

SRL3

Rodless cylinder

Rodless type

ø12·ø16·ø20·ø25·ø32·ø40
ø50·ø63·ø80·ø100

Overview

High load and long service life. Rodless cylinder that can operate at high speeds. Ample variation with sizes available from ø12 to ø100.

Features

Flat cylinder

Flat piston with a structure that could take on the load. High load resistance and non-rotating mechanism.

Seal belt

Sealing performance increased much longer to make the sealing contact linear.

Magnet provided as standard

Switches can be directly mounted on standard types.

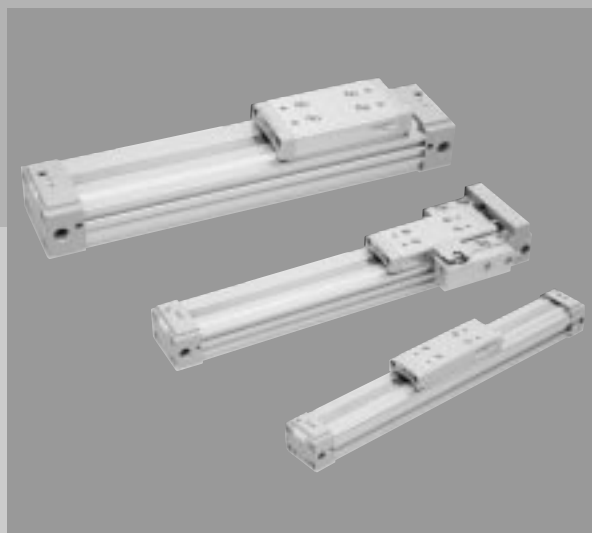
High speed packing seal provided

High speed resistant piston packing seal is used.

Common port

Common port (one end porting), or standard port (both ends porting) can be selected to accommodate cylinder mounting position.

This contributes to downsizing of devices.



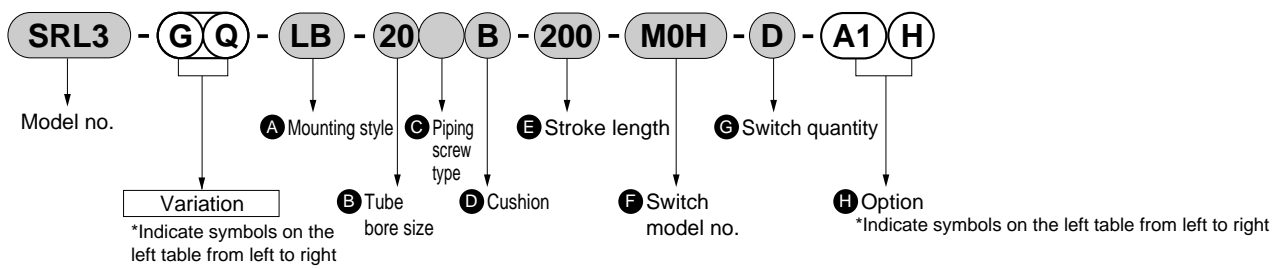
CONTENTS

Series variation	1994
Variation and option selection table	1996
▲ Safety precautions	1998
● Double acting(SRL3)	2004
● Double acting/resin guide(SRL3-G)	2018
● Double acting/position locking(SRL3-Q)	2032
● Double acting/resin guide/position locking (SRL3-GQ)	2042
SRL3 Series option dimensions	2048
Configurations table	2053
● Double acting-full cowling type(SRL3-J)	2057
Configurations table	2073
Selection guide	2074

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

<Example of model number>



Model no.: rodless cylinder

- Variation: Resin guide type, position locking
- A Mounting style : Axial foot type
- B Bore size : $\varnothing 20\text{mm}$
- C Port thread type : Rc thread
- D Cushion : Both sides cushioned
- E Stroke length : 200mm
- F Switch model no. : Reed MOH switch and lead wire 1m
- G Switch quantity : 2
- H Option : Adjustable full-stroke both sides, shock absorber and table mounting thread size up

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder



Safety precautions

Always read this section before starting use.

Refer to Intro 71 for cylinder, and Intro 78 for cylinder switch.

Individual precautions: rodless cylinder SRL3 Series

Design & Selection

1. Common

CAUTION

■ Please watch out when designing intermediate stop circuit.

With a slit rodless cylinder such as the SRL3, some air leaks due to the structure, so braking cannot be controlled with the all ports closed 3-position valve, and it may not be possible to hold the table stop position. Use a double sided pressurized control circuit having a P/A/B connection 3-position valve. If air pressure drops once and is then pressurized again unenergized, the table may move and the origin deviate.

Basic circuit diagram

● Horizontal load

If piping is as shown in Fig. 1, equal pressure is applied on both sides of the piston when stopped, and the table will not pop out when restarting.

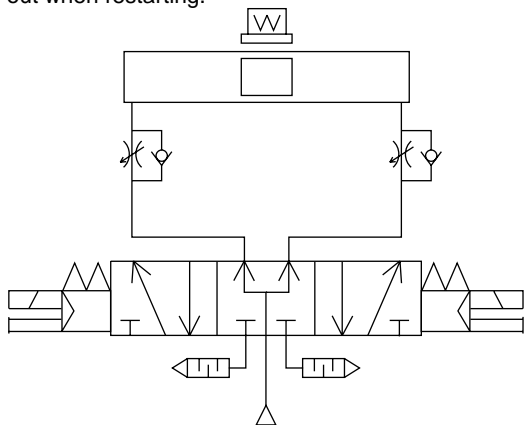


Fig.1

● Vertical load

● If a vertical load is applied as shown in Fig. 2, the table will move in the direction of the load. Thus, install a regulator with check valve to reduce the thrust in the load direction and balance the load.

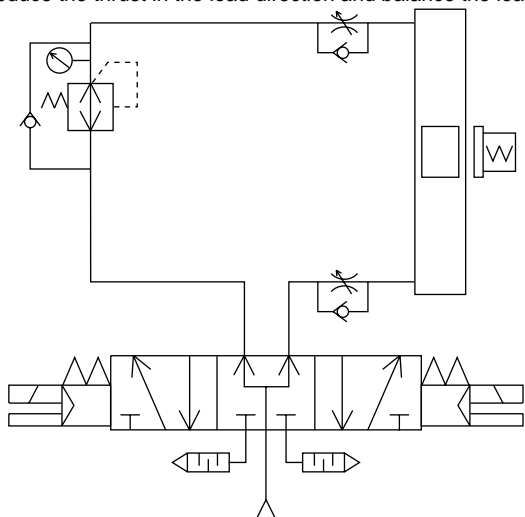


Fig.2

■ With the slit rodless cylinder, such as the SRL3, external air leaks at a level that does not affect speed control.

■ Do not use for applications that require constant pressurization to only one side such as a balancer.

2. Position locking type SRL3-Q

CAUTION

■ Cylinder load factor must be 50% or less. If the load factor is high, the lock may not be released or the lock section could be damaged.

■ When operating with 500mm/s or more, entry speed of position locking mechanism should be 500mm/s or less.

Install an external shock absorber or deceleration circuit, etc. to decelerate.

3. Full cowling type SRL3-J

CAUTION

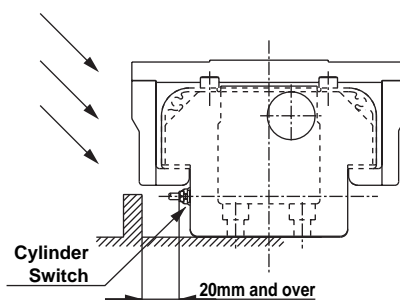
■ Do not use in an environment where it may contact welding spatters, etc. Use the full cowling type super rodless cylinder (SR3-J) in this case.

■ Precautions for full cowling type (SRL3-J)

When installing a wall to keep dirt or coolant away from the device, be sure the wall is nonmagnetic (aluminum, brass, etc.).

For a magnetic material (steel plate, etc.), separate the wall at least 20 mm from the switch edge.

(all bore sizes)

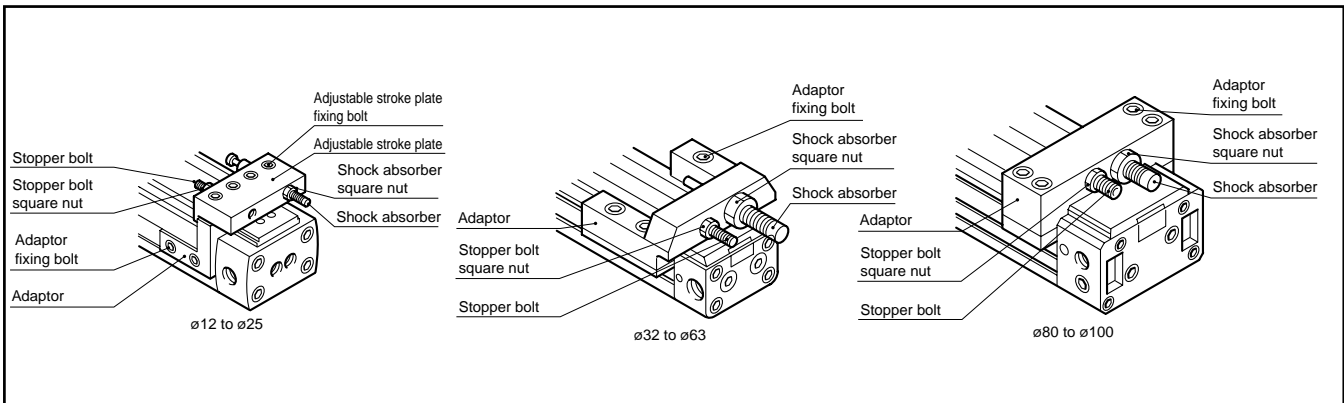


Installation & Adjustment

1. Common

⚠ WARNING

■ How to adjust stroke adjustment unit



(1) Moving the stroke adjustment unit

The stroke adjustment unit is moved by loosening the adapter fixing bolt (adapter fixing bolt and stroke adjustment plate fixing bolt for 12 to 25 mm bore).

(2) Fixing the stroke adjustment unit

After moving the stroke adjustment unit to the required position, tighten and fix the adapter fixing bolt (adapter fixing bolt and stroke adjustment plate fixing bolt for 12 to 25 mm bore) using values in Table 8. If tightened at a lower value, the stroke adjustment unit may deviate.

Table 1 Tightening torque for adapter fixing bolt and stroke adjustment plate fixing bolt

Tightening torque	Adaptor fixing bolt (N/cm)	Adjustable stroke plate Fixing bolt (N/cm)
Model		
SRL3-12/16	100 to 120	50 to 70
SRL3-20	250 to 270	
SRL3-25	520 to 560	250 to 270
SRL3-32	2200 to 2400	-
SRL3-40	4400 to 4800	-
SRL3-50/63	7700 to 8300	-
SRL3-80/100	10000 to 11000	-

(3) Stroke adjustment using stopper bolt

With 12 to 20mm bore, clearance between the table and stroke adjustment plate is small, and fingers may be pinched during adjustment. The stroke must basically be adjusted by moving the stroke adjustment unit.

Loosen the stopper bolt lock nut, turn the stopper bolt, and adjust the stroke.

After adjusting the stroke, tighten and fix the stopper bolt lock nut using values in Table 2.

(4) Adjusting shock absorber

Shock absorber absorbed energy is adjusted by changing the working stroke of the shock absorber.

Adjust the shock absorber working stroke by loosening the shock absorber lock nut and turning the shock absorber. After adjusting, tighten the shock absorber fixing nut with the tightening torque shown below.

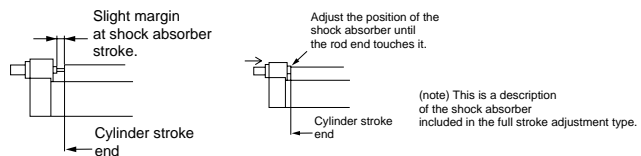
Table 2 Tightening torque of stopper bolt fixing nut, shock absorber fixing nut

Tightening torque	Square nut (N/cm)	Square nut (N/cm)
Model		
SRL3-12/16	110 to 120	130 to 180
SRL3-20	250 to 270	290 to 390
SRL3-25	880 to 950	450 to 600
SRL3-32	2200 to 2400	750 to 1000
SRL3-40	4400 to 4800	2200 to 3000
SRL3-50	7700 to 8300	5500 to 7000
SRL3-63	20000 to 21600	5500 to 7000
SRL3-80/100	21500 to 23500	10000 to 13000

(5) Precautions upon use

● The shock absorber absorbs rated energy with the rated stroke. When the product is shipped, the shock absorber is installed with a slight margin to the stroke at the cylinder stroke limit.

Absorbed energy is smaller than allowable energy absorption for the individual shock absorber, so if rated absorbed energy is required, adjust so the full stroke for the shock absorber is used.



● Allowable energy absorption differs with collision speed, so if collision speed is 2000 mm/s, check that one-third of the maximum energy absorption in Table 3 is not exceeded. If collision speed is 1000 mm/s, check that one-half of the maximum energy absorption is not exceeded.

Table 3 Adjustable full-stroke shock absorber specifications (initial setpoint)

Type type	Absorbed energy (J)	Valid mm stroke (mm)
SRL3-12/16	2.4	5.5
SRL3-20	5.7	7
SRL3-25	10	9
SRL3-32	18	13
SRL3-40	50	16.5
SRL3-50/63	86	21
SRL3-80/100	143	25

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

Rodless type
Rodless cylinder

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

⚠ CAUTION

■ Avoid electrical welding after installing the rodless cylinder.

If the current flows into the cylinder and generates sparks between the dust-proof belt and cylinder tube, the dust-proof belt may be damaged.

■ If a unit with excessive inertia, etc., is moved, the cylinder may be damaged or faulty operation occur. Use only within the allowable range.

■ Do not apply shock or excessive moment on the table.

■ Align before connecting to an load with an external guide mechanism.

● Carefully consider connection (floating) so deviation is absorbed. The longer the stroke, the greater the shaft center may deviate.

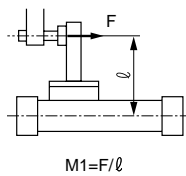
■ Check that moment, including inertia generated when moving or stopping the load, does not exceed the allowable load, or damage may result. Exceeding this value will result in damage. (When the overhang is large)

● If overhang is large and the cylinder is stopped at both ends with the piston, the bending moment functions due to load inertia even within internal cushion energy absorption. If kinetic energy is large and an external cushion, etc., is used, try contact with the work-piece center of gravity when possible.

(When using an external stopper)

● When selecting an external stopper, consider the bending moment generated by cylinder thrust.

● Moment that functions when stopping with external stopper

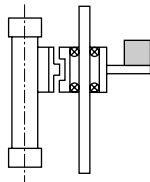


F : Cylinder thrust
 l : Distance from cylinder center to stopper

(When using an external guide)

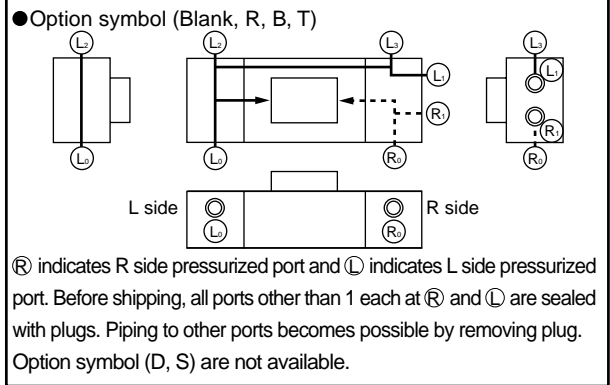
● When an external guide is installed, if the center is not aligned, movement is not smooth and resistance caused by twisting functions as moment.

● Example of guide use

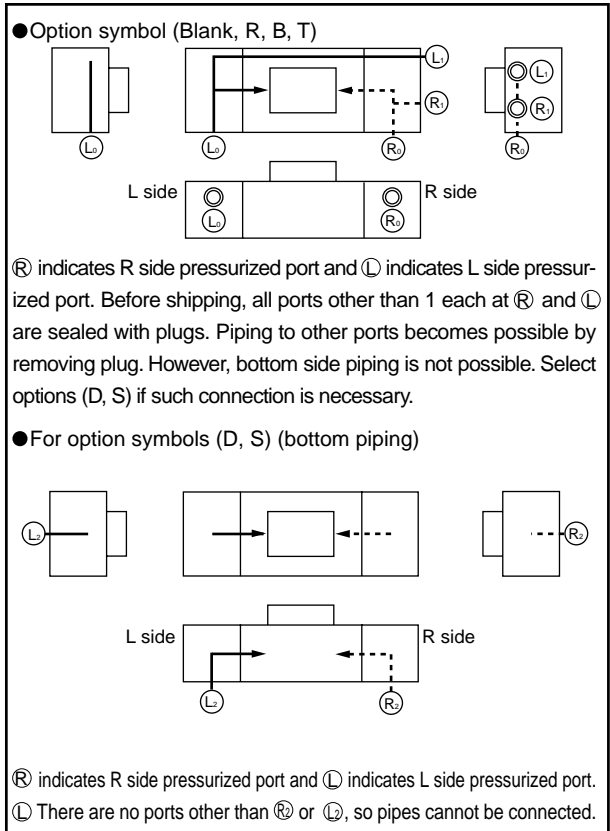


■ Piping port position and operating direction

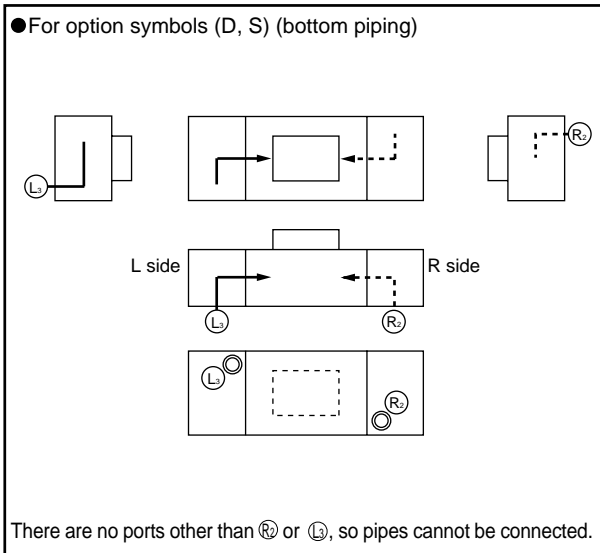
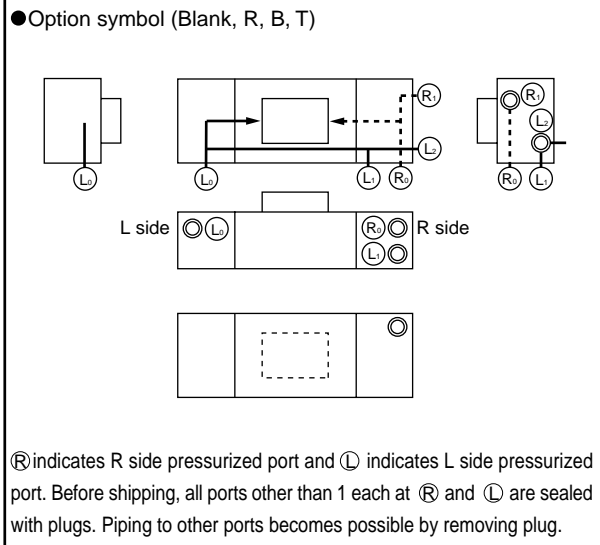
Bore size ø12 to 20.



Bore size ø25 to ø63.

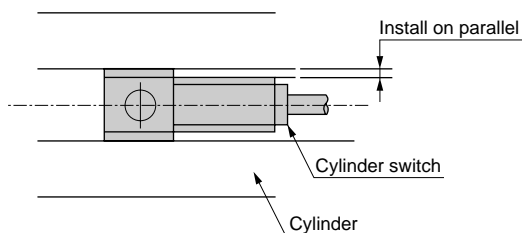


Bore size $\varnothing 80$ and 100.



■CKD shock absorbers are consumables. Replace the shock absorber if energy absorption performance drops or if movement is no longer smooth.

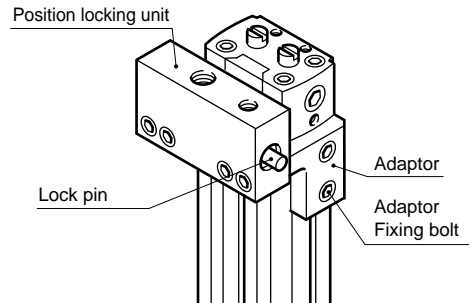
■Mount the switch in parallel to the mounting groove so that force is not applied on the lead wires.



2. Position locking type SRL3-Q

⚠ WARNING

■How to adjust stroke adjustment unit



●Position locking unit can be moved by loosening the adaptor fixing bolt.

Select shock absorber (A, A1, A2) in this case. If the stroke is finely adjusted with the shock absorber, the position locking unit deviates and the position cannot be completely locked. Finely adjust stroke with the adapter fixing bolt.

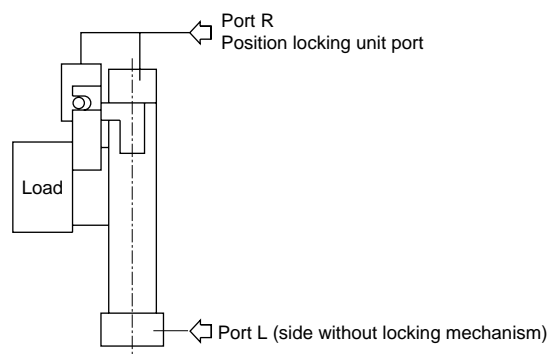
●After moving to the required position, tighten and fix the adapter fixing bolt using the values below. The position locking unit may deviate if the bolt is not tightened to these values.

●Check that the locking mechanism works when a load is set.

Model	Adaptor fixing bolt tightening torque (N•cm)
SRL3-Q-12/16	100 to 120
SRL3-Q-20	250 to 280
SRL3-Q-25	520 to 560
SRL3-Q-32	2200 to 2400
SRL3-Q-40	4400 to 4800
SRL3-Q-50/63	7700 to 8300
SRL3-Q-80/100	10000 to 11000

■Piping

●Piping is required for the position locking unit.



●Branch pipe to the rodless cylinder R side using a tee union, etc., and pipe to the position locking unit with similar piping.

●If the piping on the side where the locking mechanism is provided is long and thin, or if the speed controller is separated from the cylinder port, the exhaust speed will drop and it may take longer for the lock to be applied. This may also occur if the silencer on the valve's EXH port is clogged.

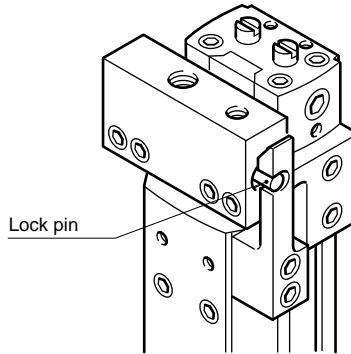
■Supply pressure above the minimum working pressure to the position locking unit port.

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

■Unlocking manually

- Release the position locking pin with a rod-shaped object. Supply pressure to port L to check that load is not applied to the locking mechanism before releasing the lock. If both ports R and L are exhausted and pressure is supplied to port R while the piston is locked, the lock is released and the table may suddenly move, creating a hazard.



■Valves

- If the cylinder is held while pressure is applied on the locking mechanism, the locking pin may dislocate and cause danger. Do not use a 3-position closed center or P/A/B connection valve.
- If back pressure is applied while locked, the lock may be released. Use a discrete valve, or use an individual exhaust manifold.
- Dropping speed is increased with a quick exhaust valve, the cylinder may move faster than the locking pin and prevent proper release. Do not use quick exhaust valves for position locking cylinders.

3. Full cowling type SRL3-J

⚠ CAUTION

- Take care not to catch hands or fingers when adjusting the switch.
- Avoid installing in reverse. Dirt may accumulate or operation be inhibited by accumulated fluid.

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

During Use & Maintenance

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

1. Position locking type SRL3-Q

⚠ WARNING

- For safety purposes, prevent the load from dropping under its own weight during maintenance.
- When using the cylinder with air cushion, if the air cushion needle on the lock mechanism side is too tight, the piston could bounce at the stroke end causing the lock lever and lock pin to collide and damage the locking mechanism. If the air cushion needle is opened too far, the piston could spring back at the stroke end and cause similar damage. Adjust the air cushion needle so that the piston does not bounce. When stopping with an external shock absorber, etc., adjust in the same way to prevent bouncing. Regularly (once or twice a year) check that the holding section is not damaged by this symptom.

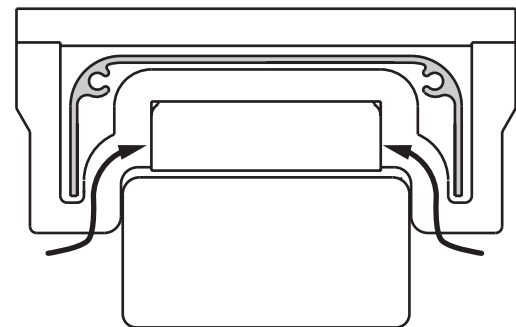
⚠ CAUTION

- If the locking mechanism has been manually operated, check and then return it manually to the original position. Do not use a manual override except during adjustment.
- Release the lock when installing or adjusting the cylinder. The lock could be damaged if the cylinder is installed while the lock is applied.
- Do not use multiple cylinders synchronized. Do not move more than one workpiece using more than two cylinders with position locking mechanism simultaneously. One of the cylinders may become unable to unlock.
- Use the speed control valve with meter-out control. Locks may not be released during meter-in control.
- Always use up to the stroke end of the side with the lock. If the cylinder's piston does not reach the stroke end, the lock may not be applied or may not be released.
- Apply grease to sliding section of lock lever periodically.

2. Full cowling type SRL3-J

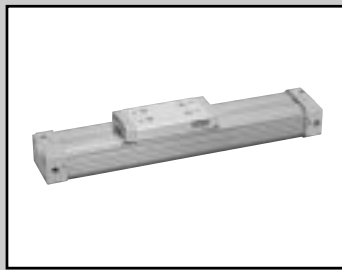
⚠ CAUTION

- Suspended particles such as fiber, feathers, or powder may pass through the table adapter passage under the cover and adhere to the cylinder, leading to operation faults.
- If coolant (oil) or cutting chips scatter with force, or if they scatter from an inclined direction, provide another cover on the cylinder and sides, etc.
- Do not let particles get stuck in the clearance of 2 to 3mm between the sliding section(table adaptor) and the cover.
 - Regularly remove particles on top of the cover and inside the cover. The product may be damaged if this is left as is.
 - This product provides clearance under the cover for passing the table adapter through. Therefore, there is a risk of particles entering the cover.



<Simplified view of entry path>

- Do not get on the cover. It could break.



Rodless cylinder

SRL3 Series

● Bore size : $\varnothing 12, \varnothing 16, \varnothing 20, \varnothing 25, \varnothing 32$
 $\varnothing 40, \varnothing 50, \varnothing 63, \varnothing 80, \varnothing 100$

JIS symbol



Specifications

Descriptions	SRL3									
Bore size mm	$\varnothing 12$	$\varnothing 16$	$\varnothing 20$	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	0.7									
Min. working pressure MPa	0.2		0.1				0.05			
Withstanding pressure MPa	1.05									
Ambient temperature $^{\circ}\text{C}$	5 to 60									
Port size	M5		Rc $1/8$		Rc $1/4$		Rc $3/8$		Rc $1/2$	
Stroke tolerance mm	$+2.0_0$ (up to 1000), $+2.5_0$ (up to 3000), $+3.0_0$ (up to 5000)									
Working piston speed mm/s	50 to 2000 (standard port piping) (note 1)									
Cushion	Air cushion									
Lubrication	Not required (continuously lubricate using turbine oil class 1 ISOVG32 if lubricated.)									

Note 1: Piston speed used with common port piping differs depending on the stroke. Contact CKD for details.

Allowable energy absorption

Bore size (mm)	Cushioned		No cushion	With shock absorber (initial setpoint)	
	Allowable energy absorption (J)	Cushion mm stroke (mm)	Allowable energy absorption (J)	Absorbed energy (J)	Valid mm stroke (mm)
$\varnothing 12$	0.03	14.5	0.003	2.4	5.5
$\varnothing 16$	0.22	19.2	0.007	2.4	5.5
$\varnothing 20$	0.59	22.2	0.010	5.7	7
$\varnothing 25$	1.40	20.9	0.015	10	9
$\varnothing 32$	2.57	23.5	0.030	18	13
$\varnothing 40$	4.27	23.9	0.050	50	16.5
$\varnothing 50$	9.13	24.9	0.072	86	21
$\varnothing 63$	17.4	29.6	0.138	86	21
$\varnothing 80$	40	45.8	0.393	143	25
$\varnothing 100$	67	45.8	0.622	143	25

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
$\varnothing 12$			
$\varnothing 16$			
$\varnothing 20$			
$\varnothing 25$	200,300		
$\varnothing 32$	400,500	5000	1
$\varnothing 40$	600,700		
$\varnothing 50$	800,900		
$\varnothing 63$	1000		
$\varnothing 80$			
$\varnothing 100$			

** The intermediate stroke can be manufactured in 1 mm increments.

M type switch quantity and min. stroke length (mm)

Switch quantity	1		2		3		4		5		6	
Switch model no.	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H
Bore size (mm)												
$\varnothing 12$	10	10	30	45(70)	60	90(120)	90	135(170)	120	180(220)	150	225(270)
$\varnothing 16$	10	10	30	45(70)	60	90(120)	90	135(170)	120	180(220)	150	225(270)
$\varnothing 20$	10	10	30	45(70)	60	90(120)	90	135(170)	120	180(220)	150	225(270)
$\varnothing 25$	10	10	30	45(70)	60	90(120)	90	135(170)	120	180(220)	150	225(270)
$\varnothing 32$	10	10	30	45	60	90	90	135	120	180	150	225
$\varnothing 40$	10	10	30	45	60	90	90	135	120	180	150	225
$\varnothing 50$	15	15	30	45	60	90	90	135	120	180	150	225
$\varnothing 63$	15	15	30	45	60	90	90	135	120	180	150	225
$\varnothing 80$	25		50		100		150		200		250	
$\varnothing 100$	25		50		100		150		200		250	

Note: The minimal stroke for full stroke adjustment models with switches are shown in ().

T type switch quantity and min. stroke length (mm)

Switch quantity	1		2		3		4		5		6	
Switch model no.	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H
Bore size (mm)												
$\varnothing 12$	5	5	45	50(70)	85	100(120)	125	150(170)	165	200(220)	205	250(270)
$\varnothing 16$	5	5	45	50(70)	85	100(120)	125	150(170)	165	200(220)	205	250(270)
$\varnothing 20$	5	5	45	50(70)	85	100(120)	125	150(170)	165	200(220)	205	250(270)
$\varnothing 25$	10	10	45	50(70)	85	100(120)	125	150(170)	165	200(220)	205	250(270)
$\varnothing 32$	10	10	45	50	85	100	125	150	165	200	205	250
$\varnothing 40$	10	10	45	50	85	100	125	150	165	200	205	250
$\varnothing 50$	10	10	45	50	85	100	125	150	165	200	205	250
$\varnothing 63$	10	10	45	50	85	100	125	150	165	200	205	250
$\varnothing 80$	15	15	45	50	85	100	125	150	165	200	205	250
$\varnothing 100$	15	15	45	50	85	100	125	150	165	200	205	250

Note: The minimal stroke for full stroke adjustment models with switches are shown in ().

Switch specifications (M type switch)

(1) 1color /2 color display

Descriptions	Proximity 2 wire		Proximity 3 wire		
	M2V and M2H	M2WV (2 color indicator type)	M3H/M3V	M3PH/M3PV (Custom order)	M3WV
Applications	PLC		PLC, relay, IC circuit or small solenoid valve		
Output method	-		NPN output	PNP output	NPN output
Power voltage	-		4.5 to 28 VDC		10 to 28 VDC
Load voltage	10 to 30 VDC		30 VDC or less		
Load current	5 to 30mA		200mA or less	100mA or less	150mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Yellow LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	0.05mA or less	10μA or less
Descriptions	M0V and M0H		Reed 2 wire		
			M5V and M5H		
Applications	PLC, relay		PLC, relay, IC circuit (w/o lamp), serial connection		
Power voltage	-		-		
Load voltage	12/24 VDC	110 VAC	5/12/24 VDC		110 VAC or less
Load current	5 to 50mA	7 to 20mA	50mA or less		20mA or less
Light	LED (ON lighting)		Without indicator light		
Leakage current			0mA		

Note 1: For M0* switch, if load current is within 7 to 20mA, this switch can be used with 24 VAC and 48 VAC.

Note 2: Refer to Ending 1 for specifications of other switches.

Switch specifications (T type switch)

● 2 Color indicator type

Descriptions	Proximity 2 wire		Proximity 3 wire	
	T2YH/T2YV	T2WH/T2WV	T3YH/T3YV	T3WH/T3WV
Applications	PLC		PLC, relay	
Output method	-		NPN output	NPN output
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA		50mA or less	
Light	Red/green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

● Strong magnetic field proof

Descriptions	Proximity switch	
	T2YD and T2YDT	
Applications	PLC	
Light	Red/green LED (ON lighting)	
Load voltage	24 VDC ±10%	
Load current	5 to 20mA	
Internal voltage drop	6V or less	
Leakage current	1.0mA or less	

Cylinder weight

Unit: kg

Bore size (mm)	Weight when stroke length is 0mm			Weight per switch (including bracket)	Additional weight per St=100mm
	Basic type (00)	Foot type			
		(LB)	(LB1)		
ø12	0.24	0.25	0.26	0.02	0.10
ø16	0.32	0.33	0.35		0.13
ø20	0.52	0.54	0.58		0.18
ø25	1.0	1.1	1.1		0.28
ø32	1.5	1.6	1.7		0.36
ø40	2.4	2.5	-		0.53
ø50	3.5	3.6	-		0.75
ø63	6.1	6.4	-		1.11
ø80	18.4	19.0	-		2.32
ø100	26.2	27.2	-		3.38

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

How to order

Without switch



With switch



A Mounting style
Note 1

B Bore size

C Port thread type

D Cushion

E Stroke length

F Switch model no.
Note 3

G Switch quantity

H Option
Note 4, Note 5
Note 6, Note 7
Note 8

Note on model no. selection

Note 1: When bore size 12, 16, 20, 25, 32 and option symbol "R" and "T" is selected, mounting style will be "00" or "LB1".

(Mounting style "LB" is not available for option symbol "R" and "T" because it can not be piped.)

Note 2: Refer to page 2004 for minimum stroke with switch.

Note 3: Switches not listed on option "F" are also available. Refer to Ending 1 for more details (custom order)

Note 4: The "*" mark on L* and N* indicates the quantity of sets. If 2 sets are required, fill in "L2" for LB and "N2" for LB1. 2 pcs./set

Note 5: Refer to dimensions on page 2026 to 2031 for port, cushion needle position indication symbol.

Note 6: Standard models of ø12 to ø15 needs to have their cover removed and full stroke adjustment mounted using a plate nut afterwards.

"A3" is a option that will have a plate nut for mounting installed beforehand so that it can be mounted afterwards without removing the cover.

Note 7: Thread size will be M4 for ø12 and ø16, and thread size will be M5 for ø20 when "H" is selected.

Note 8: Refer to "Optional combination table" on the following page for available combinations.

Note 9: Copper and PTFE free as standard.

<Example of model number>

SRL3-00-12B-200-M0H-R-B

Model: Rodless cylinder

- A** Mounting style : Basic type
- B** Bore size : ø12mm
- C** Port thread type : Rc thread
- D** Cushion : Both sides cushioned
- E** Stroke length : 200mm
- F** Switch model no. : Reed switch M0H and lead wire 1m
- G** Switch quantity : 1 on rod end
- H** Option : Port position F, cushion needle position B

Symbol	Descriptions
A Mounting style	
00	Basic type
LB	Axial foot type
LB1	Axial foot type

B Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

C Port thread type	
Blank	Rc thread
N	NPT thread (ø20 and over) (custom order)
G	G thread (ø20 and over) (custom order)

D Cushion	
B	Both sides cushioned
R	R side cushioned
L	L side cushioned
N	No cushion

E Stroke length (mm)		
Bore size	Stroke length Note 2	Custom stroke length
ø12 to ø100	1 to 5000	By 1 mm increment

F Switch model no.				
Lead wire	Lead wire	Contact	Indicator	Lead wire
Axial	Radial			
M0H*	M0V*	Reed	1 color indicator type	2-wire
M5H*	M5V*		Without indicator light	
M2H*	M2V*		1 color indicator type	
-	M2WV*	Proximity	2 color indicator type	2-wire
M3H*	M3V*		1 color indicator type	3-wire
-	M3WV*		2 color indicator type	
M3PH*	M3PV*		1 color indicator type (custom order)	3-wire
T2WH*	T2WV*		2 color indicator type	2-wire
T2YH*	T2YV*			
T3WH*	T3WV*			
T3YH*	T3YV*			
T2YD*	-	Strong magnetic field proof (AC magnetic field dedicated)	2-wire	
T2YDT*	-			

*Lead wire length	
Blank	1m (standard)
3	3m (option)
5	5m (option)

G Switch quantity	
R	One on R side
L	One on L side
D	2
T	3
4	4 pieces (fill in switch quantity if 4 or more switches are required.)

H Option											
Bore size(ø)		12	16	20	25	32	40	50	63	80	100
A	Adjustable full-stroke R end only, with shock absorber	●	●	●	●	●	●	●	●	●	●
A1	Adjustable full-stroke L end only, with shock absorber	●	●	●	●	●	●	●	●	●	●
A2	Adjustable full-stroke bracket retrofitting	●	●	●	●	●	●	●	●	●	●
A3	Floating joint	●	●	●	●						
Y	Thin floating joint	●	●	●	●	●	●	●	●	●	●
Y1	Intermediate support bracket (00, LB)	●	●	●	●	●	●	●	●	●	●
L*	With intermediate support bracket (LB1)	●	●	●	●	●	●	●	●	●	●
N*	C mount bracket	●	●	●	●	●	●	●	●	●	●
C	Table mounting thread size up	●	●	●	●	●	●	●	●	●	●
H	Height adjustment plate	●	●	●	●	●	●	●	●	●	●
U		●	●	●	●	●	●	●	●	●	●
Blank	: F (standard)	●	●	●	●	●	●	●	●	●	●
R	: R (common port)	●	●	●	●	●	●	●	●	●	●
	: F	●	●	●	●	●	●	●	●	●	●
	: B	●	●	●	●	●	●	●	●	●	●
	: D	●	●	●	●	●	●	●	●	●	●
B	: R (common port)	●	●	●	●	●	●	●	●	●	●
	: F	●	●	●	●	●	●	●	●	●	●
	: B	●	●	●	●	●	●	●	●	●	●
	: D	●	●	●	●	●	●	●	●	●	●
T	: R (common port)	●	●	●	●	●	●	●	●	●	●
	: F	●	●	●	●	●	●	●	●	●	●
	: B	●	●	●	●	●	●	●	●	●	●
	: D	●	●	●	●	●	●	●	●	●	●
S	: D	●	●	●	●	●	●	●	●	●	●
	: F (common port)	●	●	●	●	●	●	●	●	●	●
X	: F	●	●	●	●	●	●	●	●	●	●
	: F	●	●	●	●	●	●	●	●	●	●

Option combination table

● : Combination available ■ : Combination not available

Option	Option																		
	Symbol	A	A1	A2	A3	Y	Y1	L*	N*	C	H	U	Blank	R	B	T	D	S	X
Port position and cushion needle position F (common port)																			
Port position D, cushion needle position D																			
Port position D, cushion needle position F																			
Port position R, cushion needle position B (common port)																			
Port position F, cushion needle position B																			
Port position R, cushion needle position F (common port)																			
Port position F, cushion needle position F (standard)																			
Height adjustment plate																			
Table mounting thread size up																			
C mount bracket																			
Intermediate support bracket (LB1)																			
Intermediate support bracket (00, LB)																			
Thin type floating joint																			
Floating joint																			
Adjustable full-stroke bracket retrofitting																			
Adjustable full-stroke L end only, with shock absorber																			
Adjustable full-stroke R end only, with shock absorber																			
Adjustable full-stroke both ends, with shock absorber																			

Note 1: Some combinations are not available depending on bore size. Confirm the conditions of options of **H** "How to order" on the previous page.

