

Features

- Dual piston
- Flexible mounting
- Compact
- Precise movement
- High precision
- Magnetic
- Rubber cushioned

RS PRO Slide Cylinder

0180303



RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

Product Description

The slide cylinders are designed to be used in compact spaces and offer precise movement and positioning. They offer double the output force using their double cylinders with high guiding accuracy and are suitable for use with magnetic switches.

- *Lifting, sliding, moving, pulling and pushing*
- *Packaging, handling, printing, semiconductor, automation, robotics and manufacturing industries*

General Specifications

Stroke	See table below for more details
Bore	See table below for more details
Manufacturer Series	ELS
Action	Double
Bearing Type	Linear roller
Pneumatic Connector	M5
Maximum Operating Pressure	7 bar
Cushioning Type	Rubber cushioned both ends / Shock absorber

Mechanical Specifications

Pneumatic Guided Cylinders

Body	Aluminium
Rod	Stainless steel
Maximum Operating Temperature	80°C
Minimum Operating Temperature	-20°C
Dimension	See table below for more details
Weight	See table below for more details
Length	See table below for more details

RS PRO ELS Series Slide Cylinder Specifications

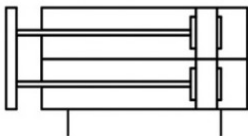
Stock No.	Series Model	Bore (mm)	Stroke (mm)	Length (mm)	Height (mm)	Width (mm)	Weight (g)
0180304	ELS 6	6	10	48	20	30	160
0180306	ELS 6	6	20	58	20	30	190
0180307	ELS 6	6	30	68	20	30	230
0180309	ELS 8	8	10	56	24	40	143
2351133	ELS 8	8	20	61	24	24	156
2351131	ELS 12	12	30	80	32	50	355
2351132	ELS 12	12	50	112	32	50	470
0180303	ELS 16	16	30	75	40	62	560

Specifications & Materials

Pneumatic Guided Cylinders



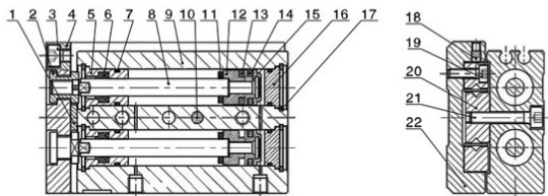
ELS Slide Cylinder



Specifications

Acting Type	Double Acting
Working Medium	Clean Air(after 40 μ m filtration)
Working Pressure(MPa)	0.15~0.7
Guaranteed Pressure(MPa)	1.05
Working Temperature(°C)	-20~80(No freezing)
Piston Speed(mm/s)	50~500
Stroke tolerance	Stroke≤100 ^{+1.0} ₀ , Stroke>100 ^{+1.5} ₀
Cushion	Rubber cushion on both ends、 Shock absorber cushion
Port Size	M5x0.8

Internal Structure



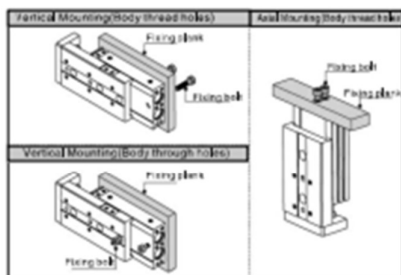
No.	Part Name	Material
1	Cushion Pad	TPU
2	Fixing Screw	Stainless Steel
3	Hexagon Socket Cap Head Screw	Carbon Steel
4	Fixing Plate	Aluminum Alloy
5	Front Cover	Aluminum Alloy
6	Front Scraper Seal	NBR
7	O-ring	NBR
8	Piston Rod	Stainless Steel
9	Barrel	Aluminum Alloy
10	Positioning pin	Stainless Steel
11	Anti-Crash Gasket	TPU
12	Magnet Seat	Aluminum Alloy
13	Integrated Magnet	RbFeB
14	Piston Seal	NBR
15	Piston	Aluminum Alloy
16	Rear Cover	Aluminum Alloy
17	C-Type Retainer Ring	Spring Steel
18	Hexagon Socket Set Screw	Carbon Steel
19	Hexagon Socket Cap Head Screw	Carbon Steel
20	Linear Roller Sliding Guide Rail	Assembly
21	Hexagon Socket Cap Head Screw	Carbon Steel
22	Slide Table	Aluminum Alloy

Pneumatic Guided Cylinders






1. How to mount cylinder:

- 1.1 Cylinder can be mounted from 3 directions.

