

■ Features

1. High quality of aluminum tube provides a long service life.
2. High quality of seals ensures leakage free.
3. With adjustable cushions on both ends.



■ How to order

ICE	32	B	50	SM	D	1	FA	Y	S
Type	Bore size	Magnet	Stroke	Sensor	Type	Number of sensor	Mounting parts	Rod end joint	Rod material
ICE:ISO15552 standard type	32:Ø32	B:W/I magnet		Blank:W/O sensor	Blank:Reed switch	1 pc	Blank:W/O mounting parts	Blank:W/O rod end joint	Blank:S45C
ICED:Double piston rod type	40:Ø40	C:W/O magnet		SM:LED in front	D:NPN	2 pcs	FA:Front flange	Y:Double knuckle joint	S:SUS304
ICEA:Stroke adjustable 25mm	50:Ø50				E:PNP		FB:Rear flange	I:Single knuckle joint	
ICEB:Stroke adjustable 50mm	63:Ø63						CA:Male clevis	P:Eyebolt floating joint	
	80:Ø80						CB:Female clevis	T:Basic floating joint	
	100:Ø100						CR:Angular trunnion with female clevis	L:Axial foot type floating joint	
							LB:Foot mounting	F:Flange type floating joint	

*Sensor please refer to P3-195

*Repair kit to P3-12

■ How to order mounting parts

ZI	FA	—	32
ICE series	Mounting parts		Bore size
	FA:Front flange		32:Ø32
	FB:Rear flange		40:Ø40
	CA:Male clevis		50:Ø50
	CB:Female clevis		63:Ø63
	CR:Angular trunnion with female clevis		80:Ø80
	LB:Foot mounting		100:Ø100

*Please refer to P3-18~P3-19

■ How to order rod end joints

ZNF	Y	—	M10
	Rod end joint		Thread size
	Y:Double knuckle joint		M10:M10xP1.25 (ICE32)
	I:Single knuckle joint		M12:M12xP1.25 (ICE40)
	P:Eyebolt floating joint		M16:M16xP1.5 (ICE50, 63)
	T:Basic floating joint		M20:M20xP1.5 (ICE80, 100)
	L:Axial foot type floating joint		
	F:Flange type floating joint		

