

Compact Cylinder with Lock Double Acting, Single Rod Series **CLQ**

ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

How to Order

Without auto switch

CLQ B 40 30 D F

With auto switch

CDLQ B 40 30 D F F9BW S

ø20, ø25

B	Through-hole/ Both ends tapped common (Standard)
L	Foot style
F	Rod side flange style
G	Head side flange style
D	Double clevis style

ø32 to ø100

B	Through-hole (Standard)
A	Both ends tapped style
L	Foot style
F	Rod side flange style
G	Head side flange style
D	Double clevis style

* Mounting bracket is shipped together, (but not assembled).

Built-in magnet

Mounting style

Thread type

Nil	Rc
TN	NPT

Number of auto switches

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

Auto switch

Nil	Without auto switch (Built-in magnet)
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* For the applicable auto switch model, refer to the table below.
* Auto switches are shipped together, (but not assembled).

Locking direction

F	Extension locking
B	Retraction locking

Body option

Nil	Standard (Rod end female thread)
C	With rubber bumper
M	Rod end male thread
CM	With rubber bumper, Rod end male thread

Action

D	Double acting
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Bore size

20	20 mm	50	50 mm
25	25 mm	63	63 mm
32	32 mm	80	80 mm
40	40 mm	100	100 mm

Cylinder stroke (mm)

For "Standard strokes" and "Manufacture of Intermediate of Stroke", refer to page 9-10-9.

Applicable Auto Switch/Refer to page 9-15-1 for further information on auto switches.

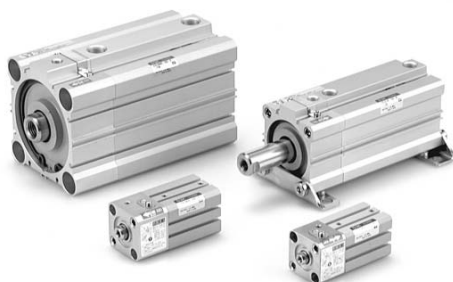
Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Rail mounting		Direct mounting		Lead wire length (m)*				Pre-wire connector	Applicable load			
					DC	AC	ø32 to ø100		ø20 to ø100		0.5 (Nil)	3 (L)	5 (Z)	None (N)		IC circuit	Relay, PLC		
						Perpendicular	In-line	Perpendicular	In-line										
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A76H	A96V	A96	●	●	—	—	—	—	Relay, PLC		
				—	—	200 V	A72	A72H	—	—	●	●	—	—					
		Connector		2-wire	24 V	12 V	100 V	—	—	A93V	A93	●	●	●	—			—	
				—	—	—	A73C	—	—	—	—	●	●	—	—				
Solid state switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	F7NV	F79	M9NV	M9N	●	●	○	—	○	IC circuit	—		
				3-wire (PNP)			F7PV	F7P	M9PV	M9P	●	●	○	—	○				
		Connector		2-wire	12 V	—	F7BV	J79	M9BV	M9B	●	●	○	—	○	—	—		
				—	—	—	J79C	—	—	—	●	●	●	●	—				
		Grommet		Diagnostic indication (2-color indication)	3-wire (NPN)	24 V	5 V, 12 V	—	F7NWW	F79W	F9NWW	F9NW	●	●	○	—	○	IC circuit	Relay, PLC
					3-wire (PNP)	—	—	F7PW	F9PW	F9PW	●	●	○	—	○				
				With diagnostic output (2-color indication)	2-wire	12 V	—	F7BWW	J79W	F9BWW	F9BW	●	●	○	—	○	—	—	
					—	—	—	F7BA	—	—	—	—	●	○	—	○			
		With diagnostic output (2-color indication)		4-wire(NPN)	5 V, 12 V	—	—	F79F	—	—	—	●	●	○	—	○	IC circuit	—	
				—	—	—	—	—	—	—	—	—	—	—	—	—			

* Lead wire length symbols: 0.5 m..... Nil (Example) A73C 5 m.....Z (Example) A73CZ 3 m..... L (Example) A73CL None..... N (Example) A73CN * Solid state switches marked with "○" are produced upon receipt of order.

• Since there are other applicable auto switches than listed, refer to page 9-10-28 for details.
• For details about auto switches with pre-wire connector, refer to page 9-15-66.

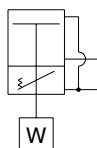
Compact Cylinder with Lock Double Acting, Single Rod Series CLQ

Cylinder Specifications

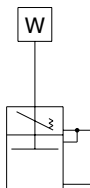


JIS Symbol

Extension locking



Retraction locking



Made to Order Specifications
(For details, refer to page 9-16-1.)

