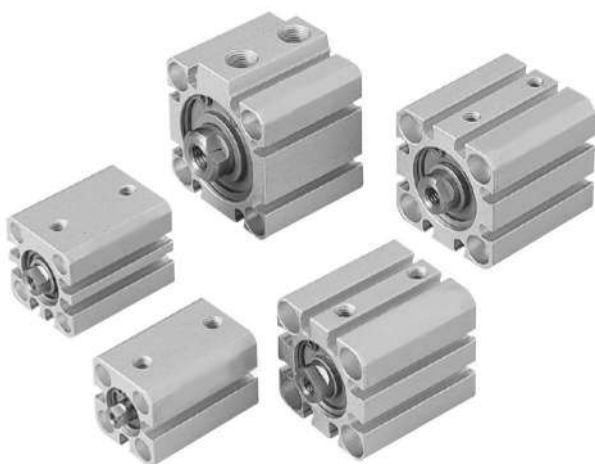


COMPACT CYLINDER



Features

- Ultra Compact, light weight and space saving cylinder.
- Wide range of bore sizes and strokes (12mm~100mm).
- Single and double acting available.
- Ideal for use in machinery where space is limited and incorporating sensor groove which enables flush fitting of sensors.
- Sensor can be mounted on any one of three faces on 12 and 16 bore and on four faces on 20~100 bore.

Specification

Model		HZ05									
Acting type		Double acting / Single acting						Double			
Tube I.D. (mm)		12	16	20	25	32	40	50	63	80	100
Port size		M5×0.8				Rc1/8		Rc1/4		Rc3/8	
Medium		Air									
Operating perssure range (Bar)	Double acting	0.7~10			0.5~10						
	Single acting	2~10			1.5~10		1~10		—		
Proof pressure		15 Bar									
Ambient temperature		-5°C~+60°C (No freezing)									
Available speed range		50~500 mm/sec									
Sensor switch (*)		RCB, RCE, RCE1, RDEP									

Order example

* Order example for special specification, refer to page 0-7.

HZ05 — 12 — 20 — 25 M — F — G

MODEL

1: Single rod
2: Double rod

TUBE I.D.

STROKE

Blank: Standard
F: Rear flange

M: Magnet

PORT THREAD

Blank: M5×0.8
(for ø12~ø25)
Blank: Rc thread
G: G thread
NPT: NPT thread
(for ø32~ø100)

STYLE

Code	Symbol	Description
1 1		Double acting / Male thread
1 2		Double acting / Female thread
1 3		Single acting / Normally extended male thread
1 4		Single acting / Normally extended female thread
1 5		Single acting / Normally returned male thread
1 6		Single acting / Normally returned female thread
2 1		Double rod / Male thread
2 2		Double rod / Female thread
2 3		Single acting / Double rod / Male thread
2 4		Single acting / Double rod / Female thread
2 7		Double rod / Adjustable male thread
2 8		Double rod / Adjustable female thread

Mounting accessories

FAC — HZ05 — 20

MOUNTING TYPE

	LB		FBC
	CB		RF
	FAC	* Only for double acting / single rod type.	

Single acting – Table for standard stroke

Tube I.D.	Standard stroke (mm)
ø12,16,20,25,32,40	5,10
ø50	5,10,15,20

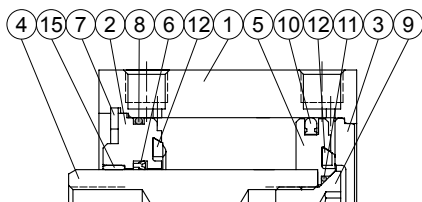
Double acting – Table for standard stroke

Tube I.D.	Standard stroke	Long stroke (mm)
ø12,16	5,10,15,20,25,30	35,40,45,50,75,100
ø20	5,10,15,20,25,30,35,40,45,50	75,100,125,150,175,200
ø25	5,10,15,20,25,30,35,40,45,50,75,100	75,100,125,150,175,200,250,300
ø32~80	5,10,15,20,25,30,35,40,45,50,75,100	125,150,175,200,250,300
Tube I.D.	Standard stroke (mm)	
ø100	5,10,15,20,25,30,35,40,45,50,75,100	

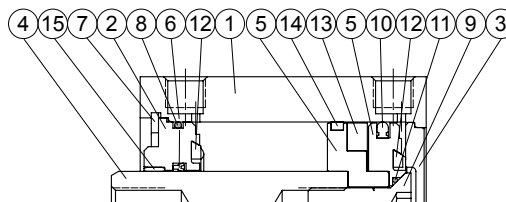
- Stroke out of specification is also available.
- Please consult us if stroke out of specification.

COMPACT CYLINDER

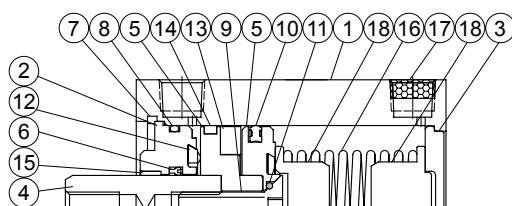
Double acting



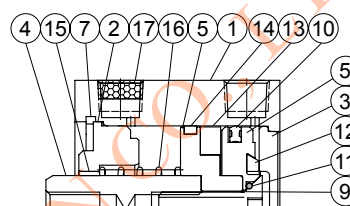
Double acting (with magnet)



Single acting Normally extended



Single acting Normally returned



Material

No.	Tube I.D. Part name	12	16	20	25	32	40	50	63	80	100	Note	Q'y	Component parts (inclusion)	Repair kits (inclusion)
1	Body	Aluminum alloy										Hard anodized	1		
2	Rod cover	Aluminum alloy										*	1	●	
3	End cover	Aluminum alloy										Anodized	1	●	
4	Piston rod	With magnet	Stainless steel			Carbor steel						1			
		Without magnet	SUS	Carbor steel										1	
5	Piston	Aluminum alloy										ø12~32 anodized	1	●	
6	Rod packing	NBR											1	●	●
7	Snap ring	Stainless steel				Spring steel							1	●	
8	Cover ring	NBR											1	●	●
9	Piston bolt	Stainless steel				SCM							1	●	
10	Piston packing	NBR											1	●	●
11	Piston gasket	NBR											1	●	●
12	Cushion packing	NBR											2	●	●
13	Magnet	Magnet											1	●	
14	Wear ring	—			Teflon								1	●	
15	Bush	—				Bearing alloy							1	●	
16	Spring	SWP							—				1	●	
17	Silencer	Brass							—				1	●	
18	Spring holder	Aluminum alloy							—				2	●	

* ø12~ø32 hard anodized, ø40~ø100 anodized.

Seal kit

Acting type	Rod packing		Piston packing		Cover ring		Piston gasket
	Double acting / Normally extended	Normally returned	Double acting	Single acting	Double acting / Normally extended	Normally returned	Double acting / Single acting
Q'y	1	0	1	1	1	0	1
12	KSYR-6	—	OPA-12	OPA-12	S-11	—	d4×w1
16	KSYR-8	—	OPA-16	OPA-16	S-14	—	d5×w1
20	KSYR-10A	—	OPA-20	OPA-20	S-18	—	d6×w1
25	KSYR-12	—	OPA-25	OPA-25	S-22,4	—	d8×w1
32	KSYR-16	—	OPA-32	OPA-32	S-28	—	S-9
40	KSYR-16	—	OPA-40	OPA-40	S-36	—	S-10
50	KSYR-20	—	OPA-50	OPA-50	S-46	—	S-16
63	KSYR-20	—	OPA-63	—	S-60	—	S-16
80	ORA-25	—	OPA-80	—	G-75	—	d20×w1
100	ORA-30	—	OPA-100	—	G-95	—	S-26

Order example Component parts

Tube I.D.	Component parts
ø12	CP-HZ05-12(M)
ø16	CP-HZ05-16(M)
ø20	CP-HZ05-20(M)
ø25	CP-HZ05-25(M)
ø32	CP-HZ05-32(M)
ø40	CP-HZ05-40(M)
ø50	CP-HZ05-50(M)
ø63	CP-HZ05-63(M)
ø80	CP-HZ05-80(M)
ø100	CP-HZ05-100(M)

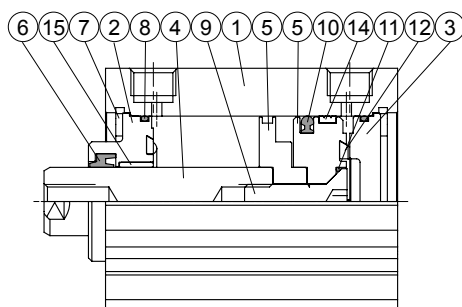
M: With magnet

Repair kits

Tube I.D.	Repair kits
ø12	PS-HZ05-12
ø16	PS-HZ05-16
ø20	PS-HZ05-20
ø25	PS-HZ05-25
ø32	PS-HZ05-32
ø40	PS-HZ05-40
ø50	PS-HZ05-50
ø63	PS-HZ05-63
ø80	PS-HZ05-80
ø100	PS-HZ05-100

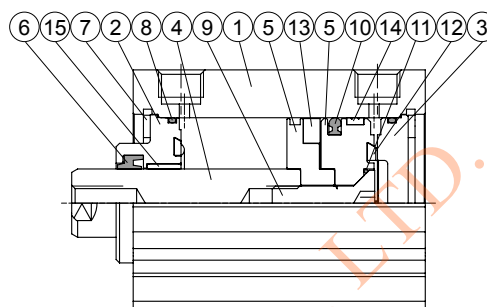
COMPACT CYLINDER

Long stroke



Long stroke

(with magnet)



Long stroke – Material

No.	Tube I.D. Part name		12	16	20	25	32	40	50	63	80	Note	Q'y	Component parts (inclusion)	Repair kits (inclusion)	
1	Body		Aluminum alloy										Hard anodized	1		
2	Rod cover		Aluminum alloy										*	1	●	
3	End cover		Aluminum alloy										Anodized	1	●	
4	Piston	With magnet	Stainless steel			Carbor steel						1				
	rod	Without magnet	SUS	Carbor steel									1			
5	Piston		Aluminum alloy										ø12~32 anodized	1	●	
6	Rod packing		NBR											1	●	●
7	Snap ring		Stainless steel				Spring steel					2	●			
8	Cover ring		NBR											2	●	●
9	Piston bolt		Stainless steel				SCM					1	●			
10	Piston packing		NBR											1	●	●
11	Piston gasket		NBR											1	●	●
12	Cushion packing		NBR											2	●	●
13	Magnet		Magnet											1	●	
14	Wear ring		Teflon											1	●	
15	Bush		—				Bearing alloy					1	●			

* ø12~ø32 hard anodized, ø40~ø80 anodized.

