (US FED STD class 10)			
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)			

(\*) Based on a 5.000km service life.









### CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders





Details of A

(mounting holes and reference surface)

Details of oblong hole

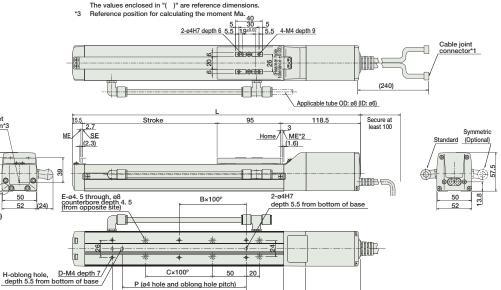
\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

Ma moment offset

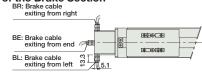
reference position\*3

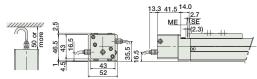
The motor-encoder cable is connected here. See page A-39 for details on cables.

When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end SE: Stroke end



Dimensions of the Brake Section





50 52

The length L of a brake-equipped actuator is longer than that of a standard model (see the table) by 40mm (53.3mm with the cable exit out its end); add 0.4kg to weight.

### ■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	279	329	379	429	479	529	579	629	679	729	779	829	879	929	979	1029
Α	73	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
В	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
С	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
D	4	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18
Е	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
Н	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Р	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight (kg)	1.7	1.8	1.9	2.0	2.1	2.3	2.4	2.5	2.6	2.7	2.8	3.0	3.1	3.2	3.3	3.4

Com	patible	Control	lers
-----	---------	---------	------

The RCP2CR series actuators can operate with the controllers below. Select the controller according to your usage

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solehold valve Type		PSEP-C-42PI-NP-2-0-H	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type	1	PSEP-CW-42PI-NP-2-0-H	No homing necessary with simple absolute type.				→ F407
Positioner Type	ĺ	PCON-C-42PI-NP-2-0-H	Positioning is possible for up to 512 points	512 points 512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0-H	r ostuorining is possible for up to 312 points			2A max.	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0-H	Pulse train input type with differential line driver support	(-)	DC24V		→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0-H	Pulse train input type with open collector support				
Serial Communication Type		PCON-SE-42PI-N-0-0-H	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P-H	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0-H	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

IAI

400

RCP2CR-SA5C

\* See page Pre-35 for an explanation of the naming convention.

Standard
Introllers
tegrated
Rod
Type
Mini
Standard
Introllers
tegrated
Table/Arm
/Flat Type



3:3mm

(50mm pitch

increments)

P3: PMEC

PSEP

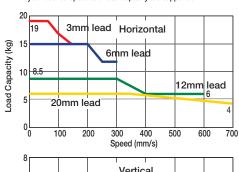
Technical References [**全** P. A-5

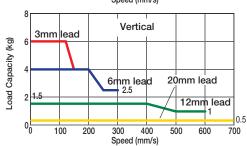
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire
- Since the RCP2 series use the pulse motor, the load capacity decreases at high speeds.
- In the Speed vs. Load Capacity graph on the right, see if your desired speed and load capacity are supported.
- The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). The maximum acceleration is 0.7G (0.3G when used vertically), however, note that the load capacity decreases at high accelerations. For more information, see the table of load capacity by acceleration, on page A-53.
- The ISO cleanliness class 4 is for horizontal usage. Please note that the actuator may not support C10 when used on its side or in vertical orientation.

### ■ Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

NM : Reversed-home VR : Intake port on opposite side





### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead (mm)	Max. Load Ca Horizontal (kg)		Stroke (mm)
RCP2CR-SA6C-I-42P-20-①-②-③-④	20	~ 6	0.5	
RCP2CR-SA6C-I-42P-12-①-②-③-④	12	~ 8.5	1.5	50 ~ 800 (50mm increments)
RCP2CR-SA6C-I-42P-6-①-②-③-④	6	~ 15	~ 4	,
RCP2CR-SA6C-I-42P-3-①-②-③-④	3	~19	~ 6	
Legend: ① Stroke ② Compatible controller ③ Cable length	4 Opt	ions		

### ■ Stroke, Max. Speed, and Suction Volume

		Stroke Lead	50 ~ 500 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction Volume (N l/min)
		20	1000	980	850	740	650	580	80
;)		12	600	540	460	400	360	300	50
		6	300	270	230	200	180	150	30
		3	150	135	115	100	90	75	15
_	-	(Unit: mn	n/s)						

### ③ Cable List

© Cable List							
Туре	Cable Symbol						
	P (1m)						
Standard Type	<b>S</b> (3m)						
	<b>M</b> (5m)						
	X06 (6m) ~ X10 (10m)						
Special Lengths	X11 (11m) ~ X15 (15m)						
	X16 (16m) ~ X20 (20m)						
	R01 (1m) ~ R03 (3m)						
	R04 (4m) ~ R05 (5m)						
Robot Cable	R06 (6m) ~ R10 (10m)						
	R11 (11m) ~ R15 (15m)						
	R16 (16m) $\sim$ R20 (20m)						

\* See page A-39 for cables for maintenance.

## Actuator Specifications

Item	Description
Drive System	Ball screw ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Allowable Static Moment	Ma: 38.3N·m Mb: 54.7N·m Mc: 81.0N·m
Allowable Dynamic Moment (*)	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang Load Length	Ma direction: 220mm or less Mb, Mc direction: 220mm or less
Grease Type	Low dust generation grease (both ball screw and guide)
Cleanliness	ISO class 4 (US FED STD class 10)
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

(\*) Based on a 5.000km service life. Directions of Allowable Load Moments







Option List

<u> </u>			
Name	Option Code	See Page	
Brake (Cable exiting from end)	BE	→ A-25	
Brake (Cable exiting from left)	BL	→ A-25	
Brake (Cable exiting from right)	BR	→ A-25	
Reversed-home	NM	→ A-33	
Intake port on opposite side	VR	→ A-38	

### <sub>ebsite.</sub> www.robocylinder.de (

Ma moment offset reference position\*3

For Special Orders





\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

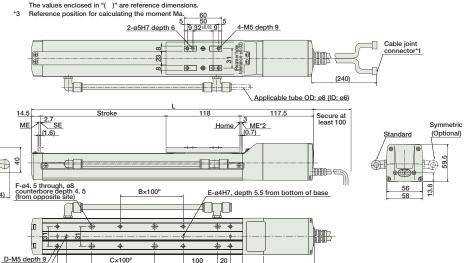
(mounting holes and reference surface)

The motor-encoder cable is connected here. See page A-39 for details on cables.

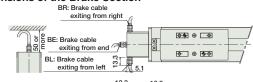
When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end

The values enclosed in "( )" are reference dimensions

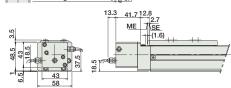
P (ø4 hole and oblong hole pitch)



### **Dimensions of the Brake Section**



H-oblong hole, depth 5.5 from bottom of base



The length L of a brake-equipped actuator is longer than that of a standard model (see the table) by 40mm (53.3mm with the cable exit out its end); add 0.4kg to weight.

### ■ Dimensions and Weight by Stroke

L	Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
	П	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
	Α	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
	В	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
	O	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
	D	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
	Е	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	F	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
	Н	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
[	Р	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
	Weight (kg)	2.0	2.2	2.3	2.4	2.6	2.7	2.9	3.0	3.1	3.3	3.4	3.6	3.7	3.8	4.0	4.1

### Compatible Controllers

The RCP2CR series actuators can operate with the controllers below. Select the controller according to your usage

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solehold valve Type		PSEP-C-42PI-NP-2-0-H	Easy-to-use controller, even for beginners  Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type	1	PSEP-CW-42PI-NP-2-0-H	No homing necessary with simple absolute type.				→ F407
Positioner Type	Í	PCON-C-42PI-NP-2-0-H	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0-H	1 Ostroning is possible for up to 512 points	orz pointo			
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0-H		()	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0-H		(-)			
Serial Communication Type		PCON-SE-42PI-N-0-0-H	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P-H	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0-H		1500 points			→ P557

■ Configuration:

Standard
ntrollers
tegrated
Rod
Type
Mini
Standard
ntrollers
tegrated

# RCP2CR-SA7C Cleanroom Rob Aluminum Base

Cleanroom RoboCylinder Slider Coupling Type 73mm Width Pulse motor

RCP2CR- SA7C -Туре Encoder I: Incremental

The simple absolute encoder is also considered type "!".

\* See page Pre-35 for an explanation of the naming convention.

ı

**56P** Motor 56P: Pulse motor 16:16mm 56 🗌 size

8: 8mm 4: 4mm

50: 50mm 800: 800mm (50mm pitch increments)

Stroke

P1: PCON **RPCON** PSEL P3: PMEC **PSEP** 

30

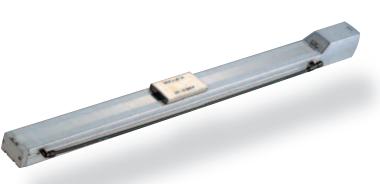
Compatible Controllers

Cable Length

BE : Brake (Cable exiting from end) BL : Brake (Cable exiting from left) BR : Brake (Cable exiting from right) NM : Reversed-home

Option

Due to the characteristics of the Pulse motor, the RCP2 series' if your desired speed and load capacity are supported. 4mm lead



Technical References





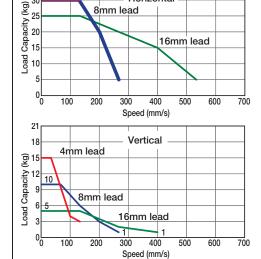
Cable List

- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- Since the RCP2 series use the pulse motor, the load capacity decreases at high speeds. In the Speed vs. Load Capacity graph on the right, see if your desired speed and load capacity are supported.
- The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 4mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- The ISO cleanliness class 4 is for horizontal usage. Please note that the actuator may not support C10 when used on its side or in vertical orientation

### ■ Speed vs. Load Capacity

load capacity decreases at high speeds. In the table below, check

Horizontal



### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Ca	Stroke	
Model	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2CR-SA7C-I-56P-16-①-②-③-④	16	~ 25	~ 5	50000
RCP2CR-SA7C-I-56P-8-①-②-③-④	8	~ 30	~ 10	50~800 (50mm
RCP2CR-SA7C-I-56P-4-①-②-③-④	4	~ 30	∼ <b>1</b> 5	increments)
Legend: ① Stroke ② Compatible controller ③ Cable length	0ptions			

■ Stroke, Max. Speed, and Suction Volume

Stroke Lead	$50 \sim 700$ (50mm increments)	~ 800 (mm)	Suction Volume (NI/min)
16	533 <400>	480 <400>	70
8	266	240	40
4	133	120	30

\* The values enclosed in "< >" apply to vertical usage (Unit: mm/s)

Type	Cable Symbol	
	P (1m)	
Standard Type	<b>S</b> (3m)	
	M (5m)	
Special Lengths	X06 (6m) ~ X10 (10m)	
	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	

\* See page A-39 for cables for maintenance.

# Option List

Name	Option Code	See Page	
D 1 (0 11 '11' ( 1)		. A OF	
Brake (Cable exiting from end)	BE	ightarrow A-25	
Brake (Cable exiting from left)	BL	→ A-25	
Diake (Oable exiting noin left)	5	7 A-23	
Brake (Cable exiting from right)	BR	$\rightarrow$ A-25	
		1 00	
Reversed-home	NM	$\rightarrow$ A-33	
Intake port on opposite side	VR	→ A-38	
intake port on opposite side	*17	/ A-30	

### Actuator Specifications

Item	Description
Drive System	Ball screw ø12mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Allowable Static Moment	Ma: 50.4N·m Mb: 71.9N·m Mc: 138.0N·m
Allowable Dynamic Moment (*)	Ma: 13.9N·m Mb: 19.9N·m Mc: 38.3N·m
Overhang Load Length	Ma direction: 230mm or less Mb, Mc direction: 230mm or less
Grease Type	Low dust generation grease (both ball screw and guide)
Cleanliness	ISO class 4 (US FED STD class 10)
Ambient Operating Temp /Humidity	0~40°C, 85% RH or less (non-condensing)

(\*) Based on a 5.000km service life. **Directions of Allowable Load Moments** 





Symmetric

(Optional)



Secure at least 100

译 P. A-**9** 

Cable joint connector\*1

Standard

**(** 

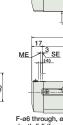


\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

Dimensions

Ma moment offset reference position

CAD drawings can be downloaded from IAI website. www.robocylinder.de



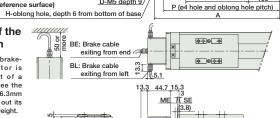
**▼ ⊕ ⊕ ⊕** Applicable tube OD: ø8 (ID: ø6) 40 Stroke Home 3 ME\*2

F-ø6 through, ø9.5 counterbore, depth 5.5 (from opposite site) B×100<sup>P</sup> E-ø4H7, depth 6 from bottom of base --ф-→ → 0 Details of oblong hole C×100<sup>F</sup> 100 30 D-M5 depth 9.

### Dimensions of the **Brake Section**

(mounting holes and reference surface)

 \* The length L of a brake-equipped actuator is longer than that of a standard model (see the table) by 43mm (56.3mm with the cable exit out its end); add 0.6kg to weight.



\*1 \*2 The motor-encoder cable is connected here. See page A-39 for details on cables.

158

When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.

ME: Mechanical end

SE: Stroke end

80

Reference position for calculating the moment Ma.

### ■ Dimensions and Weight by Stroke

	Difficitions and Weight by Choice															
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	353	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103
Α	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
В	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
С	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
D	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
Н	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Р	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight (kg)	3.3	3.5	3.8	4.0	4.2	4.4	4.7	4.9	5.1	5.3	5.6	5.8	6.0	6.2	6.5	6.7

Compatible Controllers
------------------------

The RCP2CR series actuators can operate with the controllers below. Select the controller according to your usage

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-56PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
odiciiola vaive type		PSEP-C-56PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			→ P487
Splash-Proof Solenoid Valve Type	1	PSEP-CW-56PI-NP-2-0	No homing necessary with simple absolute type.				71407
Positioner Type	Í	PCON-C-56PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-56PI-NP-2-0	Postaorining is possible for up to 312 points	orz pomio	DC24V	2A max.	
Pulse Train Input Type Differential Line Driver)		PCON-PL-56PI-NP-2-0	Pulse train input type with differential line driver support	()			→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-56P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-56PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

RCP2CR-SA7C 404

■ Configuration:

Standard
Introllers
tegrated
Rod
Type
Mini
Standard
Introllers
tegrated
Table/Arm
/Flat Type

PMEC //AMEC //AMEC //ASEP ROBO NET ERC2 PCON ACON ACON SCON ASEL SSEL

# RCP2CR-SS7C Cleanroom RoboCylinder Slider Coupling Type 60mm Width Pulse motor Steel Base

RCP2CR- SS7C -Encoder

I: Incremental \* The simple absolute encoder is also considered \* See page Pre-35 for an explanation of the naming convention.

**42P** Motor 42P: Pulse motor

42 🗌 size

12:12mm 6: 6mm 3: 3mm

Stroke 50: 50mm 600: 600mm (50mm pitch increments)

Compatible Controllers P1: PCON RPCON PSEL P3: PMEC **PSEP** 

N : None P : 1m S : 3m M : 5m X 🔲 : Custom R 🔲 : Robot cable

Cable Length

B : Brake NM: Reversed-home VR : Intake port on opposite side

Option

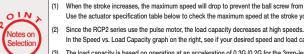
■ Speed vs. Load Capacity



Technical References

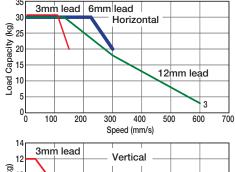
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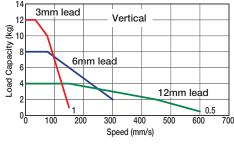




- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.
- In the Speed vs. Load Capacity graph on the right, see if your desired speed and load capacity are supported. (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically).

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Cap	Stroke	
IVIOGEI	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2CR-SS7C-I-42P-12-①-②-③-④	12	~ 30	$\sim$ 4	F0. C00
RCP2CR-SS7C-I-42P-6-①-②-③-④	6	~ 30	~ 8	50~600 (50mm increments)
RCP2CR-SS7C-I-42P-3-①-②-③-④	3	~ 30	$\sim$ 12	increments)
Legend: ①Stroke ②Compatible controller ③Cable length	Options			

■ Stroke, Max. Speed, and Suction Volume

	,	- 1 , .			
Lea	Stroke	$50 \sim 500$ (50mm increments)	~ 600 (mm)	Suction Volume (NI/min)	
	12	600	470	50	
	6	300	230	30	
	3	150	115	15	
		•		(Unit: mm/s)	

Cable List				
Cable Symbol				
P (1m)				
<b>S</b> (3m)				
M (5m)				
X06 (6m) ~ X10 (10m)				
X11 (11m) ~ X15 (15m)				
X16 (16m) ~ X20 (20m)				
R01 (1m) ~ R03 (3m)				
R04 (4m) ~ R05 (5m)				
R06 (6m) ~ R10 (10m)				
R11 (11m) ~ R15 (15m)				
R16 (16m) ~ R20 (20m)				
	P (1m) S (3m) M (5m) X06 (6m) ~ X10 (10m) X11 (11m) ~ X15 (15m) X16 (16m) ~ X20 (20m) R01 (1m) ~ R03 (3m) R04 (4m) ~ R05 (5m) R06 (6m) ~ R10 (10m) R11 (11m) ~ R15 (15m)			

\* See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	
Intake port on opposite side	VR	→ A-38	

### Actuator Specifications

Item	Description
Drive System	Ball screw ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Allowable Static Moment	Ma: 79.4N·m Mb: 79.4N·m Mc: 172.9N·m
Allowable Dynamic Moment (*)	Ma: 14.7N·m Mb: 14.7N·m Mc: 33.3N·m
Overhang Load Length	Ma direction: 300mm or less Mb, Mc direction: 300mm or less
Grease Type	Low dust generation grease (both ball screw and guide)
Cleanliness	ISO class 4 (US FED STD class 10)
Ambient Operating Temp /Humidity	0~40°C, 85% RH or less (non-condensing)

(\*) Based on a 10.000km service life. Directions of Allowable Load Moments







### CAD drawings can be downloaded from IAI website. www.robocylinder.de

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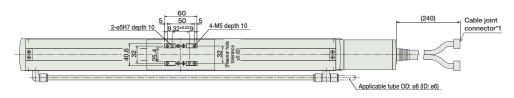


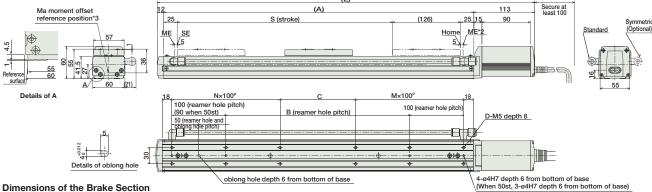
\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped. \*1 The motor-encoder cable is connected here. See page A-39 for details on cables.