Symbol	Specifications
-XA□	Change of rod end shape

Bore size (mm)	20	25	32	40	50	63	80	100
Action	Double acting, Single rod							
Fluid	Air							
Proof pressure	1.5 MPa							
Maximum operating pressure	1.0 MPa							
Minimum operating pressure	0.2 MPa ^{Note)}							
Ambient and fluid temperature	Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)							
Lubrication	Non-lube							
Piston speed	50 to 500 mm/s							
Stroke length tolerance	$^{+0.1}_0$ mm							
Cushion	None or rubber bumper							
Rod end thread tolerance	JIS Class 2							
Port size	M5 x 0.8		Rc 1/8		Rc 1/4		Rc 3/8	

Note) The minimum operating pressure of the cylinder is 0.1 MPa when the cylinder and lock are connected to separate ports.

Lock Specifications

Bore size (mm)	20	25	32	40	50	63	80	100
Locking action	Spring locking (Exhaust locking)							
Unlocking pressure	0.2 MPa or more							
Lock starting pressure	0.05 MPa or less							
Locking direction	One direction (Either extension locking or retraction locking)							
Unlocking port size	M5 x 0.8				Rc 1/8			Rc 1/4
Holding force (N) (Maximum static load)	157	245	402	629	982	1559	2513	3927
	Equivalent to 0.5 MPa							

Standard Stroke

Bore size (mm)	Standard stroke (mm)
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40, 50, 63, 80, 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

Manufacture of Intermediate Stroke

Description	Spacer is installed in the standard stroke body.	
Part no.	Refer to "How to Order" for the standard model no. on page 9-10-8.	
Method	Dealing with the stroke by the 1 mm interval is available by installing spacer with standard stroke cylinder.	
Stroke range	Bore size (mm)	Stroke range (mm)
	20, 25	1 to 50
	32, 40, 50, 63, 80, 100	1 to 100
Example	Part no.: CLQB40-47D-B A 3 mm spacer is installed in standard cylinder CLQB40-50D-B. B dimension is 79.5 mm.	

Note) Please consult with SMC regarding intermediate strokes for sizes $\phi 40$ through $\phi 100$ with rubber bumpers.

CL

CL1

MLGC

CNG

MNB

CNA

CNS

CLS

CLQ

MLGP

RLQ

MLU

ML1C

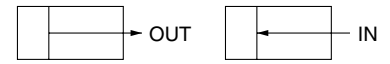
D-

-X

20-

Data

Series CLQ



Theoretical Output

Mounting Bracket Part No.

Bore size (mm)	Foot ⁽¹⁾	Flange	Double clevis ⁽³⁾
20	CLQ-L020	CLQ-F020	CLQ-D020
25	CLQ-L025	CLQ-F025	CLQ-D025
32	CLQ-L032	CLQ-F032	CLQ-D032
40	CLQ-L040	CLQ-F040	CLQ-D040
50	CLQ-L050	CLQ-F050	CLQ-D050
63	CLQ-L063	CLQ-F063	CLQ-D063
80	CLQ-L080	CLQ-F080	CLQ-D080
100	CLQ-L100	CLQ-F100	CLQ-D100

Note 1) When ordering foot bracket, order 2 pieces per cylinder.

Note 2) Parts belonging to each bracket are as follows. Foot, Flange: Body mounting screws, Double clevis: Clevis pin, C type snap ring for shaft, Body mounting screws, Flat washer.

Note 3) Clevis pin and snap ring are included with the double clevis style.

Auto Switch Mounting Bracket/ Part No. (Rail mounting style)

Bore size (mm)	Mounting bracket part no.	Note
32, 40 50, 63 80, 100	BQ-2	<ul style="list-style-type: none"> Switch mounting screw (M3 x 0.5 x 10ℓ) Switch spacer Switch mounting nut

Applicable auto switch

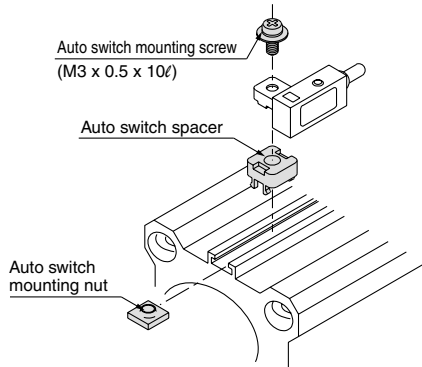
Reed switch	Solid state switch
D-A7□/A80	D-F7□/J79
D-A73C/A80C	D-F7□V
D-A7□H/A80H	D-J79C
D-A79W	D-F7□W/J79W
	D-F7□WV
	D-F7BAL/F7BAVL
	D-F79F
	D-F7NTL

[Mounting screws set made of stainless steel]

The set of stainless steel mounting screws (with nuts) described below is available and can be used depending on the operating environment. (Since the spacer is not included, order it separately.) **BBA2**: For D-A7/A8/F7/J7

The above stainless steel screw kit is used for water resistant auto switch types D-F7BAL and F7BAVL when they are shipped mounted on a cylinder.