Note 2: LB1 can not be used if port position is D. (ø25, ø32)

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

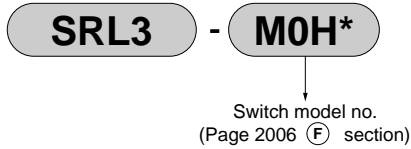
Rodless type
Rodless cylinder

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

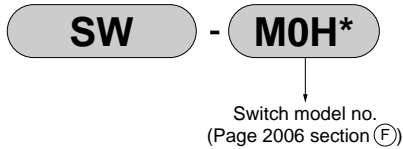
How to order switch

(Refer to page 2053 to 2055 for configurations)

- Switch body + mounting bracket (Note 1)



- Only switch body



*Lead wire length	
Blank	1m (standard)
3	3m (option)
5	5m (option)

*** mark indicates length of lead wire.

- Mounting bracket (Note 2)

- M type switch



- T type switch



- Lead wire holder (Note 3)



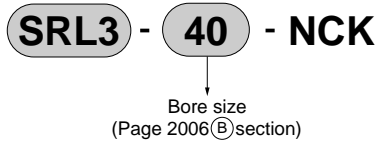
Note 1: Lead wire holder is not included in the switch and its mounting bracket.

When a lead wire holder is necessary, place an order separately.

Note 2: M type switch and T type switch has different brackets.

Note 3: Lead wire holder comes in a set of 10 pcs.

- Discrete shock absorber model no.



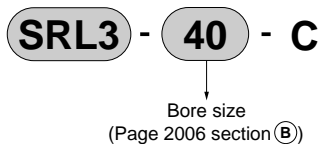
(Square nut 1 pc., hex nut for fixing shock absorber 1pc.)

Square nut for shock absorber for SRL3-40 is a special design.

Applicable shock absorber model No.

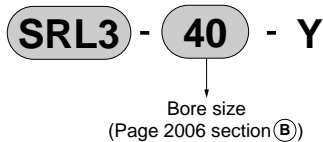
Model	Shock absorber model no.
SRL3-12	NCK-00-0.3-C
SRL3-16	NCK-00-0.3-C
SRL3-20	NCK-00-0.7-C
SRL3-25	NCK-00-1.2
SRL3-32	NCK-00-2.6
SRL3-40	NCK-00-7
SRL3-50	NCK-00-12
SRL3-63	NCK-00-12
SRL3-80	NCK-00-20
SRL3-100	NCK-00-20

- Discrete C mount bracket model no. (for ø12 to ø63)



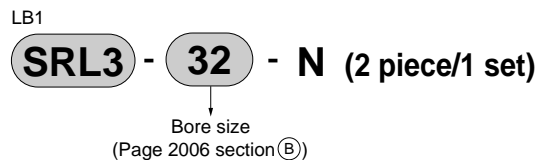
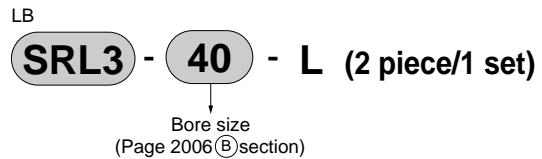
(C mount bracket and mounting bolt 4 pc.)

- Floating joint set model no.

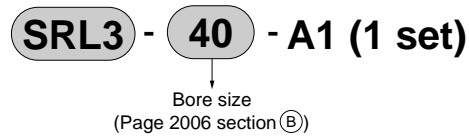


(Mount, mount base, pin, plain washer, pan head machine screw with spring washer and 4 mounting bolts)

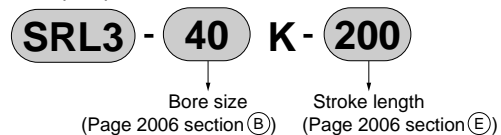
- Discrete intermediate support bracket model no.



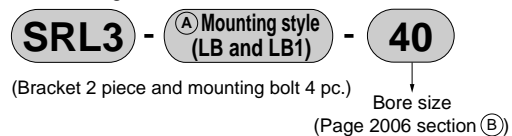
- Adjustable full-stroke kit model no.



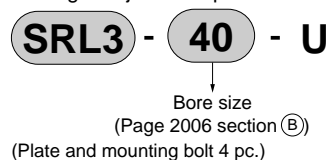
- Repair parts model no.



- Mounting bracket model no.

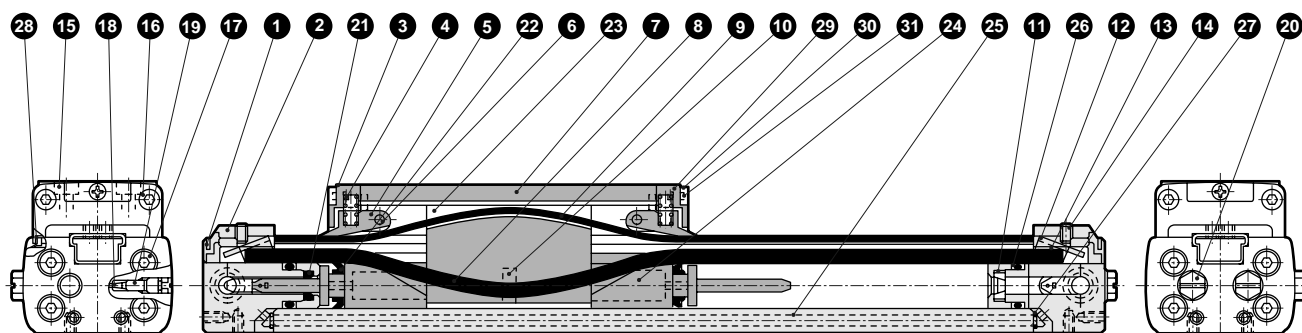


- Height adjustment plate set model no.



Internal structure and parts list

● $\phi 12$ to $\phi 40$.



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Belt cover	Polyamide		18	Needle gasket	Nitrile rubber	
2	Cover (L)	Aluminum alloy	Baking finish	19	Cushion needle	Steel	Galvanizing
3	Table cover	Polyacetal resin		20	Plug ($\phi 12$, $\phi 16$)	Brass	Nickeling
4	Spring	Steel	Blackening		Plug ($\phi 20$ to $\phi 40$)	Steel	Galvanizing
5	Belt tension	Polyacetal resin		21	Cushion packing seal	Urethane rubber	
6	Parallel pin ($\phi 12$ to $\phi 20$)	Stainless steel		22	Piston packing seal	Nitrile rubber	
	Shaft ($\phi 25$ to $\phi 40$)	Steel	Galvanizing	23	Yoke	Aluminum alloy	Alumite
7	Table	Aluminum alloy	Alumite	24	Piston	Polyacetal resin	
8	Seal belt	Urethane rubber		25	Cylinder tube	Aluminum alloy	Alumite
9	Dust-proof belt	Stainless steel + nitrile rubber		26	Cylinder gasket	Nitrile rubber	
10	Magnet	Special alloy	Nickeling	27	O ring for common port	Nitrile rubber	
11	Cushion adapter	Polyacetal resin		28	Dust wiper	Polyacetal resin	
12	Cover (R)	Aluminum alloy	Baking finish	29	2-side adhesive tape		
13	Belt spacer	Steel	Galvanizing	30	Plate	Stainless steel ($\phi 12$ to $\phi 20$)	
14	Hexagon socket set screw	Alloy steel	Galvanizing			Alloy steel ($\phi 25$ to $\phi 40$)	Galvanizing
15	Hexagon socket bolt	Alloy steel	Galvanizing	31	Cross-recessed tapping screw	Stainless steel	
16	Hexagon socket bolt	Stainless steel					
17	Hexagon socket bolt	Alloy steel	Galvanizing				

Repair parts list

Tube Bore size (mm)	Kit No.	Repair parts number
$\phi 12$	SRL3-12K-*	
$\phi 16$	SRL3-16K-*	
$\phi 20$	SRL3-20K-*	8 9 18 21
$\phi 25$	SRL3-25K-*	22 26 27 28
$\phi 32$	SRL3-32K-*	
$\phi 40$	SRL3-40K-*	

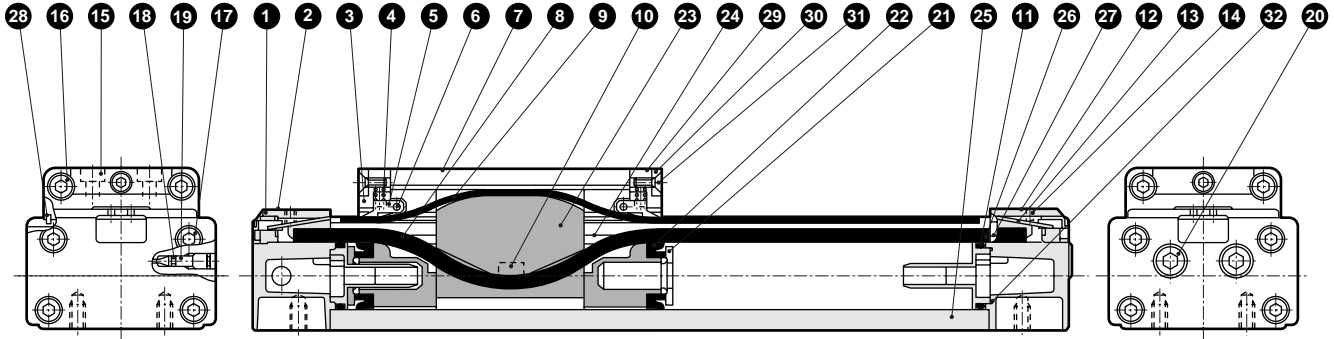
Note: Specify the kit no. when placing an order.
Specify the stroke length for *.

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

Internal structure and parts list

● ø50 to ø63.



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Belt cover	Polyamide		17	Hexagon socket bolt	Alloy steel	Galvanizing
2	Cover (L)	Aluminum alloy	Baking finish	18	Needle gasket	Nitrile rubber	
3	Table cover	Polyacetal resin		19	Cushion needle	Steel	Galvanizing
4	Spring	Steel	Blackening	20	Plug	Steel	Galvanizing
5	Belt tension	Polyacetal resin		21	Cushion packing seal	Urethane rubber	
6	Shaft	Steel	Galvanizing	22	Piston packing seal	Nitrile rubber	
7	Table	Aluminum alloy	Alumite	23	Yoke	Aluminum alloy	Alumite
8	Seal belt	Urethane rubber		24	Piston	Polyacetal resin	
9	Dust-proof belt	Stainless steel + nitrile rubber		25	Cylinder tube	Aluminum alloy	Alumite
10	Magnet	Special alloy	Nickeling	26	Cylinder gasket	Nitrile rubber	
11	Cushion ring	Polyacetal resin		27	O ring for common port	Nitrile rubber	
12	Cover (R)	Aluminum alloy	Baking finish	28	Dust wiper	Polyacetal resin	
13	Belt spacer	Steel	Galvanizing	29	2-side adhesive tape		
14	Hexagon socket set screw	Alloy steel	Galvanizing	30	Plate	Alloy steel	Galvanizing
15	Hexagon socket bolt	Alloy steel	Galvanizing	31	Cross-recessed tapping screw	Stainless steel	
16	Hexagon socket bolt	Stainless steel		32	Cushion ring gasket	Nitrile rubber	

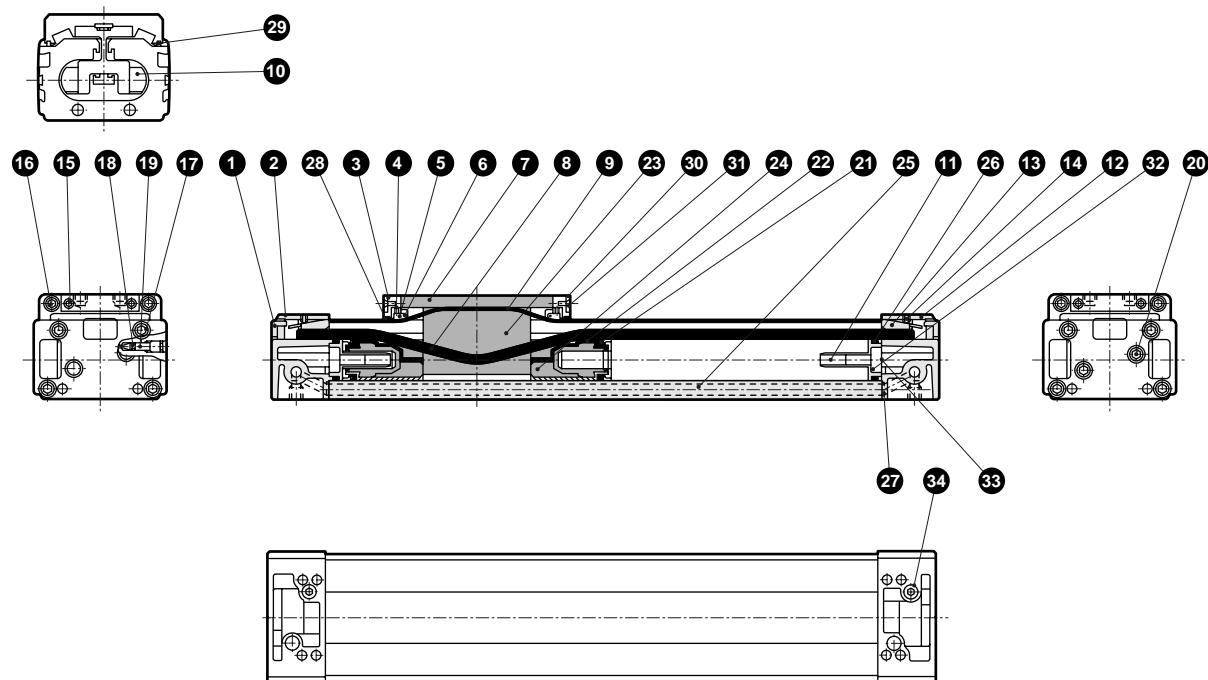
Repair parts list

Tube Bore size (mm)	Kit No.	Repair parts number
ø50	SRL3-50K-*	8 9 18 21 22
ø63	SRL3-63K-*	26 27 28 32

Note: Specify the kit no. when placing an order Specify stroke length for "**".

Internal structure and parts list

● ø80 to ø100.



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Belt cover	Polyamide		18	Needle gasket	Nitrile rubber	
2	Cover (L)	Aluminum alloy	Baking finish	19	Cushion needle	Steel	Galvanizing
3	Table cover	Polyacetal resin		20	Plug	Steel	Galvanizing
4	Spring	Steel	Blackening	21	Cushion packing seal	Urethane rubber	
5	Belt tension	Polyacetal resin		22	Piston packing seal	Nitrile rubber	
6	Shaft	Steel	Galvanizing	23	Yoke	Aluminum alloy	Alumite
7	Table	Aluminum alloy	Alumite	24	Piston	Polyacetal resin	
8	Seal belt	Urethane rubber		25	Cylinder tube	Aluminum alloy	Alumite
9	Dust-proof belt	Stainless steel + nitrile rubber		26	Cylinder gasket	Nitrile rubber	
10	Magnet	Special alloy	Nickeling	27	O ring for common port	Nitrile rubber	
11	Cushion ring	Polyacetal resin		28	Felt (1)	Wool	
12	Cover (R)	Aluminum alloy	Baking finish	29	Felt (2)	Wool	
13	Belt spacer	Steel	Galvanizing	30	Plate	Alloy steel	Galvanizing
14	Hexagon socket set screw	Alloy steel	Galvanizing	31	Cross-recessed tapping screw	Stainless steel	
15	Hexagon socket bolt	Alloy steel	Galvanizing	32	Cushion ring gasket (1)	Nitrile rubber	
16	Hexagon socket bolt	Stainless steel		33	Cushion ring gasket (2)	Nitrile rubber	
17	Hexagon socket bolt	Alloy steel	Galvanizing	34	Plug	Steel	Galvanizing

Repair parts list

Tube Bore size (mm)	Kit No.	Repair parts number
ø80	SRL3-80K-*	8 9 18 21 22 26
ø100	SRL3-100K-*	27 28 29 32 33

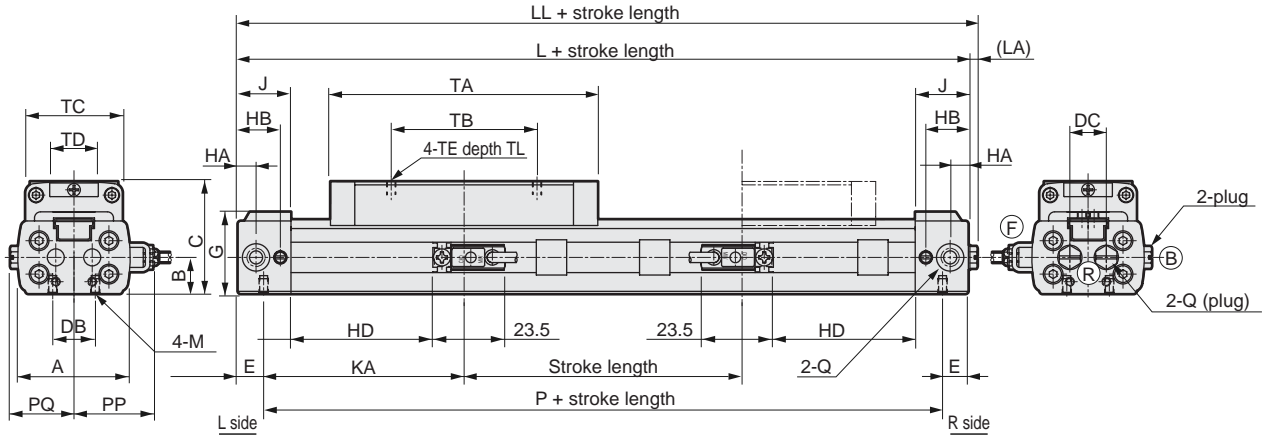
Note: Specify the kit no. when placing an order Specify stroke length for "**".

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

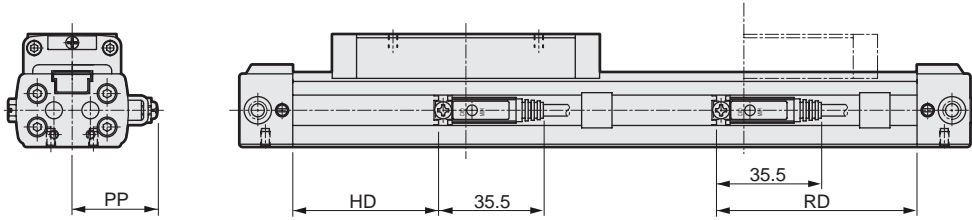
Rodless type
Rodless cylinder

Dimensions (ø12 to ø20)

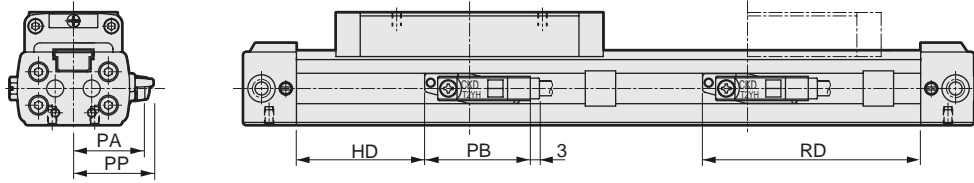
● SRL3 with cylinder switch SRL3-**-***-***-M*V*
(Radial lead wire)



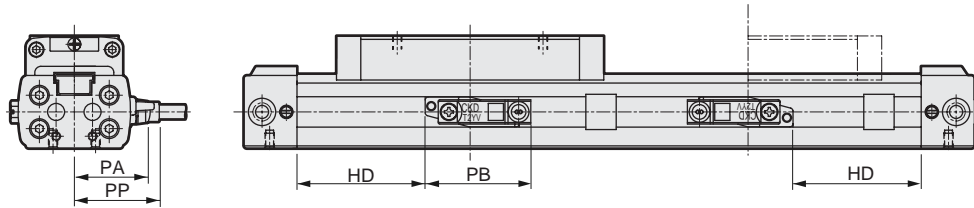
● SRL3 with cylinder switch SRL3-**-***-***-M*H*
(Axial lead wire)



● SRL3-**-***-***-T*H with cylinder switch (T*W, T*Y or T2YD)



● SRL3-**-***-***-T*V with cylinder switch (T*W and T*Y)



RD: Max. sensitive position HD: Max. sensitive position

Symbol	A	B	C	DB	DC	E	G	HA	HB	J	KA	L	LL	LA	M	P	PQ	Q	TA	TB	TC	TD	TE
ø12	33	10.5	33	10	11	8.5	24	6	14	17.5	59.5	136	139	3	M3 depth 5	119	19	M5	81	42	29	13	M3 depth 5
ø16	37	12	37	14	12	8.5	27	6	14	17.5	66	149	152	3	M3 depth 5	132	21	M5	88	48	32	15	M3 depth 5
ø20	44	14	42	16	16	10.5	31	8.5	18.5	22	74	169	171.5	2.5	M4 depth 6.5	148	24.5	Rc ¹ / ₈	100	60	38	18	M4 depth 6

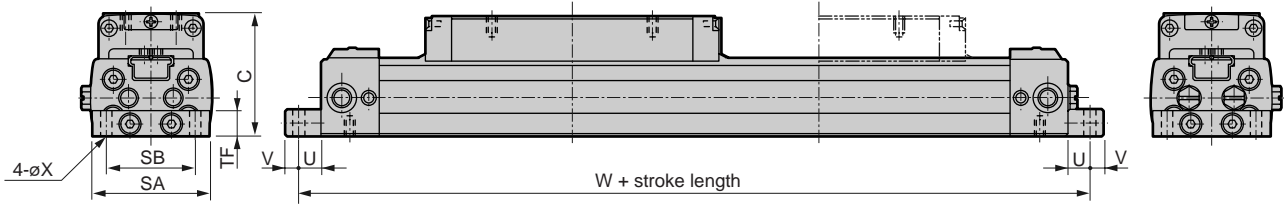
Symbol	With switch																
	HD			RD			PA	PB			PP						
Bore size (mm)	M*	T*Y*	T*W	M*	T*Y*	T*W		T*Y*	T2YD	T*W*	M*V	M*H	T*YV	T*YH	T2YD	T*WV	T*WH
ø12	40.5	36	32	60.5	65	69	24.3	35	34	33.5	24.5	24.5	26	23	28.4	20.7	17.2
ø16	47	42	38	67	72	76	26.3	35	34	33.5	26.5	26.5	28	25	30.4	22.7	19.2
ø20	52.5	48	44	72.5	77	81	29.3	35	34	33.5	29.5	29.5	31	28	33.4	25.7	22.2

Note 1: Refer to pages 2048 to 2052 for dimensions with options and dimensions of accessories.

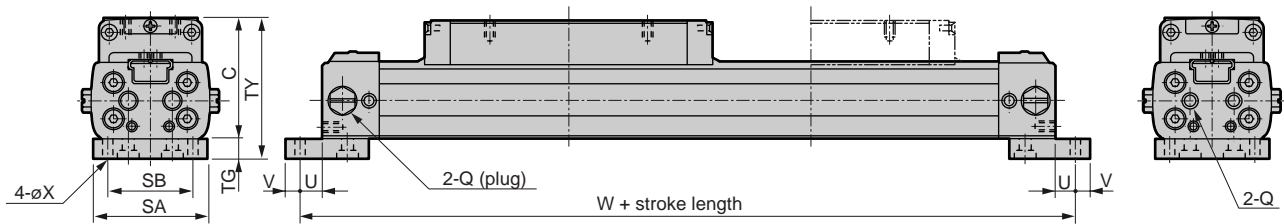
Dimensions (ø12 to ø20)



- SRL3 with foot bracket SRL3-LB-**-***



- SRL3 with foot bracket SRL3-LB1-**-***



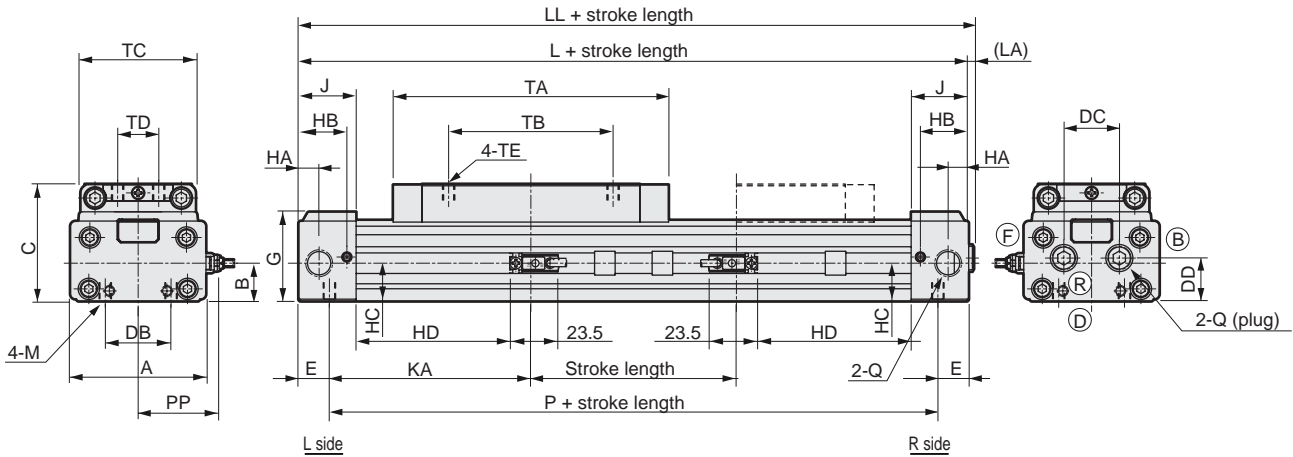
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

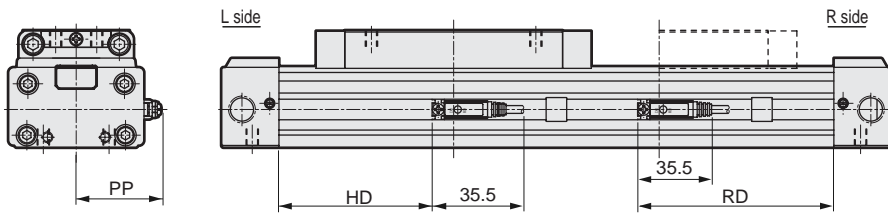
Symbol Bore size (mm)	With foot bracket (LB)							With foot bracket (LB1)							
	SA	SB	TF	U	V	W	X	SA	SB	TG	TY	U	V	W	X
ø12	32	24	8	6	4	148	3.4	32	24	6	39	6	4	148	3.4
ø16	35	26	8	6	4	161	3.4	35	26	6	43	6	4	161	3.4
ø20	43	33	10	6	6	181	4.5	43	33	8	50	6	6	181	4.5

Dimensions (ø25 to ø63)

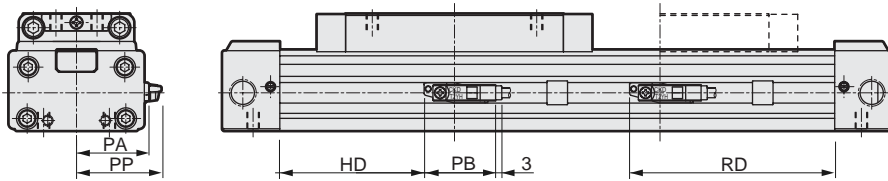
● SRL3 with cylinder switch SRL3-**-***-***-M*V*
(Radial lead wire)



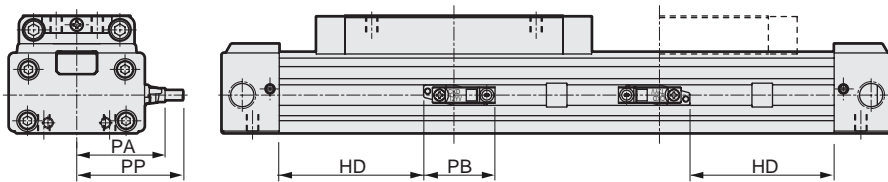
● SRL3 with cylinder switch SRL3-**-***-***-M*H*
(Axial lead wire)



● SRL3 with cylinder switch (T*W, T*Y, T2YD) SRL3-**-***-***-T*H



● SRL3 with cylinder switch (T*W, T*Y) SRL3-**-***-***-T*V



RD: Max. sensitive position HD: Max. sensitive position

Symbol	A	B	C	DB	DC	DD	E	G	HA	HB	HC	J	KA	L	LL	LA	M	P	Q	TA	TB	TC	TD	TE
ø25	53	17	53	20	26	19	14	40.5	7.5	20	18.9	24	81	190	192	2	M6 depth 9	162	Rc ^{1/8}	122	70	48	20	M5 depth 6
ø32	66	18.5	57	32	27	21	15	43.5	10	23.5	21.5	28	98	226	228.5	2.5	M6 depth 9	196	Rc ^{1/4}	134	80	56	20	M6 depth 7.5
ø40	80	22	67	36	35	28	17	51.5	13	26	27	31	105	244	246.5	2.5	M8 depth 12	210	Rc ^{1/4}	148	90	68	30	M6 depth 9
ø50	96	28	82	45	35	35	23	61	15	33	35.3	39	106	258	260.5	2.5	M8 depth 12	212	Rc ^{3/8}	152	100	80	30	M8 depth 10.5
ø63	118	35	95	50	39	42	19	74	15	32	43	39	129	296	298.5	2.5	M10 depth 15	258	Rc ^{3/8}	168	110	102	40	M8 depth 11.5

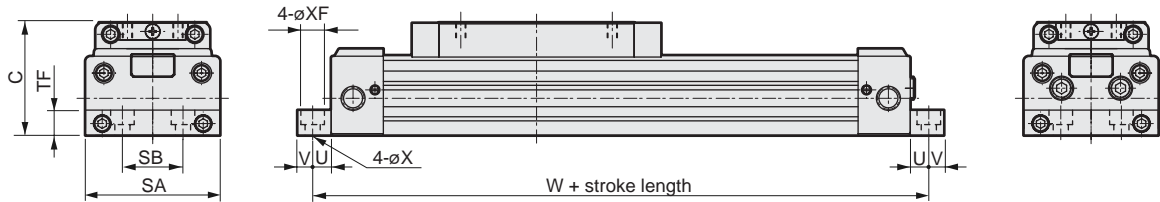
Symbol	With switch																
	HD			RD			PA	PB			PP						
Bore size (mm)	M*	T*Y*	T*W	M*	T*Y*	T*W		T*Y*	T2YD	T*W*	M*V	M*H	T*YV	T*YH	T2YD	T*WV	T*WH
ø25	60	56	52	82	86	90	34.3	35	34	33.5	34.5	34.5	36	33	38.4	30.7	27.2
ø32	74	70	66	96	100	104	41.3	35	34	33.5	41.5	41.5	43	40	45.4	37.7	34.2
ø40	80	76	72	102	106	110	48.3	35	34	33.5	48.5	48.5	50	47	52.4	44.7	41.2
ø50	79	75	71	101	105	109	56.3	35	34	33.5	56.5	56.5	58	55	60.4	52.7	49.2
ø63	98	94	90	120	124	128	67.3	35	34	33.5	67.5	67.5	69	66	71.4	63.7	60.2

Note 1: Refer to pages 2048 to 2052 for dimensions with options and dimensions of accessories.

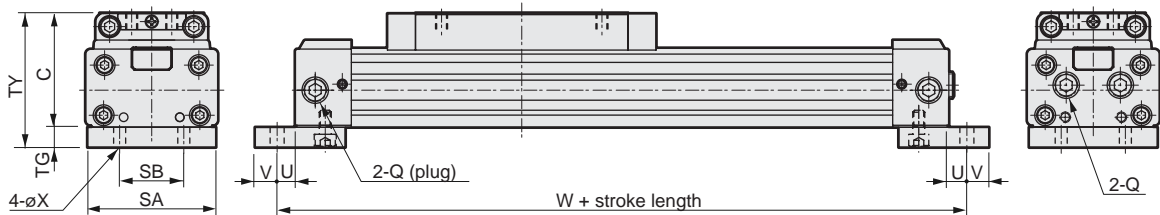
Dimensions (ø25 to ø63)



- SRL3 with foot bracket SRL3-LB-**-***with foot bracket



- SRL3-LB1-**-***with foot bracket



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC

Ending

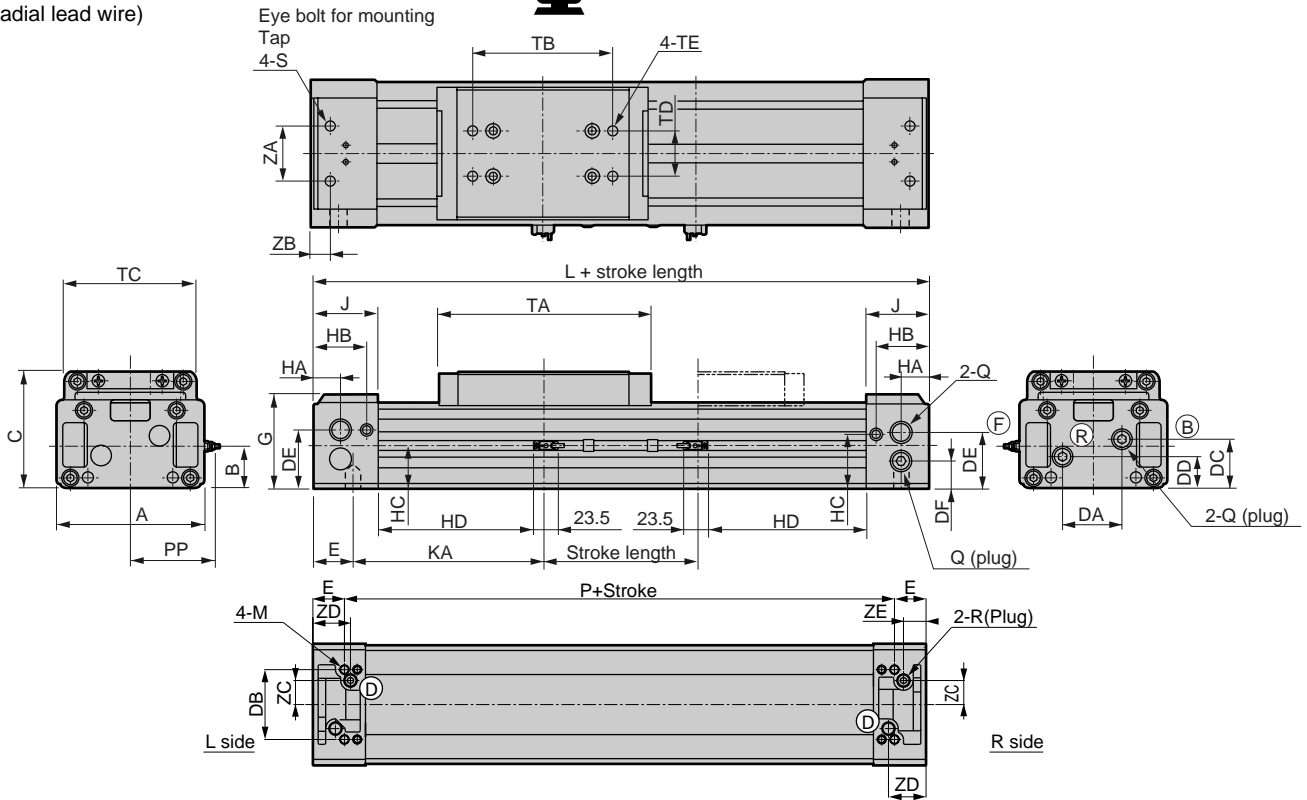
Rodless type
Rodless cylinder

Symbol Bore size (mm)	With foot bracket (LB)								With foot bracket (LB1)							
	SA	SB	TF	U	V	W	X	XF	SA	SB	TG	TY	U	V	W	X
ø25	52	20	12	9	11	208	7	-	50	20	10	63	9	11	208	7
ø32	64	32	12	9	11	244	7	-	64	32	10	67	9	11	244	7
ø40	80	36	15	11	9	266	9	14 spot face depth 8.6	-	-	-	-	-	-	-	-
ø50	94	45	20	11	9	280	9	14 spot face depth 8.6	-	-	-	-	-	-	-	-
ø63	116	50	25	13	12	322	11	17.5 spot face depth 10.8	-	-	-	-	-	-	-	-

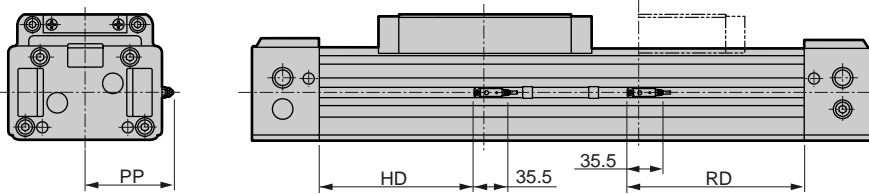
Dimensions (ø80 to ø100)

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

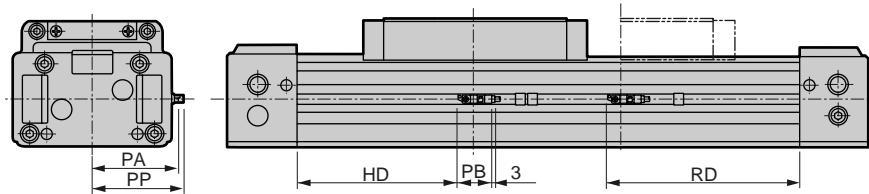
● SRL with cylinder switch SRL3-**-**-**-*M*V*
(Radial lead wire)



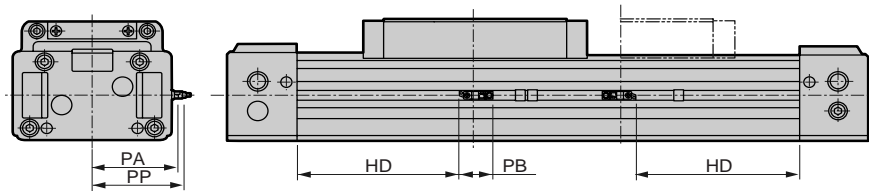
● SRL with cylinder switch SRL3-**-**-**-*M*H*
(Axial lead wire)



● SRL3 with cylinder switch (T*W, T*Y, T2YD) SRL3-**-**-**-*T*H



● SRL3 with cylinder switch (T*W, T*Y) SRL3-**-**-**-*T*V



RD: max. sensitive position
HD: max. sensitive position

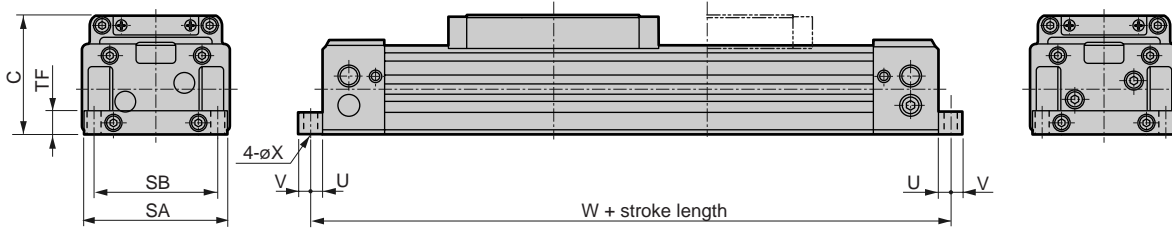
Symbol	A	B	C	DA	DB	DC	DD	DE	DF	E	G	HA	HB	HC	J	KA	L	M	P	Q	R	S
Bore size (mm)																						
ø80	162	49	130	64	93	58	38	65	33	42	106	30	59	64.5	70	208	500	M12 depth 18	416	Rc ¹ / ₂	Rc ³ / ₈	M12 depth 23
ø100	198	61.5	150	73	108	71.5	47.5	81.5	41.5	43	125	30	69	76.5	80	222	530	M12 depth 18	444	Rc ¹ / ₂	Rc ³ / ₈	M12 depth 23

Symbol	TA	TB	TC	TD	TE	ZA	ZB	ZC	ZD	ZE	With foot bracket											
											SA	SB	TF	U	V	W	X					
Bore size (mm)																						
ø80	228	150	146	50	M12 depth 15	60	21	32	50	30	162	134	25	13	12	526	14					
ø100	238	160	170	60	M12 depth 15	60	21	36.5	55	30	198	160	30	15	15	560	14					

Note 1: Refer to pages 2048 to 2052 for dimensions with options and dimensions of accessories.