When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end

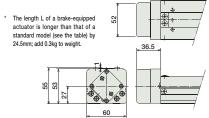
The dimensions enclosed in "( )" are reference dimensions.

3 Reference position for calculating the moment Ma.





Time control of the Brake Gooden



### ■ Dimensions and Weight by Stroke

	Stroke	50	100	150	200	250	300	350	400	450	500	550	600
ſ	L	351	401	451	501	551	601	651	701	751	801	851	901
	Α	226	276	326	376	426	476	526	576	626	676	726	776
	В	0	40	90	140	190	240	290	340	390	440	490	540
ſ	С	90	40	90	140	190	40	90	140	190	40	90	140
ſ	D	6	8	8	8	8	12	12	12	12	16	16	16
ſ	M	1	1	1	1	1	2	2	2	2	3	3	3
	N	0	1	1	1	1	2	2	2	2	3	3	3
	Weight (kg)	3.3	3.6	3.9	4.2	4.6	4.9	5.3	5.6	6.0	6.3	6.6	6.9

	Com	patible	Controllers	
--	-----	---------	-------------	--

The RCP2CR series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Sciencia valve type		PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ D497
Splash-Proof Solenoid Valve Type	1	PSEP-CW-42PI-NP-2-0	No homing necessary with simple absolute type.				→ P487
Positioner Type	Í	PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0	r consuming to possible for up to 0.2 points	. , ,			
Pulse Train Input Type (Differential Line Driver)	ė į	PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-42P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

This is for the single-axis PSEL.

Slider Type

Mini

Standard

Controllers Integrated

Rod Vpe

Mini

Standard

Controllers Integrated

Flat Type

Gripper/ Rotary Type

Linear Motor

Cleanroom

Splash-Proof

Controllers

/AMEC

ROBO NET

ERC2

PCON

ACUN

SCUN

VOEL

Servo Moto

(24V)

Servo Motoi (230V)

Linear Mot

■ Configuration:

Standard
ntrollers
tegrated
Rod
Type
Mini
Standard
ntrollers
tegrated

# RCP2CR-SS8C Cleanroom RoboCylinder Slider Coupling Type 80mm Width Pulse motor Steel Base

RCP2CR- SS8C ı Encoder I: Incremental

The simple absolute encoder is also considered \* See page Pre-35 for an explanation of the naming convention.

Motor 20:20mm 56P: Pulse motor 10:10mm 56 🗌 size 5: 5mm

**56P** 

Stroke 50: 50mm 1000: 1000mm (50mm pitch increments)

P1: PCON **RPCON** PSEL P3: PMEC **PSEP** 

Compatible Controllers

N : None P : 1m S : 3m M : 5m X 🔲 : Custom R 🔲 : Robot cable

B : Brake

Option

NM: Reversed-home VR : Intake port on opposite side



Technical References



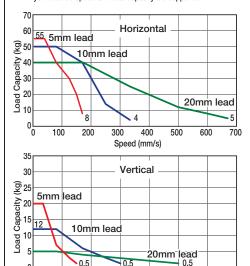


- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed Use the actuator specification table below to check the maximum speed at the stroke you desire.
- Since the RCP2 series use the pulse motor, the load capacity decreases at high speeds. In the Speed vs. Load Capacity graph on the right, see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 5mm-lead model, or when used vertically). This is the upper limit of the acceleration.

### ■ Speed vs. Load Capacity

Cable Length

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

	, ,			
Model	Lead	Max. Load Cap	Stroke	
Model	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2CR-SS8C-I-56P-20-①-②-③-④	20	~ 40	$\sim$ 5	50. 1000
RCP2CR-SS8C-I-56P-10-①-②-③-④	10	~ 50	$\sim$ 12	50~1000 (50mm increments)
RCP2CR-SS8C-I-56P-5-①-②-③-④	5	∼ <b>5</b> 5	$\sim$ 20	increments)
Legend: ①Stroke ②Compatible controller ③Cable length	4 Options			

■ Stroke, Max. Speed, and Suction Volume

300

400

Speed (mm/s)

500

Stroke Lead	50 ~ 800 (50mm increments)	~ 900 (mm)	~ 1000 (mm)	Suction Volume (NI/min)
20	666 <500>	625 <500>	515 <500>	80
10	333 <300>	310 <300>	255	40
5	165 <150>	155 <150>	125	20

\* The values enclosed in "< >" apply to vertical usage (Unit: mm/s)

С	able	List

Oubic List		
Туре	Cable Symbol	
	P (1m)	
Standard Type	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	

<sup>\*</sup> See page A-39 for cables for maintenance.

### Option List

Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	
Intake port on opposite side	VR	→ <b>A-38</b>	

### Actuator Specifications

Item	Description							
Drive System	Ball screw ø16mm C10 grade							
Positioning Repeatability	±0.02mm							
Lost Motion	0.1mm or less							
Allowable Static Moment	Ma: 198.9N·m Mb: 198.9N·m Mc: 416.7N·m							
Allowable Dynamic Moment (*)	Ma: 36.3N·m Mb: 36.3N·m Mc: 77.4N·m							
Overhang Load Length	Ma direction: 450mm or less Mb, Mc direction: 450mm or less							
Grease Type	Low dust generation grease (both ball screw and guide)							
Cleanliness	ISO class 4 (US FED STD class 10)							
Ambient Operating Temp /Humidity	0~40°C, 85% RH or less (non-condensing)							

100

(\*) Based on a 10.000km service life. Directions of Allowable Load Moments







### CAD drawings can be downloaded from IAI website. www.robocylinder.de

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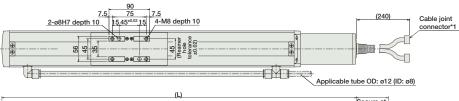
\*For the reversed-home model, the dimensions (distance to home) on the

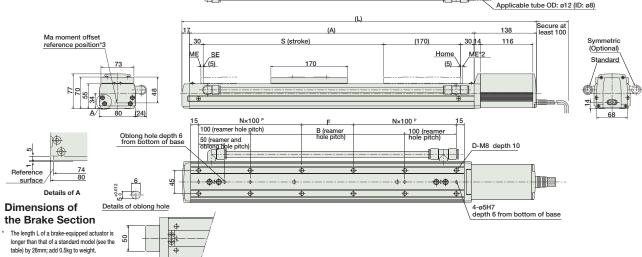
motor-side and that on the opposite side are

The motor-encoder cable is connected here. See page A-39 for details on cables. \*1 \*2

When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end SE: Stroke end

Reference position for calculating the moment Ma.





### ■ Dimensions and Weight by Stroke

- Dimens	Difference and Weight by Groke																			
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385
Α	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
В	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
Weight (kg)	7.0	7.5	8.0	8.5	9.0	9.6	10.1	10.6	11.2	11.7	12.3	12.7	13.3	13.8	14.4	14.9	15.4	15.9	16.5	17.0

The RCP2CR s	eries actuators	can operate with the	controllers below. Select the controller	r according to your ι	ısage.		
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Pag
Solenoid Valve Type		PMEC-C-56PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P47
Solenoid valve Type			Operable with same signal as solenoid valve.  Supports both single and double solenoid types.	3 points			→ P48
Splash-Proof Solenoid Valve Type	Ţ,	PSEP-CW-56PI-NP-2-0	No homing necessary with simple absolute type.				→ P40
Positioner Type	afety-Compliant PCON-CG-56PLNP-2-0	Positioning is possible for up to 512 points	512 points				
Safety-Compliant Positioner Type		Positioning is possible for up to 312 points	512 points				
Pulse Train Input Type Differential Line Driver)	Ó	PCON-PL-56PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P52
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type	8	PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-56P	Dedicated to field network	768 points			→ P50
Program Control Type	R.	PSEL-C-1-56PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P55

■ Configuration: RCP2CR— HS8C —

\* See page Pre-35 for an explanation of the naming convention.

Туре

RCP2CR-HS8C Cleanroom RoboCylinder High-Speed Slider Coupling Type 80mm Width Pulse motor Steel Base

86P Motor 86P: Pulse motor 30:30mm

output

56 🗌 high

50: 50mm 1000: 1000mm (50mm pitch

increments)

Compatible Controllers -P2: PCON-CF

**P2** 

N: None P:1m S:3m M:5m X 🗆 : Custom
R 🗀 : Robot cable

Option B : Brake NM: Reversed-home VR : Intake port on opposite side

# 

Encoder

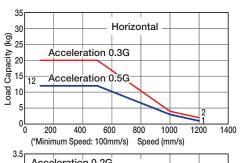
I: Incremental

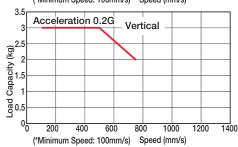
Technical References [音 P. A-5

- Due the large lead of the ball screw in high-speed actuators, operating at low speeds may cause vibration and/or noise. Therefore, use the actuator at speeds over 100mm/s.
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- Since the RCP2 series use the pulse motor, the load capacity decreases at high speeds. In the Speed vs. Load Capacity graph on the right, see if your desired speed and load capacity are supported.
- The load capacity is based on operation at an acceleration of 0.3G (0.2G when used vertically).  $0.5\mbox{G}$  (horizontal) and  $0.3\mbox{G}$  (vertical) are the upper limits of the acceleration.

### ■ Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Cap	Stroke	
Model	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2CR-HS8C-I-86P-30-①-P2-②-③	30	~ 20	~ 3	50~1000 (50mm increments)
Legend ① Stroke ② Cable length ③ Options				

### ■ Stroke and Maximum Speed

-												
Stroke Lead	50 ~ 800 (50mm increments)	~ 900 (mm)	~ 1000 (mm)	Suction Volume (NI/min)								
30	1200 <750>	1000 <750>	800 <750>	180								

\* The values enclosed in "< >" apply to vertical usage

### Cable List

Cable List										
Cable Symbol										
P (1m)										
<b>S</b> (3m)										
M (5m)										
<b>X06</b> (6m) ~ <b>X10</b> (10m)										
X11 (11m) ~ X15 (15m)										
X16 (16m) ~ X20 (20m)										
R01 (1m) ~ R03 (3m)										
R04 (4m) ~ R05 (5m)										
R06 (6m) ~ R10 (10m)										
R11 (11m) ~ R15 (15m)										
R16 (16m) ~ R20 (20m)										
	N (5m)  N (5m)  N (5m)  X06 (6m) ~ X10 (10m)  X11 (11m) ~ X15 (15m)  X16 (16m) ~ X20 (20m)  R01 (1m) ~ R03 (3m)  R04 (4m) ~ R05 (5m)  R06 (6m) ~ R10 (10m)  R11 (11m) ~ R15 (15m)									

<sup>\*</sup> See page A-39 for cables for maintenance.

### Option List

Name	Option Code	See Page	
Brake	В	→ A-25	
Reversed-home	NM	→ A-33	
Intake port on opposite side	VR	→ <b>A-38</b>	

### Actuator Specifications

Item	Description							
Drive System	Ball screw ø16mm C10 grade							
Positioning Repeatability	±0.02mm							
Lost Motion	0.1mm or less							
Allowable Static Moment	Ma: 198.9N·m Mb: 198.9N·m Mc: 416.7N·m							
Allowable Dynamic Moment (*)	Ma: 36.3N·m Mb: 36.3N·m Mc: 77.4N·m							
Overhang Load Length	Ma direction: 450mm or less Mb, Mc direction: 450mm or less							
Grease Type	Low dust generation grease (both ball screw and guide)							
Cleanliness	ISO class 4 (US FED STD class 10)							
Ambient Operating Temp /Humidity	0~40°C, 85% RH or less (non-condensing)							

(\*) Based on a 10.000km service life. Directions of Allowable Load Moments







(Unit: mm/s)

### <sub>ebsite.</sub> www.robocylinder.de (

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\*For the reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

Ma moment offset

reference position\*3

**Dimensions of** 

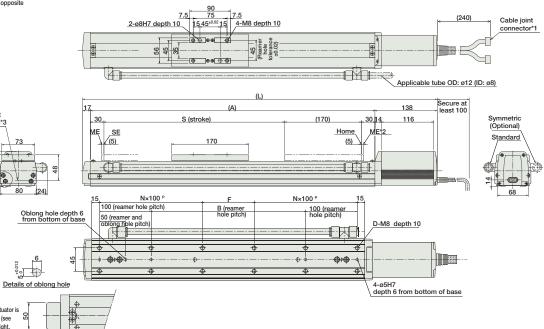
70 59

the Brake Section The length L of a brake-equipped actuator is longer than that of a standard model (see the table) by 26mm; add 0.5kg to weight.

The motor-encoder cable is connected here. See page A-39 for details on cables.

When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end SE: Stroke end

Reference position for calculating the moment Ma.



■ Dimensions and Weight by Stroke

				. ,																
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385
Α	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
В	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
Weight (kg)	7.0	7.5	8.0	8.5	9.0	9.6	10.1	10.6	11.2	11.7	12.3	12.7	13.3	13.8	14.4	14.9	15.4	15.9	16.5	17.0

### Compatible Controllers

The RCP2CR-HS8C series actuators can operate with the controllers below.

Name	External View	Model	Description	Max. Positioning Points	x. Positioning Points Input Voltage		See Page
Positioner Type		PCON-CF-86PI-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	6A max.	→ <b>P525</b>

Please note that a dedicated CF type encoder cable is used, which is different from the encoder cable used for the PCON-C/CG/CY/PL/PO/SE controllers.

RCP2CR-GRSS Cleanroom RoboCylinder 2-Finger Gripper Mini Slider Type 42mm Width Pulse motor

8

■ Configuration: RCP2CR - GRSS -Encoder

I: Incremental encoder is also considered type "I". **20P** 30 - Deceleration Ratio -

Motor

20P: Pulse motor 30: 1/30 8: 8mm deceleration (4mm per side) 20 🗌 size

Stroke Compatible Controllers

P1: PCON **RPCON** PSEL P3: PMEC **PSEP** 

N: None P: 1m S: 3m M: 5m X \_\_ : Custom

Cable Length

NM: Reversed-home FB: Flange bracket SB: Shaft bracket

Option

\* See page Pre-35 for an explanation of the naming convention.



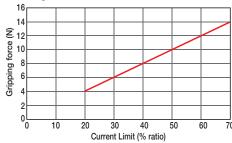
Technical References

- $The \ maximum \ opening/closing \ speed \ indicates \ the \ operating \ speed \ on \ one \ side. \ The \ relative \ operating \ speed \ is \ twice \ this \ value.$
- The maximum gripping force is the sum of the gripping forces of both fingers, at a gripping point distance of 0mm and no overhang (2) distance. The workpiece weight that can be actually moved depends on the friction coefficient between the gripper fingers and the workpiece, as well as on the shape of the workpiece. As a rough guide, a workpiece's weight should not exceed 1/10 to 1/20 of the gripping force. (See page A-74 for details.)
- The rated acceleration while moving is 0.3G.

### ■ Gripping Force Adjustment

The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.

\* The gripping forces in the following diagrams indicate the sum of the gripping forces of both fingers.



- \* The value of the gripping (pushing) in the graph is only reference. Please note that there is a maximum variation of about 15%.
- \* Please note that, when gripping (pushing), the speed is fixed at 5mm/s.

### Actuator Specifications

### ■ Lead and Load Capacity

= Load and Load Supasity			
Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (mm)
RCP2CR-GRSS-I-20P-30-8-①-②-③	30	14	8 (4 per side)

■ Stroke, Max. Opening/Closing Speed, and Suction Volume

Stroke	8	Suction Volume
Deceleration Ratio	(mm)	(NI/min)
30	78	

(Unit: mm/s)

Cable List		
Туре	Cable Symbol	
Standard Type (Robot Cables)	P (1m)	
	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

Legend: ① Compatible controllers ② Cable length ③ Options

- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

# Actuator Specifications

Item	Description	
Drive System	Worm gear + helical gear + helical rack	
Positioning Repeatability	±0.01mm	
Backlash	0.2mm or less per side (constantly pressed out by a spring)	
Lost Motion	0.05mm or less per side	
Guide	Linear guide	
Allowable Static Load Moment	Ma: 0.5N·m Mb: 0.5N·m Mc: 1.5N·m	
Weight	0.2kg	
Cleanliness	ISO class 4 (US FED STD class 10)	
Ambient Operating Temp./Humidity	0~40°C, 85% BH or less (non-condensing)	

Option List			
Name	Option Code	See Page	
Reversed-home	NM	→ A-33	

Option List			
Name	Option Code	See Page	
Reversed-home	NM	→ A-33	
Flange bracket	FB	→ A-26	
Shaft bracket	SB	→ A-36	

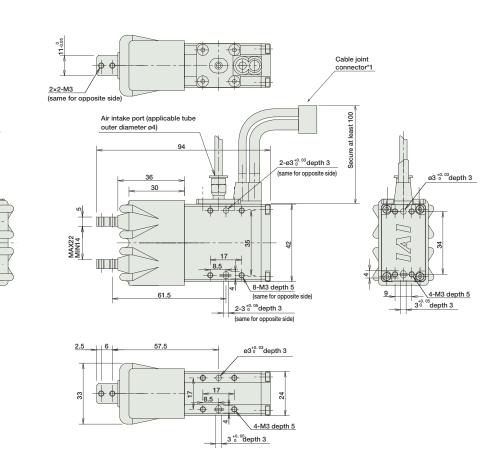
CAD drawings can be downloaded from IAI website. www.robocylinder.de

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- \* The opening side of the slider is the home position.
- \* 1 The motor-encoder cable is connected here. See page A-39 for details on cables.



Weight (kg) 0.2

The RCP2CR se	eries actuators	can operate with the	e controllers below. Select the controlle	er according to your	usage.		
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P477
Solellold valve Type	1	PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve.				→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	Supports both single and double solenoid types.  No homing necessary with simple absolute type.			→ F407	
Positioner Type		PCON-C-20PI-NP-2-0 Positioning is possible for up to 512 points 512 points					
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	Positioning is possible for up to 312 points	512 points	312 points		
Pulse Train Input Type (Differential Line Driver)	ė	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P503
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P557

■ Configuration:

PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL SSEL

RCP2CR- GRLS -

Cleanroom RoboCylinder 2-Finger Gripper Mini Lever Type 42mm Width Pulse motor

Encoder I: Incremental

The simple absolute encoder is also considered type "I".

**20P** 30 180 Motor - Deceleration Ratio -Stroke 20P: Pulse motor 30: 1/30

ratio

20 🗌 size

- Compatible Controllers 180:180 degrees deceleration (90 degrees per side)

P1: PCON **RPCON** PSEL P3: PMEC **PSEP** 

Z

Gripping force 2 N: None P:1m S:3m M:5m X □□ : Custom

■ Gripping Force Adjustment

The gripping (pushing) force can be adjusted freely within the range of current limits of 20% to 70%.

