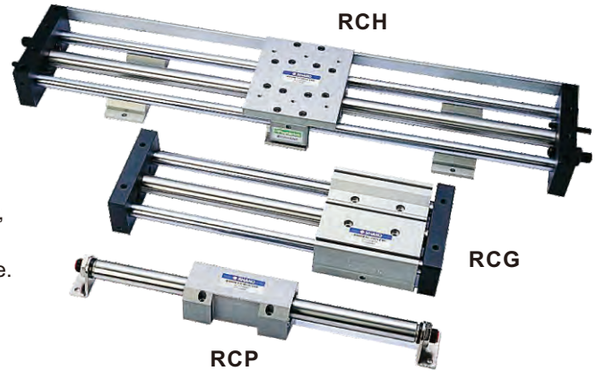
Rodless Magnetic Cylinder

Features

1. Utilize a special magnetic device to move cylinder body instead of piston rod acting, so the length of cylinder is half shorter than standard cylinder.
2. The piston in magnetic device is sealed by stainless steel tube that is completely isolated from cylinder body, which ensures leakage free and long life.
3. Moving magnetically provides stable quality, accuracy, and vibration free.
4. Automation quality test ensures excellent performance.
5. Simple installation and maintenance.



How to order

RCP — L — 32 — B50 — A1 — SS — 1

Rodless magnetice cylinder	Guide rod	Bore size	Stroke	Shock absorber	Sensor type	Number of sensor
RCP : Mono-block type (W/O guide rod)	**B** : Bush bearing	**20** : ϕ20		**A1** : 1 pc	**Blank** : W/O sensor	1 pc
RCG : Guide type	**L** : Linear bearing	**25** : ϕ25		**A2** : 2 pcs	**SS** : Square type	2 pcs
RCH : Mono-block with supporting type (ϕ20, ϕ25)		**32** : ϕ32			AL-11D/N/P	

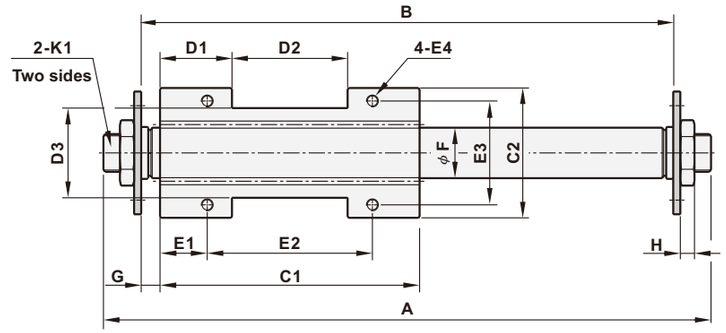
*Please refer to P3-181 ~ P3-182

Specifications

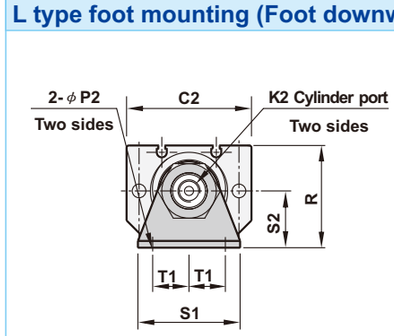
Bore size	ϕ20	ϕ25	ϕ32
Port size	1/8"		1/4"
Fluid	Compressed air		
Acting	Double acting		
Operating pressure range	2 ~ 7 kgf/cm^2		
Max operating pressure	10.5 kgf/cm^2		
Barrel material	Aluminum alloy		
Lubrication	Not required		
Lubricant on outside rod	Required		
Magnet	Built-in		
Ambient temperature	0℃ ~ 60℃		
Piston speed	500 mm/Sec		
Bush bearing	Applicable to low speed acting(Heavy loads)		
Linear bearing	Applicable to high speed acting(Light loads)		