When only a switch is shipped independently, "BBA2" screws are attached.



Bore size (mm)	Operating direction	Operating pressure (MPa)		
		0.3	0.5	0.7
20	IN	71	118	165
	OUT	94	157	220
25	IN	113	189	264
	OUT	147	245	344
32	IN	181	302	422
	OUT	241	402	563
40	IN	317	528	739
	OUT	377	628	880
50	IN	495	825	1150
	OUT	589	982	1370
63	IN	841	1400	1960
	OUT	935	1560	2180
80	IN	1360	2270	3170
	OUT	1510	2510	3520
100	IN	2140	3570	5000
	OUT	2360	3930	5500

Weight

Basic Weight: Mounting/Through-hole (Type B)

Bore size (mm)	Standard stroke (mm)											
	5	10	15	20	25	30	35	40	45	50	75	100
20 *	184	199	213	227	241	255	270	284	298	312	—	—
25 *	260	278	295	312	329	346	364	381	398	415	—	—
32	—	407	430	453	475	498	521	544	566	589	754	867
40	—	514	537	560	583	606	630	653	676	699	883	1003
50	—	838	874	910	947	983	1019	1055	1092	1128	1421	1609
63	—	1202	1242	1283	1324	1365	1406	1447	1488	1529	1877	2088
80	—	2229	2297	2364	2432	2500	2568	2636	2704	2771	3344	3678
100	—	3770	3860	3951	4041	4132	4223	4313	4404	4495	5299	5759

* Through-hole and both ends tapped are common for sizes ø20 and ø25.

Basic Weight: Mounting/Both Ends Tapped (Type A)

Bore size (mm)	Standard stroke (mm)										
	10	15	20	25	30	35	40	45	50	75	100
32	405	429	453	475	499	523	546	569	593	763	879
40	542	568	593	619	644	670	695	721	746	947	1079
50	883	922	962	1002	1041	1081	1121	1161	1200	1517	1723
63	1330	1377	1424	1471	1518	1565	1613	1660	1707	2099	2341
80	2468	2545	2623	2700	2778	2856	2933	3011	3089	3729	4113
100	4054	4154	4254	4355	4455	4556	4656	4757	4857	5730	6239

Additional Weight

Bore size (mm)	20	25	32	40	50	63	80	100	
Magnet	35	45	64	77	118	158	261	380	
Rod end male thread	Thread	6	12	26	27	53	53	120	175
	Nut	4	8	17	17	32	32	49	116
With rubber bumper	-2	-3	-3	-7	-9	-18	-31	-56	
Foot style (Including mounting bolt)	152	174	137	149	221	288	638	1009	
Rod side flange style (Including mounting bolt)	127	149	174	208	351	523	998	1307	
Head side flange style (Including mounting bolt)	121	140	159	192	326	498	959	1251	
Double clevis style (Including pin, snap ring, bolt and flat washer)	76	111	145	190	373	518	1064	1839	

Calculation: (Example) CDLQD32-20DCM-B

- Basic weight : CLQA32-20D-.....453 g
 - Additional weight: Magnet..... 64 g
 - Rod end male thread..... 43 g
 - With rubber bumper..... -3 g
 - Double clevis..... 145 g
- 702 g

When auto switches are mounted, add the weight of the auto switch and mounting bracket multiplied by the quantity.

Auto Switch Mounting Bracket Weight

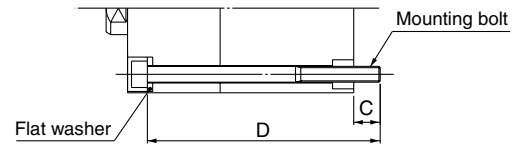
Mounting bracket part no.	Applicable bore size (mm)	Weight (g)
BQ-2	32 to 100	1.5

For the auto switch weight, refer to page 9-15-1.

Compact Cylinder with Lock Double Acting, Single Rod **Series CLQ**

Mounting Bolt for C□LQB

Mounting method: Mounting bolt for through-hole mounting style of C□LQB is available as an option.
Ordering: Add the word "Bolt" in front of the bolts to be used.
Example) Bolt M6 x 90ℓ 4 pcs.