\* The gripping forces in the following diagrams indicate the sum of the gripping forces of both

Cable Length

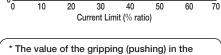
NM: Reversed-home FB : Flange bracket SB : Shaft bracket

Option

\* See page Pre-35 for an explanation of the naming convention.



References



graph is only reference. Please note that there is a maximum variation of about 15%.

\* Please note that, when gripping (pushing), the speed is fixed at 5 degrees/s.

### The maximum opening/closing speed indicates the operating speed on one side. The relative operating speed is twice this (1)



(3) The rated acceleration while moving is 0.3G.

### Actuator Specifications

### ■ Lead and Load Capacity

Model	Deceleration Ratio	Max. Gripping Force (N)	Stroke (deg)
RCP2CR-GRLS-I-20P-30-180-①-②-③	30	6.4	180 (90 per side)
Legend: ①Compatible controllers ②Cable length ③Options			

■ Stroke and Maxi. Opening/Closing Speed

Stroke Deceleration Ratio	180 (deg)
30	600

(Unit: degrees/s)

Cable List		
Туре	Cable Symbol	
Standard Type (Robot Cables)	P (1m)	
	<b>S</b> (3m)	
	M (5m)	

Туре	Cable Symbol	
Standard Type	P (1m)	
(Robot Cables)	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

\* The standard cable is the motor-encoder integrated robot cable.

### Option List Name **Option Code** See Page Reversed-home NM $\rightarrow$ A-33 Flange bracket FB → A-26

→ A-36

SB

Actuator Specifications		
Item	Description	
Drive System	Worm gear + helical gear	
Positioning Repeatability	±0.01mm	
Backlash	1 degree or less per side (constantly pressed out by a spring)	
Lost Motion	0.1 degree or less per side	
Guide	-	
Allowable Static Load Moment	-	
Weight	0.2kg	
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)	

413 RCP2CR-GRLS

Shaft bracket

<sup>\*</sup> See page A-39 for cables for maintenance.

CAD drawings can be downloaded from IAI website. www.robocylinder.de

<u> | ø4</u>

9\_

18

36

For Special Orders

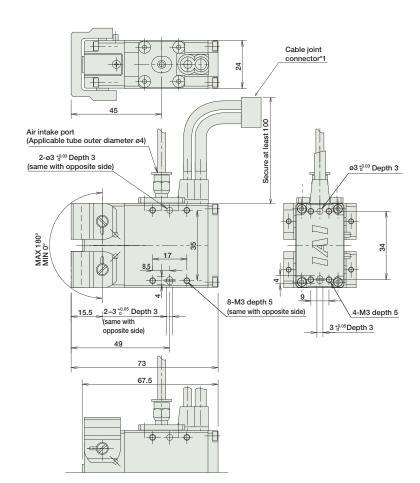
**P. A-9** 



\* The opening side of the slider is the home position.

2-ø4<sup>+0.03</sup> Depth 2.5 4-M4 through

\*1 The motor-encoder cable is connected here. See page A-39 for details on cables.



Weight (kg) 0.2

The RCP2CR s	eries actuators	can operate with the	controllers below. Select the controller	er according to your	usage.		
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Paç
Solenoid Valve Type		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners		AC115V AC230V	See P481	→ P47
Solenoid Valve Type	PSEP-C-20PI-NP-2-0 PSEP-CW-20PI-NP-2-0	Operable with same signal as solenoid valve.  Supports both single and double solenoid types.				→ P48	
Splash-Proof Solenoid Valve Type		PSEP-CW-20PI-NP-2-0	No homing necessary with simple absolute type.				→ F40
Positioner Type	Í	PCON-C-20PI-NP-2-0	Positioning is possible for up to 512 points	s 512 points			
Safety-Compliant Positioner Type		PCON-CG-20PI-NP-2-0	rositioning is possible for up to 312 points		312 politics		
Pulse Train Input Type Differential Line Driver)	Ó	PCON-PL-20PI-NP-2-0	Pulse train input type with differential line driver support	()	DC24V	2A max.	→ P52
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Pulse train input type with open collector support	(-)			
Serial Communication Type	1	PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points			
Field Network Type		RPCON-20P	Dedicated to field network	768 points			→ P50
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			→ P55

RCP2CR-GRLS 414

IAI

# RCP2W-SA16C

RoboCylinder Water-proof Slider Type 158mm Width Pulse Motor Coupled

**P2** ■ Configuration: RCP2W — SA16C 86P Type Motor Compatible Controllers \_\_\_\_ Series Encoder Stroke Lead Option 8:8mm P2: PCON-CF CO: With Cover 86P: Pulse motor 50:50mm N: None I: Incremental 56 High Output 4:4mm

\* See page Pre-35 for explanation of each code that makes up the configuration name.

600 : 600mm (50mm pitch

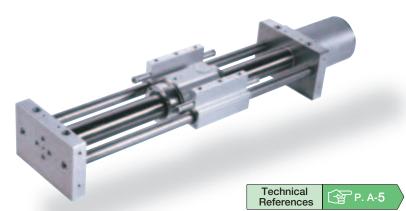
increments)

S : 3m M : 5m

NM : Reversed-home

X : Custom Length R : Robot Cable

■ Speed vs. Load Capacity



(1) The actuator is limited to being installed horizontally. Please note that it can't be used when installed in a wrong direction (transverse, vertical or reverse). (The same goes for storage.)

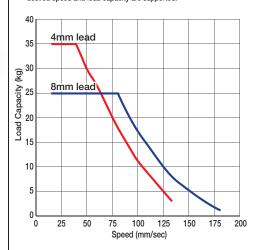
(2) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.

Use the actuator specification table below to check the maximum speed at the stroke you desire.

- (3) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.

  Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (4) The load capacity is based on operation at an acceleration of 0.2G. 0.2G is the upper limit for the acceleration.
- (5) This actuator is not available to use push function mode. (6) The cable joint connector is not splash-proof; secure it in a place that is not prone to water spills.

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications

### ■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead	Max. Load Ca	pacity (Note 1)	Stroke
Model	(mm)	Horizontal (kg)	Vertical (kg)	(mm)
RCP2W-SA16C-I-86P-8-①-P2-②-③	8	~25	Not Allowed	50~600
RCP2W-SA16C-I-86P-4-①-P2-②-③	4	~35	Not Allowed	(50mm increments)
Legend 1 Stroke 2 Cable length 3 Options				

# ■ Stroke and Maximum Speed

Stroke Lead	50~600 (50mm increments)
8	180
4	133

(Unit: mm/s)

Oable List				
Туре	Cable Symbol			
	P(1m)			
Standard	<b>S</b> (3m)			
	<b>M</b> (5m)			
	X06 (6m) ~ X10 (10m)			
Special Lengths	X11 (11m) ~ X15 (15m)			
	X16(16m) ~ X20(20m)			
	R01(1m) ~ R03(3m)			
	R04(4m) ~ R05(5m)			
Robot Cable	R06(6m) ~ R10(10m)			
	R11(11m) ~ R15(15m)			
	R16(16m) ~ R20(20m)			

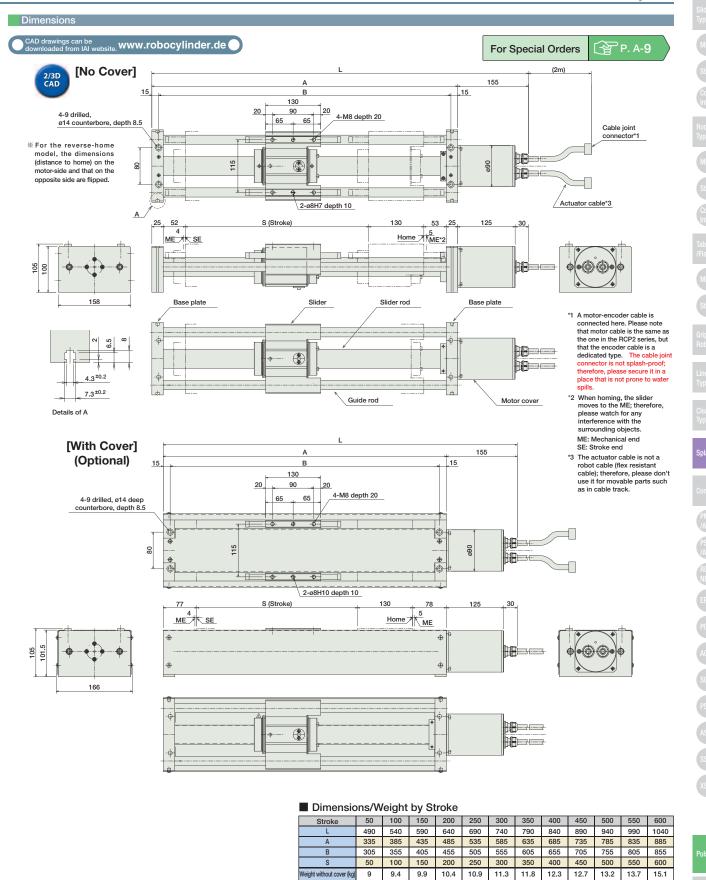
<sup>\*</sup> See page A-39 for cables for maintenance.

Option List			
Name	Option Code	See Page	
With cover	co	<b>→ 444</b>	
Reversed-home	NM	→ A-33	

### Actuator Specifications

Item	Description			
Drive System	Ball screw ø12mm C10 grade			
Positioning Repeatability	±0.08mm			
Lost Motion	0.7 mm or less			
Guide	ø20 Non-lubricated Linear Sliding Guide			
Allowable Static Load Moment	20.0N•m			
Overhang Load Length	Ma direction 200mm or less			
Protection Structure	IP67			
Ambient Operating Temp./Humidity	0~40°C, 85%RH or less (Non-condensing)			

A dynamic moment isn't applicable for the SA16C for structural reasons. When an object is to be mounted on the slider, please fix it in a manner so that no moment load is applied in the direction Mb or Mc, and so that the load is distributed evenly.



Compatible Controllers							
The controller for the RCP2W-SA16C type is a dedicated controller.							
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Positioner Type		PCON-CF-86PI-NP-2-0	Positioning possible for up to 512 points	512 points	DC24V	6A max.	→ <b>P</b> 525

Weight with cover (kg) 10.5

11.1 11.8 12.5 13.2 13.8 14.6 15.3 15.9

Note: Please note that the encoder cable is a dedicated CF-type cable that is different from the PCON-C/CG/CY/PL/PO/SE controllers. 18.9

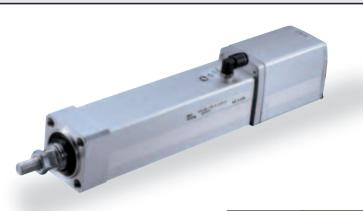
16.6 17.3 \* See page Pre-35 for explanation of each code that makes up the configuration name.

PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL SSEL SSEL

RCP2W-RA4C RoboCylinder Splash-proof Rod Type 45mm Width Pulse Motor Coupled

increments)

■ Configuration: RCP2W — RA4C 42P Type Motor Cable Length Series Encoder Stroke Option I: Incremental Type 42P: Pulse motor 10:10mm P1:PCON 50: 50mm N : None : Brake-Equipped \* The simple absolute encoder is also considered type "I". P:1m S:3m M:5m With Flange With Foot bracket FL 5 : 5mm RPCON 42 🗌 size FT: With Foot bracke NM: Reversed-home 2.5 : 2.5mm 300: 300mm PSEL (50mm pitch P3: PMEC



Technical References

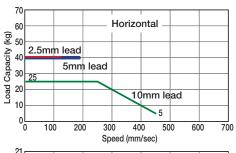
(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

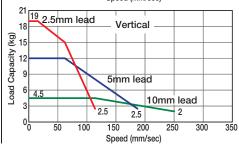
- (2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph on the above right to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.2G. 0.2G is the upper limit for the acceleration.
- (4) The cable joint connector is not splash-proof; secure it in a place that is not prone to water spills.

### Speed vs. Load Capacity

**PSEP** 

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





### Actuator Specifications ■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Ecda dila Loda Capacity					
Model	Lead	Max. Load Capacity (Note 1)		Maximum Push Force	Stroke
Model	(mm)	Horizontal (kg)	Vertical (kg)	(N) (Note 2)	(mm)
RCP2W-RA4C-I-42P-10-①-②-③-④	10	~25	~4.5	150	F0 000
RCP2W-RA4C-I-42P-5-①-②-③-④	5	40	~12	284	50~300 (50mm increments)
RCP2W-RA4C-I-42P-2.5-①-②-③-④	2.5	40	~19	358	increments)

(Note 2) See page A-69 for push force graph. \* The value inside < > applies to vertical setting. (Unit: mm/s)

Stroke Lead	50~200 (50mm increments)	250	300
10	450 〈250〉	450 〈250〉	350 〈250〉
5	190	190	175
2.5	125 〈115〉	115	85

■ Stroke and Maximum Speed

able List	A	ctuator

Cable List					
Туре	Cable Symbol				
	P (1m)				
Standard	S (3m)				
	M (5m)				
	X06 (6m) ~ X10(10m)				
Special Lengths	X11 (11m) ~ X15 (15m)				
	X16 (16m) ~ X20 (20m)				
	R01 (1m) ~ R03 (3m)				
Robot Cable	R04 (4m) ~ R05 (5m)				
	R06 (6m) ~ R10 (10m)				
	R11 (11m) ~ R15 (15m)				
	R16 (16m) ~ R20 (20m)				

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

*	See	page	A-39	for	cables	for	maintenance.
	000	page	,, ,,		oubico		mamiconanoc.

Actuator Specification	Actuator Specifications				
Item	Description				
Drive System	Ball screw ø8mm C10 grade				
Positioning Repeatability	±0.02mm				
Lost Motion	0.1 mm or less				
Rod diameter	ø22mm				
Rod non-rotational accuracy	±1.5 degrees				
Protection Structure	IP65				
Ambient Operating Temp./Humidity	0~40°C, 85%RH or less (Non-condensing)				

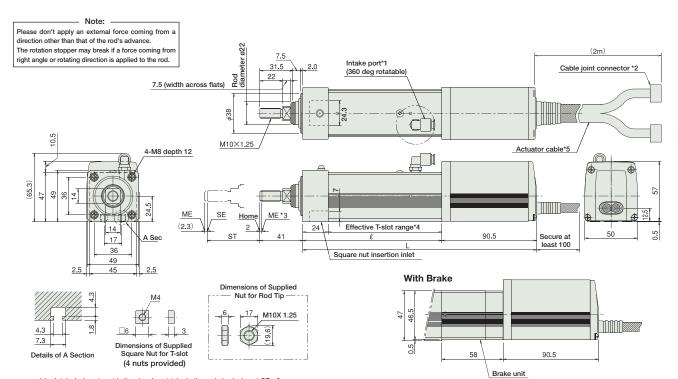
Option List			
Name	Option Code	See Page	
Brake-Equipped	В	→ A-25	
With Flange	FL	→ A-27	
With Foot bracket	FT	→ A-29	
Reversed-home	NM	→ A-33	

CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Orders







- $^{\star}$  1. Intake/exhaust port is the air exhaust tube in the main body. Insert OD ø6 mm tube and use it extended to a place that is not prone to water spills or intake.
- $^{\star}$  2. Connect motor encoder cable . See page A-39 for details on cables. The cable joint connector is not splash-proof; therefore, please secure it in a place that is not prone to water spills.
- \* 3. When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.

ME: Mechanical End

SE: Stroke end

The dimensions enclosed in "( )" are reference dimensions.

- \* 4. Please note that there is no T-slot in the bottom of brake unit.
- \* 5. The actuator cable is not a robot cable (flex resistant cable); therefore, please don't use it for movable parts such as cable track.

### ■ Dimensions/Weight by Stroke

Billiensions, weight by otione									
Stroke	50	100	150	200	250	300			
l	132.5	182.5	232.5	282.5	332.5	382.5			
L	223	273	323	373	423	473			
Weight (kg)	1.9	2.1	2.2	2.5	2.9	3.1			

\* Adding a brake increases overall length by 58mm

and its weight by 0.4kg.

		an operate with the controllers belo		,	_	_			
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page		
Solenoid		PMEC-C-42PI-NP-2-2	Easy-to-use controller, even for beginners.		AC115V AC230V	See P481	→ P477		
Valve Type	1	PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid	3 points			→ P487		
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0	types. No homing necessary with simple absolute type.				1 401		
Positioner Type	Í	PCON-C-42PI-NP-2-0	Positioning possible for	512 points					
Safety Category Compliant Positioner Type				PCON-CG-42PI-NP-2-0	up to 512 points	orz points			
Pulse Train Input Type Differential Line Driver)		PCON-PL-42PI-NP-2-0	Differential line driver support Pulse Train Input Type	(-)	DC24V	2A max.	→ P525		
ulse Train Input Type (Open Collector)	PCON-PO-42PI-NP-2-0 Open Collector Pulse Ti Input Type		Open Collector Pulse Train Input Type	(-)					
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points					
ield Network Type		RPCON-42P	Dedicated to field network	768 points			→ P503		
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points			→ P557		

RCP2W-RA4C 446

# CP2W-RA6C

■ Configuration: RCP2W — RA6C **56P** Motor Series Type Encoder Stroke Option Lead 16:16mm P1 : PCON 50: 50mm 8:8mm

I: Incremental Type 56P: Pulse motor \*The simple absolute encoder is also considered type "I".

56 □ size is ze

4:4mm \* See page Pre-35 for explanation of each code that makes up the configuration name

300: 300mm (50mm pitch increments)

RPCON PSEL P3:PMEC

N : None P : 1m S : 3m M : 5m

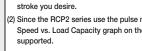
: Brake-Equipped FL: With Flange FT: With Foot bracket NM: Reversed-home

PSEP



Technical References

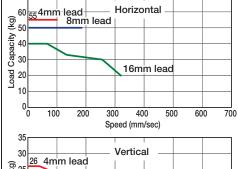
(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the

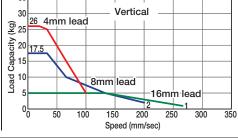


- (2) Since the RCP2 series use the pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph on the above right to see if your desired speed and load capacity are
- (3) The load capacity is based on operation at an acceleration of 0.2G. 0.2G is the upper limit for the acceleration.
- 4) The cable joint connector is not splash-proof; secure it in a place that is not prone to water spills

### Speed vs. Load Capacity

Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below. check if your desired speed and load capacity are supported.





■ Stroke and Maximum Speed

### Actuator Specifications

Cable List

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model		Max. Load Ca Horizontal(kg)		Maximum Push Force (N) (Note 2)	Stroke (mm)
RCP2W-RA6C-I-56P-16-①-②-③-④	16	~40	~5	240	50.000
RCP2W-RA6C-I-56P-8-①-②-③-④	8	50	~17.5	470	50~300 (50mm increments)
RCP2W-RA6C-I-56P-4-①-②-③-④	4	55	~26	800	increments)

(Note 2) See page A-69 for push force graph.