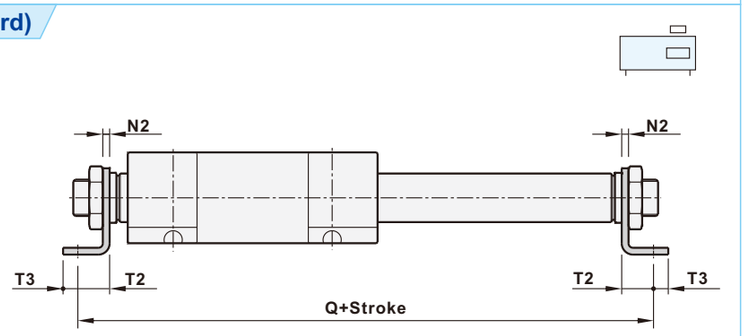
Dimensions

RCP series

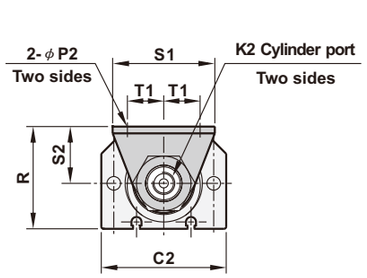


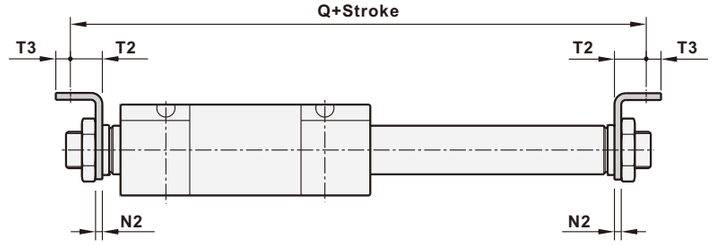
L type foot mounting (Foot downward)





L type foot mounting (Foot upward)





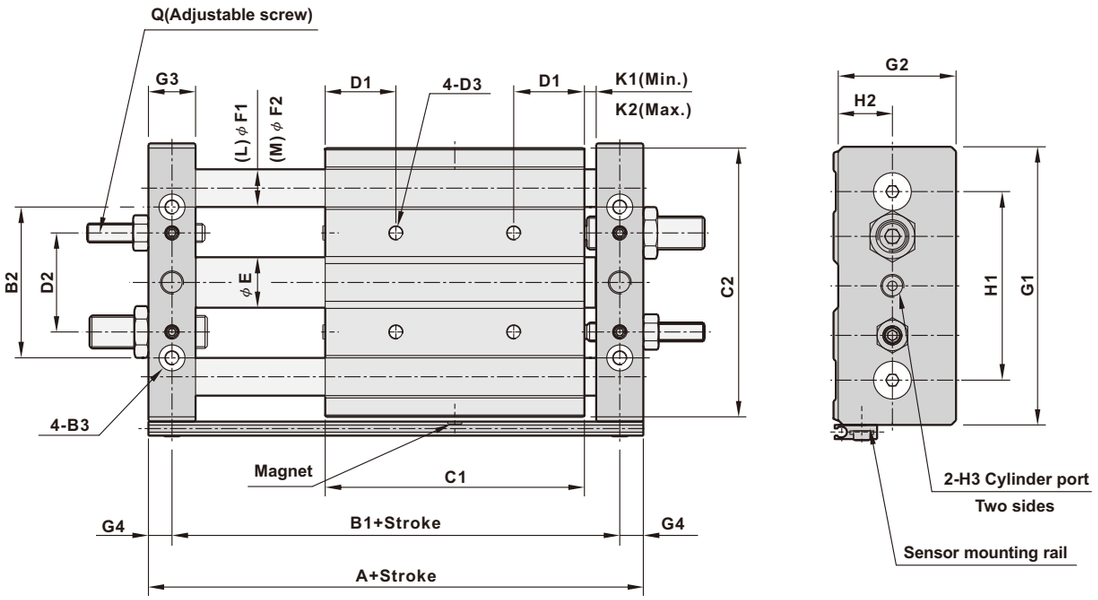
(Unit: mm)

Bore size	A	B	C1	C2	D1	D2	D3	E1	E2	E3	E4	F	G	H
ϕ **20**	158	126	110	55	30.5	49	38	20	70	44	M5xP0.8x15dp	21.4	8	8
ϕ **25**	166	126	110	65	30.5	49	48	20	70	54	M5xP0.8x15dp	26.4	8	8
ϕ **32**	186	146	120	80	29	62	60	20	80	66	M6xP1.0x20dp	33.6	13	8

