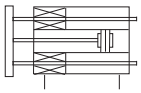
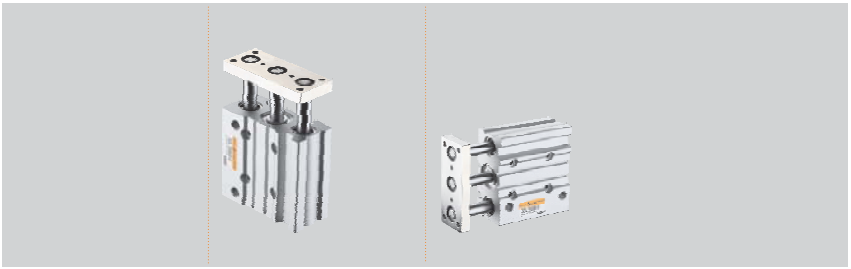
1





How to Order?

Series No	Type No	Bore	X	Stroke	–	Magnet No	–	Thread type
SG	L: Linear bearing M: slide bearing	12 16 20 …		25 50 75 …		S : with magnet		Blank: G P : PT T : NPT

Order Example:
SG series, linear bearing, bore 16mm, stroke 30mm, EPR code is: SGL16X30–S

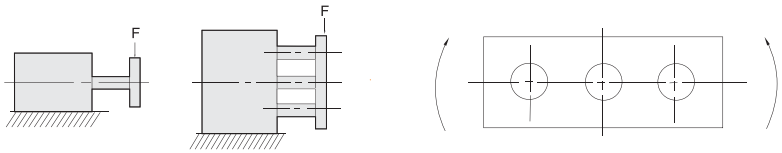
Specifications

Bore(mm)		12	16	20	25	32	40	50	63
Acting type		Double acting							
Working medium		Clean air (40μm filteration)							
Working pressure (MPa)		0.1~1.0							
Guaranteed pressure (MPa)		1.5							
Working temperature (℃)		–20~80(Dry air)							
Piston speed (mm/s)		30~500							
Cushion		Rubber cushion							
Tolerance of stroke (mm)		$^{+1.5}_{0}$							
Bearing		Slide bearing / Linear bearing							
No–rotating precision	Slide bearing	±0.08°		±0.07°		±0.06°		±0.05°	
	Linear bearing	±0.10°		±0.09°		±0.08°		±0.06°	
Port Size		M5x0.8		G 1/8				G 1/4	

Bore (mm)	Standard stroke (mm)	Max. stroke (mm)
12	10 20 25 30 40 50 60 70 75 80 90 100 125 150	150
16	10 20 25 30 40 50 60 70 75 80 90 100 125 150 175 200	200
20/25	20 25 30 40 50 60 70 75 80 90 100 125 150 175 200 225 250	250
32~63	25 30 40 50 60 70 75 80 90 100 125 150 175 200 225 250	250

Note:The dimensions of non–std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder.
e.g. 27mm stroke cylinder has the same dimensions of 30 std. stroke cylinder.

Permit Load and Torque



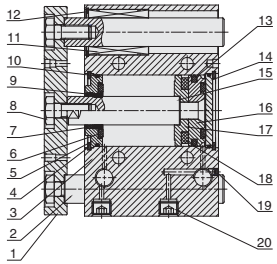
Torque：T(N.m)

Bore(mm)	Model	Max Side Load F(N) Stroke(mm) 10	20	25	30	40	50	75	100	125	150	175	200
12	SGM	24	19	–	17	14	13	26	22	–	–	–	–
	SGL	37	27	–	22	35	30	23	18	–	–	–	–
16	SGM	38	31	–	27	23	21	37	32	–	–	–	–
	SGL	54	40	–	32	54	47	35	28	–	–	–	–
20	SGM	–	49	–	43	38	35	87	75	66	59	54	49
	SGL	–	58	–	48	101	90	70	58	62	54	48	43
25	SGM	–	69	–	60	54	49	116	100	88	79	71	65
	SGL	–	82	–	68	132	118	93	77	80	70	62	55
32	SGM	–	–	203	–	–	164	182	159	142	127	116	106
	SGL	–	–	191	–	–	157	164	144	203	186	171	158
40	SGM	–	–	203	–	–	164	182	159	142	127	116	106
	SGL	–	–	190	–	–	157	163	144	203	185	171	158
50	SGM	–	–	296	–	–	245	273	241	216	195	179	164
	SGL	–	–	208	–	–	173	223	199	264	242	224	207
63	SGM	–	–	296	–	–	245	273	241	216	195	179	164
	SGL	–	–	206	–	–	171	221	196	262	240	221	205