Note) When mounting ø50 to ø100 cylinders from the rod side, be sure to use the attached flat washers because the bearing surface is limited.

CLQB: Without Built-in Magnet

Model	C	D	Mounting bolt	Model	C	D	Mounting bolt	Model	C	D	Mounting bolt	Model	C	D	Mounting bolt
CLQB20-5D	10.5	55	M5 x 55ℓ	CLQB32-10D	7	65	M5 x 65ℓ	CLQB50-10D	12.5	80	M6 x 80ℓ	CLQB80-10D	17	100	M10 x 100ℓ
-10D		60	x 60ℓ	-15D		70	x 70ℓ	-15D		85	x 85ℓ	-15D		105	x 105ℓ
-15D		65	x 65ℓ	-20D		75	x 75ℓ	-20D		90	x 90ℓ	-20D		110	x 110ℓ
-20D		70	x 70ℓ	-25D		80	x 80ℓ	-25D		95	x 95ℓ	-25D		115	x 115ℓ
-25D		75	x 75ℓ	-30D		85	x 85ℓ	-30D		100	x 100ℓ	-30D		120	x 120ℓ
-30D		80	x 80ℓ	-35D		90	x 90ℓ	-35D		105	x 105ℓ	-35D		125	x 125ℓ
-35D		85	x 85ℓ	-40D		95	x 95ℓ	-40D		110	x 110ℓ	-40D		130	x 130ℓ
-40D		90	x 90ℓ	-45D		100	x 100ℓ	-45D		115	x 115ℓ	-45D		135	x 135ℓ
-45D		95	x 95ℓ	-50D		105	x 105ℓ	-50D		120	x 120ℓ	-50D		140	x 140ℓ
-50D		100	x 100ℓ	-75D		140	x 140ℓ	-75D		155	x 155ℓ	-75D		175	x 175ℓ
CLQB25-5D	8.5	60	M5 x 60ℓ	-100D	165	x 165ℓ	-100D	180	x 180ℓ	-100D	200	x 200ℓ			
-10D		65	x 65ℓ	CLQB40-10D	8.5	75	M5 x 75ℓ	CLQB63-10D	16.5	90	M8 x 90ℓ	CLQB100-10D	15.5	115	M10 x 115ℓ
-15D		70	x 70ℓ	-15D		80	x 80ℓ	-15D		95	x 95ℓ	-15D		120	x 120ℓ
-20D		75	x 75ℓ	-20D		85	x 85ℓ	-20D		100	x 100ℓ	-20D		125	x 125ℓ
-25D		80	x 80ℓ	-25D		90	x 90ℓ	-25D		105	x 105ℓ	-25D		130	x 130ℓ
-30D		85	x 85ℓ	-30D		95	x 95ℓ	-30D		110	x 110ℓ	-30D		135	x 135ℓ
-35D		90	x 90ℓ	-35D		100	x 100ℓ	-35D		115	x 115ℓ	-35D		140	x 140ℓ
-40D		95	x 95ℓ	-40D		105	x 105ℓ	-40D		120	x 120ℓ	-40D		145	x 145ℓ
-45D		100	x 100ℓ	-45D		110	x 110ℓ	-45D		125	x 125ℓ	-45D		150	x 150ℓ
-50D		105	x 105ℓ	-50D		115	x 115ℓ	-50D		130	x 130ℓ	-50D		155	x 155ℓ
			-75D	150		x 150ℓ	-75D	165		x 165ℓ	-75D	190		x 190ℓ	
			-100D	175	x 175ℓ	-100D	190	x 190ℓ	-100D	215	x 215ℓ				