Bore size	K1	K2	N2	P1	P2	Q	R	S1	S2	T1	T2	T3
ϕ **20**	M16xP1.5xL16	PT 1/8	3	20	5.5	154	45	45	25	16	14	6.5
ϕ **25**	M22xP1.5xL20	PT 1/8	3	25	6.5	160	55	55	30	20	17	9
ϕ **32**	M22xP1.5xL20	PT 1/8	3	25	6.5	180	65	65	35	25	17	9

Dimensions

RCG series



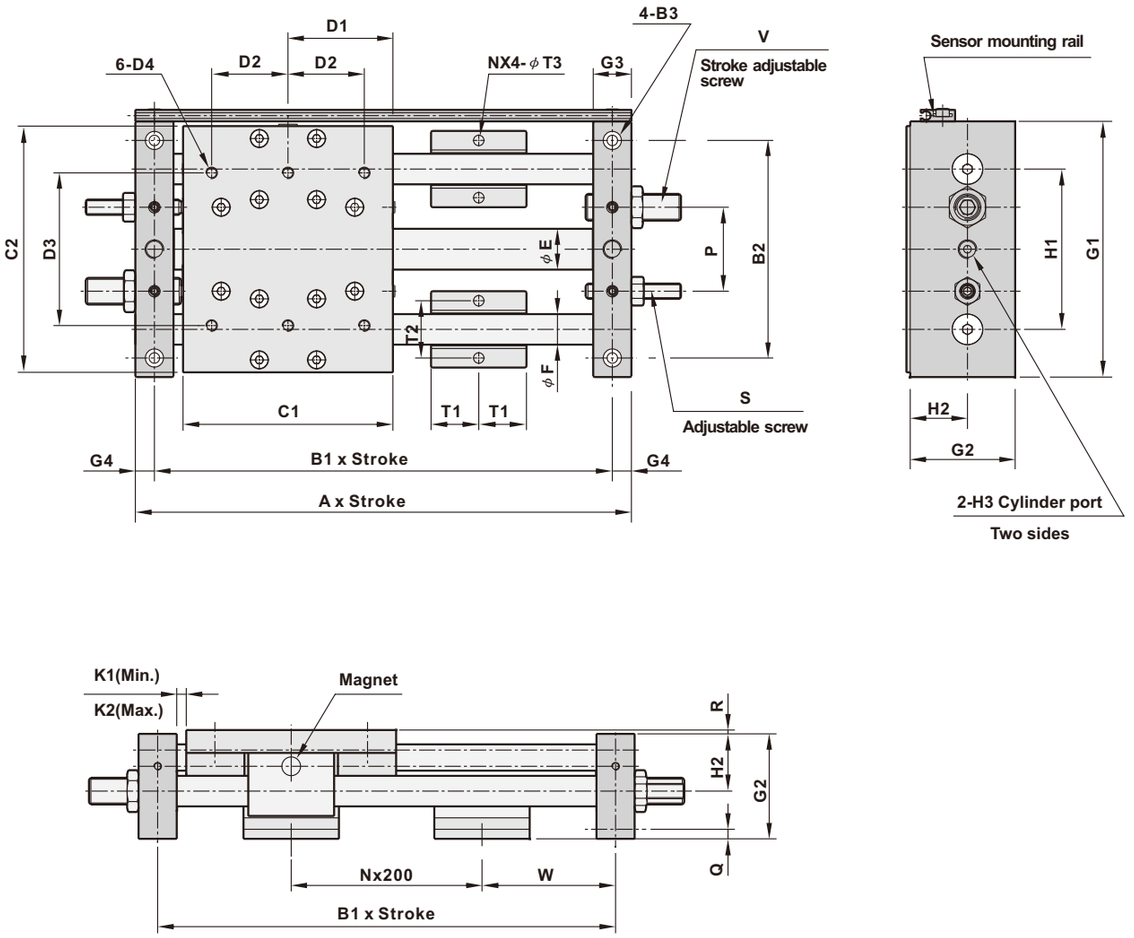
(Unit: mm)

Bore size	A	B1	B2	B3	C1	C2	D1	D2	D3	E	F1	F2	G1
ϕ 20	160	140	64	ϕ 5.2- ϕ 9.5x5.5dp	110	114	30	42	M6xP1.0x15dp	21.4	16	20	118
ϕ 25	160	140	74	ϕ 5.2- ϕ 9.5x5.5dp	110	124	30	52	M6xP1.0x15dp	26.4	16	20	128
ϕ 32	190	165	94	ϕ 6.8- ϕ 11x6.5dp	120	150	35	66	M8xP1.25x20dp	33.6	20	25	154