Dimensions (ø80 to ø100)

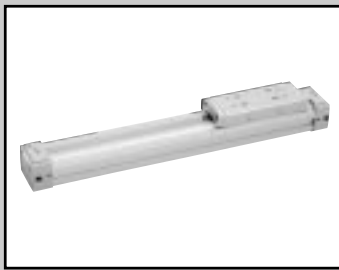
- SRL3 with foot bracket SRL3-LB-**-***with foot bracket



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

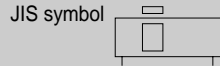
Symbol Bore size (mm)	With switch																
	HD			RD			PA	PB			PP						
	M*	T*Y*	T*W	M*	T*Y*	T*W		T*Y*	T2YD	T*W*	M*V	M*H	T*VV	T*YH	T2YD	T*WV	T*WH
ø80	170	165	161	190	195	199	87.3	35	34	33.5	87.5	87.5	89	86	91.4	83.7	80.2
ø100	175	170	166	195	200	204	105.3	35	34	33.5	105.5	105.5	107	104	109.4	101.7	98.2



Rodless cylinder, resin guide type

SRL3-G Series

● Bore size ϕ : $\phi 12, \phi 16, \phi 20, \phi 25, \phi 32, \phi 40, \phi 50, \phi 63, \phi 80, \phi 100$



Specifications

Descriptions	SRL3-G											
	Bore size	mm	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Actuation	Double acting											
Working fluid	Compressed air											
Max. working pressure	MPa	0.7										
Min. working pressure	MPa	0.25			0.15				0.1			
Withstanding pressure	MPa	1.05										
Ambient temperature	$^{\circ}\text{C}$	5 to 60										
Port size		M5	Rc $1/8$		Rc $1/4$		Rc $3/8$		Rc $1/2$			
Stroke tolerance	mm	$+2.0_0$ (up to 1000), $+2.5_0$ (up to 3000), $+3.0_0$ (up to 5000)										
Working piston speed	mm/s	50 to 2000 (standard port piping) (note 1)										
Cushion		Air cushion										
Lubrication		Not required (use turbine oil Class 1 ISO VG32 if lubricated)										

Note 1: Piston speed used with common port piping differs with the stroke. Contact CKD for details.

Allowable energy absorption

Bore size (mm)	Cushioned		No cushion	With shock absorber (initial setpoint)	
	Allowable energy absorption (J)	Cushion mm stroke (mm)	Allowable energy absorption (J)	Absorbed energy (J)	Valid mm stroke (mm)
$\phi 12$	0.03	14.5	0.003	2.4	5.5
$\phi 16$	0.22	19.2	0.007	2.4	5.5
$\phi 20$	0.59	22.2	0.010	5.7	7
$\phi 25$	1.40	20.9	0.015	10	9
$\phi 32$	2.57	23.5	0.030	18	13
$\phi 40$	4.27	23.9	0.050	50	16.5
$\phi 50$	9.13	24.9	0.072	86	21
$\phi 63$	17.4	29.6	0.138	86	21
$\phi 80$	40	45.8	0.393	143	25
$\phi 100$	67	45.8	0.622	143	25

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
$\phi 12$			
$\phi 16$			
$\phi 20$			
$\phi 25$	200,300	5000	1
$\phi 32$	400,500		
$\phi 40$	600,700		
$\phi 50$	800,900		
$\phi 63$	1000		
$\phi 80$			
$\phi 100$			

** The intermediate stroke can be manufactured in 1 mm increments.

M type switch quantity and min. stroke length (mm)

Switch quantity	1		2		3		4		5		6	
	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H
$\phi 12$	10	10	30	45 (70)	60	90 (120)	90	135 (170)	120	180 (220)	150	225 (270)
$\phi 16$	10	10	30	45 (70)	60	90 (120)	90	135 (170)	120	180 (220)	150	225 (270)
$\phi 20$	10	10	30	45 (70)	60	90 (120)	90	135 (170)	120	180 (220)	150	225 (270)
$\phi 25$	10	10	30	45 (70)	60	90 (120)	90	135 (170)	120	180 (220)	150	225 (270)
$\phi 32$	10	10	30	45	60	90	90	135	120	180	150	225
$\phi 40$	10	10	30	45	60	90	90	135	120	180	150	225
$\phi 50$	15	15	30	45	60	90	90	135	120	180	150	225
$\phi 63$	15	15	30	45	60	90	90	135	120	180	150	225
$\phi 80$	25		50		100		150		200		250	
$\phi 100$	25		50		100		150		200		250	

Note: The minimal stroke for full stroke adjustment models with switches are shown in ().

T type switch quantity and min. stroke length (mm)

Switch quantity	1		2		3		4		5		6	
	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H
$\phi 12$	5	5	45	50 (70)	85	100 (120)	125	150 (170)	165	200 (220)	205	250 (270)
$\phi 16$	5	5	45	50 (70)	85	100 (120)	125	150 (170)	165	200 (220)	205	250 (270)
$\phi 20$	5	5	45	50 (70)	85	100 (120)	125	150 (170)	165	200 (220)	205	250 (270)
$\phi 25$	10	10	45	50 (70)	85	100 (120)	125	150 (170)	165	200 (220)	205	250 (270)
$\phi 32$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 40$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 50$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 63$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 80$	15	15	45	50	85	100	125	150	165	200	205	250
$\phi 100$	15	15	45	50	85	100	125	150	165	200	205	250

Note: The minimal stroke for full stroke adjustment models with switches are shown in ().

Switch specifications (M type switch)

● One color/bi-color indicator

Descriptions	Proximity 2 wire		Proximity 3 wire		
	M2V and M2H	M2WV (2 color indicator type)	M3H/M3V	M3PH/M3PV (Custom order)	M3WV
Applications	PLC		PLC, relay, IC circuit or small solenoid valve		
Output method	-		NPN output	PNP output	NPN output
Power voltage	-		4.5 to 28 VDC		10 to 28 VDC
Load voltage	10 to 30 VDC		30 VDC or less		
Load current	5 to 30mA		200mA or less	100mA or less	150mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Yellow LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	0.05mA or less	10μA or less

Descriptions	M0V and M0H		M5V and M5H	
	M0V and M0H		M5V and M5H	
Applications	PLC, relay		PLC, relay, IC circuit(w/o lamp), serial connection	
Power voltage	-		-	
Load voltage	12/24 VDC	110 VAC	5/12/24 VDC	110 VAC or less
Load current	5 to 50mA	7 to 20mA	50mA or less	20mA or less
Light	LED (ON lighting)		Without indicator light	
Leakage current			0mA	

Note 1: For M0* switch, if load current is within 7 to 20mA, this switch can be used with 24 VAC and 48 VAC.

Note 2: Refer to Ending 1 for other switch specifications.

Switch specifications (T type switch)

● 2 Color indicator type

Descriptions	Proximity 2 wire		Proximity 3 wire	
	T2YH/T2YV	T2WH/T2WV	T3YH/T3YV	T3WH/T3WV
Applications	PLC		PLC, relay	
Output method	-		NPN output	NPN output
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA (Note 1)		50mA or less	
Light	Red/green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

● Strong magnetic field proof

Descriptions	Proximity 2 wire	
	T2YD and T2YDT	
Applications	PLC	
Light	Red/green LED (ON lighting)	
Load voltage	24 VDC ±10%	
Load current	5 to 20mA	
Internal voltage drop	6V or less	
Leakage current	1.0mA or less	

Cylinder weight

Unit: kg

Bore size (mm)	Weight when stroke length is 0mm			Weight per switch (Including bracket)	Additional weight per St=100mm
	Basic type (00)	Foot type (LB) (LB1)			
ø12	0.24	0.25	0.26	0.02	0.10
ø16	0.32	0.33	0.35		0.13
ø20	0.52	0.54	0.58		0.18
ø25	1.0	1.1	1.1		0.28
ø32	1.5	1.6	1.7		0.36
ø40	2.4	2.5	-		0.53
ø50	3.5	3.6	-		0.75
ø63	6.1	6.4	-		1.11
ø80	18.8	19.4	-		2.32
ø100	26.6	27.6	-		3.38

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

SRL3-G Series

How to order

Without switch



With switch



A Mounting style
Note 1
B Bore size

C Port thread type

D Cushion

E Stroke length

F Switch model no.

G Switch quantity

H Option
Note 3, Note 4
Note 5, Note 6

⚠ Note on model no.

- Note 1: When bore size 12, 16, 20, 25, 32 and option symbol "R" and "T" is selected, mounting style will be "00" or "LB1".
(Mounting style "LB" is not available for option symbol "R" and "T" because it can not be piped.)
- Note 2: Refer to page 2018 for the minimal stroke for models with a switch.
- Note 3: Switches other than switch model no. are also available to.
(Custom order) Refer to Ending 1 for details.
- Note 4: The asterisk (*) following L* and N* indicates the number of brackets. Fill in "L2" for LB and "N2" for LB1 when 2 sets are necessary.
2 piece/1 set
- Note 5: For port and cushion needle position indicating symbol Refer pages 2026 to 2031 to dimensions.
- Note 6: Standard models of ø12 to ø15 needs to have their cover removed and full stroke adjustment mounted using a plate nut afterwards.
"A3" is a option that will have a plate nut for mounting installed beforehand so that it can be mounted afterwards without removing the cover.
- Note 7: Thread size will be M4 for ø12 and ø16, and thread size will be M5 for ø20 when "H" is selected.
- Note 8: Refer to "Optional combination table" on the following page for available combinations.
- Note 9: Copper and PTFE free as standard.

<Example of model number>

SRL3-G-00-12B-200-M0H-R-B

Model: Rodless cylinder guided

- A** Mounting style : Basic type
- B** Bore size : ø12mm
- C** Port thread type : Rc thread
- D** Cushion : Both sides cushioned
- E** Stroke length : 200mm
- F** Switch model no. : Reed switch M0H and lead wire 1m
- G** Switch quantity : 1 on rod end
- H** Option : Port position F, cushion needle position B

Symbol	Descriptions	
A Mounting style		
00	Basic type	
LB	Axial foot type	
LB1	Axial foot type	
B Bore size (mm)		
12	ø12	
16	ø16	
20	ø20	
25	ø25	
32	ø32	
40	ø40	
50	ø50	
63	ø63	
80	ø80	
100	ø100	
C Port thread type		
Blank	Rc thread	
N	NPT thread (ø20 and over) (custom order)	
G	G thread (ø20 and over) (custom order)	
D Cushion		
B	Both sides cushioned	
R	R side cushioned	
L	L side cushioned	
N	No cushion	
E Stroke length (mm)		
Bore size	Stroke length Note 2	Custom stroke length
ø12 to ø100	1 to 5000	By 1 mm increment
F Switch model no.		
Lead wire	Lead wire	Contact
Axial	Radial	
M0H*	M0V*	Reed
M5H*	M5V*	
M2H*	M2V*	
-	M2WV*	Proximity
M3H*	M3V*	
-	M3WV*	
M3PH*	M3PV*	
T2WH*	T2WV*	
T2YH*	T2YV*	
T3WH*	T3WV*	2 color indicator type
T3YH*	T3YV*	
T2YD*	-	
T2YDT*	-	Strong magnetic field proof (AC magnetic field dedicated)
*Lead wire length		
Blank	1m (standard)	
3	3m (option)	
5	5m (option)	
G Switch quantity		
R	One on R side	
L	One on L side	
D	2	
T	3	
4	4 pieces (fill in switch quantity if 4 or more switches are required.)	
H Option		
	Bore size (ø)	
A	Adjustable full-stroke both sides and shock absorber	● ● ● ● ● ● ● ● ● ●
A1	Adjustable full-stroke R sides and shock absorber	● ● ● ● ● ● ● ● ● ●
A2	Adjustable full-stroke L sides and shock absorber	● ● ● ● ● ● ● ● ● ●
A3	Adjustable full-stroke bracket retrofitting	● ● ● ● ● ● ● ● ● ●
L*	Intermediate support bracket (00, LB)	● ● ● ● ● ● ● ● ● ●
N*	With intermediate support bracket (LB1)	● ● ● ● ● ● ● ● ● ●
C	C mount bracket	● ● ● ● ● ● ● ● ● ●
H	Table mounting thread size up	● ● ● ● ● ● ● ● ● ●
U	Height adjustment plate	● ● ● ● ● ● ● ● ● ●
Blank	F (standard)	● ● ● ● ● ● ● ● ● ●
R	R (common port)	● ● ● ● ● ● ● ● ● ●
	F (standard)	● ● ● ● ● ● ● ● ● ●
B	F	● ● ● ● ● ● ● ● ● ●
	B	● ● ● ● ● ● ● ● ● ●
T	R (common port)	● ● ● ● ● ● ● ● ● ●
	B	● ● ● ● ● ● ● ● ● ●
D	D	● ● ● ● ● ● ● ● ● ●
	F	● ● ● ● ● ● ● ● ● ●
S	D	● ● ● ● ● ● ● ● ● ●
	F	● ● ● ● ● ● ● ● ● ●
X	F (common port)	● ● ● ● ● ● ● ● ● ●
	F	● ● ● ● ● ● ● ● ● ●

Option combination table

● : Combination possible ■ : Combination not available

Option	Option																
	Symbol	A	A1	A2	A3	L*	N*	C	H	U	Blank	R	B	T	D	S	X
Port position F, cushion needle position F (common port)																	
Port position D, cushion needle position D																	
Port position D, cushion needle position F																	
Port position R, cushion needle position B (common port)																	
Port position F, cushion needle position B																	
Port position R, cushion needle position F (common port)																	
Port position F, cushion needle position F (standard)																	
Height adjustment plate																	
Table mounting thread size up																	
C mount bracket																	
Intermediate support bracket (LB1)																	
Intermediate support bracket (00, LB)																	
Adjustable full-stroke bracket retrofitting																	
Adjustable full-stroke L end only, with shock absorber																	
Adjustable full-stroke R end only, with shock absorber																	
Adjustable full-stroke both ends, with shock absorber																	

Note 1: Some combinations are not available depending on bore size. Confirm the conditions of options of **H** "How to order" on the previous page.

Note 2: LB1 can not be used if port position is D. (ø25, ø32)

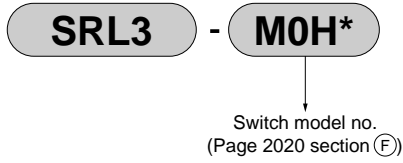
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

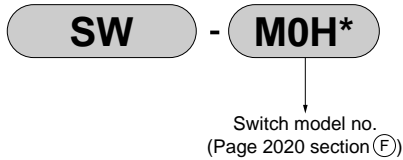
How to order switch

(Refer to page 2053 to 2055 for configurations)

● Switch body + mounting bracket (Note 1)



● Only switch body



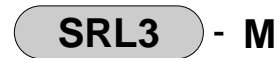
*Lead wire length

Blank	1m (standard)
3	3m (option)
5	5m (option)

*** mark indicates length of lead wire.

● Mounting bracket (Note 2)

· M type switch



· T type switch



● Lead wire holder (Note 3)

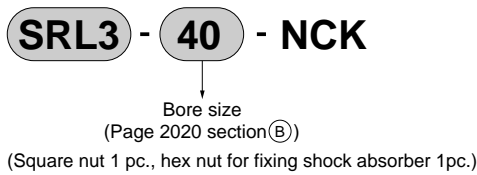


Note 1: Lead wire holder is not included in the switch and its mounting bracket. When a lead wire holder is necessary, place an order separately.

Note 2: M type switch and T type switch has different brackets.

Note 3: Lead wire holder comes in a set of 10 pieces.

● Discrete shock absorber model no.

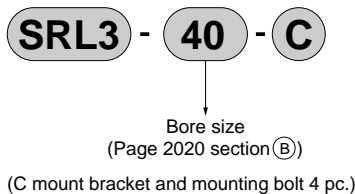


Square nut for shock absorber for SRL3-40 is a special design.

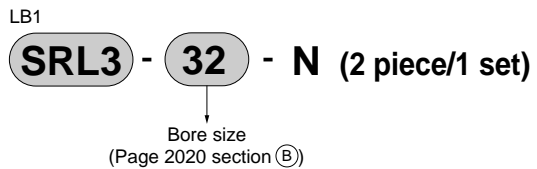
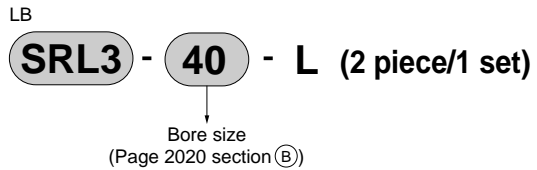
Applicable shock absorber model No.

Model	Shock absorber model no.
SRL3-12	NCK-00-0.3-C
SRL3-16	NCK-00-0.3-C
SRL3-20	NCK-00-0.7-C
SRL3-25	NCK-00-1.2
SRL3-32	NCK-00-2.6
SRL3-40	NCK-00-7
SRL3-50	NCK-00-12
SRL3-63	NCK-00-12
SRL3-80	NCK-00-20
SRL3-100	NCK-00-20

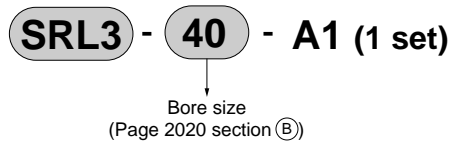
● Discrete C mount bracket model no. (for ø12 to ø63)



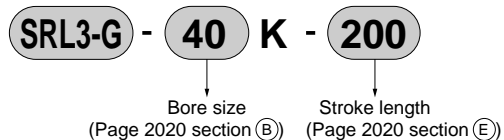
● Discrete intermediate support bracket model no.



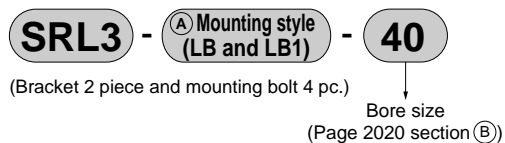
● Adjustable full-stroke kit model no.



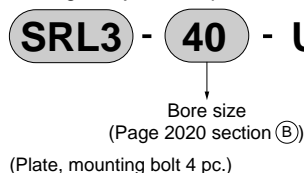
● Repair parts model no.



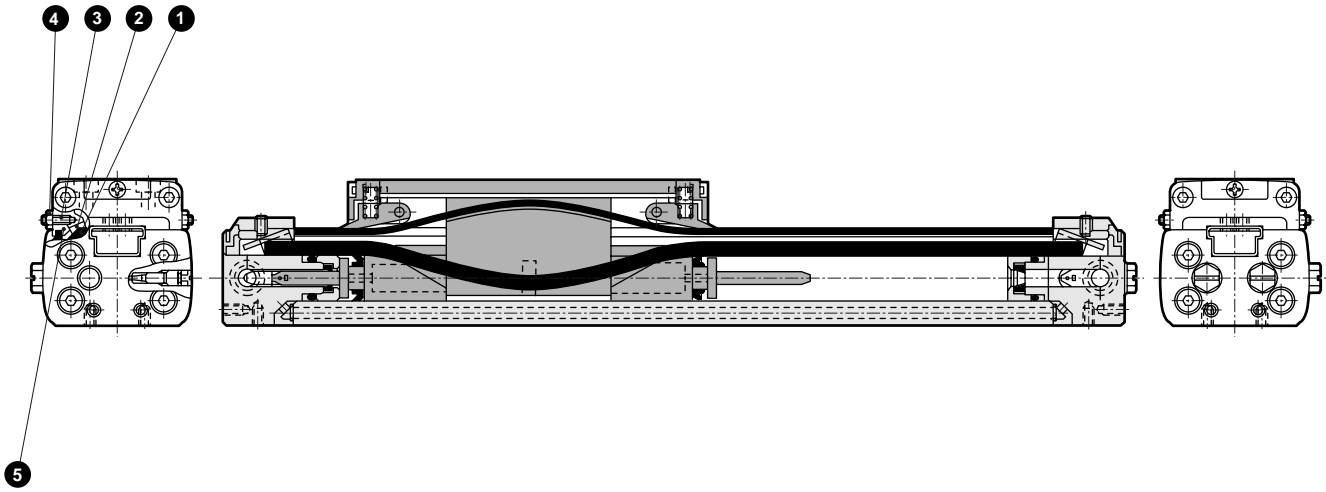
● Mounting bracket model no.



● Height adjustment plate set model no.



Internal structure drawing and parts list (ø12 to ø40)



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Slider	Polyacetal resin		4	Nut	Steel	Galvanizing
2	Slider plate	Steel		5	Dust wiper	Polyacetal resin	
3	Adjusting screw	Alloy steel	Galvanizing				

Repair parts list

Tube bore size (mm)	Kit No.	Repair parts number
ø12	SRL3-G-12K-*	
ø16	SRL3-G-16K-*	
ø20	SRL3-G-20K-*	① ⑤ ⑧ ⑨ ⑱ ⑳ ㉓ ㉖
ø25	SRL3-G-25K-*	㉗
ø32	SRL3-G-32K-*	
ø40	SRL3-G-40K-*	

Note 1: Specify the kit no. when placing an order Specify stroke length for "**".

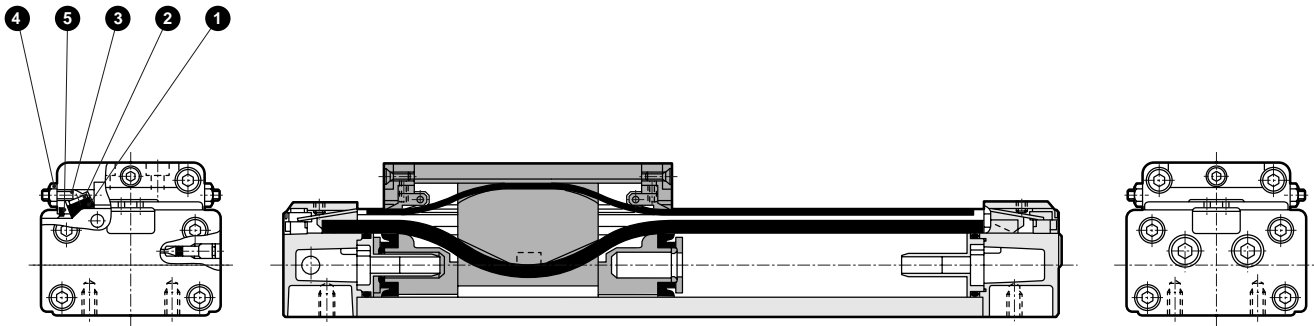
Note 2: Parts no. on ⑧⑨⑱⑳㉓㉖㉗ is based on page 2009.

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC

Ending

Rodless type
Rodless cylinder

Internal structure drawing and parts list (ø50, ø63)



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Slider	Polyacetal resin		4	Nut	Steel	Galvanizing
2	Slider plate	Steel	Galvanizing	5	Dust wiper	Polyacetal resin	
3	Adjusting screw	Alloy steel	Galvanizing				

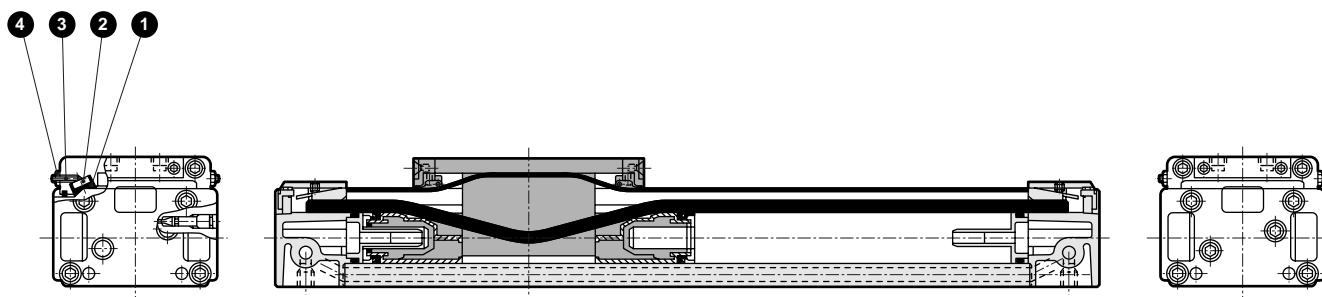
Repair parts list

Tube Bore size (mm)	Kit No.	Repair parts number
ø50	SRL3-G-50K-*	① ⑤ ⑧ ⑨ ⑱
ø63	SRL3-G-63K-*	⑳ ㉑ ㉒ ㉓ ㉔

Note 1: Specify the kit no. when placing an order. Specify stroke length for "**".
 Note 2: Parts no. on ⑧⑨⑱㉑㉒㉓㉔ is based on page 2010.

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

Internal structure drawing and parts list (ø80, ø100)



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Slider	Polyacetal resin		3	Adjusting screw	Alloy steel	Galvanizing
2	Slider plate	Steel	Galvanizing	4	Nut	Steel	Galvanizing

Repair parts list

Tube Bore size (mm)	Kit No.	Repair parts number
ø80	SRL3-G-80K-*	① ⑧ ⑨ ⑱ ㉑
		㉒ ㉖ ㉗ ㉘ ㉙
ø100	SRL3-G-100K-*	㉚ ㉛

Note 1: Specify the kit no. when placing an order Specify stroke length for "**".

Note 2: Parts no. on ⑧⑨⑱㉑㉒㉖㉗㉘㉙㉚㉛ is based on page 2011.

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

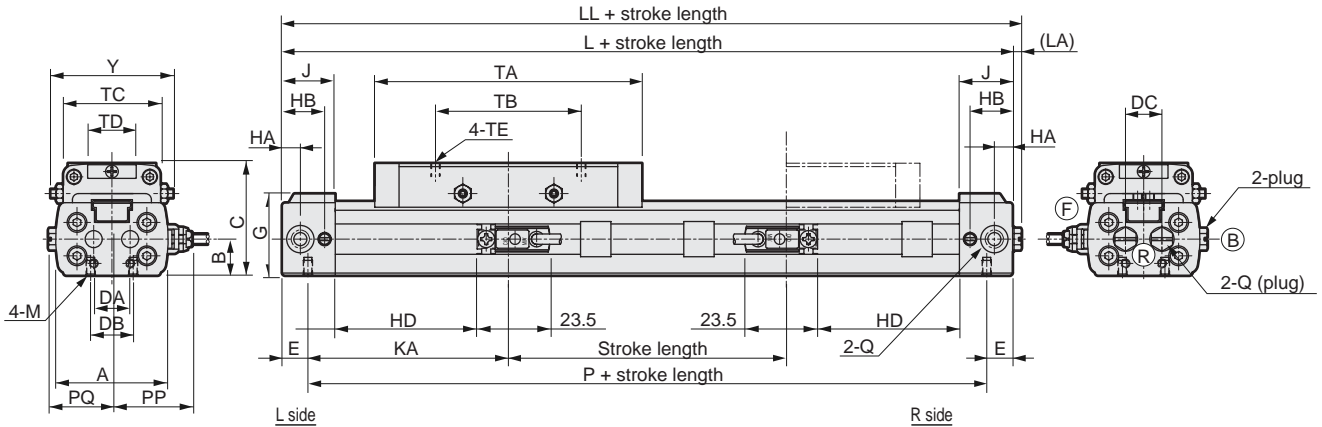
Rodless type
Rodless cylinder

SRL3-G Series

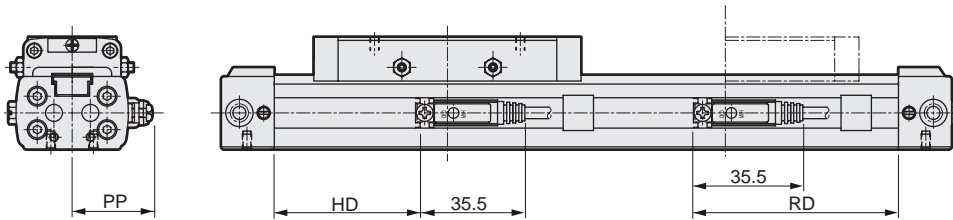
Dimensions (ø12 to ø20)



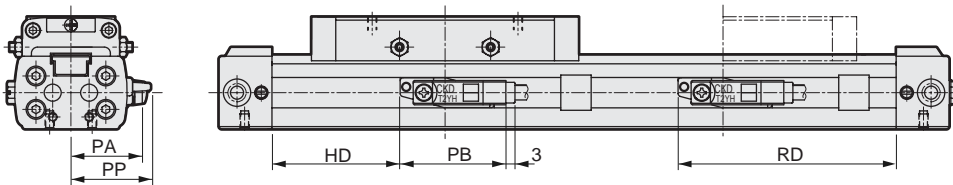
● SRL3-G with cylinder switch SRL3-G-**-**-***-M*V*
(Radial lead wire)



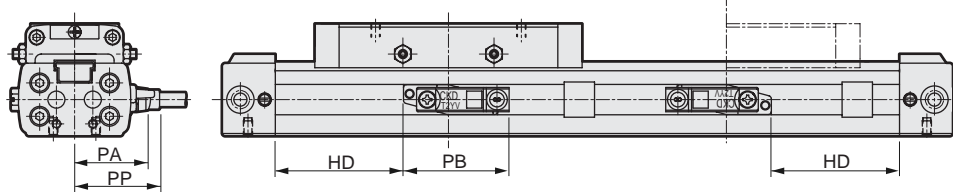
● SRL3-G with cylinder switch SRL3-G-**-**-***-M*H*
(Axial lead wire)



● SRL3-G with cylinder switch SRL3-G-**-**-***-T*H* (T*W, T*Y, T2YD)



● SRL3-G with cylinder switch SRL3-G-**-**-***-M*V* (T*W, T*Y)



RD: Max. sensitive position HD: Max. sensitive position

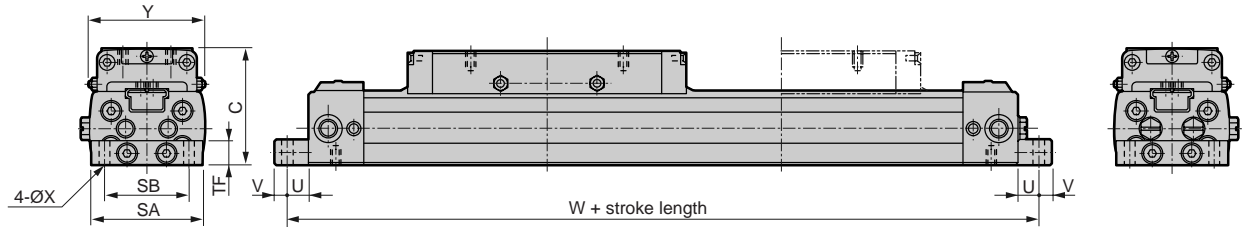
Symbol	A	B	C	DA	DB	DC	E	G	HA	HB	J	KA	L	LL	LA	M	P	PQ	Q	TA	TB	TC	TD	TE	Y
ø12	33	10.5	33	8	10	11	8.5	24	6	14	17.5	59.5	136	139	3	M3 depth 5	119	19	M5	81	42	29	13	M3 depth 5	36 to 38
ø16	37	12	37	12	14	12	8.5	27	6	14	17.5	66	149	152	3	M3 depth 5	132	21	M5	88	48	32	15	M3 depth 5	39 to 41
ø20	44	14	42	12	16	16	10.5	31	8.5	18.5	22	74	169	171.5	2.5	M4 depth 6.5	148	24.5	Rc $\frac{1}{8}$	100	60	38	18	M4 depth 6	43 to 45

Symbol	With switch																
	HD			RD			PA	PB			PP						
Bore size (mm)	M*	T*Y*	T*W	M*	T*Y*	T*W		T*Y*	T2YD	T*W*	M*V	M*H	T*YV	T*YH	T2YD	T*WV	T*WH
ø12	40.5	36	32	60.5	65	69	24.3	35	34	33.5	24.5	24.5	26	23	28.4	20.7	17.2
ø16	47	42	38	67	72	76	26.3	35	34	33.5	26.5	26.5	28	25	30.4	22.7	19.2
ø20	52.5	48	44	72.5	77	81	29.3	35	34	33.5	29.5	29.5	31	28	33.4	25.7	22.2

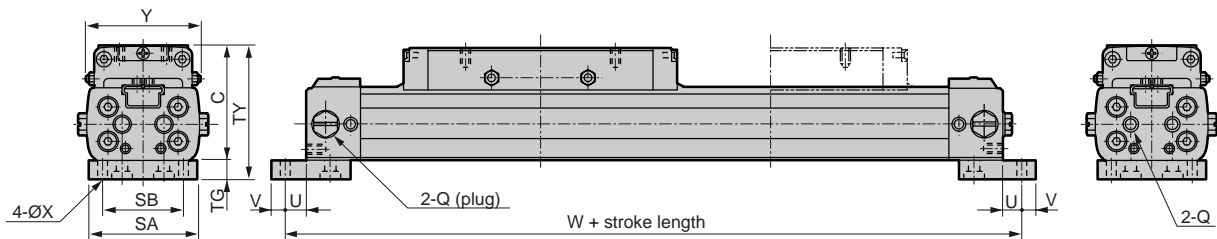
Note 1: Refer to pages 2048 to 2052 for dimensions with options and dimensions of accessories.

Dimensions (ø12 to ø20)

- SRL3-G with foot bracket SRL3-G-LB-**-***



- SRL3-G with foot bracket SRL3-G-LB1-**-***



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

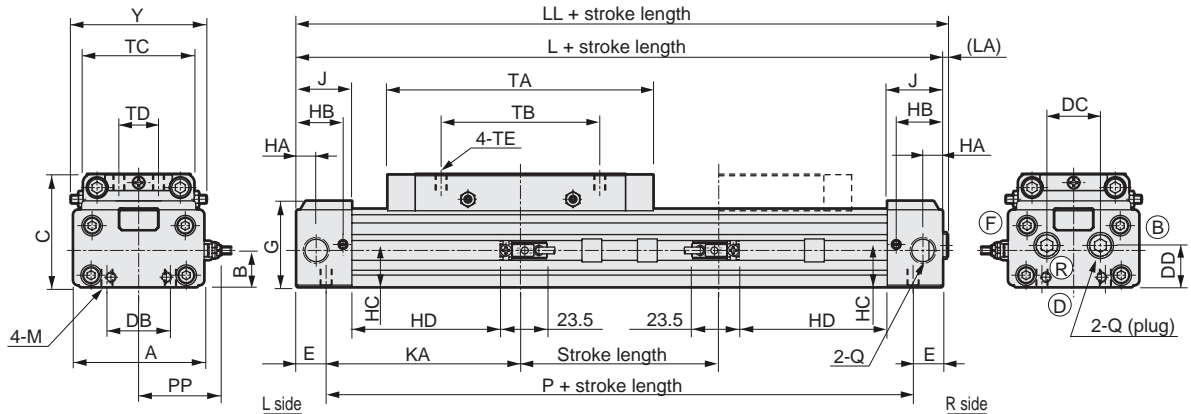
Symbol Bore size (mm)	With foot bracket (LB)							With foot bracket (LB1)							
	SA	SB	TF	U	V	W	X	SA	SB	TG	TY	U	V	W	X
ø12	32	24	8	6	4	148	3.4	32	24	6	39	6	4	148	3.4
ø16	35	26	8	6	4	161	3.4	35	26	6	43	6	4	161	3.4
ø20	43	33	10	6	6	181	4.5	43	33	8	50	6	6	181	4.5

SRL3-G Series

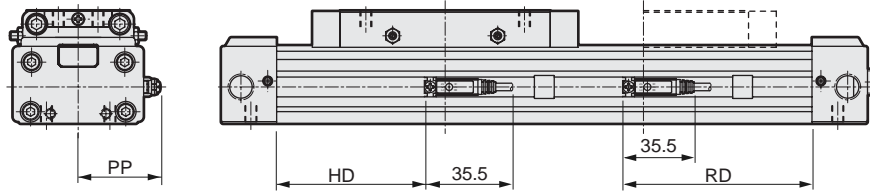
Dimensions (ø25 to ø63)



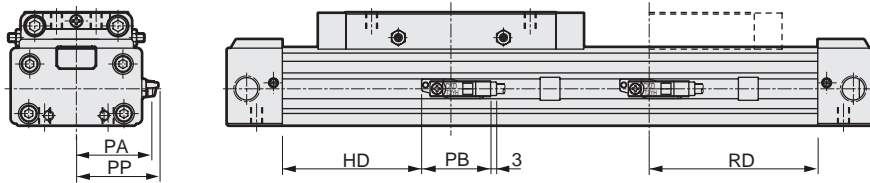
● SRL3-G with cylinder switch SRL3-G-**-***-****-M*V*
(Radial lead wire)



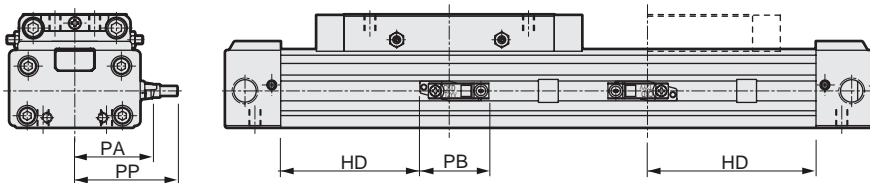
● SRL3-G with cylinder switch SRL3-G-**-***-****-M*H*
(Axial lead wire)



● SRL3-G with cylinder switch SRL3-G-**-***-****-T*H(T*W, T*Y, T2YD)



● SRL3-G with cylinder switch SRL3-G-**-***-****-T*V(T*W, T*Y)



RD: Max. sensitive position HD: Max. sensitive position

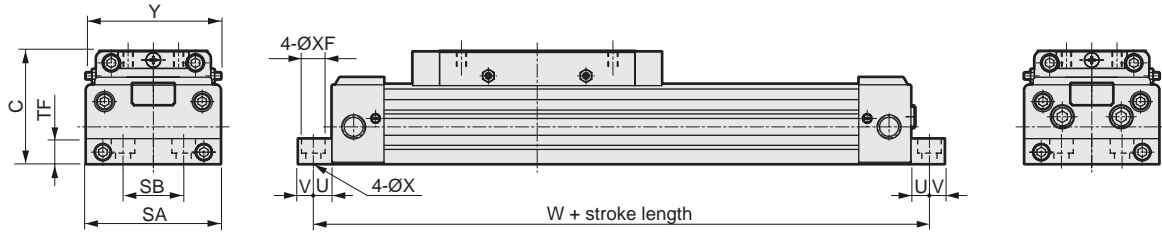
Symbol	A	B	C	DB	DC	DD	E	G	HA	HB	HC	J	KA	L	LL	LA	M	P	Q	TA	TB	TC	TD	TE	Y
ø25	53	17	53	20	26	19	14	40.5	7.5	20	18.9	24	81	190	192	2	M6 depth 9	162	Rc ¹ / ₈	122	70	48	20	M5 depth 6	58 to 61
ø32	66	18.5	57	32	27	21	15	43.5	10	23.5	21.5	28	98	226	228.5	2.5	M6 depth 9	196	Rc ¹ / ₄	134	80	56	20	M6 depth 7.5	65 to 69
ø40	80	22	67	36	35	28	17	51.5	13	26	27	31	105	244	246.5	2.5	M8 depth 12	210	Rc ¹ / ₄	148	90	68	30	M6 depth 9	77 to 81
ø50	96	28	82	45	35	35	23	61	15	33	35.3	39	106	258	260.5	2.5	M8 depth 12	212	Rc ¹ / ₈	152	100	80	30	M8 depth 10.5	92 to 96
ø63	118	35	95	50	39	42	19	74	15	32	43	39	129	296	298.5	2.5	M10 depth 15	258	Rc ¹ / ₈	168	110	102	40	M8 depth 11.5	114 to 118

Symbol	With switch																
	HD			RD			PA	PB			PP						
	M*	T*Y*	T*W*	M*	T*Y*	T*W*		T*Y*	T2YD	T*W*	M*V	M*H	T*YV	T*YH	T2YD	T*WV	T*WH
ø25	60	56	52	82	86	90	34.3	35	34	33.5	34.5	34.5	36	33	38.4	30.7	27.2
ø32	74	70	66	96	100	104	41.3	35	34	33.5	41.5	41.5	43	40	45.4	37.7	34.2
ø40	80	76	72	102	106	110	48.3	35	34	33.5	48.5	48.5	50	47	52.4	44.7	41.2
ø50	79	75	71	101	105	109	56.3	35	34	33.5	56.5	56.5	58	55	60.4	52.7	49.2
ø63	98	94	90	120	124	128	67.3	35	34	33.5	67.5	67.5	69	66	71.4	63.7	60.2

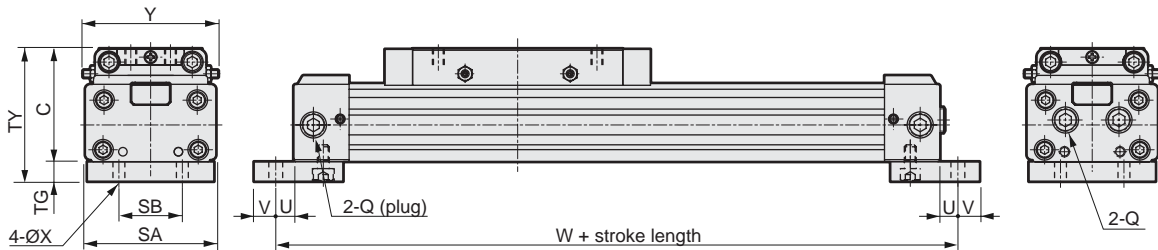
Note 1: Refer to pages 2048 to 2052 for dimensions with options and dimensions of accessories.