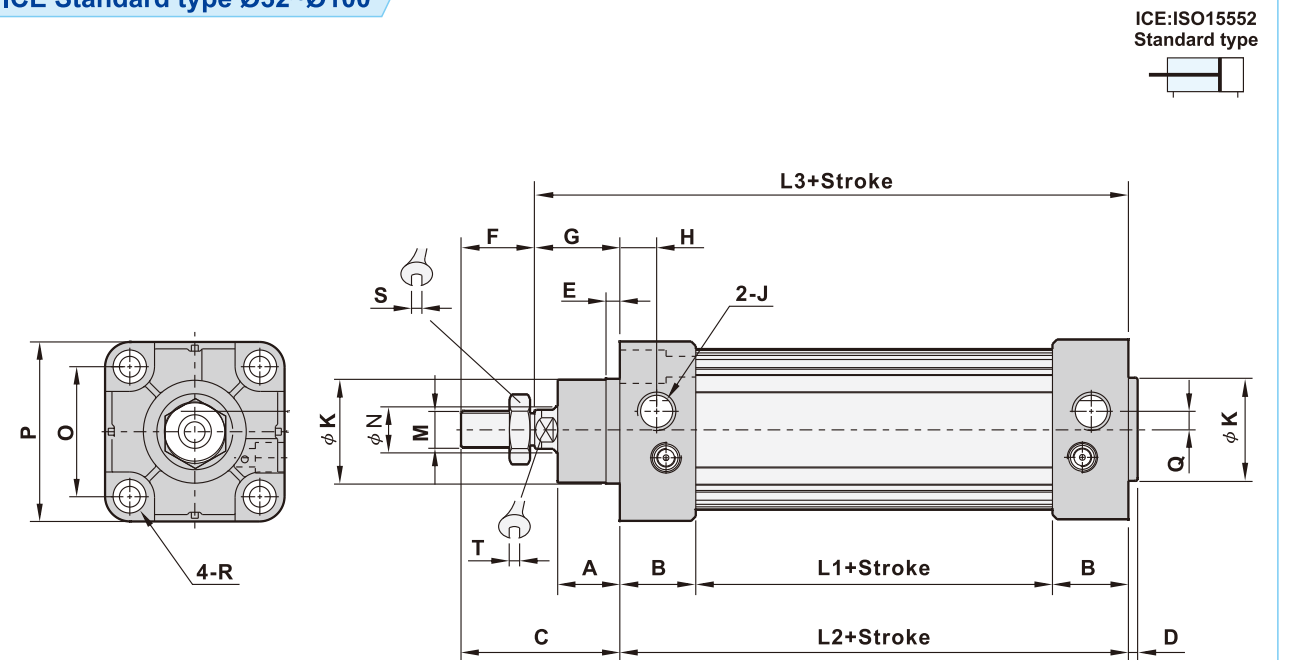
*Please refer to P3-187~P3-188

■ Specifications

Bore size	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
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.					

■ Dimensions

ICE Standard type Ø32~Ø100

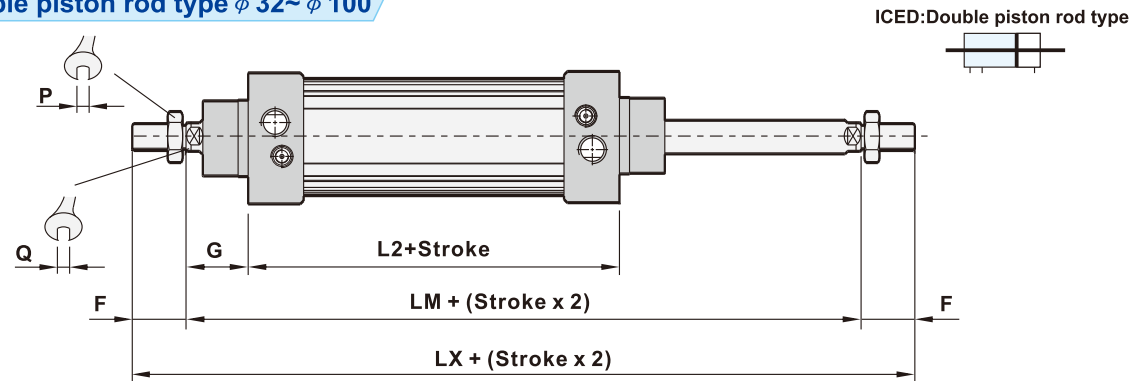
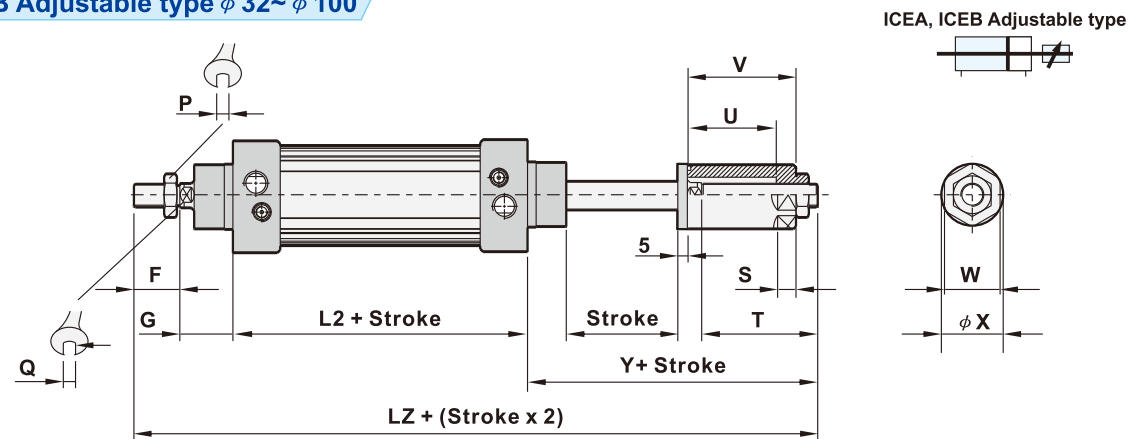
ICE:ISO15552
Standard type

