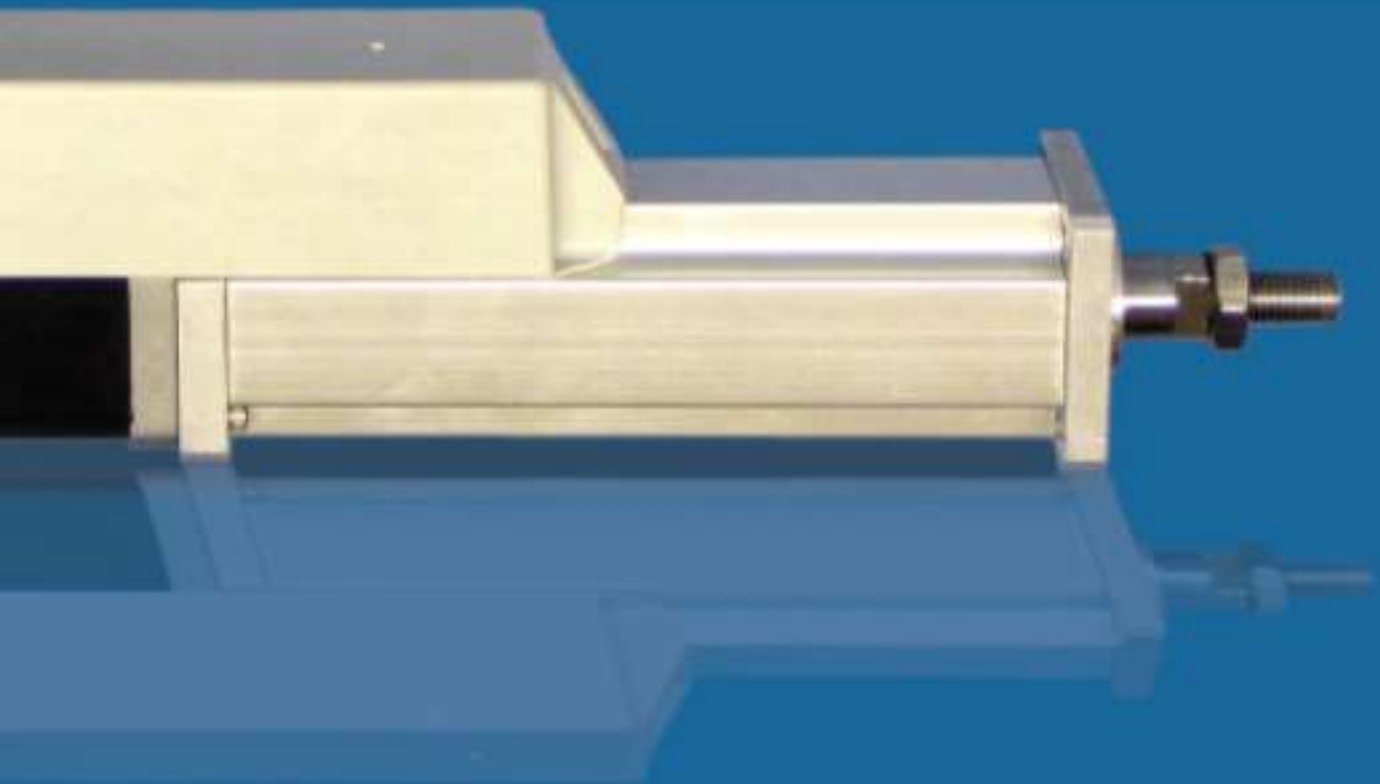
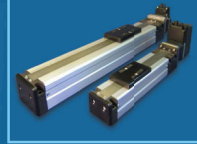




Dyadic

MECHATRONICS CYLINDER



D2101M

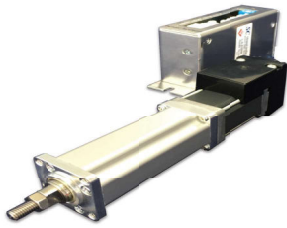


Mirai Inter-Technologies

www.miraiintertech.com



Page 3



SCN3 COMPACT MODEL

SCN5 ECONOMY MODEL



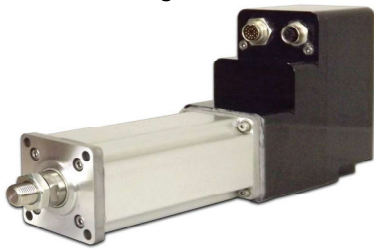
Page 4 & 5

Page 6 & 7



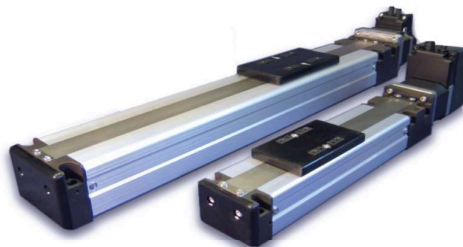
SCN6 SERIES

Page 8



IP-67 RATED

SCLT SERIES



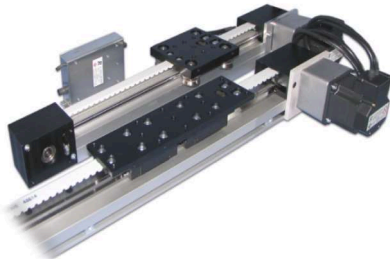
Page 9

Page 10



SCLG6 SERIES

Page 11



ML SERIES

RSA SERIES MOTORS



Page 12

Page 13

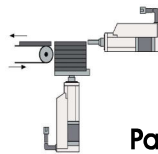


RMJ SERIES MOTORS

Page 14 & 15



PROGRAMMING



Sample Applications

Page 16



MEG Pick & Place
Page 17

Page 18

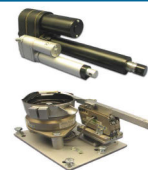


SCARA ROBOT

| Model | Stroke | Weight | Speed | Force | Stroke | Weight | Speed | Force | Stroke | Weight | Speed | Force | Stroke | Weight | Speed | Force |
|-------|--------|--------|---------|-------|--------|--------|---------|-------|--------|--------|---------|-------|--------|--------|---------|-------|
| 30 kg | 100mm | 1.5kg | 100mm/s | 100N | 100mm | 1.5kg | 100mm/s | 100N | 100mm | 1.5kg | 100mm/s | 100N | 100mm | 1.5kg | 100mm/s | 100N |
| 40 kg | 100mm | 2.0kg | 100mm/s | 100N | 100mm | 2.0kg | 100mm/s | 100N | 100mm | 2.0kg | 100mm/s | 100N | 100mm | 2.0kg | 100mm/s | 100N |
| 50 kg | 100mm | 2.5kg | 100mm/s | 100N | 100mm | 2.5kg | 100mm/s | 100N | 100mm | 2.5kg | 100mm/s | 100N | 100mm | 2.5kg | 100mm/s | 100N |
| 60 kg | 100mm | 3.0kg | 100mm/s | 100N | 100mm | 3.0kg | 100mm/s | 100N | 100mm | 3.0kg | 100mm/s | 100N | 100mm | 3.0kg | 100mm/s | 100N |

Page 19

- Quick Reference Guide



- Low Cost DC Linear Actuators
Back Cover
- Vibratory Parts Feeders

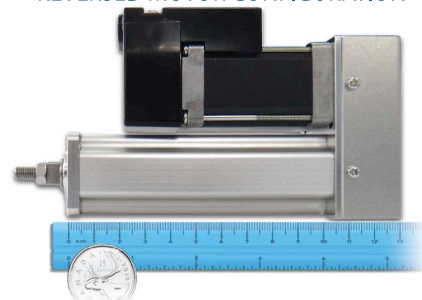


INTRODUCTION

The SCN3 model Mechatronics Cylinder was developed to offer a super-compact servo linear actuator with high precision, programmable moves, serial control, 10,000 km life and 100% duty cycle.

High speeds and accelerations are possible and it is even possible to control the force applied to the workpiece!

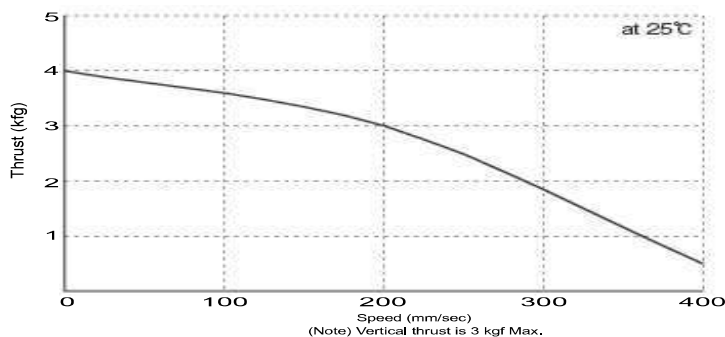
REVERSED MOTOR CONFIGURATION



SPECIFICATIONS

| MODEL | | SCN3-004-○○○-AB (External Amp type) | |
|---------------------------------|----------------------|--|--|
| Stroke (mm) | | 30 | 50 |
| Max. thrust (N) / (kgf) | | 40 / 4 | |
| Push mode max. thrust (N)/(kgf) | | 30 / 3 | |
| Max. speed (mm/s) * note 1 | | 400 | |
| Screw lead (mm) | | 6 | |
| Repeatability (mm) | | ± 0.01 | |
| Lost motion (mm) | | 0.3 | |
| Max radial load (N) | | 5 | |
| Rod diameter (mm) | | Ø12 | |
| Rod tip thread | | M5 Pitch 0.5 (Metal 303SS) | |
| Program capacity | | 16 Positionings | |
| Power supply | | Power supply | DC24V ± 10% (max. 2.0 Amps) |
| | | Control power | DC24V ± 10% (max. 0.2 Amps) |
| Life | | 3 years after delivery or 10,000 km operation when applied within published specs | |
| I/O | Parallel input | Names | DC24V type di/do Interface (Connector PIO) Position number (4 bit binary: PC1,PC2,PC4,PC8) Start (CSTR), Axis movement interlock (ILK) |
| | | Input current | Max. 4mA / port |
| | Parallel output | Names | DC24V TYPE di/do interface (Connector PIO) Positioning complete(PFIN), Alarm(ALM), Homed signal(ZFIN), Zone signal(ZONE) |
| | | Output current | Max. 30mA / port (Open Collector Output) |
| Serial signal | | Serial interface (Connector SIO) +5V, 5G, TRx+, TRx- | |
| Protection function | | Over speed, Main power over voltage, Abnormal voltage, Overload, Sensor abnormal, Servo abnormal, Encoder wire disconnected | |
| Ambience | Operating temp | 0 ~ 40°C, [0 ~ 55°C] | |
| | Storage temp | -20 ~60°C, [-20 ~60°C] | |
| | Ope/Storage humidity | Ope/Storage humidity: smaller than 90% RH, Non-condensing | |
| | Vibration | 2G / 10G (2 times) | |
| Protection | | IP-40 equivalent | |
| Actuator weight (kgs) | | 0.38 | 0.42 |
| Amp weight (kgs) | | 0.5 | |
| Functions | | - Positioning with speed, Accele. - Incremental movement - Home direction set - Stroke limit end set - Push force mode - Zone signal output - Suitable auto max. accel. - Complete signal width set | |

SPEED-THRUST CURVE



CABLES

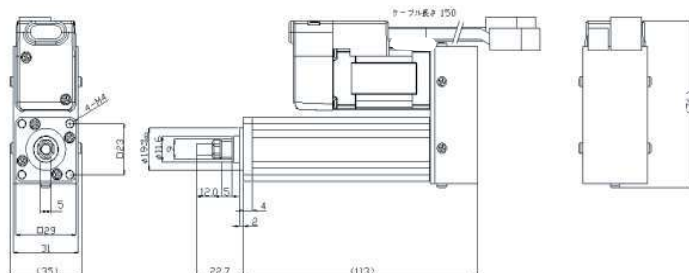
RP9135 1m-20m Lengths

The RP9135 cables are extension cables for SCN3, SCN6, SCLL5, SCLG5, SCLG6, and R-Series Servo Motors. The cables are available in standard and Hi Flex versions.

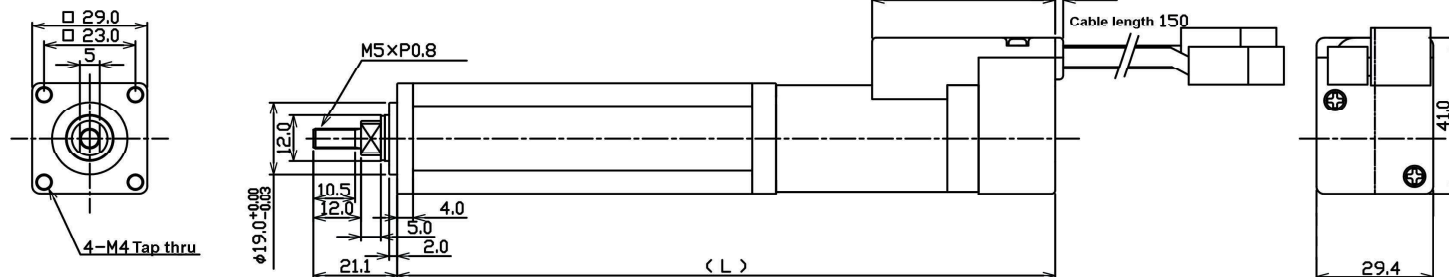
RP9120

RP9120 cables provide 24VDC power and Input/Output signals for SCN3, SCN6, SCL, and ML actuators, as well as R-Series servo motors. The cables are available in standard and Hi Flex versions.

DIMENSIONS



| Models | Stroke | L |
|--------------|--------|-----|
| SCN3-004-030 | 30mm | 147 |
| SCN3-004-050 | 50mm | 167 |



SCN5 Economy 10 kgf Model



INTRODUCTION

The SCN5 model Mechatronics Cylinders were developed in response to popular demand for a compact, affordable servo linear actuator. The cost of SCN5 actuators is roughly equivalent to that of air cylinders with accessories such as FRL, flow controls, reed switches, valves, etc.

With speed up to 400mm/s and stroke up to 300mm, SCN5 actuators are suited to a wide variety of applications. Different speeds and positions can be programmed as necessary, and it is also possible to control the force applied to the workpiece!