Long stroke – Seal kit

	Rod packing	Piston packing	Cover ring	Piston gasket
Acting type	Double acting			
Q'y	1	1	2	1
12	KSYR-6	OPA-12	S-11	d4×w1
16	KSYR-8	OPA-16	S-14	d5×w1
20	KSYR-10A	OPA-20	S-18	d6×w1
25	KSYR-12	OPA-25	S-22	d8×w1
32	KSYR-16	OPA-32	d28×w2	S-9
40	ORA-16	OPA-40	S-36	S-10
50	ORA-20	OPA-50	S-46	S-16
63	ORA-20	OPA-63	S-60	S-16
80	ORA-25	OPA-80	AS-41 G-75	d20×w1

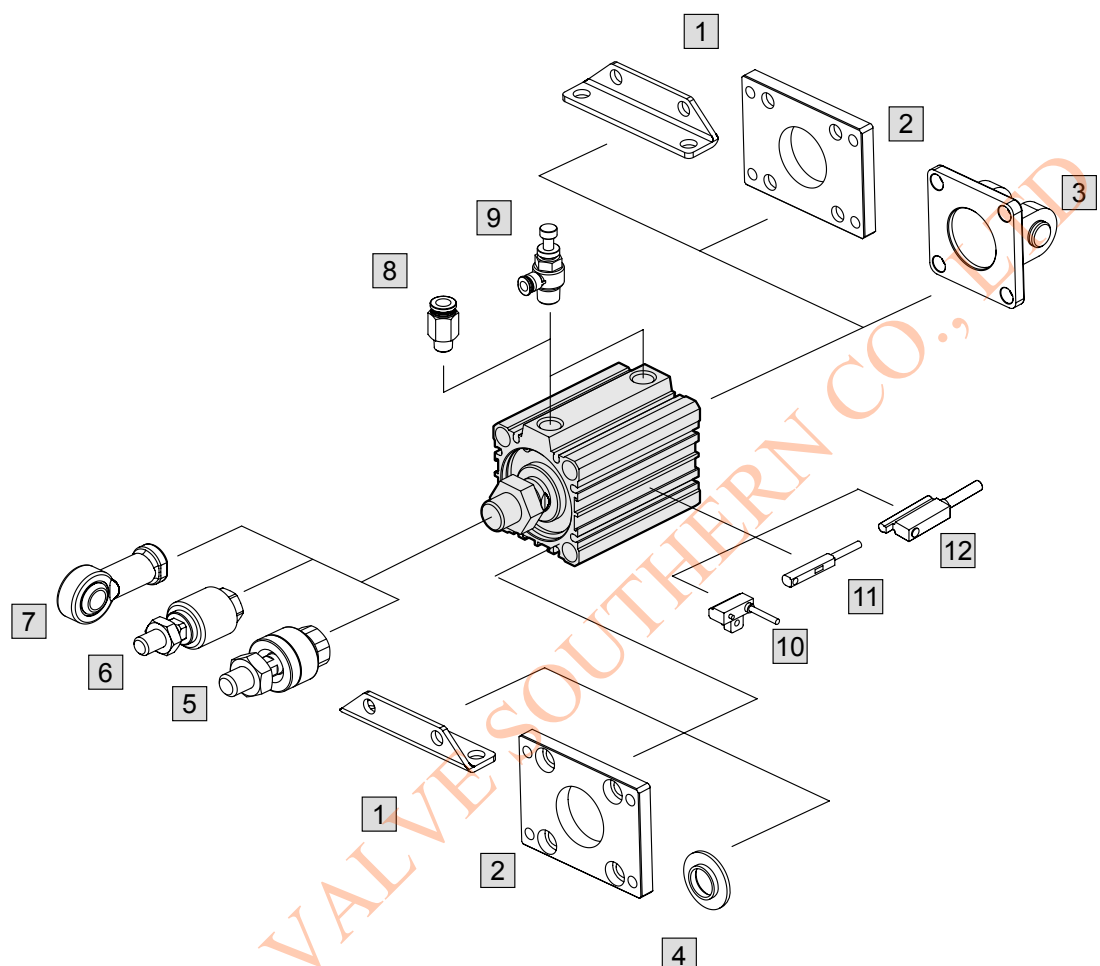
Order example

Component parts / Repair kits

Tube I.D.	Component parts	Repair kits
ø12	CPL-HZ05-12(M)	PSL-HZ05-12
ø16	CPL-HZ05-16(M)	PSL-HZ05-16
ø20	CPL-HZ05-20(M)	PSL-HZ05-20
ø25	CPL-HZ05-25(M)	PSL-HZ05-25
ø32	CPL-HZ05-32(M)	PSL-HZ05-32
ø40	CPL-HZ05-40(M)	PSL-HZ05-40
ø50	CPL-HZ05-50(M)	PSL-HZ05-50
ø63	CPL-HZ05-63(M)	PSL-HZ05-63
ø80	CPL-HZ05-80(M)	PSL-HZ05-80

M: With magnet

COMPACT CYLINDER



No.	Accessories	Page
1	Mounting accessories LB	2-36, 38
2	Mounting accessories FAC/FBC	2-36, 37, 39, 40
3	Mounting accessories CB+PIN	2-37, 41, 42
4	Mounting accessories RF	2-42
5	Floating joint MFC	8-2
6	Floating joint MFCS	8-4

No.	Accessories	Page
7	Female rod ends PHS	8-5
8	Fitting PC (PISCO)	8-5 (Vol.1)
9	Speed controller JSC (PISCO)	8-18 (Vol.1)
10	Sensor switch RCB	8-8
11	Sensor switch RCE/RCE1	8-10
12	Sensor switch RDEP	8-14

COMPACT CYLINDER

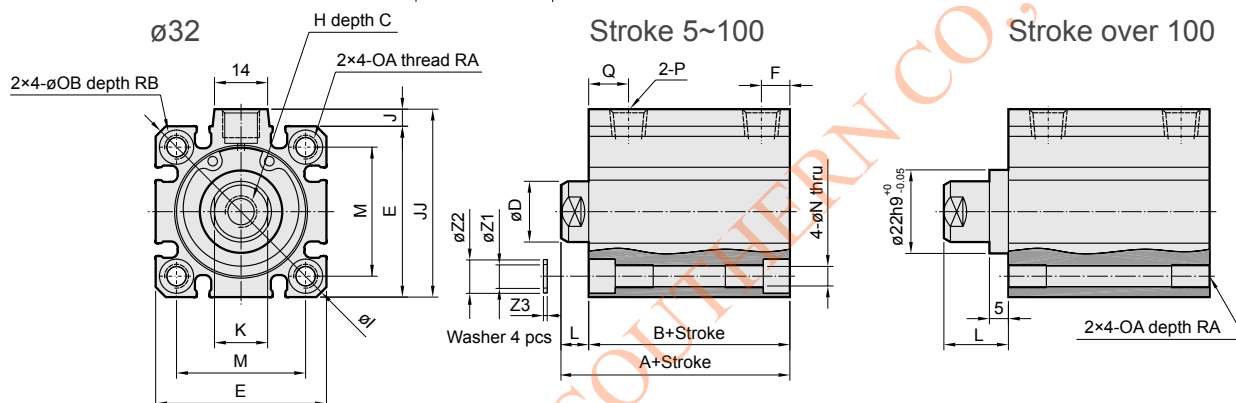
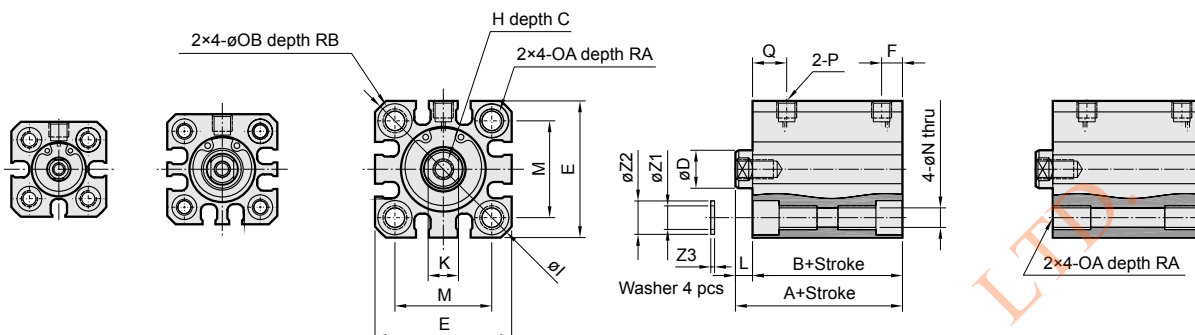
ø12

ø16

ø20, ø25

Stroke 5~100

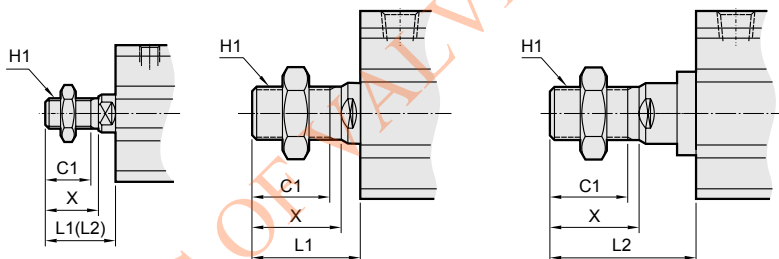
Stroke over 100



ø12~25

ø32 for stroke 5~100

ø32 for stroke over 100



HZ05-11 male thread size

Code Tube I.D.	C1	H1	L1	L2	X
12	9	M5×0.8	14	24	10.5
16	10	M6×1.0	15.5	25.5	12
20	12	M8×1.25	18.5	28.5	14
25	15	M10×1.25	22.5	32.5	17.5
32	20.5	M14×1.5	28.5	38.5	23.5

* L1: Standard stroke, L2: Long stroke

ø12~25

Code Tube I.D.	Standard stroke										Long stroke									
	Stroke range	Without magnet				Magnet				Stroke range	A	B	F	L	C	D	E	H	I	K
		A	B	F	L	A	B	F	L											
12	5~30	20.5	17	5	3.5	25.5	22	5	3.5	31~100	45.5	32	7.5	13.5	6	6	25	M3×0.5	32	5
16	5~30	20.5	17	5	3.5	25.5	22	5	3.5	31~100	45.5	32	7.5	13.5	8	8	29	M4×0.7	38	6
20	5~50	24	19.5	5.5	4.5	34	29.5	5.5	4.5	51~200	55.5	41	9	14.5	7	10	36	M5×0.8	47	8
25	5~50	27.5	22.5	5.5	5	37.5	32.5	5.5	5	51~300	59	44	11	15	12	12	40	M6×1.0	52	10

ø32

Code Tube I.D.	Standard stroke										Long stroke									
	Stroke range	Without magnet				Magnet				Stroke range	A	B	F	L	Q	P	C	D	E	H
		A	B	A	B	F	L	Q												
32	5~50	30	23	40	33	7.5	7	10.5		101~300	62.5	45.5	12.5	17	12.5	Rc1/8 (*1)	13	16	45	M8×1.25
	51~100	40	33	40	33	7.5	7	10.5												

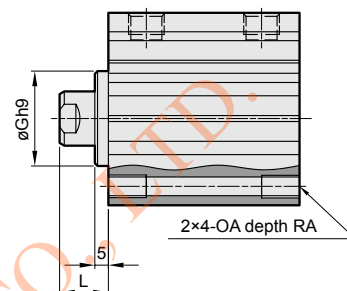
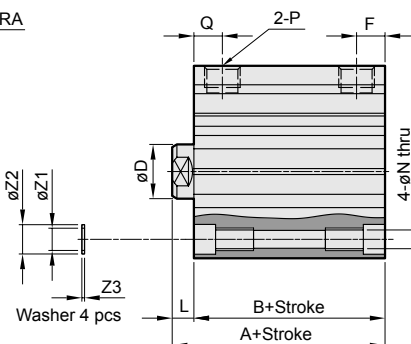
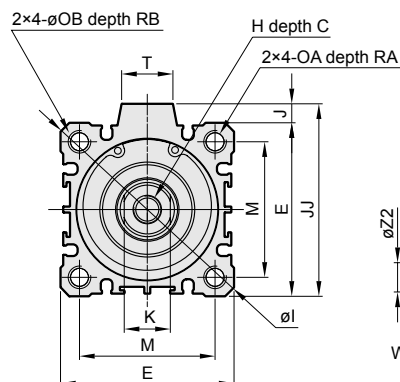
*1. Without magnet with stroke=5mm, P=M5×0.8, Q=11.5, F=5.5

COMPACT CYLINDER

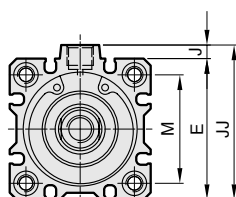
ø50~ø100

Stroke 5~100

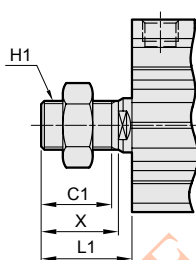
Stroke over 100



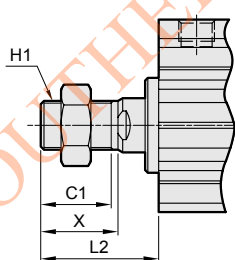
ø40



ø40~ø100
(Stroke 5~100)



ø40~ø80
(Stroke over 100)



HZ05-11 male thread size

Code Tube I.D.	C1	H1	L1	L2	X
40	20.5	M14×1.5	28.5	38.5	23.5
50	26	M18×1.5	33.5	43.5	28.5
63	26	M18×1.5	33.5	43.5	28.5
80	32.5	M22×1.5	43.5	53.5	35.5
100	32.5	M26×1.5	43.5	—	35.5