Bore size	A	B	C	D	E	F	G	H	J	K
Ø32	18	26	48	3	4.5	22	26	11.5	G 1/8	Ø30
Ø40	20.2	34	53.5	4	4.5	24	29.5	13.5	G 1/4	Ø34.5
Ø50	28	31	71	4	6	32	39	16	G 1/4	Ø39.7
Ø63	25.2	33	70.5	4	6	32	38.5	16	G 3/8	Ø44.7
Ø80	32.5	35.5	86	4	6	40	46	20.5	G 3/8	Ø44.7
Ø100	37	37	91	4.8	5.5	40	51	18	G 1/2	Ø54.8

(Unit: mm)

Bore size	L1	L2	L3	M	N	O	P	Q	R	S	T
Ø32	42	94	120	M10xP1.25	Ø12	32.5	47	4.3	M6	17	10
Ø40	37	105	134.5	M12xP1.25	Ø16	38	55	5.3	M6	19	13
Ø50	44	106	145	M16xP1.5	Ø20	46.5	65	7	M8	24	17
Ø63	55	121	159.5	M16xP1.5	Ø20	56.5	78	8	M8	24	17
Ø80	57	128	174	M20xP1.5	Ø25	72	95	9	M10	26	22
Ø100	64	138	189	M20xP1.5	Ø25	89	115	13.5	M10	26	22

■ Dimensions

ICED Double piston rod type $\phi 32 \sim \phi 100$ ICEA, ICEB Adjustable type $\phi 32 \sim \phi 100$ 

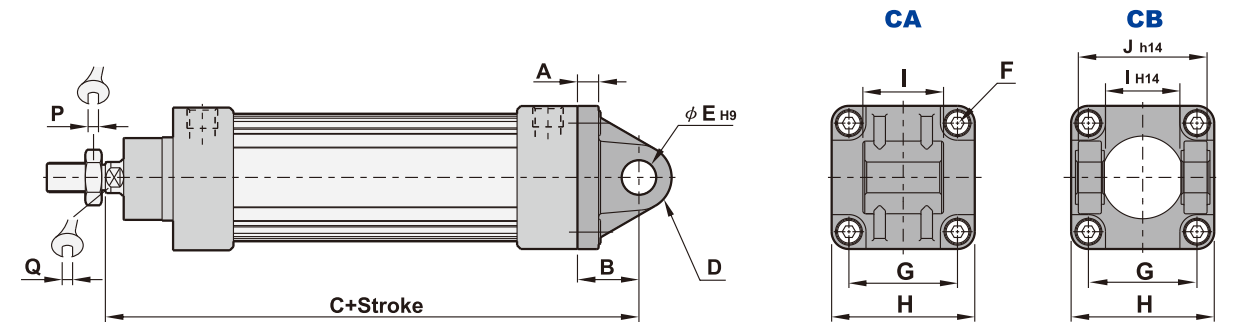
(Unit: mm)

Bore size	F	G	L2	LM	LX	LZ		P	Q	S
						ICEA	ICEB			
$\phi 32$	22	26	94	146	190	221.2	246.2	17	10	10
$\phi 40$	24	29.5	105	164	212	242.5	267.5	19	13	10
$\phi 50$	32	39	106	184	248	275.5	300.5	24	17	12
$\phi 63$	32	38.5	121	198	262	286.8	311.8	24	17	12
$\phi 80$	40	46	128	220	300	322.5	347.5	26	22	12
$\phi 100$	40	51	138	240	320	345.5	370.5	26	22	12