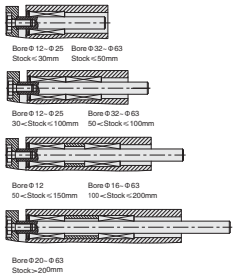
Bore(mm)	Model	Max Torque F(N) Stroke(mm) 10	20	25	30	40	50	75	100	125	150	175	200
12	SGM	0.39	0.32	–	0.27	0.24	0.21	0.43	0.36	–	–	–	–
	SGL	0.61	0.45	–	0.35	0.58	0.50	0.37	0.29	–	–	–	–
16	SGM	0.69	0.58	–	0.49	0.43	0.38	0.69	0.58	–	–	–	–
	SGL	0.99	0.74	–	0.59	0.99	0.86	0.65	0.52	–	–	–	–
20	SGM	–	1.05	–	0.93	0.83	0.75	1.88	1.63	1.44	1.28	1.16	1.06
	SGL	–	1.26	–	1.03	2.17	1.94	1.52	1.25	1.34	1.17	1.03	0.93
25	SGM	–	1.76	–	1.55	1.38	1.25	2.96	2.57	2.26	2.02	1.83	1.67
	SGL	–	2.11	–	1.75	3.37	3.02	2.38	1.97	2.05	1.78	1.58	1.41
32	SGM	–	–	6.35	–	–	5.13	5.69	4.97	4.42	3.98	3.61	3.31
	SGL	–	–	5.95	–	–	4.89	5.11	4.51	6.34	5.79	5.33	4.93
40	SGM	–	–	7	–	–	5.66	2.27	5.48	4.87	4.38	3.98	3.65
	SGL	–	–	6.55	–	–	5.39	5.62	4.96	6.98	6.38	5.87	5.43
50	SGM	–	–	13	–	–	10.8	12	10.6	9.5	8.6	7.86	7.24
	SGL	–	–	9.17	–	–	7.62	9.83	8.74	11.6	10.7	9.83	9.12
63	SGM	–	–	14.7	–	–	12.1	13.5	11.9	10.7	9.69	8.86	8.16
	SGL	–	–	10.2	–	–	8.48	11	9.74	13	11.9	11	10.2

1

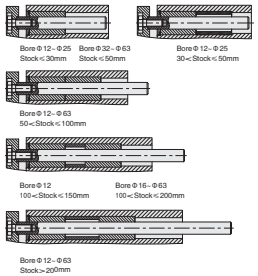
Internal structure



SGL Series



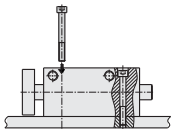
SGM Series



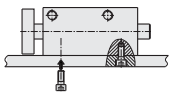
NO.	Part name	Material
1	Fixing plate	Aluminum alloy
2	Leader	Steel
3	Barrel	Aluminum alloy
4	C type retainer ring	Spring steel
5	Head cover	Aluminum alloy
6	Anti-bump cushion	NBR/TPU
7	Piston rod seal	TPU
8	Screw	Stainless steel
9	Self lubricating bearing	Bronze powder
10	O-ring	NBR
11	Bearing	Brass
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	Carbon steel
21	Spacer	Aluminum alloy