Code Tube I.D.	Standard stroke									Long stroke					
	Stroke range	Without magnet		Magnet		F	L	Q		Stroke range	A	B	F	L	Q
		A	B	A	B										
40	5~50	36.5	29.5	46.5	39.5	8	7	11		125~300	72	55	14	17	14
	75,100	46.5	39.5	46.5	39.5	8	7	11		125~300	72	55	14	17	14
50	5~50	38.5	30.5	48.5	40.5	10.5	8	10.5		125~300	73.5	55.5	14	18	14
	75,100	48.5	40.5	48.5	40.5	10.5	8	10.5		125~300	73.5	55.5	14	18	14
63	5~50	44	36	54	46	10.5	8	15		125~300	75	57	16.5	18	16.5
	75,100	54	46	54	46	10.5	8	15		125~300	75	57	16.5	18	16.5
80	5~50	53.5	43.5	63.5	53.5	12.5	10	16		125~300	86	66	19	20	19
	75,100	63.5	53.5	63.5	53.5	12.5	10	16		125~300	86	66	19	20	19
100	5~50	65	53	75	63	13	12	23		—					
	75,100	75	63	75	63	13	12	23		—					

Code Tube I.D.	C	D	E	G ^{h9}	H	I	J	JJ	K	M	N	OA	OB	P	RA	RB	T	Z1	Z2	Z3
40	13	16	52	28 ^{+0 -0.052}	M8×1.25	70	5	57	14	40	5.5	M6×1.0	9	Rc1/8	10	7	14	6.2	8.8	1
50	15	20	64	35 ^{+0 -0.062}	M10×1.5	86	7	71	17	50	6.6	M8×1.25	11	Rc1/4 (*1)	14	8	19	8.2	10.8	1
63	15	20	77	35 ^{+0 -0.062}	M10×1.5	103	7	84	17	60	9	M10×1.5	14	Rc1/4 (*2)	18	10.5	19	10.2	13.8	1
80	21	25	98	43 ^{+0 -0.062}	M16×2.0	132	6	104	22	77	11	M12×1.75	17.5	Rc3/8 (*3)	22	13.5	26	12.2	17.3	2
100	27	30	117	—	M20×2.5	156	6.5	123.5	27	94	11	M12×1.75	17.5	Rc3/8 (*3)	22	13.5	26	12.2	17.3	2

*1. Without magnet with stroke=5mm, P=Rc1/8, Q=12, F=8

*2. Without magnet with stroke=5mm, P=Rc1/8

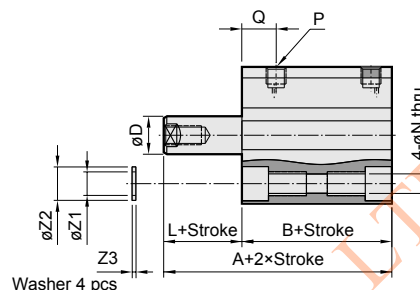
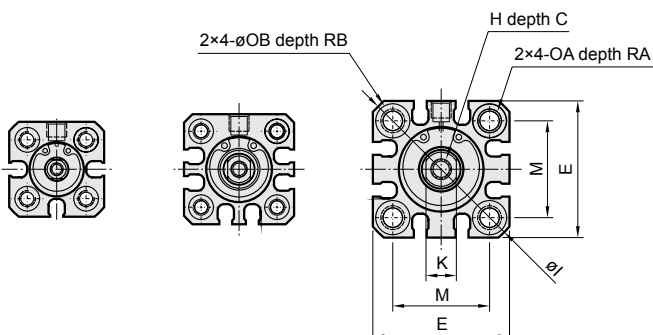
*3. Without magnet with stroke=5mm, P=Rc1/4

COMPACT CYLINDER

$\phi 12$

$\phi 16$

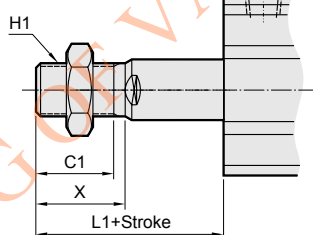
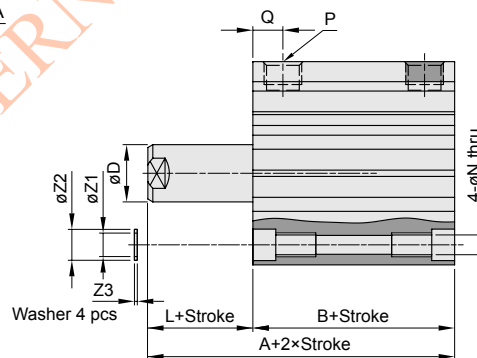
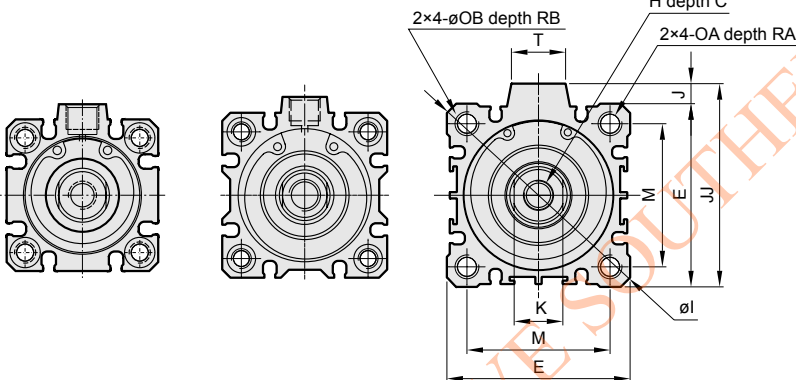
$\phi 20, \phi 25$



$\phi 32$

$\phi 40$

$\phi 50$



* L1: Standard stroke

HZ05-13 male thread size

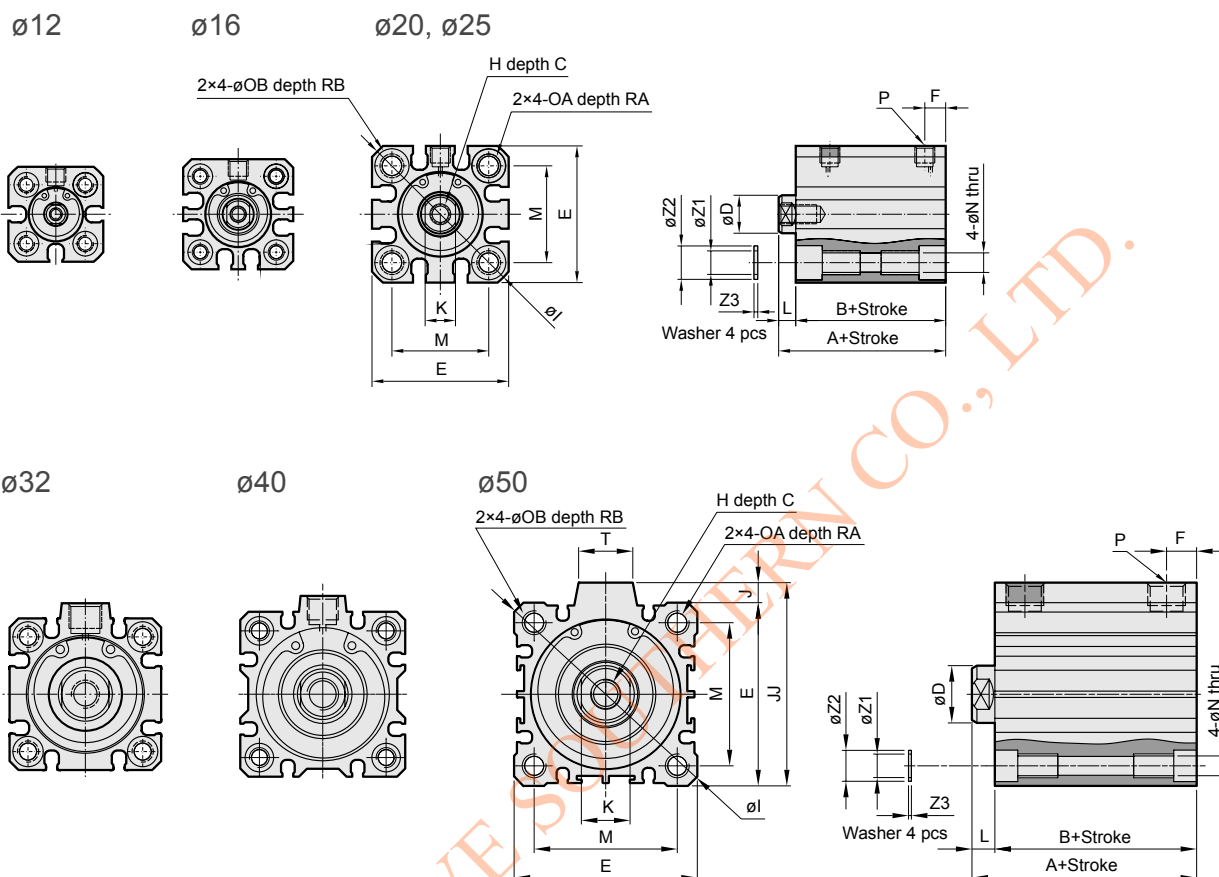
Code Tube I.D.	C1	H1	L1	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5
32	20.5	M14×1.5	28.5	23.5
40	20.5	M14×1.5	28.5	23.5
50	26	M18×1.5	33.5	28.5

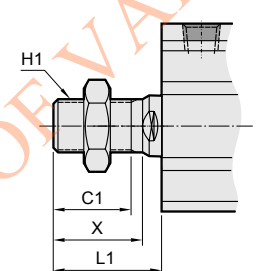
Note: The value **B** of $\phi 12 \sim \phi 40$ type is greater than double acting type.

Code Tube I.D.	Standard stroke					C	D	E	H	I	J	JJ	K	L	M	N	OA	OB	P	Q	RA	RB	T	Z1	Z2	Z3
	Stroke range	Without magnet		Magnet																						
		A	B	A	B																					
12	5,10	30.5	27	35.5	32	6	6	25	M3×0.5	32	–	–	5	3.5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	–	4.2	6.3	0.5
16	5,10	35.5	32	40.5	37	8	8	29	M4×0.7	38	–	–	6	3.5	20	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	–	4.2	6.3	0.5
20	5,10	34	29.5	44	39.5	7	10	36	M5×0.8	47	–	–	8	4.5	25.5	5.4	M6×1.0	9	M5×0.8	9	10	7	–	6.2	8.8	1
25	5,10	47.5	42.5	57.5	52.5	12	12	40	M6×1.0	52	–	–	10	5	28	5.4	M6×1.0	9	M5×0.8	11	10	7	–	6.2	8.8	1
32	5,10	55	48	65	58	13	16	45	M8×1.25	60	4.5	49.5	14	7	34	5.5	M6×1.0	9	Rc1/8	10.5	10	7	14	6.2	8.8	1
40	5,10	61.5	54.5	71.5	64.5	13	16	52	M8×1.25	70	5	57	14	7	40	5.5	M6×1.0	9	Rc1/8	11	10	7	14	6.2	8.8	1
50	5~20	38.5	30.5	48.5	40.5	15	20	64	M10×1.5	86	7	71	17	8	50	6.5	M8×1.25	11	Rc1/4 (*1)	10.5	14	8	19	8.2	10.8	1

*1. Without magnet with stroke=5mm, P=Rc1/8, Q=12

COMPACT CYLINDER





Code Tube I.D.	C1	H1	L1	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5
32	20.5	M14×1.5	28.5	23.5
40	20.5	M14×1.5	28.5	23.5
50	26	M18×1.5	33.5	28.5