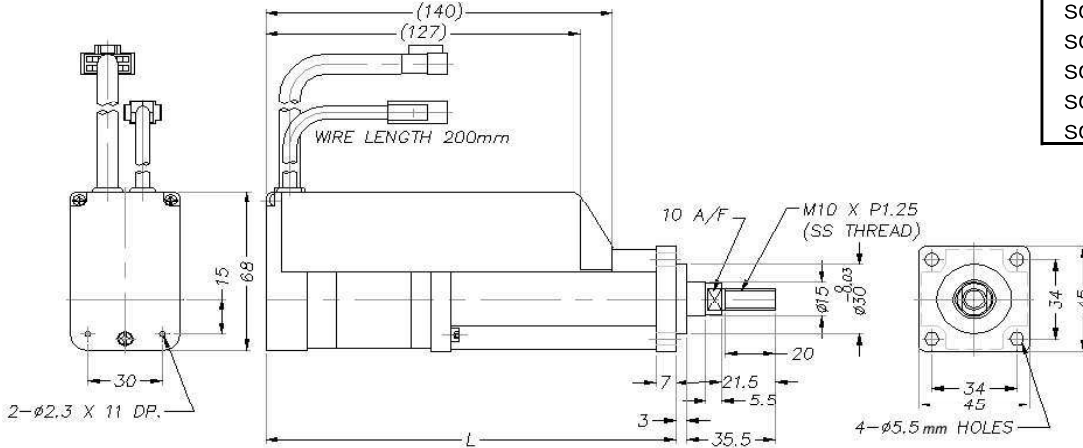
SCN5 actuators have extruded aluminum bodies and are assembled using socket-head machine screws to provide the toughness required in industrial environments.

SPECIFICATIONS

| Models | SCN5-010-050AS03 | SCN5-010-100AS03 | SCN5-010-150AS03 | SCN5-010-200AS03 | SCN5-010-250AS03 | SCN5-010-300AS03 |
|--------------------------|------------------------|------------------|------------------|------------------|------------------|------------------|
| Stroke (mm) | 50 | 100 | 150 | 200 | 250 | 300 |
| Max. Thrust | 100 (N) / 10.2 (Kgf) | | | | | |
| Push force mode (N) | 70 | | | | | |
| Max. Thrust (kgf) | 7.1 | | | | | |
| Max. Speed (mm/s) * Typ. | 400 | | 200 | | 160 | 120 |
| Radial Load Capacity (N) | 15 | 10 | 5 | 4 | 3 | 2.5 |
| Rod Diameter (mm) | Ø15 | | | | | |
| Rod Tip Thread | M10 Pitch 1.25 (303SS) | | | | | |
| Weight (kg) | 1.1 | 1.2 | 1.4 | 1.6 | 1.8 | 2.0 |

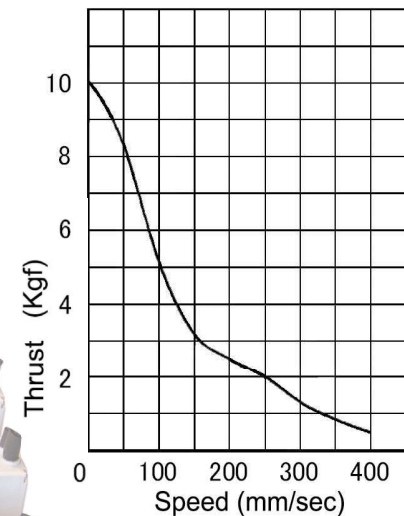
Note : Max vertical load is the same as the maximum force in push mode.
12 VDC Operation also permitted - Please contact Mirai for specs.

DIMENSIONS (mm)



| Models | Stroke | L |
|-------------|--------|--------|
| SCN5-10-050 | 50 mm | 166 mm |
| SCN5-10-100 | 100 mm | 216 mm |
| SCN5-10-150 | 150 mm | 266 mm |
| SCN5-10-200 | 200 mm | 316 mm |
| SCN5-10-250 | 250 mm | 366 mm |
| SCN5-10-300 | 300 mm | 416 mm |

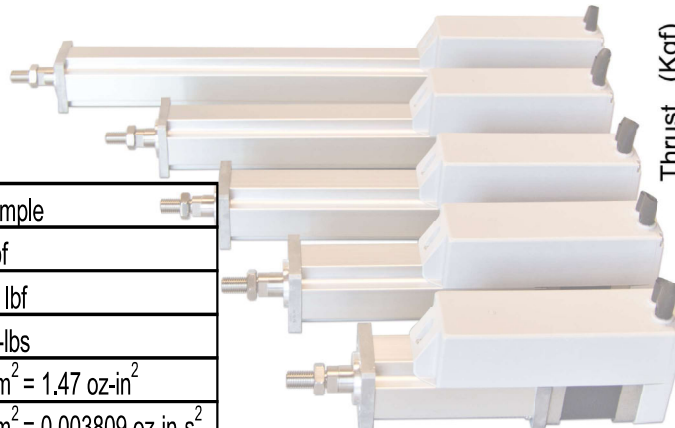
SPEED-THRUST CURVE



(Note) Vertical thrust is 7 kgf Max.

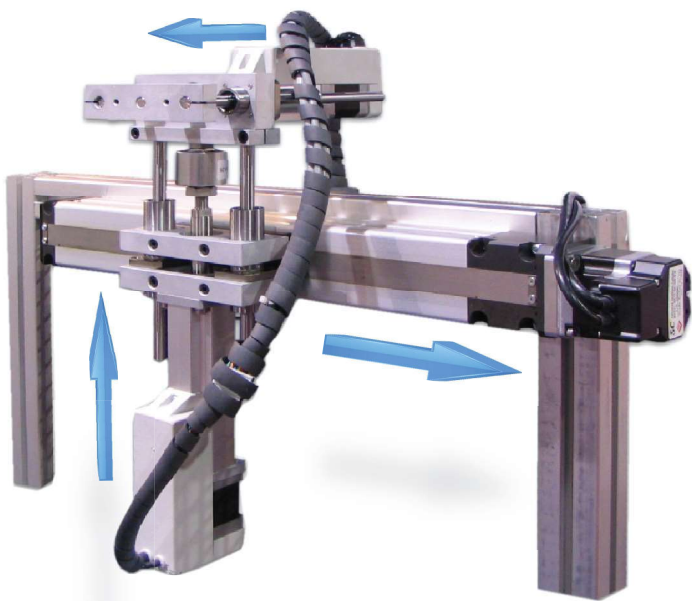
CONVERSIONS

| Type | Conversion | Multiplier | Reference Example |
|----------|---|------------|--|
| Force | N -> lbf | 0.225 | 100 N = 22.5 lbf |
| Force | kgf -> lbf | 2.2 | 10.2 kgf = 22.5 lbf |
| Torque | Nm -> in-lbf | 8.85 | 5 Nm = 44.3 in-lbs |
| Inertia | kg-m ² -> oz-in ² | 54678 | 0.269x10 ⁻⁴ kg-m ² = 1.47 oz-in ² |
| Inertia | kg-m ² -> oz-in-s ² | 141.6 | 0.269x10 ⁻⁴ kg-m ² = 0.003809 oz-in-s ² |
| Distance | mm -> inch | 0.03937 | 100mm = 3.937" |

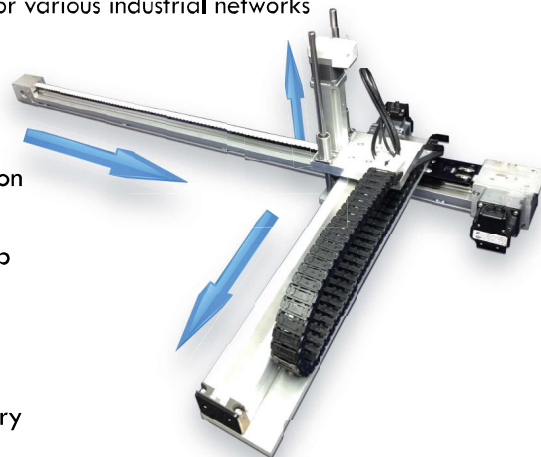




MULTI AXIS & GUIDES



Multi Axis Systems
 Servo motor and drive included on every axis X, Y, Z, Theta options
 Flex-rated cables available
 Cable track available
 Rod and Rodless Options, Cantilevered or Gantry 24V Operation
 Control from PLC or various industrial networks



- Flexible Configuration
- Pre-Engineered
- Payloads up to 50 lb
- Speeds up to 36"/s
- Strokes up to 72
- Low Cost
- Bolt Together Delivery

MOUNTING & THRUSTER GUIDES

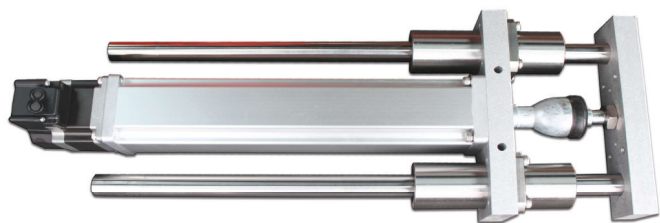
SWIVEL ROD TIP



BOLT ON MOUNTING FEET



THRUSTER GUIDES



CABLES

POWER I/O FOR SCN5

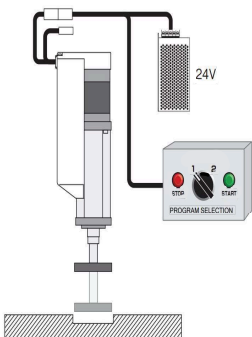
| | |
|--------------|-------------|
| RP9100-030 | 3M |
| RP9100-050 | 5M |
| RP9100-100 | 10M |
| RP9100-150 | 15M |
| RP9100-200 | 20M |
| RP9100-010R2 | 1M HI-FLEX |
| RP9100-030R2 | 3M HI-FLEX |
| RP9100-050R2 | 5M HI-FLEX |
| RP9100-100R2 | 10M HI-FLEX |
| RP9100-150R2 | 15M HI-FLEX |
| RP9100-200R2 | 20M HI-FLEX |



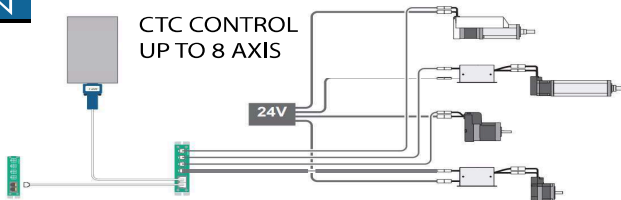
ALSO AVAILABLE IN
HI-FLEX
 HIGH FLEXIBILITY CABLES

FLEXIBLE INTEGRATION

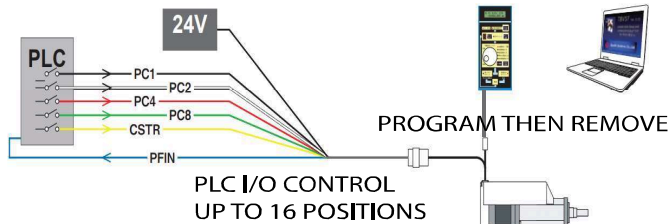
INTEGRATED AMP HAS BUILT IN PLC FUNCTIONALITY



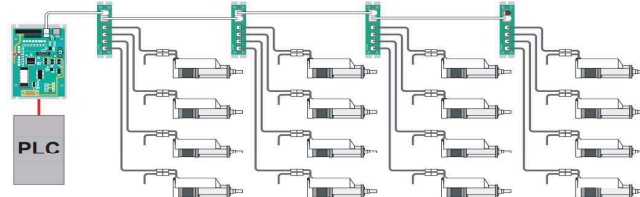
CTC CONTROL UP TO 8 AXIS



PLUG AND PLAY COMPATIBILITY



CC-LINK CONTROL UP TO 1024 AXIS



SCN6 20-60kgf Model



Also available in the Mechatronics Cylinder line are 20 kgf, 40 kgf, 50 kgf and 60 kgf models.

Each model is available as a dust-proof version which is sealed at the shaft outlet with a muffler on the end mounting block.



| Models | Stroke | L | Models | Stroke | L |
|---------------------|--------|--------|---------------------|--------|--------|
| SCN6-020-050-AB(W*) | 50 mm | 189 mm | SCN6-020-200-AB(W*) | 200 mm | 339 mm |
| SCN6-040-050-AB(W*) | | 223 mm | SCN6-040-200-AB(W*) | | 373 mm |
| SCN6-050-050-AB(W*) | | 201 mm | SCN6-050-200-AB(W*) | | 351 mm |
| SCN6-060-050-AB(W*) | | 223 mm | SCN6-060-200-AB(W*) | | 373 mm |
| SCN6-020-100-AB(W*) | 100 mm | 239 mm | SCN6-020-250-AB(W*) | 250 mm | 389 mm |
| SCN6-040-100-AB(W*) | | 273 mm | SCN6-040-250-AB(W*) | | 423 mm |
| SCN6-050-100-AB(W*) | | 251 mm | SCN6-050-250-AB(W*) | | 401 mm |
| SCN6-060-100-AB(W*) | | 273 mm | SCN6-060-250-AB(W*) | | 423 mm |
| SCN6-020-150-AB(W*) | 150 mm | 289 mm | SCN6-020-300-AB(W*) | 300 mm | 439 mm |
| SCN6-040-150-AB(W*) | | 323 mm | SCN6-040-300-AB(W*) | | 473 mm |
| SCN6-050-150-AB(W*) | | 301 mm | SCN6-050-300-AB(W*) | | 451 mm |
| SCN6-060-150-AB(W*) | | 323 mm | SCN6-060-300-AB(W*) | | 473 mm |

SPECIFICATIONS

Dyadic's Mechatronics Cylinder controller comes complete with on board memory - a relay contact, push button, or PLC output can be used to initiate the programmed motion profile. Stainless steel shaft & thread is standard to carry heavy load.