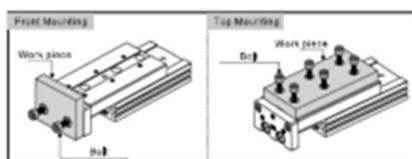


- 1.2 When mounting an compact slide cylinder, screws of appropriate length should be used and tightened properly within the maximum tightening torque. If screws are tightened beyond designed limits, malfunction may occur. If they are tightened insufficiently, it may result in sliding off from its position.

Vertical Mounting (Body thread holes)				
	Model	Bolt used	Max. tightening torque (Nm)	Maximum depth (mm)
	EL 56	MX05.7	2.1	8
	EL 58	MX05.7	2.1	8
	CLS12	MX05.6	4.4	10
	EL 516	MX1.0	7.8	12
	EL 520	MX1.0	7.8	12
	EL 525	MX1.25	18	15
Vertical Mounting (Body through holes)				
	Model	Bolt used	Max. tightening torque (Nm)	Maximum depth (mm)
	EL 56	MX05.5	1.2	10.8
	EL 58	MX05.5	1.2	10.8
	CLS12	MX05.7	2.8	18
	EL 516	MX05.6	5.7	20.5
	EL 520	MX05.6	5.7	20.5
	EL 525	MX1.0	18	24
Axial Mounting (Body through holes)				
	Model	Bolt used	Max. tightening torque (Nm)	Maximum depth (mm)
	CL 96	M2 X05.45	0.5	3.5
	EL 58	MX05.5	0.9	6.0
	EL 512	MX05.7	2.1	6.0
	EL 516	MX05.6	4.4	7.2
	EL 520	MX05.6	4.4	8.0
	EL 525	MX1.0	7.8	10.0

2. Work Piece Mounting:

- 2.1 Work pieces can be mounted on 2 surfaces of the compact slide.



- 2.2 When mounting a work piece, tighten the bolts properly at a torque value within the limiting range. Use bolts at least 0.5mm shorter than maximum thread depth to prevent bolts from contacting the guide block. If the bolts are too long, they hit the guide block and cause damage.

Front Mounting

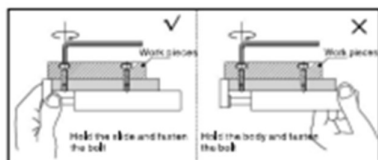
Model	Bolt used	Max.tightening torque (Nm)	Maximum depth (mm)
EL56	MX05.5	0.9	5
EL58	MX05.7	2.1	8
ELS12	MX05.6	4.4	8
ELS16	MX1.0	7.8	10
EL520	MX1.0	7.8	10
EL525	MX1.25	18	15

Top Mounting

Model	Bolt used	Max.tightening torque (Nm)	Maximum depth (mm)
EL56	MX05.5	0.9	6
EL58	MX05.7	2.1	8
ELS12	MX05.6	2.1	5.5
ELS16	MX05.6	4.4	7.5
EL520	MX05.6	4.4	8.5
EL525	MX1.0	7.8	13

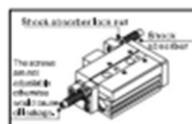
- 2.3 Since the table is supported by the linear guide, take care not to apply strong impact or large moment to the guide section.

- 2.4 Hold the slide when fastening work pieces to it with bolts, if the body is held while tightening bolts, excessive moment may damage guide section.



3. About shock absorber:

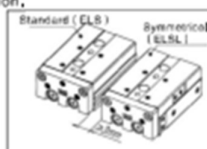
- 3.1 Shock absorbers are expendable parts. Promptly replace them when energy absorbing capacity decreases.
3.2 Never turn or adjust the screws on bottom of the shock absorber body. The screws are not for adjusting. Otherwise would cause oil leakage.
3.3 Follow the table for tightening torque of shock absorber to lock nuts.



Model	Shock absorber	Tightening torque (Nm)
ELS8	AC0806-WY	1.57
ELS12	AC0806-WY	1.57
ELS16	AC1008-WY	3.14
EL520	AC1416-WY	10.8
EL525	AC1416-WY	10.8

4. How to mount sensor switch:

- 4.1 ELS Series are all with magnet.
4.2 Maintain a minimum spacing of at least 3mm if two compact cylinders are used side by side in order to avoid malfunction.

