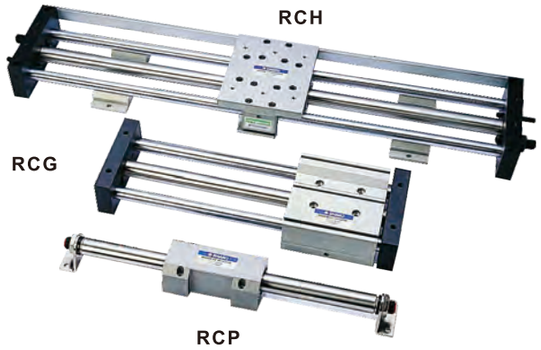
Rodless Magnetic Cylinder

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	D	1
Rodless magnetic cylinder	Guide rod	Bore size	Stroke	Shock absorber	Sensor	Type	Number of sensor
RCP:Mono-block type (W/O guide rod) **RCG**:Guide type **RCH**:Mono-block with supporting type (Ø20, Ø25)	**B**:Bush bearing **L**:Linear bearing	**20**:Ø20 **25**:Ø25 **32**:Ø32		**A1**:1 pc **A2**:2 pcs	**Blank**:W/O sensor **SS**:Square type AL-11	**Blank**:Reed switch **D**:NPN **E**:PNP	1 pc 2 pcs

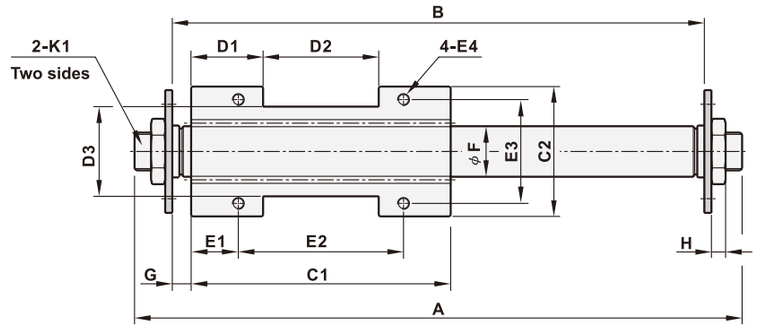
*Sensor please refer to P3-192

Specifications

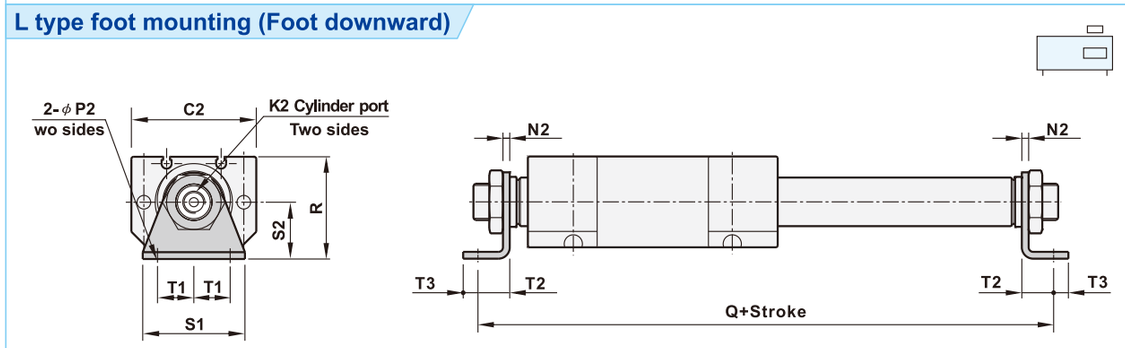
Bore size	Ø20	Ø25	Ø32
Port size	1/8"		1/4"
Fluid	Compressed air		
Acting	Double acting		
Operating pressure range	2 ~ 7 kgf/cm²		
Max operating pressure	10.5 kgf/cm²		
Barrel material	Aluminum alloy		
Lubrication	Not required		
Lubricant on outside rod	Required		
Magnet	Built-in		
Ambient temperature	0°C ~ 60°C		
Piston speed	500 mm/Sec		
Bush bearing	Applicable to low speed acting(Heavy loads)		
Linear bearing	Applicable to high speed acting(Light loads)		

Dimensions

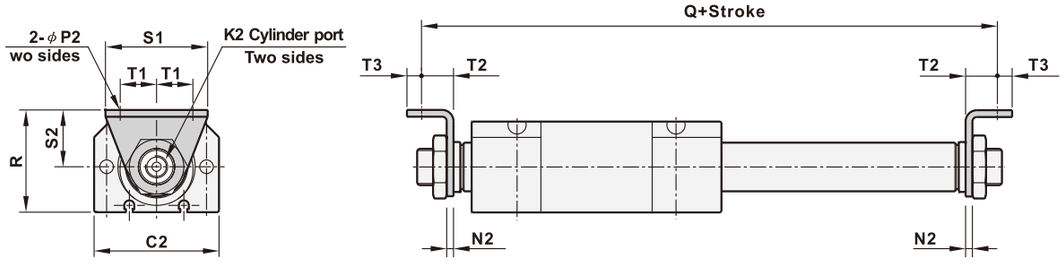
RCP series



L type foot mounting (Foot downward)