Bore size	T		U		V		W	X	Y	
	ICEA	ICEB	ICEA	ICEB	ICEA	ICEB			ICEA	ICEB
$\phi 32$	53.2	78.2	35	62	47	72	22	$\phi 25$	79.2	104.2
$\phi 40$	54.5	79.5	37	62	47	72	27	$\phi 30$	84	109
$\phi 50$	59.5	84.5	38	63	53	78	36	$\phi 40$	98.5	123.5
$\phi 63$	56.8	81.8	38	63	53	78	36	$\phi 40$	95.3	120.3
$\phi 80$	62.5	87.5	40	65	60	85	36	$\phi 40$	108.5	133.5
$\phi 100$	65.5	90.5	40	65	60	85	36	$\phi 40$	116.5	141.5

■ Dimension of mounting parts

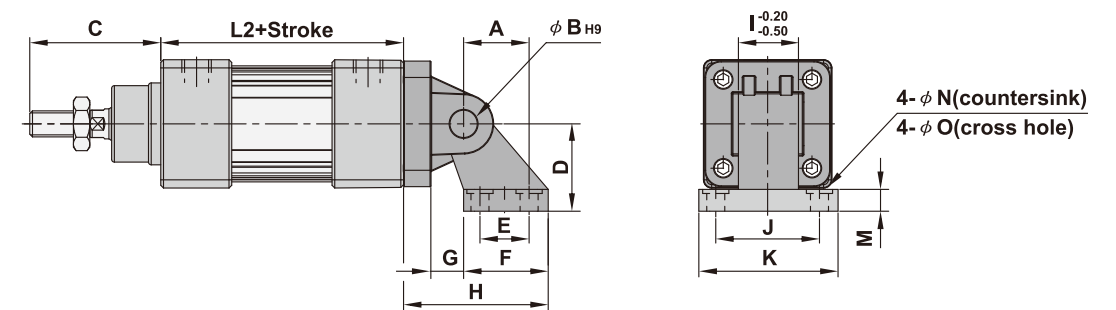
CA, CB Male & Female clevis



(Unit: mm)

Bore size	A		B	C	D	E	F	G	H	I	J	P	Q
	CA	CB											
$\phi 32$	10	10	22	142	R11	$\phi 10$	M6	32.5	46	$26^{+0.2}_{-0.6}$	45	17	10
$\phi 40$	10	10	25	160.8	R13	$\phi 12$	M6	38	54	$28^{+0.2}_{-0.6}$	52	19	13
$\phi 50$	13	13	28	170	R13	$\phi 12$	M8	46.5	64	$32^{+0.2}_{-0.6}$	60	24	17
$\phi 63$	13	13	33	190	R17	$\phi 16$	M8	56.5	77	$40^{+0.2}_{-0.6}$	70	24	17
$\phi 80$	15	15	35	210.8	R17	$\phi 16$	M10	72	94	$50^{+0.2}_{-0.6}$	90	26	22
$\phi 100$	15	15	40	230	R21	$\phi 20$	M10	89	114	$60^{+0.2}_{-0.6}$	110	26	22

CR Angular trunnion with female clevis

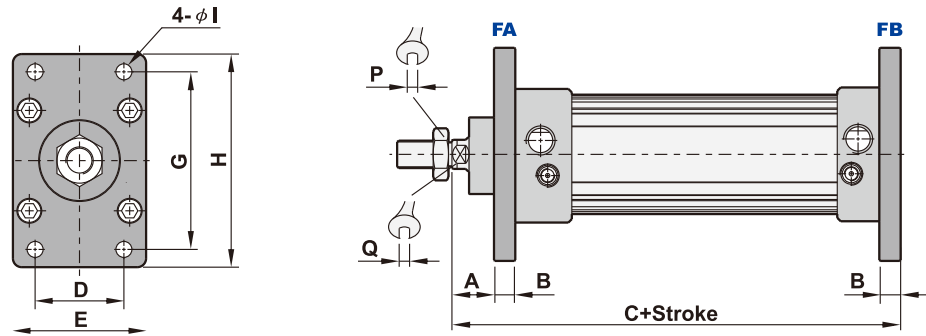


(Unit: mm)