* L1: Standard stroke

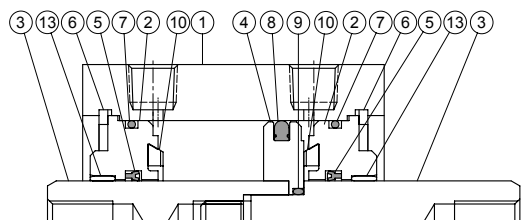
Code Tube I.D.	Standard stroke					C	D	E	F	H	I	J	JJ	K	L	M	N	OA	OB	P	RA	RB	T	Z1	Z2	Z3
	Stroke range	Without magnet		Magnet																						
		A	B	A	B																					
12	5,10	20.5	17	25.5	22	6	6	25	5	M3×0.5	32	—	—	5	3.5	15.5	3.5	M4×0.7	6.5	M5×0.8	7	4	—	4.2	6.3	0.5
16	5,10	20.5	17	25.5	22	8	8	29	5	M4×0.7	38	—	—	6	3.5	20	3.5	M4×0.7	6.5	M5×0.8	7	4	—	4.2	6.3	0.5
20	5,10	24	19.5	34	29.5	7	10	36	5.5	M5×0.8	47	—	—	8	4.5	25.5	5.4	M6×1.0	9	M5×0.8	10	7	—	6.2	8.8	1
25	5,10	27.5	22.5	37.5	32.5	12	12	40	5.5	M6×1.0	52	—	—	10	5	28	5.4	M6×1.0	9	M5×0.8	10	7	—	6.2	8.8	1
32	5,10	30	23	40	33	13	16	45	7.5	M8×1.25	60	4.5	49.5	14	7	34	5.5	M6×1.0	9	Rc1/8 (*1)	10	7	14	6.2	8.8	1
40	5,10	36.5	29.5	46.5	39.5	13	16	52	8	M8×1.25	70	5	57	14	7	40	5.5	M6×1.0	9	Rc1/8	10	7	14	6.2	8.8	1
50	5~20	38.5	30.5	48.5	40.5	15	20	64	10.5	M10×1.5	86	7	71	17	8	50	6.5	M8×1.25	11	Rc1/4 (*2)	14	8	19	8.2	10.8	1

*1. Without magnet with stroke=5mm, P=M5×0.8, F=5.5

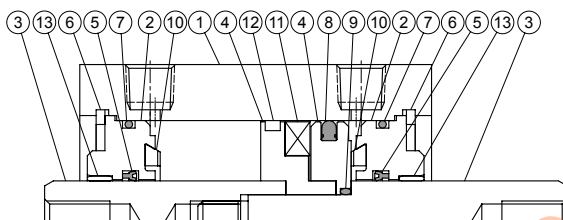
*2. Without magnet with stroke=5mm, P=Rc1/8, F=8

COMPACT CYLINDER

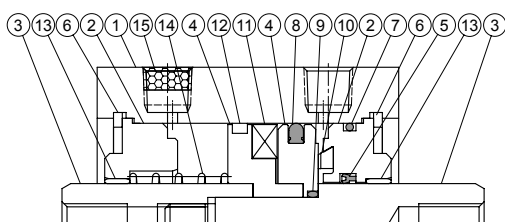
Double acting



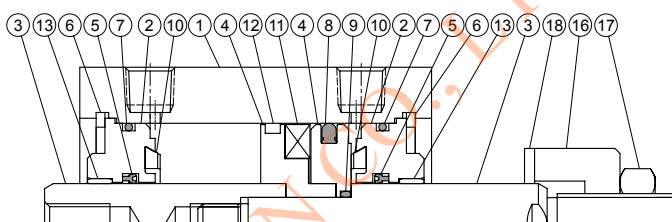
Double acting (with magnet)



Single acting



Adjustable stroke



Material

No.	Tube I.D. Part name	12	16	20	25	32	40	50	63	80	100	Note	Q'y	Component parts (inclusion)	Repair kits (inclusion)
1	Body	Aluminum alloy										Hard anodized	1		
2	Rod cover	Aluminum alloy										*1	2	●	
3	Piston With magnet rod Without magnet	Stainless steel			Carbor steel								2		
		SUS	Carbor steel											2	
4	Piston	Aluminum alloy											1	●	
5	Rod packing	NBR											2	●	●
6	Snap ring	Stainless steel			Spring steel								2	●	
7	Cover ring	NBR										*2	2	●	●
8	Piston packing	NBR											1	●	●
9	Piston gasket	NBR											1	●	●
10	Cushion packing	NBR											2	●	●
11	Magnet	Magnet											1	●	
12	Wear ring	—			Teflon								1	●	
13	Bush	—			Bearing alloy								2	●	
14	Spring	SWP							—				1	●	
15	Silencer	Brass							—				1	●	
16	Adjustble nut	Carbor steel											1	●	
17	Hexagon nut	Carbor steel											1	●	
18	Cushion packing	PU											1	●	

*1. $\phi 12 \sim \phi 32$ hard anodized, $\phi 40 \sim \phi 100$ anodized. *2. Single acting (Q'y=1 pc)

Seal kit

Acting type	Rod packing		Piston packing		Cover ring		Piston gasket
	Double acting	Single acting	Double acting	Single acting	Double acting	Single acting	Double acting Single acting
Q'y	2	1	1	1	2	1	1
12	KSYR-6	KSYR-6	OPA-12	OPA-12	S-11	S-11	d4×w1
16	KSYR-8	KSYR-8	OPA-16	OPA-16	S-14	S-14	d6×w1
20	KSYR-10A	KSYR-10A	OPA-20	OPA-20	S-18	S-18	d6×w1
25	KSYR-12	KSYR-12	OPA-25	OPA-25	S-22	S-22	S-9
32	KSYR-16	KSYR-16	OPA-32	OPA-32	d28×w2	d28×w2	d11×w1
40	KSYR-16	KSYR-16	OPA-40	OPA-40	S-36	S-36	S-10
50	KSYR-20	KSYR-20	OPA-50	OPA-50	S-46	S-46	S-16
63	KSYR-20	—	OPA-63	—	S-60	—	S-14
80	ORA-25	—	OPA-80	—	G-75	—	d20×w1
100	ORA-30	—	OPA-100	—	G-95	—	S-24

Order example

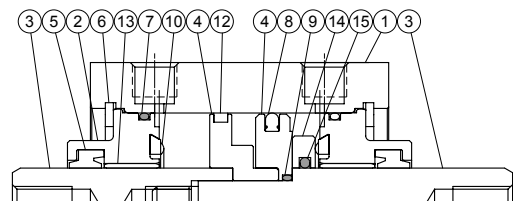
Component parts / Repair kits

Tube I.D.	Component parts	Repair kits
$\phi 12$	CP-HZ05-2-12(M)	PS-HZ05-2-12
$\phi 16$	CP-HZ05-2-16(M)	PS-HZ05-2-16
$\phi 20$	CP-HZ05-2-20(M)	PS-HZ05-2-20
$\phi 25$	CP-HZ05-2-25(M)	PS-HZ05-2-25
$\phi 32$	CP-HZ05-2-32(M)	PS-HZ05-2-32
$\phi 40$	CP-HZ05-2-40(M)	PS-HZ05-2-40
$\phi 50$	CP-HZ05-2-50(M)	PS-HZ05-2-50
$\phi 63$	CP-HZ05-2-63(M)	PS-HZ05-2-63
$\phi 80$	CP-HZ05-2-80(M)	PS-HZ05-2-80
$\phi 100$	CP-HZ05-2-100(M)	PS-HZ05-2-100

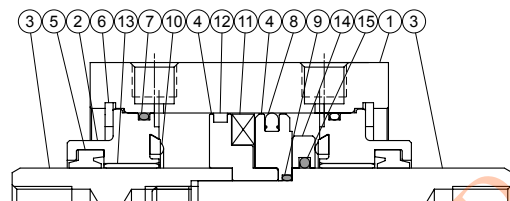
M: With magnet

COMPACT CYLINDER

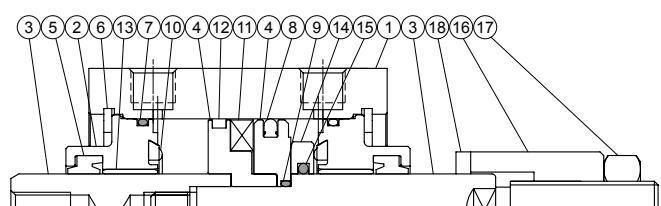
Double acting



Double acting



Adjustable stroke



Long stroke – Material

No.	Tube I.D. Part name	12	16	20	25	32	40	50	63	80	Note	Q'y	Component parts (inclusion)	Repair kits (inclusion)
1	Body	Aluminum alloy									Hard anodized	1		
2	Rod cover	Aluminum alloy									*	2	●	
3	Piston With magnet	Stainless steel			Carbor steel						2			
	rod Without magnet	SUS	Carbor steel										2	
4	Piston	Aluminum alloy										2	●	
5	Rod packing	NBR										2	●	●
6	Snap ring	Stainless steel			Spring steel						2	●		
7	Cover ring	NBR										2	●	●
8	Piston packing	NBR										1	●	●
9	Piston gasket	NBR										1	●	●
10	Cushion packing	—	NBR									2	●	●
11	Magnet	Magnet										1	●	
12	Wear ring	—				Teflon					1	●		
13	Bush	—				Bearing alloy					2	●		
14	Sub-piston	—	PU			Aluminum alloy					1	●		
15	Sub-piston gasket	—			NBR						1	●	●	
16	Adjust nut	Carbor steel										1	●	
17	Hexagon nut	Carbor steel										1	●	
18	Cushion gasket	PU										1	●	

* ø12~ø32 hard anodized, ø40~ø80 anodized.

Long stroke – Seal kit

	Rod packing	Piston packing	Cover ring	Piston gasket	Sub-piston gasket
Acting type	Double acting				
Q'y	2	1	2	1	1
12	KSYR-6	OPA-12	S-11	d4×w1	—
16	KSYR-8	OPA-16	S-14	d5×w1	—
20	KSYR-10A	OPA-20	S-18	d6×w1	—
25	KSYR-12	OPA-25	S-22	S-9	—
32	KSYR-16	OPA-32	d28×w2	d11×w1	P-16
40	ORA-16	OPA-40	S-36	S-10	P-16
50	ORA-20	OPA-50	S-46	S-16	P-20
63	ORA-20	OPA-63	S-60	S-14	P-20
80	ORA-25	OPA-80	G-75	S-18	S-25

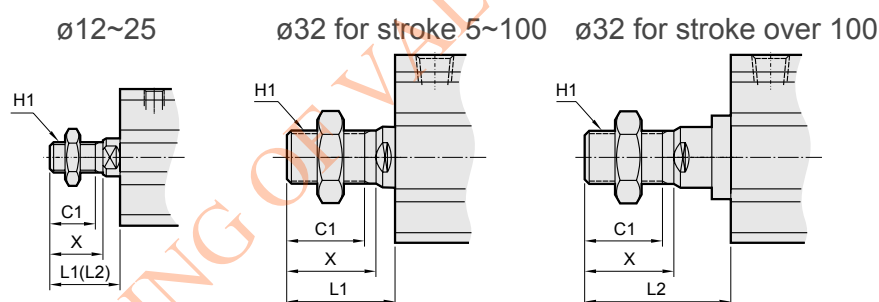
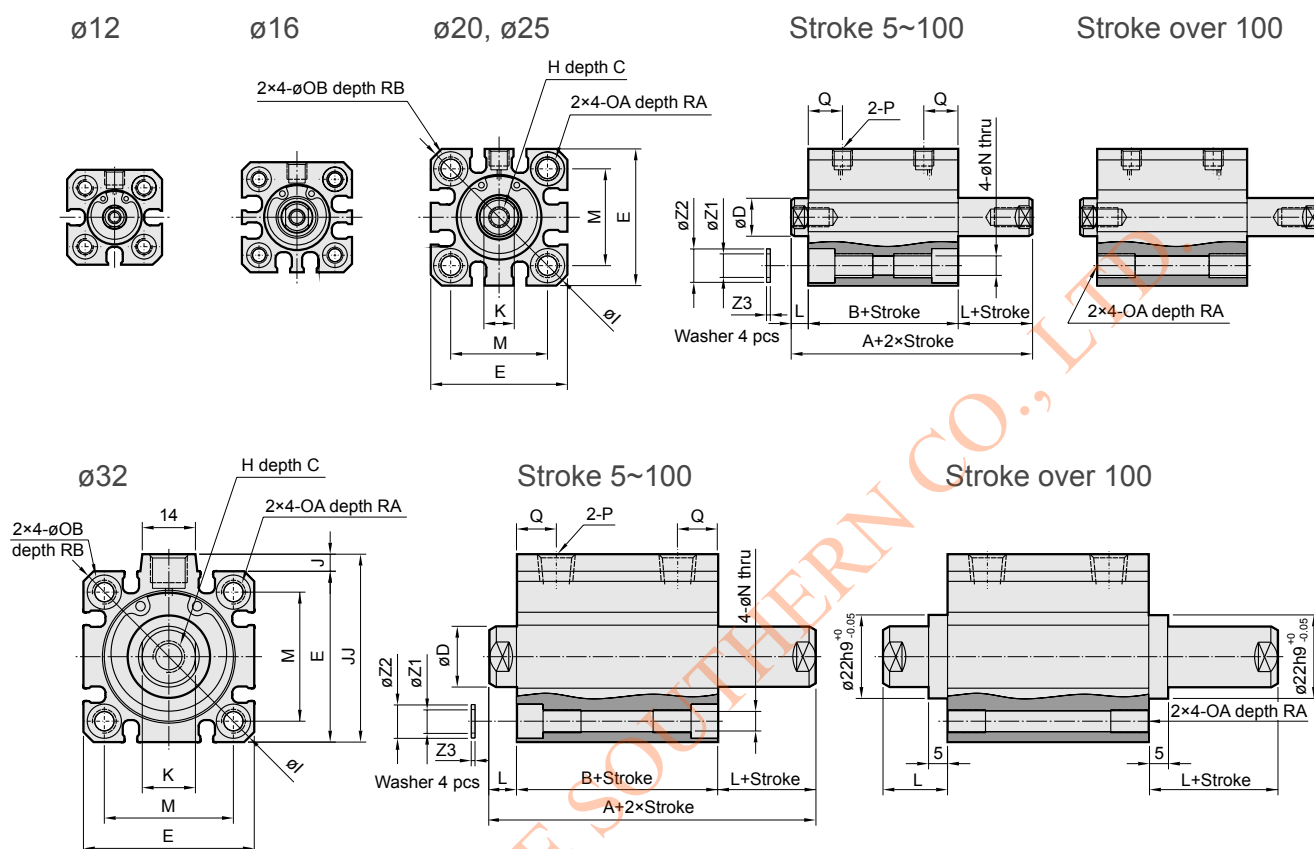
Order example

