

Features

- Flexible mounting
- Compact
- Precise movement
- High precision
- Magnetic
- Rubber cushioned.
- Linear bearings

RS PRO Compact Guide Cylinder

0180310



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	SGL
Action	Double
Pneumatic Connector	See table below for more details
Maximum Operating Pressure	10 bar
Cushioning Type	Rubber
Bearing Type	Linear

Mechanical Specifications

Body	Aluminium
Rod	Chromed Steel
Maximum Operating Temperature	70°C
Minimum Operating Temperature	-20°C
Dimensions	See table below for more details
Weight	See table below for more details
Length	See table below for more details


RS PRO SGL Series Compact Guide Cylinder

Stock No.	Series Model	Bore (mm)	Stroke (mm)	Length (mm)	Height (mm)	Width (mm)	Weight (g)	Pneumatic Connector
0180310	SGL	12	50	92	22	56	420	M5 x 0.8
0180312	SGL	16	100	142	25	62	867	M5 x 0.8
0180313	SGL	16	10	56	25	62	700	M5 x 0.8


Technical Data

SG

Compact Guide Cylinder



Specifications



Bore(mm)	6	10	12	16	20	25	32	40	50	63
Acting type	Double acting									
Working medium	Clean Air(after 40 μm filtration)									
Working pressure (MPa)	0.1~1.0									
Guaranteed pressure (MPa)	1.5									
Working temperature (°C)	-20~70(No freezing)									
Piston speed (mm/s)	30~500									
Cushion	Rubber cushion									
Stroke tolerance(mm)	+1.0 0									
No-rotating precision ★	SGL	—		± 0.08°	± 0.07°		± 0.06°	± 0.05°		
	SGM	± 0.10°		± 0.09°		± 0.08°	± 0.06°			
Port Size	M3 x 0.5		M5 x 0.8		G1/8 ①			G1/4 ①		

★ Retract position. ① PT, NPT port size is optional.

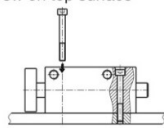
Stroke

Bore (mm)	Standard Stroke (mm)									
12	10	20	25	30	40	50	75	80	100	
16	10	20	25	30	40	50	75	80	100	150
20		20		30	40	50	75		100	150
25			20	30	40	50	75		100	125
32				25	40	50	80	100	125	160
40/50										50

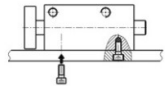
Note: the middle non-standard stroke is made by adding a pad in the cylinder of standard stroke; The Ø12~Ø32 cylinder diameter corresponds to every 1mm stroke, and the Ø40~Ø63 cylinder diameter corresponds to every 5mm stroke;
For example, order SGL20*47 non-standard travel cylinder, it is made from SGL20*50 standard travel cylinder with 3mm gasket, its external size, installation size and SGL20*50 the same

How to Mount ?

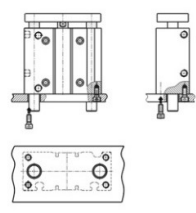
Fixation of screw on top surface



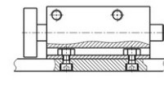
Fixation of screw at bottom surface

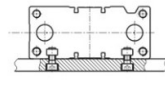


Fixation of screw at back surface



Fixation of T slot at bottom

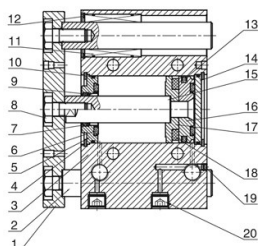
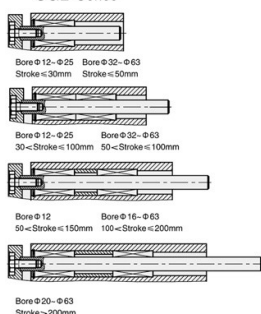