Bore size	A	B	C	D	E	F	G	H	I	J	K	L2	M	N	O
$\phi 32$	21	$\phi 10$	48	32	18	31	10	50	26	38	51	94	8	-	$\phi 6.6$
$\phi 40$	24	$\phi 12$	53.5	36	22	35	12	56	28	41	54	105	10	-	$\phi 6.6$
$\phi 50$	33	$\phi 12$	71	45	30	45	13	68	32	50	65	106	12	-	$\phi 9$
$\phi 63$	37	$\phi 16$	70.5	50	35	50	17	77	40	52	67	120.2	12	-	$\phi 9$
$\phi 80$	47	$\phi 16$	86	63	40	60	19	93	50	66	86	128	14	$\phi 18$	$\phi 11$
$\phi 100$	55	$\phi 20$	91	71	50	70	22	106	60	76	96	138	15	$\phi 18$	$\phi 11$

■ Dimension of mounting parts

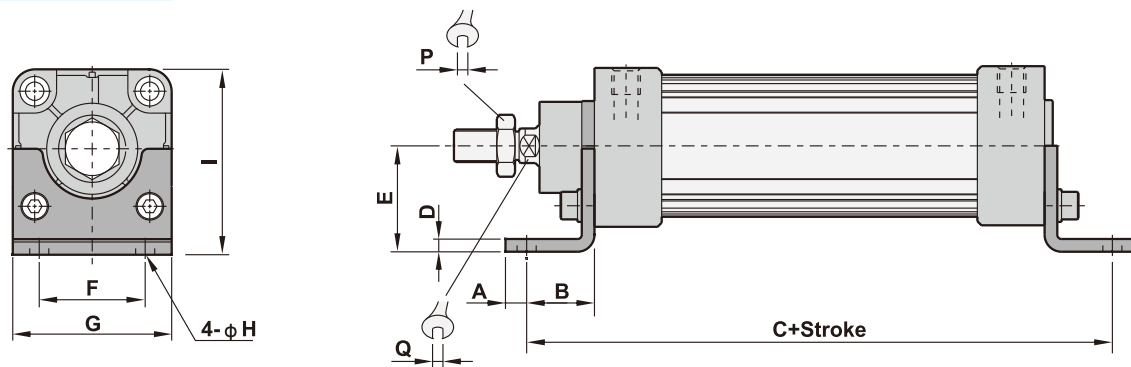
FA, FB Front & Rear flange



Bore size	A	B	C	D	E	G	H	I	P	Q
φ 32	16	10	130	32	50	64	79	φ 7	17	10
φ 40	19.5	10	145	36	55	72	90	φ 9	19	13
φ 50	27	12	155	45	65	90	110	φ 9	24	17
φ 63	26.5	12	170	50	75	100	120	φ 9	24	17
φ 80	30	16	190	63	95	126	153	φ 12	26	22
φ 100	35	16	205	75	115	150	178	φ 14	26	22

(Unit: mm)