Component parts / Repair kits

Tube I.D.	Component parts	Repair kits
ø12	CPL-HZ05-2-12(M)	PSL-HZ05-2-12
ø16	CPL-HZ05-2-16(M)	PSL-HZ05-2-16
ø20	CPL-HZ05-2-20(M)	PSL-HZ05-2-20
ø25	CPL-HZ05-2-25(M)	PSL-HZ05-2-25
ø32	CPL-HZ05-2-32(M)	PSL-HZ05-2-32
ø40	CPL-HZ05-2-40(M)	PSL-HZ05-2-40
ø50	CPL-HZ05-2-50(M)	PSL-HZ05-2-50
ø63	CPL-HZ05-2-63(M)	PSL-HZ05-2-63
ø80	CPL-HZ05-2-80(M)	PSL-HZ05-2-80

M: With magnet

COMPACT CYLINDER



* L1: Standard stroke, L2: Long stroke

HZ05-21 male thread size

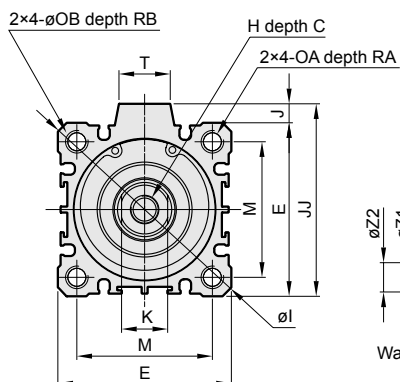
Code Tube I.D.	C1	H1	L1	L2	X
12	9	M5×0.8	14	24	10.5
16	10	M6×1.0	15.5	25.5	12
20	12	M8×1.25	18.5	28.5	14
25	15	M10×1.25	22.5	32.5	17.5
32	20.5	M14×1.5	28.5	38.5	23.5

Code	Standard stroke							Long stroke				C	D	E	H	I	J	JJ	K	M	N	OA	OB	P	Q	RA	RB	Z1	Z2	Z3
	Stroke range	Without magnet			Magnet			Stroke range	A	B	L																			
		A	B	L	A	B	L																							
12	5~30	29	22	3.5	34	27	3.5	31~100	59	32	13.5	6	6	25	M3×0.5	32	—	—	5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	4.2	6.3	0.5
16	5~30	29	22	3.5	34	27	3.5	31~100	59	32	13.5	8	8	29	M4×0.7	38	—	—	6	20	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	4.2	6.3	0.5
20	5~50	35	26	4.5	45	36	4.5	51~200	70	41	14.5	7	10	36	M5×0.8	47	—	—	8	25.5	5.4	M6×1.0	9	M5×0.8	9	10	7	6.2	8.8	1
25	5~50	39	29	5	49	39	5	51~300	74	44	15	12	12	40	M6×1.0	52	—	—	10	28	5.4	M6×1.0	9	M5×0.8	11	10	7	6.2	8.8	1
32	5~50	44.5	30.5	7	54.5	40.5	7	101~300	79.5	45.5	17	13	16	45	M8×1.25	60	4.5	49.5	14	34	5.5	M6×1.0	9	Rc1/8 (*1)	12.5	10	7	6.2	8.8	1
	51~100	54.5	40.5	7	54.5	40.5	7																							

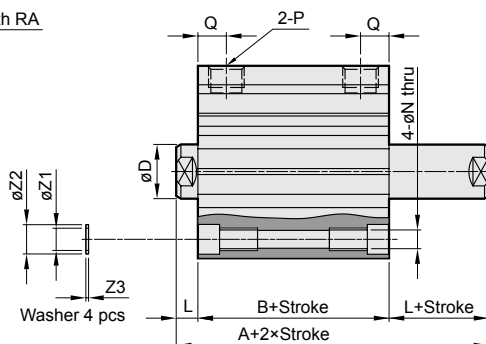
*1. Without magnet with stroke=5mm, P=M5×0.8

COMPACT CYLINDER

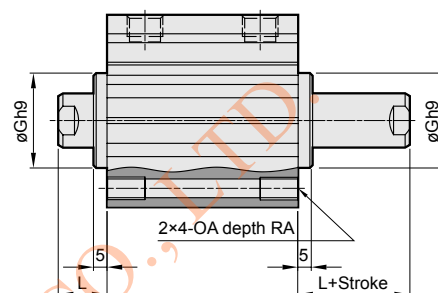
ø50~ø100



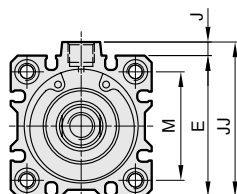
Stroke 5~100



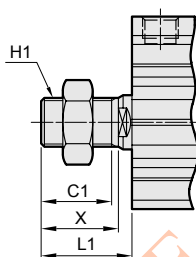
Stroke over 100



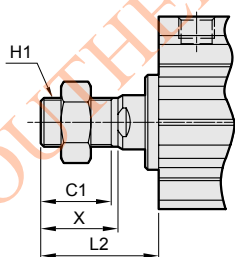
ø40



ø40~ø100
(Stroke 5~100)



ø40~ø80
(Stroke over 100)



HZ05-21 male thread size

Code Tube I.D.	C1	H1	L1	L2	X
40	20.5	M14×1.5	28.5	38.5	23.5
50	26	M18×1.5	33.5	43.5	28.5
63	26	M18×1.5	33.5	43.5	28.5
80	32.5	M22×1.5	43.5	53.5	35.5
100	32.5	M26×1.5	43.5	—	35.5

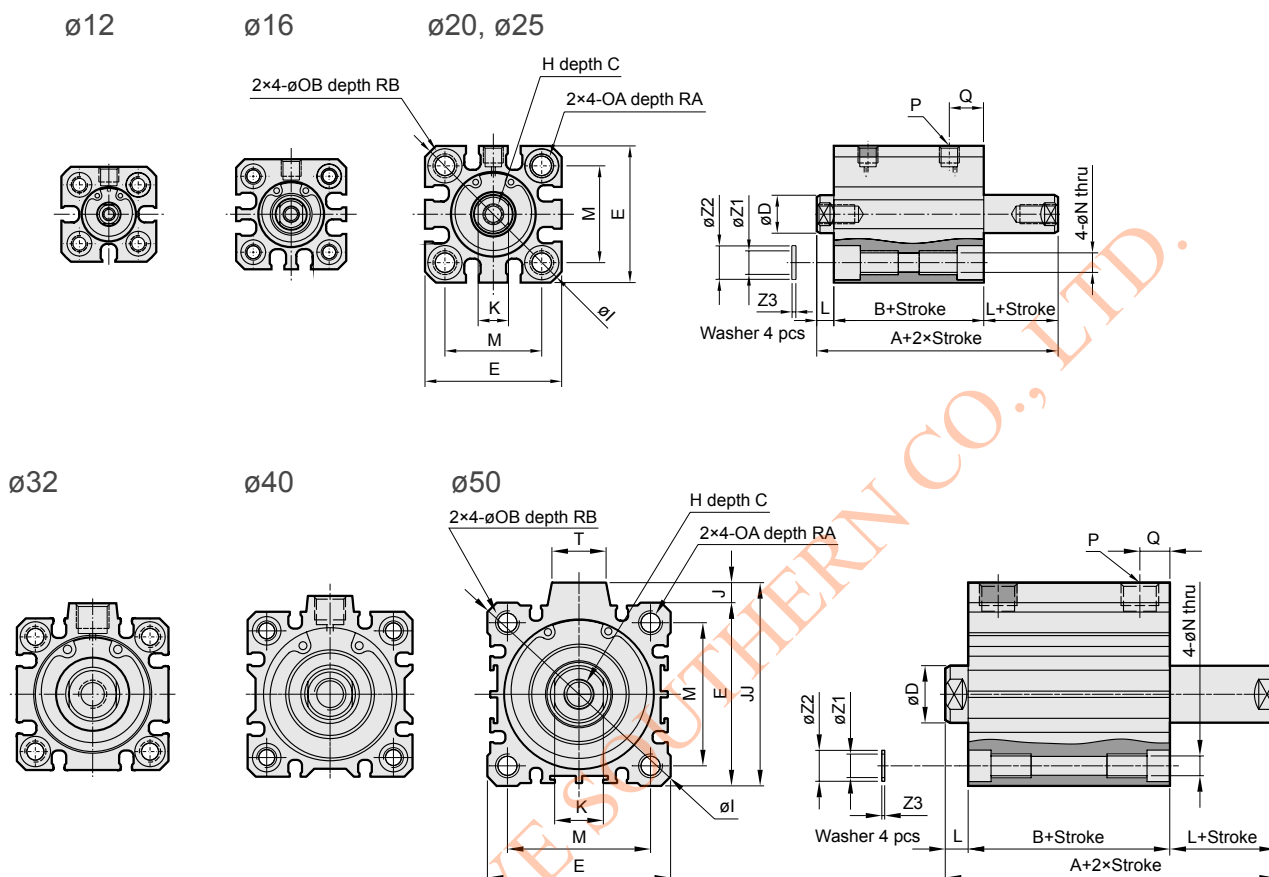
Code Tube I.D.	Standard stroke								Long stroke				
	Stroke range	Without magnet		Magnet		L	Q	Stroke range	A	B	L	Q	
		A	B	A	B								
40	5~50	54	40	64	50	7	14	101~300	89	55	17	14	
	51~100	64	50										
50	5~50	56.5	40.5	66.5	50.5	8	14	101~300	91.5	55.5	18	14	
	51~100	66.5	50.5										
63	5~50	58	42	68	52	8	15.5	101~300	93	57	18	16.5	
	51~100	68	52										
80	5~50	71	51	81	61	10	18	101~300	106	66	20	19	
	51~100	81	61										
100	5~50	84.5	60.5	94.5	70.5	12	22						
	51~100	94.5	70.5										