20 kgf & 40 kgf models

| MODEL | SCN6- | 020-050 | 020-100 | 020-150 | 020-200 | 020-250 | 020-300 | 040-050 | 040-100 | 040-150 | 040-200 | 040-250 | 040-300 |
|----------------------------------|-------|--|---------|---------|---------|---------|---------|------------|---------|---------|---------|---------|---------|
| Stroke (mm) | | 50 | 100 | 150 | 200 | 250 | 300 | 50 | 100 | 150 | 200 | 250 | 300 |
| Max. Thrust (N) / (kgf) | | 200 / 20.4 | | | | | | 400 / 40.8 | | | | | |
| Push mode max. Thrust (N)/(kgf) | | 140 / 14.2 | | | | | | 280 / 28.5 | | | | | |
| Max. Speed (mm/s) * Typ. | | 200 | | | | | | 200 | | | | | |
| Radial Load Capacity (N) | | 30 | 20 | 10 | 10 | 10 | 10 | 75 | 50 | 25 | 18 | 15 | 12 |
| Max. radial thrust at pwr ON (N) | | 14 | | | | | | 28 | | | | | |
| Rod Diameter (mm) / Thread | | Ø 22 / M14 Pitch 1.5 (303SS) | | | | | | | | | | | |
| Environmental Protection | | IP-40 equivalent (Standard), IP-54 (Dust proof sealed model) | | | | | | | | | | | |
| Actuator Weight (kg) | | 1.6 | 1.9 | 2.2 | 2.5 | 2.8 | 3.1 | 1.9 | 2.2 | 2.5 | 2.8 | 3.1 | 3.4 |

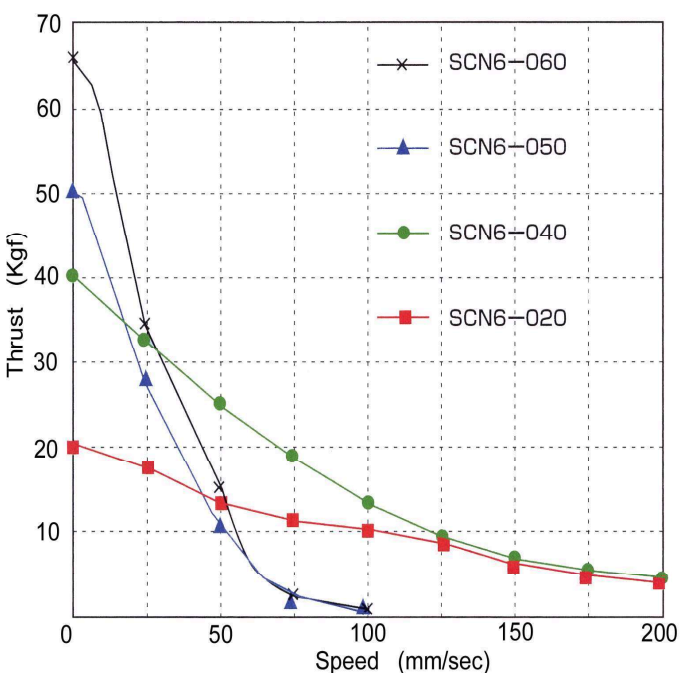
50 kgf & 60 kgf models

| MODEL | SCN6- | 050-050 | 050-100 | 050-150 | 050-200 | 050-250 | 050-300 | 060-050 | 060-100 | 060-150 | 060-200 | 060-250 | 060-300 |
|----------------------------------|-------|--|---------|---------|---------|---------|---------|------------|---------|---------|---------|---------|---------|
| Stroke (mm) | | 50 | 100 | 150 | 200 | 250 | 300 | 50 | 100 | 150 | 200 | 250 | 300 |
| Max. Thrust (N) / (kgf) | | 500 / 51.0 | | | | | | 650 / 66.3 | | | | | |
| Push mode max. Thrust (N)/(kgf) | | 350 / 35.5 | | | | | | 450 / 45.9 | | | | | |
| Max. Speed (mm/s) * Typ. | | 100 | | | | | | 100 | | | | | |
| Radial Load Capacity (N) | | 75 | 50 | 25 | 18 | 15 | 12 | 75 | 50 | 25 | 18 | 15 | 12 |
| Max. radial thrust at pwr ON (N) | | 30 | | | | | | 45 | | | | | |
| Rod Diameter (mm) / Thread | | Ø 22 / M14 Pitch 1.5 (303SS) | | | | | | | | | | | |
| Environmental Protection | | IP-40 equivalent (Standard), IP-54 (Dust proof sealed model) | | | | | | | | | | | |
| Actuator Weight (kg) | | 1.9 | 2.2 | 2.5 | 2.8 | 3.1 | 3.4 | 1.9 | 2.2 | 2.5 | 2.8 | 3.1 | 3.4 |

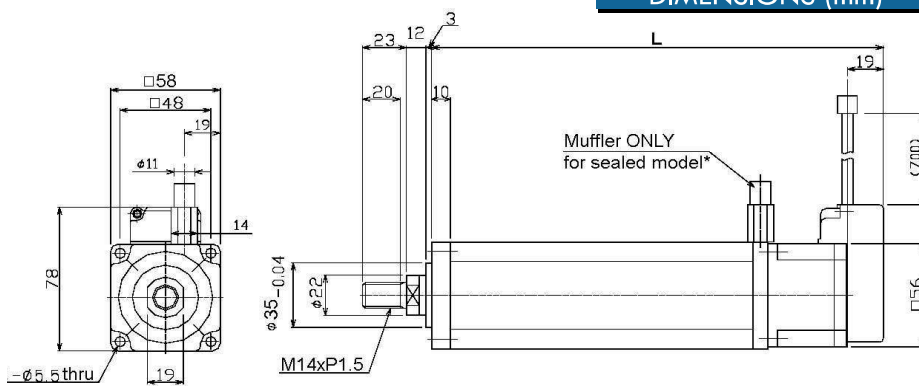
Note : Max vertical load is the same as the maximum force in push mode.

Note: Higher force / longer stroke models available on request

SPEED-THRUST CURVE

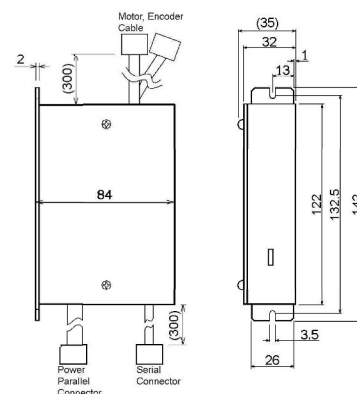
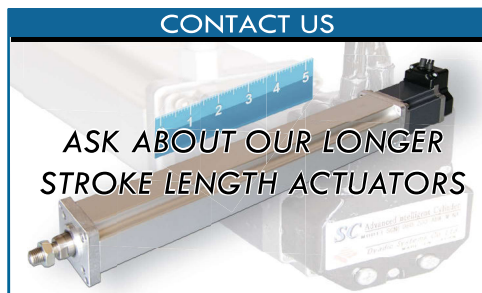


DIMENSIONS (mm)



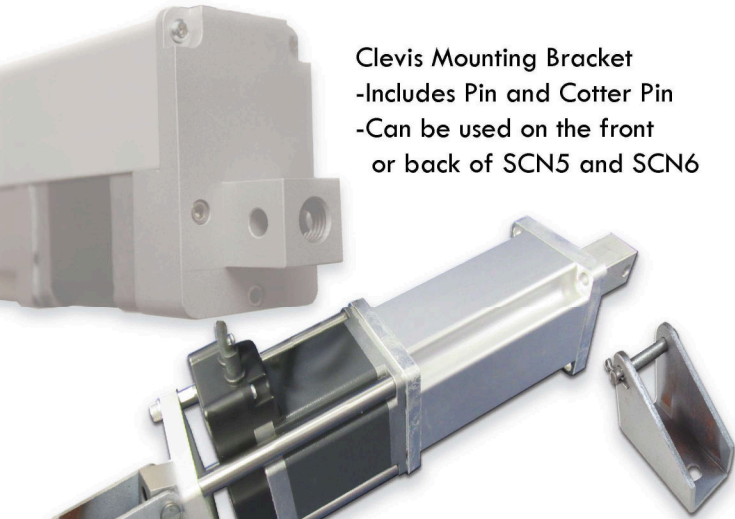
CONTACT US

ASK ABOUT OUR LONGER STROKE LENGTH ACTUATORS





CLEVIS MOUNTING SYSTEM



Clevis Mounting Bracket
-Includes Pin and Cotter Pin
-Can be used on the front or back of SCN5 and SCN6

| Ordering Information | | |
|----------------------|--------------|---|
| List Price | Part Number | Description |
| \$199 | CLEVIS-N5-BK | Rear mount for SCN5 clevis or spherical bearing |
| \$199 | CLEVIS-N6-BK | Rear mount for SCN6 clevis or spherical bearing |
| \$27 | MBRK-6.4 | Clevis bracket for SCN5 and SCN6 |
| \$57 | CLEVIS-N5-RD | Rod eye for SCN5 |
| \$49 | CLEVIS-N6-RD | Rod eye for SCN6 |

IP40 & IP54 SEALED MODELS



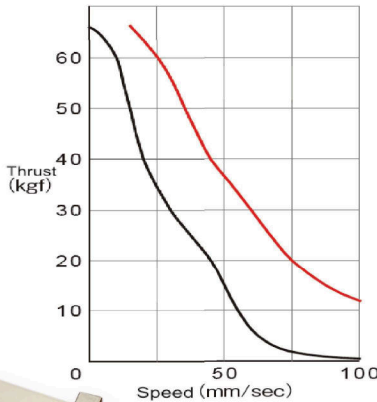
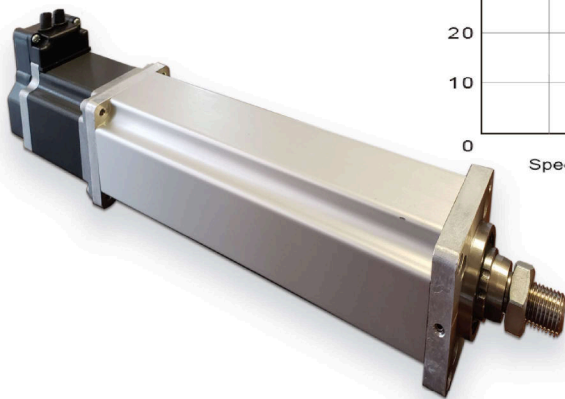
IP RATED

- Dust & moisture resistant
- Available in 20-60KGF thrust
- 50-300mm stroke lengths

SCN6-080Q ACTUATORS

80 kgf

- Powerful guide mechanism
- High-rigidity model capable of handling large lateral loads



| MODEL | SCN6-080Q-100AB |
|---------------------------------------|---|
| Stroke (mm) | 100 |
| Max. Thrust (N) / (kgf) | 800 / 81.6 |
| Max. vertical carriage wt at power ON | 45 kgs |
| Push mode max. Thrust (N)/(kgf) | 450 / 45.9 |
| Max. Speed (mm/s) * note 1 | 100 |
| Repeatability (mm) | ± 0.1 |
| Backlash (mm) | 0.3 |
| Shaft rod diameter (mm) | 25 |
| Shaft end thread | M14 Pitch 1.5 (303SS) |
| Program Capacity | 16 Positionings |
| Power Supply | Drive Power : DC48V ± 5% max. 3.0 Amps, Control power : DC24V ± 10% max. 0.2A Drive Power : DC24V ± 10% max. 3.0 Amps, Control power : DC24V ± 10% max. 0.2A |
| Life | 3 years after the delivery, or 10,000 km operation under the use within the specs. |
| Parallel Input Names | DC24V type D/DO Interface (Connector PIO) Position number (4 bit binary: PC1,PC2,PC4,PC8) Start (CSTR), Axis Movement Interlock (ILK) |
| Input current | Max. 4mA / port |
| I/O Parallel Output Names | DC24V type D/DO Interface (Connector PIO) Completed Position Number (4bit binary: PM1,PM2,PM4,PM8), Positioning complete(PFIN/NP), Homed signal(ZFIN), Zone signal(ZONE), Alarm (ALM) |
| Output current | Max. 30mA / port (Open collector output) |
| Serial Signal | Serial interface (Connector SID) +5V, 0V, S+, S- |
| Protection function | Over speed, Main power over voltage, abnormal voltage, Overload, Sensor abnormal, Servo abnormal, Encoder wire disconnected |
| Ambience Operate Temperature | 0 ~ 40°C |
| Storage Temperature | -20 ~ 60°C |
| Oper/Storage Humidity | ≤ 90% RH, not dew on the products |
| Weight (kgs) Actuator | 2.5 |
| Weight (kgs) Amplifier | 0.5 |
| Functions | Positioning with speed, Accel/Decel Push Force Mode Home Direction Set Speed Profile Suitable Auto Max. Accel |
| | Servo Gain Adjust Stroke Limit end set Zone Signal output |

SIMPLE DESIGN

LIGHTWEIGHT ALUMINUM HOUSING

STAINLESS STEEL ROD

BRASS RECIRCULATING NUT

LONG LIFE
THREADED SHAFT

HIGH TORQUE/SPEED
SERVO MOTOR

CLOSED LOOP, HIGH PRECISION
ROTARY ENCODER

POWER I/O CABLES

RP9135

1m-20m Lengths

RP9120



The RP9135 cables are extension cables for SCN3, SCN6, SCLL5, SCLG5, SCLG6, and R-Series Servo Motors. The cables are available in standard and Hi Flex versions.

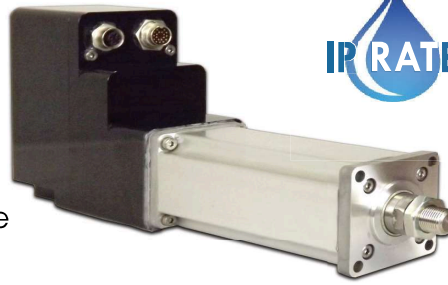
RP9120 cables provide 24VDC power and Input/Output signals for SCN3, SCN6, SCL, and ML actuators, as well as R-Series servo motors. The cables are available in standard and Hi Flex versions.

IP-67 Rated Actuators



INTRODUCTION

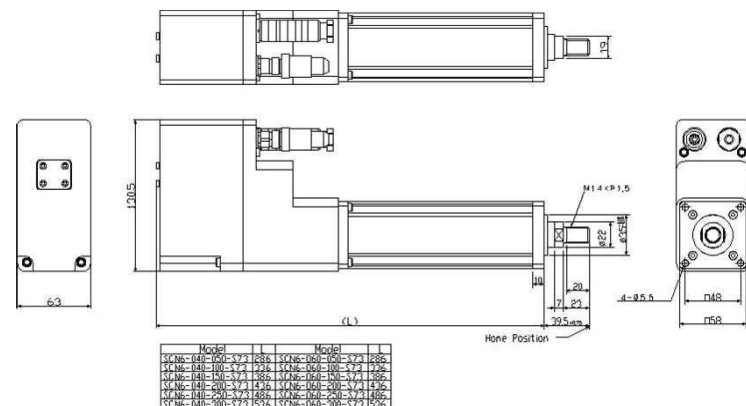
Sealed against particulate and water for IP-67 use in demanding environments, including outdoors. The rod and tip are made from stainless steel and the body from anodized aluminum. The servo drive is built in for easy mounting and these actuators include absolute encoders for homing-free operation.