Stroke	50~300 (50mm increments)
16	320 〈265〉
8	200
4	100

\* The value inside < > applies to vertical setting. (Unit: mm/s)

Туре	Cable Symbol	
	P(1m)	
Standard	<b>S</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

Standard	<b>3</b> (3m)	
	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	
Robot Cable	R06 (6m) ~ R10 (10m)	
	R11 (11m) ~ R15 (15m)	
	R16 (16m) ~ R20 (20m)	

\* See page A-39 for cables for maintenance.

Actuator Specification	ons
Item	Description
Drive System	Ball screw ø12mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1 mm or less
Rod diameter	ø30mm
Rod non-rotational accuracy	±1.0 degrees
Protection Structure	IP65
Ambient Operating Temp /Humidity	0-40°C 85%BH or less (Non-condensing)

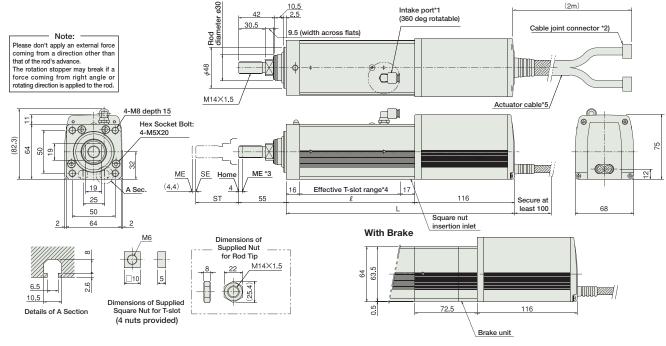
Option List							
Name	Option Code	See Page					
Brake-Equipped	В	→ A-25					
With Flange	FL	→ A-27					
With Foot bracket	FT	→ A-29					
Reversed-home	NM	→ A-33					



For Special Orders







- \*1. Intake/exhaust port is the air exhaust tube in the main body. Insert OD ø6 mm tube and use it extended to a place that is not prone to water spills or intake.
- \*2. Connect motor encoder cable . See page A-39 for details on cables.

The cable joint connector is not splash-proof; therefore, please secure it in a place that is not prone to water spills.

\*3. When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.

ME: Mechanical End

SE: Stroke end

Th

- \*5. The actuator cable is not a robot cable (flex resistant cable); therefore, please don't use it for movable parts such as cable track.

\* Adding a brake increases overall length by 72.5mm and its weight by 0.9kg.

### ■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300
٤	150	200	250	300	350	400
L	266	316	366	416	466	516
Weight (kg)	3.5	4.0	4.5	5.0	5.5	6.0

he dimensions enclosed in "( )" are reference dimensions.	Stroke	50	100
Please note that there is no T-slot in the bottom of brake unit	l.	150	200

Compatible Controllers The RCP2W series actuators can operate with the controllers below. Select the controller according to your usage.									
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Page	
Solenoid Valve Type		PMEC-C-56PI-NP-2-2	Easy-to-use controller, even for beginners.		AC115V AC230V	See P481		→ P477	
Soletiola valve Type		PSEP-C-56PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and	3 points				→ P487	
Splash-Proof Solenoid ValveType		PSEP-CW-56PI-NP-2-0	double solenoid types.  No homing necessary with simple absolute type.		DC24V 2A1	24V 2A max.		7 1 407	
Positioner Type	Í	PCON-C-56PI-NP-2-0	Positioning possible for	512 points					
Safety Category Compliant Positioner Type		PCON-CG-56PI-NP-2-0	up to 512 points	orz pointo					
Pulse Train Input ype (Differential Line Driver)	eil .	PCON-PL-56PI-NP-2-0	Differential line driver support Pulse Train Input Type	(-)				→ P525	
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Open Collector Pulse Train Input Type	(-)					
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points					
Field Network Type		RPCON-56P	Dedicated to field network	768 points				→ P503	
Program Control Type		PSEL-C-1-56PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points				→ P557	

ROBO NET
ERC2
PCON
ACON
SCON
PSEL
ASEL

# RCP2W-RA10C RoboCylinder High-thrust Dust-proof Rod Type 100mm Width Pulse Motor

■ Configuration: RCP2W — RA10C 86P Type

\* See page Pre-35 for explanation of each code that makes up the configuration name.

Encoder I: Incremental

Motor 86 🗌 size

> Technical References

86P: Pulse motor 10: 10mm 5 : 5mm

2.5 : 2.5mm

Stroke 50: 50mm 300: 300mm (50mm pitch

increments)

Compatible Controllers P2: PCON-CF N: None

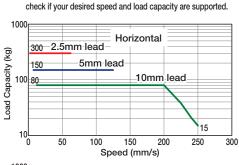
**P2** 

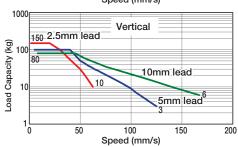
P:1m S:3m Cable outlet direction change : Brake-Equipped X □ : Custom Length R □ : Robot Cable FT : With Flange M:5m

Option

A1~A3: Connector cable

■ Speed vs. Load Capacity Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below,





■ Stroke and Maximum Speed

Stroke

10 5

2.5

(1) Minimum speed is set for each lead. (Lead 10: 10mm/s, Lead 5: 5mm/s, Lead 2.5: 1mm/s) Please note that vibration etc. may occur when operated at minimum speed.

(2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check the Speed vs. Load Capacity on the right hand graph to see if your desired speed and load capacity are supported.

(3) The load capacity is based on operation at lead 10: 0.04G, lead 5: 0.02G and lead 2.5: 0.01G. These values are the upper limits for the acceleration. Also, this is when the load capacity is attached to the external guide. The rotation stopper may break if an external force coming from a direction other than that of rod's advance is applied.

(4) The cable joint connector is not splash-proof; secure it in a place that is not prone to water

### Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model		Max. Load Ca Horizontal(kg)		Force	Stroke (mm)
RCP2W-RA10C-I-86P-10-①-P2-②-③	10	~80	~80	1500	50.000
RCP2W-RA10C-I-86P-5-①-P2-②-③	5	150	~100	3000	50~300 (50mm increments)
RCP2W-RA10C-I-86P-2.5-① -P2-② -③	2.5	300	~150	6000	increments)

(Note 2) See page A-70 for push force graph. \* The value inside < > applies to vertical setting. (Unit: mm/s)

(50mm increments) 250 (167)

125

63

### Cable List

Odbie List				
Туре	Cable Symbol			
	P (1m)			
Standard	<b>S</b> (3m)			
	M (5m)			
	X06 (6m) ~ X10 (10m)			
Special Lengths	X11 (11m) ~ X15 (15m)			
	X16 (16m) ~ X20 (20m)			
	R01 (1m) ~ R03 (3m)			
	R04 (4m) ~ R05 (5m)			
Robot Cable	R06 (6m) ~ R10 (10m)			
	R11 (11m) ~ R15 (15m)			
	R16 (16m) ~ R20 (20m)			

*	See	page	A-39	for	cables	for	maintenance.
	000	page	,, ,,		oubico		mamiconanoc.

Legend ① Stroke ② Cable length ③ Options

Option List			
Name	Option Code	See Page	
Connector cable outlet direction changed	A1~A3	→ A-25	
Brake	В	→ A-25	
Flange	FL	→ A-27	
Foot bracket	FT	→ A-29	

### Actuator Specifications

Item	Description			
iteiii	Description			
Drive System	Ball screw C10 grade			
Positioning Repeatability	±0.02mm			
Lost Motion	0.1 mm or less			
Rod diameter	ø40mm			
Rod non-rotational accuracy	±1.0 degrees			
Protection Structure	IP54			
Ambient Operating Temp./Humidity	0~40°C, 85%RH or less (Non-condensing)			

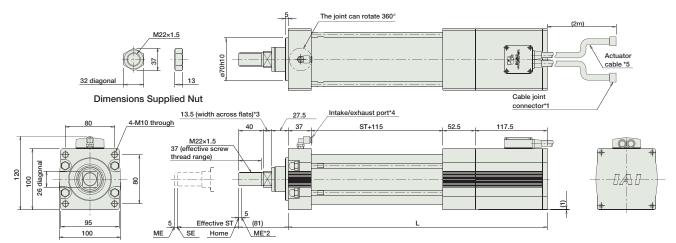


For Special Orders





Please note that reversed home position is unavailable for the RA10C type for structural reasons.



\*1. A motor-encoder cable is connected here.

Please note that motor cable is the same as the one in the RCP2 series, but that the encoder cable is a dedicated

type.
See page A-39 for details on cables.
The cable joint connector is not splash-proof; therefore, please secure it in a place that is not prone to water spills.

2. When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.
ME: Mechanical end

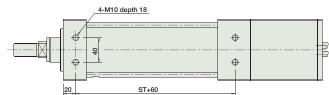
SE: Stroke end
The dimensions enclosed in "( )" are reference dimensions.

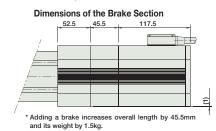
The direction of across-flats will vary depending on the product.

 Intake/exhaust port is the air exhaust tube in the main

body.
\*5. The actuator cable is not a robot cable (flex resistant

cable); therefore, please don't use it for movable parts such as cable track.





### ■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300
L	372	422	472	522	572	622
Weight (kg)	9	9.5	10	10.5	11	11.5

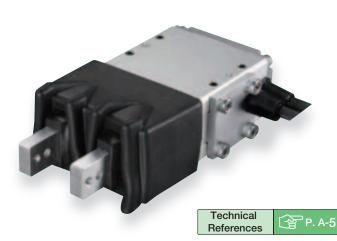
### Compatible Controllers

The controller for the RCP2W-RA10C type is a dedicated controller.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	See Page
Positioner Type		PCON-CF-86PI-NP-2-0	Positioning possible for up to 512 points	512 points	DC24V	6A max.	→ P525

Please note that the encoder cable is a dedicated CF-type cable that is different from the PCON-C/CG/CY/PL/PO/SE controllers.

### RCP2W-GRSS RoboCylinder 2-Finger Gripper Dust-proof Mini Slider Type 42mm Width Pulse Motor ■ Configuration: RCP2W — GRSS **20P** 8 30 ı Motor Lead Stroke Cable Length Series -Type Encoder Option I: Incremental Type 20P: Pulse motor 30 : Deceleration 8:8mm P1: PCON : None NM: Reversed-home FB: Flange Bracket N P S M : 1m : 3m The simple absolute encoder **RPCON** 20 🗌 size ratio 1/30 (One side 4mm)



(1) The max. open/close speed represents one side operating speed.

\* See page Pre-35 for explanation of each code that makes up the configuration name.

- (2) The max. grip force will be the sum of the two fingers grip force when the distance for grip point and over hang is 0. The actual work part weight which can be transported depends on the friction constant between finger and work material, and the form; typically it is 1/10 - 1/20 or less than gripping force. (See page A-74 for details.)
- (3) The rated acceleration at transportation is 0.3G.
- (4) Please note that the product has no splash-proof function.

### ■ Grip Force Arrangement

**PSEL** 

**PSEP** 

P3:PMEC

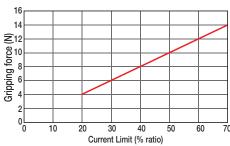
Through push operation the grip force (push force) can be arranged freely within the range of 20%-70% of current limit value of the controller.

: 5m

X 🗆 🗆 : Custom Length

SB: Shaft Bracket

\* Grip force noted in the figure below is the sum of the grip force of two fingers.



- \* The value of the gripping (pushing) in the graph is only reference. Please note that there is a maximum variation of about 15%.
- \* Please note when gripping (pushing) is performed the speed will be fixed at 5 mm/s.

### Actuator Specifications

### ■ Lead and Load Capacity

=						
Model	Deceleration ratio	Max. Grip Force	Stroke (mm)			
RCP2W-GRSS-I-20P-30-8-①-②-③	30	14	8 (One side 4)			

■ Stroke and Maximum Open/Close Speed

Decele-	8
ration ratio	(mm)
30	78

(Unit: mm/s)

Cable List		
Туре	Cable Symbol	
Standard	P (1m)	
	<b>S</b> (3m)	
(Robot Cables)	M (5m)	
	X06 (6m) ~ X10 (10m)	
Special Lengths	X11 (11m) ~ X15 (15m)	
	X16 (16m) ~ X20 (20m)	

Legend ① Compatible controller ② Cable length ③ Options

- \* The standard cable is the motor-encoder integrated robot cable.
- \* See page A-39 for cables for maintenance.

# Option List

Option List			
Name	Option Code	See Page	
Reversed-home	NM	→ A-33	
Flange Bracket	FB	→ 26	
Shaft Bracket	SB	→ 36	

Actuator Specifications						
Item	Description					
Drive System	Worm gear + Helical gear + Helical rack					
Positioning Repeatability	±0.01mm					
Backlash	0.2 mm or less for one side (stressed by spring on the side which is opened always)					
Lost Motion	0.05mm or less one side					
Guide	Linear Guide					
Statically Allowable Load Moment	Ma:0.5N·m Mb:0.5N·m Mc:1.5N·m					
Weight	0.2kg					
Protection Structure	IP50					
Ambient Operating Temp./Humidity	0~40°C, 85%RH or less (Non-condensing)					

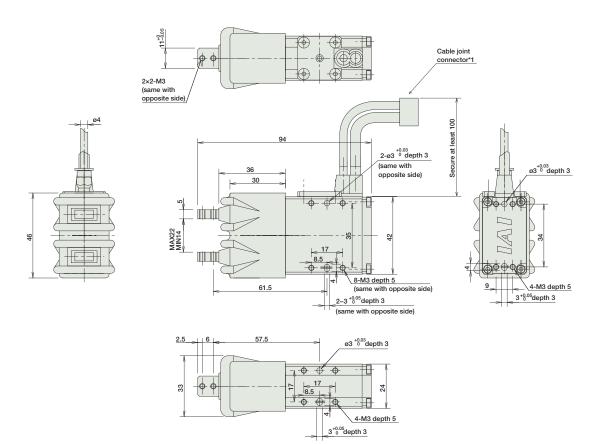
CAD drawings can be downloaded from IAI website. www.robocylinder.de

For Special Order

**P. A-9** 



- \* Open side of slider will be home position.
- \*1 A motor-encoder cable is connected here. See page A-39 for details on cables.



Weight (kg) 0.2

The RCP2W series actuators can operate with the controllers below. Select the controller according to your usage.											
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Pag			
Solenoid ValveType		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners.		AC115V AC230V	See P481		→ P47			
Solenoid valve type		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and	enoid valve. 3 points h single and noid types. necessary	3 points			→ P48			
Splash-Proof Solenoid Type		PSEP-CW-20PI-NP-2-0	double solenoid types. No homing necessary with simple absolute type.						→ P40		
Positioner Type		PCON-C-20PI-NP-2-0	Positioning possible for	512 points							
Safety Category Compliant Positioner Type						PCON-CG-20PI-NP-2-0	up to 512 points	312 points			
Pulse Train Input Type (Differential Line Driver)	e i	PCON-PL-20PI-NP-2-0	Differential line driver support Pulse Train Input Type	(-)	DC24V	2A max.		→ P52			
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Open Collector Pulse Train Input Type	(-)							
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points		4 points					
Field NetworkType		RPCON-20P	Dedicated to field network	768 points				→ P503			
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points				→ P557			

RCP2W-GRSS 452

IAI

ntegrate

pe

Vini

Controllers Integrated

Flat Type

Mini

Gripper/ Rotary Type

Linear Motor Type

Cleanroom Type

Splash-Proof

Controllers

PSEP

ROBO NET

ERC2

 $\equiv$ 

ACON

SCON

DCEI

ACEL

SSEL

XSEL

. . . . . .

Servo Motoi

. . . .

(230V)

Linear Moto

■ Configuration: RCP2W—

**GRLS** ı Туре Encoder

\* See page Pre-35 for explanation of each code that makes up the configuration name.

Motor I: Incremental Type 20P: Pulse motor 30 : Deceleration 180 : 180 Degress P1 : PCON The simple absolute encoder is also considered type "I".

**20P** 

20 🗌 size

30 Lead

Stroke ratio 1/30 (One side 90 dedress)

180

RPCON **PSEL** 

RoboCylinder 2-Finger Gripper Dust-proof Mini Lever Type 42mm Width Pulse Motor

N:None P:1m S : 3m M:5m

NM: Reversed-home FB: Flange Bracket SB : Shaft Bracket

P3: PMEC X 🗌 🗆 : Custom Length PSEP



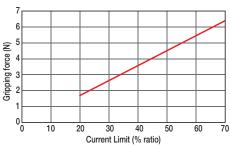
(1) The max. open/close speed represents one side operating speed.

- (2) The max, grip force will be the sum of the two fingers grip force when the distance for grip point and over hang is 0. The actual work part weight which can be transported depends on the friction constant between finger and work part material, and the form; typically it is  $1/10\sim 1/20$  or less than gripping force. (See page A-77 for details.)
- (3) The rated acceleration at transportation is 0.3G.
- (4) Please note that the product has no splash-proof function.

### ■ Grip Force Arrangement

Through push operation the grip force (push force) can be arranged freely within the range of 20%~70% of current limit value of the controller.

\* Grip force noted in the figure below is the sum of the grip force of two fingers.



- \* The value of the gripping (pushing) in the graph is only reference. Please note that there is a maximum variation of about 15%.
- \* Please note when gripping (pushing) is performed the speed will be fixed at 5 degrees/sec.

### Actuator Specifications

### ■ Lead and Load Capacity

Load and Load outputty						
Model	Deceleration ratio	Max. Grip Force	Stroke degrees)			
RCP2W-GRLS-I-20P-30-180-①-②-③	30	6.4	180 (One side 90)			

# ■ Stroke and Maximum Open/Close Speed

Deceleration ratio	180 (degrees)
30	600

Legend 1 Compatible controller 2 Cable length 3 Options

(Unit: degrees/s)

### Cable List Type Cable Symbol P (1m) Standard **S** (3m) (Robot Cables) **M** (5m) **X06** (6m) ~ **X10** (10m)

X16 (16m) ~ X20 (20m) \* The standard cable is the motor-encoder integrated robot cable.

X11 (11m) ~ X15 (15m)

\* See page A-39 for cables for maintenance.