CDLQB: With Built-in Magnet

Model	C	D	Mounting bolt	Model	C	D	Mounting bolt	Model	C	D	Mounting bolt	Model	C	D	Mounting bolt
CDLQB20-5D	10.5	65	M5 x 65ℓ	CDLQB32-10D	7	75	M5 x 75ℓ	CDLQB50-10D	12.5	90	M6 x 90ℓ	CDLQB80-10D	17	110	M10 x 110ℓ
-10D		70	x 70ℓ	-15D		80	x 80ℓ	-15D		95	x 95ℓ	-15D		115	x 115ℓ
-15D		75	x 75ℓ	-20D		85	x 85ℓ	-20D		100	x 100ℓ	-20D		120	x 120ℓ
-20D		80	x 80ℓ	-25D		90	x 90ℓ	-25D		105	x 105ℓ	-25D		125	x 125ℓ
-25D		85	x 85ℓ	-30D		95	x 95ℓ	-30D		110	x 110ℓ	-30D		130	x 130ℓ
-30D		90	x 90ℓ	-35D		100	x 100ℓ	-35D		115	x 115ℓ	-35D		135	x 135ℓ
-35D		95	x 95ℓ	-40D		105	x 105ℓ	-40D		120	x 120ℓ	-40D		140	x 140ℓ
-40D		100	x 100ℓ	-45D		110	x 110ℓ	-45D		125	x 125ℓ	-45D		145	x 145ℓ
-45D		105	x 105ℓ	-50D		115	x 115ℓ	-50D		130	x 130ℓ	-50D		150	x 150ℓ
-50D		110	x 110ℓ	-75D		140	x 140ℓ	-75D		155	x 155ℓ	-75D		175	x 175ℓ
CDLQB25-5D	8.5	70	M5 x 70ℓ	-100D	165	x 165ℓ	-100D	180	x 180ℓ	-100D	200	x 200ℓ			
