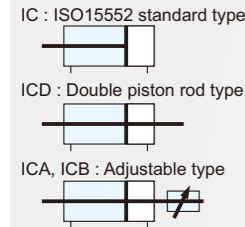


Symbol



Features

- * Identical to ISO15552 standard.
- * High quality of aluminum tube provides a long service life.
- * High quality of seals ensures leakage free.
- * Various sensors for option.
- * With adjustable cushions on both ends.



How to order

* For ϕ IC32~ ϕ IC100 non-rotated type, please contact our sales.

IC	32	B	50	SF	1	FA	FY
Type	Bore size	Magnet	Stroke	Sensor type	Number of sensor	Mounting parts	Rod end joint
IC ISO15552 standard type	32 ϕ 32	B W/I magnet		Blank W/O sensor	1 pc	Blank W/O mounting parts	Blank W/O rod end joint
ICD Double piston rod type	40 ϕ 40	C W/O magnet		SF LED in front	2 pcs	FA Front flange	FY Double knuckle joint
ICA Stroke adjustable 25mm	50 ϕ 50			ST LED on top		FB Rear flange	FI Single knuckle joint
ICB Stroke adjustable 50mm	63 ϕ 63					TC Central trunnion	FP Eyebolt floating joint
	80 ϕ 80					CA Male clevis	FT Basic floating joint
	100 ϕ 100					CB Female clevis	FL Axial foot type floating joint
						LB Foot mounting	FF Flange type floating joint

How to order Mounting parts / Rod end joints

IC series	Mounting parts	Rod end joint	Bore size
ZI	FA Front flange	FY Double knuckle joint	32 ϕ 32
	FB Rear flange	FI Single knuckle joint	40 ϕ 40
	TC Central trunnion	FP Eyebolt floating joint	63 ϕ 63
	CA Male clevis	FT Basic floating joint	80 ϕ 80
	CB Female clevis	FL Axial foot type floating joint	100 ϕ 100
	LB Foot mounting	FF Flange type floating joint	