Special Lengths

Actuator Specifications				
Item	Description			
Drive System	Worm gear + Helical gear			
Positioning Repeatability	±0.01mm			
Backlash	1 degree or less for one side (stressed by spring on the side which is opened always)			
Lost Motion	0.1 mm or less one side			
Guide	-			
Statically Allowable Load Moment	-			
Weight	0.2kg			
Protection Structure	IP50			
Ambient Operating Temp./Humidity	0~40°C, 85%RH or less (Non-condensing)			

Option List			
Name	Option Code	See Page	
Reversed-home	NM	A-33	
Flange Bracket	FB	26	
Shaft Bracket	SB	36	

CAD drawings can be downloaded from IAI website. www.robocylinder.de

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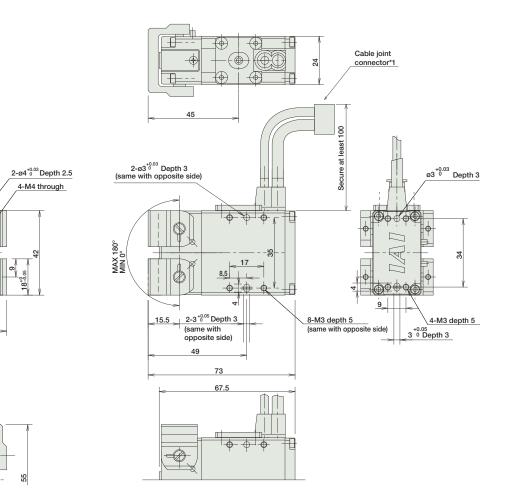
36

For Special Order

會 P. A-9



- \* Open side of slider will be home position.
- \*1 A motor-encoder cable is connected here. See page A-39 for details on cables.



Weight (kg) 0.2

The RCP2W series actuators can operate with the controllers below. Select the controller according to your usage.									
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity		See Pag	
Solenoid		PMEC-C-20PI-NP-2-2	Easy-to-use controller, even for beginners.		AC115V AC230V	See P481		→ P47	
ValveType		PSEP-C-20PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and	3 points	nts			→ P48	
Splash-Proof Solenoid Valve Type	F	PSEP-CW-20PI-NP-2-0	double solenoid types. No homing necessary with simple absolute type.					. 140	
Positioner Type		PCON-C-20PI-NP-2-0	Positioning possible for	512 points					
Safety Category Compliant Positioner Type			PCON-CG-20PI-NP-2-0	up to 512 points	orz points				
Pulse Train Input Type (Differential Line Driver)		PCON-PL-20PI-NP-2-0	Differential line driver support Pulse Train Input Type	( )	DC24V	2A max.		→ P52	
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-NP-2-0	Open Collector Pulse Train Input Type	(–)					
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated to serial communication	64 points		64 points			
Field NetworkType		RPCON-20P	Dedicated to field network	768 points				→ P50	
Program Control Type		PSEL-C-1-20PI-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points				→ P55	

IAI

RCP2W-GRLS 454

Standard

Rod Type

Mini

Standard

Tahle/Arm

/Flat Type

Standard

Gripper/ Rotary Type

Linear Motor Type

Cleanroom Type

Splash-Proof

Controllers

PSEP

ROBO NET

ERC2

PCON

AUUN

COOM

ASEL

CCFI

VOEL

Pulse Moto

Servo Moto

ervo Moto

inear Moto





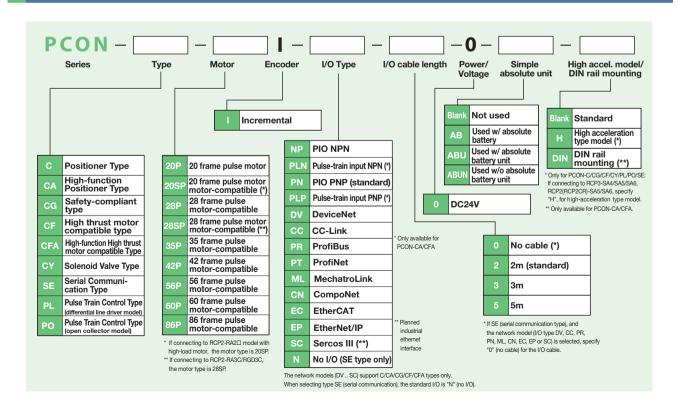
### List of models

These are the position controllers that can be used with the RCP3/RCP2 series actuators. Our line-up has 6 types, which are compatible with various control systems.

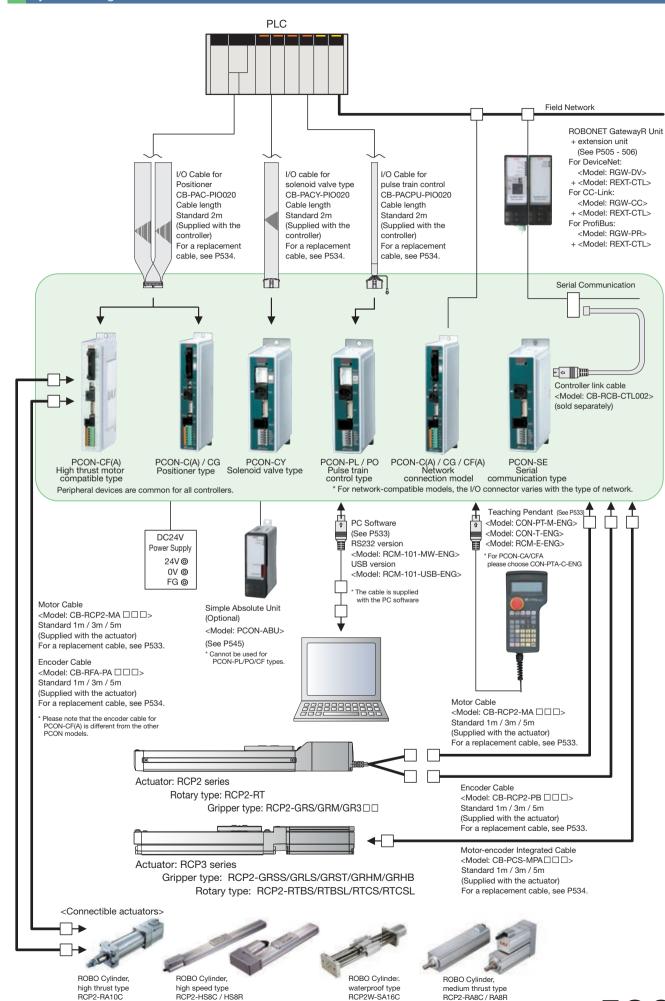
	Туре	C / CA	CG	CF / CFA	CY	PL/PO	SE
	Name	Positioner type	Conforming to safety category compatible type	High-thrust motor compatible type	Solenoid valve type	Pulse train control type	Serial communication type
E	xtemal View	Committee of the commit	Committee of the Commit				
	Description	Positioner capable of a maximum of 512 points positioning (*1)	Conforming to type C safety category specifications (*1)	Dedicated controller for RCP2 high-speed type / high-thrust type / waterproof type (*1)	Can be operated using the same control as the air cylinder type	For pulse train control	For Serial communication
P	osition points	512 points (*2)	512 points (*2)	512 points (*2)	3 points	-	64 points

- (\*1) Network connection specifications are designated by the I/O type symbols for the model.
  (\*2) Besides positioning mode PCON-C/CG/CF can be operated in teaching and solenoid valve mode, PCON-CA/CFA additionally in pulse-train mode.

### Model



### System configuration



Slider Type

Mini

Standard

Rod

Туре

Mini

Controllers Integrated

Table/Arm FlatType

Mini

Gripper/

Rotary Type

Cleanroom

Splash-Proo

Controllers

/AMEC

ROBO

ERC2

PCON

SCON

ASEL

SSEL

Pulse Motor

Servo Motor (24V)

Servo Moto (230V)

Linear Moto

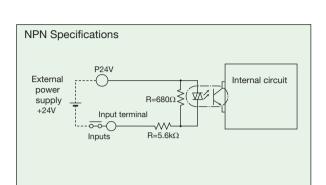




### I/O Specifications

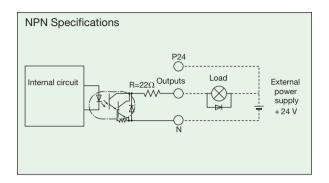
### Input section External input specifications

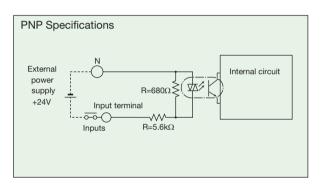
Item	Specifications
Input voltage	DC24V +/-10%
Input current	5mA/circuit
Leak current	1mA max./point
Isolation method	Photocoupler

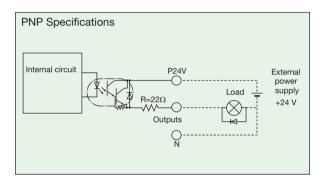


### Output section External output specifications

Item	Specifications
Load Voltage	DC24V
Max. load current	50mA/point
Remaining voltage	2V or less
Isolation method	Photocoupler







### I/O Specifications

The 4 types of controllers (C(A)/CG/CF(A), CY, PL/PO, and SE) are classified by their respective I/O specifications. In addition, with the positioner type and solenoid valve type, the I/O signal details can be changed via the controller settings. As a result, a number of functions can be used.

### ■ Control Function by Type

Туре	C(A)/CG/CF(A)	CY	PL/PO	SE	Features
Name	Positioner type	Solenoid valve type	Pulse in-line control type	Serial communication type	reatures
Positioner mode		-	-	(*1)	This is the basic operating mode, in which the user designates position numbers and inputs start signals.
Teaching mode	0	-	-	(*1)	In this mode, the slider (rod) moves based on an external signal, and the stopped positions can be registered as position data.
Solenoid valve mode	0	0	-	(*1)	The actuator can be moved simply by ON/OFF of position signals. This mode supports the same control signals you are already familiar with on solenoid valves of air cylinders.
Pulse train mode	(*2)	-	0	-	In this mode, you can operate the actuator freely using pulse trains without inputting position data.
Network compatible	(*3)	-	-	(*4)	The controller can be connected to a DeviceNet or CC-Link network.

<sup>\*1</sup> Operates using network communications or serial communications.

<sup>\*2</sup> Only high-function types PCON-CA/CFA can be operated in pulse-train mode.

<sup>\*3</sup> Can make a direct connection to a field network with the network specifications.

<sup>\*4</sup> Can be connected to a field network using a gateway unit.

### Explanation of I/O Signal Functions

The table below explains the functions allocated to the controller's I/O signal.

Since the signals that can be used vary depending on the controller type and settings, check the signal table for each controller to confirm the available functions.

### ■ Signal Function Description

lassification	Signal abbreviations	Signal	Function description		
	CSTR	PTP strobe signal (start signal)	Input this signal to cause the actuator to start moving to the position set by the command position number signal.		
	PC1 to PC256	Command position number signal	This signal is used to input a target position number (binary input).		
	BKRL	Brake forced release signal	This signal forcibly releases the brake.		
	RMOD	Running mode switching signal	This signal can switch the running mode when the MODE switch on the controller is set to AUT (AUTO when this signal is OFF, or MANU when the signal is ON)		
	*STP	Pause signal	Turning this signal OFF causes the moving actuator to decelerate to a stop. The actuator w resume the remaining movement if the signal is turned ON during the pause.		
	RES	Reset signal	Turning this signal ON resets the alarms that are present. If this signal is turned ON while th actuator is paused (*STP is OFF), the remaining movement can be cancelled.		
	SON	Servo ON signal	The servo remains on while this signal is ON, or off while the signal is OFF.		
	НОМЕ	Home return signal	Turning this signal ON performs home-return operation.		
Input	MODE	Teaching mode signal	Turning this signal ON switches the controller to the teaching mode. (provided that CSTR, JOG and JOG- are all OFF and the actuator is not moving).		
	JISL	JOG/INCHING switching signal	When the main signal is off, the JOG operation will be conducted for JOG+ and JOG When the signal is on, the unit will do the inching operation for JOG+ and JOG		
	JOG+, JOG-	JOG signal	When the JISL signal is off and the JOG +/- signal turns on, the unit will jog in the + (positive direction when the JOG + turns on and the - (negative) direction when the JOG - turns on.  During the JOG operation, the unit slows to a stop when the JOG +/- signal turns off.		
	PWRT	Teaching signal	In the teaching mode, specify a desired position number and then turn this signal ON for at leas 20ms to write the current position to the specified position number.		
	ST0 to ST6	Start position command	Turning this signal ON in the solenoid valve mode causes the actuator to move to the specific position. (Start signal is not required)		
	TL	Torque limit selection signal	While this signal is ON, torque is limited by the value set by a parameter. The TLR signal turns if torque has reached the specified value.		
	DCLR	Deviation counter clear signal	The position deviation counter is continuously cleared while this signal is ON.		
	PEND/INP	In position signal	This signal turns ON when the actuator has entered the positioning band after movement. actuator has exceeded the positioning band, PEND does not turn OFF, but INP does. PENI INP can be swapped within parameters.		
	PM1 to PM256	Positioning complete signal	This signal is used to output the position number achieved at the completion of position (binary output)		
	HEND	Home return completion signal	This signal turns ON upon completion of home return.		
	ZONE1	Zone signal	This signal turns ON when the current actuator position has entered the range specified by the parameters.		
	PZONE	Position zone signal	Turns ON when the actuator moves into a position within the range of the target position that was set. PZONE can be used together with ZONE1, but PZONE is valid only movement to a specified position.		
	RMDS	Running mode status signal	This outputs the operation mode status.		
	*ALM	Controller alarm status signal	This signal remains ON while the controller is not in the alarm condition, and turns OFF valarm has occurred.		
	MOVE	Moving signal	Turns ON while the actuator is moving (home return), including when there is push force.		
	SV	Servo ON status signal	This signal turns ON when servo is ON.		
Output	*EMGS	Emergency stop status signal	This signal remains ON while the controller is not in the emergency stop mode, and turns OF once an emergency stop has been actuated.		
	MODES	Mode status signal	The mode signal input turns it ON when it goes into teaching mode. It turns OFF when it into normal mode.		
	WEND	Writing complete signal	This signal remains OFF after the controller has switched to the teaching mode. It turns ON completion of data write using the PWRT signal. If the PWRT signal is turned Off, this signal turns OFF.		
	PE0 to PE6	Current position number signal	This signal turns ON after the controller has completed moving to the target position solenoid valve mode.		
	TLR	Torque limiting signal	This signal turns ON once the motor torque has reached the specified value in a condition torque is being limited by the TL signal.		
	LSO to LS2	Limit switch output signal	Each signal turns ON when the current actuator position has entered the positioning band or after the target position. If the actuator has already completed home return, these signa output even before a movement command is issued or while the servo is OFF.		
	LOAD	Load output determination status signal	This signal turns ON once the motor torque has reached the specified value. (*PCON-C dedicated signal)		
	TRQS	Torque level status signal	Turns ON when the motor current reaches the threshold. (*PCON-CF dedicated signal)		

(Note) Signals with asterisks (\*) are normally ON and OFF during operation.

Slider

View.

Standard

Controller Integrated

Rod Tyne

Mini

IVIIII

Controller

Table/Arm

FlatType

Standard

Gripper/ Rotary Type

Type

Cleanroom Type

оріазії-і тоо

Controllers

PSEP

ROBO

EDCO

PCON

ACON

SCON

DOEL

ACEL

COFI

XSEL

Pulse Moto

Servo Moto

Servo Mot

Slider Type

Mini Standard

ntegrated Ro

Mini
Standard

/FlatType Mini

Gripper/ Rotary Type

Linear Motor Type

Splash-Proof

Controller

PSEP /ASEP

PCON

ACON SCON

ASEL

SSEL

Pulse Motor

Servo Motor (24V

Servo Motor (230V)

Linear Motor

### I/O Signal table

### ■ Positioner types (PCON-C / CA / CG / CF / CFA)

Positioning Points								
Page   Page	5							
Pzone signal	id Valve Mode 2							
Page   Page	3 points							
1A	0							
P24	0							
NC								
AA								
SA   SA   SA   SA   SA   SA   SA   SA								
IN1								
102   PC4   PC4   PC4   PC4   PC4   ST2	ST0							
SA   SA   SA   SA   SA   SA   SA   SA	T1 (JOG+)							
10A	ST2 (-)							
10A	-							
11A	-							
12A	-							
13A	-							
13A	-							
15A	-							
16A	BKRL							
17A	RMOD							
18A	-							
19A	-							
20A	-							
18	RES							
OUT1	SON							
OUT2	LSO							
AB	S1 (TRQS)							
OUT4	LS2 (-)							
OUT5	-							
OUT6	-							
8B         Output         OUT7         ZONE1         MODES         PM128         PM128         ZONE1           10B         10B         OUT9         RMDS         RMDS         RMDS         RMDS         RMDS           11B         OUT10         HEND         HEND         HEND         HEND         HEND           12B         OUT11         PEND         PEND/WEND         PEND         PEND	-							
9B         Output         OUT8         PZONE         PZONE         PZONE         PM256         PZONE           10B         0UT9         RMDS         RMDS         RMDS         RMDS         RMDS           11B         0UT10         HEND         HEND         HEND         HEND         HEND           12B         0UT11         PEND         PEND/WEND         PEND         PEND         PEND	-							
9B         OUT8         PZONE         PZONE         PZONE         PZONE           10B         OUT9         RMDS         RMDS         RMDS         RMDS           11B         OUT10         HEND         HEND         HEND         HEND         HEND           12B         OUT11         PEND         PEND/WEND         PEND         PEND         PEND	ZONE1							
11B         OUT10         HEND         HEND         HEND         HEND         HEND           12B         OUT11         PEND         PEND/WEND         PEND         PEND         PEND	PZONE							
12B OUT11 PEND PEND/WEND PEND PEND PEND	RMDS							
125	HEND							
	-							
13B OUT12 SV SV SV SV SV	SV							
14B         OUT13         *EMGS         *EMGS         *EMGS         *EMGS	* EMGS							
15B OUT14 *ALM *ALM *ALM *ALM *ALM *ALM	* ALM							
16B OUT15 LOAD/TRQS – LOAD/TRQS LOAD/TRQS LOAD/TRQS	_							
17B _ NC								
18B _ NC								
19B 0V N								
20B 0V N								

(Note) The names of signals above inside () are functions before the unit returns home. (Note) Signals with asterisks (\*) are normally ON, and OFF during operation.

### ■ Solenoid valve type (PCON-CY)

			Parameters (select PIO pattern)			
	Ę		0	1		
Pin	catio		Solenoid valve mode 0	Solenoid valve mode 1		
No.	Classification	Positioning Points	3 points	3 points		
		Zone signal	-	-		
		P-zone signal	-	0		
1	24V					
2	0V					
3	Input	IN0	ST0	ST0		
4		IN1	ST1 (JOG+)	ST1 (JOG+)		
5		IN2	ST2 (RES)	ST2 (RES)		
6		IN3	SON	SON		
7		OUT0	LS0	PE0		
8		OUT1	LS1 (TRQS)	PE1 (TRQS)		
9		OUT2	LS2 (-)	PE2 (-)		
10		OUT3	SV	PZONE		
11		OUT4	HEND	HEND		
12		OUT5	* ALM	* ALM		

(Note) The names of signals above inside () are functions before the unit returns home. (Note) Signals with asterisks (\*) are normally ON, and OFF during operation.