How to mount

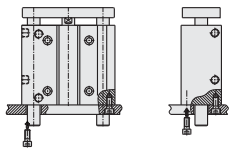
Fixation of screw on top surface



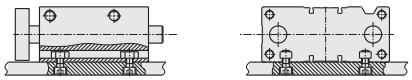
Fixation of screw at bottom surface



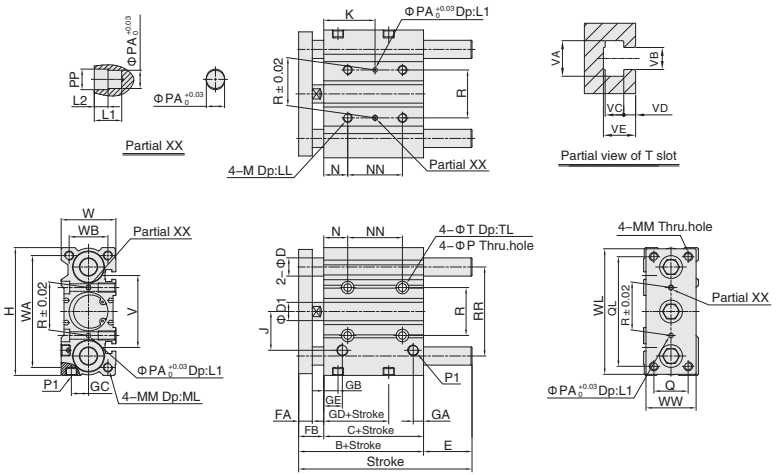
Fixation of screw at back surface



Fixation of T slot at bottom



Main Dimensions

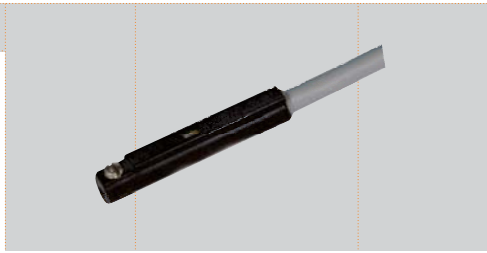


(mm)

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
	≤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

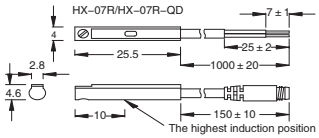


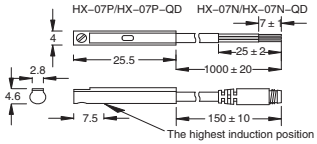
How to Order?

HX	–	07	–	R	–	H	–	2M	–	QD8
Product code		Series No.		Switch type R:Two wire reed switch N: NPT type P: PNP type		Special model No.:Standard sensitive B: NC type H: High sensitive type L: Low sensitive type X: No indicator type		Wire length No: Standard 1M 1.5M: 1.5M 2M: 2M 5M: 5M		Connection QD8: QD8 Male fitting

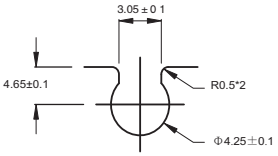
Note: 1.Testing with standard magnet: Φ15. 5x Φ8x5t (Plastic magnet) ;
2. Sine wave/X、Y、Z3 axial direction/ each axial direction three times/ each time 11ms;
3. complex amplitude 1.5mm/10Hz–55Hz sweep frequency, last one minute/ each time X、Y、Z axial direction for one hour;
4. 1=No/2=output short circuit protection/3=Power reverse connection protection/4=Surge absorption protection

Dimensions

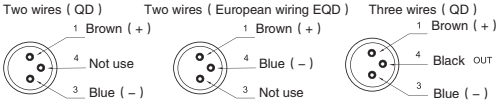




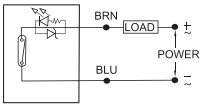
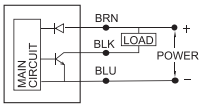
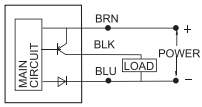
Groove dimension



QD fitting wiring



Specification

Type	HX–07R	HX–07RA	HX–07N	HX–07P
Connect Diagram / Parameter				
Wiring method	2–Wire Type		3–Wire Type	
Switching logic	SPST Normally Open		Solid State Output, Normally Open	
Sensor type	Reed switch		NPN type (Input)	PNP type (Output)
Operating voltage	5–120V DC/AC	5–240V DC/AC	5–30V DC	
Max. switching current	100 mA max.		200 mA max.	
Contact rating	6 W max.	10 W max.	6 W max.	
Current consumption	None		20mA @ 24V DC max	
Voltage drop	2.5V max.		0.5V @ 200mA max	
Leakage current	None		0.01mA max.	
Indicator	Red LED	Green LED	Red LED	Green LED
Max. exchange frequency	200Hz		1000Hz	
Temperature range	–10 – 70℃			
Shock	30G		50G	
Vibration	9G			
Enclosure classification	IEC 529 IP67 (NEMA 6)			
Protection circuit	None		Power reverse connection protection Surge absorption protection	
Cable	2.8Φ, 2C, Gray color, oil resistance PVC		2.8Φ, 3C, Black color, oil resistance PVC	