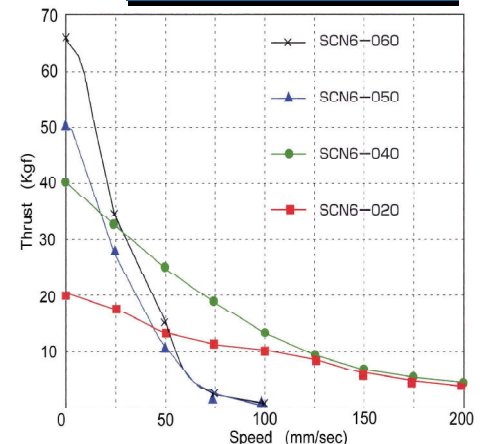
SPECIFICATIONS

| Model | SCN6-40-050-S73SWH-P-NA | SCN6-40-100-S73SWH-P-NA | SCN6-40-150-S73SWH-P-NA | SCN6-40-200-S73SWH-P-NA | SCN6-40-250-S73SWH-P-NA | SCN6-40-300-S73SWH-P-NA | SCN6-60-050-S73SWH-P-NA | SCN6-60-100-S73SWH-P-NA | SCN6-60-150-S73SWH-P-NA | SCN6-60-200-S73SWH-P-NA | SCN6-60-250-S73SWH-P-NA | SCN6-60-300-S73SWH-P-NA | | |
|---|---|---|---|-------------------------|-------------------------|-------------------------|---|---|---|-------------------------|-------------------------|-------------------------|--|--|
| Stroke (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 50 | 100 | 150 | 200 | 250 | 300 | | |
| Max. Thrust (N) / (kgf) | 400 / 40.8 | | | | | | 650 / 66.3 | | | | | | | |
| Max. Vertical carriage weight at power ON | 28 KG | | | | | | 45 KG | | | | | | | |
| Push Mode Max. Thrust (N) / (kgf) | 280 / 28.5 | | | | | | 450 / 45.9 | | | | | | | |
| Max. Speed (mm/s) | 200 | | | | | | 100 | | | | | | | |
| Repeatability (mm) | ±0.1 | | | | | | ±0.1 | | | | | | | |
| Backlash (mm) | 0.3 | | | | | | 0.3 | | | | | | | |
| Max. Radial Load (N) | 75 | 50 | 25 | 18 | 15 | 12 | 75 | 50 | 25 | 18 | 15 | 12 | | |
| Shaft Rod Diameter (mm) | Dia. 22 | | | | | | Dia. 22 | | | | | | | |
| Shaft Tip Screw | M14 x 1.5 pitch (303SS) | | | | | | M14 x 1.5 pitch (303SS) | | | | | | | |
| Program Capacity | 16 Positions | | | | | | 16 Positions | | | | | | | |
| Power Supply | DC 24V ± 10% Max. Current 3.0A | | | | | | DC 24V ± 10% Max. Current 3.0A | | | | | | | |
| Lifespan | 3 Years From Delivery or 10,000 KM Of Use Within Specifications | | | | | | 3 Years From Delivery or 10,000 KM Of Use Within Specifications | | | | | | | |
| I/O | Paralell Input | Names | DC 24V Type DI / DO Interface (Connector PIO) Position Number (4 bit binary: PC1, PC2, PC4, PC8) Start (CSTR), Axis Movement Interlock (ILK) | | | | | | DC 24V Type DI / DO Interface (Connector PIO) Position Number (4 bit binary: PC1, PC2, PC4, PC8) Start (CSTR), Axis Movement Interlock (ILK) | | | | | |
| | | Input Current | Max. 4mA / port | | | | | | Max. 4mA / port | | | | | |
| | Paralell Output | Names | DC 24V Type DI / DO Interface (Connector PIO), Position Complete (PFIN/INP) Completed Position Number (4 bit binary: PM1, PM2, PM4, PM8) Homed Signal (ZFIN), Zone Signal (ZONE), Alarm (ALM) | | | | | | DC 24V Type DI / DO Interface (Connector PIO), Position Complete (PFIN/INP) Completed Position Number (4 bit binary: PM1, PM2, PM4, PM8) Homed Signal (ZFIN), Zone Signal (ZONE), Alarm (ALM) | | | | | |
| | | Output Current | Max. 10 mA / Port (Open Collector) | | | | | | Max. 10 mA / Port (Open Collector) | | | | | |
| Serial Signal | | Serial Interface (Connector SIO) | | | | | | Serial Interface (Connector SIO) | | | | | | |
| Protection Function | | IP67, Over Speed, Main Power Over Voltage, Abnormal Voltage, Overload Sensor, Abnormal Servo, Servo Failure | | | | | | IP67, Over Speed, Main Power Over Voltage, Abnormal Voltage, Overload Sensor, Abnormal Servo, Servo Failure | | | | | | |
| Ambience | Operating Temp. | 0° C ~ 40° C | | | | | | 0° C ~ 40° C | | | | | | |

DIMENSIONS



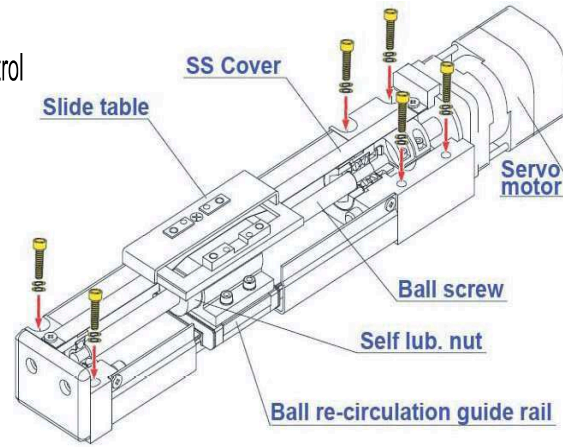
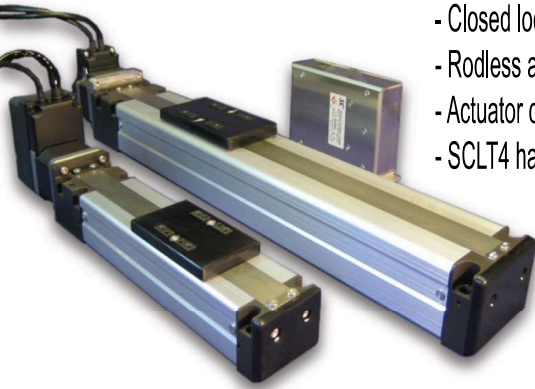
SPEED-THRUST CURVE





INTRODUCTION

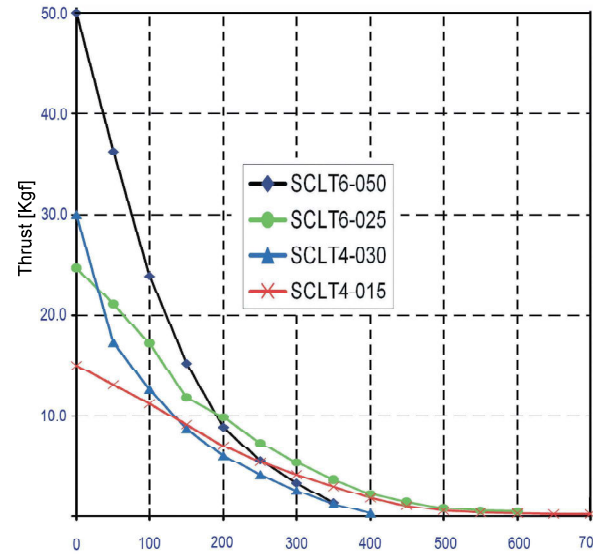
- Closed loop servo motor, built-in/external servo amplifier and control
- Rodless actuator with recirculating ball screw and profile rail.
- Actuator can be mounted from above or below.
- SCLT4 has built in servo amplifier for easy installation.



SPECIFICATIONS

| MODEL | SCLT4-015 -XXX AS | SCLT4-030 -XXX AS | SCLT6-025 -XXX AB | SCLT6-050 -XXX AB |
|-----------------------------------|--|--------------------------------|---|---------------------------------------|
| Amplifier | Built-in to actuator | | External | |
| Stroke (mm) | 50 / 100 / 150 / 200 / 300 / 400 / 500 | | 50 / 100 / 150 / 200 / 300 / 400 / 500 / 600 / 700 | |
| Max. Hor Load weight (kg) | 5 | 10 | 16 | 30 |
| Max. Thrust (N) / (kgf) | 150 / 15 | 300 / 30 | 250 / 25 | 500 / 50 |
| Push mode max. Thrust (N)/(kgf) | 105 / 10.5 | 210 / 21 | 175 / 17.5 | 350 / 35 |
| Ball screw lead (mm) | 12 | 6 | 12 | 6 |
| Max. Speed (mm/s) * note 1 | 700 (680mm/s for 500mm stroke) | 400 (340mm/s for 500mm stroke) | 600 (500mm/s for 700mm stroke) | 350 (600mm: 340mm/s) (700mm: 250mm/s) |
| Repeatability (mm) | ± 0.02 | ± 0.02 | ± 0.02 | ± 0.02 |
| Backlash (mm) | 0.1 | 0.1 | 0.1 | 0.1 |
| Max. vertical load (kg) | 1.5 | 2.5 | 4 | 6 |
| Max. axial thrust at power ON (N) | 15 | 25 | 40 | 60 |
| Load moment (Nm / kg-cm) | Mp=12 / 120, My=12 / 120, Mr=31 / 310 | | Mp=25.7 / 257, My=25.7 / 257, Mr=58 / 580 | |
| Overhang length (mm) * note 2 | 100 or less | | | |
| Weight (kg) | 1.42/1.53/1.64/1.74/1.96/2.18/2.4 | | 2.7 / 2.9 / 3.1 / 3.3 / 3.7 / 4.1 / 4.5 / 5.0 / 5.4 | |

SPEED-THRUST CURVE



Notes: (*1) Typical data



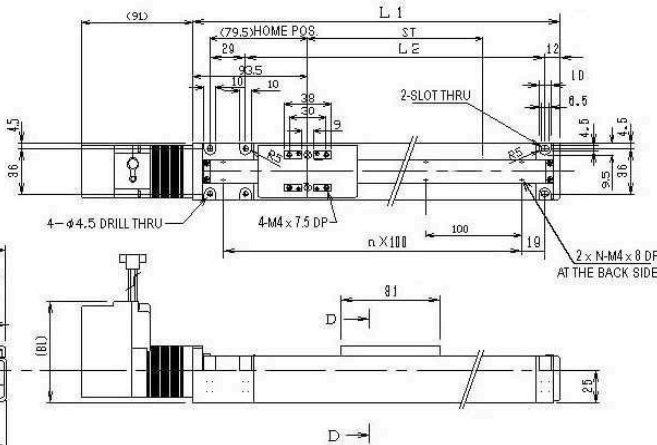
(The calculation of the load moment (kg-cm) is: $m \text{ (kg)} \times L \text{ (cm)} < M_p, M_y, M_r$)

Notes: (*2) This is the acceptable over hand length from the slider carriage.

The actual moment will be combinations of those moments (Mp, Py, Mr).

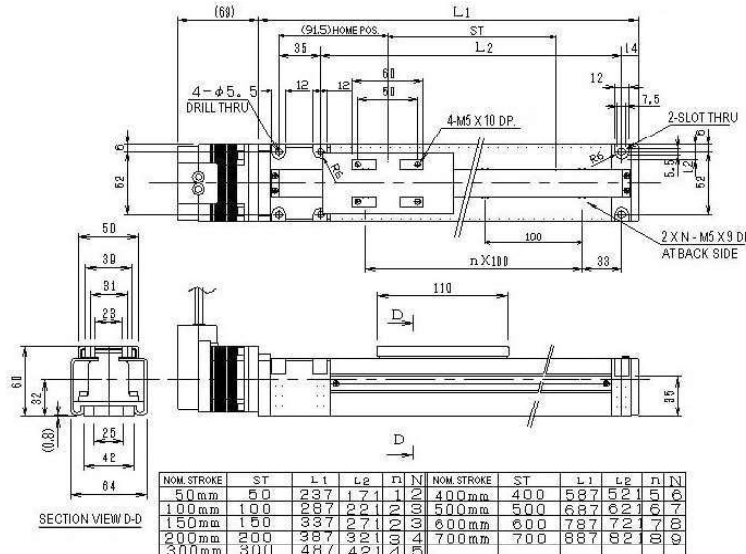
DIMENSIONS (mm)

SCLT4 MODEL



| NOM STROKE | ST | L1 | L2 | n | N | NOM STROKE | ST | L1 | L2 | n | N |
|------------|-----|-----|-----|---|---|------------|-----|-----|-----|---|---|
| 50mm | 50 | 206 | 151 | 1 | 2 | 300mm | 300 | 456 | 401 | 4 | 5 |
| 100mm | 100 | 256 | 201 | 2 | 3 | 400mm | 400 | 556 | 501 | 5 | 6 |
| 150mm | 150 | 306 | 251 | 2 | 3 | 500mm | 500 | 656 | 601 | 6 | 7 |
| 200mm | 200 | 356 | 301 | 3 | 4 | | | | | | |

SCLT6 MODEL

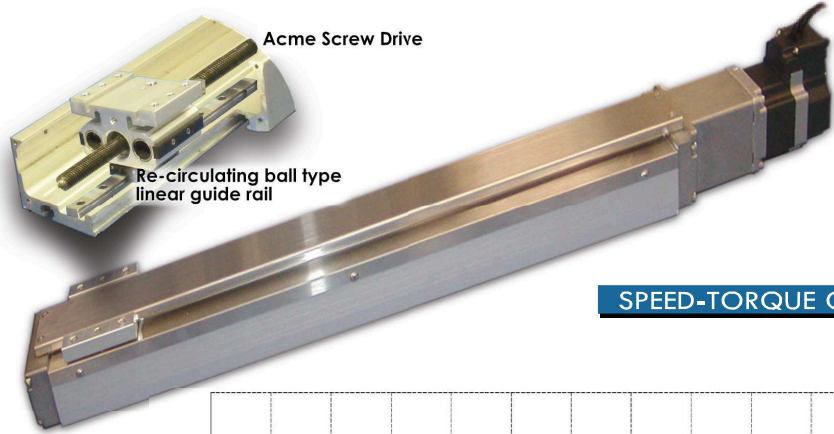


| NOM STROKE | ST | L1 | L2 | n | N | NOM STROKE | ST | L1 | L2 | n | N |
|------------|-----|-----|-----|---|---|------------|-----|-----|-----|---|---|
| 50mm | 50 | 237 | 171 | 1 | 2 | 400mm | 400 | 587 | 521 | 5 | 6 |
| 100mm | 100 | 287 | 221 | 2 | 3 | 500mm | 500 | 687 | 621 | 6 | 7 |
| 150mm | 150 | 337 | 271 | 2 | 3 | 600mm | 600 | 787 | 721 | 7 | 8 |
| 200mm | 200 | 387 | 321 | 3 | 4 | 700mm | 700 | 887 | 821 | 8 | 9 |
| 300mm | 300 | 487 | 421 | 4 | 5 | | | | | | |