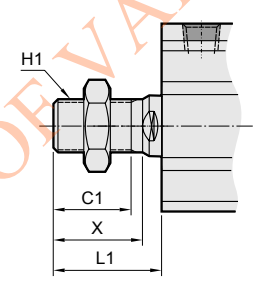
Code Tube I.D.	C	D	E	G ^{h9}	H	I	J	JJ	K	M	N	OA	OB	P	RA	RB	T	Z1	Z2	Z3
40	13	16	52	28 ^{+0/-0.052}	M8×1.25	70	5	57	14	40	5.5	M6×1.0	9	Rc1/8	10	7	14	6.2	8.8	1
50	15	20	64	35 ^{+0/-0.062}	M10×1.5	86	7	71	17	50	6.6	M8×1.25	11	Rc1/4	14	8	19	8.2	10.8	1
63	15	20	77	35 ^{+0/-0.062}	M10×1.5	103	7	84	17	60	9	M10×1.5	14	Rc1/4 (*1)	18	10.5	19	10.2	13.8	1
80	21	25	98	43 ^{+0/-0.062}	M16×2.0	132	6	104	22	77	11	M12×1.75	17.5	Rc3/8 (*2)	22	13.5	26	12.2	17.3	2
100	27	30	117	—	M20×2.5	156	6.5	123.5	27	94	11	M12×1.75	17.5	Rc3/8 (*2)	22	13.5	26	12.2	17.3	2

*1. Without magnet with stroke=5mm, P=Rc1/8

*2. Without magnet with stroke=5mm, P=Rc1/4

COMPACT CYLINDER





Code Tube I.D.	C1	H1	L1	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5
32	20.5	M14×1.5	28.5	23.5
40	20.5	M14×1.5	28.5	23.5
50	26	M18×1.5	33.5	28.5

* L1: Standard stroke

Code Tube I.D.	Standard stroke						C	D	E	H	I	J	JJ	K	L	M	N	OA	OB	P	Q	RA	RB	T	Z1	Z2	Z3
	Stroke range	Without magnet		Magnet																							
		A	B	A	B																						
12	5,10	29	22	34	27	6	6	25	M3×0.5	32	—	—	5	3.5	15.5	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	—	4.2	6.3	0.5	
16	5,10	29	22	34	27	8	8	29	M4×0.7	38	—	—	6	3.5	20	3.5	M4×0.7	6.5	M5×0.8	7.5	7	4	—	4.2	6.3	0.5	
20	5,10	35	26	45	36	7	10	36	M5×0.8	47	—	—	8	4.5	25.5	5.4	M6×1.0	9	M5×0.8	9	10	7	—	6.2	8.8	1	
25	5,10	39	29	49	39	12	12	40	M6×1.0	52	—	—	10	5	28	5.4	M6×1.0	9	M5×0.8	11	10	7	—	6.2	8.8	1	
32	5,10	44.5	30.5	54.5	40.5	13	16	45	M8×1.25	60	4.5	49.5	14	7	34	5.5	M6×1.0	9	Rc1/8 (*1)	12.5	10	7	14	6.2	8.8	1	
40	5,10	54	40	64	50	13	16	52	M8×1.25	70	5	57	14	7	40	5.5	M6×1.0	9	Rc1/8	14	10	7	14	6.2	8.8	1	
50	5~20	56.5	40.5	66.5	50.5	15	20	64	M10×1.5	86	7	71	17	8	50	6.5	M8×1.25	11	Rc1/4	14	14	8	19	8.2	10.8	1	

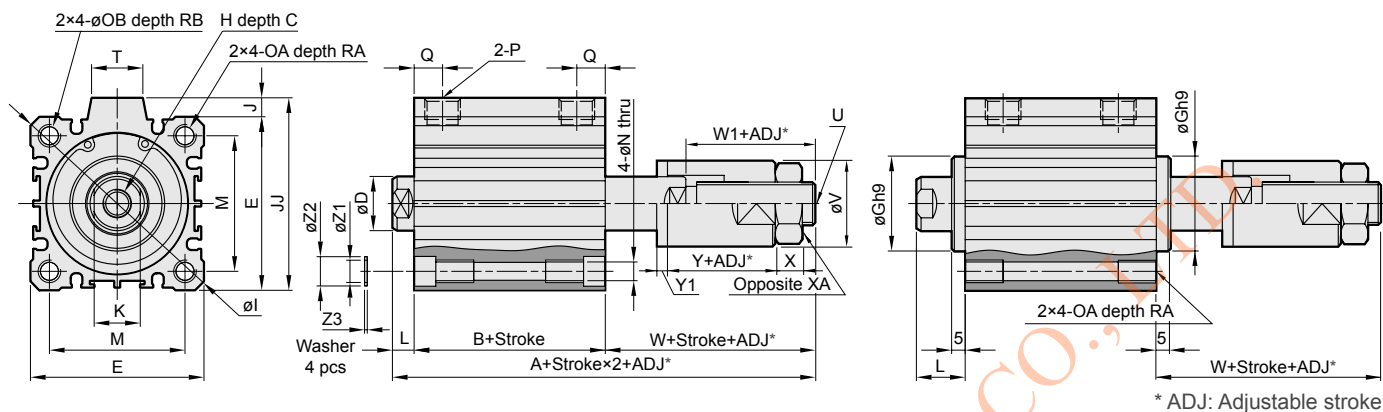
*1. Without magnet with stroke=5mm, P=M5×0.8

COMPACT CYLINDER

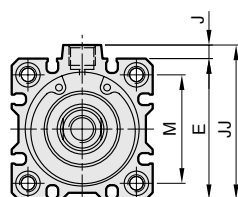
ø50~ø100

Stroke 5~100

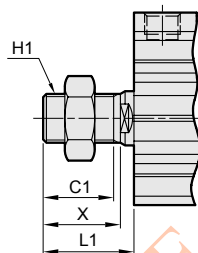
Stroke over 100



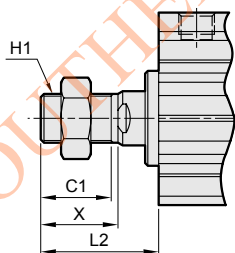
ø40



ø40~ø100
(Stroke 5~100)



ø40~ø80
(Stroke over 100)



HZ05-27 male thread size

Code Tube I.D.	C1	H1	L1	L2	X
40	20.5	M14×1.5	28.5	38.5	23.5
50	26	M18×1.5	33.5	43.5	28.5
63	26	M18×1.5	33.5	43.5	28.5
80	32.5	M22×1.5	43.5	53.5	35.5
100	32.5	M26×1.5	43.5	—	35.5

Code Tube I.D.	Standard stroke								Long stroke					
	Stroke range	Without magnet		Magnet		L	Q	W	Stroke range	A	B	L	Q	W
		A	B	A	B									
40	5~50	71	40	81	50	7	14	24	101~300	102.5	55	17	14	30.5
	51~100	81	50											
50	5~50	75	40.5	85	50.5	8	14	26.5	101~300	105.5	55.5	18	14	32
	51~100	85	50.5											
63	5~50	80	42	90	52	8	15.5	30	101~300	110	57	18	16.5	35
	51~100	90	52											
80	5~50	100	51	110	61	10	18	39	101~300	130	66	20	19	44
	51~100	110	61											
100	5~50	111	60.5	121	70.5	12	22	38.5	—					
	51~100	121	70.5											

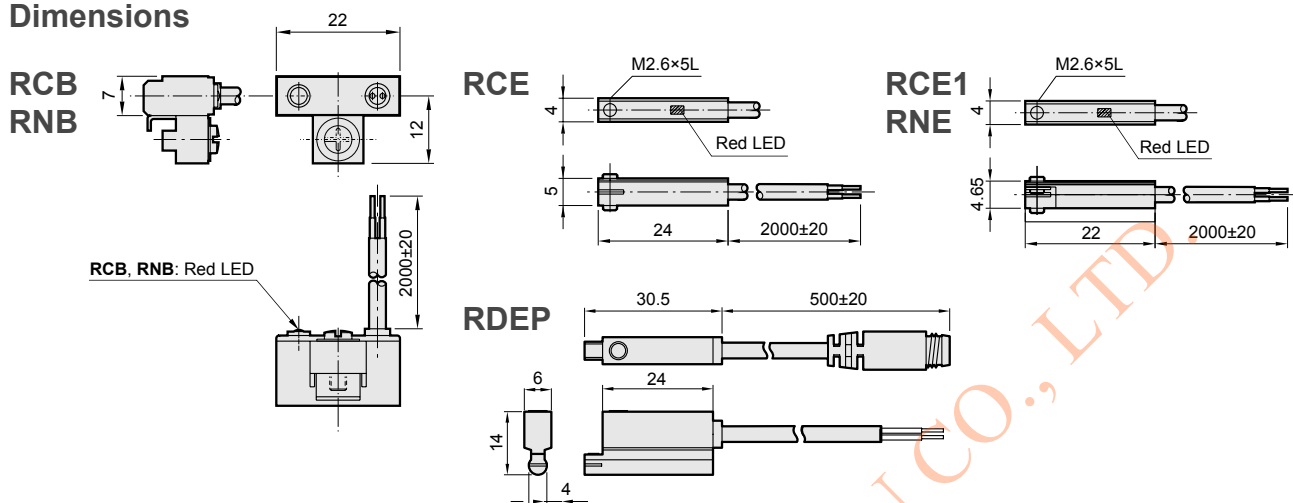
Code Tube I.D.	C	D	E	G ^{h9}	H	I	J	JJ	K	M	N	OA	OB	P	RA	RB	T	U	V	W1	X	XA	Y	Y1	Z1	Z2	Z3
40	13	16	52	28 ^{+0/-0.052}	M8×1.25	70	5	57	14	40	5.5	M6×1.0	9	Rc1/8	10	7	14	M12×1.25	30	21	7	19	12	2	6.2	8.8	1
50	15	20	64	35 ^{+0/-0.062}	M10×1.5	86	7	71	17	50	6.6	M8×1.25	11	Rc1/4	14	8	19	M16×1.5	40	22.5	8	24	15	2	8.2	10.8	1
63	15	20	77	35 ^{+0/-0.062}	M10×1.5	103	7	84	17	60	9	M10×1.5	14	Rc1/4 (*1)	18	10.5	19	M16×1.5	40	25.5	8	24	15	2	10.2	13.8	1
80	21	25	98	43 ^{+0/-0.062}	M16×2.0	132	6	104	22	77	11	M12×1.75	17.5	Rc3/8 (*2)	22	13.5	26	M22×1.5	50	33	13	32	20	3	12.2	17.3	2
100	27	30	117	—	M20×2.5	156	6.5	123.5	27	94	11	M12×1.75	17.5	Rc3/8 (*2)	22	13.5	26	M22×1.5	50	33	13	32	20	3	12.2	17.3	2

*1. Without magnet with stroke=5mm, P=Rc1/8

*2. Without magnet with stroke=5mm, P=Rc1/4

COMPACT CYLINDER

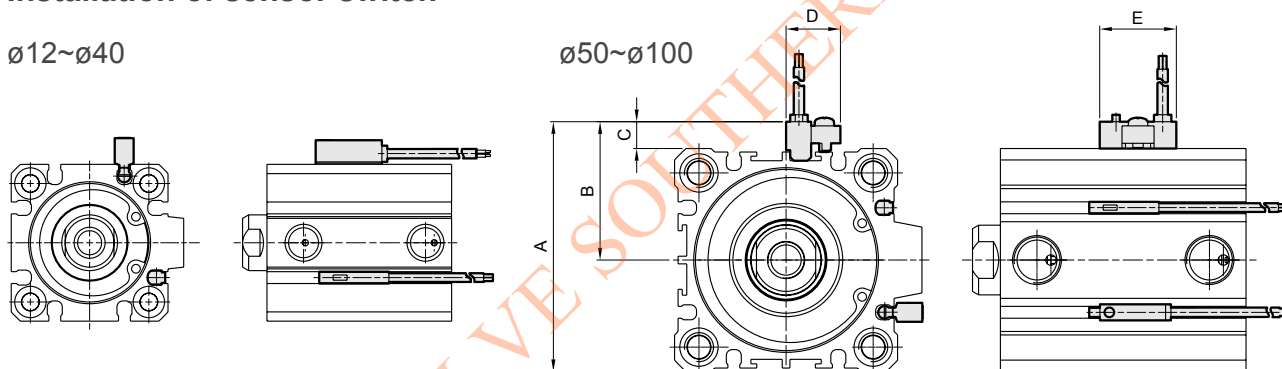
Dimensions



Installation of sensor switch

$\phi 12 \sim \phi 40$

$\phi 50 \sim \phi 100$



Order example

RCE1 — □

MODEL

RCB / RCE / RCE1 (C: Reed switch)