Dimensions (ø25 to ø63)

- SRL3-G-LB-**-***with foot bracket (ø25 to ø63)



- SRL3-G-LB1-**-***with foot bracket (ø25,ø32)



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Symbol Bore size (mm)	With foot bracket (LB)								With foot bracket (LB1)							
	SA	SB	TF	U	V	W	X	XF	SA	SB	TG	TY	U	V	W	X
ø25	52	20	12	9	11	208	7	—	50	20	10	63	9	11	208	7
ø32	64	32	12	9	11	244	7	—	64	32	10	67	9	11	244	7
ø40	80	36	15	11	9	266	9	14 spot face depth 8.6	—	—	—	—	—	—	—	—
ø50	94	45	20	11	9	280	9	14 spot face depth 8.6	—	—	—	—	—	—	—	—
ø63	116	50	25	13	12	322	11	17.5 spot face depth 10.8	—	—	—	—	—	—	—	—

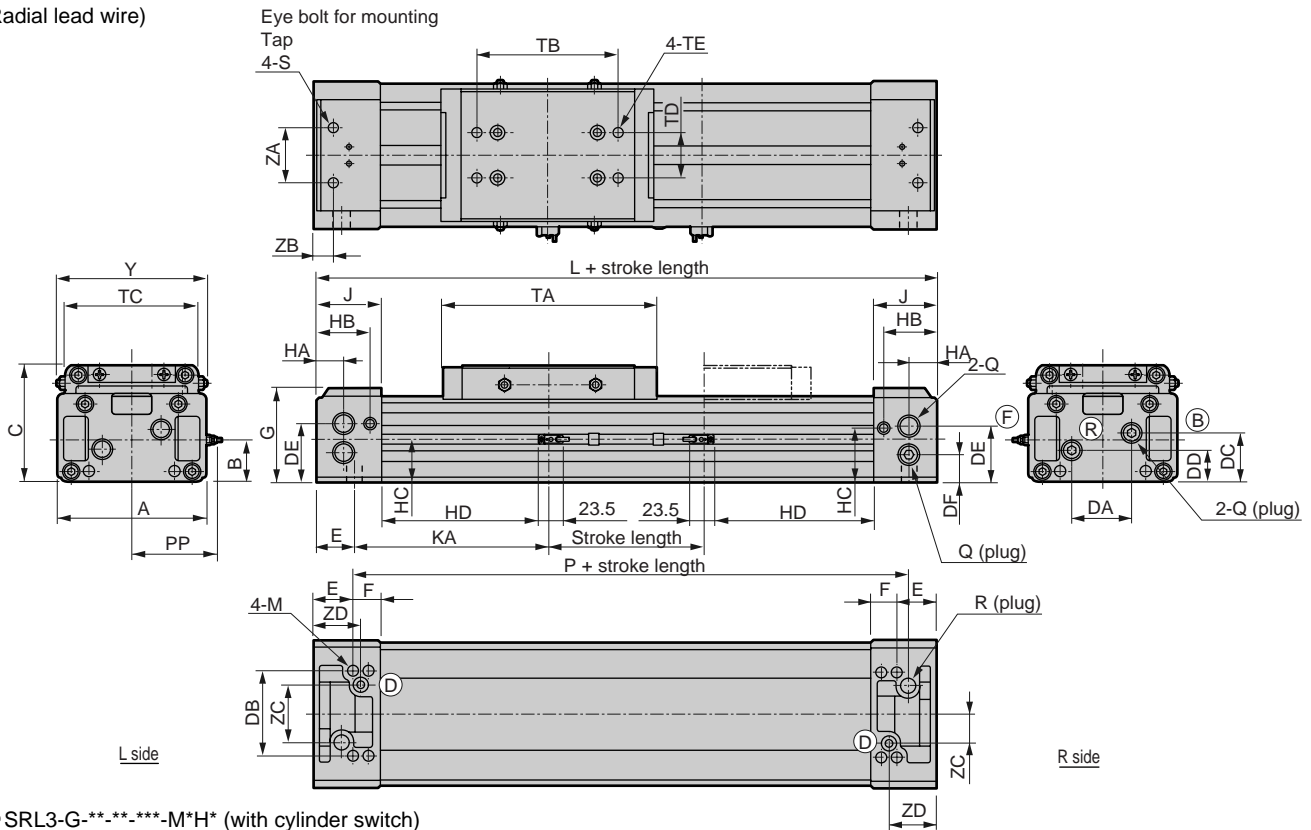
Rodless type
Rodless cylinder

SRL3-G Series

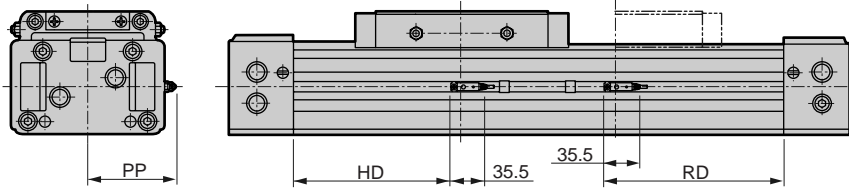
Dimensions (ø80 to ø100)



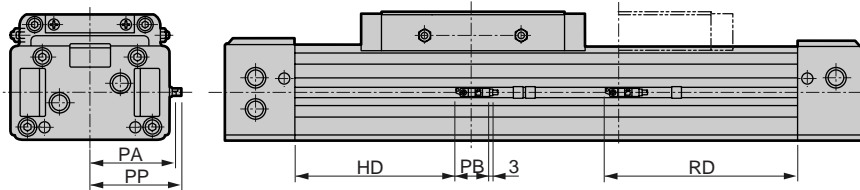
● SRL3-G-**-***-M*V* (with cylinder switch) (Radial lead wire)



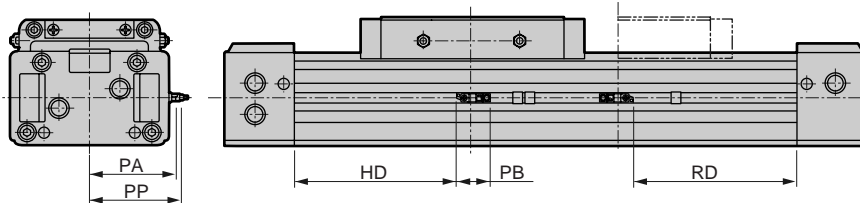
● SRL3-G-**-***-M*H* (with cylinder switch) (Axial lead wire)



● SRL3-G-**-***-T*H* (T*W, T*Y, T2YD) with cylinder switch



● SRL3-G-**-***-T*V* (T*W, T*Y) with cylinder switch



RD: Max. sensitive position
HD: Max. sensitive position

Symbol	A	B	C	DA	DB	DC	DD	DE	DF	E	G	HA	HB	HC	J	KA	L	M	P	Q	R	S	TA	TB
Bore size (mm)																								
ø80	162	49	130	64	93	58	38	65	33	42	106	30	59	64.5	70	208	500	M12 depth 18	416	Rc ¹ / ₂	RC	M12 depth 23	228	150
ø100	198	61.5	150	73	108	71.5	47.5	81.5	41.5	43	125	30	69	76.5	80	222	530	M12 depth 18	444	Rc ¹ / ₂	RC	M12 depth 23	238	160

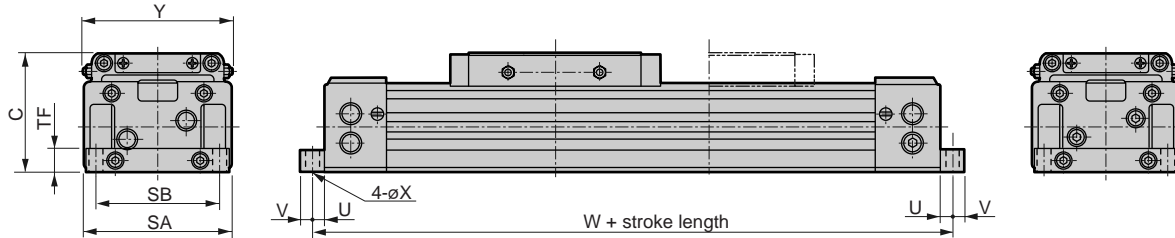
Symbol	Bore size (mm)	TC	TD	TE	Y	ZA	ZB	ZC	ZD	With foot bracket						
										SA	SB	TF	U	V	W	X
	ø80	146	50	M12 depth 15	157 to 164	60	21	64	50	162	134	25	13	12	526	14
	ø100	170	60	M12 depth 15	183 to 190	60	21	73	55	198	160	30	15	15	560	14

Note 1: Refer to pages 2048 to 2052 for dimensions with options and dimensions of accessories.

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

Dimensions (ø80 to ø100)

● SRL3-G-LB-**-***with foot bracket



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

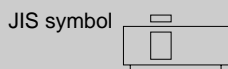
Rodless type
Rodless cylinder

Symbol	With switch																
	HD			RD			PA	PB			PP						
	M*	T*Y*	T*W	M*	T*Y*	T*W		T*Y*	T2YD	T*W*	M*V	M*H	T*YV	T*YH	T2YD	T*WV	T*WH
ø80	170	165	161	190	195	199	87.3	35	34	33.5	87.5	87.5	89	86	91.4	83.7	80.2
ø100	175	170	166	195	200	204	105.3	35	34	33.5	105.5	105.5	107	104	109.4	101.7	98.2

Rodless cylinder double acting/position locking

SRL3-Q Series

● Bore size ϕ : $\phi 12, \phi 16, \phi 20, \phi 25, \phi 32, \phi 40, \phi 50, \phi 63, \phi 80, \phi 100$



Specifications

Descriptions		SRL3-Q											
Bore size	mm	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$		
Actuation		Double acting											
Working fluid		Compressed air											
Max. working pressure	MPa	0.7											
Min. working pressure	MPa	0.2			0.15			0.1					
Withstanding pressure	MPa	1.05											
Ambient temperature	$^{\circ}\text{C}$	5 to 60											
Port size	Cylinder section	M5		Rc $1/8$		Rc $1/4$		Rc $3/8$		Rc $1/2$			
	Position locking unit	M5		Rc $1/8$									
Stroke tolerance	mm	$+2.0$ (up to 1000)			$+2.5$ (up to 3000)			$+3.0$ (up to 5000)					
Working piston speed	mm/s	50 to 200 (standard port piping) (note 1)											
Cushion		Air cushion											
Lubrication		Not required (Use turbine oil Class 1 ISOVG32 if lubricated. Lubricate continuously if lubricated.)											
Position locking mechanism		Installation on guard R											
Holding force	N	Maximum thrust x 0.7											

Note 1: (1) The speed of entry to the position locking mechanism must not exceed 500mm/s when operating at a speed of 500 to 2000mm/s. For common port pipe, working piston speed varies depending on stroke length. Consult with CKD.
 (2) For deceleration method, install an external shock absorber or a deceleration circuit etc..
 (3) Apply grease to sliding section of lock lever periodically.

Allowable energy absorption

Bore size (mm)	Cushioned		No cushion	With shock absorber (initial setpoint)	
	Allowable energy absorption (J)	Cushion mm stroke (mm)	Allowable energy absorption (J)	Absorbed energy (J)	Valid mm stroke (mm)
$\phi 12$	0.03	14.5	0.003	2.4	5.5
$\phi 16$	0.22	19.2	0.007	2.4	5.5
$\phi 20$	0.59	22.2	0.010	5.7	7
$\phi 25$	1.40	20.9	0.015	10	9
$\phi 32$	2.57	23.5	0.030	18	13
$\phi 40$	4.27	23.9	0.050	50	16.5
$\phi 50$	9.13	24.9	0.072	86	21
$\phi 63$	17.4	29.6	0.138	86	21
$\phi 80$	40	45.8	0.393	143	25
$\phi 100$	67	45.8	0.622	143	25

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
$\phi 12$			
$\phi 16$			
$\phi 20$			
$\phi 25$	200,300		
$\phi 32$	400,500		
$\phi 40$	600,700	5000	1
$\phi 50$	800,900		
$\phi 63$	1000		
$\phi 80$			
$\phi 100$			

** The intermediate stroke can be manufactured in 1mm increments.

M type switch quantity and min. stroke length (mm)

Switch quantity	1		2		3		4		5		6	
	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H
Switch model no.												
Bore size (mm)												
$\phi 12$	10	10	30	70	60	120	90	170	120	220	150	270
$\phi 16$	10	10	30	70	60	120	90	170	120	220	150	270
$\phi 20$	10	10	30	70	60	120	90	170	120	220	150	270
$\phi 25$	10	10	30	70	60	120	90	170	120	220	150	270
$\phi 32$	10	10	30	45	60	90	90	135	120	180	150	225
$\phi 40$	10	10	30	45	60	90	90	135	120	180	150	225
$\phi 50$	15	15	30	45	60	90	90	135	120	180	150	225
$\phi 63$	15	15	30	45	60	90	90	135	120	180	150	225
$\phi 80$	25		50		100		150		200		250	
$\phi 100$	25		50		100		150		200		250	

T type switch quantity and min. stroke length (mm)

Switch quantity	1		2		3		4		5		6	
	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H
Switch model no.												
Bore size (mm)												
$\phi 12$	5	5	45	70	85	120	125	170	165	220	205	270
$\phi 16$	5	5	45	70	85	120	125	170	165	220	205	270
$\phi 20$	5	5	45	70	85	120	125	170	165	220	205	270
$\phi 25$	10	10	45	70	85	120	125	170	165	220	205	270
$\phi 32$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 40$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 50$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 63$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 80$	15	15	45	50	85	100	125	150	165	200	205	250
$\phi 100$	15	15	45	50	85	100	125	150	165	200	205	250

Always safety precautions before starting use (With position locking function) Read pages 2001 the to 2003.

Switch specifications (M type switch)

Descriptions	Proximity 2 wire		Proximity 3 wire		
	M2V and M2H	M2WV (2 color indicator type)	M3H/M3V	M3PH/M3PV (Custom order)	M3WV
Applications	PLC only		PLC, relay, IC circuit or small solenoid valve		
Output method	-		NPN output	PNP output	NPN output
Power voltage	-		4.5 to 28 VDC		10 to 28 VDC
Load voltage	10 to 30 VDC		30 VDC or less		
Load current	5 to 30mA		200mA or less	100mA or less	150mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Yellow LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	0.05mA or less	10μA or less

Descriptions	Reed 2 wire			
	M0V and M0H		M5V and M5H	
Applications	PLC, relay		PLC, relay, IC circuit (w/o lamp), serial connection	
Power voltage	-		-	
Load voltage	12/24 VDC	110 VAC	5/12/24 VDC	110 VAC or less
Load current	5 to 50mA	7 to 20mA	50mA or less	20mA or less
Light	LED (ON lighting)		Without indicator light	
Leakage current	0mA			

Note 1: For M0* switch, if load current is within 7 to 20mA, this switch can be used with 24 VAC and 48 VAC.
 Note 2: Refer to Ending 1 for other switch specifications.

Switch specifications (T type switch)

● 2 Color indicator type

Descriptions	Proximity 2 wire		Proximity 3 wire	
	T2YH/T2YV	T2WH/T2WV	T3YH/T3YV	T3WH/T3WV
Applications	PLC only		PLC, relay	
Output method	-		NPN output	NPN output
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA		50mA or less	
Light	Red/green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

● Strong magnetic field proof

Descriptions	Proximity 2 wire	
	T2YD and T2YDT	
Applications	PLC	
Light	Red/green LED (ON lighting)	
Load voltage	24 VDC ±10%	
Load current	5 to 20mA	
Internal voltage drop	6V or less	
Leakage current	1.0mA or less	

Cylinder weight

Unit: kg

Bore size (mm)	Weight when stroke length is 0mm			Weight per switch (Including bracket)	Additional weight per St=100mm
	Basic type (00)	Foot type			
		(LB)	(LB1)		
ø12	0.38	0.25	0.26	0.02	0.10
ø16	0.47	0.33	0.35		0.13
ø20	0.74	0.54	0.58		0.18
ø25	1.5	1.6	1.1		0.28
ø32	2.4	2.5	1.7		0.36
ø40	3.6	3.7	-		0.53
ø50	6.0	6.1	-		0.75
ø63	8.8	9.1	-		1.11
ø80	22.4	23.0	-		2.32
ø100	30.5	31.5	-		3.38

SCP*2
 CMK2
 CMA2
 SCM
 SCG
 SCA2
 SCS
 CKV2
 CA/OV2
 SSD
 CAT
 MDC2
 MVC
 SMD2
 MSD*
 FC*
 STK
 ULK*
 JSK/M2
 JSG
 JSC3
 USSD
 USC
 JSB3
 LMB
 STG
 STS L
 LCS
 LCG
 LCM
 LCT
 LCY
 STR2
 UCA2
 HCM
 HCA
SRL3
 SRG3
 SRM3
 SRT3
 MRL2
 MRG2
 SM-25
 CAC4
 UCAC2
 RCC2
 MFC
 SHC
 GLC
 Ending

Rodless type
 Rodless cylinder

SRL3-Q Series

How to order

Without switch



With switch



A Mounting style

Note 1

B Bore size

C Port thread type

D Cushion

E Stroke length

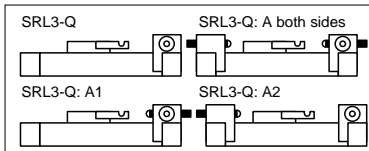
F Switch model no.
Note 3

G Switch quantity

H Option
Note 4, Note 5
Note 6, Note 7
Note 8, Note 9

Note on model no. selection

- Note 1: If Option "R" and "T" is selected for bore size 12, 16, 20, 25, or 30, the support type will be "00" or "LB1" (Option "R" and "T" with "LB" support is not available since it can not be piped)
- Note 2: Refer to page 2032 for minimum stroke with switch.
- Note 3: Switches not listed on option (F) are also available. (custom order) Refer to Ending 1 for details.
- Note 4: Adjustable full-stroke bracket on the R side provided as standard for position locking models.. Therefore, only a shock absorber will be added to the R side when A1 is specified. If A is indicated, position locking, adjustable full stroke and shock absorber will be on the R side. (The following diagram)



- Note 5: The asterisk (*) following L* and N* indicates the number of brackets. Indicate "L2" for LB and "N2" for LB1 when ordering 2 sets. 2 pieces/1 set
- Note 6: Refer to dimensions on page 2026 to 2031 for port and cushion needle position symbols.
- Note 7: Standard ø25 models needs to have its cover removed and full stroke adjustment mounted using a plate nut afterwards. "A3" is a option that will have a plate nut for mounting installed beforehand so that it can be mounted afterwards without removing the cover.
- Note 8: Thread size for ø12, ø16 will be "M4" and ø20 will be "M5" if "H" is selected.
- Note 9: Check the available combination of options on the "Option combination table" on the next page.
- Note 10: Copper and PTFE free as standard

<Example of model number>

SRL3-Q-00-12B-200-M0H-R-B

Model: Rodless cylinder with position locking function

- A** Mounting style : Basic type
- B** Bore size : ø12mm
- C** Port thread type : Rc thread
- D** Cushion : Both sides cushioned
- E** Stroke length : 200mm
- F** Switch model no. : Reed switch M0H and lead wire 1m
- G** Switch quantity : 1 on rod end
- H** Option : Port position F, cushion needle position B

Symbol	Descriptions
A Mounting style	
00	Basic type
LB	Axial foot type
LB1	Axial foot type

B Bore size (mm)	
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

C Port thread type	
Blank	Rc thread
N	NPT thread (ø20 and over) (custom order)
G	G thread (ø20 and over) (custom order)

D Cushion	
B	Both sides cushioned
R	R side cushioned
L	L side cushioned
N	No cushion

E Stroke length (mm)		
Bore size	Stroke length Note 2	Custom stroke length
ø12 to ø100	1 to 5000	By 1 mm increment

F Switch model no.				
Lead wire	Lead wire	Contact	Indicator	Lead wire
Axial	Radial			
M0H*	M0V*	Reed	1 color indicator type	2-wire
M5H*	M5V*		Without indicator light	
M2H*	M2V*		1 color indicator type	
-	M2WV*	Proximity	2 color indicator type	2-wire
M3H*	M3V*		1 color indicator type	3-wire
-	M3WV*		2 color indicator type	3-wire
M3PH*	M3PV*		1 color indicator type (custom order)	3-wire
T2WH*	T2WV*		2 color indicator type	2-wire
T2YH*	T2YV*			
T3WH*	T3WV*			
T3YH*	T3YV*	Strong magnetic field proof (AC magnetic field dedicated)	2-wire	
T2YD*	-			
T2YDT*	-			

*Lead wire length	
Blank	1m (standard)
3	3m (option)
5	5m (option)

G Switch quantity	
R	One on R side
L	One on L side
D	2
T	3
4	4 pieces (fill in switch quantity if 4 or more switches are required.)

H Option		Bore size (ø)									
		12	16	20	25	32	40	50	63	80	100
A	Adjustable full-stroke both ends, with shock absorber	●	●	●	●	●	●	●	●	●	●
A1	Adjustable full-stroke R end only, with shock absorber	●	●	●	●	●	●	●	●	●	●
A2	Adjustable full-stroke L end only, with shock absorber	●	●	●	●	●	●	●	●	●	●
A3	Adjustable full-stroke bracket retrofitting	●	●	●	●	●	●	●	●	●	●
Y	Floating joint	●	●	●	●	●	●	●	●	●	●
Y1	Thin floating joint	●	●	●	●	●	●	●	●	●	●
L*	Intermediate support bracket (00, LB)	●	●	●	●	●	●	●	●	●	●
N*	With intermediate support bracket (LB1)	●	●	●	●	●	●	●	●	●	●
H	Table mounting thread size up	●	●	●	●	●	●	●	●	●	●
U	Height adjustment plate	●	●	●	●	●	●	●	●	●	●
Blank	: F (standard)	●	●	●	●	●	●	●	●	●	●
R	: R (common port)	●	●	●	●	●	●	●	●	●	●
	: F	●	●	●	●	●	●	●	●	●	●
	: B	●	●	●	●	●	●	●	●	●	●
	: D	●	●	●	●	●	●	●	●	●	●
T	: R (common port)	●	●	●	●	●	●	●	●	●	●
	: F	●	●	●	●	●	●	●	●	●	●
	: B	●	●	●	●	●	●	●	●	●	●
	: D	●	●	●	●	●	●	●	●	●	●
D	: D	●	●	●	●	●	●	●	●	●	●
	: F	●	●	●	●	●	●	●	●	●	●
S	: D	●	●	●	●	●	●	●	●	●	●
	: F	●	●	●	●	●	●	●	●	●	●
X	: D	●	●	●	●	●	●	●	●	●	●
	: F	●	●	●	●	●	●	●	●	●	●

Option combination table

● : Combination possible ◻ : Combination not available

Option	Option																	
	Symbol	A	A1	A2	A3	Y	Y1	L*	N*	H	U	Blank	R	B	T	D	S	X
Port position and cushion needle position F (common port)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Port position and cushion needle position D		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Port position D and cushion needle position F		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Port position R and cushion needle position B (common port)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Port position F, cushion needle position B		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Port position R and cushion needle position F (common port)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Port position and cushion needle position F (standard)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Height adjustment plate		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Table mounting thread size up		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Intermediate support bracket (LB1)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Intermediate support bracket (00, LB)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Thin type floating joint		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Floating joint		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Adjustable full-stroke bracket retrofitting		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Adjustable full-stroke L end only, with shock absorber		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Adjustable full-stroke R end only, with shock absorber		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Adjustable full-stroke both ends, with shock absorber		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Note 1: Some combinations are not available depending on bore size. Confirm the conditions of options of **H** "How to order" on the previous page.

Note 2: LB1 can not be used if port position is D. (ø25, ø32)

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

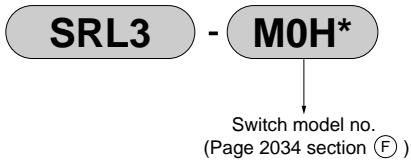
Rodless type
Rodless cylinder

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

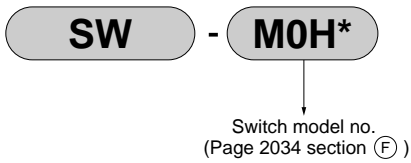
How to order switch

(Refer to pages 2053 to 2055 for parts configuration)

- Switch body + mounting bracket (Note 1)



- Only switch body



*Lead wire length	
Blank	1m (standard)
3	3m (option)
5	5m (option)

*** mark indicates length of lead wire.

- Mounting bracket (Note 2)

· M type switch



· T type switch



- Lead wire holder (Note 3)

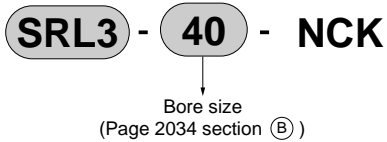


Note 1: Lead wire holder is not included in the switch and its mounting bracket. When a lead wire holder is necessary, place an order separately.

Note 2: M type switch and T type switch has different brackets.

Note 3: Lead wire holder comes in a set of 10 pieces.

- Discrete shock absorber model no.



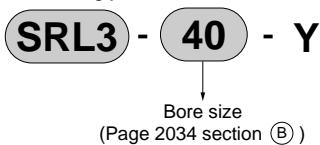
(Square nut 1 pc., hex nut for fixing shock absorber 1pc.)

Square nut for shock absorber for SRL3-40 is a special design.

Applicable shock absorber model No.

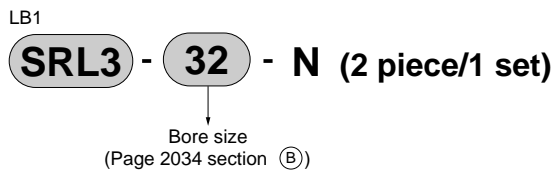
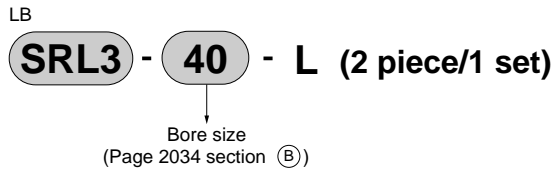
Model	Shock absorber model no.
SRL3-12	NCK-00-0.3-C
SRL3-16	NCK-00-0.3-C
SRL3-20	NCK-00-0.7-C
SRL3-25	NCK-00-1.2
SRL3-32	NCK-00-2.6
SRL3-40	NCK-00-7
SRL3-50	NCK-00-12
SRL3-63	NCK-00-12
SRL3-80	NCK-00-20
SRL3-100	NCK-00-20

- Floating joint set model no.

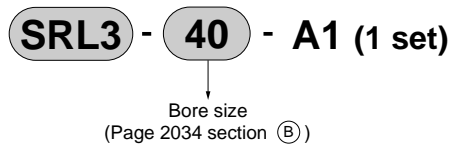


(Mount, mount base, pin, plain washer, pan head machine screw with spring washer)

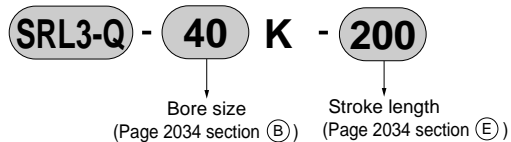
- Discrete intermediate support bracket model no.



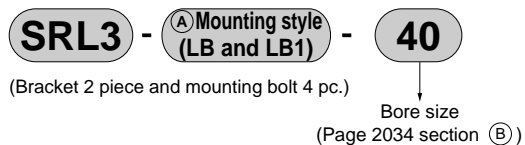
- Adjustable full-stroke kit model no.



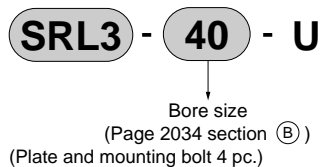
- Repair parts model no.



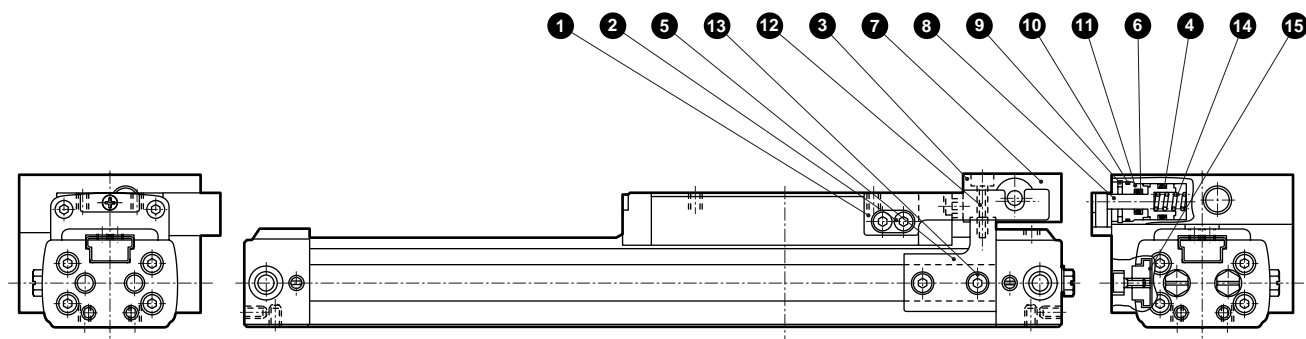
- Mounting bracket model no.



- Height adjustment plate set model no.



Internal structure drawing and parts list (ø12 to ø25)



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Lock lever	Alloy steel	Chrome plating	9	C type snap ring for hole	Steel	
2	Hexagon socket head cap bolt	Alloy steel	Galvanizing	10	Gasket	Nitrile rubber	
3	Stopper	Steel	Blackening	11	Rod cover	Aluminum alloy	Alumite
4	Piston packing seal	Nitrile rubber		12	Hexagon socket head cap bolt	Alloy steel	Galvanizing
5	Adaptor	Steel	Galvanizing	13	Hexagon socket head cap bolt	Alloy steel	Galvanizing
6	Rod packing seal	Nitrile rubber		14	Spring	Steel	Electrodeposition coating
7	Position locking unit	Aluminum alloy	Alumite	15	Square nut	Alloy steel	Blackening
8	Lock pin (stopper piston)	Alloy steel	Chrome plating				

Repair parts list

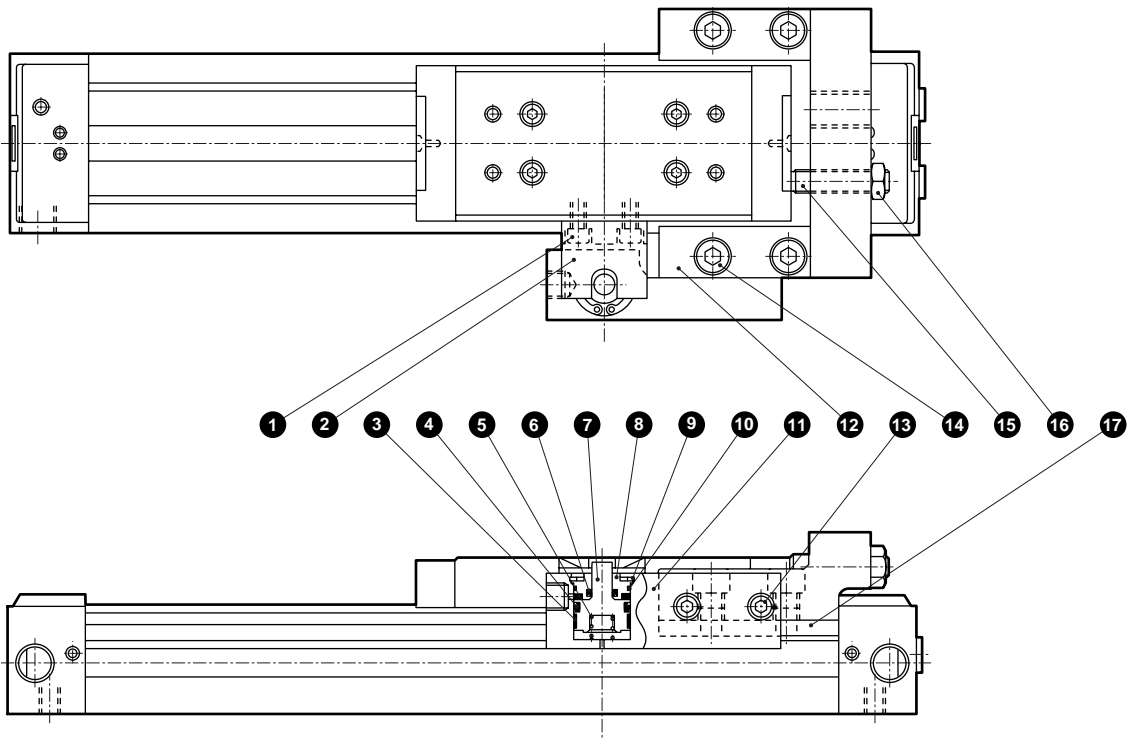
Tube Bore size (mm)	Kit No.	Repair parts number
ø12	SRL3-Q-12K-*	
ø16	SRL3-Q-16K-*	④ ⑥ ⑩ ⑧ ⑨ ⑱
ø20	SRL3-Q-20K-*	⑳ ㉑ ㉒ ㉓ ㉔
ø25	SRL3-Q-25K-*	

Note 1: Specify the kit no. when placing an order Specify stroke length for "**".

Note 2: Parts no. for ⑧⑨⑱⑲⑲⑲⑲ will be based accordingly to page 2009.

Rodless type
Rodless cylinder

Internal structure drawing and parts list (ø32 to ø63)



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Hexagon socket head cap bolt	Alloy steel	Galvanizing	10	Gasket	Nitrile rubber	
2	Lock lever	Alloy steel	Galvanizing	11	Position locking unit	Aluminum alloy	Alumite
3	Wear ring	Polyacetal resin		12	Adaptor	Steel	Galvanizing
4	Piston packing seal	Nitrile rubber		13	Hexagon socket head cap bolt	Alloy steel	Galvanizing
5	Spring	Steel	Electrodeposition coating	14	Hexagon socket head cap bolt	Alloy steel	Galvanizing
6	Rod packing seal	Nitrile rubber		15	Hexagon socket head set screw	Alloy steel	Galvanizing
7	Lock pin	Alloy steel	Chrome plating	16	Square nut	Steel	Galvanizing
8	Rod cover	Aluminum alloy	Alumite	17	Square nut	Alloy steel	Galvanizing
9	C type snap ring for hole	Steel					

Repair parts list

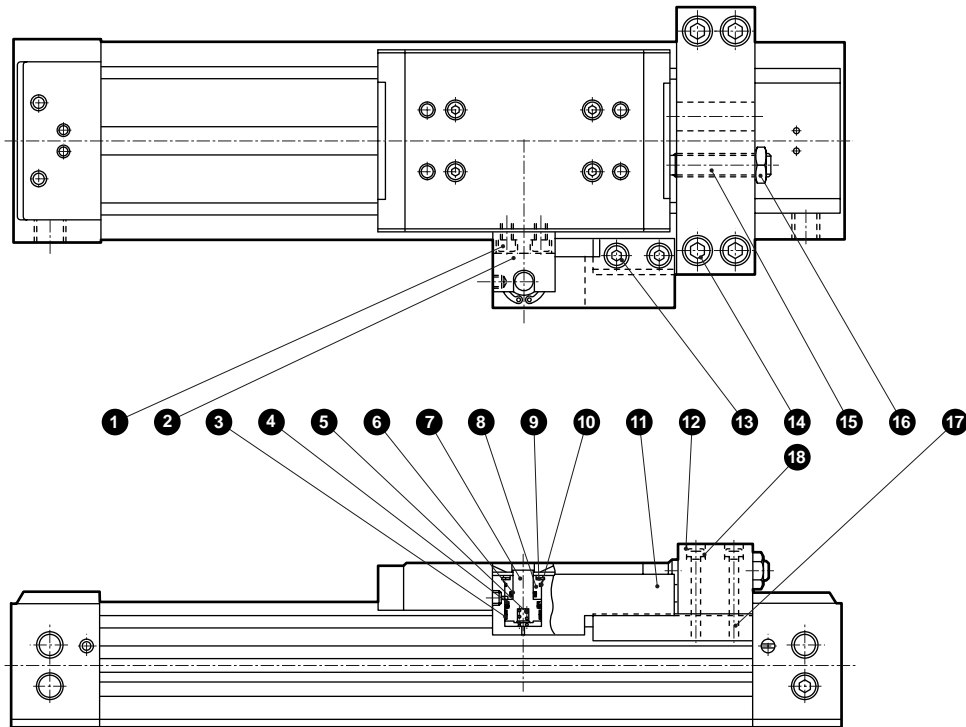
Tube Bore size (mm)	Kit No.	Repair parts number
ø32	SRL3-Q-32K-*	③ ④ ⑥
ø40	SRL3-Q-40K-*	⑩ ⑧ ⑨ ⑱ ⑲ ⑳
ø50	SRL3-Q-50K-*	⑳ ㉑ ㉒ (㉓) Note 3
ø63	SRL3-Q-63K-*	

Note 1: Specify the kit no. when placing an order. Specify stroke length for "**".

Note 2: Parts no. for ⑧ ⑨ ⑱ ⑲ ㉑ ㉒ ㉓ will be based accordingly to page 2009 and 2010.

Note 3: ㉓ applies only to ø50 and ø60 equivalent models.

Internal structure drawing and parts list (ø80 to ø100)



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Hexagon socket head cap bolt	Alloy steel	Galvanizing	10	Gasket	Nitrile rubber	
2	Lock lever	Alloy steel	Galvanizing	11	Position locking unit	Aluminum alloy	Alumite
3	Wear ring	Polyacetal resin		12	Adaptor	Steel	Galvanizing
4	Piston packing seal	Nitrile rubber		13	Hexagon socket head cap bolt	Alloy steel	Galvanizing
5	Spring	Steel	Electrodeposition coating	14	Hexagon socket head cap bolt	Alloy steel	Galvanizing
6	Rod packing seal	Nitrile rubber		15	Hexagon socket head set screw	Alloy steel	Galvanizing
7	Lock pin	Alloy steel	Chrome plating	16	Square nut	Steel	Galvanizing
8	Rod cover	Aluminum alloy	Alumite	17	Square nut	Alloy steel	Galvanizing
9	C type snap ring for hole	Steel		18	Conical spring washer	Steel	

Repair parts list

Tube Bore size (mm)	Kit No.	Repair parts number
ø80	SRL3-Q-80K-*	③ ④ ⑥ ⑩
		⑧ ⑨ ⑱ ⑳
ø100	SRL3-Q-100K-*	㉒ ㉔ ㉕ ㉖
		㉙ ㉚ ㉛

Note 1: Specify the kit no. when placing an order Specify stroke length for "**".

Note 2: Parts no. for ⑧⑨⑱⑲㉒㉔㉕㉖㉙㉚㉛ will be based accordingly to page 2011.

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

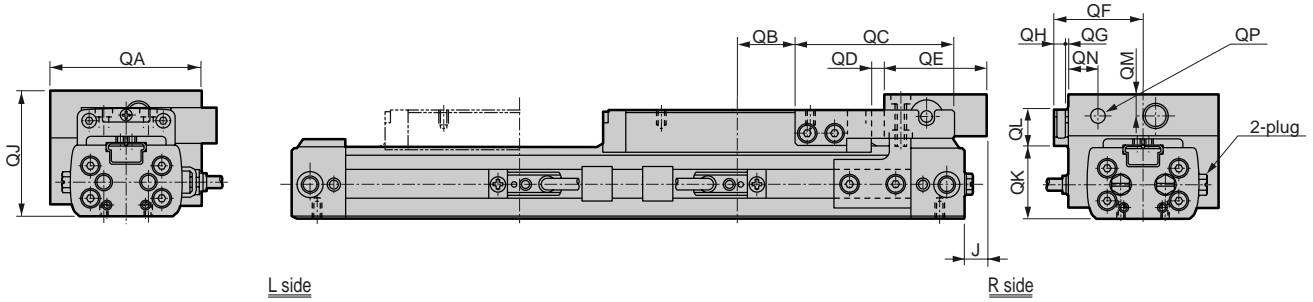
Rodless type
Rodless cylinder

SRL3-Q Series

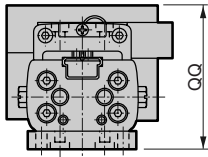
Dimensions (ø12 to ø25)

Note 1: Please refer to pages 2012 to 2015 for dimensions not shown below.
 Note 2: Refer to pages 2048 to 2052 for dimensions with options and dimensions of accessories.