-10D		75	x 75ℓ	CDLQB40-10D	8.5	85	M5 x 85ℓ	CDLQB63-10D	16.5	100	M8 x 100ℓ	CDLQB100-10D	15.5	125	M10 x 125ℓ
-15D		80	x 80ℓ	-15D		90	x 90ℓ	-15D		105	x 105ℓ	-15D		130	x 130ℓ
-20D		85	x 85ℓ	-20D		95	x 95ℓ	-20D		110	x 110ℓ	-20D		135	x 135ℓ
-25D		90	x 90ℓ	-25D		100	x 100ℓ	-25D		115	x 115ℓ	-25D		140	x 140ℓ
-30D		95	x 95ℓ	-30D		105	x 105ℓ	-30D		120	x 120ℓ	-30D		145	x 145ℓ
-35D		100	x 100ℓ	-35D		110	x 110ℓ	-35D		125	x 125ℓ	-35D		150	x 150ℓ
-40D		105	x 105ℓ	-40D		115	x 115ℓ	-40D		130	x 130ℓ	-40D		155	x 155ℓ
-45D		110	x 110ℓ	-45D		120	x 120ℓ	-45D		135	x 135ℓ	-45D		160	x 160ℓ
-50D		115	x 115ℓ	-50D		125	x 125ℓ	-50D		140	x 140ℓ	-50D		165	x 165ℓ
			-75D	150		x 150ℓ	-75D	165		x 165ℓ	-75D	190		x 190ℓ	
			-100D	175	x 175ℓ	-100D	190	x 190ℓ	-100D	215	x 215ℓ				

CL

CL1

MLGC

CNG

MNB

CNA

CNS

CLS

CLQ

MLGP

RLQ

MLU

ML1C

D-

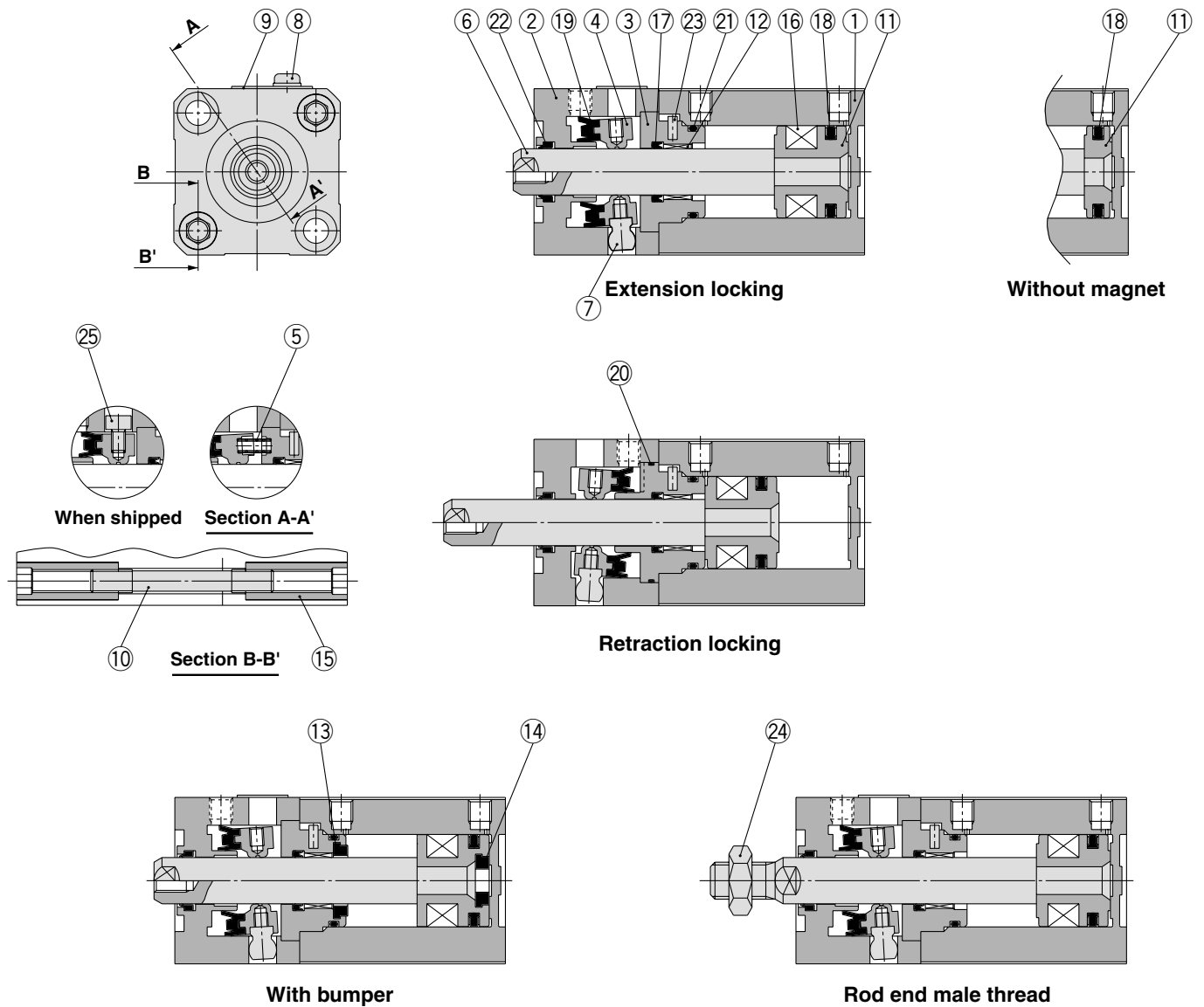
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20-