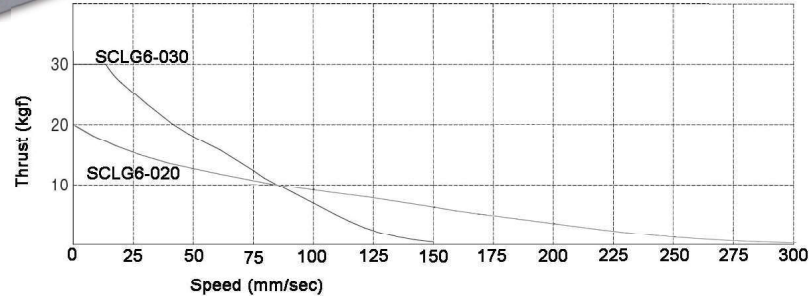


INTRODUCTION

- Includes closed loop servo motor, servo amplifier and control
- Independently programmable position, speed, acceleration, force, etc.
- Easy to use; make a few 24 VDC connections and program in 15 minutes!
- Program from handheld pendant or from PC
- Virtually infinite positioning possible
- Networkable up to 16 axes
- DeviceNet and CC-Link gateways available
- 300-1,000mm stroke versions
- Repeatability as good as $\pm 0.01\text{mm}$
- 300mm/sec max. speed
- 20kg max payload
- 20kgf and 30kgf thrust versions available



SPEED-TORQUE CURVE



SPECIFICATIONS

| MODEL | SCLG6-020- XXX -AB | | | | | | | SCLG6-030- XXX -AB | | | | | | | | | | |
|-----------------------------------|-----------------------------------|-----|-----|-----|-----|-----|------|--------------------|-----|-----|-----|-----|-----|------|-----|--|----|--|
| | 300 | 400 | 500 | 600 | 700 | 800 | 1000 | 300 | 400 | 500 | 600 | 700 | 800 | 1000 | | | | |
| Stroke (mm) | 300 | 400 | 500 | 600 | 700 | 800 | 1000 | 300 | 400 | 500 | 600 | 700 | 800 | 1000 | | | | |
| Max. Thrust (N)/(kgf) | 200 / 20.4 | | | | | | | 300 / 30.6 | | | | | | | | | | |
| Push mode max. Thrust (N)/(kgf) | 140 / 14.2 | | | | | | | 280 / 28.6 | | | | | | | | | | |
| Max. Speed (mm/s) * Typ. Data | 300 | | | 280 | | | | 220 | | 150 | | | 140 | | 110 | | 75 | |
| Max. Load weight (kgf) | 20 | | | | | | | 20 | | | | | | | | | | |
| Max. vertical load (kgf) | 10 | | | | | | | 20 | | | | | | | | | | |
| Load moment (N-m / kg-fcm) | Mp= 6 / 60, My= 6/60, Mr= 10 /100 | | | | | | | | | | | | | | | | | |
| Max. axial thrust at power ON (N) | 25 | | | | | | | | | | | | | | | | | |
| Overhang length (mm) | 150 or shorter | | | | | | | | | | | | | | | | | |
| Actuator weight (kg) | 3.7 | 4.7 | 5.7 | 6.7 | 7.7 | 8.7 | 10.7 | 3.7 | 4.7 | 5.7 | 6.7 | 7.7 | 8.7 | 10.7 | | | | |
| Servo amplifier weight (kg) | 0.5 | | | | | | | | | | | | | | | | | |

DIMENSIONS

| MODEL | Stroke | L | L1 |
|-------------------|--------|------|------|
| SCLG6-020/030-200 | 200 | 433 | 290 |
| SCLG6-020/030-300 | 300 | 533 | 390 |
| SCLG6-020/030-400 | 400 | 633 | 490 |
| SCLG6-020/030-500 | 500 | 733 | 590 |
| SCLG6-020/030-600 | 600 | 833 | 690 |
| SCLG6-020/030-700 | 700 | 933 | 790 |
| SCLG6-020/030-800 | 800 | 1033 | 890 |
| SCLG6-020/030-900 | 900 | 1133 | 990 |
| SCLG6-020/030-A00 | 1,000 | 1233 | 1090 |

(Unit in mm)

POWER I/O CABLES

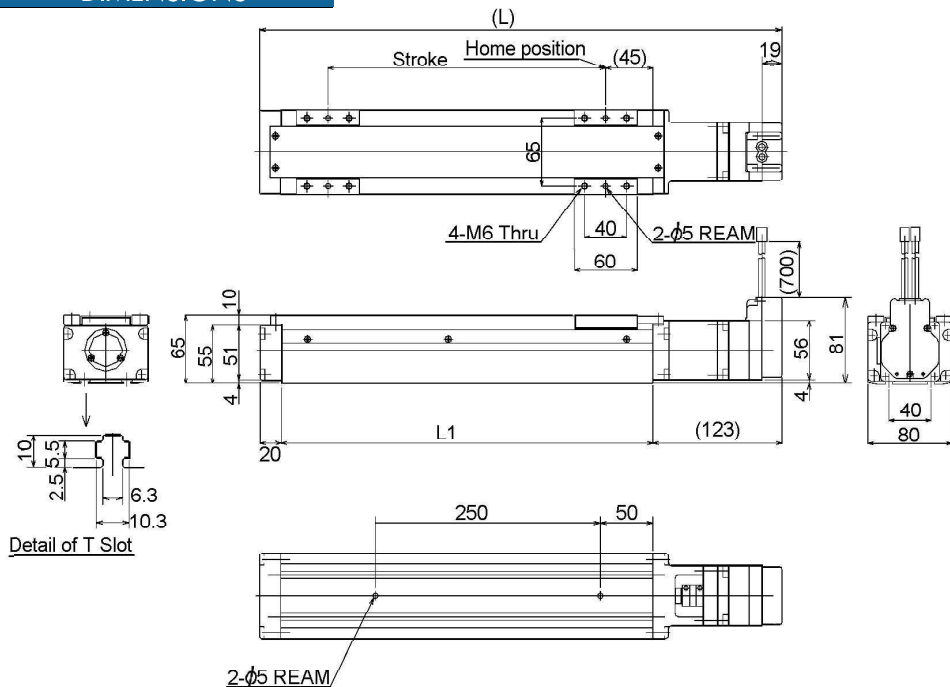
RP9120 1m-20m Lengths

RP9135



RP9120 24VDC power and Input/Output signal cable for SCLG6

RP9135 extension cable for SCLG6



INTRODUCTION

- Dyadic closed loop geared or standard servo motor
- external servo amplifier and control
- Timing belt linear actuation mechanism
- Aluminum extrusion housing
- positioning table and slider mounting slots with nuts

SPECIFICATIONS

| MODEL | ML-AA-BBBB-SGR15 | ML-AA-BBBB-SGR15D | ML-AA-BBBB-G20 | ML-AA-BBBB-G20D |
|-----------------------------|---|---------------------|------------------------|------------------------|
| Stroke (mm) * | 100 ~ 2850 | 100 ~ 2770 | 100 ~ 5850 | 100 ~ 5770 |
| Stroke increment (mm) | 100 | 100 | 100 | 100 |
| Max. Load weight (kg) | 25 | 50 | 360 | 720 |
| Load moment (Nm) | Mp=10, My=7, Mr=13 | Mp=30, My=20, Mr=25 | Mp=180, My=180, Mr=220 | Mp=600, My=600, Mr=440 |
| Actuator weight (kg) | 3.6 + 0.2 / 100mm | 3.9 + 0.2 / 100mm | 3.6 + 0.43 / 100mm | 3.9 + 0.43 / 100mm |
| Belt Type | 16AT10 | | | |
| Pulley teeth/revolution | 18 | | | |
| Pulley Diameter (mm) | 55.5 | | | |
| Travel per revolution (mm) | 180 | | | |
| Servo amplifier weight (kg) | 0.5 | | | |
| Ordering Codes | AA = MOTOR CODE, BBBB = STROKE LENGTH (mm) | | | |

* Please ask about special considerations regarding actuators 2,000 mm and longer

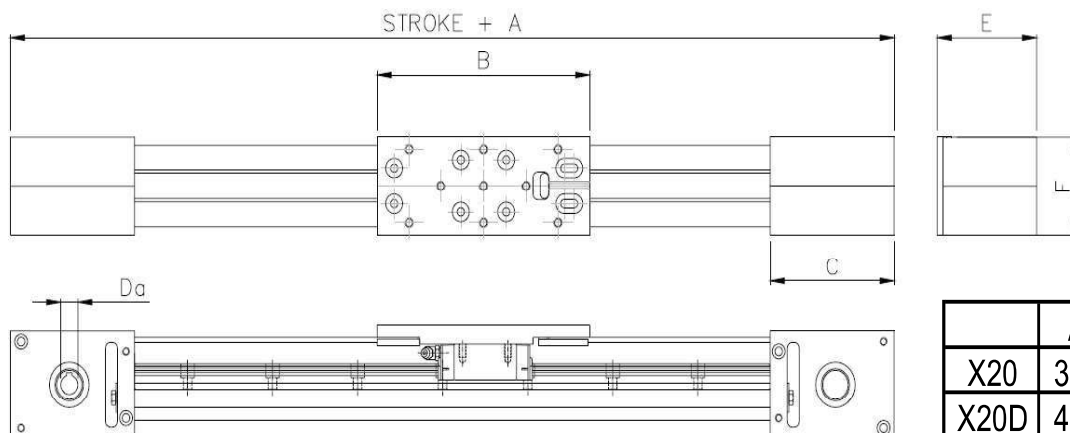
PERFORMANCE

Available Options:

- Bore & mount for your motor/gearbox
- Transition plates for cartesian systems
- Bored idler for synchronizing shaft
- Cable management

| MOTOR CODES | G1 | G2 | P5 | P10 | P20 | P50 | P100 |
|-------------------------------|---------|--------|---------|--------|--------|--------|--------|
| Max. Speed (mm/s) * Typ. Data | 1744 | 872 | 2325 | 1162 | 581 | 232 | 116 |
| Thrust @ 20% Max Speed (N) | 46 | 92 | 45 | 91 | 172 | 430 | 859 |
| Max. vertical load (kg) | 5 | 9 | 5 | 9 | 17 | 43 | 86 |
| Repeatability (mm) | 0.1 mm | 0.1 mm | 0.1 mm | 0.1 mm | 0.1 mm | 0.1 mm | 0.1 mm |
| Backlash (mm) | ~1.5 mm | | 0.15 mm | | 0.2 mm | | 0.2 mm |

DIMENSIONS (mm)



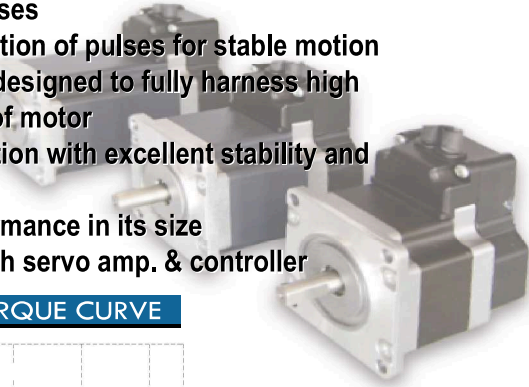
| | A | B | C | E | F | M |
|------|-----|-----|------|----|----|----|
| X20 | 335 | 150 | 87.5 | 70 | 60 | M6 |
| X20D | 415 | 250 | 87.5 | 70 | 60 | M6 |

R Series Servo Motor

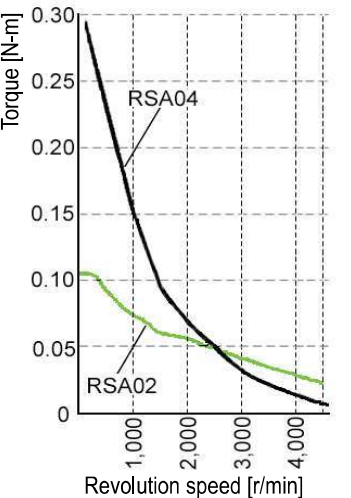
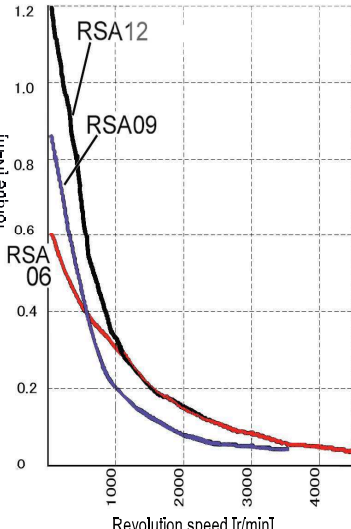


INTRODUCTION

- No lost pulses
- Self generation of pulses for stable motion
- Controller designed to fully harness high potential of motor
- Holds position with excellent stability and torque
- High performance in its size
- Stepper with servo amp. & controller



SPEED-TORQUE CURVE



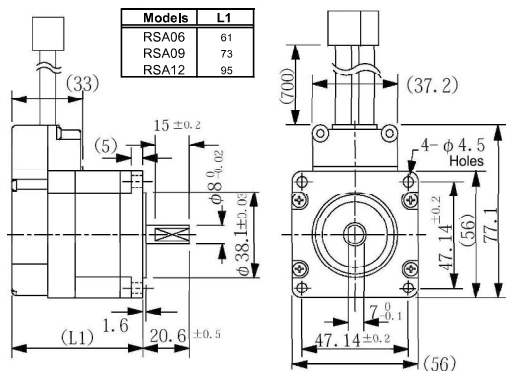
| Model | Standard Motor | | | | |
|--|---------------------------|------------------------|---------------------------|----------------------|---------|
| | RSA0241 | RSA0411 | RSA0611 | RSA0911 | RSA1211 |
| Motor Type | RMJ0231 | RMJ0411 | RMJ0611 | RMJ0911 | RMJ1211 |
| Amplifier Type | RAD0211 | RAD0111 | RAD0311 | RAD1311 | RAD1311 |
| Output Power - W | 20 | 50 | 90 | 60 | 100 |
| Max. RPM - RPM | 4500 | 4500 | 4500 | 3500 | 4500 |
| Max. Torque - N*m | 0.11 | 0.3 | 0.6 | 0.9 | 1.2 |
| Rotor Inertia (x10 ⁻⁴ Kg*m ²) | 0.018 | 0.076 | 0.115 | 0.188 | 0.269 |
| Max. Friction Load N*m | 0.03 N*m | 0.083 N*m | 0.229 N*m | 0.36 N*m | 0.5 N*m |
| Max Unbalanced Load N*m | 0.03 N*m | 0.075 N*m | 0.229 N*m | 0.036 N*m | 0.5 N*m |
| Gear Reduction | N/A | | | | |
| Motor Weight - grams | 400 | 500 | 640 | 830 | 1200 |
| Incremental Encoder | 200 P/R (X4 = 800 P/R) | | | | |
| Backlash | N/A | | | | |
| Thrust Load Capacity N (kgf) | 4.9 N (0.5 Kgf) | 9.8 N (1 Kgf) | 19.6 N (2 Kgf) OR SMALLER | | |
| Radial Load Capacity N (kgf) | 19.6 N (2 Kgf) OR SMALLER | | 49 N (5 Kgf) OR SMALLER | | |
| Power Supply | Drive Power | 24VDC+/-10% (2A Max) | | 24VDC+/-10% (3A Max) | |
| | Control Power | 24VDC+/-10% (0.2A Max) | | | |
| Amplifier Weight - grams | Approx. 400 | | | | |
| Motor Insulation Classification | Class E | | | | |
| Motor Protection | IP-40 Equivalent | | | | |