● SRL3-Q



● SRL3-Q with foot bracket SRL3-Q-LB1-**-***

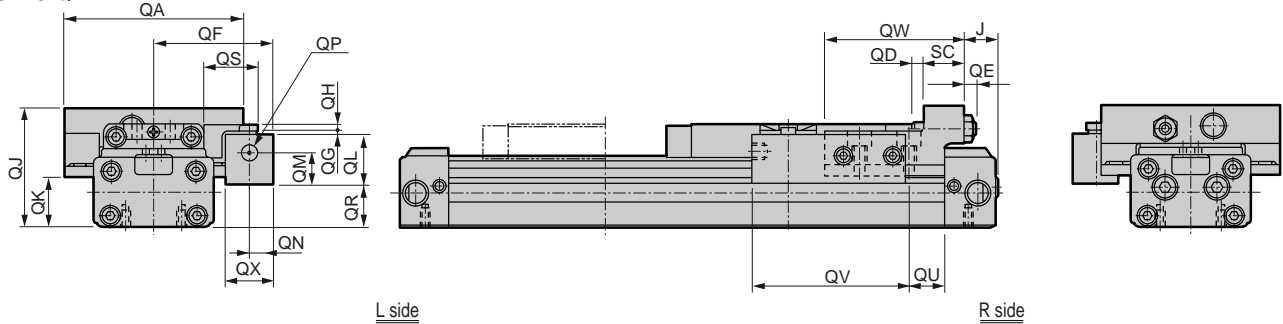


Symbol	J	QA	QB	QC	QD	QE	QF	QG	QH	QJ	QK	QL	QM	QN	QP	QQ
ø12	0	45	19	46	2.5	25	27.5	1	4	40	21.5	12.5	7	9.5	M5	46
ø16	0	49	19	52	2.5	28	29.5	1	4	42	25	12	7	9.5	M5	48
ø20	-1	57	24	53	2.5	31	33.5	1	4	48	29	13	8	10.5	Rc $\frac{1}{8}$	56
ø25	5.5	77	26	67.5	2.5	37	43.5	1	4	62.5	36	17	8	10.5	Rc $\frac{1}{8}$	72.5

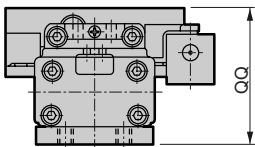
Dimensions (ø32 to ø63)

Note 1: Refer to pages 2014, 2015 for dimensions not shown below.
 Note 2: Refer to pages 2048 to 2052 for dimensions with options and dimensions of accessories.

● SRL3-Q



● SRL3-Q-LB1-32-***with foot bracket

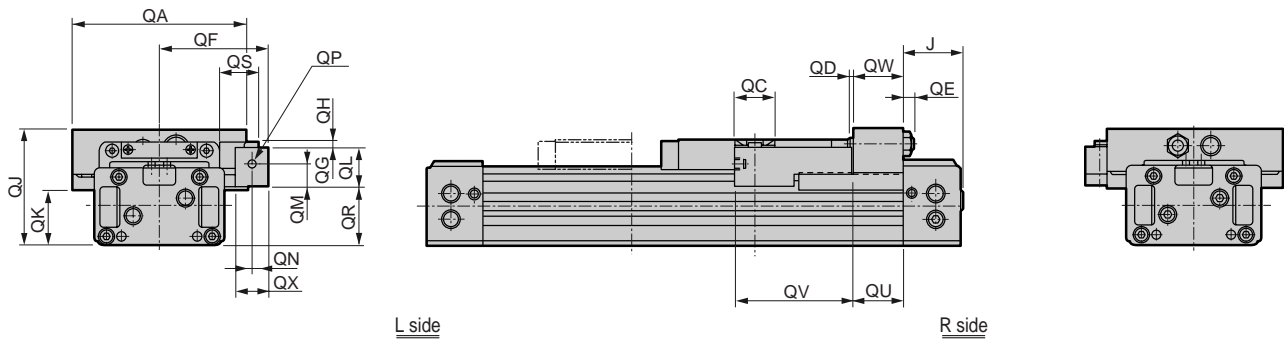


Symbol	J	QA	QD	QE	QF	QG	QH	QJ	QK	QL	QM	QN	QP	QQ	QR	QS	QU	QV	QW	QX	SC
ø32	19.5	98	7	6	65	2	4	66.5	28	27.5	18	13	Rc $\frac{1}{8}$	88.5	23.5	29	21	84	76	26	22
ø40	11.5	112	7	11	72	2	4	78.5	34	27.5	18	13	Rc $\frac{1}{8}$	-	31.5	29	27	84	87	26	32
ø50	9.5	136	8	9	84	2	5	99	40	33	21.5	15	Rc $\frac{1}{8}$	-	42	36	12.5	100	102	30	38
ø63	20.5	158	8	14	95	2	5	112	50	33	21.5	15	Rc $\frac{1}{8}$	-	55	36	31.5	100	91	30	38

Dimensions (ø80, ø100) Note 1: Refer to pages 2016, 2017 for dimensions not shown below.

Note 2: Refer to pages 2048 to 2052 for dimensions with options and dimensions of accessories.

● SRL3-Q



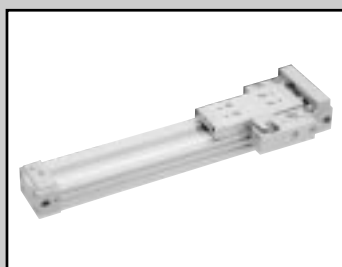
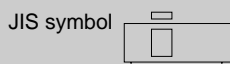
Symbol	J	QA	QC	QD	QE	QF	QG	QH	QJ	QK	QL	QM	QN	QP	QR	QS	QU	QV	QW	QX
ø80	70	214	50	6	14	133	2	7	145	69	47.5	29	20	Rc ¹ / ₈	73.5	48	62	143	60	40
ø100	80	250	50	6	14	145	2	7	164	88	47.5	29	20	Rc ¹ / ₈	92.5	48	62	148	60	40

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

Rodless type
Rodless cylinder

SRL3-GQ Series

● Bore size ϕ : $\phi 12, \phi 16, \phi 20, \phi 25, \phi 32, \phi 40, \phi 50, \phi 63, \phi 80, \phi 100$



Specifications

Descriptions		SRL3-GQ									
Bore size	mm	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Actuation		Double acting									
Specifications fluid		Compressed air									
Max. working pressure	MPa	0.7									
Min. working pressure	MPa	0.25		0.15				0.1			
Withstanding pressure	MPa	1.05									
Ambient temperature	$^{\circ}\text{C}$	5 to 60									
Port size	Cylinder section	M5		Rc $1/8$		Rc $1/4$		Rc $3/8$		Rc $1/2$	
	Position locking unit	M5 Rc $1/8$									
Stroke tolerance	mm	$+2.0_0$ (up to 1000)			$+2.5_0$ (up to 3000)			$+3.0_0$ (up to 5000)			
Working piston speed	mm/s	50 to 2000 (standard port piping)(note 1)									
Cushion		Air cushion									
Lubrication		Not required (use turbine oil Class 1 ISOVG32 if lubricated. Lubricate continuously if lubricated.)									
Position locking mechanism		Installed on R side of cover.									
Holding force	N	Maximum thrust x 0.7									

Note 1: (1)The speed of entry to the position locking mechanism must not exceed 500mm/s when operating at a speed of 500 to 2000mm/s. For common port pipe, working piston speed varies depending on stroke length. Consult with CKD.
 (2)Install an external shock absorber or a deceleration circuit etc. for deceleration.
 (3)Apply grease to sliding section of lock lever periodically.

Allowable energy absorption

Bore size (mm)	Cushioned		No cushion	With shock absorber (initial setpoint)	
	Allowable energy absorption (J)	Cushion mm stroke (mm)	Allowable energy absorption (J)	Absorbed energy (J)	Valid mm stroke (mm)
$\phi 12$	0.03	14.5	0.003	2.4	5.5
$\phi 16$	0.22	19.2	0.007	2.4	5.5
$\phi 20$	0.59	22.2	0.010	5.7	7
$\phi 25$	1.40	20.9	0.015	10	9
$\phi 32$	2.57	23.5	0.030	18	13
$\phi 40$	4.27	23.9	0.050	50	16.5
$\phi 50$	9.13	24.9	0.072	86	21
$\phi 63$	17.4	29.6	0.138	86	21
$\phi 80$	40	45.8	0.393	143	25
$\phi 100$	67	45.8	0.622	143	25

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
$\phi 12$			
$\phi 16$			
$\phi 20$			
$\phi 25$	200, 300		
$\phi 32$	400, 500		
$\phi 40$	600, 700	5000	1
$\phi 50$	800, 900		
$\phi 63$	1000		
$\phi 80$			
$\phi 100$			

** The intermediate stroke can be manufactured in 1 mm increments.

M type switch quantity and min. stroke length (mm)

Switch quantity	1		2		3		4		5		6	
	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H
Switch model no.												
Bore size (mm)												
$\phi 12$	10	10	30	70	60	120	90	170	120	220	150	270
$\phi 16$	10	10	30	70	60	120	90	170	120	220	150	270
$\phi 20$	10	10	30	70	60	120	90	170	120	220	150	270
$\phi 25$	10	10	30	70	60	120	90	170	120	220	150	270
$\phi 32$	10	10	30	45	60	90	90	135	120	180	150	225
$\phi 40$	10	10	30	45	60	90	90	135	120	180	150	225
$\phi 50$	15	15	30	45	60	90	90	135	120	180	150	225
$\phi 63$	15	15	30	45	60	90	90	135	120	180	150	225
$\phi 80$	25		50		100		150		200		250	
$\phi 100$	25		50		100		150		200		250	

T type switch quantity and min. stroke length (mm)

Switch quantity	1		2		3		4		5		6	
	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H
Switch model no.												
Bore size (mm)												
$\phi 12$	5	5	45	70	85	120	125	170	165	220	205	270
$\phi 16$	5	5	45	70	85	120	125	170	165	220	205	270
$\phi 20$	5	5	45	70	85	120	125	170	165	220	205	270
$\phi 25$	10	10	45	70	85	120	125	170	165	220	205	270
$\phi 32$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 40$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 50$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 63$	10	10	45	50	85	100	125	150	165	200	205	250
$\phi 80$	15	15	45	50	85	100	125	150	165	200	205	250
$\phi 100$	15	15	45	50	85	100	125	150	165	200	205	250

Always read safety precautions on (With position locking function) pages 2001 to 2003 before use.

Switch specifications (M type switch)

(1) Color/2 color indicator

Descriptions	Proximity 2 wire		Proximity 3 wire		
	M2V and M2H	M2WV (2 color indicator type)	M3H/M3V	M3PH/M3PV (Custom order)	M3WV
Applications	PLC		PLC, relay, IC circuit or small solenoid valve		
Output method	-		NPN output	PNP output	NPN output
Power voltage	-		4.5 to 28 VDC		10 to 28 VDC
Load voltage	10 to 30 VDC		30 VDC or less		
Load current	5 to 30mA		200mA or less	100mA or less	150mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Yellow LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	0.05mA or less	10μA or less

Descriptions	Reed 2 wire			
	M0V and M0H		M5V and M5H	
Applications	PLC, relay		PLC, relay, IC circuit (w/o lamp), serial connection	
Power voltage	-		-	
Load voltage	12/24 VDC	110 VAC	5/12/24 VDC	110 VAC or less
Load current	5 to 50mA	7 to 20mA	50mA or less	20mA or less
Light	LED (ON lighting)		Without indicator light	
Leakage current	0mA			

Note 1: For M0* switch, if load current is within 7 to 20mA, this switch can be used with 24 VAC and 48 VAC.

Note 2: Refer to Ending 1 for other switch specifications.

Switch specifications (T type switch)

● 2 Color indicator type

Descriptions	Proximity 2 wire		Proximity 3 wire	
	T2YH/T2YV	T2WH/T2WV	T3YH/T3YV	T3WH/T3WV
Applications	PLC		PLC, relay	
Output method	-		NPN output	NPN output
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA (Note 1)		50mA or less	
Light	Red/green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

● Strong magnetic field proof

Descriptions	Proximity 2 wire
	T2YD and T2YDT
Applications	PLC
Light	Red/green LED (ON lighting)
Load voltage	24 VDC ±10%
Load current	5 to 20mA
Internal voltage drop	6V or less
Leakage current	1.0mA or less

Cylinder weight

Unit: kg

Bore size (mm)	Weight when stroke length is 0mm			Weight per switch (Including bracket)	Additional weight per St=100mm
	Basic type (00)	Foot type			
		(LB)	(LB1)		
ø12	0.38	0.25	0.26	0.02	0.10
ø16	0.47	0.33	0.35		0.13
ø20	0.74	0.54	0.58		0.18
ø25	1.5	1.6	1.1		0.28
ø32	2.4	2.5	1.7		0.36
ø40	3.6	3.7	-		0.53
ø50	6.0	6.1	-		0.75
ø63	8.8	9.1	-		1.11
ø80	22.4	23.0	-		2.32
ø100	30.5	31.5	-		3.38

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

SRL3-GQ Series

How to order

Without switch

SRL3-GQ-00-12-B-200-B

With switch

SRL3-GQ-00-12-B-200-M0H-R-B

A Mounting style

Note 1

B Bore size

C Port thread type

D Cushion

E Stroke length

F Switch model no.
Note 3

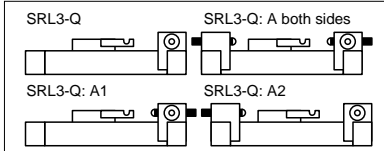
⚠ Note on model no. selection

Note 1: If Option "R" and "T" is selected for bore size 12, 16, 20, 25, or 30, the support type will be "00" or "LB1" ("LB" can not be piped for options "R" and "T", thus unavailable.)

Note 2: Refer to page 2042 for minimal stroke with models with switches.

Note 3: (F) Switches not listed on this page are also available. (custom order) Refer to Ending 1 for details.

Note 4: Adjustable full-stroke bracket on the R side is as standard part of position locking. When A1 is indicated, a shock absorber is only added to R side. If A is indicated, position locking, adjustable full stroke and shock absorber will be on the R side. (The following diagram)



Note 5: The asterisk (*) following L* and N* indicates the number of brackets. Indicate "L2" for LB and "N2" for LB1 when ordering 2 sets. 2 pieces/1 set

Note 6: Refer to dimensions on page 2026 to 2031 for port and cushion needle position symbols.

Note 7: Standard ø25 models needs to have its cover removed and full stroke adjustment mounted using a plate nut afterwards. "A3" is a option that will have a plate nut for mounting installed beforehand so that it can be mounted afterwards without removing the cover.

Note 8: Thread size for ø12, ø16 will be "M4" and ø20 will be "M5" if "H" is selected.

Note 9: Check the available combination of options on the "Option combination table" on the next page.

Note 10: Copper and PTFE free as standard

<Example of model number>

SRL3-GQ-00-12B-200-M0H-R-B

Model: Rodless cylinder Resin guide type- with position locking function

- A** Mounting style : Basic type
- B** Bore size : ø12mm
- C** Port thread type : RC screw
- D** Cushion : Both sides cushioned
- E** Stroke length : 200mm
- F** Switch model no. : Reed switch M0H and lead wire 1m
- G** Switch quantity : 1 on rod end
- H** Option : Port position F, cushion needle position B

Symbol	Descriptions										
A Mounting style											
00	Basic type										
LB	Axial foot type										
LB1	Axial foot type										
B Bore size (mm)											
12	ø12										
16	ø16										
20	ø20										
25	ø25										
32	ø32										
40	ø40										
50	ø50										
63	ø63										
80	ø80										
100	ø100										
C Port thread type											
Blank	Rc thread										
N	NPT thread (ø20 and over) (custom order)										
G	G thread (ø20 and over) (custom order)										
D Cushion											
B	Both sides cushioned										
R	R side cushioned										
L	L side cushioned										
N	No cushion										
E Stroke length (mm)											
Bore size	Stroke length Note 2	Custom stroke length									
ø12 to ø100	1 to 5000	By 1 mm increment									
F Switch model no.											
Lead wire	Lead wire	Contact	Indicator	Lead wire							
Axial	Radial										
M0H*	M0V*	Reed	1 color indicator type Without indicator light	2-wire							
M5H*	M5V*										
M2H*	M2V*		Proximity	1 color indicator type 2 color indicator type	2-wire						
-	M2WV*										
M3H*	M3V*	2 color indicator type 1 color indicator type (custom order)		3-wire							
-	M3WV*										
M3PH*	M3PV*	2 color indicator type		3-wire							
T2WH*	T2WV*										
T2YH*	T2YV*	2 color indicator type		2-wire							
T3WH*	T3WV*										
T3YH*	T3YV*	Strong magnetic field proof (AC magnetic field dedicated)	2-wire								
T2YD*	-										
T2YDT*	-										
*Lead wire length											
Blank	1m (standard)										
3	3m (option)										
5	5m (option)										
G Switch quantity											
R	One on R side										
L	One on L side										
D	2										
T	3										
4	4 pieces (fill in switch quantity if 4 or more switches are required.)										
H Option											
Bore size (ø)		12	16	20	25	32	40	50	63	80	100
A	Adjustable full-stroke both ends, with shock absorber	●	●	●	●	●	●	●	●	●	●
A1	Adjustable full-stroke R end only, with shock absorber	●	●	●	●	●	●	●	●	●	●
A2	Adjustable full-stroke L end only, with shock absorber	●	●	●	●	●	●	●	●	●	●
A3	Adjustable full-stroke bracket retrofitting	●	●	●	●						
L*	Intermediate support bracket (00, LB)	●	●	●	●	●	●	●	●	●	●
N*	With intermediate support bracket (LB1)	●	●	●	●						
H	Table mounting thread size up	●	●	●	●	●	●	●	●	●	●
U	Height adjustment plate	●	●	●	●	●	●	●	●	●	●
Blank	: F (standard)	●	●	●	●	●	●	●	●	●	●
R	: R (common port)	Cushion needle position	: F (standard)	●	●	●	●	●	●	●	●
			: B	●	●	●	●	●	●	●	●
B	: F	Cushion needle position	: B	●	●	●	●	●	●	●	●
			: R (common port)	●	●	●	●	●	●	●	●
T	: R (common port)	Cushion needle position	: B	●	●	●	●	●	●	●	●
			: F	●	●	●	●	●	●	●	●
D	: D	Cushion needle position	: F			●	●	●	●	●	●
			: D				●	●	●	●	●
S	: D	Cushion needle position	: F				●	●	●	●	●
			: D					●	●	●	●
X	: F (common port)	Cushion needle position	: F							●	●
			: D								

Option combination table

● : Combination available □ : Combination not available

		Option															
		Port position F, cushion needle position F (common port)	Port position D, cushion needle position D	Port position D, cushion needle position F	Port position R, cushion needle position B (common port)	Port position F, cushion needle position B (common port)	Port position R, cushion needle position F (common port)	Port position F, cushion needle position F (standard)	Height adjustment plate	Table mounting thread size up	Intermediate support bracket (LB1)	Intermediate support bracket (00, LB)	Adjustable full-stroke bracket retrofitting	Adjustable full-stroke L end only, with shock absorber	Adjustable full-stroke R end only, with shock absorber	Adjustable full-stroke both sides and shock absorbers	
Symbol		A	A1	A2	A3	L*	N*	H	U	Blank	R	B	T	D	S	X	
Option	A	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	A1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	A2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	A3	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	L*	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	N*	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	U	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Blank	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	R	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	B	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	T	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	D	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
X	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

Note 1: Some combinations are not available depending on bore size. Confirm the conditions of options of **H** "How to order" on the previous page.

Note 2: LB1 can not be used if port position is D. (ø25, ø32)

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

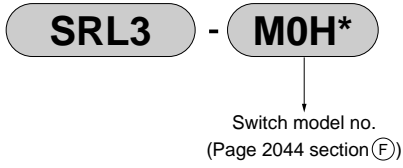
Rodless type
Rodless cylinder

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

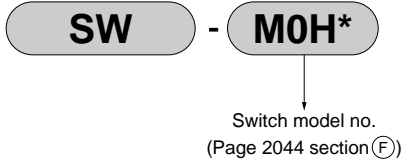
How to order switch

(Refer to page 2053 to 2055 for parts configuration)

- Switch body + mounting bracket (Note 1)



- Only switch body



*Lead wire length	
Blank	1m (standard)
3	3m (option)
5	5m (option)

*** mark indicates length of lead wire.

- Mounting bracket (Note 2)

· M type switch



· T type switch



Note: M type switch bracket different from T type switch.

- Lead wire holder (Note 3)



Note 1: Lead wire holder is not included in the switch and its mounting bracket. When a lead wire holder is necessary, place an order separately.

Note 2: M type switch and T type switch has different brackets.

Note 3: Lead wire holder comes in a set of 10 pieces.

- Discrete shock absorber model no.



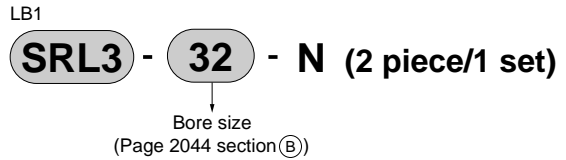
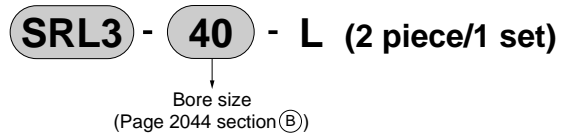
(Square nut 1 pc., hex nut for fixing shock absorber 1pc.)

Square nut for shock absorber for SRL3-40 is a special design.

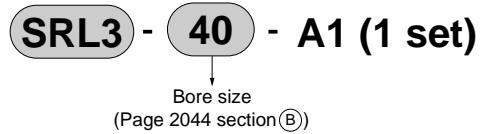
Applicable shock absorber model No.

Model	Shock absorber model no.
SRL3-12	NCK-00-0.3-C
SRL3-16	NCK-00-0.3-C
SRL3-20	NCK-00-0.7-C
SRL3-25	NCK-00-1.2
SRL3-32	NCK-00-2.6
SRL3-40	NCK-00-7
SRL3-50	NCK-00-12
SRL3-63	NCK-00-12
SRL3-80	NCK-00-20
SRL3-100	NCK-00-20

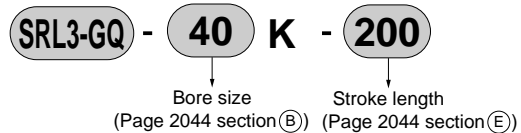
- Discrete intermediate support bracket model no.



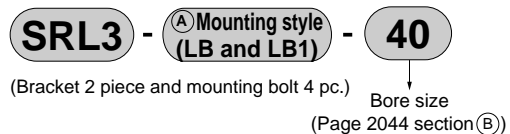
- Adjustable full-stroke kit model no.



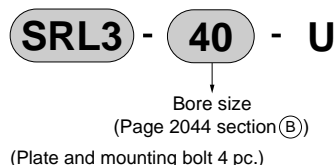
- Repair parts model no.



- Mounting bracket model no.



- Height adjustment plate set model no.



Internal structure and parts list

Refer to the following for internal structure and parts list
 SRL3 Series: 2009 to 2011
 SRL3-G Series: 2023 to 2025
 SRL3-Q Series : 2037 to 2039

Repair parts list

Tube Bore size (mm)	Kit No.	Repair parts number		
ø12	SRL3-GQ-12K-*	8 9 18 21 22 26	4 6 10	1 5
ø16	SRL3-GQ-16K-*	27 (Based on parts no. on page 2009)	(Based on parts no. on page 2037)	(Based on parts no. on page 2023)
ø20	SRL3-GQ-20K-*			
ø25	SRL3-GQ-25K-*			
ø32	SRL3-GQ-32K-*	8 9 18 21 22 26	3 4 6 10	1 5
ø40	SRL3-GQ-40K-*	27 (Based on parts no. on page 2009)	(Based on parts no. on page 2038)	(Based on parts no. on page 2023)
ø50	SRL3-GQ-50K-*	8 9 18 21 22 26	3 4 6 10	1 5
ø63	SRL3-GQ-63K-*	27 32 (Based on parts no. on page 2010)	(Based on parts no. on page 2038)	(Based on parts no. on page 2024)
ø80	SRL3-GQ-80K-*	8 9 18 21 22 26	3 4 6 10	1
ø100	SRL3-GQ-100K-*	27 28 29 32 33 (Based on parts no. on page 2011)	(Based on parts no. on page 2039)	(Based on parts no. on page 2025)

Dimensions

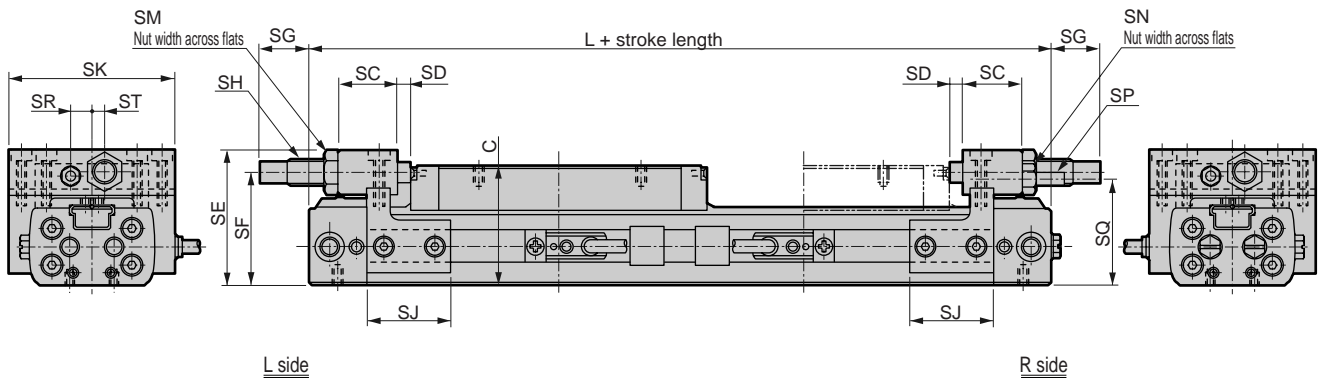
SRL3 Series pages 2012 to 2017
 SRL3-G Series pages 2026 to 2031
 SRL3-Q Series pages 2040 to 2041

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
 Rodless cylinder

SRL3 series common dimensions: Options (ø12 to ø25)

● Adjustable full-stroke with shock absorber (SRL3)

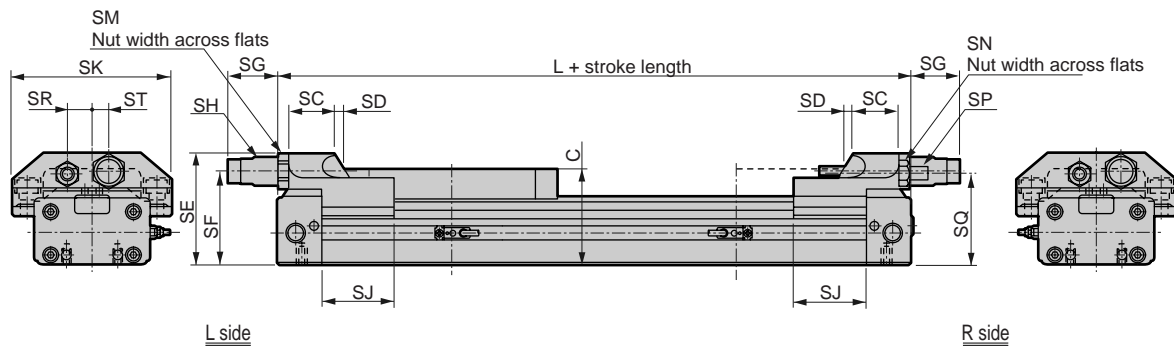


Symbol Bore size (mm)	SC	SD	SE	SF	SG			SH		SJ	SK	SM	SN	SP	SQ	SR	ST	C	L
					MAX	MIN	Adjustment depth	Screw diameter	Maximum energy absorption										
ø12	19.5	2.5	40	32	17.5	7.5	10	M8 x 0.75	3	25	45	12	5.5	M3	30.5	6	3	33	136
ø16	18	4	42	35	14.5	4.5	10	M8 x 0.75	3	25	49	12	5.5	M3	34	6	4	37	149
ø20	22.5	3.5	48	40	14.5	4.5	10	M10 x 1.0	7	39	57	14	7	M4	38	8	5	42	169
ø25	20	2.5	62.5	51.5	14.5	4.5	10	M12 x 1.0	12	50	77	17	10	M6	50	12	10	53	190

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

SRL3 series common dimensions: Options (ø32 to ø63)

- Adjustable full-stroke with shock absorber (SRL3)



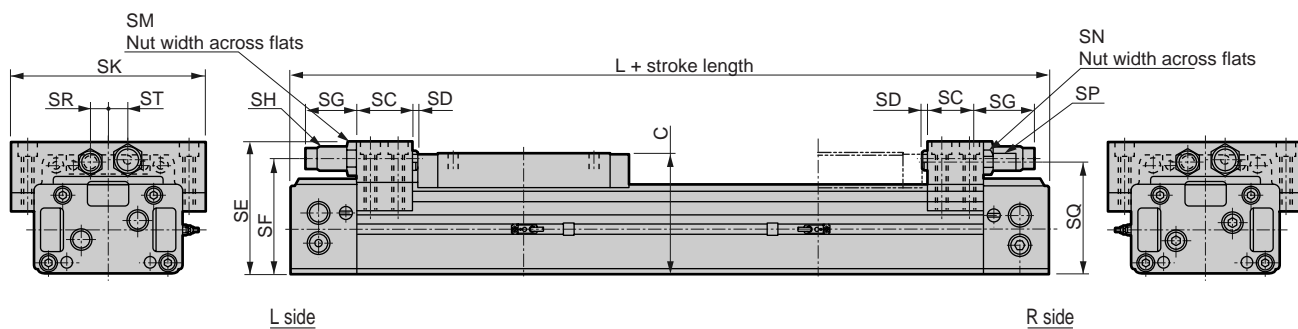
Symbol Bore size (mm)	SC	SD	SE	SF	SG			SH		SJ	SK	SM	SN	SP	SQ	SR	ST	C	L
					MAX	MIN	Adjustment depth	Screw diameter	Maximum energy absorption J										
ø32	22	7	66.5	55.5	27	17	10	M14 x 1.5	26	46	98	19	13	M8	53.5	14	12	57	226
ø40	32	7	78.5	65.5	34	24	10	M20 x 1.5	70	51	112	24	17	M10	63.5	17	12	67	244
ø50	38	8	99	80	55	45	10	M25 x 1.5	120	53	136	32	19	M12	77.5	22	17	82	258
ø63	38	8	112	93.5	44	34	10	M25 x 1.5	120	64	158	32	24	M16	89	25	20	95	296

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

SRL3 series common dimensions: Options (ø80 to ø100)

● Adjustable full-stroke with shock absorber

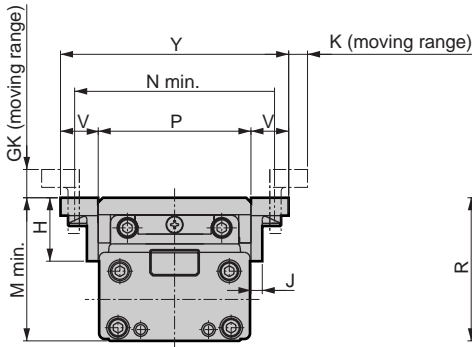


Symbol Bore size (mm)	SC	SD	SE	SF	SG			SH		SK	SM	SN	SP	SQ	SR	ST	C	L
					MAX	MIN	Adjustment depth	Screw diameter	Maximum energy absorption J									
ø80	60	6	145	125.5	50	40	10	M27 x 1.5	200	214	32	27	M20	123	20	20	130	500
ø100	60	6	164	144.5	50	40	10	M27 x 1.5	200	250	32	27	M20	142	20	20	150	530

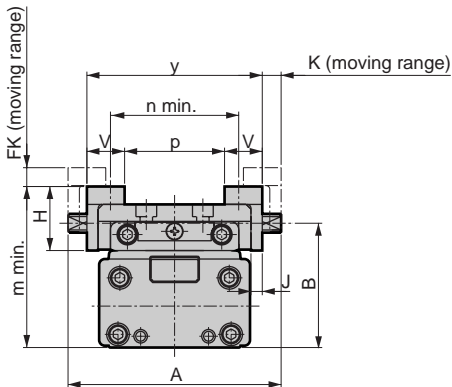
- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

SRL3 series common dimensions: Options

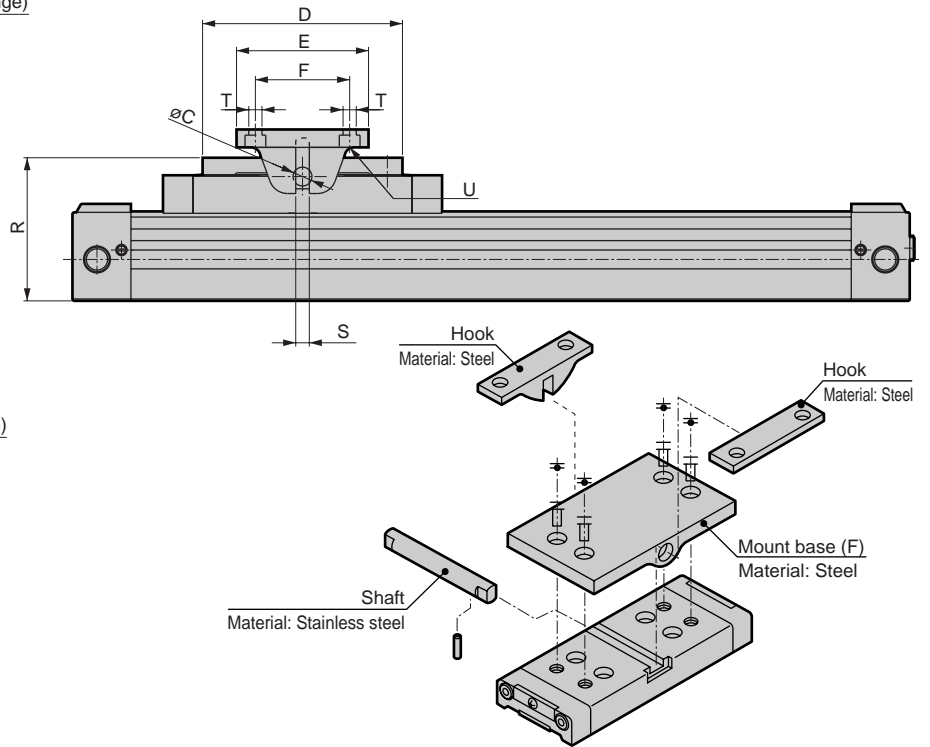
- Thin floating joint (Y1) $\phi 12$ to $\phi 63$.



(Hook installed outwards)

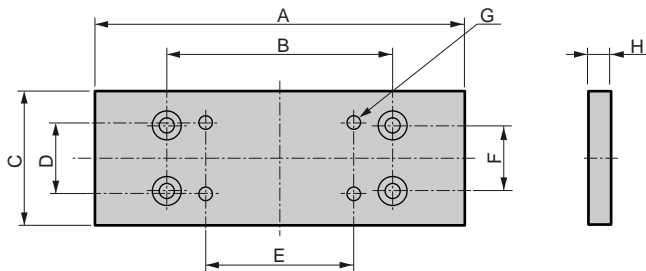


(Hook installed inwards)



Symbol Port size	A	B	C	D	E	F	H	J	K	FK	GK	M min.	m min.	N min.	n min.	P	p	R	S	V	Y	y	T	U
$\phi 12$	52	32	5	60	40	30	20	3	6	6	9	38	43	47.5	26.5	34	16	38.5	3.5	12	58	40	$\phi 3.4$	$\phi 6.5$ spot face depth 3.3
$\phi 16$	56	36.5	5	60	40	30	20	3	6	6	9	42	47	51.5	30.5	38	20	42.5	3.5	12	62	44	$\phi 3.4$	$\phi 6.5$ spot face depth 3.3
$\phi 20$	64	41	6	84	56	40	24.5	4	6	6	9	48.5	56.5	62	34	44	22	48.5	4	15	74	52	$\phi 4.5$	$\phi 8$ spot face depth 4.4
$\phi 25$	74	53	6	84	56	40	24.5	4	6	6	9	60.5	68.5	72	44	54	32	60.5	4	15	84	62	$\phi 5.5$	$\phi 9.5$ spot face depth 5.4
$\phi 32$	99	56.5	8	106	70	50	34	6	10	10	15	66	75.5	92	54	67	39	66.5	5.5	20	107	79	$\phi 6.6$	$\phi 11$ spot face depth 6.5
$\phi 40$	113	66	10	116	70	50	34	6	10	10	15	76	85.5	106	68	81	53	76.5	7	20	121	93	$\phi 6.6$	$\phi 11$ spot face depth 6.5
$\phi 50$	133	81	12	120	90	70	43	8	10	10	15	93	106	129	81	97	63	93.5	8.5	25	147	113	$\phi 9$	$\phi 14$ spot face depth 8.6
$\phi 63$	155	94	14	136	90	70	43	8	10	10	15	107	120	151	103	119	85	107	10	25	169	135	$\phi 9$	$\phi 14$ spot face depth 8.6

- Height adjustment plate (U) Material: Aluminum alloy



Symbol Port size	A	B	C	D	E	F	G	H
$\phi 12$	80	42	29	16	30	13	4-M3 penetrating	8
$\phi 16$	87	48	32	16	30	15	4-M3 penetrating	6
$\phi 20$	99	60	38	20	40	18	4-M4 penetrating	7
$\phi 25$	121	70	48	20	40	20	4-M5 penetrating	10.5
$\phi 32$	134	80	56	30	50	20	4-M6 penetrating	10.5
$\phi 40$	147	90	68	30	50	30	4-M6 penetrating	12.5
$\phi 50$	151	100	80	40	70	30	4-M8 penetrating	18
$\phi 63$	167	110	102	40	70	40	4-M8 penetrating	18
$\phi 80$	227	150	146	50	90	50	4-M12 penetrating	18
$\phi 100$	237	160	170	60	110	60	4-M12 penetrating	18

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC

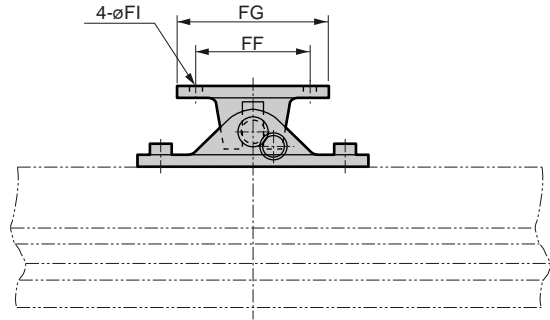
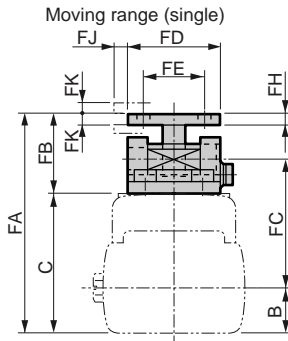
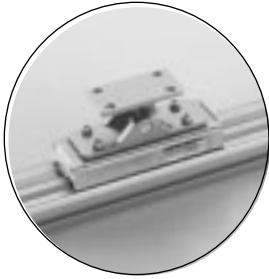
Ending

Rodless type
Rodless cylinder

SRL3 series common dimensions: Options



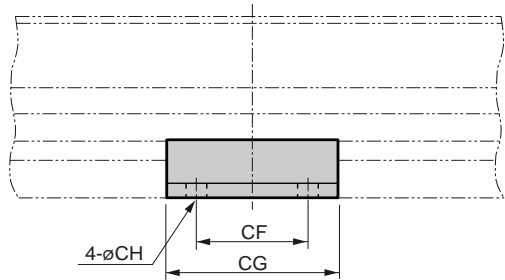
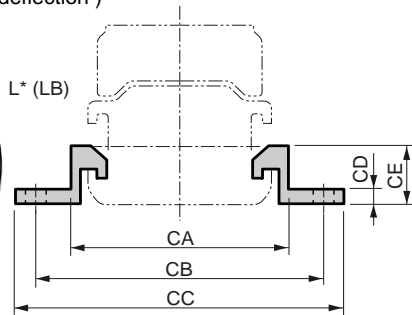
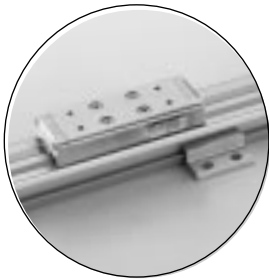
● Floating joint (Y) material: Steel



Symbol	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	B	C
Symbol	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	B	C
Bore size (mm)													
ø12	54	21	31.5	24	16	30	40	3	3.4	3	3	10.5	33
ø16	58	21	34	24	16	30	40	3	3.4	3	3	12	37
ø20	67	25	39	30	20	40	56	4	4.5	3	3	14	42
ø25	78	25	47	30	20	40	56	4	6	3	3	17	53
ø32	95	38	55.5	45	30	50	70	6	7	5	5	18.5	57

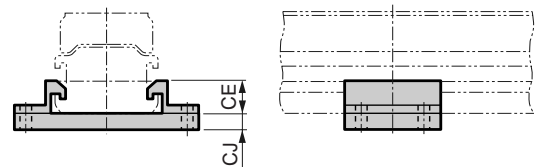
Symbol	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	B	C
Symbol	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	B	C
Bore size (mm)													
ø40	105	38	62	45	30	50	70	6	7	5	5	22	67
ø50	126	44	73	60	40	70	90	8	9	5	5	28	82
ø63	139	44	79	60	40	70	90	8	9	5	5	35	95
ø80	188	58	107	80	50	90	120	11	14	10	5	49	130
ø100	220	70	120.5	90	60	110	140	13	14	10	5	61.5	150

● Intermediate support bracket (L*N*) material: Aluminum alloy (This bracket is for preventing deflection)