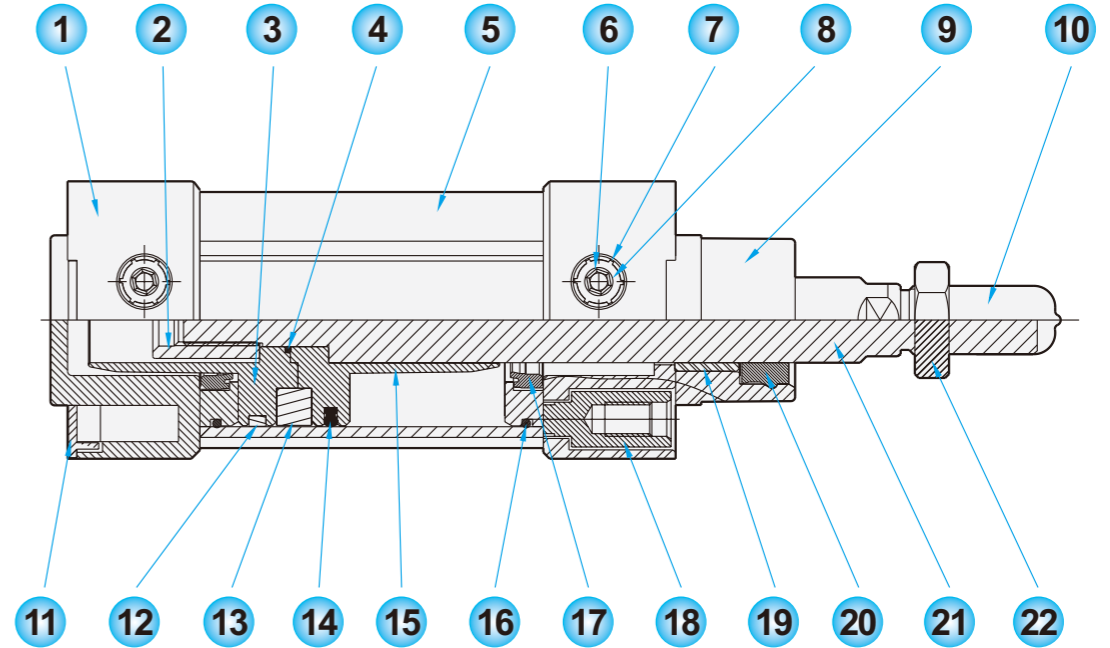
* Please refer to P5-10~11

* Please refer to P5-40~41

Specifications

Bore size	ϕ 32	ϕ 40	ϕ 50	ϕ 63	ϕ 80	ϕ 100
Port size	1/8"	1/4"		3/8"		1/2"
Fluid	Compressed air					
Acting	Double acting					
Operating pressure range	1.5 ~ 9.5 kgf/cm ²					
Barrel material	Aluminum alloy					
Cushion	Built in					
Magnet	Option					
Ambient temperature	-5°C ~ 60°C					
Piston speed	50~700mm/Sec.					

Material of parts



No.	Description	Material	Qty.	No.	Description	Material	Qty.
1	Rear cover	Aluminum alloy	1	12	Wear ring	Teflon	1
2	Piston mounting nut	Brass+Ni	1	13	Magnet	Rubber	1
3	Rear piston	Aluminum alloy	1	14	U-Piston seal	NBR	1
4	O-ring	NBR	1	15	Front piston	Aluminum alloy	1
5	Barrel	Aluminum alloy	1	16	O-ring	NBR	2
6	Cushion needle	Brass	1	17	Cushion	PU	2
7	Fixing nut	Brass+Ni	2	18	Fixing bolt	Fe+Ni	8
8	O-ring	NBR	2	19	Bushing	Brass	1
9	Front cover	Aluminum alloy	1	20	Rod seal	PU	1
10	Rubber cap	NBR	1	21	Piston rod	S45C+Cr	1
11	Rear plate	Plastic	1	22	Nut	Fe+Ni	1

Stroke table

Bore size	Acting	Standard stroke(mm)
ϕ 32	Double acting	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350,
ϕ 40		400, 450, 500, 550, 600, 650, 700, 750, 800, 850,
ϕ 50		900, 950, 1000