SPECIFICATIONS

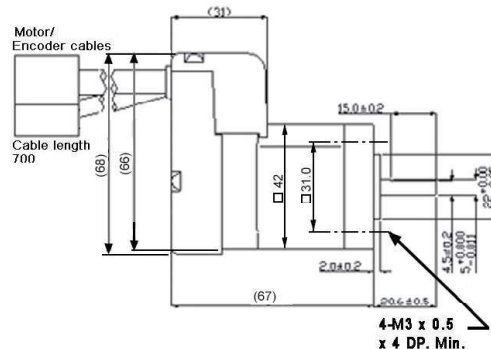
| Model | Standard Gear Motor | | | Precision Gear Motor | | |
|--|---------------------|-----------------------|------------------|----------------------|----------------|----------------|
| | RSA06-G1 | RSA06-G2 | 02-G5-10 | 04-G5-06 | 06-G5-05 | 12-G5-05 |
| Motor Type | RMJ06-G1 | RMJ06-G2 | RMJ02-G5-10 | RMJ04-G5-06 | RMJ06-G5-05 | RMJ12-G5-05 |
| Amplifier Type | RAD0311 | RAD0311 | RAD0211 | RAD0111 | RAD0311 | RAD32311 |
| Output Power - W | N/A | | | | | |
| Max. RPM - RPM | 600 | 300 | 450 | 750 | 800 | 800 |
| Max. Torque - N*m | 1.5 | 2.5 | 0.8 | 1.4 | 2.6 | 4.8 |
| Rotor Inertia (x10 ⁻⁴ Kg*m ²) | 0.14 | 0.14 | 0.018 | 0.078 | 0.135 | 0.289 |
| Max. Friction Load N*m | N/A | | | | | |
| Max Unbalanced Load N*m | N/A | | | | | |
| Gear Reduction | 1/5 | 1/10 | 1/10 | 1/6 | 1/5.6 | 1/5.6 |
| Motor Weight - grams | 900 | 900 | 350 | 850 | 1000 | 2000 |
| Incremental Encoder | 1000 P/R (X4) | | | | | |
| Backlash | 120 | | | 60 | 30 | 48 |
| Thrust Load Capacity N (kgf) | 29.4 N (3 Kgf) | | 24.5 N (2.5 Kgf) | 59 N (6 Kgf) | 294 N (15 Kgf) | 294 N (15 Kgf) |
| Radial Load Capacity N (kgf) | 49 N (5 Kgf) | | 49 N (5 Kgf) | 118 N (12 Kgf) | 294 N (30 Kgf) | 294 N (30 Kgf) |
| Power Supply | Drive Power | 24VDC+/-10% (3A Max) | | | | |
| | Control Power | 24VDC+/-10% (.2A Max) | | | | |
| Amplifier Weight - grams | Approx. 400 | | | | | |
| Motor Insulation Classification | Class E | | | | | |
| Motor Protection | IP-40 Equivalent | | | | | |
| Program Capacity | | | | | | |

DIMENSIONS-STANDARD MOTOR

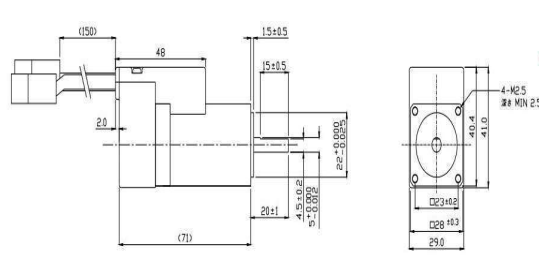
RSA06/09/12/16 NEMA 23



RSA04 NEMA 17



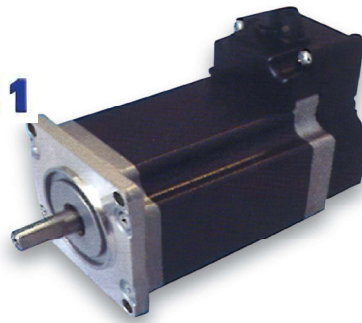
RSA02 NEMA 12



INTRODUCTION

- Larger rotor allows greater peak torque
- Higher rotor inertia for authority over tough loads
- With special high-density stator
- 48V motor power option
- Same Nema 23 mounting size
- Special shaft geometry for higher strength

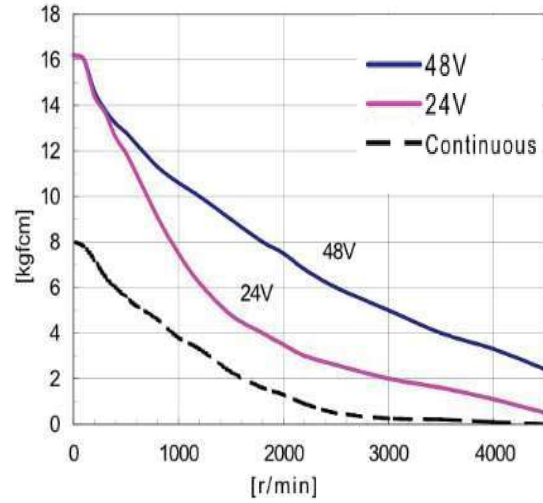
NEW
RSA1611



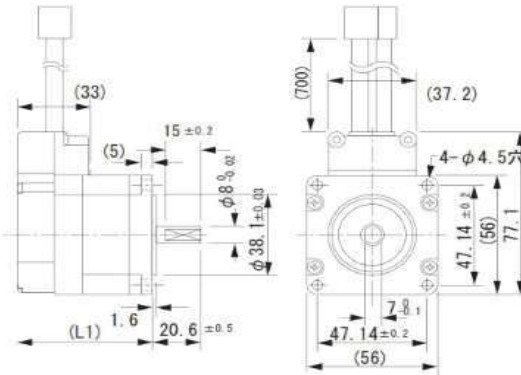
SPECIFICATIONS

| | | |
|------------------------------|-------------------------|-----------------------|
| Model | RSA1611 | |
| Motor type | RMJ1611 | |
| Amplifier type | RAD0611 | |
| Drive power supply | 24V±10% 6.2 A | 48V±5% 6.2 A |
| Control power supply | 24V±10% 0.2 A | |
| Output power (equiv to BL/W) | 200 (24V drive power) | 300 (48V drive power) |
| Max RPM | r/min | 4500 |
| Max torque | N.m | 1.6 |
| Rotor inertia | Kg.cm ² | 0.36×10 ⁻⁴ |
| Max friction load | N.m | 0.5 |
| Max unbalance load | N.m | 0.5 |
| Radial load capacity | N | 49 and smaller |
| Thrust load capacity | N | 19.6 or smaller |
| Incremental encoder | 200 P/R (x 4 = 800 P/R) | |

SPEED-TORQUE CURVE



Plug & Play Compatibility

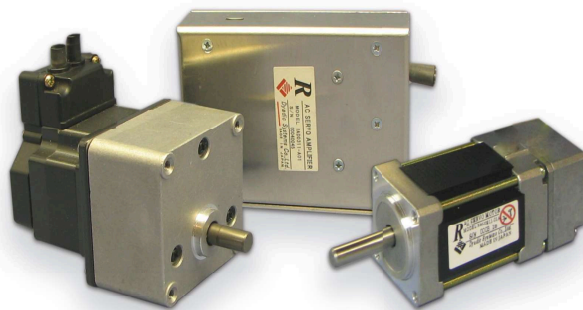


| | L1 |
|---------|----|
| RMJ0611 | 61 |
| RMJ0911 | 73 |
| RMJ1211 | 95 |
| RMJ1611 | 95 |

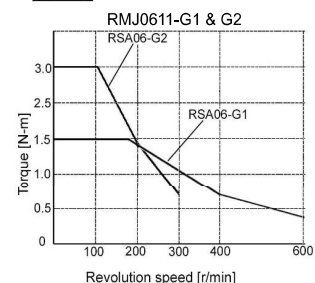
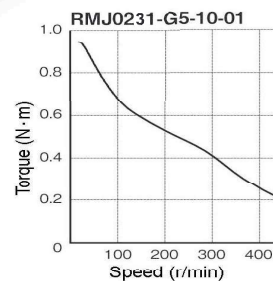
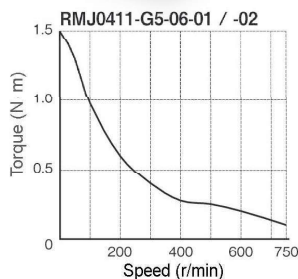
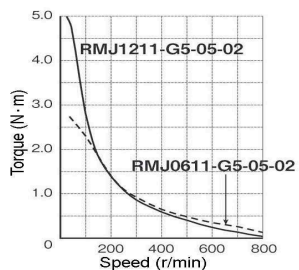
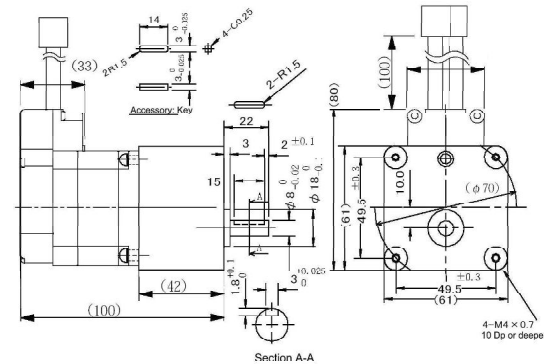
INTRODUCTION

- Available with standard gear and high resolution gears
- Uses Dyadic servo motors
- Low cost with high performance

Mechatronics Servo Motor



DIMENSIONS (G1 & G2)





Position Data Programming

Teach Pendant
(CTA-23-EN-SET) Kit price US\$455

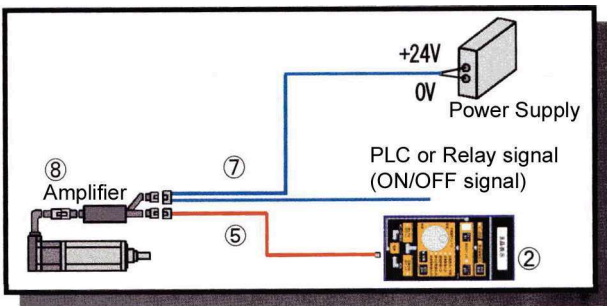
FEATURES

- Easy programming with jog handle
- Jog handle has choice of standard jog and fine jog
- Handle allows data input without jog movement if desired
- Visual indication of the programming procedure
- Complete control over all actuator capabilities
- Program one actuator at a time,

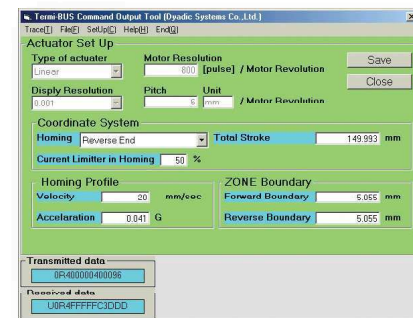
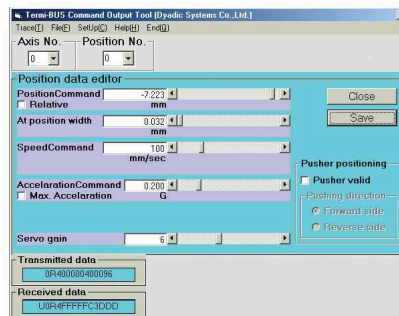
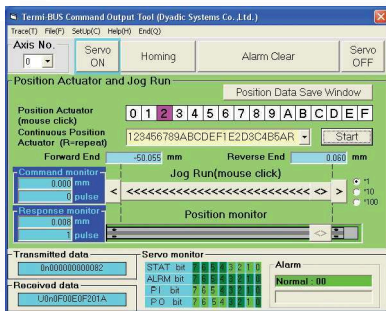
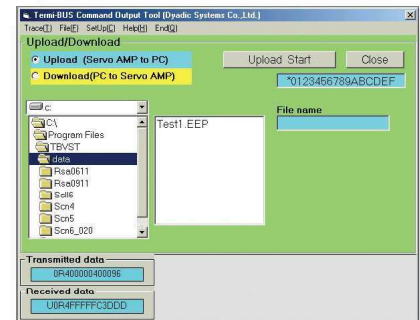
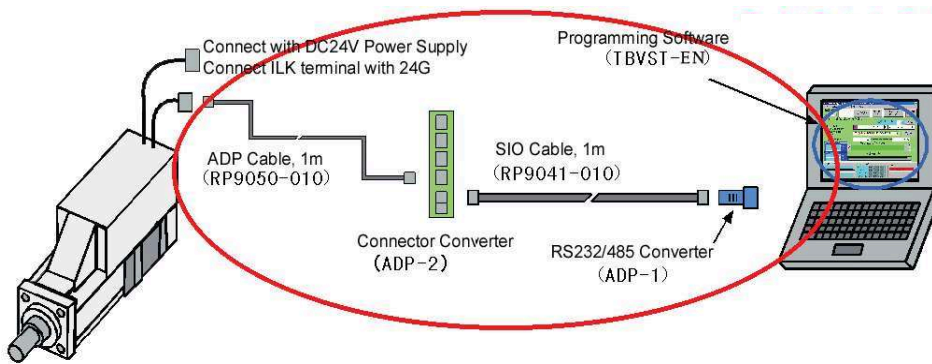
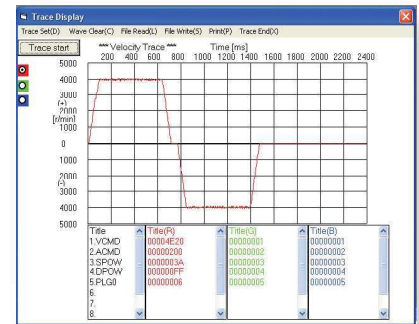
**For multi synchronized actuator motion programming tool, please contact Mirai.