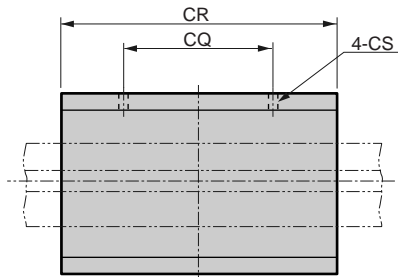
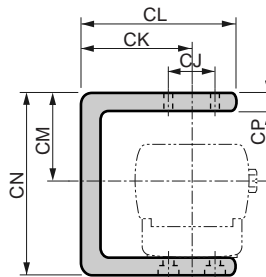
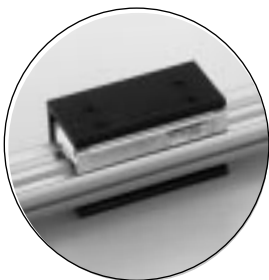
Symbol	CA	CB	CC	CD	CE	CF	CG	CH	CJ
Symbol	CA	CB	CC	CD	CE	CF	CG	CH	CJ
Bore size (mm)									
SRL3 ø12	38	52	60	3	11	16	30	4	6
SRG3 ø16	42	56	64	3	12	20	35	4	6
ø20	49	64	75	4	14	20	38	5	8
SRM3 ø25	60	76	88	6	19.5	20	40	7	10
SRT3 ø32	74	88	100	6	21.5	20	40	7	10
MRL2 ø40	90	108	124	6	24.5	30	60	9	-
ø50	106	124	140	8	30.5	30	60	9	-
MRG2 ø63	130	152	172	10	38.5	50	90	11	-
SM-25 ø80	172	210	236	12	32	60	110	14	-
CAC4 ø100	208	246	272	12	32	60	110	14	-

N* (LB1)



L* (for LB) N* (for LB1)

● C mount bracket (C) material: Aluminum alloy



Symbol	CJ	CK	CL	CM	CN	CP	CQ	CR	CS
Symbol	CJ	CK	CL	CM	CN	CP	CQ	CR	CS
Bore size (mm)									
ø12	13	27	40	22.5	50	5	42	81	M3
ø16	15	35.5	50	29	60	6	48	88	M3
ø20	18	32.5	50	26	60	6	60	100	M4
ø25	20	45	69	28	71	5	70	116	M5

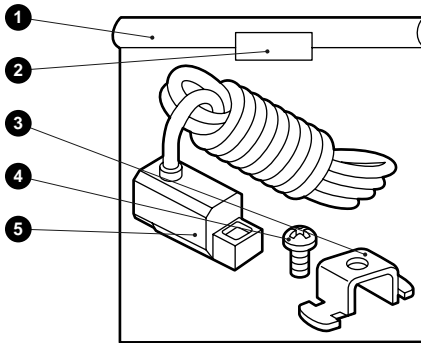
Symbol	CJ	CK	CL	CM	CN	CP	CQ	CR	CS
Symbol	CJ	CK	CL	CM	CN	CP	CQ	CR	CS
Bore size (mm)									
ø32	20	54	81.5	33.5	80	7	80	128	M6
ø40	30	63	95.5	38	91.5	8	90	138	M6
ø50	30	74	113	48	112.5	10	100	142	M8
ø63	40	88	138	58	131	13	110	158	M8

Switch

- Switch body + mounting bracket (Note 1)

SRL3 - M0H*

Switch model no.
(Page 2006 section (F))

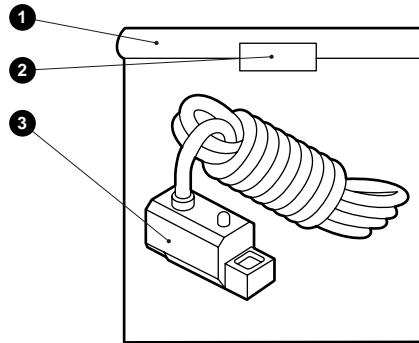


No.	Part name	Quantity
1	Plastic bag	1
2	Label	1
3	Switch bracket	1
4	Cross headed pan	1
5	Switch	1

- Switch body

SW - M0H*

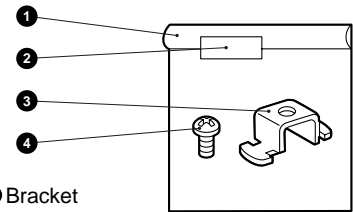
Switch model no.
(Page 2006 section (F))



No.	Part name	Quantity
1	Plastic bag	1
2	Label	1
3	Switch	1

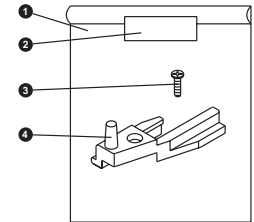
- Bracket

SRL3 - M



- Bracket

SRL3 - T



No.	Part name	Quantity
1	Plastic bag	1
2	Label	1
3	Switch bracket	1
4	Cross headed pan	1

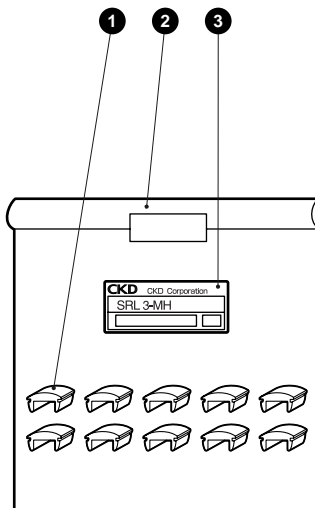
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

Switch

- Lead wire holder

SRL3 - MH



No.	Part name	Quantity
1	Lead wire holder	10
2	Plastic bag	1
3	Package label (S)	1

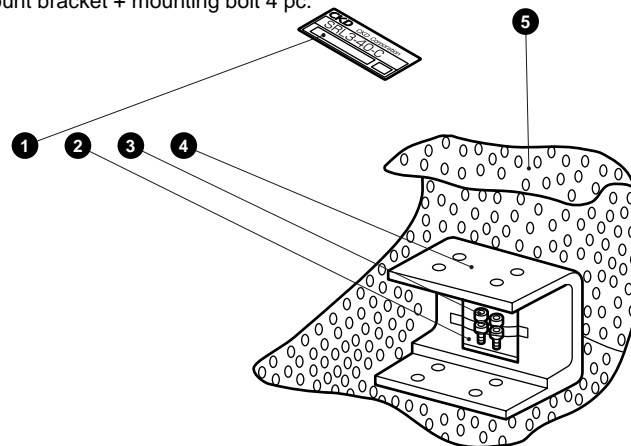
C mount bracket

- C mount bracket

SRL3 - 40 - C

Bore size
(Page 2006 section (B))

C mount bracket + mounting bolt 4 pc.



No.	Part name	Quantity
1	Package label (S)	1
2	Plastic bag	1
3	Hexagon socket head cap bolt	4
4	C mount	1
5	Air mat	

Note: Packaging may slightly differ depending on the size.

SRL3 Series

Configurations table

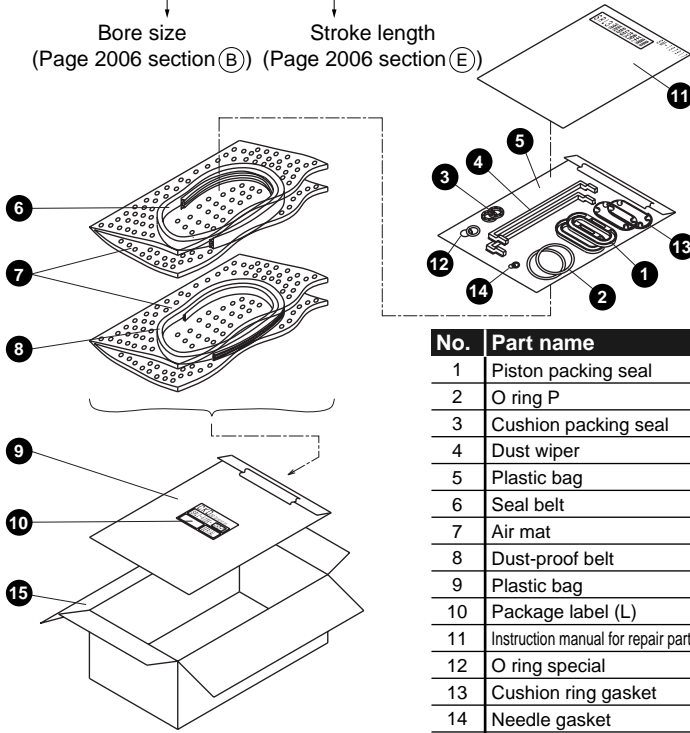
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Repair parts

● Repair parts

SRL3 - 40 K - 200

Bore size (Page 2006 section (B))
Stroke length (Page 2006 section (E))



No.	Part name	Quantity
1	Piston packing seal	2
2	O ring P	2
3	Cushion packing seal	2
4	Dust wiper	2
5	Plastic bag	1
6	Seal belt	1
7	Air mat	1
8	Dust-proof belt	1
9	Plastic bag	1
10	Package label (L)	1
11	Instruction manual for repair parts replacement	1
12	O ring special	2
13	Cushion ring gasket	2
14	Needle gasket	2
15	Cardboard box	1

Note 1: Cushion ring gasket not included for $\phi 12$ to $\phi 40$

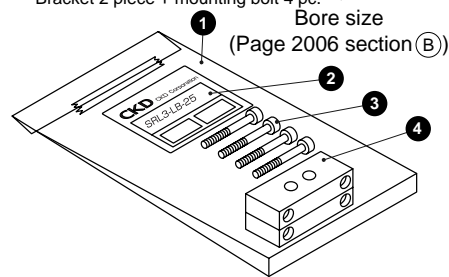
Note 2: 4 gaskets will be added for $\phi 80$ to $\phi 100$

Mounting bracket

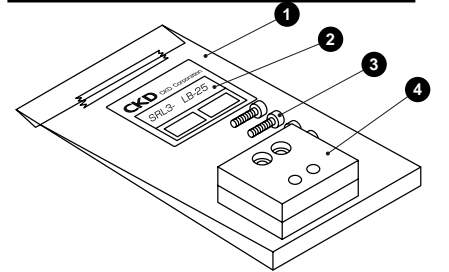
● Mounting bracket

SRL3 - (A) Mounting style (LB.LB1) - 40

Bracket 2 piece + mounting bolt 4 pc.
Bore size (Page 2006 section (B))



No.	Part name	Quantity
1	Plastic bag	1
2	Package label (S)	1
3	Hexagon socket head cap bolt	4
4	Foot bracket (A)	2



No.	Part name	Quantity
1	Plastic bag	1
2	Package label (S)	1
3	Hexagon socket head cap bolt	4
4	Foot bracket (B)	2

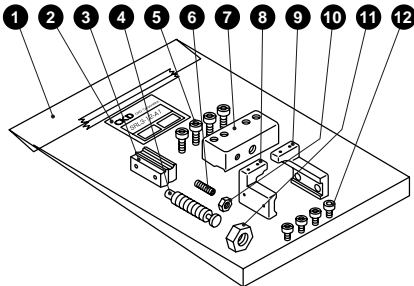
Adjustable full-stroke kit

● Adjustable full-stroke kit

SRL3 - 40 - A1 1 set

Bore size (Page 2006 section (B))

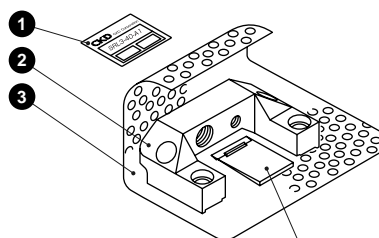
($\phi 12$ to $\phi 25$)



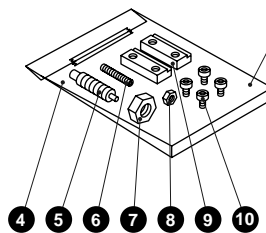
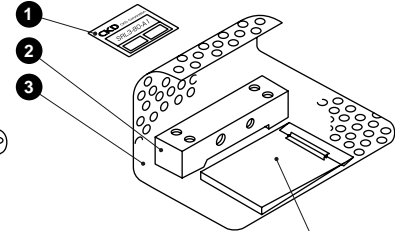
No.	Part name	Quantity
1	Plastic bag	1
2	Package label (S)	1
3	Square nut	2
4	Shock absorber	1
5	Hexagon socket head cap bolt	4
6	Hexagon socket head set screw	1
7	Plate	1
8	Adaptor (R)	1
9	Adaptor (L)	1
10	Square nut	1
11	Square nut	1
12	Hexagon socket head cap bolt	4

Note: Packaging may slightly differ depending on the size.

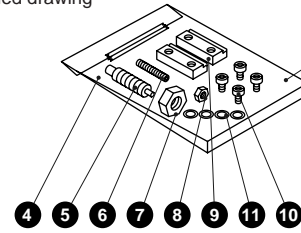
($\phi 32$ to $\phi 63$)



($\phi 80, \phi 100$)



Detailed drawing



Detailed drawing

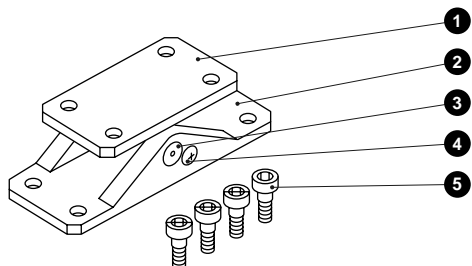
No.	Product name	Quantity	No.	Product name	Quantity
1	Package label (S)	1	7	Square nut	1
2	Adaptor	1	8	Square nut	1
3	Air mat		9	Square nut	2
4	Plastic bag	1	10	Hexagon socket head cap bolt	4
5	Shock absorber	1	11	Belleville spring	4
6	Hexagon socket head set screw	1			

Floating joint set

● Floating joint set

SRL3 - 40 - Y

Bore size
(Page 2006 section ⑥)



No.	Part name	Quantity
1	Mount	1
2	Mount base	1
3	Pin	1
4	Pan head machine screw with spring washer	1
5	Mounting bolt	4

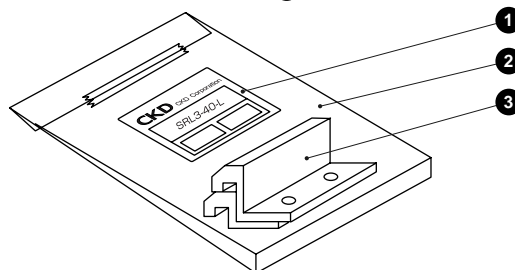
Note: Packaging may slightly differ depending on the size.

Intermediate support bracket

● LB

SRL3 - 40 - L 2 piece/
1 set

Bore size
(Page 2006 section ⑥)

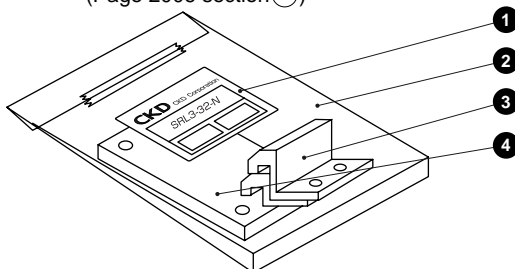


No.	Part name	Quantity
1	Package label (S)	1
2	Plastic bag	1
3	Intermediate support bracket	2

● LB1

SRL3 - 32 - N 2 piece/
1 set

Bore size
(Page 2006 section ⑥)



No.	Part name	Quantity
1	Package label (S)	1
2	Plastic bag	1
3	Intermediate support bracket	2
4	Plate	1

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

Rodless cylinder SRL3-J Series

Full coweling type (with dust cover)

Designed for tough conditions.

(ø25 to ø63)

Resistant to direct contact with spatter, metal dust and coolants.

PAT. PEND

Overview

A new option with powerful dust-proof properties has been added to the rodless cylinder SRL3 Series. By mounting an original metal cover on the standard type, the product can be used safely without direct contact from spatter, metal chips, coolant or cutting lubricants. By mounting an original metal cover on the standard type, the product can be used safely without direct contact from spatter, metal chips, coolant, or cutting lubricants

Applications

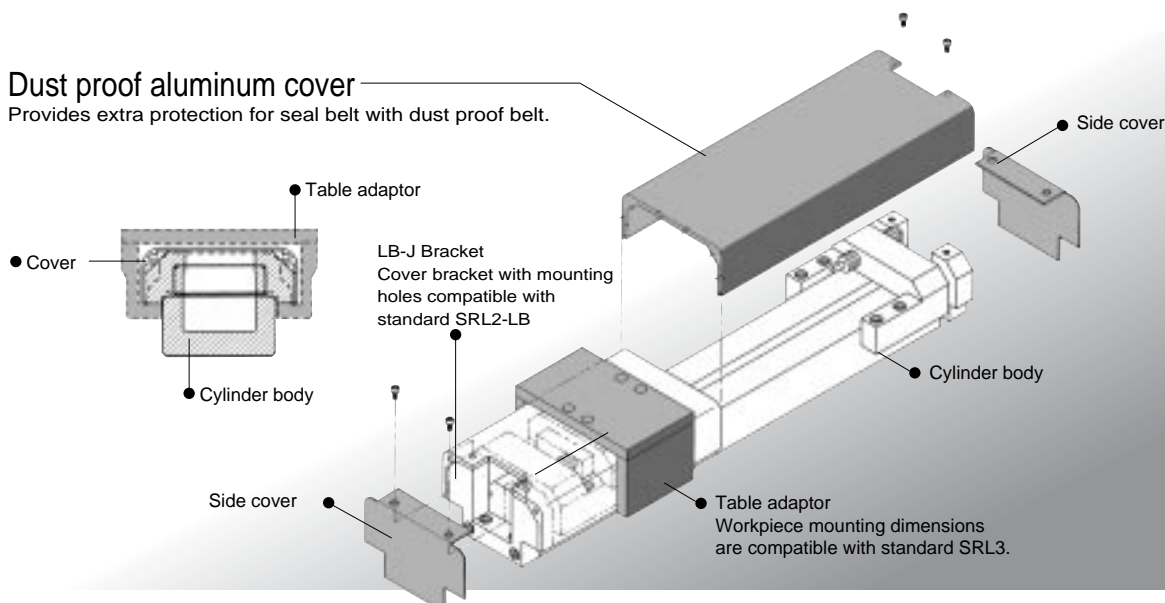
- Areas exposed to coolant and cutting fluid from machines etc
- Areas exposed to metal dust generated by metal processing machines.
- Areas exposed to spatters caused by welding machines
- Where cleanliness is required, such as in food processing plants
- Other poor environment requiring dust proofing

Features

- Industry's first rodless type with dust proof cover
- Dust proof model with same mounting dimensions and overall length as standard models
- Aluminum cover resistant to spatter adhesion
- Remove cover from top using only a wrench
- Sleek design with side cover on both ends
- 5 sizes from ø25 to ø63 available

Dust proof aluminum cover

Provides extra protection for seal belt with dust proof belt.



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

Rodless cylinder double acting/full cowling type

SRL3-J Series

● Bore size: $\varnothing 25$ · $\varnothing 32$ · $\varnothing 40$ · $\varnothing 50$ · $\varnothing 63$



Specifications

Descriptions	SRL3-J				
	Bore size mm	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$	$\varnothing 50$
Actuation	Double acting				
Working fluid	Compressed air				
Max. working pressure MPa	0.7				
Min. working pressure MPa	0.1		0.05		
Withstanding pressure MPa	1.05				
Ambient temperature $^{\circ}\text{C}$	5 to 60				
Port size	Rc1/8	Rc1/4		Rc3/8	
Stroke tolerance mm	$+2.0_0$ (to 1000), $+2.5_0$ (to 3000)				
Working piston speed mm/s	50 to 2000 (standard port piping) (note 1)				
Cushion	Air cushion				
Lubrication	Not required (Use turbine oil Class 1 ISO VG32 if lubricated. Lubricate continuously if lubricated.)				

Note 1: Piston speed used with common port piping differs with the stroke. Contact CKD for details.

Allowable energy absorption

Bore size (mm)	Cushioned		No cushion	With shock absorber (initial setpoint)	
	Allowable energy absorption (J)	Cushion mm stroke (mm)	Allowable energy absorption (J)	Absorbed energy (J)	Valid mm stroke (mm)
$\varnothing 25$	1.40	20.9	0.015	10	9
$\varnothing 32$	2.57	23.5	0.030	18	13
$\varnothing 40$	4.27	23.9	0.050	50	16.5
$\varnothing 50$	9.13	24.9	0.072	86	21
$\varnothing 63$	17.4	29.6	0.138	86	21

Stroke

Equivalent bore size	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
$\varnothing 25$, $\varnothing 32$, $\varnothing 40$, $\varnothing 50$, $\varnothing 63$	200, 300, 400, 500, 600, 700, 800, 900, 1000	3000	1

Note 1: Intermediate strokes can be manufactured in 1mm increments.

M type switch quantity and min. stroke length (mm)

Switch quantity	1		2		3		4		5		6	
Switch model no.	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H	M*V	M*H
Bore size (mm)												
$\varnothing 25$	10	10	30	45 (70)	60	90 (120)	90	135 (170)	120	180 (220)	150	225 (270)
$\varnothing 32$	10	10	30	45	60	90	90	135	120	180	150	225
$\varnothing 40$	10	10	30	45	60	90	90	135	120	180	150	225
$\varnothing 50$	15	15	30	45	60	90	90	135	120	180	150	225
$\varnothing 63$	15	15	30	45	60	90	90	135	120	180	150	225

Note: The minimal stroke for full stroke adjustment models with switches are shown in ().

T type switch quantity and min. stroke length (mm)

Switch quantity	1		2		3		4		5		6	
Switch model no.	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H	T*V	T*H
Bore size (mm)												
$\varnothing 25$	10	10	45	50 (70)	85	100 (120)	125	150 (170)	165	200 (220)	205	250 (270)
$\varnothing 32$	10	10	45	50	85	100	125	150	165	200	205	250
$\varnothing 40$	10	10	45	50	85	100	125	150	165	200	205	250
$\varnothing 50$	10	10	45	50	85	100	125	150	165	200	205	250
$\varnothing 63$	10	10	45	50	85	100	125	150	165	200	205	250

Note: The minimal stroke for full stroke adjustment models with switches are shown in ().

Switch specifications (M type switch)

● 1 color/2 color indicator

Descriptions	Proximity 2 wire		Proximity 3 wire		
	M2V, M2H	M2WV (2 color indicator type)	M3H/M3V	M3PH/M3PV (custom order)	M3WV
Applications	PLC		PLC, relay, IC circuit or small solenoid valve		
Output method	-		NPN output	PNP output	NPN output
Power voltage	-		4.5 to 28 VDC		10 to 28 VDC
Load voltage	10 to 30 VDC		30 VDC or less		
Load current	5 to 30mA		200mA or less	100mA or less	150mA or less
Light	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Yellow LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	0.05mA or less	10μA or less

Descriptions	Reed 2 wire		M5V and M5H	
	MOV, MOH			
Applications	PLC, relay		PLC, relay, IC circuit (w/o lamp), serial connection	
Power voltage	-		-	
Load voltage	12/24 VDC	110 VAC	5/12/24 VDC	110 VAC
Load current	5 to 50mA	7 to 20mA	50mA or less	20mA or less
Light	LED (ON lighting)		Without indicator light	
Leakage current	0mA			

Note 1: For MO* switch, if load current is within 7 to 20mA, this switch can be used with 24 VAC and 48 VAC.

Note 2: Refer to Ending 1 for other switch specifications.

Switch specifications (T type switch)

● 2 Color indicator type

Descriptions	Proximity 2 wire		Proximity 3 wire	
	T2YH/T2YV	T2WH/T2WV	T3YH/T3YV	T3WH/T3WV
Applications	PLC			
Output method	-		NPN output	NPN output
Power voltage	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20mA (Note 1)		50mA or less	
Light	Red/green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)	Red/green LED (ON lighting)
Leakage current	1mA or less		10μA or less	

● Strong magnetic field proof

Descriptions	Proximity 2 wire
	T2YD and T2YDT
Applications	PLC
Light	Red/green LED (ON lighting)
Load voltage	24 VDC ±10%
Load current	5 to 20mA
Internal voltage drop	6V or less
Leakage current	1.0mA or less

● Coolant proof

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2YLH and T2YLV	T3YLH and T3YLV
Applications	PLC	PLC, relay
Power voltage	-	10 to 28 VDC
Load voltage and current	10 to 30 VDC 5 to 20mA	30 VDC 50mA or less or less
Current consumption	-	10mA or less with 24 VDC (when turned ON)
Internal voltage drop	4V or less	0.5V or less
Leakage current	1mA or less	10μA or less
Light	Red/green LED (ON lighting)	

Cylinder weight

Descriptions	Weight when stroke length is 0mm		Additional weight per stroke of 100mm
	Basic type	Weight per switch (including bracket)	
Bore size			(kg)
ø25	2.37	0.02	0.37
ø32	3.34		0.46
ø40	4.78		0.65
ø50	7.27		0.90
ø63	11.23		1.28

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

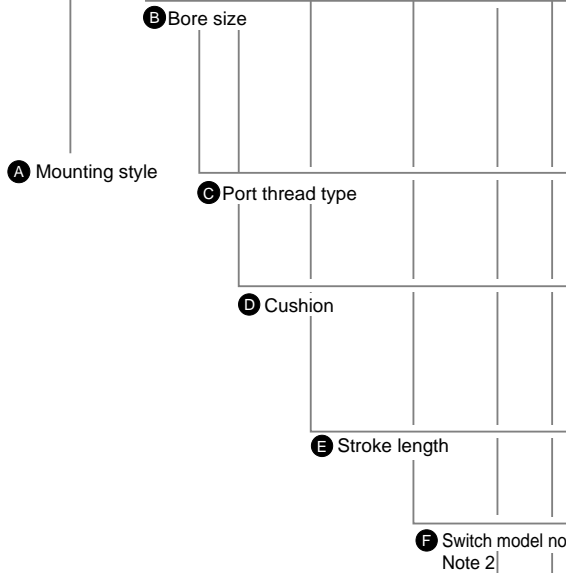
How to order

Without switch

SRL3-J - 00 - 25 - B - 200 - B

With switch

SRL3-J - 00 - 25 - B - 200 - M0H - R - B



Note on model no. selection

- Note 1: Refer to page 2058 for minimal stroke for models with switches.
- Note 2: (F) Switches not listed on option F are also available. (custom order) Refer to Ending 1 for details.
- Note 3: Standard ø25 models needs to have its cover removed and full stroke adjustment mounted using a plate nut afterwards. "A3" is a option that will have a plate nut for mounting installed beforehand so that it can be mounted afterwards without removing the cover.
- Note 4: The asterisk (*) following L* and N* indicates the number of brackets. Indicate "L2" for 00 and "N2" for LJ when ordering 2 sets.
- Note 5: Refer to dimensions on page 2026 to 2072 for port and cushion needle position symbols.
- Note 6: We recommend the use of the extension fitting included in the package when mounting speed control valves and piping fittings.
- Note 7: Remove the side cover when using the common piping port on the R side.
- Note 8: Common port (port position R) for ø25 and ø32 are available only when bracket LJ is selected. Not available for mounting style 00.

<Example of model number>

SRL3-J-00-25B-200-M0H-R-B

- A** Mounting style : Basic type
- B** Bore size : ø25mm or equivalent
- C** Port thread type : Rc thread
- D** Cushion : Both sides cushioned
- E** Stroke length : 200mm
- F** Switch model no. : Reed MOH
- G** Switch quantity : One on R side
- H** Option : Port position F, cushion needle position B

Symbol	Descriptions					
A Mounting style						
	Bore size (ø)	25	32	40	50	63
00	Basic type note 7	●	●	●	●	●
LJ	Axial foot type (common porting)	●	●			
B Bore size						
25	ø25					
32	ø32					
40	ø40					
50	ø50					
63	ø63					
C Port thread type						
Blank	Rc thread					
N	NPT thread (ø20 and over) (custom order)					
G	G thread (ø20 and over) (custom order)					
D Cushion						
B	Both sides cushioned					
R	R side cushioned					
L	L side cushioned					
N	No cushion					
E Stroke length (mm)						
	Bore size	Stroke length Note 1	Custom stroke length			
	ø25 to ø63	1 to 3000	By 1 mm increment			
F Switch model no.						
	Lead wire Axial	Lead wire Radial	Contact Reed	Indicator	Lead Line	
	M0H*	M0V*	Proximity	1 color indicator type	2-wire	
	M5H*	M5V*		Without indicator light		
	M2H*	M2V*		1 color indicator type	2-wire	
	-	M2WV*	Proximity	2 color indicator type	3-wire	
	M3H*	M3V*		1 color indicator type	3-wire	
	-	M3WV*		2 color indicator type	3-wire	
	M3PH*	M3PV*	Proximity	1 color indicator type (custom order)	3-wire	
	T2WH*	T2WV*		2 color indicator type	2-wire	
	T2YH*	T2YV*			3-wire	
	T3WH*	T3WV*	Proximity	Strong magnetic field proof (AC magnetic field dedicated)	2-wire	
	T3YH*	T3YV*			2-wire	
	T2YD*	-		Proximity	Cutting oil switch	2-wire
	T2YDT*	-	2-wire			
	T2YLH*	T2YLV*	2-wire			
	T3YLH*	T3YLV*			2-wire	
*Lead wire length						
Blank	1m (standard)					
3	3m (option)					
5	5m (option)					
G Switch quantity						
R	One on R side					
L	One on L side					
D	2 pieces					
T	3 pieces					
4	4 pieces (fill in quantity for 4 or more)					
H Option and accessory						
	Bore size (ø)	25	32	40	50	63
A	Adjustable full-stroke both ends, with shock absorber	●	●	●	●	●
A1	Adjustable full-stroke R end only, with shock absorber	●	●	●	●	●
A2	Adjustable full-stroke L end only, with shock absorber	●	●	●	●	●
A3	Adjustable full-stroke bracket retrofitting	●				
Y	Floating joint	●	●	●	●	●
L*	Intermediate support bracket (00)	●	●	●	●	●
N*	With intermediate support bracket (LJ)	●	●			
Blank	F (standard)	●	●	●	●	●
R	R (common port)	●	●	●	●	●
B	F (common port)	●	●	●	●	●
T	R (common port)	●	●	●	●	●
D	D	●	●	●	●	●
S	D		●	●	●	●

How to order switch

(Refer to page 2053 for parts configuration)

Switch body + mounting bracket (Note 1)

SRL3 - MOH*

Only switch body

SW - MOH*

Switch model no.
(Previous page section **F**)

Mounting bracket (Note 2)

SRL3 - M

SRL3 - T

Lead wire holder (Note 3)

SRL3 - MH

Note 1: Lead wire holder is not included in the switch and its mounting bracket.

When a lead wire holder is necessary, place an order separately.

Note 2: M type switch and T type switch has different brackets.

Note 3: Lead wire holder comes in a set of 10 pieces.

Discrete shock absorber model no.

SRL3 - 40 - NCK

Bore size
(Previous page section **B**)

(Square nut 1 pc., hex nut for fixing shock absorber 1pc.)
Square nut for shock absorber for SRL3-40 is a special design.

Cover kit model no.

SRL3-J - 40 - 200 - COVER-KIT

Bore size
(Previous page section **B**) Stroke length
(Previous page section **E**)

Adaptor kit model no.

SRL3-J - 40 - ADAPTOR-KIT

Bore size
(Previous page section **B**)

Applicable shock absorber model No.

Model no.	Applicable shock absorber
SRL3-J-25	NCK-00-1.2
SRL3-J-32	NCK-00-2.6
SRL3-J-40	NCK-00-7
SRL3-J-50/63	NCK-00-12

Repair parts model no.

SRL3 - 40 K - 200

Bore size
(Previous page section **B**) Stroke length
(Previous page section **E**)

Refer to page 2009 to 2010 for details of repair parts.

Floating joint set model no.

SRL3 - 40 - Y

Bore size
(Previous page section **B**)

(Mount, mount base, pin, plain washer, pan head machine screw with spring washer or 4 mounting bolts)

Adjustable full-stroke kit model no.

SRL3-J - 40 - A1 (1 set)

Bore size
(Previous page section **B**)

Refer to a 2073 page for the configurations table.

Discrete intermediate support bracket model no.

00

SRL3 - 40 - L (2 piece/1 set)

Bore size
(Previous page section **B**)

LJ

SRL3 - 32 - N (2 piece/1 set)

Bore size
(Previous page section **B**)

Mounting bracket model no.

SRL3-J - Mounting style LJ - 40

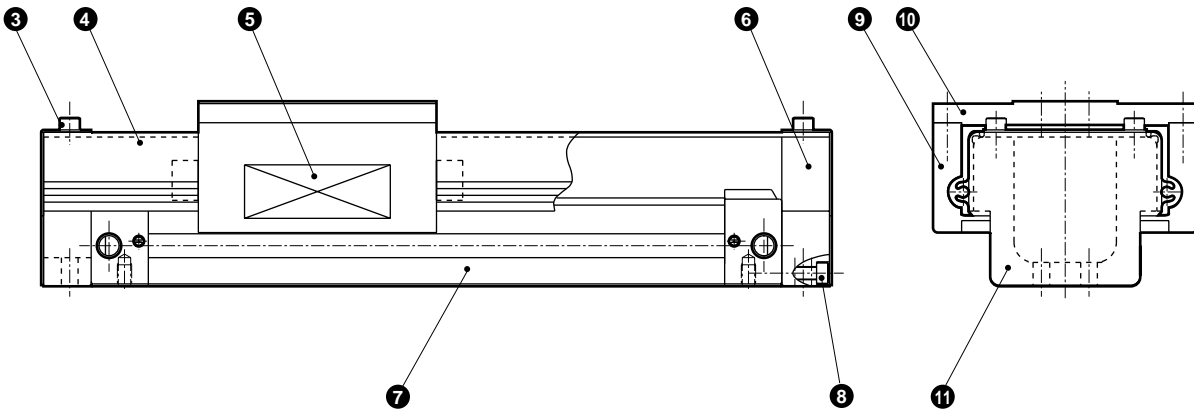
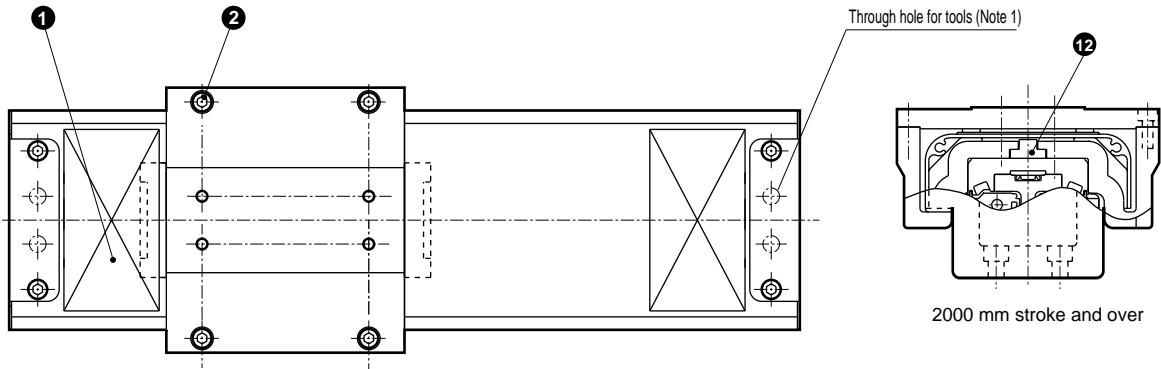
(Bracket 2 piece and mounting bolt 4 pc.)

Bore size
(Previous page section **B**)

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

Internal structure and parts list (ø25)



Note 1: Remove the cover and use this hole to tighten with a hex wrench when mounting this product.

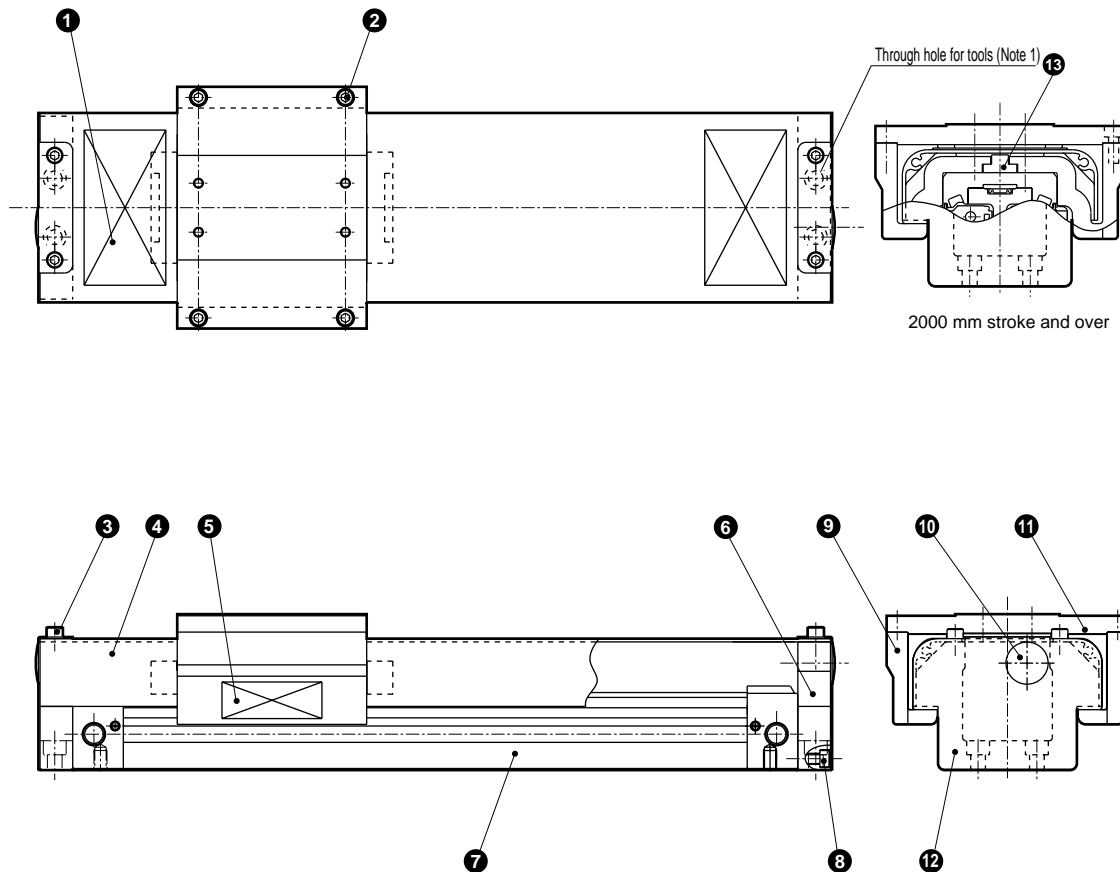
Note 2: When shipping, extension fittings (two pcs.) are attached.

Parts list

Descriptions	Parts name	Material	Remarks	Descriptions	Parts name	Material	Remarks
1	Caution plate (Do not step)	Polypropylene		7	Body		
2	Hexagon socket head cap bolt	Stainless steel		8	Hexagon socket head cap bolt	Alloy steel	
3	Hexagon socket head cap bolt	Stainless steel		9	Table adaptor	Aluminum alloy	Alumite
4	Cover	Aluminum alloy	Alumite	10	Table plate	Aluminum alloy	Alumite
5	Caution plate (pinch caution)	Polypropylene		11	Side cover	Aluminum alloy	Alumite
6	LB-J bracket	Aluminum alloy	Alumite	12	Table spacer	Polyacetal resin	

· Refer to pages 2009 to 2010 for internal structure and consumed parts because they are common with standard SRL3 series.

Internal structure and parts list (ø32 to 63)



Note 1: Remove the cover and use this hole to tighten with a hex wrench when mounting this product.
 Note 2: When shipping, extension fittings (two pcs.) are attached.