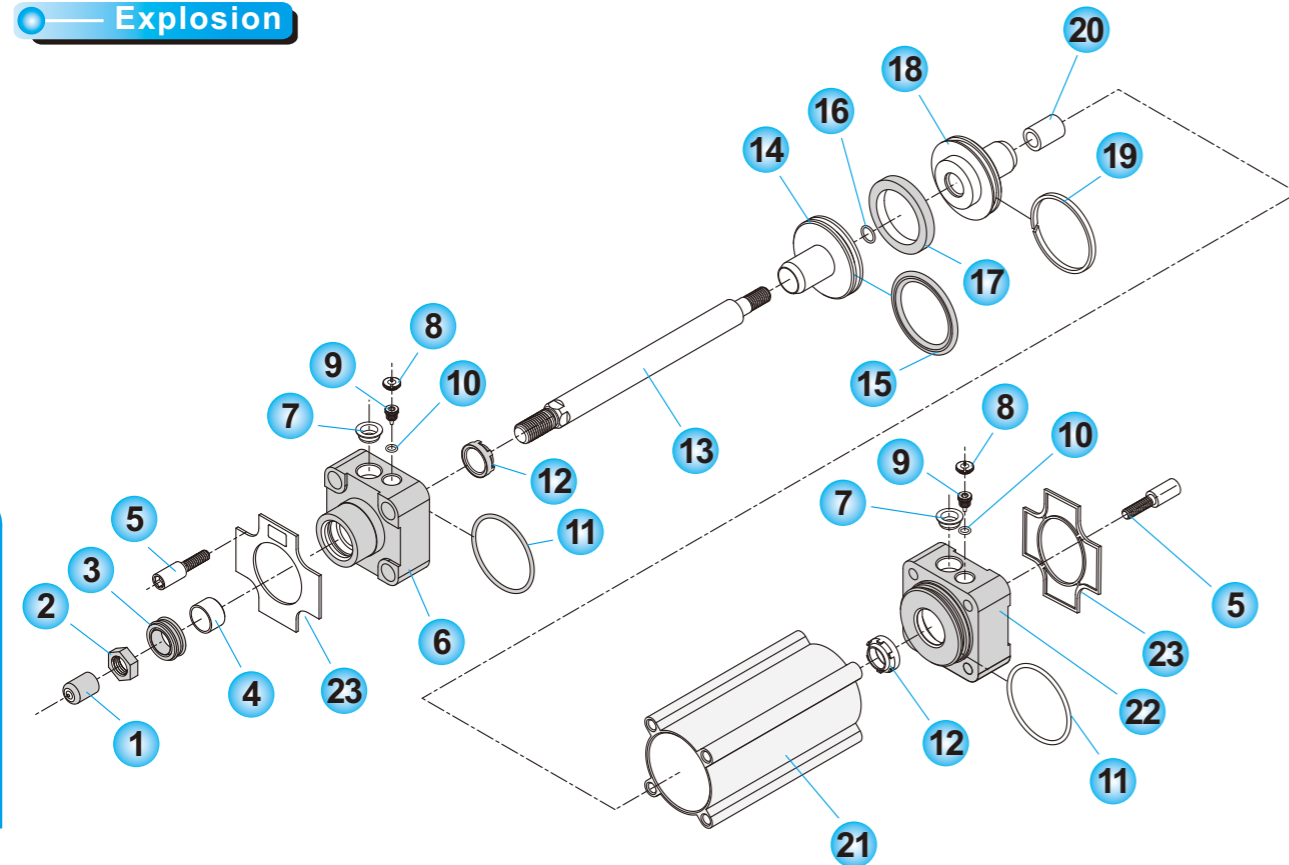
Note: Please contact our sales for non-standard stroke.

How to order Cylinder kit/Repair kit

Bore size	Cylinder kit	Repair kit
φ 32	ZGCI-32	ZGCIN-32
φ 40	ZGCI-40	ZGCIN-40
φ 50	ZGCI-50	ZGCIN-50
φ 63	ZGCI-63	ZGCIN-63
φ 80	ZGCI-80	ZGCIN-80

Bore size	Cylinder kit	Repair kit
φ 100	ZGCI-100	ZGCIN-100
φ 125	ZGCI-125	ZGCIN-125
φ 160	ZGCI-160	ZGCIN-160
φ 200	ZGCI-200	ZGCIN-200

Explosion



No.	Description	Qty.
1	Rubber cap	1
2	Rod nut	1
3	Front seal	1
4	Bushing	1
5	Fixing bolt	8
6	Front cover	1
7	Port plug	2
8	Fixing nut	2
9	Cushion needle	2
10	O-ring	2
11	Front cover o-ring	2
12	Cushion o-ring	2

No.	Description	Qty.
13	Piston rod	1
14	Front piston	1
15	U-Piston seal	1
16	O-ring	1
17	Rubber magnet	1
18	Rear piston	1
19	Wear ring	1
20	Piston mounting nut	1
21	Aluminum barrel	1
22	Rear cover	1
23	Rear plate	1