Bore size	G2	G3	G4	H1	H2	H3	K1	K2	N	P	Q	R
ϕ 20	50	20	10	80	23	PT 1/8	5	25	2	2	M8xP1.25xL50	M14xP1.5xL50
ϕ 25	54	20	10	90	25	PT 1/8	5	25	2	2	M8xP1.25xL50	M14xP1.5xL50
ϕ 32	62	25	12.5	112	29	PT 1/8	10	25	2	2	M14xP1.5xL50	M20xP1.5xL50

Dimensions

RCH series



Stroke	500	1000	1500
N	2	5	7
W	120	70	120

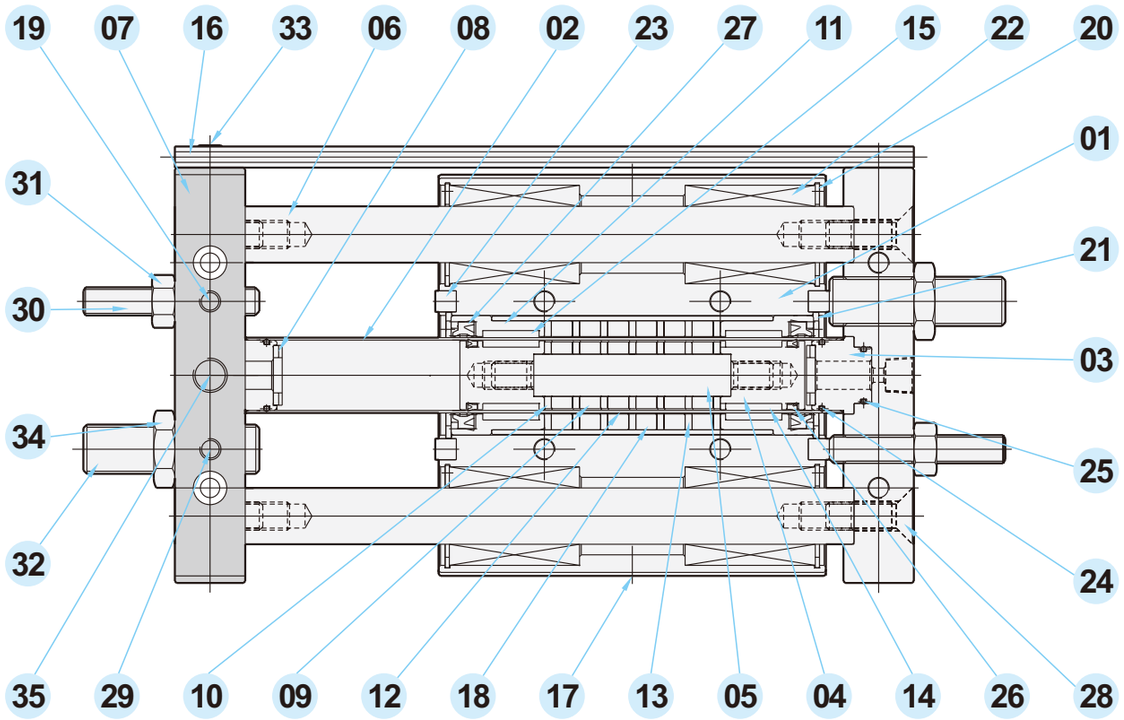
(Unit: mm)

Bore size	A	B1	B2	B3	C1	C2	D1	D2	D3	D4	E	F	G1	G2	G3
ϕ 20	160	140	114	ϕ 5.2- ϕ 9.5x5.5dp	110	129	55	40	80	M5xP0.8x15dp	21.4	16	134	55	20
ϕ 25	160	140	124	ϕ 5.2- ϕ 9.5x5.5dp	110	139	55	40	100	M5xP0.8x15dp	26.4	16	144	64	20