Parts list

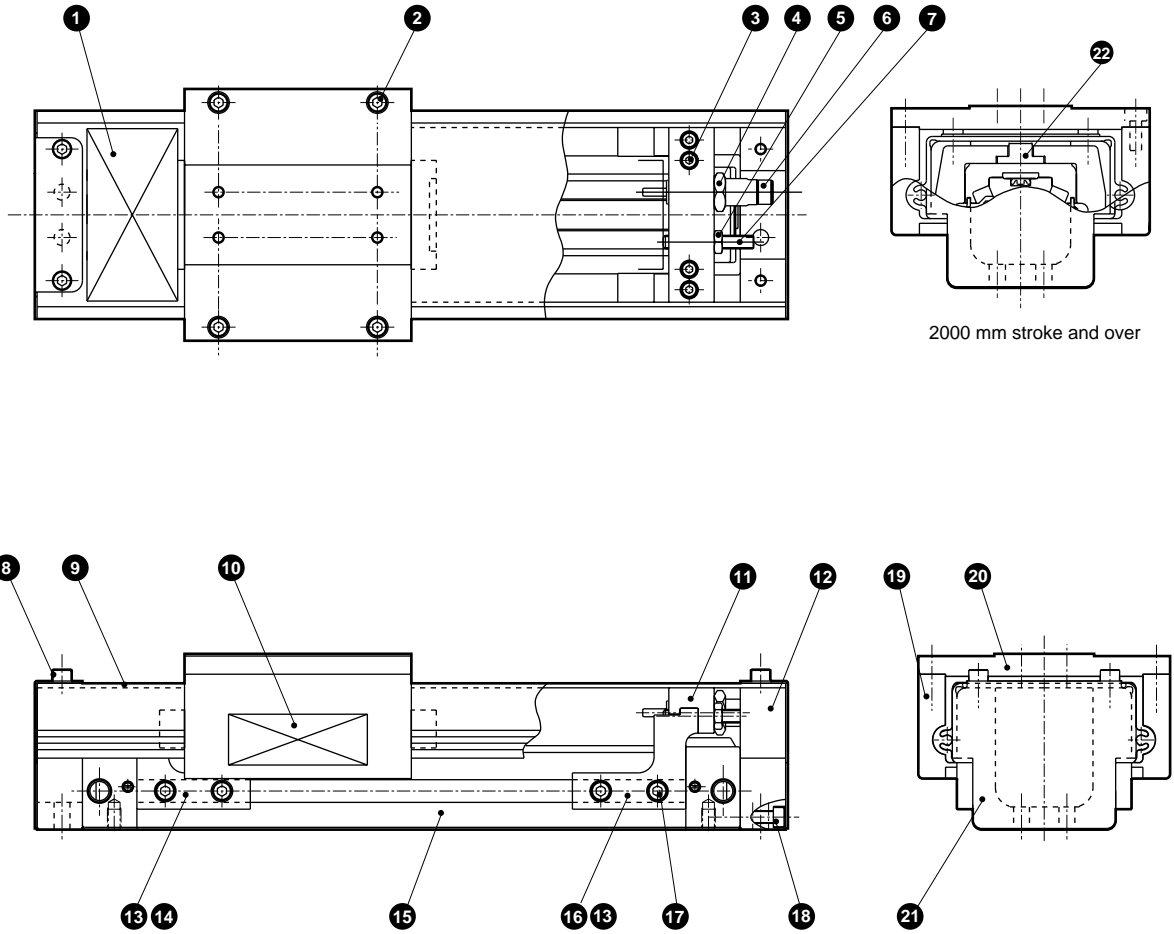
Descriptions	Parts name	Material	Remarks	Descriptions	Parts name	Material	Remarks
1	Caution plate (Do not step)	Polypropylene		8	Hexagon socket head cap bolt	Alloy steel	Galvanizing
2	Hexagon socket head cap bolt	Stainless steel		9	Table adaptor	Aluminum alloy	Alumite
3	Hexagon socket head cap bolt	Stainless steel		10	Hall plug	Polyamide	
4	Cover	Aluminum alloy	Alumite	11	Table plate	Aluminum alloy	Alumite
5	Caution plate (pinch caution)	Polypropylene		12	Side cover	Aluminum alloy	Alumite
6	LB-J bracket	Aluminum alloy	Alumite	13	Table spacer	Polyacetal resin	
7	Body						

· Refer to pages 2009 to 2010 for internal structure and consumed parts because they are common with standard SRL3 series.

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

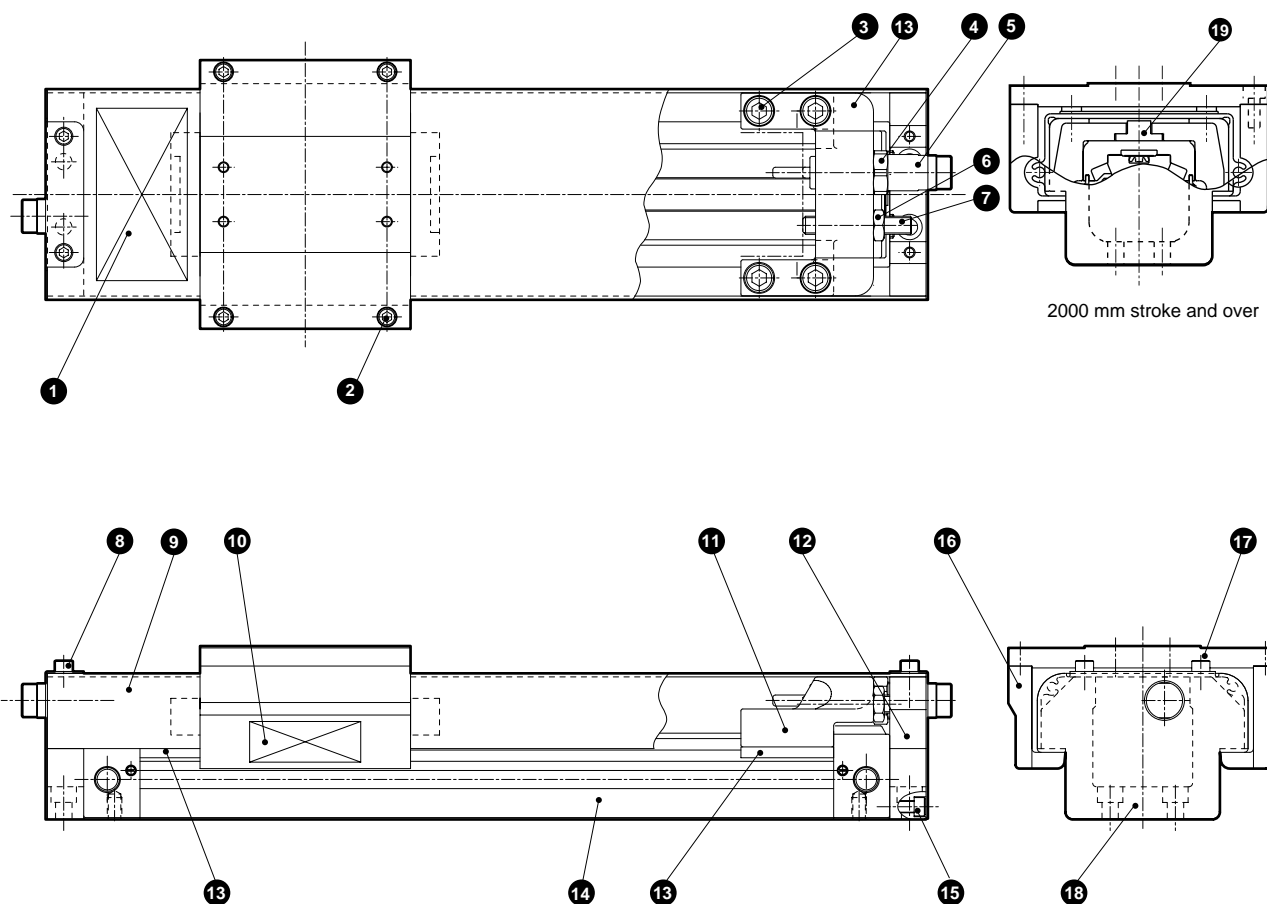
Internal structure and parts list: with adjustable full-stroke shock absorber (ø25)



Note 1: When shipping, extension fittings (two pcs.) are attached.

Descriptions	Parts name	Material	Remarks	Descriptions	Parts name	Material	Remarks
1	Caution plate (Do not step)	Polypropylene		12	LB-J bracket	Aluminum alloy	Alumite
2	Hexagon socket head cap bolt	Stainless steel		13	Square nut	Alloy steel	Blackening
3	Hexagon socket head cap bolt	Alloy steel	Galvanizing	14	Adaptor (R)	Steel	Galvanizing
4	Square nut	Steel	Galvanizing	15	Body		
5	Square nut	Steel	Galvanizing	16	Adaptor (L)	Steel	Galvanizing
6	Shock absorber			17	Hexagon socket head cap bolt	Alloy steel	Galvanizing
7	Hexagon socket head set screw	Alloy steel	Galvanizing	18	Hexagon socket head cap bolt	Alloy steel	Galvanizing
8	Hexagon socket head cap bolt	Stainless steel		19	Table adaptor	Aluminum alloy	Alumite
9	Cover	Aluminum alloy	Alumite	20	Table plate	Aluminum alloy	Alumite
10	Caution plate (pinch caution)	Polypropylene		21	Side cover	Aluminum alloy	Alumite
11	Plate	Aluminum alloy	Alumite	22	Table spacer	Polyacetal resin	

Internal structure and parts list: with adjustable full-stroke shock absorber (ø32 to 63)



Note 1: When shipping, extension fittings (two pcs.) are attached.

Descriptions	Parts name	Material	Remarks	Descriptions	Parts name	Material	Remarks
1	Caution plate (Do not step)	Polypropylene		11	Adaptor	Steel	Galvanizing
2	Hexagon socket head cap bolt	Stainless steel		12	LB-J bracket	Aluminum alloy	Alumite
3	Hexagon socket head cap bolt	Alloy steel	Galvanizing	13	Square nut	Steel	Galvanizing
4	Square nut	Steel	Galvanizing	14	Body		
5	Shock absorber			15	Hexagon socket head cap bolt	Alloy steel	Galvanizing
6	Square nut	Steel	Galvanizing	16	Table adaptor	Aluminum alloy	Alumite
7	Hexagon socket head set screw	Alloy steel	Galvanizing	17	Table plate	Aluminum alloy	Alumite
8	Hexagon socket head cap bolt	Stainless steel		18	Side cover	Aluminum alloy	Alumite
9	Cover	Aluminum alloy	Alumite	19	Table spacer	Polyacetal resin	
10	Caution plate (pinch caution)	Polypropylene					

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MLR2
MRG2
SM-25

CAC4
UCAC2
RCC2
MFC
SHC
GLC

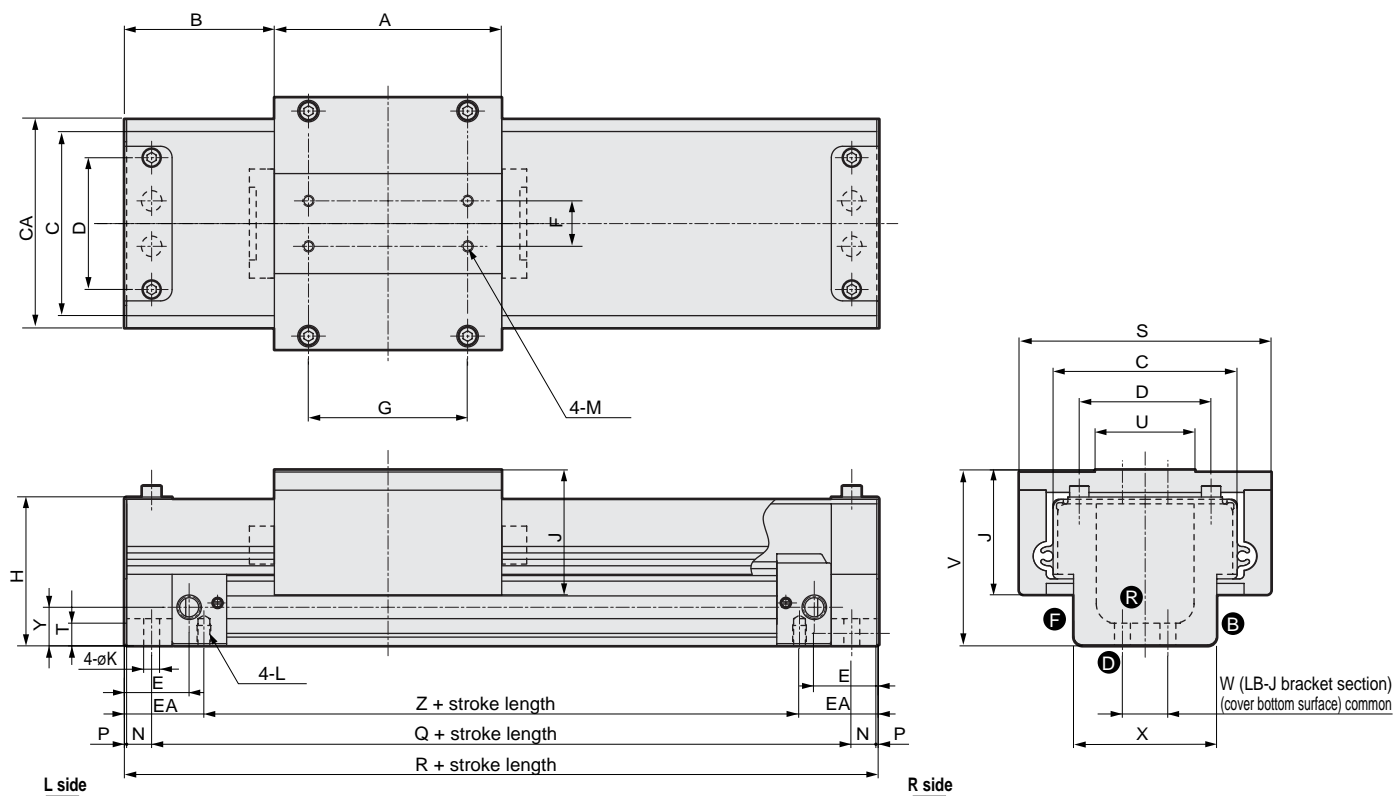
Ending
Rodless type
Rodless cylinder

SRL3-J Series

Dimensions (ø25)



●ø25



Note 1: When shipping, extension fittings (two pcs.) are attached.

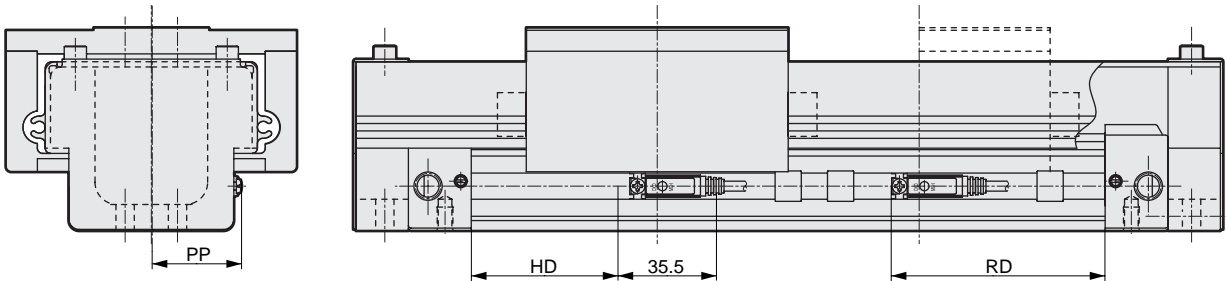
Symbol	A	B	C	CA	D	E	EA	F	G	H	J	K	L	M
Bore size (mm)														
SRL3-J-25	100	66	81	91.9	58	28.5	35	20	70	65.5	55	7	M6 depth 9	M5 penetrating
Symbol	N	P	Q	R	S	T	U	V	W	X	Y	Z		
Bore size (mm)														
SRL3-J-25	11	1	208	232	111	10	44	77.5	20	63	17	162		

Note) SRL3-J has the same mounting dimensions as SRL3-LB (page 2014, 2015)

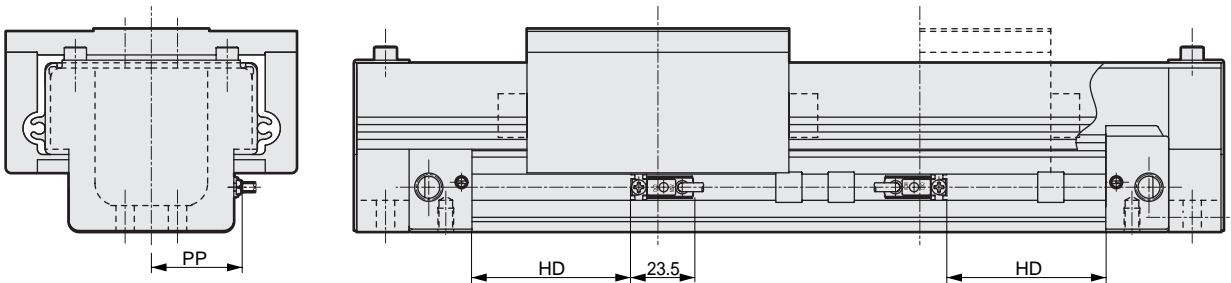
Dimensions

● $\phi 25$ (with switch)

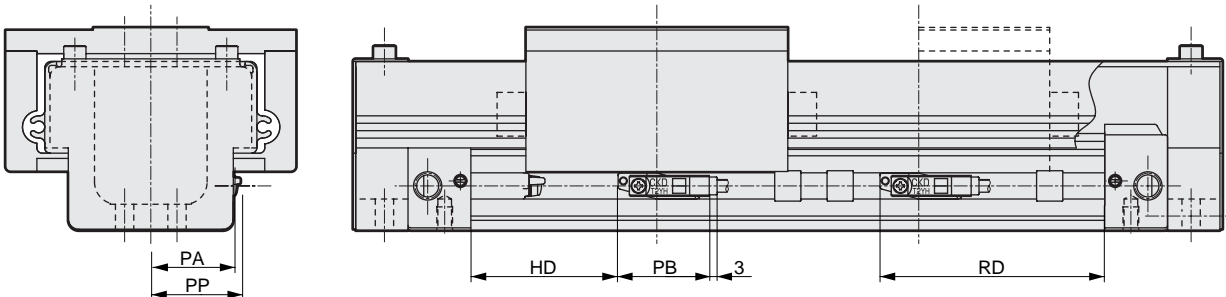
● SRL3-J-**-**-***-M*H* with cylinder switch (axial lead wire)



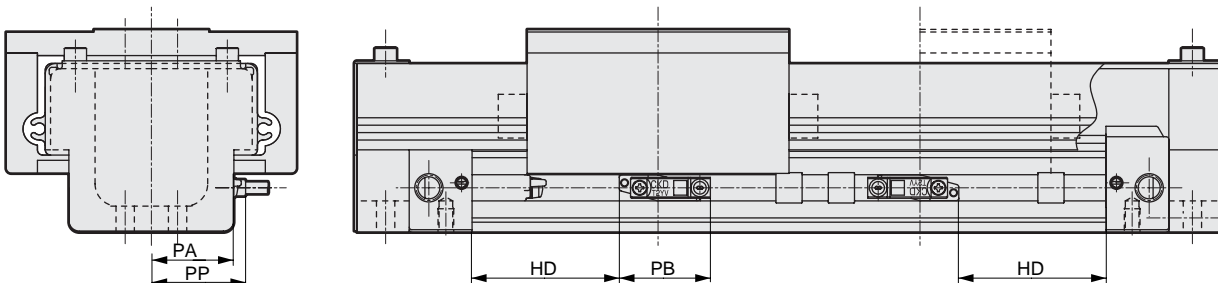
● SRL3-J-**-**-***-M*V* with cylinder switch (radial lead wire)



● SRL3-J-**-**-***-T*H*(T*W, T*Y, T*YL, T*YD) with cylinder switch (axial lead wire)



● SRL3-J-**-**-***-T*V*(T*W, T*Y, T*YL) with cylinder switch (radial lead wire)



Symbol Bore size (mm)	With switch																
	HD			RD			PA	PB			PP						
	M*	T*Y*	T*W	M*	T*Y*	T*W		T*Y*	T2YD	T*W*	M*V	M*H	T*YV	T*YH	T2YD	T*WV	T*WH
$\phi 25$	60	56	52	82	86	90	34.3	35	34	33.5	34.5	34.5	36	33	38.4	30.7	27.2

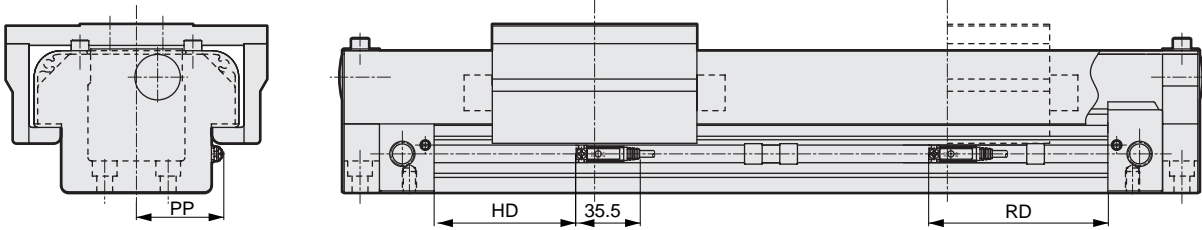
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

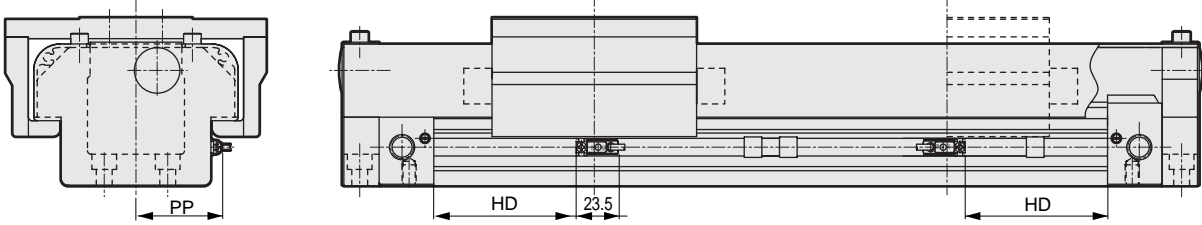
Dimensions

● $\phi 32$ to 63 (with switch)

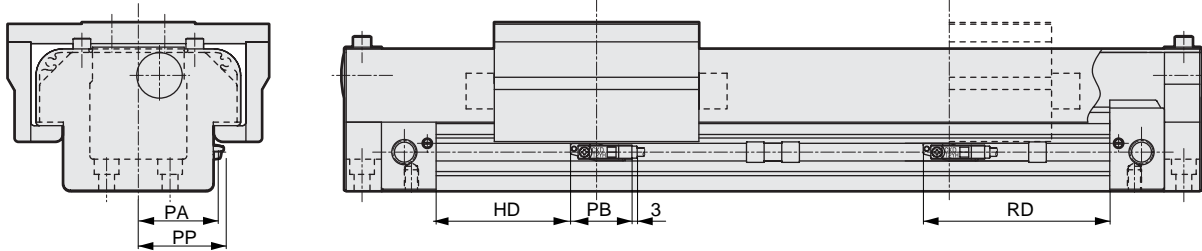
● SRL3-J-**-**-***-M*H* with cylinder switch (axial lead wire)



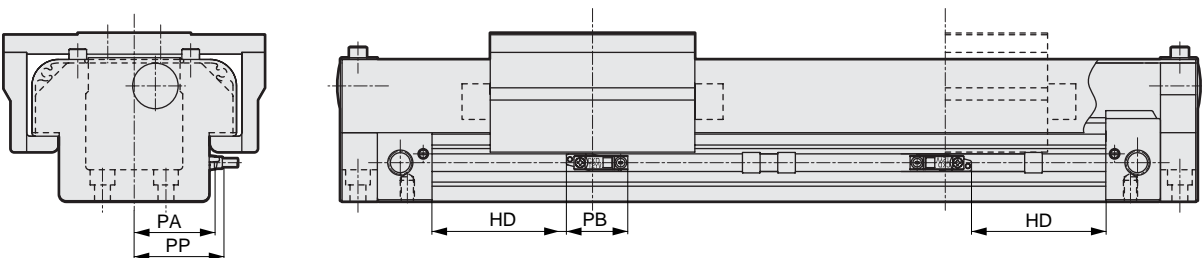
● SRL3-J-**-**-***-M*V* with cylinder switch (radial lead wire)



● SRL3-J-**-**-***-T*H*(T*W, T*Y, T*YL, T*YD) with cylinder switch (axial lead wire)



● SRL3-J-**-**-***-T*V*(T*W, T*Y, T*YL) with cylinder switch (radial lead wire)

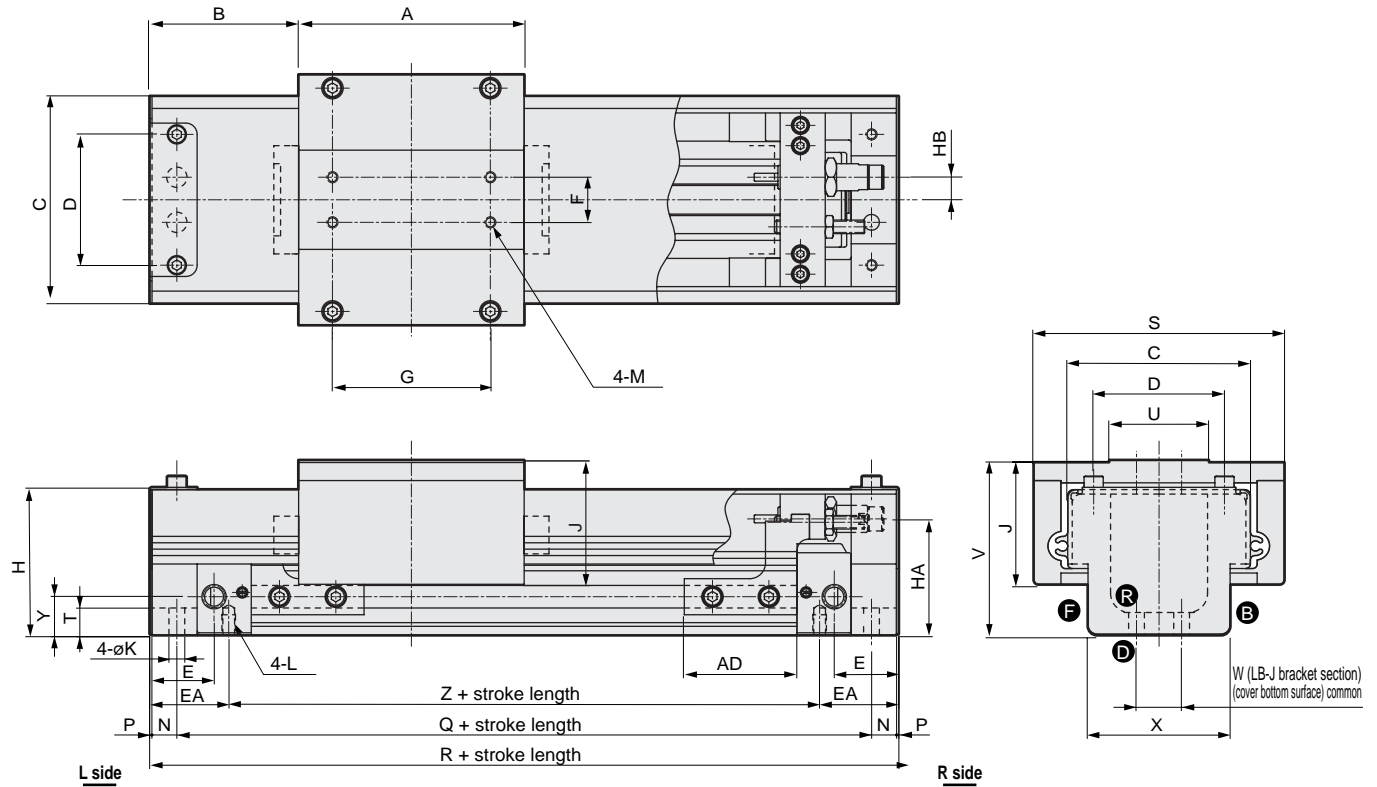


Symbol Bore size (mm)	With switch																
	HD			RD			PA	PB			PP						
	M*	T*Y*	T*W	M*	T*Y*	T*W		T*Y*	T2YD	T*W*	M*V	M*H	T*YV	T*YH	T2YD	T*WV	T*WH
$\phi 32$	74	70	66	96	100	104	41.3	35	34	33.5	41.5	41.5	43	40	45.4	37.7	34.2
$\phi 40$	80	76	72	102	106	110	48.3	35	34	33.5	48.5	48.5	50	47	52.4	44.7	41.2
$\phi 50$	79	75	71	101	105	109	56.3	35	34	33.5	56.5	56.5	58	55	60.4	52.7	49.2
$\phi 63$	98	94	90	120	124	128	67.3	35	34	33.5	67.5	67.5	69	66	71.4	63.7	60.2

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

Dimensions: with adjustable full-stroke shock absorber (ø25)



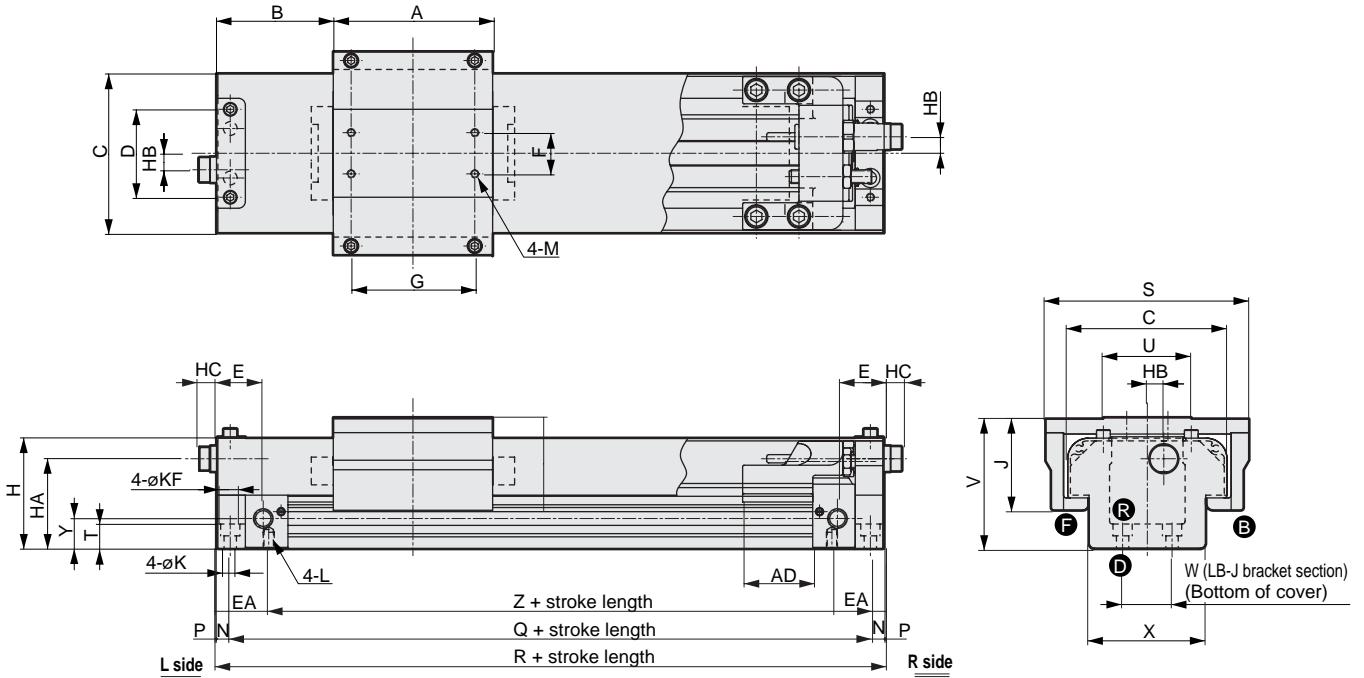
Note 1: When shipping, extension fittings (two pcs.) are attached.

Symbol	A	AD	B	C	D	E	EA	F	G	H	HA	HB	J	K
SRL3-J-25-A	100	50	66	81	58	28.5	35	20	70	65.5	51.5	10	55	7
Symbol	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z
SRL3-J-25-A	M6 depth 9	M5 penetrating	11	1	208	232	111	10	44	77.5	20	63	17	162

Note: SRL3-J has the same mounting dimensions as SRL3-LB (Page 2014, 2015)

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

Dimensions: with adjustable full-stroke shock absorber (ø32 to 63)



Note 1: When shipping, extension fittings (two pcs.) are attached.

Symbol	A	AD	B	C	D	E	EA	F	G	H	HA	HB	HC _{MAX}	J	K	KF	L	M
SRL3-J-32-A	106	46	81	102	58	31	36	20	80	70.5	55.5	12	6	61	7	-	M16 depth 9	M6 penetrating
SRL3-J-40-A	116	51	85	116	64	34	38	30	90	80.5	65.5	12	13	67.5	9	14 spot face depth 8.6	M8 depth 12	M6 penetrating
SRL3-J-50-A	120	53	90	140	84	36	44	30	100	101	80	17	34	85	9	14 spot face depth 8.6	M8 depth 12	M8 penetrating
SRL3-J-63-A	136	64	106	162	95	41	45	40	110	114	93.5	20	18	91	11	17.5 spot face depth 10.8	M10 depth 15	M8 penetrating
Symbol	N	P	Q	R	S	T	U	V	W	X	Y	Z						
SRL3-J-32-A	11	1	244	268	134	11	52	85.5	32	72	18.5	196						
SRL3-J-40-A	9	1	266	286	148	18	64	95.5	36	85	22	210						
SRL3-J-50-A	9	1	280	300	178	22.5	74	119	45	109	28	212						
SRL3-J-63-A	12	1	322	348	200	28	96	132	50	129	35	258						

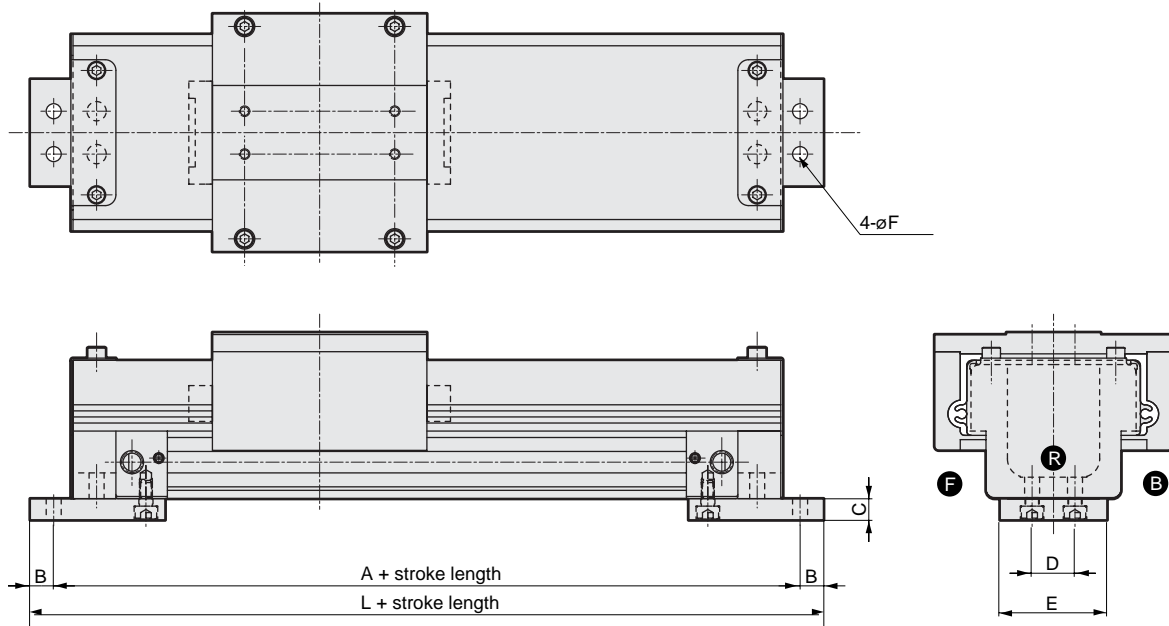
Note: SRL3-J has the same mounting dimensions as SRL3-LB (Page 2014, 2015)

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

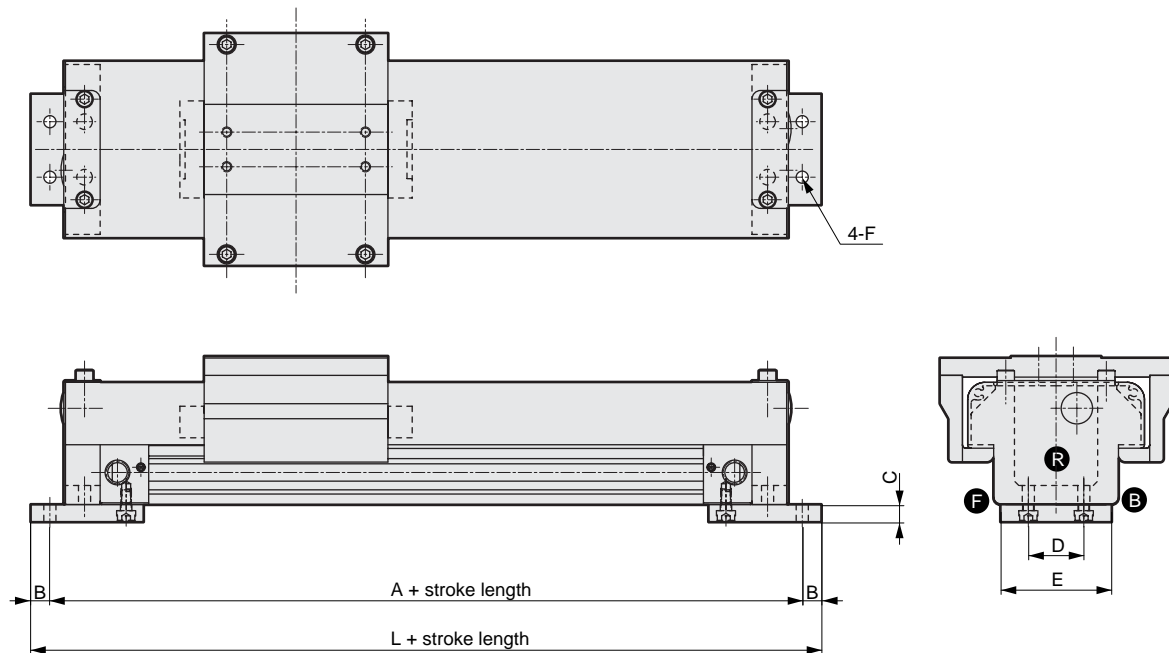
Dimensions: Mounting style (L J) (ø25)



Symbol	A	B	C	D	E	F	L
Bore size (mm)							
SRL3-J-LJ-25-A	248	11	10	20	50	7	270

Standard models and adjustable full-stroke shock absorber models (A) has the same dimensions.

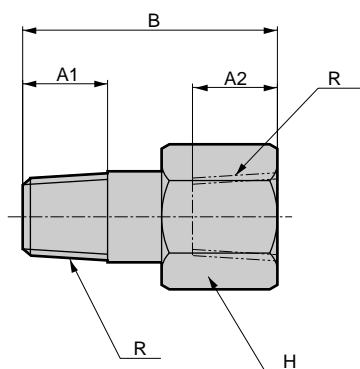
Dimensions: Mounting style (L J) (ø32)



Symbol	A	B	C	D	E	F	L
Bore size (mm)							
SRL3-J-LJ-32-A	284	11	10	32	64	7	306

Standard models and adjustable full-stroke shock absorber models (A) has the same dimensions.