Theoretical force

Bore size	φ 32		φ 40		φ 50		φ 63		φ 80		φ 100		
	Rod diameter φ 12		φ 16		φ 20		φ 20		φ 25		φ 25		
Acting	Double acting		Double acting		Double acting		Double acting		Double acting		Double acting		
	Push	Pull	Push	Pull	Push	Pull	Push	Pull	Push	Pull	Push	Pull	
Operating pressure (kgf/cm ²)	1	8.04	6.91	12.5	10.5	19.6	16.5	31.1	28	50.2	45.3	78.5	73.6
	2	16	9.8	25.1	21	39.2	33	62.3	56	100	90.7	157	147
	3	24.1	13.8	37.6	31.5	58.9	49.5	93.5	84	150	136	235	220
	4	32.1	20.7	50.2	42	78.5	66	124	112	201	181	314	294
	5	40.2	27.6	62.8	52.5	98.1	82.5	155	140	251	226	392	368
	6	48.2	34.6	75.3	63	117	99	187	168	301	272	417	441
	7	56.2	41.5	87.9	73.5	137	116	218	196	351	317	549	515
	8	64.3	48.4	100	84	157	132	249	224	402	362	628	589
	9	72.3	55.3	113	94.5	176	149	280	252	452	408	706	662
	10	80.4	62.2	125	105	196	165	311	280	502	453	785	736

Push : $F1 = A1 \times P \times B$ (kgf)

Pull : $F2 = A2 \times P \times B$ (kgf)

Single acting force : $F3 = (A1 \times P - S) \times B$ (kgf)
(Spring return)

Single acting force : $F4 = (A2 \times P - S) \times B$ (kgf)
(Spring extend)

A1 : Piston area for push

$$A1 = \frac{\pi}{4} D^2$$

A2 : Piston area for pull

$$A2 = \frac{\pi}{4} (D^2 - d^2)$$

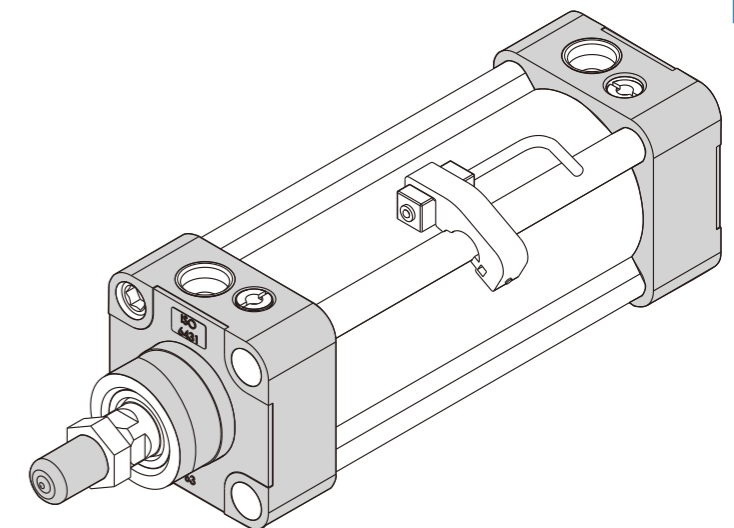
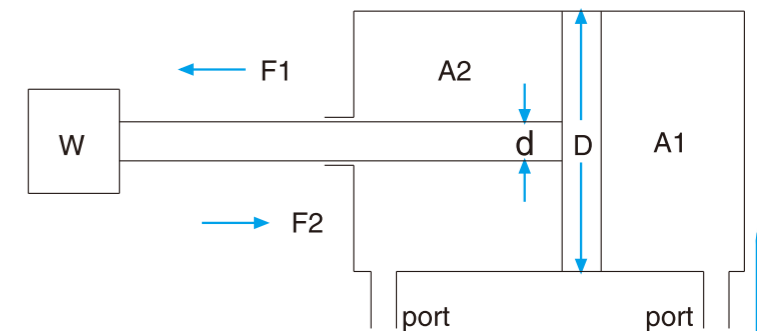
D : Bore size (mm)

d : Rod diameter (mm)

P : Operating pressure (kgf/cm²)