L type foot mounting (Foot upward)



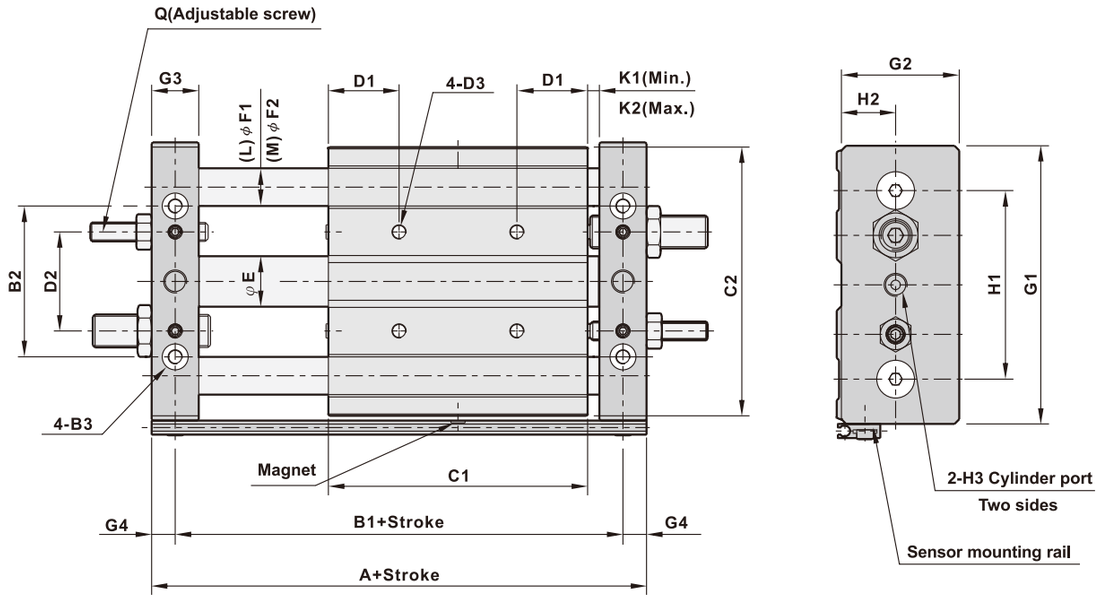
(Unit: mm)

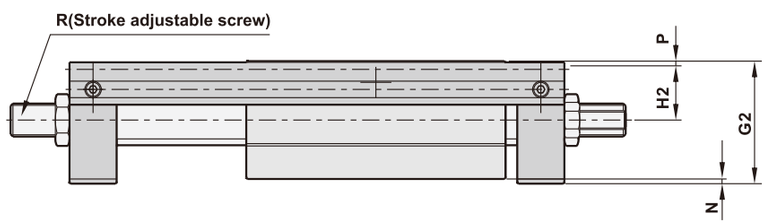
Bore size	A	B	C1	C2	D1	D2	D3	E1	E2	E3	E4	F	G	H
Ø20	158	126	110	55	30.5	49	38	20	70	44	M5xP0.8x15dp	21.4	8	8
Ø25	166	126	110	65	30.5	49	48	20	70	54	M5xP0.8x15dp	26.4	8	8
Ø32	186	146	120	80	29	62	60	20	80	66	M6xP1.0x20dp	33.6	13	8

Bore size	K1	K2	N2	P1	P2	Q	R	S1	S2	T1	T2	T3
Ø20	M16xP1.5xL16	PT 1/8	3	20	5.5	154	45	45	25	16	14	6.5
Ø25	M22xP1.5xL20	PT 1/8	3	25	6.5	160	55	55	30	20	17	9
Ø32	M22xP1.5xL20	PT 1/8	3	25	6.5	180	65	65	35	25	17	9