### ■ Pulse Train Type (PCON-PL/PO)

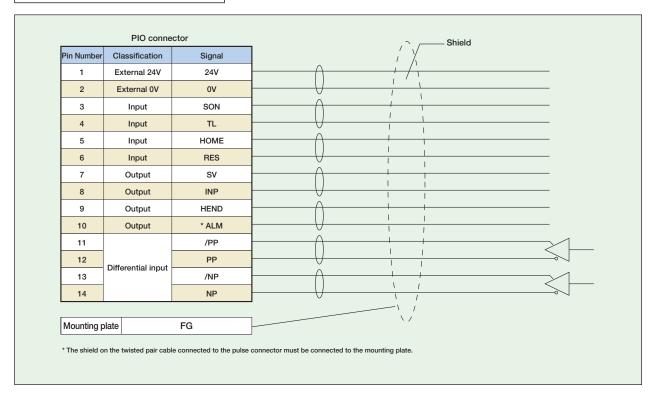
			Parameters (select PIO pattern)		
	_ ⊆		0	1	
Pin No.	catio		Standard mode	Push mode	
	Classification	Positioning Points	-	-	
		Zone signal	-	-	
		P-zone signal –		-	
1	24V				
2	0V				
3	- Input - Output	IN0	SON	SON	
4		IN1	TL	TL	
5		IN2	HOME	HOME	
6		IN3	RES	RES / DCLR	
7		OUT0	SV	SV	
8		OUT1	INP	INP / TLR	
9		OUT2	HEND	HEND	
10		OUT3	* ALM	* ALM	
11	Input		* PP	* PP	
12			PP	PP	
13			* NP	* NP	
14	]		NP	NP	

(Note) Signals with asterisks (\*) are normally ON, and OFF during operation.

### Pulse train input type wiring diagram

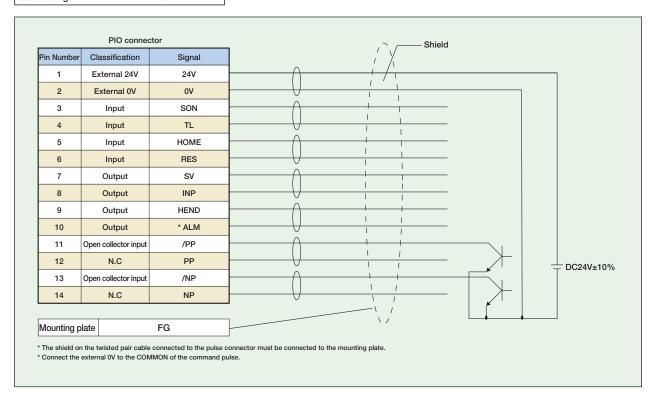
### ■ Differential Receiver Method (PCON-PL)

Max. input pulse frequency : Max. 200 kpps
Cable Length : Max. 10m



### ■ Open Collector Method (PCON-PO)

Max. input pulse frequency : Max. 60 kpps
Cable Length : Max. 2m



Slider Type

Mini

Integrated

Rod Type

A Committee

Controllers

Table/Arm /FlatType

Mini

Gripper/

Linear Moto

Cleanroom

Splash-Pro

Controllers

PMEC /AMEC

/ASEP

WEI .

LHOZ

DOEL

ASEI

COLI

XSEL

Pulsa Moto

Servo Moto

Convo Mot

plash-Proof

Controllers

PMEC
/AMEC
PSEP
ROBO
NET
ERC2
PCON
ACON
SCON
PSEL
ASEL
XSEL

### Command Pulse Input State

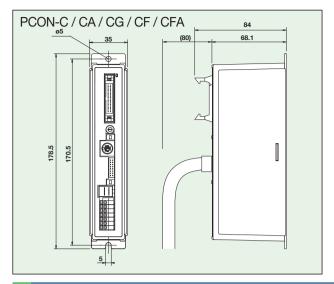
	Command pulse train state	Input terminal	During forward operation	During reversed operation				
	Forward pulse train	PP•/PP						
	Reversed pulse train	NP•/NP						
	The forward pulse train causes the motor to rotate forward, and the reverse pulse train causes the motor to rotate in reverse.							
logic	Pulse train	PP•/PP						
Negative logic	Symbols	NP•/NP	Low High					
_	The command p	The command pulse is used for the amount of motor rotation, and the command symbol is used for rotational direction.						
	A/B phase pulse train	PP•/PP						
		NP•/NP						
	An A/B phase pulse with a 90° phase difference (multiplier is 4) is used to generate commands for the amount of rotation and rotational direction.							
	Forward pulse train	PP•/PP						
	Reversed pulse train	NP•/NP						
Positive logic	Pulse train	PP•/PP						
	Symbols	NP•/NP	High	Low				
	A/D whose pulse two:	PP•/PP						
	A/B phase pulse train	NP•/NP						

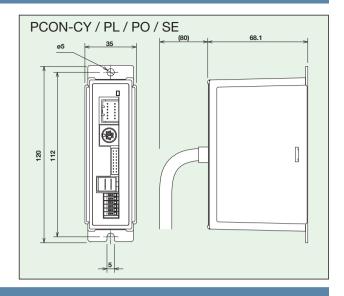
### Table of specifications

Item	Specifications						
Controller type	CF / CFA	C / CA	CG	CY	PL	PO	SE
Connected actuator (*1)	RCP2-RA8C (R) RCP2-RA10C RCP2-HS8C (R) RCP2-HS8C (R) RCP2W-SA16C						
Number of control axes	1-axis						
Operating method		Positioner type Solenoid valve type Pulse train input type Serial co					Serial communication type
Positioning Points		512 points		3 points	-	_	64 points
Backup memory				EEPROM			
I/O connector	40-pin connector 12-pin connector 40-pin con				connector	None	
Number of I/O	16 input points/16 output points			4 input points/6 output points	4 input points/4 output points		None
I/O power	External supply DC24V±10% —					_	
Serial Communication	RS485 1ch						
Peripheral device communication cable	CB-PAC-PIO          CB-PACY-PIO          CB-PACPU-PIO          CB-RCB-CTL002						
Command pulse train input method	- Differential line driver Open collector -						_
Max. input pulse frequency (Note 2)	— Мах. 200 kpps Мах. 60 kpps —					_	
Position detection method	Incremental encoder						
Drive-source cutoff relay at emergency stop	Integrated External						
Forced release of electromagnetic brake	Brake release switch ON/OFF ON/OFF terminal signal inside the power terminal for brake release					ke release	
Input Supply Voltage	DC 24 V ± 10%						
Power Supply Capacity	Max. 6A (*2) 2.2A max.						
Dielectric strength voltage	DC500V 1MΩ						
Vibration resistance	XYZ directions 10 to 57Hz, One side amplitude: 0.035mm (continuous) , 0.075mm (intermittent) 58 to 150Hz, 4.9m/s² (continuous) , 9.8m/s² (intermittent)						
Ambient operating temperature	0 ~ 40℃						
Ambient operating humidity	10 - 95% (non-condensing)						
Ambient operating atmosphere	Without corrosion gases						
Protection class	IP20						
Weight	Approx. 320g         Approx. 300g         Approx. 130g						

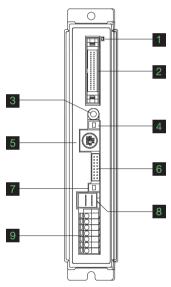
(Note 1) The medium-thrust type (RA8C/RA8R), high-thrust type (RA10C), high-speed type (HS8C/HS8R) and waterproof type (RCP2W-SA16) cannot be operated.
(Note 2) With the open collector specification, keep the maximum input frequency to 60 kpps or below to prevent malfunction. For applications exceeding 60kpps, use the differential line driver.
(1) RCP2-RA8C/RA8R/RA10C/HS8R and RCP2W-SA16C can only operate with PCON-CF(A).
Other RCP2 / RCP3 Series actuators can be operated with C(A) / CG / CY / PL / PO / SE.
(2) Inrush current peak: 10A

#### **External Dimensions**

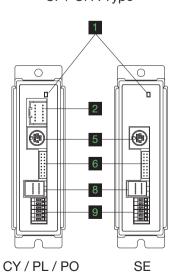




#### Name of Each Part



C / CA / CG / CF / CFA Type



Type
\* PIO connectors are:
CY: 12 pin
PL/PO: 14 pin

Type

#### 1 LED display

These LED colors indicate the condition of the controller.

Lit (green) Servo ON Lit (red) Alarm activated Unlit Servo OFF Blinking (green) Automatic servo-off Emergency stop

#### 2 PIO connector

Connects a cable for communicating with a PLC or other external equipment.

#### 3 Address-setting rotary switch

This switch sets the addresses for controllers used when the unit is linked with other controllers.

#### 4 Mode switch

Switches between manual teaching operations (MANU) and automatic operations (AUTO).

#### Operation details

MANU	I/O commands are not accepted. Data can be written from a teaching pendant or PC.
AUTO	I/O commands are valid, while operations from a teaching pendant or PC are not accepted. However, monitoring is possible.

#### 5 SIO connector

Connects a teaching pendant, PC cable, controller, or gateway unit to a controller.

#### Operation details

Pin No.	Signal	Name	Remarks
1	SGA	Positive side, RS485 differential signal	
2	SGB	Negative side, RS485 differential signal	
3	5V	+5V output	For RS232/485 conversion
4	ENBL	Enable signal	
5	EMGA	EMG line connection to external equipment	
6	24V	24-V power for T/P	For T/P
7	OV	GND	
8	EMGB	EMG line connection to external equipment	
9	0V	EMG line connection to external equipment ground	

#### 6 Encoder brake connector

Connects the encoder/brake cable for the actuator.

#### 7 Brake release switch

This switch forces the brake to release.

#### 8 Motor connector

Connects the motor cable for the actuator.

#### 9 Power terminal block

Main power for controller(s), emergency stop

#### C / CA / CG / CF / CFA type

Terminal number	Signal	Name
7	S1	External drive-source cutoff for TP_
6	S2	EMG terminal
5	MPI	Motor drive-source cutoff terminal
4	MPO	Motor drive-source cutoff terminal
3	24V	Positive side of the 24-V power supply
2	0V	Negative side of the 24-V power supply
1	EMG	EMG signal (application of 24 V)

#### CY / PL / PO / SE type

Terminal number	Signal	Name
6	BK	BK release
5	MPI	Motor drive-source cutoff terminal
4	MPO	Motor drive-source cutoff terminal
3	24V	Positive side of the 24-V power supply
2	0V	Negative side of the 24-V power supply
1	EMG	EMG signal (application of 24 V)

Slider Type

Mini

Standar

Integrated

Туре

Mini

Controllers Integrated

Table/Arm /FlatType

Standard

Rotary Type

Linear Moto Type

Type

Splash-Proo

Controllers

AMEC

ROBO

FRC2

PCON

ACON

SCON

PSEL

ASEL

XSEL

Servo Mot

Servo Moto

\_inear Moto

PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON PSEL ASEL SSEL

#### Option

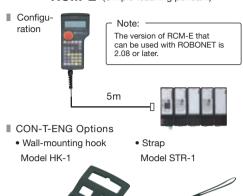
#### Teaching Pendant

Features This is a teaching device that provides information on functions such as the position input, test runs, and monitoring.

■ Model **CON-PT-M-ENG** (Touch panel teaching pendant)

CON-T-ENG (Standard type)

RCM-E (Simple teaching pendant)





Specifications

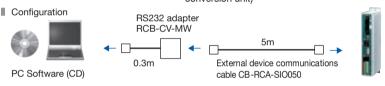
- opcomoation			
Item	CON-PT-M-ENG	CON-T-ENG	RCM-E
Data input	0	0	0
Actuator motion	0	0	0
Ambient Operating temp/humidity	Temp: 0~40	°C; Humidity: 85% RI	H or below
Ambient Operating atmosphere	No corrosive gases. Especially no dust.		
Protection class	IP40	IP54	-
Weight	Approx. 750g	Approx. 400g	Approx. 400g
Cable length	5m		
Display	3-color LED touch panel with backlight	20 char. × 4 lines LCD display	16 char. × 2 lines LCD display

For PCON-CA/CFA please choose more functional and lighter teaching pendant CON-PTA-C-ENG with 16-bit color LED touch panel (IP40).

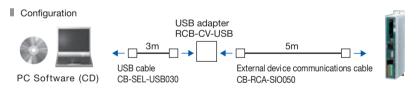
### PC Software (Windows Only)

Features A startup support software for inputting positions, performing test runs, and monitoring. With enhancements for adjustment functions, the startup time is shortened.





■ Model RCM-101-USB-ENG (External device communications cable + USB adapter + USB cable)

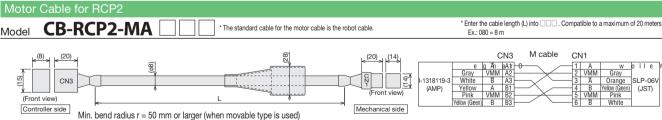


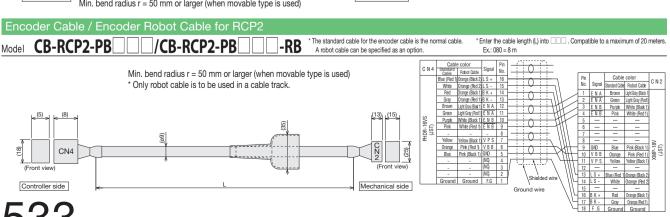


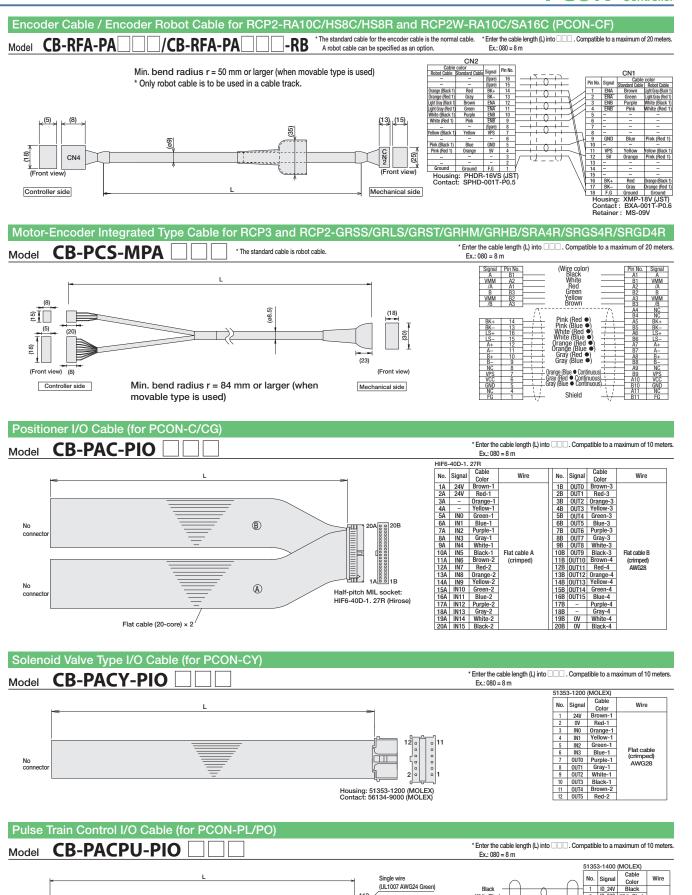


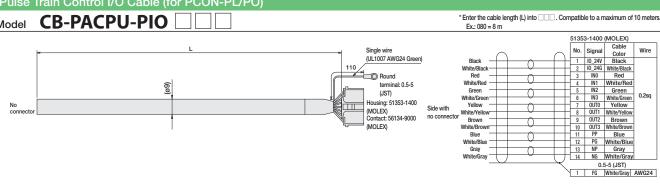


When you need spare parts after purchasing the product, such as when replacing a cable, refer to the list of models below.









Type

Mini

Mini

Mini

Mini

Mini

Mini

Mini

Mini

Mini

Standard

Mini

Standard

Mini

Table/Arm

/FlatTyp

Controllers

PMEC
/AMEC
PSEP
/ASEP

ROBO
NET

ERC2

PCON

ACON

SCON

PSEL

SSEL





## PCON-ABU ACON-ABU

Simple absolute unit For PCON/ACON/PSEL controller



### Features

When attached to a ACON/PCON-C/-CG/-CY/-SE or PSEL-C (incremental) controller, the data from the encoder is retained even after the controller's main power has been turned OFF, allowing you to use it as an absolute model, which does not require homing at power-up.

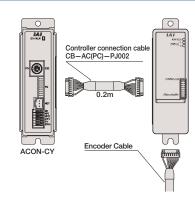
\* Cannot be used for ACON/PCON-PL or PO types.

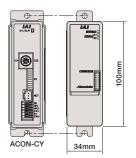
Caution:

The encoder type for the actuators and controllers with a simple absolute unit is "I" (incremental) and not "A" (absolute).

- Having the same size as the CY and SE compact controllers (W 34mm × H 100mm × D 75.3mm), it can be installed in a small space.
- Encoder data can be retained up to 20 days.

An error will occur if the actuator's slider or rod is moved faster than the fixed speed, while the encoder data is retained. Check the specifications table on page 546 for the allowable speed (rotations).





#### Dedicated controllers and software

Controller	PCON-C/CG/CY/SE	ACON-C/CG/CY/SE	PSEL-C
Absolute unit	PCON-ABU	ACON-ABU	PCON-ABU
PC software	RCM-101-MW/USE	3-EU, V6.0 ot later	IA-101-X-MW/USB, V7.4 or later

#### Connectable actuator

The simple absolute unit is available for the following actuators. (Models other than following models are not available.)