Data

Series CLQ

Construction: $\phi 20$ to $\phi 32$



Note) The sectional drawing above shows the locked condition. (A bolt is used to maintain the cylinder in the unlocked condition when shipped.)

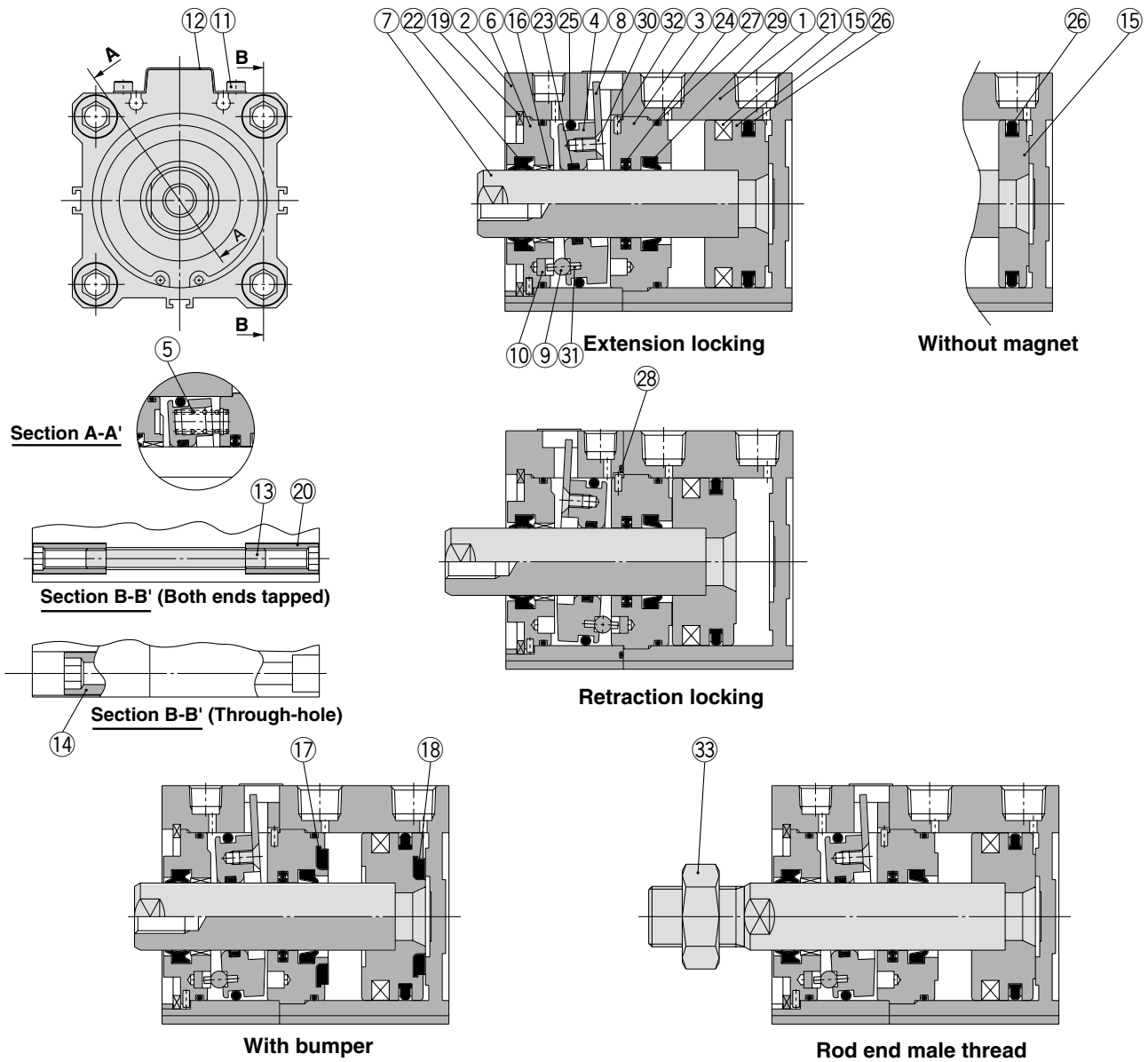
Component Parts

No.	Description	Material	Note
①	Cylinder tube	Aluminum alloy	Hard anodized
②	Lock body	Aluminum alloy	Hard anodized
③	Intermediate collar	Aluminum alloy	Extension locking: Chromated Retraction locking: Hard anodized
④	Lock ring	Carbon steel	Heat treated
⑤	Brake spring	Steel wire	Zinc chromated
⑥	Piston rod	Stainless steel	$\phi 20, 25$: Hard chrome plated
		Carbon steel	$\phi 32$: Hard chrome plated
⑦	Pivot	Chromium molybdenum steel	Electroless nickel plated
⑧	Dust cover holding bolt	Carbon steel	Nickel plated
⑨	Dust cover	Stainless steel	
⑩	Tie-rod	Rolled steel	$\phi 20$: Nickel plated
			$\phi 25$: Zinc chromated
			$\phi 32$: Black zinc chromated
⑪	Piston	Aluminum alloy	Chromated

No.	Description	Material	Note
⑫	Bushing	Oil-impregnated sintered alloy	$\phi 20, 25$
		Lead-bronze casted	$\phi 32$
⑬	Bumper A	Urethane	
⑭	Bumper B	Urethane	
⑮	Tie-rod nut	Carbon steel	Nickel plated
⑯	Magnet	—	
⑰	Rod seal	NBR	
⑱	Piston seal	NBR	
⑲	Lock ring seal	NBR	
⑳	Tube gasket A	NBR	
㉑	Tube gasket B	NBR	
㉒	Scraper	NBR	
㉓	Parallel pin	Stainless steel	JIS B 1354
㉔	Rod end nut	Carbon steel	Nickel plated
㉕	Unlocking bolt	Chromium molybdenum steel	Nickel plated

Compact Cylinder with Lock Double Acting, Single Rod Series CLQ

Construction: $\phi 40$ to $\phi 100$



CL

CL1

MLGC

CNG

MNB

CNA

CNS

CLS

CLQ

MLGP

RLQ

MLU

ML1C

D-

-X

20-

Data

Component Parts

No.	Description	Material	Note
①	Cylinder tube	Aluminum alloy	Hard anodized
②	Lock body	Aluminum alloy	Hard anodized
③	Intermediate collar	Aluminum alloy	Chromated
④	Lock ring	Carbon steel	Heat treated
⑤	Brake spring	Steel wire	Zinc chromated
⑥	Collar	Aluminum bearing alloy	$\phi 40$: Hard anodized
		Aluminum alloy casted	$\phi 50$ to $\phi 100$: Chromated, painted
⑦	Piston rod	Carbon steel	Hard chrome plated
⑧	Lever	Stainless steel	
⑨	Pivot pin	Carbon steel	Zinc chromated
⑩	Pivot key	Carbon steel	Zinc chromated
⑪	Dust cover holding bolt	Chromium molybdenum steel	Nickel plated
⑫	Dust cover	Rolled steel	Nickel plated
⑬	Tie-rod	Rolled steel	$\phi 40$, Chromated
		Carbon steel	$\phi 50$ or larger, Chromated
⑭	Unit holding bolt	Carbon steel	Nickel plated
⑮	Piston	Aluminum alloy	Chromated
⑯	Bushing	Lead-bronze casted	For $\phi 50$ or larger only