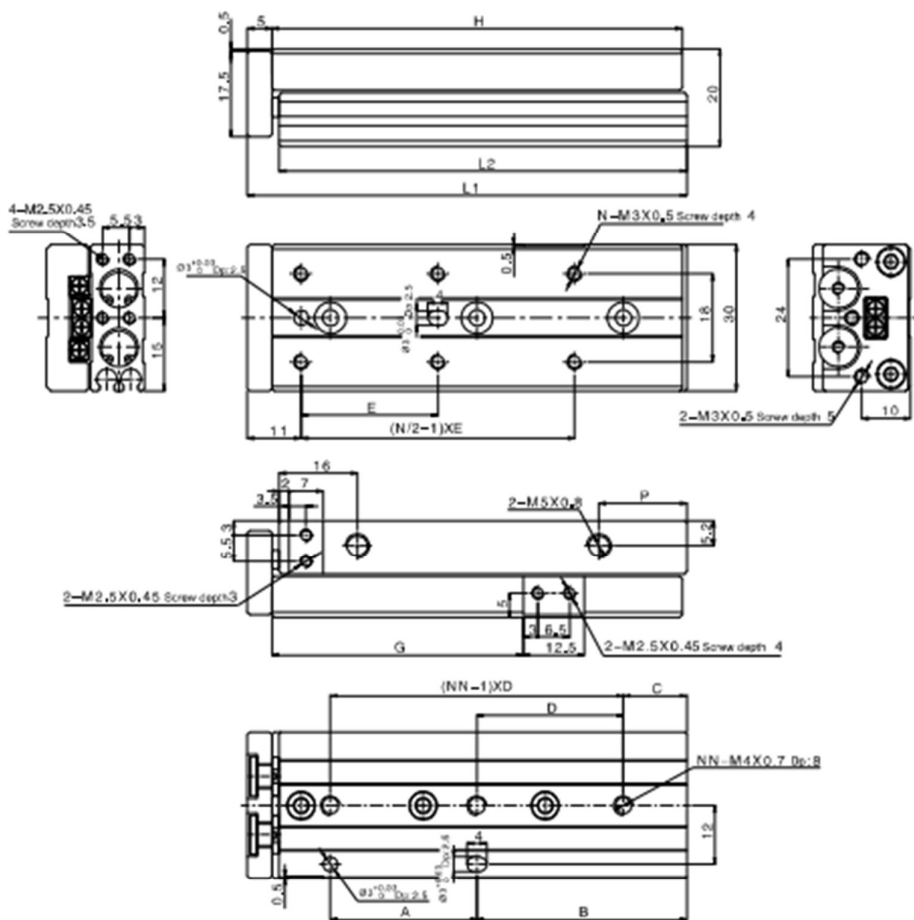


5. Make sure to connect the compact cylinder to speed controller at the meter-out side, and the speed of compact cylinder must be below 500mm/s.