Dimensions

RCG series





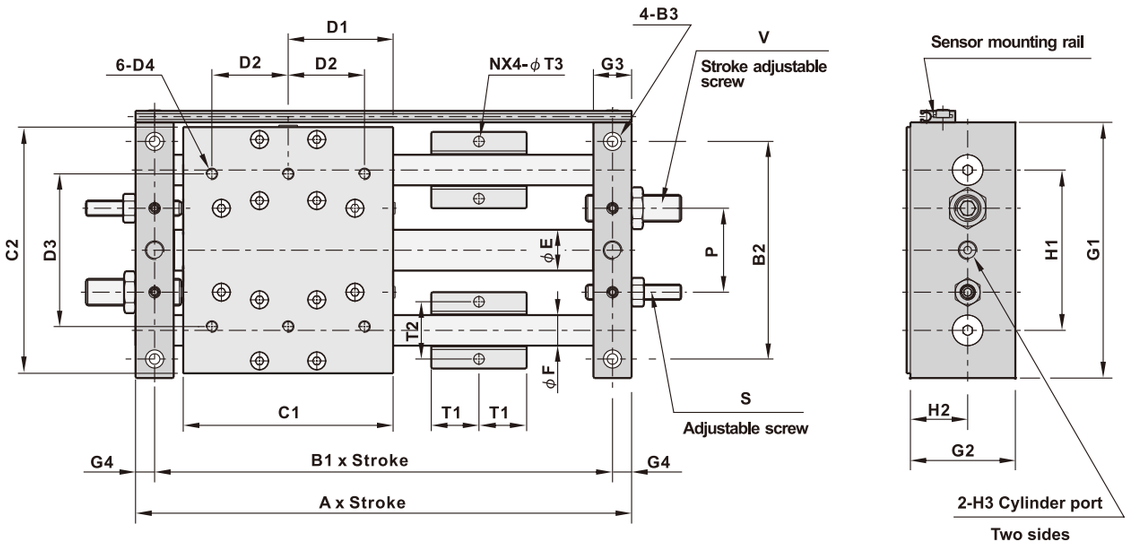
(Unit: mm)

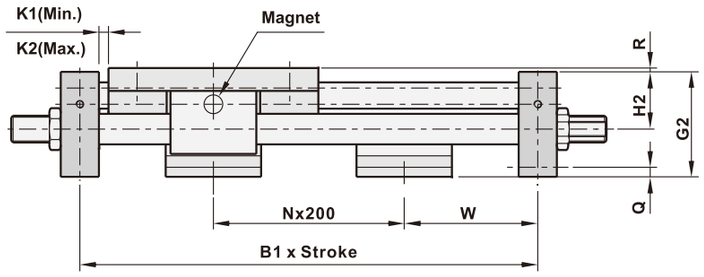
Bore size	A	B1	B2	B3	C1	C2	D1	D2	D3	E	F1	F2	G1
Ø20	160	140	64	Ø5.2-Ø9.5x5.5dp	110	114	30	42	M6xP1.0x15dp	21.4	16	20	118
Ø25	160	140	74	Ø5.2-Ø9.5x5.5dp	110	124	30	52	M6xP1.0x15dp	26.4	16	20	128
Ø32	190	165	94	Ø6.8-Ø11x6.5dp	120	150	35	66	M8xP1.25x20dp	33.6	20	25	154

Bore size	G2	G3	G4	H1	H2	H3	K1	K2	N	P	Q	R
Ø20	50	20	10	80	23	PT 1/8	5	25	2	2	M8xP1.25xL50	M14xP1.5xL50
Ø25	54	20	10	90	25	PT 1/8	5	25	2	2	M8xP1.25xL50	M14xP1.5xL50
Ø32	62	25	12.5	112	29	PT 1/8	10	25	2	2	M14xP1.5xL50	M20xP1.5xL50

Dimensions

RCH series





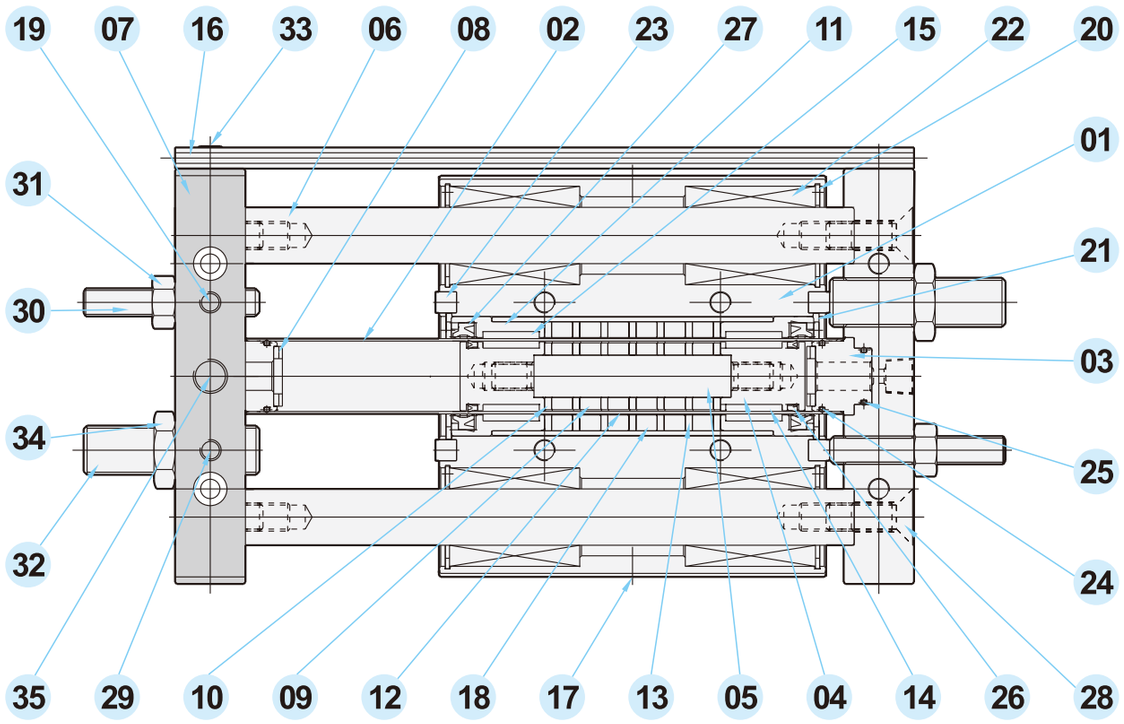
Stroke	500	1000	1500
N	2	5	7
W	120	70	120