Bore size	G4	H1	H2	H3	K1	K2	P	Q	R	S	T1	T2	T3	V
ϕ 20	10	84	30	PT 1/8	5	25	44	5	2	M8xP1.25xL50	25	30	5.5	M14xP1.5xL50
ϕ 25	10	94	35	PT 1/8	5	25	54	5	2	M8xP1.25xL50	25	30	5.5	M14xP1.5xL50

Rodless Magnetic Cylinder

Material of parts

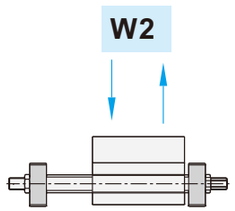


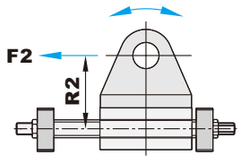
No.	Description	Material	Qty.	No.	Description	Material	Qty.
1	Cylinder body	Aluminum alloy	1	19	Press unit	Industrial plastic	4
2	Piston rod	Stainless steel	1	20	Snap ring	Spring steel	4
3	Top cover	Aluminum alloy	2	21	Snap ring	Spring steel	2
4	Piston	Aluminum alloy	2	22	Linear bearing	Bearing steel	4
5	Center rod	Stainless steel	1	23	Stopper	Bearing steel	4
6	Guide rod	Bearing steel	2	24	O-ring	NBR	2
7	Front plate	Aluminum alloy	2	25	O-ring	NBR	2
8	Bumper	NBR	2	26	Piston packing	NBR	2
9	Piston magnet	Ferrite magnet	6	27	Rod packing	NBR	2
10	Piston magnet holder	Ferrite	7	28	Fixing screw	Carbon steel	4
11	Body end cover	Aluminum alloy	2	29	Socket screw	Carbon steel	4
12	Magnet tube	Aluminum alloy	1	30	Adjustable screw	Carbon steel	2
13	Body magnet holder	Ferrite	7	31	Nut	Carbon steel	2
14	Piston wear ring	Teflon	2	32	Adjustable screw	Carbon steel	2
15	Wear ring cover	Teflon	2	33	Fixing screw	Carbon steel	2
16	Sensor mounting rail	Aluminum	1	34	Nut	Carbon steel	2
17	Magnet	Ferrite magnet	1	35	Bolt	Carbon steel	2
18	Outside magnet	Ferrite magnet	6				

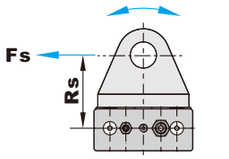
Theoretical force

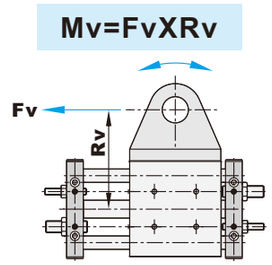
Bore size	Piston area cm²	Operating pressure kgf/cm²					
		2	3	4	5	6	7
ϕ 20	3.14	6.28	9.42	12.56	15.7	18.84	21.98
ϕ 25	4.91	9.82	14.73	19.64	24.55	29.46	34.37
ϕ 32	8.04	16.08	24.12	32.16	40.2	48.24	56.28

Allowable loads









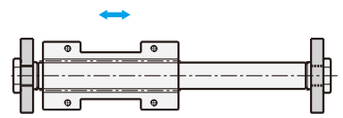
Bore size	Load W2(kgf-cm)	Load M2(kgf-cm)	Load Ms(kgf-cm)	Load Mv(kgf-cm)
ϕ 20	13	55	11	55
ϕ 25	20	100	20	100
ϕ 32	32	160	32	160

Stroke table

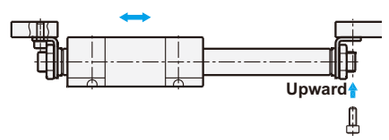
Model	Bore size	Standard stroke(mm)
RCP, RCG	ϕ 20 , ϕ 25	100 ~ 600
	ϕ 32	200 ~ 1000
RCH	ϕ 20 , ϕ 25	500 ~ 1500

Mounting example

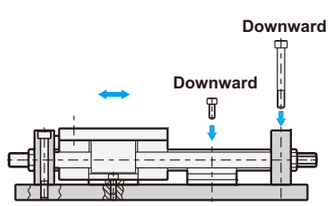
RCP(Mono-block type)



A type foot mounting



RCH(Mono-block with supporting type)



RCG(Guide type)