CONNECTION LAYOUT



TBVS SOFTWARE FOR PC



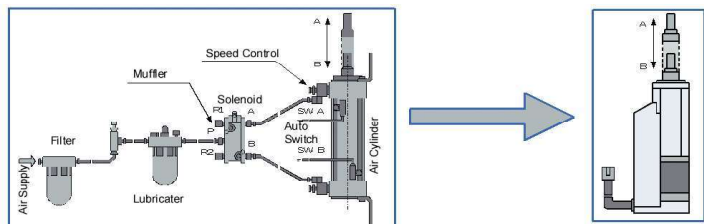
- * Easy Window-based programming
- * Programming with jog and data entry
- * Download & Upload functions
- * Actual movement result analysis function
- * Able to program position parameter/data and sequence program for CTC pendants.
- * Contains all software in one package (TBVT, MVST, CTA-1EX and CTCTOOL)



FREE Download at:
www.miraiintertech.com

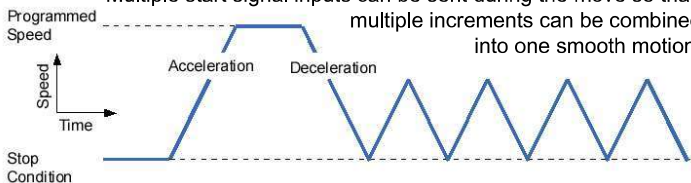
Mechatronics Cylinder Application Notes

Much Simpler Than An Air Cylinder

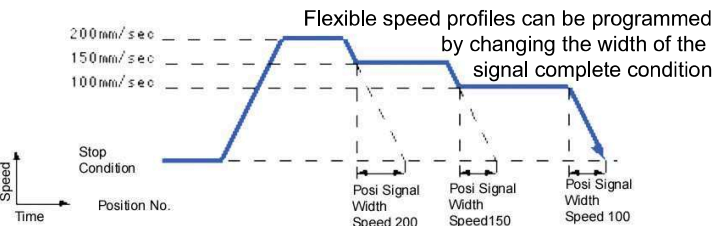


Incremental Movement

Incremental (relative) motions can be programmed for palletizing, etc. Multiple start signal inputs can be sent during the move so that multiple increments can be combined into one smooth motion.

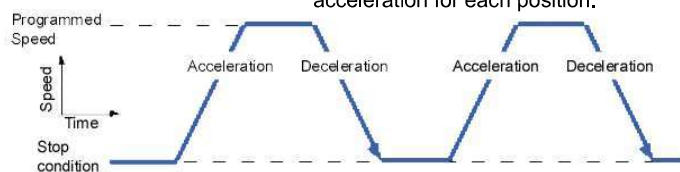


Speed Profile



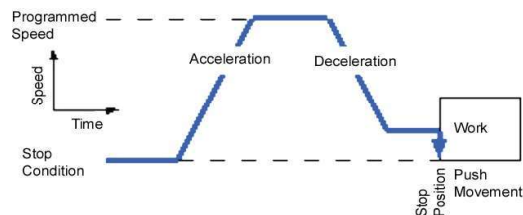
Standard Positioning

Positioning can be programmed with speed and acceleration for each position.



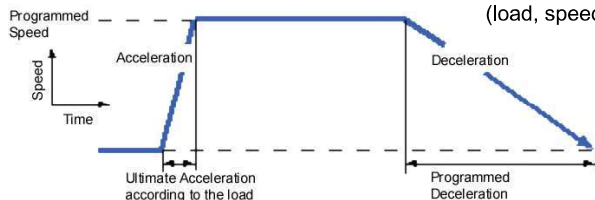
Push Force Mode

Push force mode can be programmed with force data entry (% of max force)



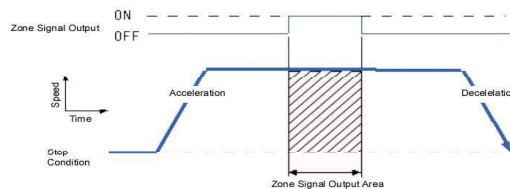
Auto Maximum Acceleration

Ultimate acceleration can be set for the condition (load, speed) automatically and then the deceleration can be programmed.



Zone signal output

The Mechatronics Cylinder can be programmed to energize an output when it is in the desired zone. Duration of the signal can be specified.



PC-CTC Tool Kit (TBVST-CTC-EN-SET) US\$275

PLC Board (CTC-67-EN-SET) Kit price US\$395

RP9050-010: ADP cable

ADP-2-4: Connector junction

RP9041-010: SIO Cable

Software

ADP-1: 232/485 Adaptor

FEATURES

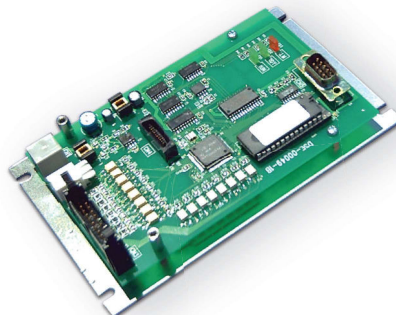
- Easy programming by CTCTOOL software
- Program up to 100 steps, each with timers, I/O conditions, etc.
- Connect up to 8 actuators
- Control up to 5 axes per step
- 6 inputs/6 outputs for users

BENEFITS

- Reduce I/O using pre-made cables
- In complex systems the PLC programming can be simplified by allowing the CTC-67 to execute subroutines selected by the PLC.
- For simple systems (lab scale, bench top), the CTC-67 can be the only controller. System elements can be easily controlled through the programmable I/O.
- Debug mode allows the user to run the sequence one step at a time.
- The time monitor function can ensure the sequence is complete in the required time.

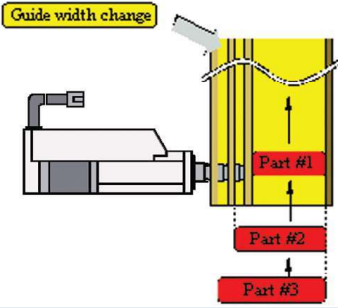
OPTIONAL

USB-RS485-1800-9050
USB Programming Cable For PC

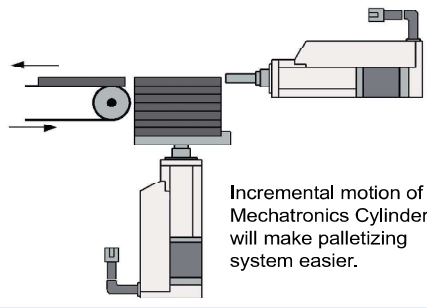




Guide Rail Width Change



Palletizing / De-Palletizing

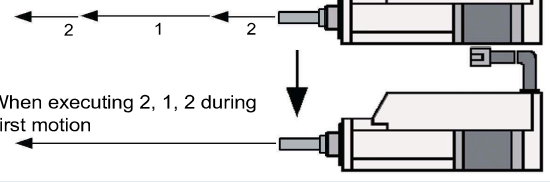


Incremental Motions

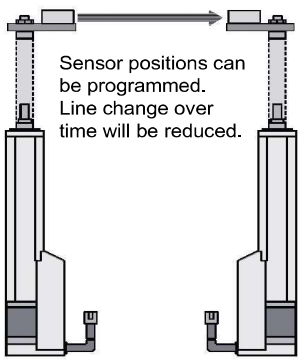
Incremental motions can be used to make flexible stroke motion as follows:

- Increment 1: 10mm
- Increment 2: 5mm

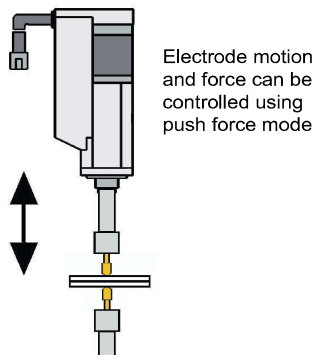
A: When executing 2, 1, 2 respectively



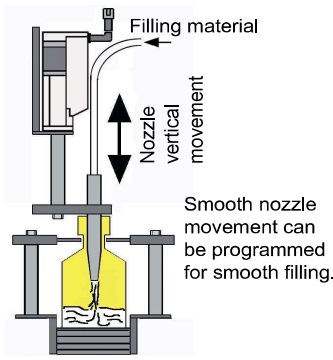
Sensor Position Change



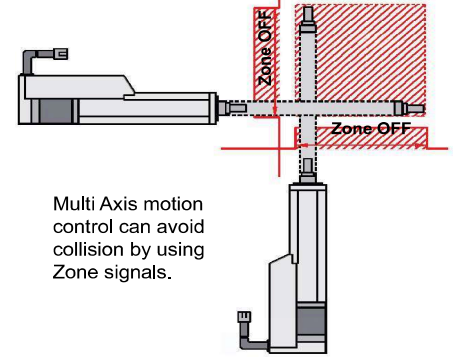
Welder Vertical Motion



Filling Nozzle Position

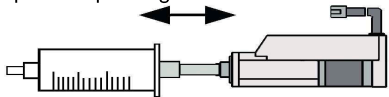


Collision Avoidance By Zone Signals



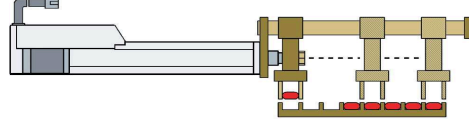
Reciprocating Pump

Pumps can be programmed with volume stroke, acceleration for smooth and high speed dispensing



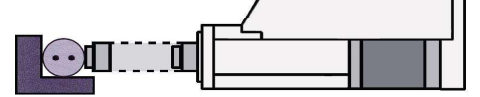
Palletizing P&P

Increment function will make palletizing P&P system programming easier.

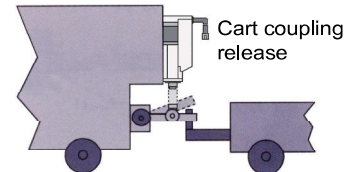
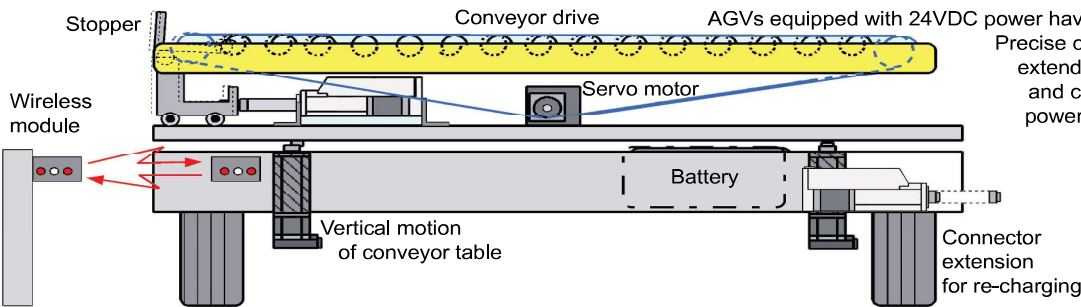


Fluorescent Lamp Clamping

Delicate objects such as light bulbs can be clamped using adjustable push force.

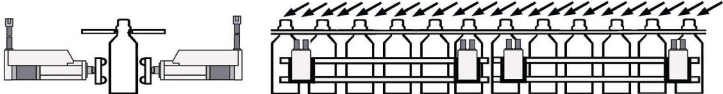


AGV Operations

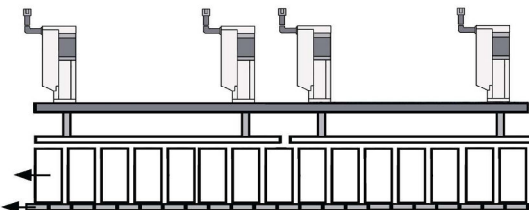


Bottle / Can Conveyor Guide

1. For plastic bottle high pressure blower conveyor



2. Height guide for can conveyor



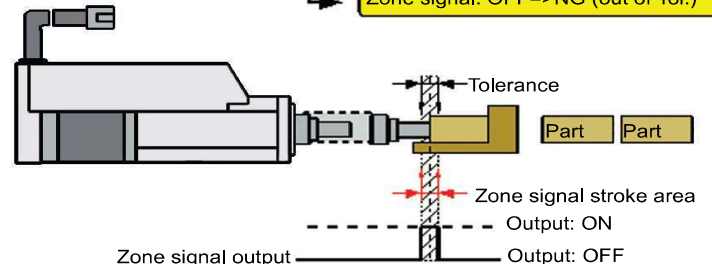
Zone Signal Inspection

If the Mechatronics Cylinder is programmed with zone signal with parts size tolerance, parts size inspection can be done.

Push force movement

Zone signal: ON=>Good (in Tolerance)

Zone signal: OFF=>NG (out of Tol.)





Center carry type



The low-cost PPU line is suited for a wide range of pick and place applications. Simple structure and mounting make it easy to design in and install. The PPU provides smooth cam motion at high speed with low cost. Center, left, right, or overhead carry options are available.

CAM MODEL SPECIFICATIONS

| Models | Type | Center carry | Side carry | Linear guide | Model No. | Strokes (X x Z) mm | Application Range | | Dynamic repeatability | Motor Power W | Homing sensor (Photo micro sensor) |
|---------------|-------------------------|--------------|------------|--------------|-----------|--------------------|---------------------------|------------------|-----------------------|---------------|------------------------------------|
| | | | | | | | Load incl. fixtures (Kgs) | Cycle time (sec) | | | |
| Economy | | ○ | | ○ | X6092 | 80 x 20 | 0.9 0.3 | 1.4 1.0 | +/- 0.015 | 25 | Accessory |
| | | | ○ | ○ | X6072L | | | | | | |
| | | | ○ | ○ | X6072R | | | | | | |
| Standard | | ○ | | ○ | X6091 | 100 x 30 | 1.5 0.3 | 2.1 1.2 | +/- 0.015 | 25 | Accessory |
| | | | ○ | ○ | X6071L | | | | | | |
| | | | ○ | ○ | X6071R | | | | | | |
| | High rigidity | | ○ | ○ | X6071WL | | | | | | |
| | | | ○ | ○ | X6071WR | | | | | | |
| | High rigidity Over head | | ○ | ○ | X6076WL | | | | | | |
| | | | ○ | ○ | X6076WR | | | | | | |
| | | ○ | | ○ | X6091S | | | | | | |
| | | | ○ | ○ | X6071SL | | | | | | |
| | | | ○ | ○ | X6071SR | | | | | | |
| High rigidity | | ○ | ○ | X6071WSL | | | | | | | |
| | | ○ | ○ | X6071WSR | | | | | | | |
| | High load | | ○ | ○ | X6074HSL | | | | | | |
| | | | ○ | ○ | X6074HSR | | | | | | |
| | High rigidity | | ○ | ○ | X6076WSL | | | | | | |
| | | | ○ | ○ | X6076WSR | | | | | | |
| Semi Long | | ○ | | ○ | X6094 | 160 x 35 | 2.0 0.7 | 2.5 1.6 | +/- 0.015 | 25 | Accessory |
| | | | ○ | ○ | X6074L | | | | | | |
| | | | ○ | ○ | X6074R | | | | | | |
| | | ○ | | ○ | X6094S | | | | | | |
| | | | ○ | ○ | X6074SL | | | | | | |
| | | | ○ | ○ | X6074SR | | | | | | |
| Long | | ○ | | | X6085 | 200 x 50 | 1.5 0.9 | 2.4 2.0 | +/- 0.015 | 40 | Accessory |
| | | | | | | | | | | | |
| Notes | | | | | | * 1 | * 8 | * 2 | * 3 | | |