(Unit: mm)

Bore size	A	B1	B2	B3	C1	C2	D1	D2	D3	D4	E	F	G1	G2	G3
Ø20	160	140	114	ϕ5.2-ϕ9.5x5.5dp	110	129	55	40	80	M5xP0.8x15dp	21.4	16	134	55	20
Ø25	160	140	124	ϕ5.2-ϕ9.5x5.5dp	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
Ø20	10	84	30	PT 1/8	5	25	44	5	2	M8xP1.25xL50	25	30	5.5	M14xP1.5xL50
Ø25	10	94	35	PT 1/8	5	25	54	5	2	M8xP1.25xL50	25	30	5.5	M14xP1.5xL50

Material of parts

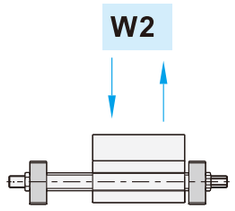


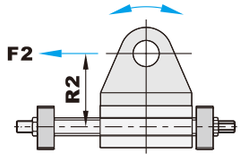
No.	Description	Material	Qty.	No.	Description	Material	Qty.
1	Cylinder body	Aluminum alloy	1	19	Press unit	Industrial plastic	4
2	Piston rod	Stainless steel	1	20	Snap ring	Spring steel	4
3	Top cover	Aluminum alloy	2	21	Snap ring	Spring steel	2
4	Piston	Aluminum alloy	2	22	Linear bearing	Bearing steel	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				

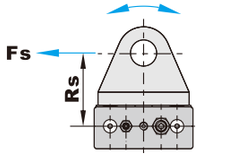
Theoretical force

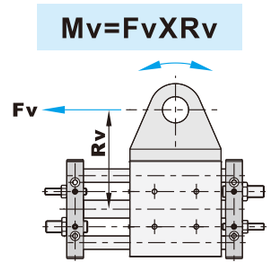
Bore size	Piston area cm²	Operating pressure kgf/cm²					
		2	3	4	5	6	7
Ø20	3.14	6.28	9.42	12.56	15.7	18.84	21.98
Ø25	4.91	9.82	14.73	19.64	24.55	29.46	34.37
Ø32	8.04	16.08	24.12	32.16	40.2	48.24	56.28

Allowable loads









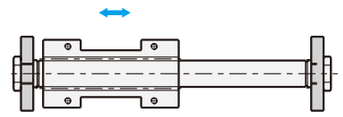
Bore size	Load W2(kgf-cm)	Load M2(kgf-cm)	Load Ms(kgf-cm)	Load Mv(kgf-cm)
Ø20	13	55	11	55
Ø25	20	100	20	100
Ø32	32	160	32	160

Stroke table

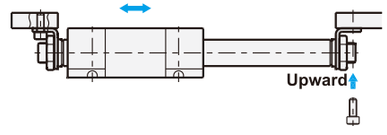
Model	Bore size	Standard stroke(mm)
RCP, RCG	Ø20, Ø25	100 ~ 600
	Ø32	200 ~ 1000
RCH	Ø20, Ø25	500 ~ 1500

Mounting example

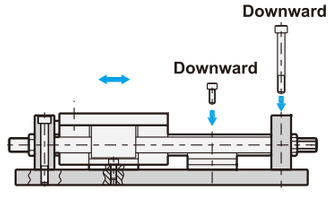
RCP(Mono-block type)



A type foot mounting



RCH(Mono-block with supporting type)



RCG(Guide type)