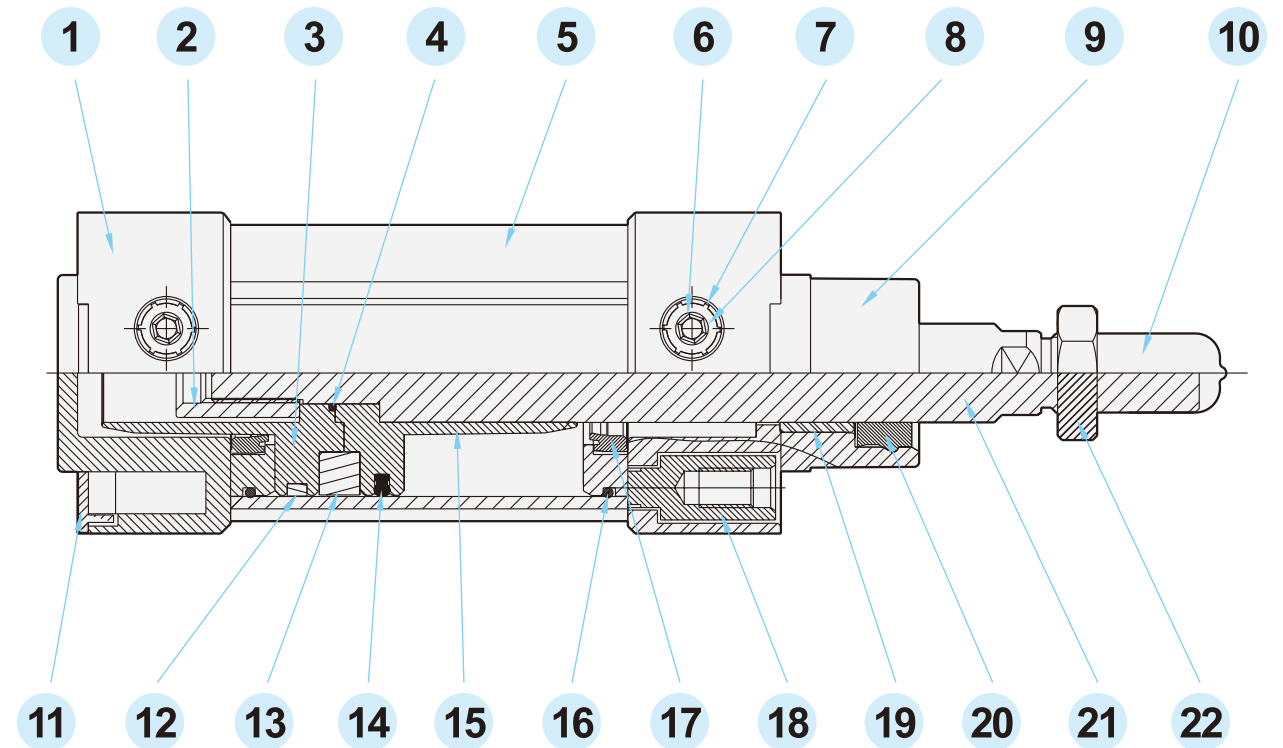
LB Foot mounting



Bore size	A	B	C	D	E	F	G	H	I	P	Q
φ 32	8	24	142	4	32	32	47	φ 7	56.5	17	10
φ 40	10	28	161	4	36	36	53	φ 9	63.5	19	13
φ 50	10	32	170	4	45	45	65	φ 9	77.5	24	17
φ 63	10	32	185	4	50	50	75	φ 9	87.5	24	17
φ 80	13	41	210	5	63	63	95	φ 12	110	26	22
φ 100	13	41	220	6	71	75	115	φ 14	127.5	26	22

(Unit: mm)