Side carry type



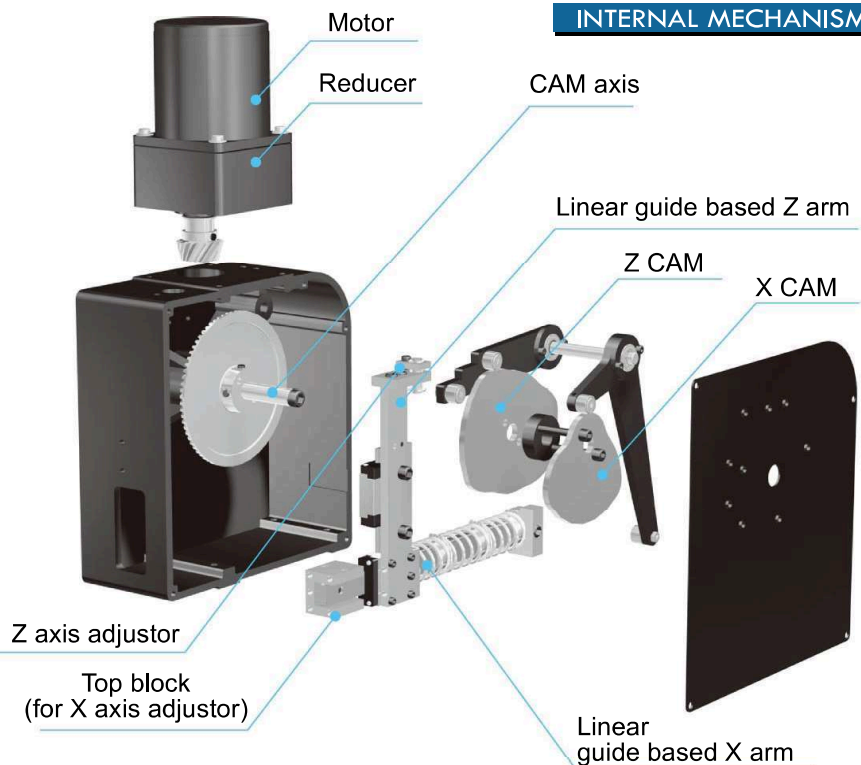
Overhead carry type



- * 1 : Stroke cannot be adjusted after customization.
- * 2 : Standard motor is the induction motor of Oriental motor.
- * 3 : Attached sensors are home photo micro sensor and a CAM sensor.
- * 8 : Top data is max. weight and the min. cycle time for the max. weight. Bottom data is min. cycle time with max. weight. Please check the cycle time and carryable weight graph.
- *** Specifications subject to change without notice.

STEPPER MODEL SPECIFICATIONS

| Models | Model No. | * 1 & 2 Strokes (X x Z) mm | Application | | * 4 Dynamic repeatability | Motor Torque kgf-cm |
|-------------|-----------|-------------------------------|---------------------------|------------------|------------------------------|---------------------|
| | | | Load incl. fixtures (Kgs) | Cycle time (sec) | | |
| Compact | X6303 | 30 x 10 | 0.2 0.1 | 0.6 0.4 | +/- 0.025 | 8.3 |
| | X6305 | 50 x 15 | 0.2 0.05 | 0.74 0.4 | | |
| | X6307 | 70 x 15 | 0.2 0.05 | 0.9 0.5 | | |
| Intelligent | KS8015 | 80 x 13 | 0.1 0.07 | 0.6 0.4 | +/- 0.025 | 16.6 |
| | KS12020 | 120 x 18 | 0.15 0.08 | 0.9 0.5 | | |



- * 1 : X axis stroke cannot be adjusted.
- * 2 : Z axis stroke data is valid stroke. There are about 2mm more to the mechanical end.
- * 3 : Compact type has mech controller with photo sensor and dog as a standard.
- * 4 : Top data is max. weight and the min. cycle time for the max. weight. Bottom data is min. cycle time with max. weight. Please check the cycle time and carryable weight graph.
- *** Specifications subject to change without notice.



Momoco

DSR02-400

EXCEPTIONAL SAFETY FEATURES

INTEGRATED SAFETY FEATURES RESULTING IN LESS SAFETY MEASURES TO PROTECT THE OPERATOR



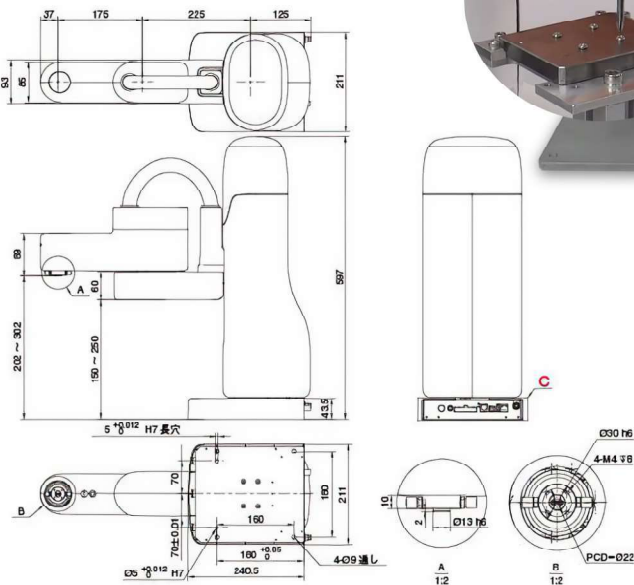
BUILT-IN SENSORS AUTOMATICALLY TURN OFF MOMOCO IF TOUCHED OR OBSTRUCTED

QUICK SPECS

- Model:** DSR02-400-4: Built-in air unit
- Number of axis:** Standard 4 axes
- Arm length:** 400 mm (1st axis (J1): 225 mm, 2nd axis (J2): 175 mm)
- Repeat accuracy:**
 - X-Y plane ± 0.05 mm (*Absolute position accuracy ± 0.2)
 - Up and down ± 0.01 mm
 - Tip rotation part ± 0.2 deg
- Portable mass:** Maximum 2 kg
- Tip rotation allowable moment:**
 - Rated 0.002 kgm²
 - Maximum 0.01 kgm²
- Air equipment:** Suction specifications:
 - Solenoid valve, vacuum generator, vacuum sensor built-in.
 - Chuck specification: Solenoid valve built-in
- Safety specifications:** ISO/TS 15066 compliant
- Behavior editing software:** Software CTCTool
- Teaching:** Tablet PC, PC
- Protection grade:** IP20
- Robot Power Supply:** +24V 8A AC adapter included (AC100 - 240V, 50Hz / 60Hz)

EASILY PROGRAMMED RESULTING IN LESS OPERATOR TRAINING

DIMENSIONS



THIN PROFILE ARM

EASY TO INSTALL ARM ATTACHMENTS

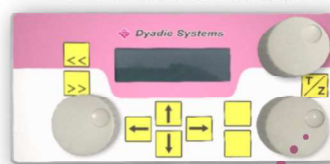


RECOMMENDED MYOTOKU GRIPPERS SOLD SEPARATELY

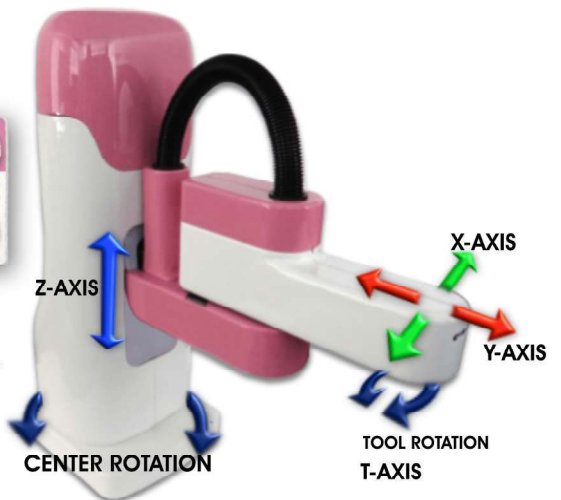
CAN BE FITTED WITH TOOLING FOR MANY APPLICATIONS



TEACH PENDANT PROGRAMMING



AXIS CAN BE CONTROLLED BY JOG HANDLES



CENTER ROTATION

TOOL ROTATION T-AXIS

BUILT IN SERVO AMP

BUILT IN CONTROLLER

**MAXIMUM CARRYING WEIGHT: 2kg
OPERATING RANGE: 400mm**

VERTICAL AXIS

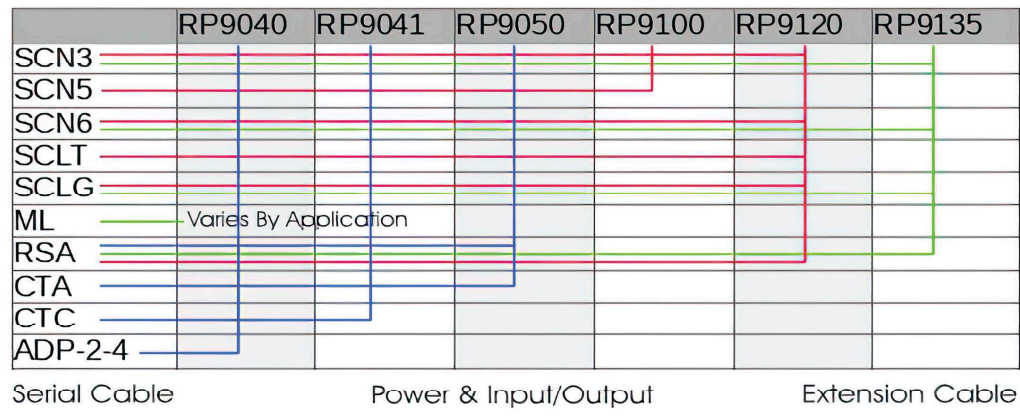
INTEGRATED AIR SOLENOID

NO NEED FOR LUBRICATION

BODY WEIGHT: 14kg

FULLY COMPATIBLE WITH DYADIC ACTUATORS AND SERVO MOTORS

| Group | | Rod Style | | | | | |
|-----------------------|-----------------|--|---|--------------------------------|--|----------|----------|
| Model | | SCN3 | SCN5 | SCN6-020 | SCN6-040 | SCN6-050 | SCN6-060 |
| Type | | Internal Amplifier | | | External Amplifier | | |
| Stroke | | 30 & 50 | 50-300 | 50-300 | 50-300 | 50-300 | 50-300 |
| Max. Thrust (in N) | | 40 | 100 | 200 | 400 | 500 | 650 |
| (in Kgf) | | 4 | 10.2 | 20.4 | 40.8 | 51 | 66.3 |
| Push Mode Max. (in N) | | 30 | 70 | 140 | 280 | 350 | 450 |
| Thrust (in Kgf) | | 4 | 7.1 | 14.2 | 28.5 | 35.5 | 45.9 |
| Repeatability (mm) | | ± 0.01 | | | ± 0.02 | | |
| Backlash (mm) | | 0.3 | | | | | |
| Radial Load Capacity | | | 5-15 N | 10-30 N | 10-30 N | 12-75 N | 12-75 N |
| Rod | | ∅ 12mm 303 SS | ∅ 15mm M10 SS | ∅ 22mm 303 SS M14 pitch 1.5 | | | |
| Program Capacity | | 16 motions with programmable acceleration, velocity, position and more. See below. | | | | | |
| Power Supply | | DC 24V ±10% | | | | | |
| | Current | Max. 2 amps | | | Drive Power Max. 3 amps | | |
| Life | Seals | 6 Months or 2500 km. Run Dustproof Model Only | | | | | |
| | Other Part Life | 3 years after delivery date or 10,000 km operation when applied within published specs. | | | | | |
| I/O | Parallel Input | Names | DC 24V type DI/DO Interface (Connector PIO), Position number (4 bit binary: PC1, PC2, PC4, PC8) Start (CSTR), Axis Movement Interlock (ILK) | | | | |
| | | Current | Max. 4MA /port | | | | |
| | Parallel Output | Names | Position complete (PFIN/INP), Homed Signal (ZFIN), Zone signal (ZONE) Alarm (ALM) DC 24V Digital I/O Interface, PNP Standard (NPN Available) | | | | |
| | | Current | Max. 10MA / port | | | | |
| | Serial Signal | RS-485 +5V, 5G, S+, S- | | | | | |
| Protection Function | | Overspeed, main power over voltage, voltage fault, overload, sensor fault, servo fault, encoder wire disconnected | | | | | |
| Ambience | Temp/Humidity | Operating Temp: 0 - 40° C, Storage Temp: -20 - 60° C | | | | | |
| | Vibration | Operating/Storage humidity: Less than 90% RH, Non-condensing 2.5G / 10G (2 times) | | | | | |
| | Protection | Standard Models: IP-40 equivalent, 'W' Models (oil splash proof): IP-54 equivalent See our full line of IP-67 Actuators for individual specs. | | | | | |
| Weight (kg) | | 1.2 - 1.4 | 1.6 - 3.1 | 1.9-3.4 | 1.9-3.4 | 1.9-3.4 | 1.9-3.4 |
| Functions | | -Positioning with speed & acceleration -Push force mode -Zone signal output -Incremental movement -Suitable Auto Max. Accel. | | | -Stroke limit end set -Home direction set -Servo gain adjust -Complete signal width set | | |





MDC Linear Actuators

For applications that require high force or analog feedback, actuators from the MDC line may be the perfect fit. These actuators are simple to install and operate anywhere.

SPECIFICATIONS

| Specification Summary - MDC Low-Cost DC Actuators | | | |
|---|----------------|----------------|-----------|
| Model | MDC3 | MDC10 | |
| Screw Type | Acme | Acme | Ballscrew |
| Max Speed (mm/s) | 55 | 40 | 65 |
| Max Load (N) | 800 | 7,000 | |
| Stroke Range (mm) | 50 - 300 | 84 - 612 | |
| Potentiometer Option | Y | Y | |
| Hall Effect Option | Y | N | |
| Limit Switch Standard | Y | Y (Adjustable) | |
| Temp. Rating | -25 ~ 65°C | -25~65°C | |
| Duty Cycle | 20% | 25% | |
| Operating Voltage | 12VDC or 24VDC | | |
| Mounting | Clevis-Clevis | | |
| Protection | IP-65 | | |

FEATURES

- DC motor linear shaft motion actuator
- High force with analog feedback
- strokes from 50 - 612mm
- built-in limit switches
- clevis-clevis mounting
- Good environmental protection

INTRODUCTION

- Driven by Piezo-Ceramic resonator
- Quiet vibration
- Repeatable digital feeding vibration
- Provide low amplitude & high frequency vibration

SANCI PIEZO FEEDER SYSTEMS

- No magnetic effect
- No heat generation
- Low power consumption-up to 70% power saving
- Easy frequency/volume adjustment