RNB / RNE (N: Solid state switch)

RDEP (Solid state switch)

WIRE LENGTH

Blank: L=2000m

1M: L=1000m

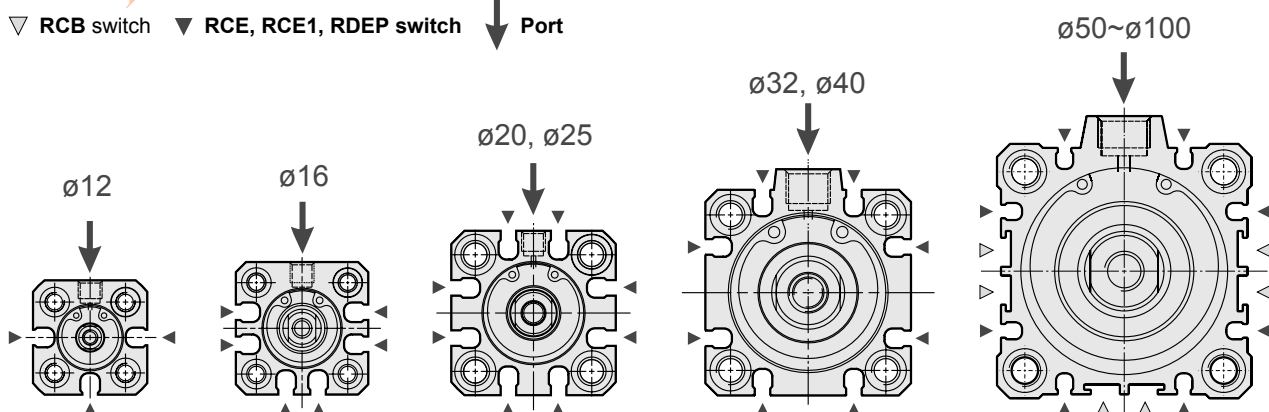
QD: M8 3Pin connector

EQD: M8 3Pin connector

Code Tube I.D.	A	B	C	D	E
50	72	40	8	16	22
63	85	46.5	8	16	22
80	106	57	8	16	22
100	125	66.5	8	16	22

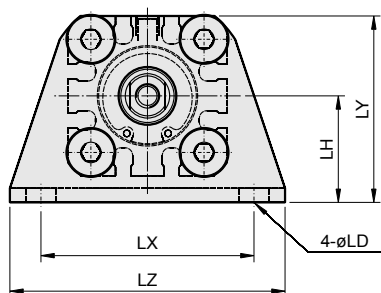
Description

▽ RCB switch ▼ RCE, RCE1, RDEP switch ↓ Port

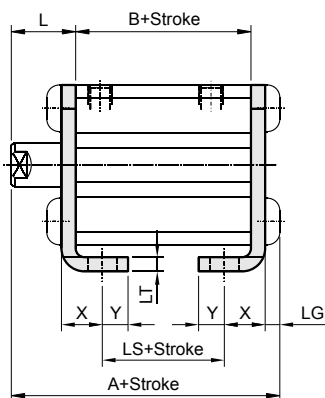


COMPACT CYLINDER

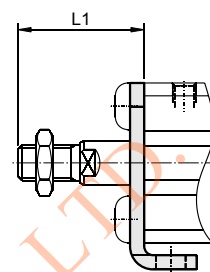
LB



Female thread

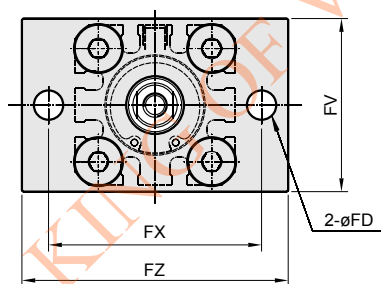


Male thread

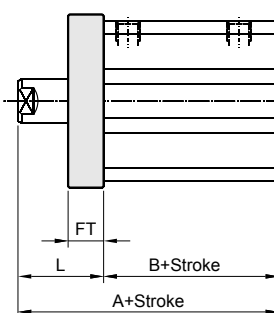


Code	Standard stroke							Long stroke				L	L1	LD	LG	LH	LT	LX	LY	LZ	X	Y	
	Stroke range	Without magnet			Magnet			Stroke range	A	B	LS												
		A	B	LS	A	B	LS																
Tube I.D.																							
12	5~30	35.3	17	5	40.3	22	10	35~100	50.3	32	20	13.5	24	4.5	2.8	17	2	34	29.5	44	8	4.5	
16	5~30	35.3	17	5	40.3	22	10	35~100	50.3	32	20	13.5	25.5	4.5	2.8	19	2	38	33.5	48	8	5	
20	5~50	41.2	19.5	7.5	51.2	29.5	17.5	75~200	62.7	41	29	14.5	28.5	6.6	4	24	3.2	48	42	62	9.2	5.8	
25	5~50	44.7	22.5	7.5	54.7	32.5	17.5	75~300	66.2	44	29	15	32.5	6.6	4	26	3.2	52	46	66	10.7	5.8	

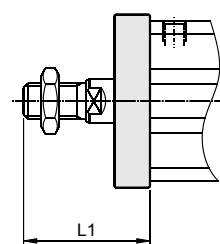
FAC



Female thread



Male thread



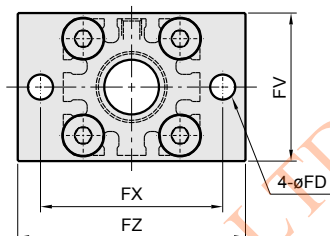
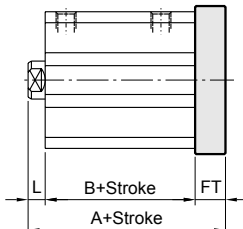
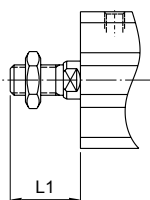
Code	Standard stroke					Long stroke			FD	FT	FV	FX	FZ	L	L1
	Stroke range	Without magnet		Magnet		Stroke range	A	B							
		A	B	A	B										
12	5~30	30.5	17	35.5	22	35~100	45.5	32	4.5	5.5	25	45	55	13.5	24
16	5~30	30.5	17	35.5	22	35~100	45.5	32	4.5	5.5	30	45	55	13.5	25.5
20	5~50	34	19.5	44	29.5	75~200	55.5	41	6.6	8	39	48	60	14.5	28.5
25	5~50	37.5	22.5	47.5	32.5	75~300	59	44	6.6	8	42	52	64	15	32.5

COMPACT CYLINDER

FBC

Male thread

Female thread

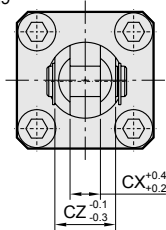
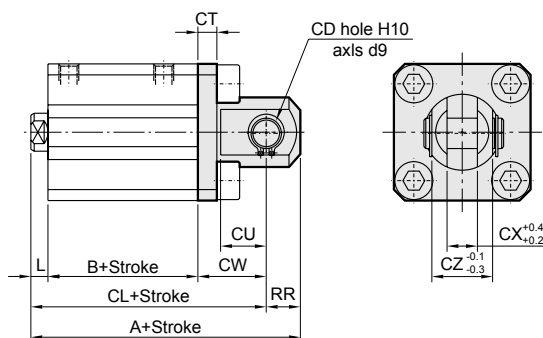
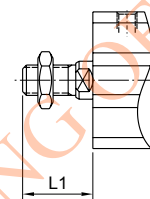


Code	Standard stroke										Long stroke					FD	FT	FV	FX	FZ
	Stroke range	Without magnet				Magnet				Stroke range	A	B	L	L1						
		A	B	L	L1	A	B	L	L1											
12	5~30	26	17	3.5	14	31	22	3.5	14	35~100	51	32	13.5	24	4.5	5.5	25	45	55	
16	5~30	26	17	3.5	15.5	31	22	3.5	15.5	35~100	51	32	13.5	25.5	4.5	5.5	30	45	55	
20	5~50	32	19.5	4.5	18.5	42	29.5	4.5	18.5	75~200	63.5	41	14.5	28.5	6.6	8	39	48	60	
25	5~50	35.5	22.5	5	22.5	45.5	32.5	5	22.5	75~300	67	44	15	32.5	6.6	8	42	52	64	

CB

Male thread

Female thread

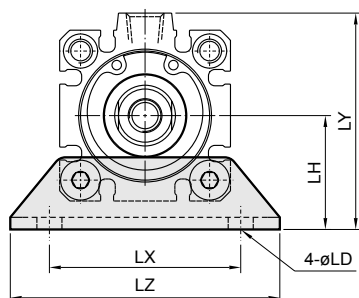


Code	Standard stroke											Long stroke						CD	CT	CU	CW	CX	CZ	RR
	Stroke range	Without magnet					Magnet					Stroke range	A	B	CL	L	L1							
		A	B	CL	L	L1	A	B	CL	L	L1													
12	5~30	40.5	17	34.5	3.5	14	45.5	22	39.5	3.5	14	35~100	65.5	32	59.5	13.5	24	5	4	7	14	5	10	6
16	5~30	41.5	17	35.5	3.5	15.5	46.5	22	40.5	3.5	15.5	35~100	66.5	32	60.5	13.5	25.5	5	4	10	15	6.5	12	6
20	5~50	51	19.5	42	4.5	18.5	61	29.5	52	4.5	18.5	75~200	82.5	41	73.5	14.5	28.5	8	5	12	18	8	16	9
25	5~50	57.5	22.5	47.5	5	22.5	67.5	32.5	57.5	5	22.5	75~300	89	44	79	15	32.5	10	5	14	20	10	20	10

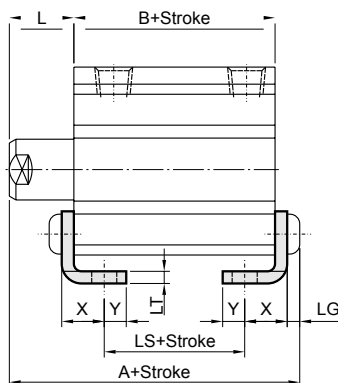
COMPACT CYLINDER

LB

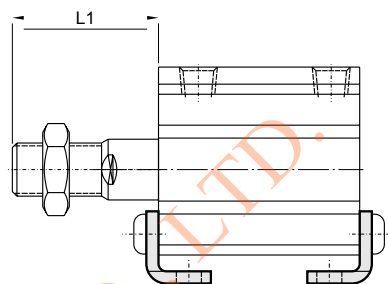
Standard stroke



Female thread

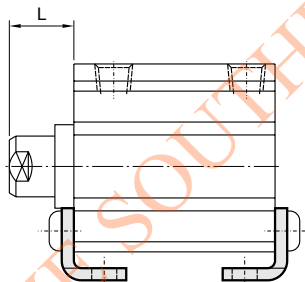


Male thread

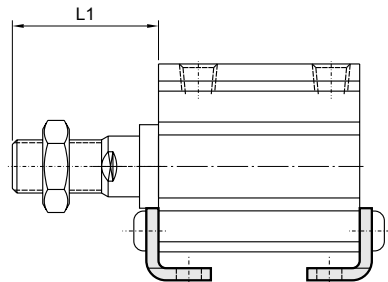


Long stroke

Female thread



Male thread



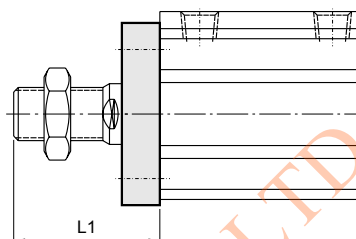
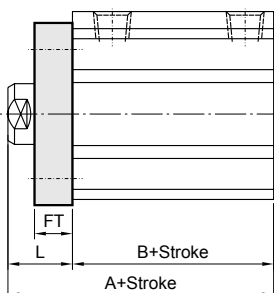
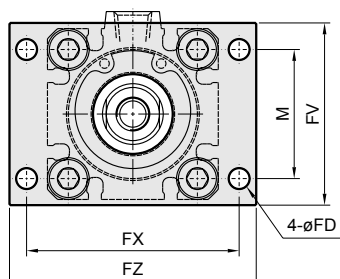
Code	Standard stroke							Long stroke				L	L1	LD	LG	LH	LT	LX	LY	LZ	X	Y
	Stroke range	Without magnet			Magnet			Stroke range	A	B	LS											
		A	B	LS	A	B	LS															
32	5~50	47.2	23	7	57.2	33	17	125~300	69.7	45.5	29.5	17	38.5	6.6	4	30	3.2	57	57	71	11.2	5.8
	75,100	57.2	33	17																		
40	5~50	53.7	29.5	13.5	63.7	39.5	23.5	125~300	79.2	55	39	17	38.5	6.6	4	33	3.2	64	64	78	11.2	7
	75,100	63.7	39.5	23.5																		
50	5~50	56.7	30.5	7.5	66.7	40.5	17.5	125~300	81.7	55.5	32.5	18	43.5	9	5	39	3.2	79	78	95	14.7	8
	75,100	66.7	40.5	17.5																		
63	5~50	62.2	36	10	72.2	46	20	125~300	83.2	57	31	18	43.5	11	5	46	3.2	95	91.5	113	16.2	9
	75,100	72.2	46	20																		
80	5~50	75	43.5	13.5	85	53.5	23.5	125~300	97.5	66	36	20	53.5	13	7	59	4.5	118	114	140	19.5	11
	75,100	85	53.5	23.5																		
100	5~50	88	53	19	98	63	29	125~300	—	—	—	22	53.5	13	7	71	6	137	136	162	23	12.5
	75,100	98	63	29																		