■ Material of parts



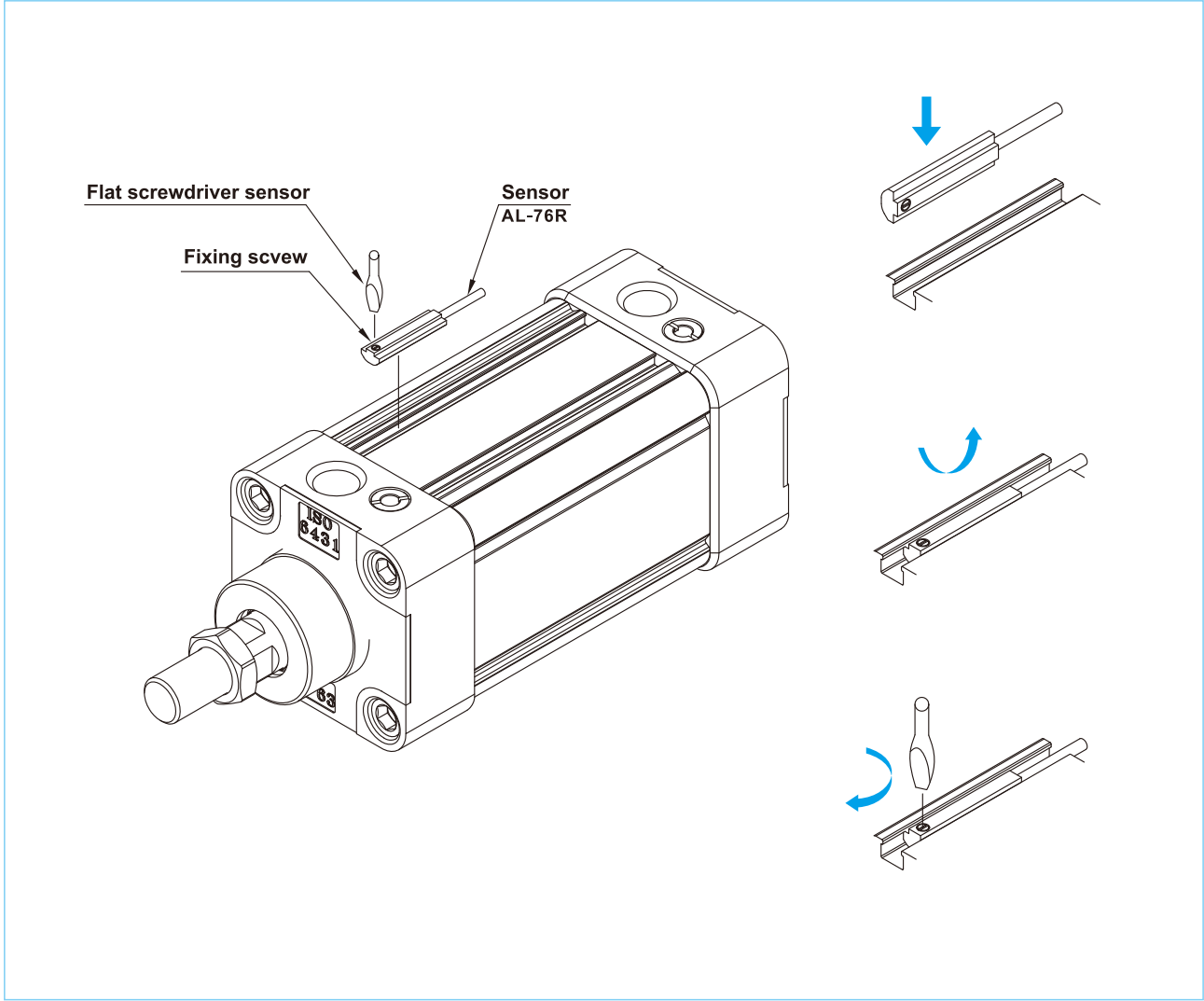
No.	Description	Material	Qty.	No.	Description	Material	Qty.
1	Rear cover	Aluminum alloy	1	12	Wear ring	Teflon+Graphite	1
2	Piston mounting nut	Brass+Ni	1	13	Magnet	Rubber	1
3	Rear piston	Aluminum alloy	1	14	U-Piston seal	NBR	1
4	O-ring	NBR	1	15	Front piston	Aluminum alloy	1
5	Barrel	Aluminum alloy	1	16	O-ring for front/rear cover	NBR	2
6	Cushion needle	Brass	1	17	Cushion	PU	2
7	Push on fastener	FeC	2	18	Fixing bolt	Fe+Ni	8
8	O-ring for cushion needle	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)	Max. Standard stroke(mm)
$\phi 32 \sim \phi 100$	Double acting	25 ~ 1000	1800

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

Sensor mounting example



Memo...