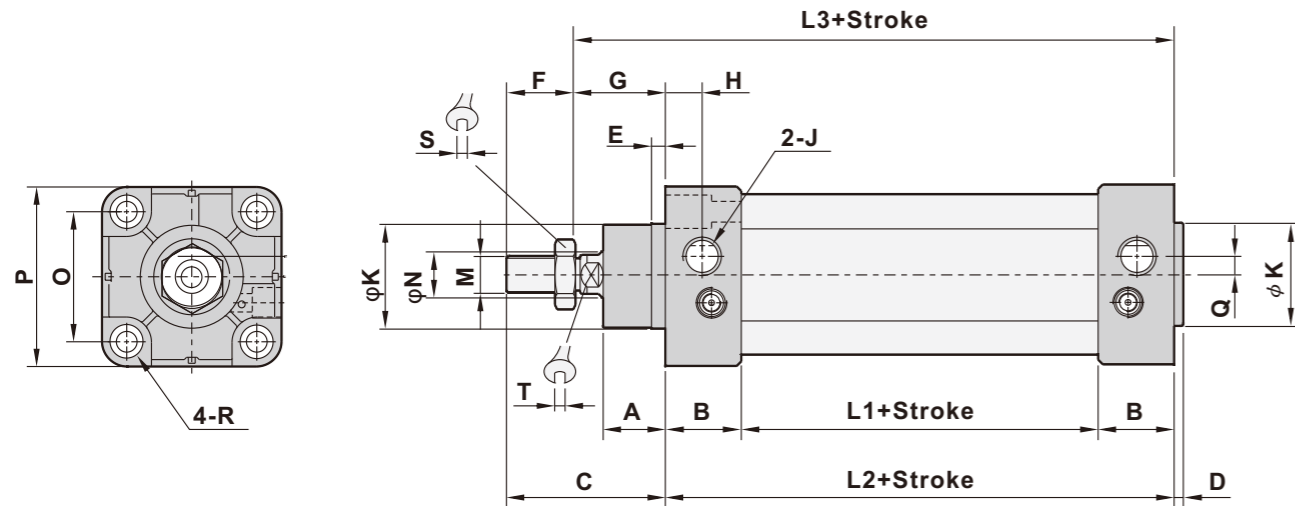
S : Spring force (kgf)

B : Loading rate : Medium speed.....65%
Low speed.....80%
High speed.....Below 50%



Dimensions

ISO15552 standard type



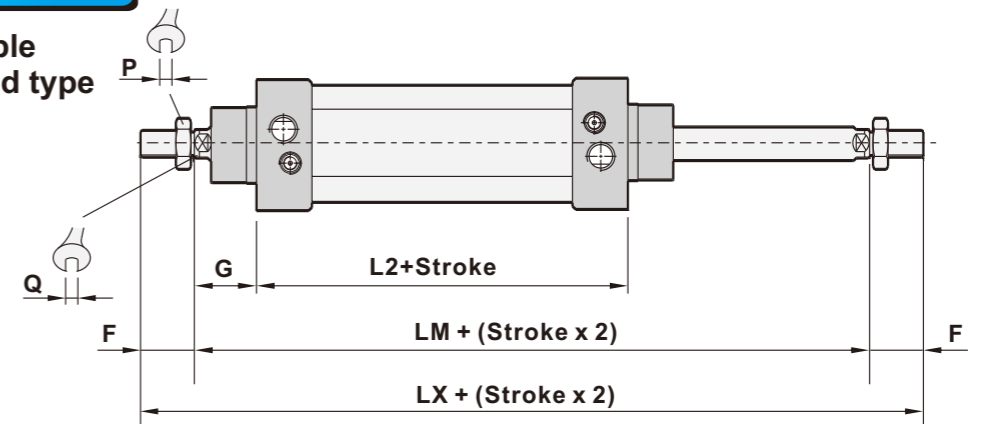
(Unit: mm)