Dimensions

Internal Structure

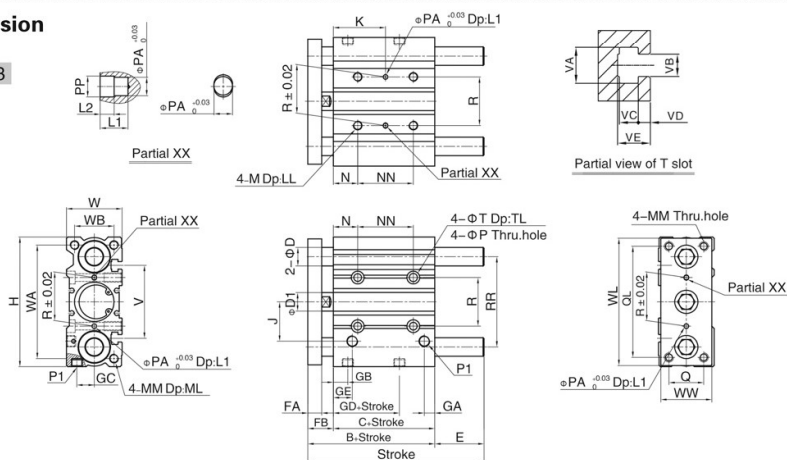
SGL Series



No.	Part Name	Material
1	Fixing plate	Aluminum alloy
2	Leader	Steel
3	Barrel	Aluminum alloy
4	C type retainer ring	Spring steel
5	Head cover	Aluminum alloy
6	Anti-bump cushion	NBR/TPU
7	Piston rod seal	TPU
8	Screw	Stainless steel
9	Self lubricating bearing	Bronze powder
10	O-ring	NBR
11	Linear bearing(SGL) Slide bearing (SGM)	Brass(SGM) Composite material(SGL)
12	C type retainer ring	Spring steel
13	Piston seal	NBR
14	Rear cover	Aluminum alloy
15	Piston rod	S45C hard chrome carbon steel
16	Piston	Aluminum alloy
17	Magnet base	Aluminum alloy
18	Magnet	Plastic
19	Nut	Carbon steel
20	Hex fix screw(G)	Carbon steel
21	Spacer	Aluminum alloy

Main Dimension

SG12-63



(mm)																					
Bore\Sign	E(SGL)				E(SGM)				NN				K								
	≤30	31-100	101-200	>200	≤50	51-100	101-200	>200	≤30	31-100	101-200	>200	≤30	31-100	101-200	>200					
12	0	13	43	—	0	13	43	—	20	40	110	—	15	25	60	—					
16	0	19	49	—	0	19	49	—	24	44	110	—	17	27	60	—					
20	0	27	51	69	0	27	51	69	24	44	120	200	29	39	77	117					
25	0	28.5	51	68.5	0	28.5	51	68.5	24	44	120	200	29	39	77	117					
Bore\Sign	≤50	51-100	101-200	>200	≤50	51-100	101-200	>200	≤40	41-100	101-200	>200	≤40	41-100	101-200	>200					
32	5.5	42.5	58.5	80.5	5.5	42.5	58.5	80.5	24	48	124	200	33	45	83	121					
40	0	36	52	74	0	36	52	74	24	48	124	200	34	46	84	122					
50	4	46	62	89	4	46	62	89	24	48	124	200	36	48	86	124					
63	0	41	57	84	0	41	57	84	28	52	128	200	38	50	88	124					
Bore\Sign	B	C	FA	FB	P1	GA	GB	GC	GD	GE	R	RR	N	P	PA	PP	T	TL	M	LL	D1
12	42	29	8	13	M5X0.8	7.5	11	8	13	11	23	41	5	4.2	3	3.5	8	4.5	M5X0.8	10	6
16	46	33	8	13	M5X0.8	8	11	10	15	11	24	46	5	4.2	3	3.5	8	4.5	M5X0.8	10	8
20	53	37	10	16	1/8"	9	10.5	10.5	12.5	10.5	28	54	17	5.2	3	3.5	9.5	5.5	M6X1.0	12	10
25	53.5	37.5	10	16	1/8"	9	11.5	13.5	12.5	11.5	34	64	17	5.2	4	4.5	9.5	5.5	M6X1.0	12	12
32	59.5	37.5	12	22	1/8"	9	12.5	15	7	12.5	42	78	21	6.9	4	4.5	11	7.5	M8X1.25	16	16
40	66	44	12	22	1/8"	10	14	18	13	14	50	86	22	6.9	4	4.5	11	7.5	M8X1.25	16	16
50	72	44	16	28	1/4"	11	12	21.5	9	14	66	110	24	8.7	5	6	14	9	M10X1.5	20	20
63	77	49	16	28	1/4"	13.5	16.5	28	14	16.5	80	124	24	8.7	5	6	14	9	M10X1.5	20	20
Bore\Sign	D(SGL)	D(SGM)	J	W	WA	WB	WL	WW	H	Q	QL	MM	ML	L1	L2	V	VA	VB	VC	VD	VE
12	6	8	18	26	50	18	56	22	58	14	48	M4X0.7	10	6	3	37	7.4	4.4	3.7	2	6.2
16	8	10	19	30	56	22	62	25	64	16	54	M5X0.8	12	6	3	38	7.4	4.4	3.7	2.5	6.7
20	10	12	25	36	72	24	81	30	83	18	70	M5X0.8	13	6	3	44	8.4	5.4	4.5	2.8	7.8
25	12	16	28.5	42	82	30	91	38	93	26	78	M6X1.0	15	6	3	50	8.4	5.4	4.5	3	8.2
32	16	20	34	48	98	34	110	44	112	30	96	M8X1.25	20	6	3	63	10.5	6.5	5.5	3.5	9.5
40	16	20	38	54	106	40	118	44	120	30	104	M8X1.25	20	6	3	72	10.5	6.5	5.5	4	11
50	20	25	47	64	130	46	146	60	148	40	130	M10X1.5	22	8	4	92	13.5	8.5	7.5	4.5	13.5
63	20	25	55	78	142	58	158	70	162	50	130	M10X1.5	22	8	4	110	17.8	11	10	7	18.5

Accessories

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