Corresponding series	Reference
RCP3 series	Corresponding to all models
RCP2 series	Corresponding to all models other than HS8C/HS8R/RA10C.
RCP2 CR series	Corresponding to all models other than HS8C.
RCP2 W series	Corresponding to all models other than SA16C/RA10C.
RCA2 series	Corresponding to all models
RCA series	Corresponding to all models
RCA CR series	Corresponding to all models
RCA W series	Corresponding to all models

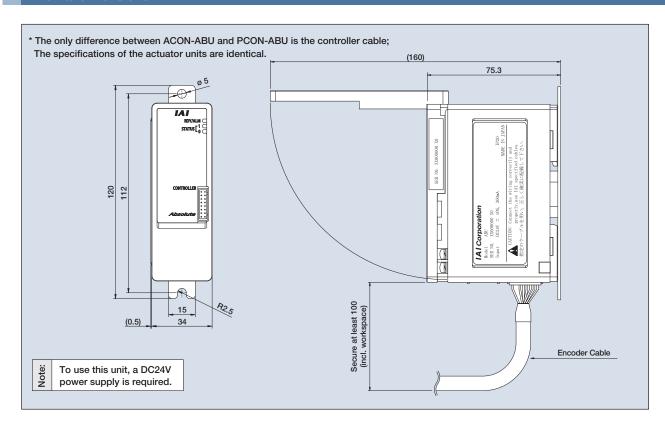
### Specifications

Item		Deta	ails		
Model	ACON-ABU PCON-ABU				
	ACON - C /	CG / CY / SE	PCON - C / CG / CY / SE ; PSEL - C		
Connecting controller	When choosing a co	ntroller to connect with the simple abso	lute unit, add		
	"-ABU" to the end of	"-ABU" to the end of the controller model designation. Ex. ACON - C - 20I - NP - 2 - 0 - ABU			
Connecting actuator	RCA2 /	RCA series	RCP3/RCP2 se	ries (* 1)	
Controller connection cable (included accessory)	Model CB - A	C - PJ002 (0.2m)	Model CB - PC - PJ00	2 (0.2m)	
Simple absolute unit	Model ABU				
Backup battery (included accessory)	Model AB · 7 (Ni · MH battery / Life: approx. 3 years)				
Power supply voltage	DC24V±10%				
Power supply current	Max. 300 mA				
Ambient operating temperature	0 to 40°C (approx. 20°C is preferred)				
Ambient operating humidity	95% RH or lower (non-condensing)				
Ambient operating atmosphere	Without corrosive gases, without dust				
Weight		330	)g		
Allowable encoder RPM during data retention (*2)	800 rpm	400 rpm	200 rpm	100 rpm	
Position data retaining time (*2)	120h	240h	360h	480h	

<sup>(\*1)</sup> Cannot be used with RCP2-RA10C/HS8C/HS8R/RCP2W-RA10C/SA16C

(800rpm ightarrow 120h / 400rpm ightarrow 240h / 200rpm ightarrow 360h / 100rpm ightarrow 480h)

#### **External dimensions**



<sup>(\*2)</sup> Position data retention time changes with the allowable encoder RPMs during data retention.

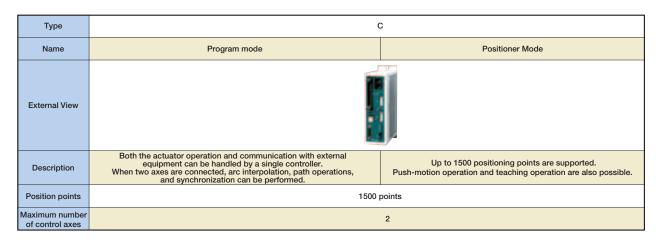


PMEC /AMEC PSEP /ASEP ROBO NET ERC2 PCON ACON SCON PSEL SSEL

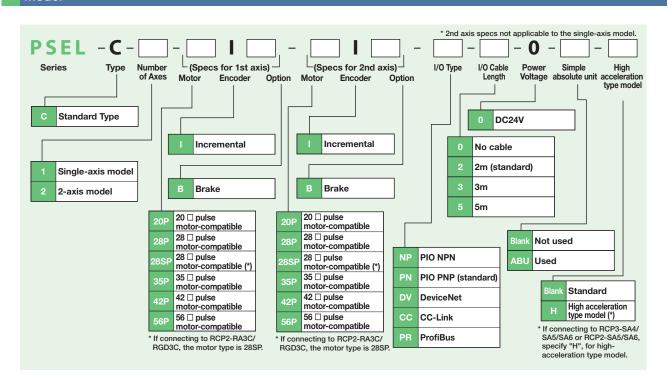


#### List of models

Program controller for operating RCP3/RCP2 series actuators. Various control functions are combined into a single unit.

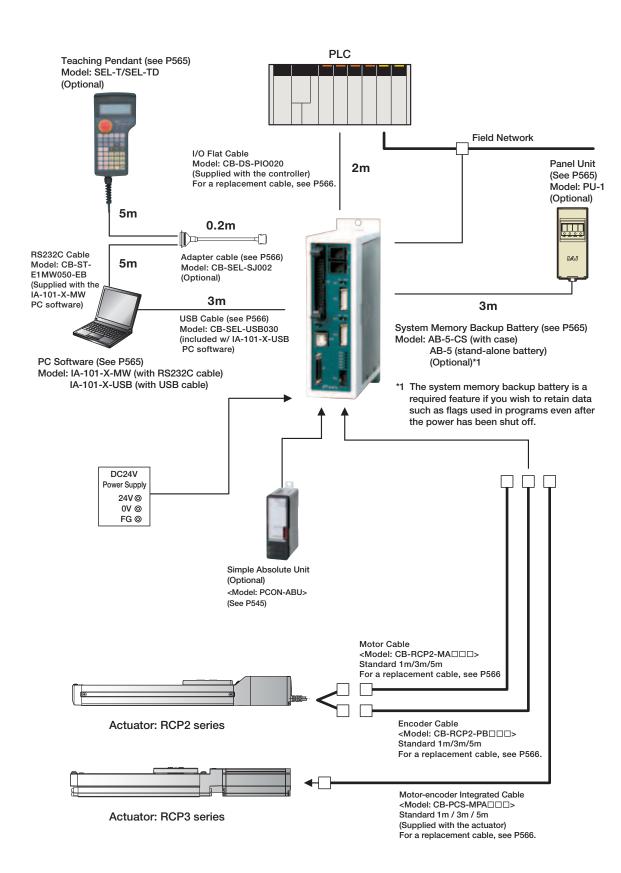


#### Model





#### System configuration



Slider

Mini

Standard

integrati

Type

Mini

Standard

Controllers Integrated

Table/Arm /Flat Tyne

Mini

0: /

Rotary Type

туре

Snlash-Pro

PSEP /ASEP

NET

ERC2

PCON

ACON

SCON

ASEL

SSEL

XSEL

Pulse Motor

Servo Mot

Servo Mot (230V)

Linear Mot

Plash-Proof

Controllers

PMEC
/AMEC
PSEP
/ASEP

ROBO
NET

ERC2

PCON

ACON

SCON

PSEL

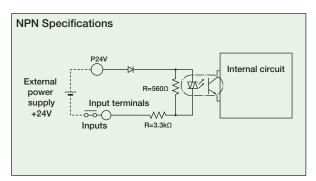
ASEL

XSEL

#### I/O Specifications

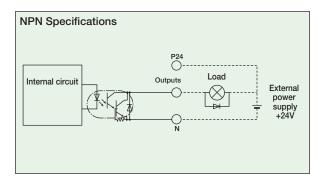
#### ■ Input section External input specifications

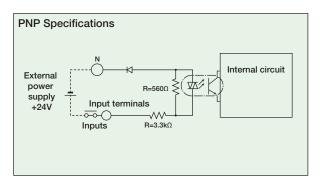
Item	Specifications	
Input voltage	DC24V ±10%	
Input current	7mA / circuit	
ON/OFF voltage	ON voltage (min.)	NPN: DC16V/PNP: DC8V
ON/OFF voilage	OFF voltage (max.)	NPN: DC5V/PNP: DC19V
Isolation method	Photocoupler	

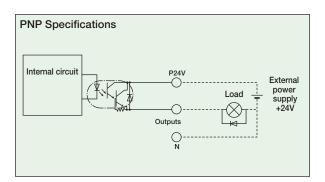


### ■ Output section External output specifications

Item	Specifications
Load Voltage	DC24V
Max. load current	100mA / 1 point 400mA / 8 points in total
Residual voltage (Max.)	Max 0.1mA / 1 point
Isolation method	Photocoupler







#### **Explanation of I/O Signal Functions**

Two modes can be selected for the SSEL controller: "Program Mode," in which the actuator is operated by entering a program, and "Positioner Mode," in which PLC signals are received and the actuator is moved to designated positions. The Positioner Mode has the five input patterns listed below to enable various applications.

#### ■ Control Function by Type

Operation	on mode	Features
Progran	m mode	Various operations including linear/arc interpolation operation, path operation ideal for coating processes, etc., archmotion operation and palletizing operation can be performed using the Super SEL language that lets you program complex control actions using simple commands.
	Standard mode	This is the basic mode from which operations can be conducted by designating position numbers and inputting the start signal.  Push-motion operation and teaching operation are also possible.
	Product Change mode	Multiple work parts of the same shape with slightly different hole positions can be handled using movement commands to the same position numbers by simply changing the product type number.
Positioner mode	2-axis independent mode	With a 2-axis controller, each axis can be commanded and operated separately.
	Teaching mode	In this mode, the slider (rod) moves based on an external signal, when the actuator is stopped, the current location can be registered as position data.
	DS-S-C1 Compatible mode	If you were using a DS-S-C1 controller, you can replace it with a PSEL controller without having to change the host programs. *This mode does not ensure actuator compatibility.



### Explanation of I/O Signal Functions

#### Program mode

in Number	Classification	Port No.	Program Mode	Functions	NPN* Wiring Diagram
1A	P24		24V input	Connect 24V.	
1B		016	Select Program No. 1		•••
2A	] [	017	Select Program No. 2		
2B	] [	018	Select Program No. 4	Colored the community of the standard	•
3A	] [	019	Select Program No. 8	Selects the program number to start.	
3B	020	Select Program No. 10	(Input as BCD values to ports 016 to 022)	•••	
4A		021	Select Program No. 20		•
4B	] [	022	Select Program No. 40		•••
5A	] [	023	CPU reset	Resets the system to the same state as when the power is turned on.	-
5B	] [	000	Start	Starts the program selected by ports 016 to 022.	•
6A	] [	001	General-purpose input		•••
6B		002	General-purpose input		•••
7A	Innut	003	General-purpose input		•••
7B	Input 004	004	General-purpose input		•••
8A	] [	005	General-purpose input		-
8B		006	General-purpose input		•
9A		007	General-purpose input		•
9B	] [	800	General-purpose input	Waits for external input via program instructions.	•
10A	] [	009	General-purpose input		•••
10B		010	General-purpose input		•
11A	] [	011	General-purpose input		•••
11B	]	012	General-purpose input		•
12A	] [	013	General-purpose input		-
12B		014	General-purpose input		•
13A		015	General-purpose input		
13B	]	300	Alarm	Turns off when an alarm occurs. (Contact B)	
14A	] [	301	Ready	Turns on when the controller starts up normally and is in an operable state.	
14B	]	302	General-purpose output		
15A	Output	303	General-purpose output		
15B	Juiput	304	General-purpose output	These outputs can be turned ON/OFF as desired via program instructions.	
16A	] [	305	General-purpose output	These surpute suri be turned on or as desired via program instructions.	
16B	306		General-purpose output		
17A		307	General-purpose output		
17B	N		0V input	Connect 0V.	

#### Positioner mode

Pin Number	Classification	Port No.	Positioner Standard Mode	Functions	NPN* Wiring Diagram
1A	P24		24V input	Connect 24V.	
1B		016	Position input 10		
2A		017	Position input 11	Specifies the position numbers to move to, using port number 007 to 019.	
2B	] [	018	Position input 12	The number can be specified either as BCD or binary.	
3A	] [	019	Position input 13	-	
3B	] [	020	-	-	
4A	1 [	021	-	-	
4B		022	-	-	
5A	1 [	023	Error reset	Resets minor errors. (Severe errors require a restart.)	
5B	1	000	Start	Starts moving to selected position.	
6A	1 1	001	Home return	Performs home return.	•••
6B	1	002	Servo ON	Switches between Servo ON and OFF.	
7A	1	003	Push	Performs a push motion.	
7B	Input	004	Pause	Pauses the motion when turned OFF, and resumes when turned ON.	<b>—•</b>
8A	1 [	005 006	Cancel	Stops the motion when turned OFF. The remaining motion is canceled.	
8B			Interpolation settings	When this signal is turned ON for a 2-axis model, the actuator moves by linear interpolation.	
9A	1 1	007	Position input 1		
9B		008	Position input 2		
10A	1 [	009	Position input 3	Specifies the position numbers to move to, using ports 007 to 019.	
10B		010	Position input 4		
11A	1 [	011	Position input 5	The number can be specified either as BCD or binary.	
11B		012	Position input 6		<b>—•</b>
12A	1 1	013	Position input 7		
12B	1	014	Position input 8		-
13A	1 1	015	Position input 9		•••
13B		300	Alarm	Turns off when an alarm occurs. (Contact B)	<b></b> ₹ <b>5</b>
14A	1 1	301	Ready	Turns on when the controller starts up normally and is in an operable state.	
14B	1	302	Positioning complete	Turns on when the movement to the destination is complete.	<b>-</b>
15A	1	303	Home return complete	Turns on when the home return operation is complete.	
15B	Output	304	Servo ON output	Turns on when servo is ON.	
16A	1 1	305	Pushing complete	Turns on when a push motion is complete.	
16B	1	306	System battery error	Turns on when the system battery runs low (warning level).	<b>→</b> 55 <b>→</b>
17A	1 1	307	_	- ' '	
17B	N		0V input	Connect 0V.	

PSEL **560** 

lider ype

Mini

Standard

Rod Tyne

Mini

Controllers

Table/Arm /Flat Type

Mini

Gripper/

Linear Motor

Туре

Туре

Controllers

PMEC /AMEC

/ASEP

ACON

SCON

PSEL

ASEL

SSEL

Pulse Moto

Servo Moto (24V)

Servo Moto (230V)

Linear Mot

Slider
Type

Mini
Standard
Controllers
Integrated

Rod
Type

Mini
Standard
Controllers
Integrated

Mini
Standard

Controllers
Integrated

Table/Arm
/Flat Type

Mini
Standard

Gripper/
Rotary Type

Cleanroom
Type

Splash-Proof

Controllers

PMEC
/AMEC

PSEP
/ASEP

R080
NET

ERC2

PCON

ACON

SCON

PSEL

ASEL

XSEL

### Explanation of I/O Signal Functions

#### Positioner, Product-Type Change Mode

Pin Number	Classification	Port No.	Positioner Product Type Change Mode	Functions	NPN* Wiring Diagram
1A	P24		24V input	Connect 24V.	
1B		016	Position/Product Type Input 10		<b>—</b> •
2A	] [	017	Position/Product Type Input 11		•••
2B	] [	018	Position/Product Type Input 12	Specifies the position numbers to move to, and the product type numbers,	•••
3A	1 [	019	Position/Product Type Input 13	ising ports 007 to 022.  The position and product type numbers are assigned by parameter settings.	•••
3B	] [	020	Position/Product Type Input 14		-
4A	] [	021	Position/Product Type Input 15	The number can be specified either as BCD or binary.	-
4B	] [	022	Position/Product Type Input 16		•••
5A	] [	023	Error reset	Resets minor errors. (Severe errors require a restart.)	<b>—</b>
5B	] [	000	Start	Starts moving to selected position.	•
6A	] [	001	Home return	Performs home return.	•••
6B	] [	002	Servo ON	Switches between Servo ON and OFF.	•••
7A	Innut	003	Push	Performs a push motion.	•••
7B	Input	004	Pause	Pauses the motion when turned OFF, and resumes when turned ON.	<b>—•</b>
8A	] [	005 006	Cancel	Stops the motion when turned OFF. The remaining motion is canceled.	•••
8B	] [	006	Interpolation settings	When this signal is turned ON for a 2-axis model, the actuator moves by linear interpolation.	•••
9A	] [	007	Position/Product Type Input 1	-  I	•••
9B		800	Position/Product Type Input 2		•••
10A	] [	009	Position/Product Type Input 3		•••
10B	] [	010	Position/Product Type Input 4		•
11A		011	Position/Product Type Input 5	using ports 007 to 022.	•••
11B	U12   Position/Product Type Input 6	The position and product type numbers are assigned by parameter settings.	•••		
12A	] [	013	Position/Product Type Input 7	The number can be specified either as BCD or binary.	•••
12B	] [	014	Position/Product Type Input 8		•••
13A		015	Position/Product Type Input 9		
13B		300	Alarm	Turns off when an alarm occurs. (Contact B)	
14A	] [	301	Ready	Turns on when the controller starts up normally and is in an operable state.	F07
14B	] [	302	Positioning complete	Turns on when the movement to the destination is complete.	<b>1</b> 0
15A	Output	303	Home return complete	Turns on when the home return operation is complete.	
15B	Output	304	Servo ON output	Turns on when servo is ON.	
16A		305	Pushing complete	Turns on when a push motion is complete.	
16B	] [	306	System battery error	Turns on when the system battery runs low (warning level).	- O
17A		307	_	-	<b>├</b> ── <b></b>
17B	N		0V input	Connect 0V.	

#### Positioner, 2-axis Independent Mode

Number	Classification	Port No.	Positioner 2-axis Independent Mode	Functions	NPN* Wiring Diagram
1A	P24		24V input	Connect 24V.	
1B		016	Position input 7		•
2A		017	Position input 8	Specifies the position numbers to move to, using ports 010 to 022.	•••
2B		018	Position input 9	The position numbers on the 1st and 2nd axes are assigned by	•
3A		019	Position input 10	parameter settings.	•••
3B		020	Position input 11	The number can be specified either as BCD or binary.	•••
4A		021	Position input 12		•••
4B		022	Position input 13		•
5A		023	Error reset	Resets minor errors. (Severe errors require a restart.)	
5B		000	Start 1	Starts the movement to the selected position number on the 1st axis.	•
6A		001	Home return 1	Performs home return on the 1st axis.	•
6B		002	Servo ON 1	Switches between servo ON and OFF for the 1st axis.	•••
7A		003	Pause 1	Pauses the motion on 1st axis when turned OFF, and resumes when turned ON.	
7B	Input	004	Cancel 1	Cancels the movement on the 1st axis.	•
A8		005	Start 2	Starts the movement to the selected position number on the 2nd axis.	•••
8B		006	Home return 2	Performs home return on the 2nd axis.	•
9A		007	Servo ON 2	Switches between servo ON and OFF for the 2nd axis.	•••
9B		800	Pause 2	Pauses the motion on 2nd axis when turned OFF, and resumes when turned ON.	•
10A		009	Cancel 2	Cancels the movement on the 2nd axis.	
10B		010	Position input 1	0	•
11A		011	Position input 2	Specifies the position numbers to move to, using ports 010 to 022.  The position numbers on the 1st and 2nd axes are assigned by	•••
I1B		012	Position input 3	'	•
12A		013	Position input 4	parameter settings.	•••
12B		014	Position input 5	The number can be specified either as BCD or binary.	•
13A		015	Position input 6		
13B		300	Alarm	Turns off when an alarm occurs. (Contact B)	-FÖT
14A		301	Ready	Turns on when the controller starts up normally and is in an operable state.	
14B		302	Positioning complete 1	Turns on when the movement to the specified position on the 1st axis is complete.	•0•
15A	Output	303	Home return complete 1	Turns on when home return on the 1st axis is complete.	
15B	Output	304	Servo ON output 1	Turns on when the 1st axis is in a servo ON state.	
16A		305	Positioning complete 2	Turns on when the movement to the specified position on the 2nd axis is complete	
16B		306	Home return complete 2	Turns on when home return on the 2nd axis is complete.	-F0
17A		307	Servo ON output 2	Turns on when the 2nd axis is in a servo ON state.	
17B	N		0V input	Connect 0V.	•

### Explanation of I/O Signal Functions

#### Positioner, Teaching Mode

Pin Number	Classification	Port No.	Positioner Teaching Mode	Functions	NPN* Wiring Diagram
1A	P24		24V input	Connect 24V.	
1B		016	JOG- on 1st axis	While the signal is on, the 1st axis is moved in the - (negative) direction.	
2A		017	JOG+ on 2nd axis	While the signal is on, the 2nd axis is moved in the + (positive) direction.	
2B		018	JOG- on 2nd axis	While the signal is on, the 2nd axis is moved in the - (negative) direction.	
3A		019	Specify inching (0.01mm)		
3B		020	Specify inching (0.1mm)	Specifies how much to move during inching.	
4A		021	Specify inching (0.5mm)	(Total of the values specified for ports 019 to 022)	
4B		022	Specify inching (1mm)		
5A		023	Error reset	Resets minor errors. (Severe errors require a restart.)	
5B		000	Start	Starts moving to selected position.	-
6A		001	Servo ON	Switches between Servo ON and OFF.	-
6B		002	Pause	Pauses the motion when turned OFF, and resumes when turned ON.	
7A	[	003	Position input 1		
7B	Input	004 005	Position input 2		
8A		005	Position input 3		
8B		006	Position input 4	D-+- 000 +- 010 d +it -thiti	
9A		007	Position input 5	Ports 003 to 013 are used to specify the position number to move, and	
9B		800	Position input 6	the position number for inputting the current position.	
10A		009	Position input 7	- When the teaching mode setting on port 014 is in the ON state, the	
10B		010	Position input 8	current value is written to the specified position number.	
11A		011	Position input 9		
11B		012	Position input 10		
12A		013	Position input 11		
12B		014	Teaching mode setting		
13A		015	JOG+ on 1st axis	While the signal is on, the 1st axis is moved in the + (positive) direction.	
13B		300	Alarm	Turns off when an alarm occurs. (Contact B)	<b>→</b> 55 <b>→</b>
14A	Ī	301	Ready	Turns on when the controller starts up normally and is in an operable state.	
14B		302	Positioning complete	Turns on when the movement to the destination is complete.	<b></b>
15A	Output	303	Home return complete	Turns on when the home return operation is complete.	
15B	Output	304	Servo ON output	Turns on when servo is ON.	
16A		305		_	
16B		306	System battery error	Turns on when the system battery runs low (warning level).	
17A		307	_		<b></b>
17B	N		0V input	Connect 0V.	