Pneumatic Guided Cylinders



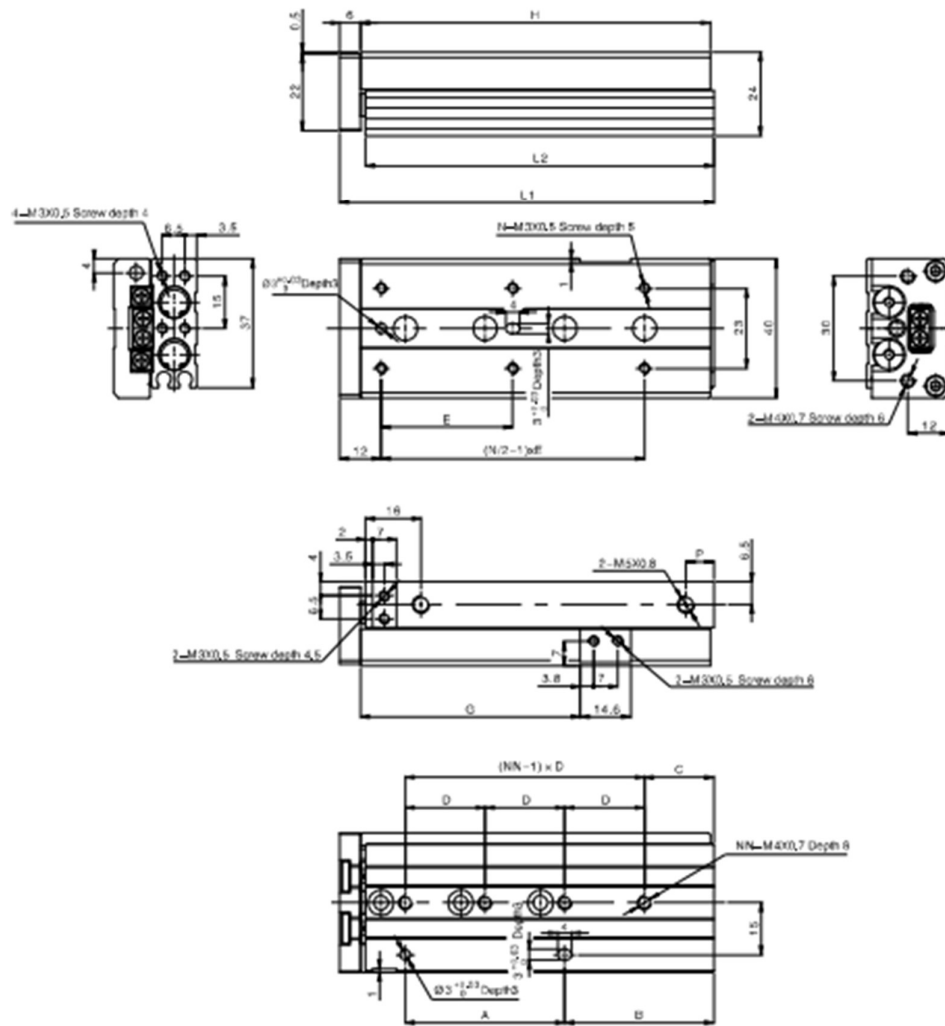
ELS 6



Stroke/Sign	A	B	C	D	E	G	H	P	L1	L2	N	NN
10	20	11	6	25	20	21,5	42	9,5	48	41,5	4	2
20	20	21	6	35	30	31,5	62	9,5	58	51,5	4	2
30	20	31	11	20	20	41,5	62	6	68	61,5	6	3
40	30	43	13	30	25	51,5	84	18	90	83,5	6	3
50	48	41	17	24	38	61,5	100	24	106	99,5	6	4

Pneumatic Guided Cylinders

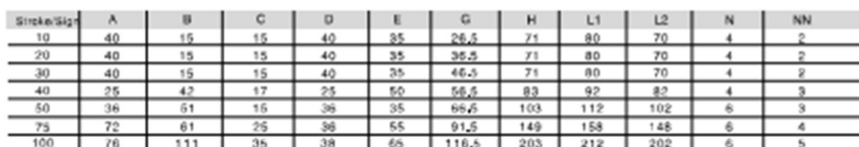
ELS 8



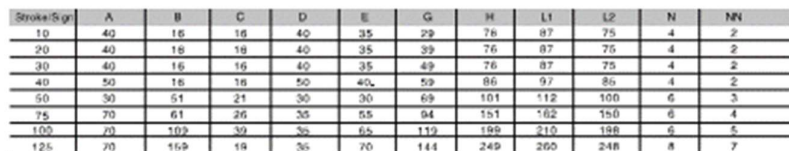
Stroke/Sign	A	B	C	D	E	G	H	P	L1	L2	N	NN
10	20	17	9	28	25	23.5	49	13	56	48.5	4	2
20	30	12	12	30	25	33.5	54	8	61	53.5	4	2
30	20	33	13	20	40	43.5	65	8	72	64.5	4	3
40	28	43	15	28	50	53.5	83	8	90	82.5	4	3
50	46	43	20	23	38	63.5	101	8	108	100.5	6	4
75	56	83	27	28	50	88.5	151	8	158	150.5	6	5

Dimensions

ELS 12



ELS 16



Pneumatic Guided Cylinders



Accessories

Stock No.	Brand	Product Name	Length	Number of Wires	Connection
235-1163	RS PRO	Magnetic switch	2mtr	NA	QD8 Male
235-1161	RS PRO	Magnetic switch	2mtr	3 wire	NA