Dimensions: extension fitting

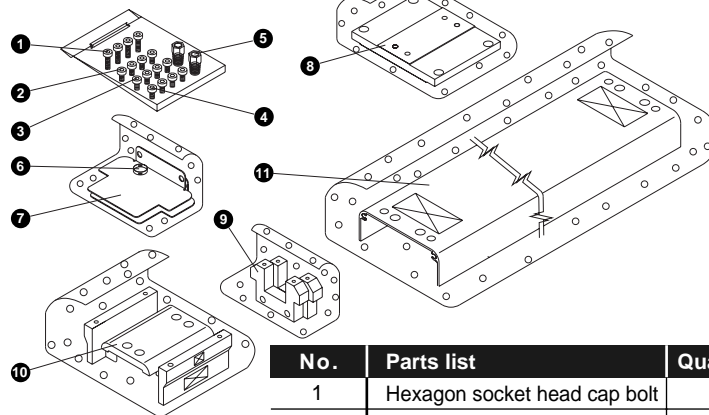


Symbol	A1	A2	B	R	H
SRL3-J-PF01	8	8	28.5	Rc1/8	14
SRL3-J-PF02	11	11	33	Rc1/4	17
SRL3-J-PF03	12	12	37	Rc3/8	21

Cover kit configurations table

SRL3-J - 40 - 200 - COVER-KIT

Bore size (Page 2060 section (B)) Stroke length (Page 2060 section (D))



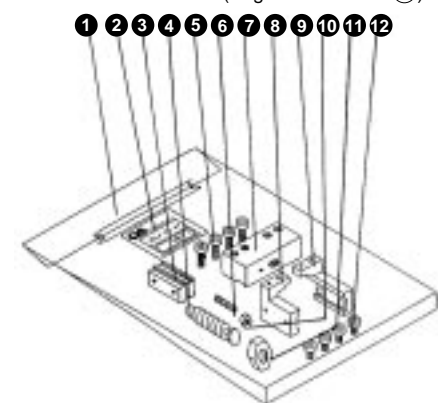
No.	Parts list	Quantity
1	Hexagon socket head cap bolt	4
2	Hexagon socket head cap bolt	4
3	Hexagon socket head cap bolt	4
4	Hexagon socket head cap bolt	4
5	Extension joint	2
6	Hall plug	2
7	Side cover	2
8	Table plate	1
9	LB-J bracket	2
10	Table adaptor	1
11	Cover	1

Adjustable full-stroke kit configurations table

● Adjustable full-stroke kit

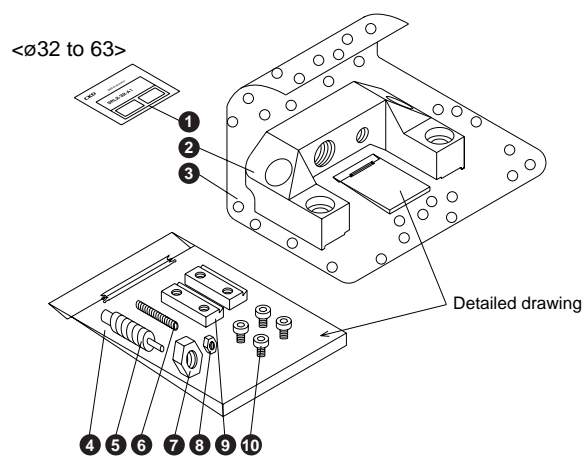
SRL3-J - 40 - A1 1 set

<ø25> Bore size (Page 2060 section (B))



No.	Parts list	Quantity
1	Plastic bag	1
2	Package label (S)	1
3	Square nut	2
4	Shock absorber	1
5	Hexagon socket head cap bolt	4
6	Hexagon socket head set screw	1
7	Plate	1
8	Adaptor (R)	1
9	Adaptor (L)	1
10	Square nut	1
11	Square nut	1
12	Hexagon socket head cap bolt	4

<ø32 to 63>



No.	Parts list	Quantity
1	Package label (S)	1
2	Adaptor	1
3	Air mat	
4	Plastic bag	1
5	Shock absorber	1
6	Hexagon socket head set screw	1
7	Square nut	1
8	Square nut	1
9	Square nut	2
10	Hexagon socket head cap bolt	4

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC

Ending

Rodless type
Rodless cylinder

Rodless cylinder selection guide

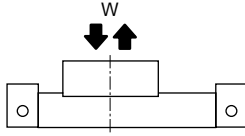
<Step 1>

1 Find the static moment.

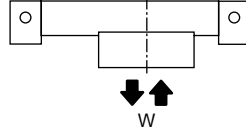
● How to find moment

(Vertical load) $W = \square$ (N)

Downward



Upward



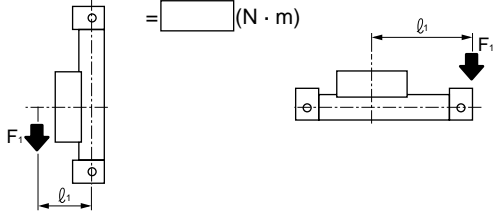
(Radial moment) $M2 = F2 \times l2$

$= \square$ (N · m)



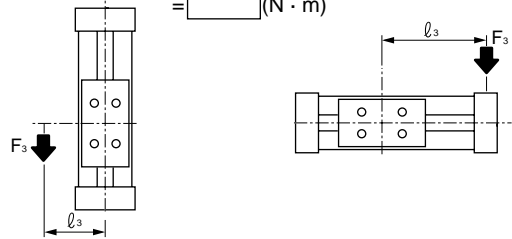
(Bending moment) $M1 = F1 \times l1$

$= \square$ (N · m)



(Twist moment) $M3 = F3 \times l3$

$= \square$ (N · m)



2 Find a rough value of coefficient G according to Table 1.

<Table 1>

$$V_a \text{ (average speed)} = \frac{\text{Moving distance}}{\text{Moving time}} \text{ (m/s)}$$

Va (average speed) (m/s)	Vm (speed at stroke limit) (m/s)	G coefficient
0.3	To 0.65	9
0.6	To 1.00	15
0.9	To 1.30	23
1.2	To 2.00	40

G coefficient = \square

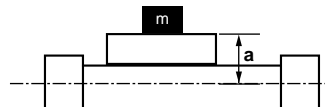
(Table 2) allowable value

The value in () are for models with mounting bracket.

Descriptions	Wmax. (N)	M1max. (N·m)	M2max. (N·m)	M3max. (N·m)	
Bore size (mm)					
SRL3	ø12	30 (15)	1.5 (1)	0.6 (0.3)	0.6 (0.6)
	ø16	140 (70)	5 (3.5)	1 (0.5)	1 (1)
	ø20	200 (100)	10 (7)	1.5 (0.7)	3 (3)
	ø25	360 (180)	17 (12)	5 (2.5)	10 (10)
	ø32	620 (310)	36 (25)	10 (5)	21 (21)
	ø40	970 (485)	77 (54)	23 (11.5)	26 (26)
	ø50	1470 (735)	154 (108)	32 (16)	42 (42)
	ø63	2320 (1160)	275 (193)	52 (26)	76 (76)
	ø80	3500	460	70	100
	ø100	5000	750	95	130
SRL3-G	ø12	30 (15)	1.5 (1)	0.6 (0.3)	0.4 (0.4)
	ø16	140 (70)	5 (3.5)	1 (0.5)	0.6 (0.6)
	ø20	200 (100)	10 (7)	1.5 (0.7)	1 (1)
	ø25	360 (180)	17 (12)	5 (2.5)	2 (2)
	ø32	620 (310)	36 (25)	10 (5)	4 (4)
	ø40	810 (485)	41 (41)	18 (11.5)	5 (5)
	ø50	1440 (735)	76 (76)	32 (16)	9 (9)
	ø63	1630 (1160)	98 (98)	51 (26)	12 (12)
	ø80	3500	351	70	37
	ø100	4130	386	95	42
SRL3-J	ø25	350	12	3.5	10
	ø32	600	25	7	21
	ø40	950	55	17	26
	ø50	1440	107	23	42
	ø63	2280	200	38	76

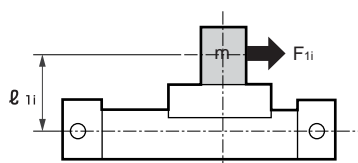
(Table 3) a value

Bore size	a (m)	
	SRL3, SRL3-G, SRL3-Q or SRL3-GQ	SRL3-J
ø12	0.023	-
ø16	0.025	-
ø20	0.028	-
ø25	0.036	0.061
ø32	0.039	0.068
ø40	0.045	0.074
ø50	0.054	0.091
ø63	0.060	0.097
ø80	0.081	-
ø100	0.089	-

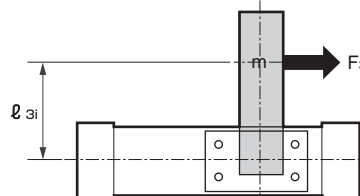


3 Obtain the dynamic moment generated by the inertia of the load at the stroke end.

(Bending moment) $M1_i = F_{1i} \times \ell_{1i}$ ($F_{1i} = m \times 9.8$)
 $=$ (N · m)



(Twist moment) $M3_i = F_{3i} \times \ell_{3i}$ ($F_{3i} = m \times 9.8$)
 $=$ (N · m)



4 Select bore size roughly.

Select bore size roughly.

$M1 + M1_i \times G =$ (N · m) (\varnothing)

$M2 =$ (N · m) (\varnothing)

$M3 + M3_i \times G =$ (N · m) (\varnothing)

$W =$ (N) (\varnothing)

$E0 = \frac{1}{2} \times m \times Vm^2 =$ (J) (\varnothing)

(m) $\frac{W}{9.8}$

Select the maximum bore size temporarily.

(Table 4) Allowable energy absorption of SRL3 (Eo)

Bore size (mm)	Integrated air cushion (J)	Shock absorber (J)	Model no.
ø12	0.03	2.4	NCK-00-0.3-C
ø16	0.22	2.4	NCK-00-0.3-C
ø20	0.59	5.7	NCK-00-0.7-C
ø25	1.40	10.0	NCK-00-1.2
ø32	2.57	18.0	NCK-00-2.6
ø40	4.27	50.0	NCK-00-7
ø50	9.13	86.0	NCK-00-12
ø63	17.4	86.0	NCK-00-12
ø80	33.0	143.0	NCK-00-20
ø100	57.0	143.0	NCK-00-20

5 Find composite moment at stroke end (M_T).

(Confirm if the bore size temporarily selected at 4 meets the following formula.)

$$M_T = \frac{M1 + M1_i \times G}{M1_{max.}} + \frac{M2}{M2_{max.}} + \frac{M3 + M3_i \times G}{M3_{max.}} + \frac{W}{W_{max.}} < 1$$

- M : Composite moment (must be less than 1)
- G : G coefficient
- W_{max.} : Max. allowable of W (from table 2)
- M1_{max.} : M1 max. allowable (from table 2)
- M2_{max.} : M2 max. allowable (from table 2)
- M3_{max.} : M3 max. allowable (from table 2)

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

<Step 2>

Then increase accuracy of load factor, effective thrust, speed at stroke end, and composite moment value.

● Find load factor.

$$\alpha = \frac{F_0}{F} \times 100 (\%)$$

α : Load factor
 F_0 : A necessary force to of movement a workpiece is caused. (N)
 F : Cylinder effective thrust (N) (Fig. 1 to 4)

During horizontal operation	During vertical operation
$F_0 = F_w + F_1 + F_2 + F_3 + F_L$	$F_0 = W + F_1 + F_2 + F_3 + F_L$
F_w : $W \times 0.2$ (N)	F_1 : $M_1 \times C_1$ note (N)
F_2 : $M_2 \times C_2$ note (N)	F_3 : $M_3 \times C_3$ note (N)
F_L : Other resistance (such as guide resistance) (N)	W : Load (N)

Note: The coefficient which compensates the increase of the frictional force which during moment was applied.

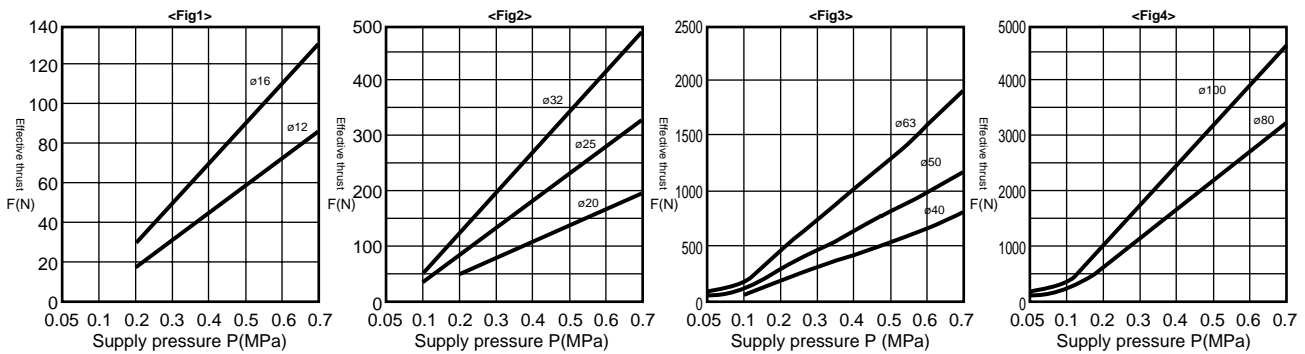
(Table 5) Friction force coefficient per moment 1/m

Bore size (mm)	C1	C2	C3
ø12	8	27	8
ø16	7	24	7
ø20	6	21	6
ø25	5	16	5
ø32	4	13	4
ø40	4	11	4
ø50	4	9	4
ø63	3	8	3
ø80	3	7	3
ø100	3	6	3

(Table 6) Reference load factor

Working pressure (MPa)	Load factor (%)
0.2 to 0.3	$\alpha \leq 40$
0.3 to 0.6	$\alpha \leq 50$
0.6 to 0.7	$\alpha \leq 60$

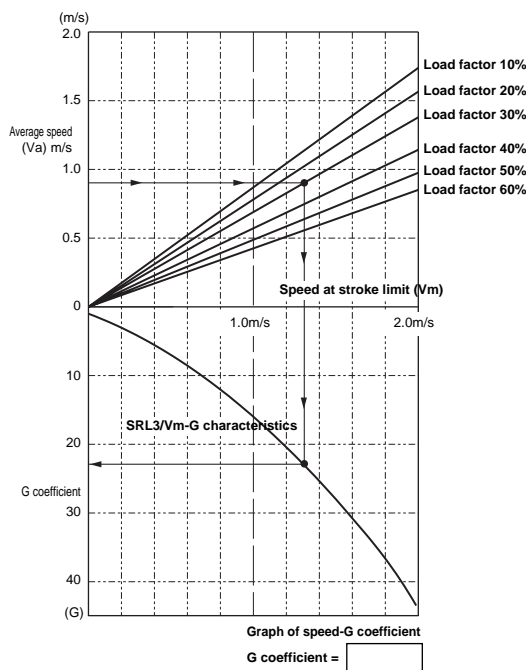
● Graph of effective thrust



<Step 3>

Obtain the stroke end speed (V_m) from <Fig. 3> and G coefficient from the average speed (V_a) and load rate obtained in STEP-2.

● Graph of speed - coefficient G <Fig.3>



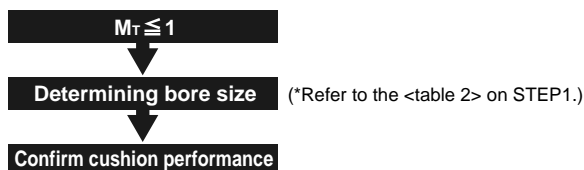
Arrow () in figure shows
 Average speed : 0.9m/s
 Load factor : 30%

Speed at stroke end: 1.3m/s
 G coefficient : 22.5
 is shown.

<Step 4>

● Confirm the composite moment (M_T) with coefficient G found at STEP-3.

$$\begin{aligned}
 M1 + M1i \times G &= \boxed{} \text{ (N} \cdot \text{m)} \\
 M2 &= \boxed{} \text{ (N} \cdot \text{m)} \\
 M3 + M3i \times G &= \boxed{} \text{ (N} \cdot \text{m)} \\
 W &= \boxed{} \text{ (N)} \\
 M_T &= \frac{M1 + M1i \times G}{M1_{max.}} + \frac{M2}{M2_{max.}} + \frac{M3 + M3i \times G}{M3_{max.}} + \frac{W}{W_{max.}}
 \end{aligned}$$



<Step5>

● Confirmation of cushion performance

$$E = \frac{1}{2} \times m \times Vm^2$$

E : Kinetic energy at workpiece final end (J)

m : Load weight (kg)

Vm : Piston rush-into the cushion speed (m/s)

Confirming allowable colliding energy of shock absorber
Calculate colliding energy E and weight equivalent to colliding object Me according to the formula on the table below, and confirm if Me should not be greater than the allowable values of Fig.4 and also table 4.

Allowable value of weight equivalent to colliding object Me and colliding energy E may vary depending on colliding speed.

● The allowable absorption energy differs according to the collision speed, so if the collision speed is 2000mm/s, make sure that one-third of the maximum absorption energy shown in Table 4 is not exceeded. When the collision speed is 1000mm/s, make sure that one-half of the maximum absorption energy is not exceeded.

(Table 4) Allowable energy absorption of SRL3 (E_0)

Bore size (mm)	Integrated air cushion (J)	Shock absorber (J)	Model no.
ø12	0.03	2.4	NCK-00-0.3-C
ø16	0.22	2.4	NCK-00-0.3-C
ø20	0.59	5.7	NCK-00-0.7-C
ø25	1.40	10.0	NCK-00-1.2
ø32	2.57	18.0	NCK-00-2.6
ø40	4.27	50.0	NCK-00-7
ø50	9.13	86.0	NCK-00-12
ø63	17.4	86.0	NCK-00-12
ø80	33.0	143.0	NCK-00-20
ø100	57.0	143.0	NCK-00-20

Applications	Horizontal movement	Moving downward	Moving upward
Colliding object equivalent weight Me (kg)	$Me = \frac{2 \times E}{V^2}$	$Me = \frac{2 \times E}{V^2}$	$Me = \frac{2 \times E}{V^2}$
Energy E (J)	$E = \frac{mV^2}{2} + F/St$	$E = \frac{mV^2}{2} + (F + mg)/St$	$E = \frac{mV^2}{2} + (F - mg)/St$

● Symbol

E : Colliding energy J

Me : Colliding object equivalent weight kg

m : Weight of workpiece kg

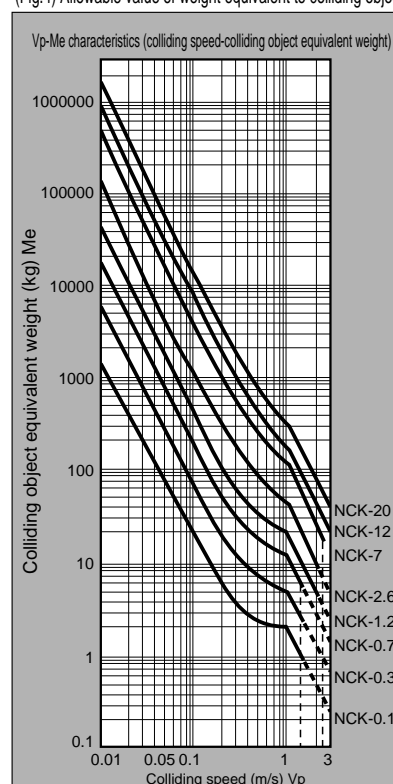
F : Cylinder thrust N

V : Colliding speed (m/s)

St : Shock absorber stroke (m)

g : Gravity acceleration 9.8 (m/s²)

(Fig.4) Allowable value of weight equivalent to colliding object



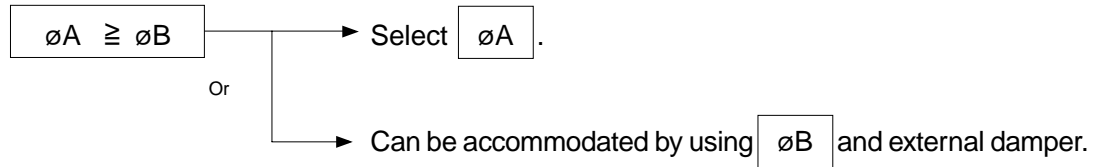
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC

Ending
Rodless type
Rodless cylinder

<Step 6>

● Bore size determined by cushion performance: $\varnothing A$ (Bore size determined on step 5)

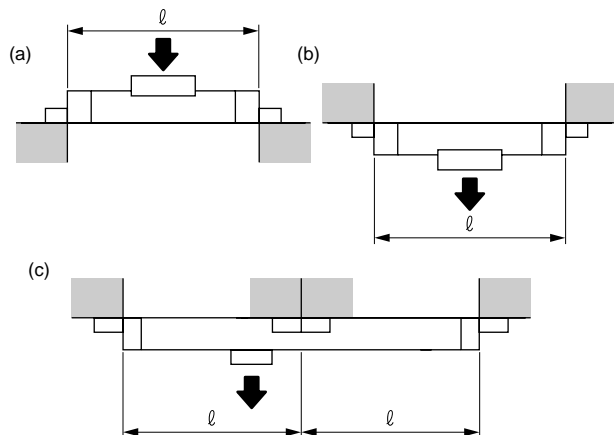
● Bore size determined according to load conditions is assumed as $\varnothing B$. (Bore size determined on step 4)



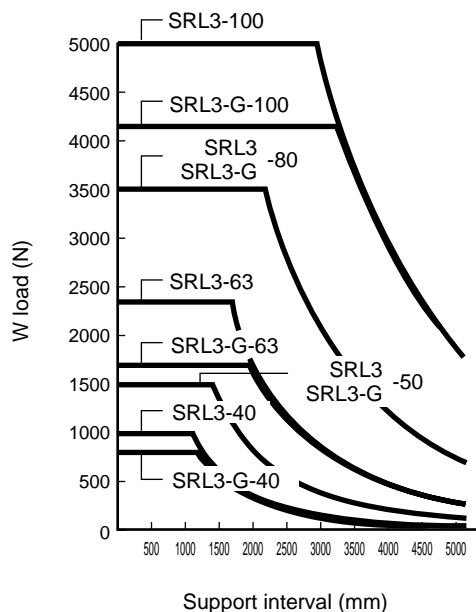
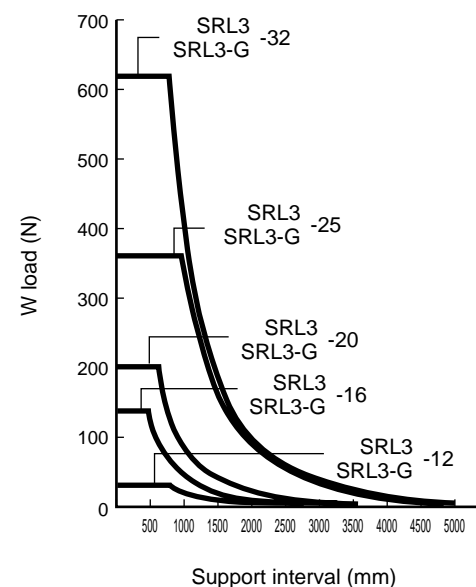
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

1 Restriction of vertical load

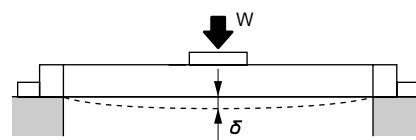
● Long stroke length causes cylinder tube deflection by cylinder own-weight/load. In this case, adjust the intermediate support bracket: l to meet the conditions such as support intervals on the following diagram l should be the graph value or less.
(Intermediate support bracket is an auxiliary bracket to prevent deflection, not for fixing)



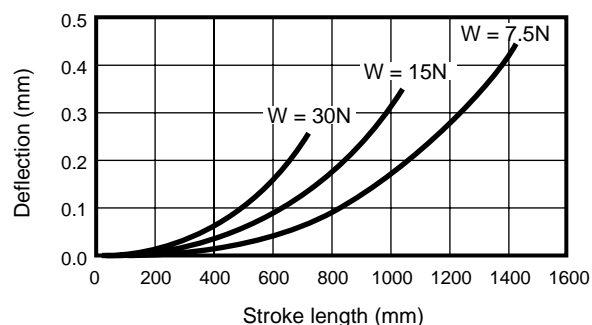
● Allowable load for support methods (a), (b), (c) shown above.



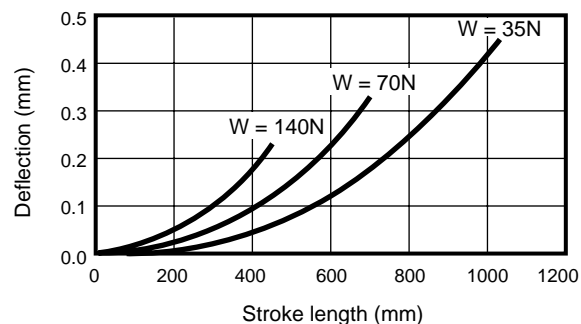
2 Bent of cylinder tube δ



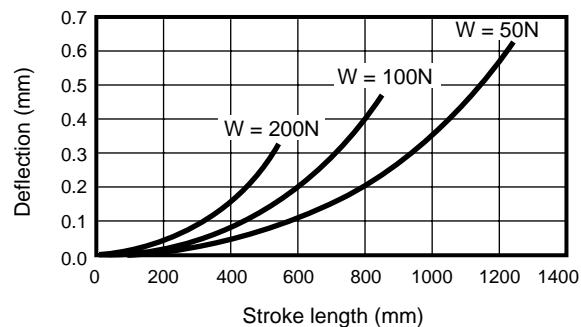
● SRL3-12, SRL3-G-12 ($\phi 12$)



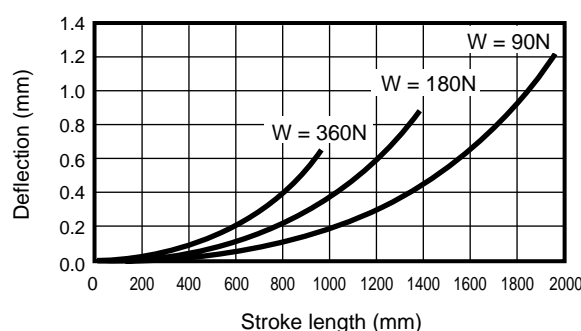
● SRL3-16, SRL3-G-16 ($\phi 16$)



● SRL3-20, SRL3-G-20 ($\phi 20$)



● SRL3-25, SRL3-G-25 ($\phi 25$)



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

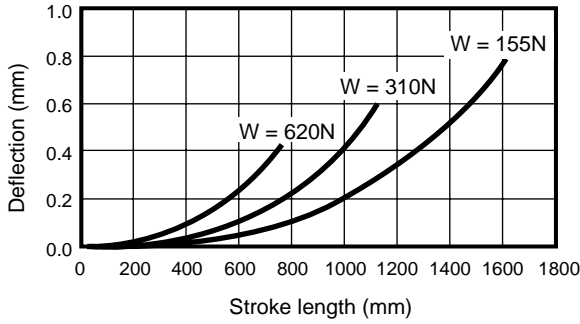
Rodless type
Rodless cylinder

SRL3 Series

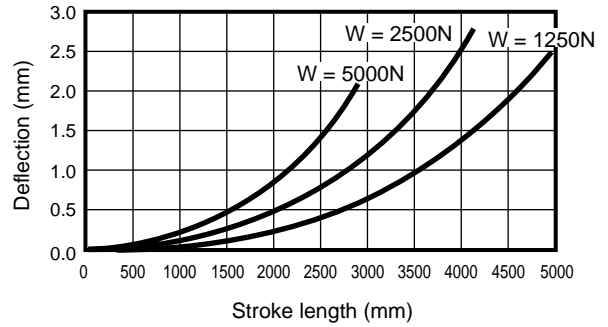
Selection guide

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STSL
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

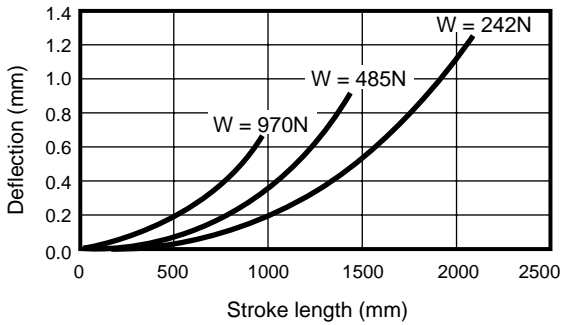
● SRL3-32, SRL3-G-32 (ø32)



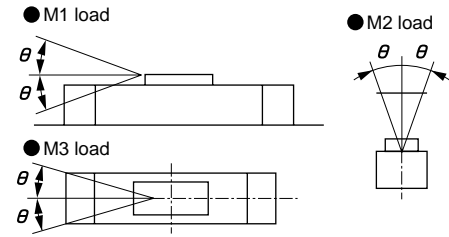
● SRL3-100, SRL3-G-100 (ø100)



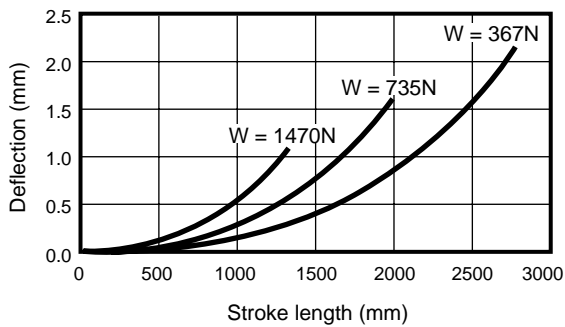
● SRL3-40, SRL3-G-40 (ø40)



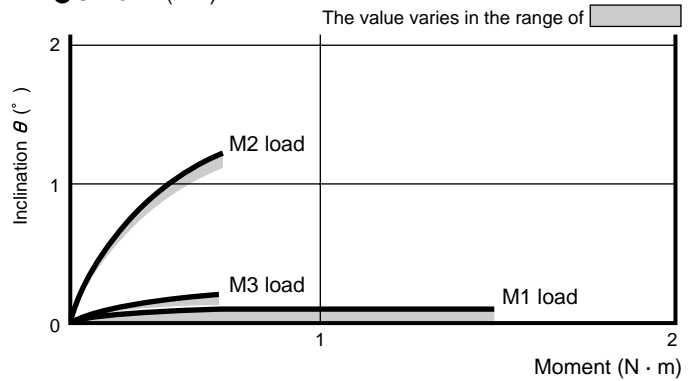
3 Inclination of table θ



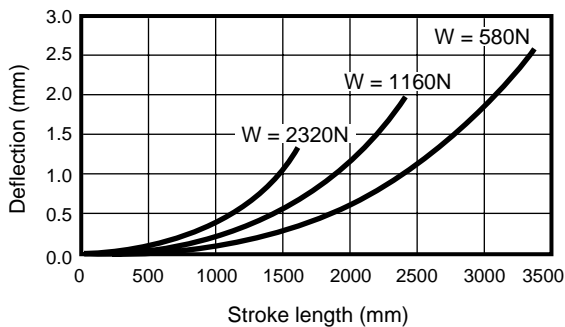
● SRL3-50, SRL3-G-50 (ø50)



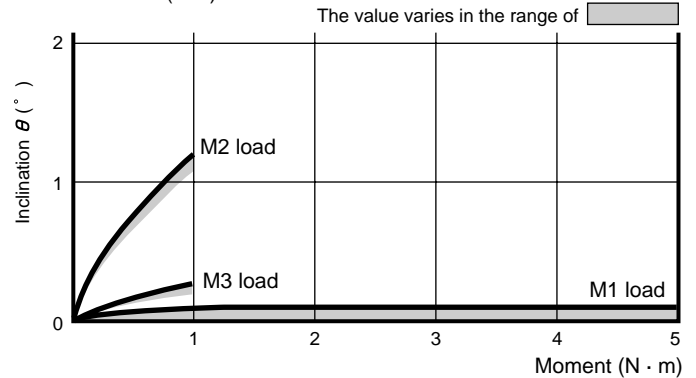
● SRL3-12 (ø12)



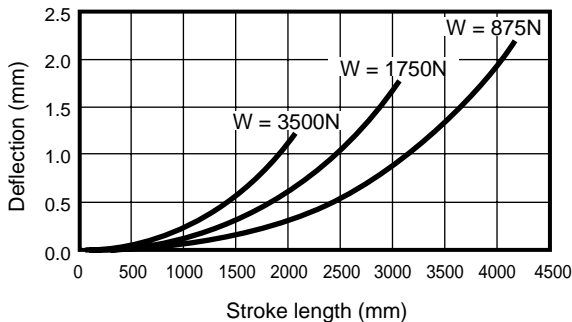
● SRL3-63, SRL3-G-63 (ø63)



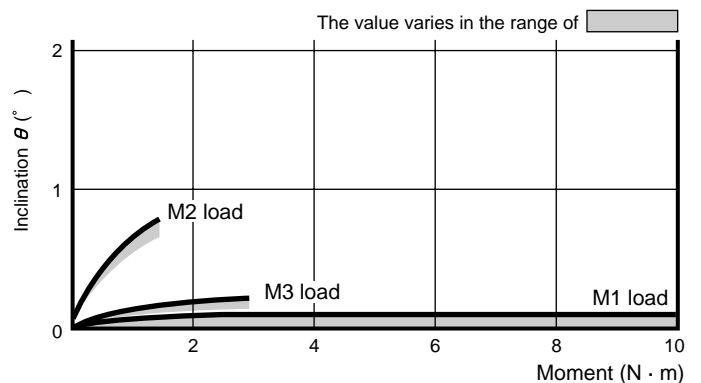
● SRL3-16 (ø16)



● SRL3-80, SRL3-G-80 (ø80)



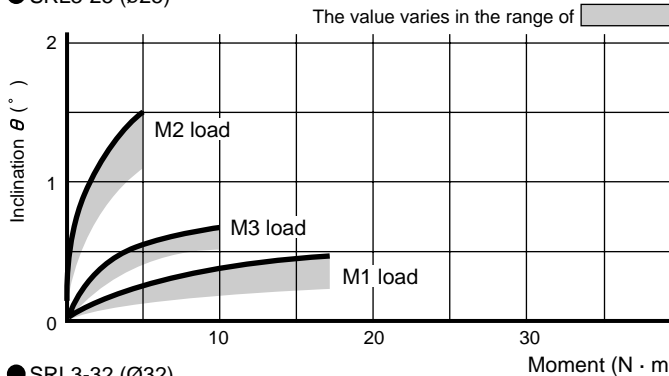
● SRL3-20 (ø20)



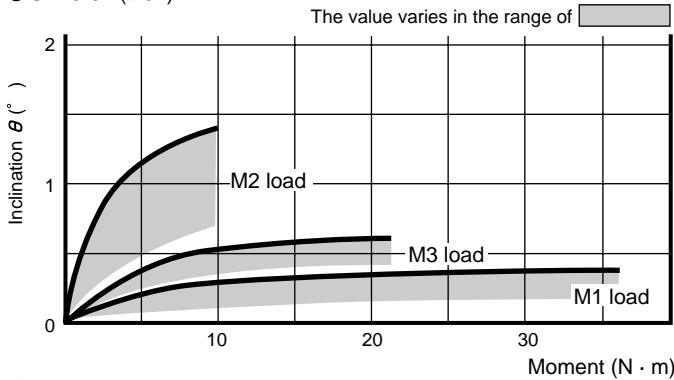
SRL3 Series

Selection guide

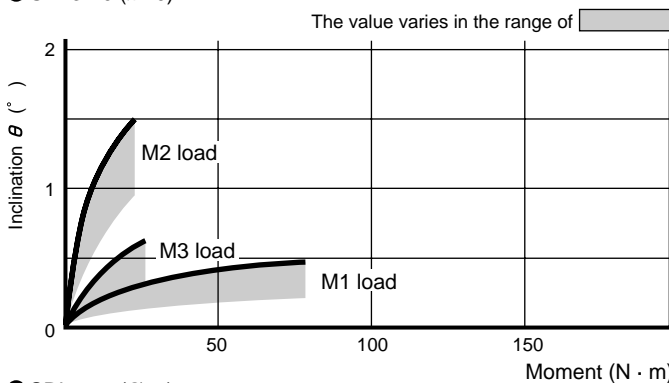
● SRL3-25 (ø25)



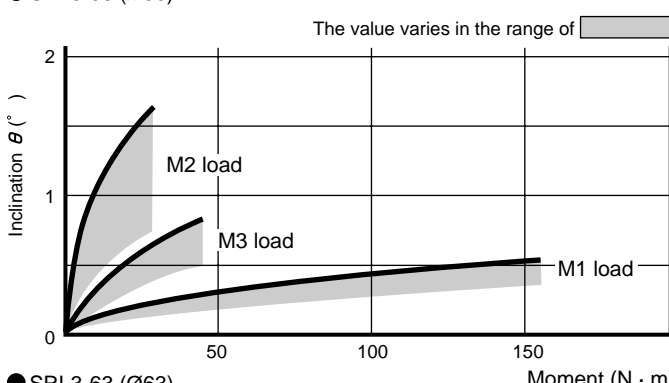
● SRL3-32 (ø32)



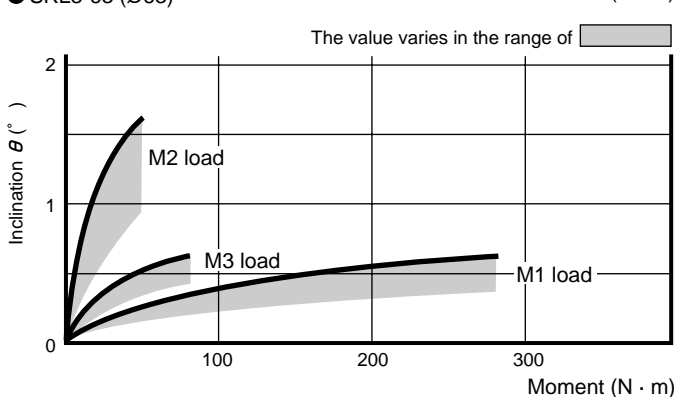
● SRL3-40 (ø40)



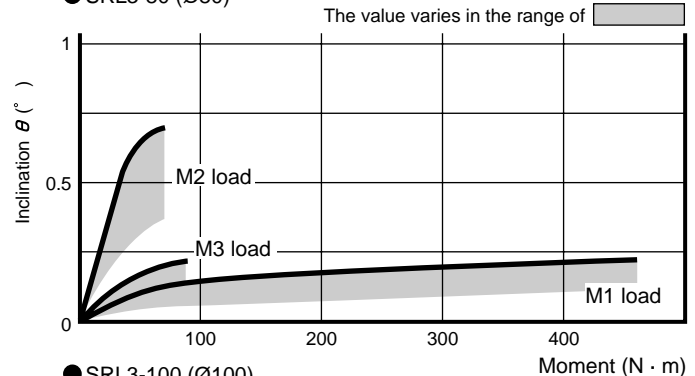
● SRL3-50 (ø50)



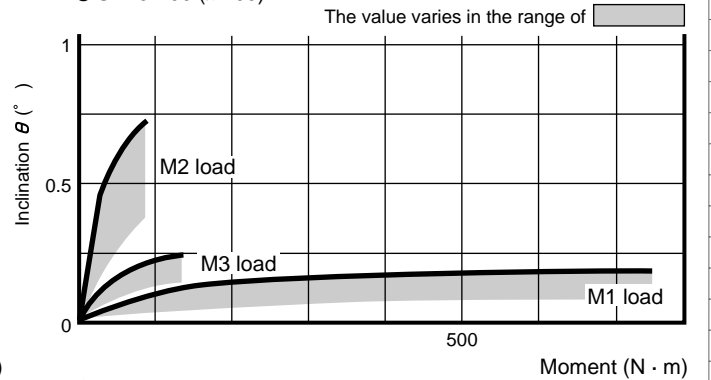
● SRL3-63 (ø63)



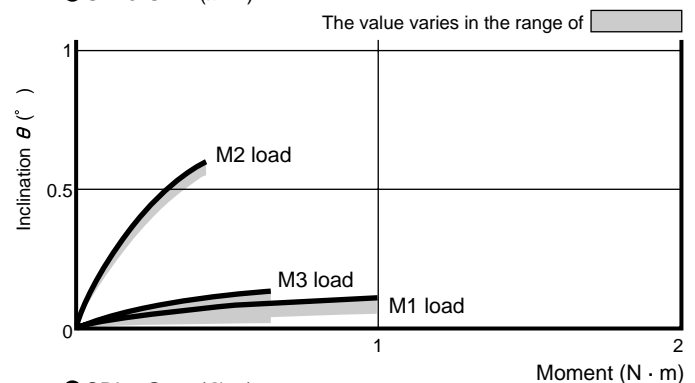
● SRL3-80 (ø80)



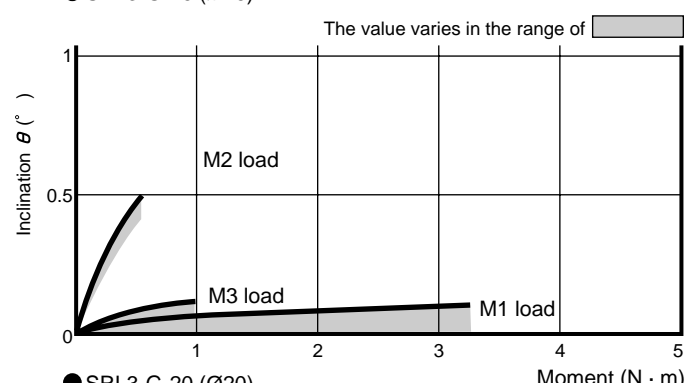
● SRL3-100 (ø100)



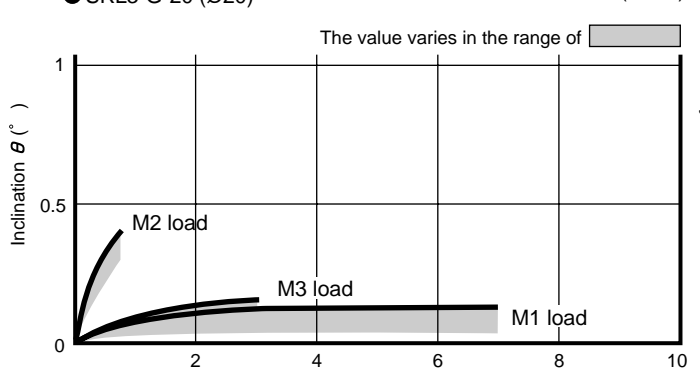
● SRL3-G-12 (ø12)



● SRL3-G-16 (ø16)



● SRL3-G-20 (ø20)



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL3
SRG3
SRM3
SRT3
MRL2
MRG2
SM-25
CAC4
UCAC2
RCC2
MFC
SHC
GLC
Ending

Rodless type
Rodless cylinder

SRL3 Series

Selection guide

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STSL
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL3**
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- CAC4
- UCAC2
- RCC2
- MFC
- SHC
- GLC
- Ending