#### Positioner, DS-S-C1 Compatible Mode

Pin Number	Classification	Port No.	Positioner DS-S-C1 Compatible Mode	Functions	NPN* Wiring Diagram
1A	P24		24V input	Connect 24V.	
1B		016	Position No. 1000	(Same as ports 004 through 015)	
2A	1 [	017	-	-	
2B	] [	018	-	-	
3A	1 [	019	-	-	
3B	] [	020	-	-	
4A	1 [	021	-	-	
4B	]	022	-	-	
5A	] [	023	CPU reset	Resets the system to the same state as when the power is turned on.	
5B		000	Start	Starts moving to selected position.	-
6A	] [	001	Hold (Pause)	Pauses the motion when turned ON, and resumes when turned OFF.	-
6B	] [	002	Cancel	Stops the motion when turned ON. The remaining motion is canceled.	
7A	] , [	003	Interpolation settings	When this signal is turned ON for a 2-axis model, the actuator moves by linear interpolation.	
7B	Input	004	Position No. 1		
8A	] [	005	Position No. 2	-	
8B		006	Position No. 4		<b>—•</b>
9A		007	Position No. 8		
9B		800	Position No. 10	Ports 004 through 016 are used to specify the position number to move.	-
10A	] [	009	Position No. 20	The numbers are specified as BCD.	
10B		010	Position No. 40	The numbers are specified as BCD.	<b></b>
11A		011	Position No. 80		
11B		012	Position No. 100		<b>—•</b>
12A		013	Position No. 200		
12B	]	014	Position No. 400		
13A		015	Position No. 800		
13B	]	300	Alarm	Turns off when an alarm occurs. (Contact A)	-FÖT-
14A	]	301	Ready	Turns on when the controller starts up normally and is in an operable state.	
14B		302	Positioning complete	Turns on when the movement to the destination is complete.	_ <del>-</del>
15A	Output	303	-	=	
15B	Juiput	304	-	-	
16A	]	305	-	-	
16B		306	System battery error	Turns on when the system battery runs low (warning level).	
17A		307	-	-	
17B	N		0V input	Connect 0V.	

уре

Mini

Standard

Rod

Mini

Standard

Table/Arm

Mini

IVIIII

Gripper/ Rotary Type

Linear Moto

Cleanroom

Splash-Proo

Controllers

PMEC /AMEC

/ASEP

WHI I

ERUZ

SCON

PSEL

ASEL

SSEL

XSEL

Pulsa Moto

Servo Moto

. ...

Linear Mot

PMEC //AMEC //AMEC //AMEC PSEP //ASEP ROBO NET ERC2 PCON ACON SCON PSEL ASEL XSEL

#### Table of specifications

	Item	Specifications				
	Connected actuator	RCP2/RCP3 series actuator (Note 1)				
Suc	Input voltage	DC24V ±10%				
atic	Power Supply Capacity	Control power (Max. 1.2A) + Motor power (See the table below)				
Basic Specifications	Dielectric strength voltage	DC500V 10MΩ or higher				
bed	Withstand voltage	AC500V 1 min.				
ပ္	Rush current	Max. 30A				
Basi	Vibration resistance	XYZ directions 10 to 57Hz, One side amplitude: 0.035mm (continuous), 0.075mm (intermittent) 58 to 150 Hz 4.9 m/s² (continuous), 9.8 m/s² (intermittent)				
_	Maximum total output of connected axis	-				
ol Hio	Position detection method	Incremental encoder				
Control	Speed setting	From 1mm/s. The maximum limit varies depending on the actuator.				
Control specification	Acceleration setting	From 0.01G. The maximum limit varies depending on the actuator.				
<u> </u>	Operating method	Program operation / Positioner operation (switchable)				
	Programming language	Super SEL language				
	Number of programs	64 programs				
듩	Number of program steps	2000 steps				
Program	Number of multi-tasking programs	8 programs				
Pro	Positioning Points	1500 points				
	Data memory device	FLASHROM (A system-memory backup battery can be added as an option)				
	Data input method	Teaching pendant or PC software				
	Number of I/O	24 input points / 8 output points (NPN or PNP selectable)				
e G	I/O power	Externally supplied 24VDC ± 10%				
cati	PIO cable	CB-DS-PIO □□□ (supplied with the controller)				
Communication	Serial communications function	RS232C (Half-pitch connector) / USB connector				
E	Field Network	DeviceNet, CC-Link, ProfiBus				
Ö	Motor Cable	RCP2:CB-RCP2-MA 🔲 🗆 (Max. 20m) / RCP3: CB-PCS-MPA 🖂 🖂 (Max. 20m)				
	Encoder cable	RCP2:CB-RCP2-PA . (Max. 20m) / RCP3: see motor cable (dual motor-encoder cable)				
8	Protection function	Motor driver temperature check, Encoder open-circuit check Soft limit over, system error, battery error, etc.				
Fig.	Ambient operating humidity and temperature	0 to 40°C 10 to 95% (non-condensing)				
General specifications	Ambient atmosphere	Free from corrosive gases. In particular, there shall be no significant powder dust.				
ecit ecit	Protection class	IP20				
ď	Weight	Approx. 450g				
	External dimension	43 mm (W) x 159 mm (H) x 110 mm (D)				

(Note 1) Cannot operate High-Thrust type (RA10C), High-Speed type (HS8C/HS8R), or Waterproof type (RCP2W-SA16).

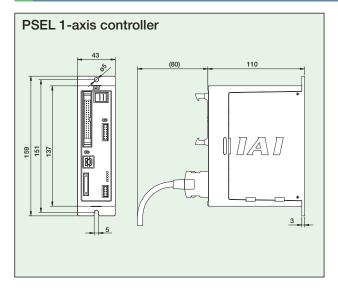
		1-Axis spe	ecifications	2-Axis specifications		
Motorpower	Motor type	Rated	Max.(Note 3)	Rated	Max.(Note 3)	
supply Capacity	20P, 28P, 28SP motor	0.4A	2.0A	0.8A	4.04	
(Note2)	35P, 42P, 56SP motor	1.2A	2.0A	2.4A	4.0A	

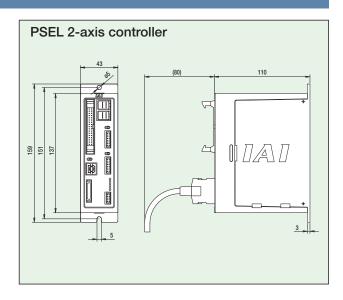
(Note 2) For both 1-axis and 2-axis specifications, approx. 30A inrush current flows for 5 ms when the control power supply is turned on.

(Note 3) After Servo ON, excitation detection is performed. In that case, the current is maximized. (Approx. 100 msec)

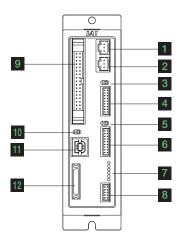
However, if motor drive power supply is turned on after a shut-down, approx. 6.0A and approx. 12.0A current flows to axis-1 and axis-2 respectively. (Approx. 1 to 2 msec)

#### **Exterior dimensions**

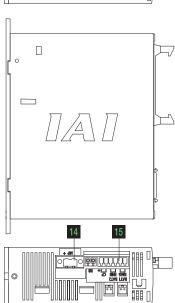




#### Name of Each Part



# 13



#### 1 Motor connector for axis 1

Connects the motor cable of the axis 1 actuator.

#### 2 Motor connector for axis 2

Connects the motor cable of the axis 2 actuator.

#### 3 Brake switch for axis 1

This switch is used to release the axis brake. Setting it to the left position (RLS side) forcibly releases the brake, while setting it to the right position (NOM side) causes the controller to automatically control the brake.

#### 4 Encoder connector for axis 1

Connect the encoder cable of the axis 1 actuator.

#### 5 Brake switch for axis 2

This switch is used to release the axis brake. Setting it to the left position (RLS side) forcibly releases the brake, while setting it to the right position (NOM side) causes the controller to automatically control the brake.

#### 6 Encoder connector for axis 2

Connect the encoder cable of the axis 2 actuator.

#### 7 Status indicator LEDs

These LEDs are used to indicate the operating condition of the controller.

The LED status indicators are as follows:

PWR Power is input to controller.

RDY The controller is ready to perform program

operation.

ALM The controller is abnormal. **EMG** 

An emergency stop is actuated and the drive

source is cut off.

SV1 The axis 1 actuator servo is on. SV2 : The axis 2 actuator servo is on.

#### 8 Panel unit connector

A connector for the panel unit (optional) that displays the controller status and error codes.

#### 9 I/O Connector

A connector for interface I/Os.

34-pin flat cable connector for DIO (24IN/8OUT) interface.

I/O power is also supplied to the controller via this connector (Pin No. 1 and No. 34).

#### 10 Mode switch

This switch is used to specify the running mode of the controller. The left position indicates the MANU (manual operation) mode, while the right position indicates the AUTO (automatic operation) mode. Teaching can only be performed in manual operation, and automatic operation using external I/Os is not possible in the MANU mode.

#### 11 USB connector

A connector for PC connection via USB. If the USB connector is connected, the TP connector is disabled and all communication inputs to the TP connector are cut off.

#### 12 Teaching pendant connector

A half-pitch I/O 26-pin connector that connects a teaching pendant when the running mode is MANU. A special conversion cable is needed to connect a conventional D-sub. 25-pin connector.

## 13 System-memory backup battery

If you wish to retain the various data recorded in the SRAM of the controller even after the power is cut off, connect the necessary battery to this connector. This battery is installed externally to the unit. The controller does not come standard with the battery (Option).

#### 14 Motor power input connector

This connector is used to input the motor power. It consists of a 2-pin, 2-piece connector by Phoenix Contact.

#### 15 Control power/System input connector

This connector is used to connect the control power input, emergency stop switch, and enable switch. It consists of a Phoenix Contact 6-pin 2-piece connector.

PMEC AMEC PSEP ASEP ROBO NET ERC2 PCON SCON PSEL

Option

tandard

ntrollers
tegrated

Rod
Type

Mini

Standard

ntrollers
tegrated

ACON
SCON
PSEL
ASEL



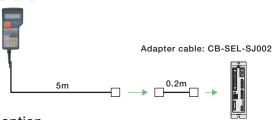
■Teaching Pendant

■ Features This is a teaching device that provides information on functions such as position input, test runs, and monitoring.

Model

Model	Description
SEL-T-J	Standard type with adapter cable
SEL-TD-J	Equipped with a deadman switch and adapter cable

Configuration



SEL-T option

• Wall-mounting hook • Strap Model HK-1 Model STR-1



# 66.6 55.0

#### Specifications

_ opcoca			
Item	SEL-T-J	SEL-TD-J	
3-position Enable Switch	No	Yes	
ANSI/UL standards	Non-compliant	Compliant	
CE mark	Compliant		
Display	20 char. × 4 lines		
Ambient Operating Temp./Humidity	0~40°C 10~90% RH (non-condensing)		
Protective structure	IP54		
Weight	Approx. 0.4kg (not incl. cable)		

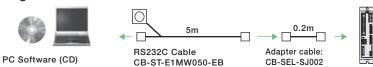
## **■PC Software (Windows Only)**

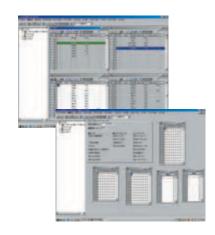
■ Features A startup support software for inputting programs/positions, performing test runs, and monitoring. More functions have been added for debugging, and improvements have been made to shorten the start-up time.

> IA-101-X-MW-J (with RS232C cable + adapter cable) IA-101-X-MW (with RS232C cable)

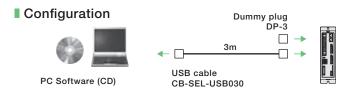
Configuration

Model





IA-101-X-USB (with USB cable) Model

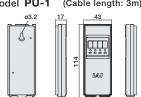


Note: Only versions 7.0.0.0 and later can

#### **Panel Unit**

Display device that shows the error code from the controller or the currently running program number. ■ Features

■ Model PU-1 (Cable length: 3m)



#### System Memory Backup Battery

Features This battery is required when you are using global flags in the program and you want to retain your data even after the power has been turned OFF.

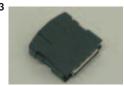
■ Model AB-5-CS (with case) AB-5 (stand-alone battery)



#### **Dummy Plug**

When connecting the PSEL controller to a computer with a USB cable, this plug is inserted in the teaching port to shut off the enable circuit. (Supplied with the PC software IA-101-X-USB) Features

■ Model DP-3



#### Option

#### **USB** Cable

■ Features

A cable for connecting the controller to the USB port to a computer. A controller with no USB port (e.g. XSEL) can be connected to the USB port of a computer by connecting an RS232C cable to the USB cable via a USB cabo USB adapter. (See PC software IA-101-X-USBMW)

■ Model CB-SEL-USB030 (Cable length: 3m)



#### **Adapter Cable**

■ Features

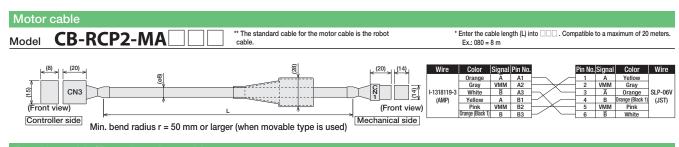
An adapter cable to connect the D-sub 25-pin connector from the teaching pendant or a PC to the teaching connector (half-pitch) of the PSFL controller.

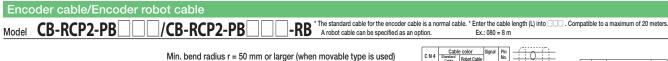
■ Model CB-SEL-SJ002 (Cable length: 0.2m)

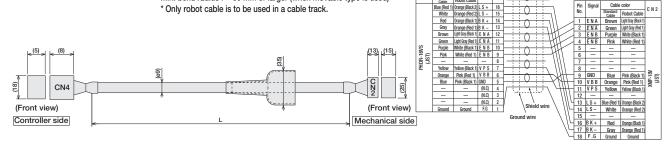


#### **Spare Parts**

When you need spare parts after purchasing the product, such as when replacing a cable, refer to the list of models below.

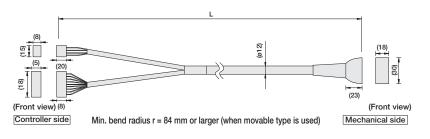






#### Motor-Encoder Integrated Cable for RCP3





Ex.: 080 = 8 m	.,			
Signal A VMM /A B VMM	Pin Number B1 A2 A1 B3 B2 A3	(Wire color) Black White Red Green Yellow	Pin Number A1 B1 A2 B2 A3 B3	Signal A VMM /A B VMM
BK+ BK- LS+	14 13 16	Pink (Red •) Pink (Blue •) White (Red •)	A4 B4 A5 B5 A6	NC NC BK+ BK- LS+
LS- A+ A- B+ B-	15 12 11 10 9	White (Blue •)  Orange (Red •)  Gray (Red •)  Gray (Red •)	B6 A7 B7 A8 B8	LS- A+ A- B+ B-
NC VPS VCC GND NC FG	8 7 6 5 4	Orange (Blue • Contiguous) Gray (Red • Contiguous) Gray (Blue • Contiguous) Shield	A9 B9 A10 B10 A11 B11	NC VPS VCC GND NC FG

Enter the cable length (L) into . Compatible to a maximum of 10 meters

\* Enter the cable length (L) into  $\Box\Box\Box$  . Compatible to a maximum of 20 meters.

#### I/O Flat Cable

CB-DS-PIO Model

	2m ,	
1B 1A 17A 17A	Flat cable AWG28 (3	No connector 4-core)

Pin No.	Color	Wire	Pin No.	Color	Wire
1A	Brown 1	WIIC	9B	Gray 2	WIIC
1B	Red 1		10A	White 2	
2A	Orange 1		10B	Black 2	
2B	Yellow 1		11A	Brown-3	
3A	Green 1		11B	Red 3	
	Blue1		12A		
3B				Orange 3	
4A	Purple 1		12B	Yellow 3	
4B	Gray 1	Flat	13A	Green 3	Flat
5A	White 1	cable	13B	Blue 3	cable
5B	Black 1	crimped	14A	Purple 3	crimped
6A	Brown-2		14B	Gray 3	
6B	Red 2		15A	White 3	
7A	Orange 2		15B	Black 3	
7B	Yellow 2		16A	Brown-4	
8A	Green 2		16B	Red 4	
8B	Blue 2		17A	Orange 4	
9A	Purple 2		17B	Yellow 4	

SCON

## RCP2&RCP3 Series Extract Cat. No. 0513-E

The information contained in this catalog is subject to change without notice for the purpose of product improvement



Providing quality products since 1986



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