COMPACT CYLINDER

FAC

Female thread

Male thread



Code	Standard stroke					Long stroke			FD	FT	FV	FX	FZ	L	L1	M
	Stroke range	Without magnet		Magnet		Stroke range	A	B								
		A	B	A	B											
32	5~50	40	23	50	33	125~300	62.5	45.5	5.5	8	48	56	65	17	38.5	34
	75,100	50	33													
40	5~50	46.5	29.5	56.5	39.5	125~300	72	55	5.5	8	54	62	72	17	38.5	40
	75,100	56.5	39.5													
50	5~50	48.5	30.5	58.5	40.5	125~300	73.5	55.5	6.6	9	67	76	89	18	43.5	50
	75,100	58.5	40.5													
63	5~50	54	36	64	46	125~300	75	57	9	9	80	92	108	18	43.5	60
	75,100	64	46													
80	5~50	63.5	43.5	73.5	53.5	125~300	86	66	11	11	99	116	134	20	53.5	77
	75,100	73.5	53.5													
100	5~50	75	53	85	63	125~300	—	—	11	11	117	136	154	22	53.5	94
	75,100	85	63													

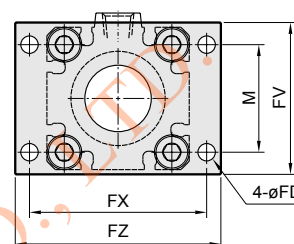
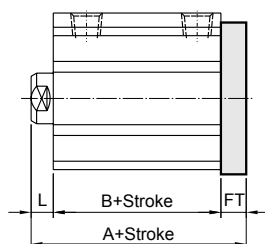
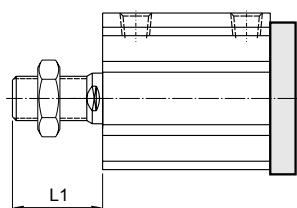
COMPACT CYLINDER

FBC

Standard stroke

Male thread

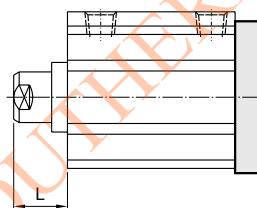
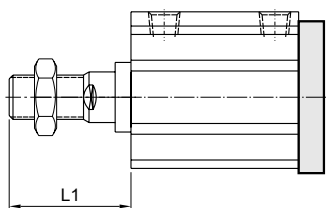
Female thread



Long stroke

Male thread

Female thread



Code	Standard stroke							Long stroke					FD	FT	FV	FX	FZ	M
	Stroke range	Without magnet		Magnet		L	L1	Stroke range	A	B	L	L1						
		A	B	A	B													
32	5~50	38	23	48	33	7	28.5	125~300	70.5	45.5	17	38.5	5.5	8	48	56	65	34
	75,100	48	33															
40	5~50	44.5	29.5	54.5	39.5	7	28.5	125~300	80	55	17	38.5	5.5	8	54	62	72	40
	75,100	54.5	39.5															
50	5~50	47.5	30.5	57.5	40.5	8	33.5	125~300	82.5	55.5	18	43.5	6.6	9	67	76	89	50
	75,100	57.5	40.5															
63	5~50	53	36	63	46	8	33.5	125~300	84	57	18	43.5	9	9	80	92	108	60
	75,100	63	46															
80	5~50	64.5	43.5	74.5	53.5	10	43.5	125~300	97	66	20	53.5	11	11	99	116	134	77
	75,100	74.5	53.5															
100	5~50	76	53	86	63	12	43.5	125~300	—	—	—	—	11	11	117	136	154	94
	75,100	86	63															

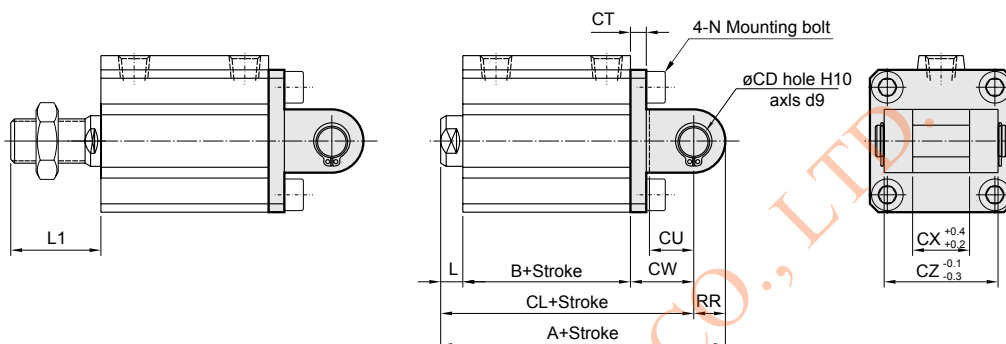
COMPACT CYLINDER

CB

Standard stroke

Male thread

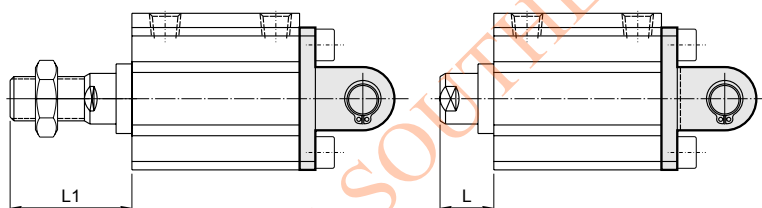
Female thread



Long stroke

Male thread

Female thread

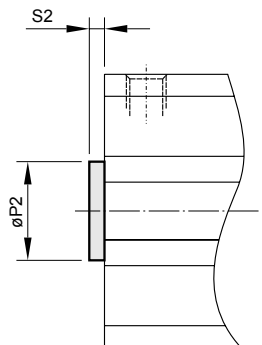


Code	Standard stroke									Long stroke						CD	CT	CU	CW	CX	CZ	N	RR
	Stroke range	Without magnet			Magnet			L	L1	Stroke range	A	B	CL	L	L1								
		A	B	CL	A	B	CL																
32	5~50	60	23	50	70	33	60	7	28.5	125~300	92.5	45.5	82.5	17	38.5	10	5	14	20	18	36	M6×1.0	10
	75,100	70	33	60																			
40	5~50	68.5	29.5	58.5	78.5	39.5	68.5	7	28.5	125~300	104	55	94	17	38.5	10	6	14	22	18	36	M6×1.0	10
	75,100	78.5	39.5	68.5																			
50	5~50	80.5	30.5	66.5	90.5	40.5	76.5	8	33.5	125~300	115.5	55.5	101.5	18	43.5	14	7	20	28	22	44	M8×1.25	14
	75,100	90.5	40.5	76.5																			
63	5~50	88	36	74	98	46	84	8	33.5	125~300	119	57	105	18	43.5	14	8	20	30	22	44	M10×1.5	14
	75,100	98	46	84																			
80	5~50	109.5	43.5	91.5	119.5	53.5	101.5	10	43.5	125~300	142	66	124	20	53.5	18	10	27	38	28	56	M12×1.75	18
	75,100	119.5	53.5	101.5																			
100	5~50	132	53	110	142	63	120	12	43.5	125~300	—	—	—	—	—	22	13	31	45	32	64	M12×1.75	22
	75,100	142	63	120																			

COMPACT CYLINDER

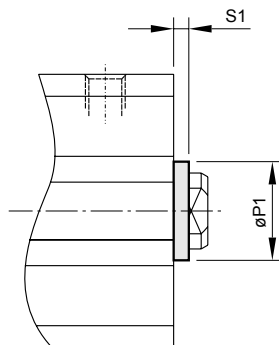
F

Rear flange



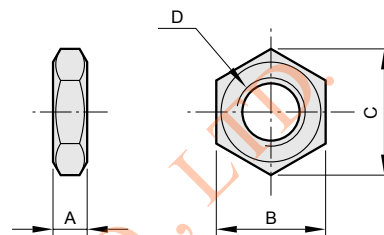
Code Tube I.D.	P2 ^{h9}	S2
12	6	1.5
16	10	1.5
20	13	2
25	15	2
32	21	2
40	28	2
50	35	2
63	35	2
80	43	2
100	59	2

RF



Code Tube I.D.	P1 ^{h9}	S1
12	15	1.5
16	20	1.5
20	13	2
25	15	2
32	21	2
40	28	2
50	35	2
63	35	2
80	43	2
100	59	2

Rod front nut



Code Tube I.D.	A	B	C	D
12	4	8	9.2	M5×0.8
16	5	10	11.5	M6×1.0
20	5	13	15	M8×1.25
25	6	17	19.6	M10×1.25
32,40	8	22	25.4	M14×1.5
50,63	11	27	31.4	M18×1.5
80	13	32	37	M22×1.5
100	16	41	47.3	M26×1.5

Pin for CB

Order example

PIN — HZ05 — 20 — CB — P

PIN

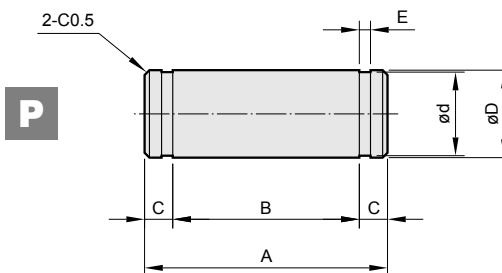
TUBE I.D.

12
16
20
25
32
40
50
63
80
100

TYPE

CB: for CB accessory

P: With split pin



Code Tube I.D.	A	B	C	øD ^{g9}	ød	E	Snap ring
12	14.6	10.2	2.2	5 ^{-0.03 -0.06}	4.8 ^{0 -0.04}	0.7 ^{+0.10 0}	STW-5
16	16.6	12.2	2.2	5 ^{-0.03 -0.06}	4.8 ^{0 -0.04}	0.7 ^{+0.10 0}	STW-5
20	21	16.2	2.4	8 ^{-0.04 -0.08}	7.6 ^{0 -0.06}	0.9 ^{+0.10 0}	STW-8
25	25.6	20.2	2.7	10 ^{-0.04 -0.08}	9.6 ^{0 -0.06}	1.15 ^{+0.14 0}	STW-10
32,40	41.6	36.2	2.7	10 ^{-0.04 -0.08}	9.6 ^{0 -0.09}	1.15 ^{+0.14 0}	STW-10
50,63	50.6	44.2	3.2	14 ^{-0.05 -0.10}	13.4 ^{0 -0.11}	1.15 ^{+0.14 0}	STW-14
80	64	56.2	3.9	18 ^{-0.05 -0.10}	17.0 ^{0 -0.11}	1.35 ^{+0.14 0}	STW-18
100	72	64.2	3.9	22 ^{-0.07 -0.12}	21.0 ^{0 -0.21}	1.35 ^{+0.14 0}	STW-22