Bore size	A	B	C	D	E	F	G	H	J	K
φ 32	18	26	48	3	4.5	22	26	11.5	G 1/8	φ 30
φ 40	20.2	34	53.5	4	4.5	24	29.5	13.5	G 1/4	φ 34.5
φ 50	28	31	71	4	6	32	39	16	G 1/4	φ 39.7
φ 63	25.2	32.6	70.5	4	6	32	38.5	16	G 3/8	φ 44.7
φ 80	32.5	35.5	86	4	6	40	46	20.5	G 3/8	φ 44.7
φ 100	37	37	91	4.8	5.5	40	51	18	G 1/2	φ 55.3

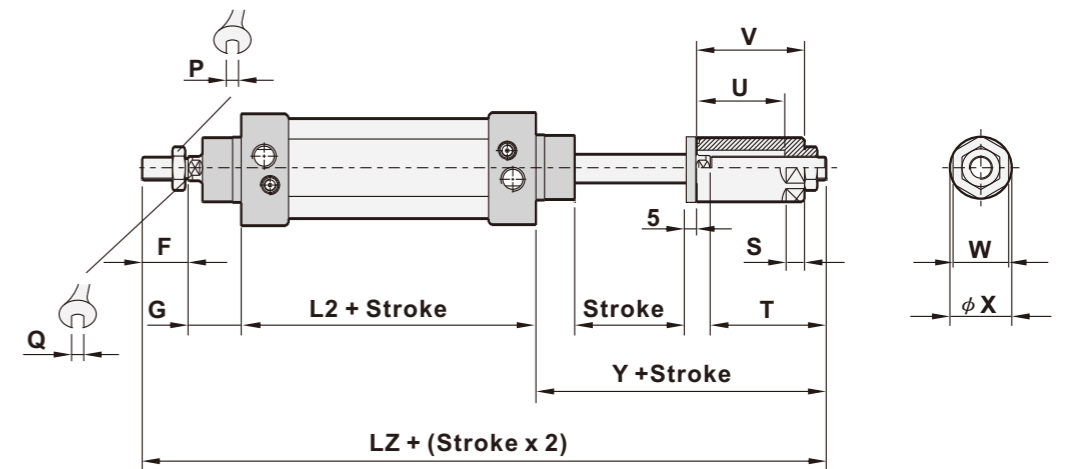
Bore size	L1	L2	L3	M	N	O	P	Q	R	S	T
φ 32	42	94	120	M10xP1.25	φ 12	32.5	47	4.3	M6	17	10
φ 40	37	105.2	134.8	M12xP1.25	φ 16	38	55	5.3	M6	19	13
φ 50	44	106	147	M16xP1.5	φ 20	46.5	65	7	M8	24	17
φ 63	55	120	159	M16xP1.5	φ 20	56.5	78	8	M8	24	17
φ 80	57	128	175	M20xP1.5	φ 25	72	95	9	M10	26	22
φ 100	64	138	189	M20xP1.5	φ 25	89	115	13.5	M10	26	22

Dimensions

ICD Double piston rod type



ICA Stroke adjustable 25mm, ICB Stroke adjustable 50mm



(Unit: mm)

Bore size	F	G	L2	LM	LX	LZ		P	Q	S
						ICA	ICB			
φ 32	22	26	94	146	190	215	240	17	10	10
φ 40	24	29.5	105	164	212	236	261	19	13	10
φ 50	32	39	106	182	248	266	291	24	17	12
φ 63	32	38.5	120.2	196.5	262	280.5	305.5	24	17	12
φ 80	40	46	128	220	300	318	343	26	22	15
φ 100	40	51	138	240	320	338	363	26	22	15

Bore size	T		U		V		W	X	Y	
	ICA	ICB	ICA	ICB	ICA	ICB			ICA	ICB
φ 32	47	72	35	62	47	72	22	φ 25	73	98
φ 40	48	73	37	62	47	72	27	φ 30	77.5	102.5
φ 50	52	77	38	63	53	78	36	φ 40	91	116
φ 63	52	77	38	63	53	78	36	φ 40	90.5	115.5
φ 80	58	83	40	65	60	85	46	φ 50	104	129
φ 100	58	83	40	65	60	85	46	φ 50	109	134