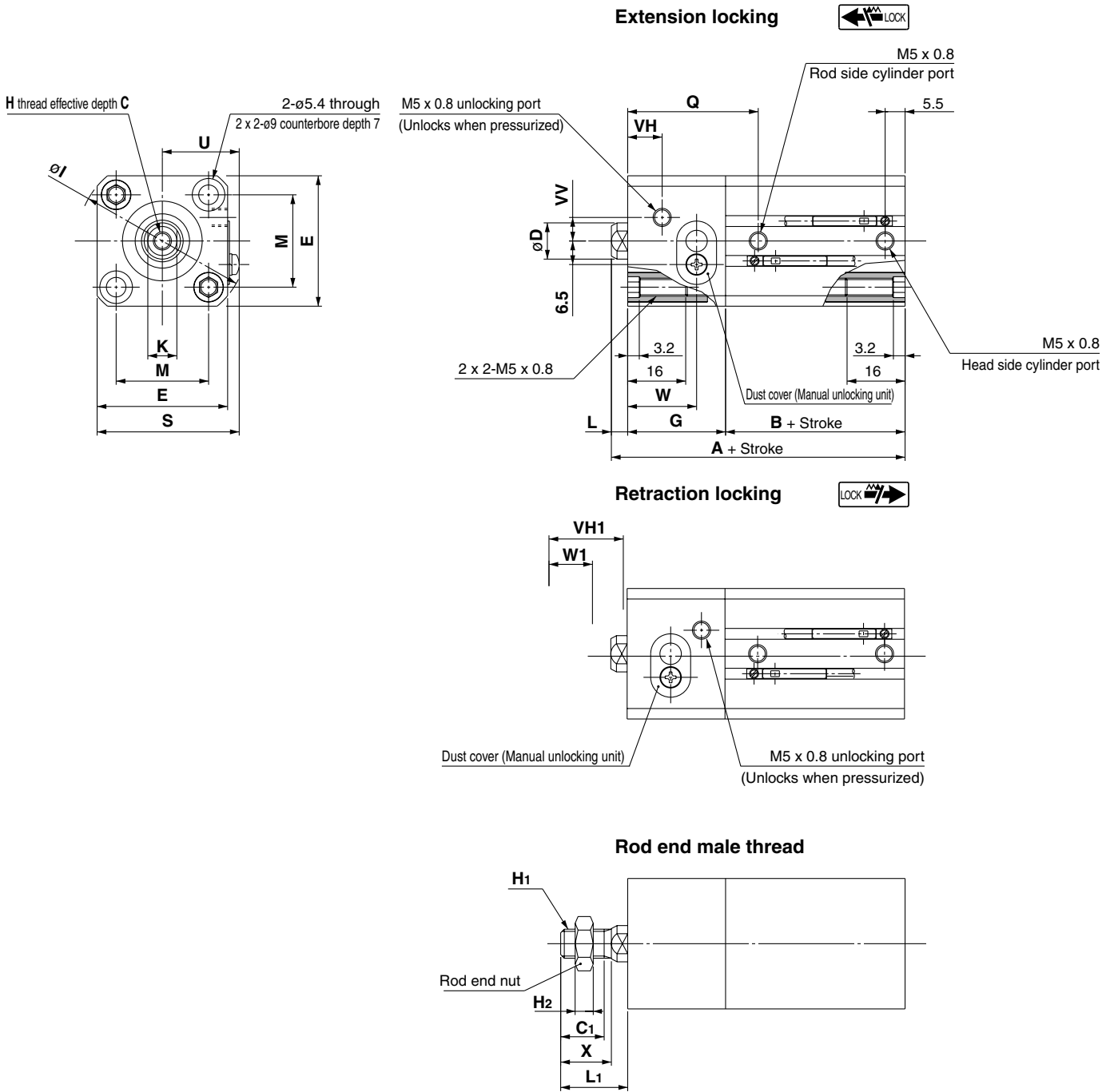
Note) The sectional drawing above shows the locked condition.

No.	Description	Material	Note
⑰	Bumper A	Urethane	
⑱	Bumper B	Urethane	
⑲	Snap ring	Carbon tool steel	Phosphate coated
⑳	Tie-rod nut	Carbon steel	Nickel plated
㉑	Magnet	—	
㉒	Rod seal A	NBR	
㉓	Rod seal B	NBR	
㉔	Rod seal C	NBR	
㉕	Piston seal A	NBR	
㉖	Piston seal B	NBR	
㉗	Tube gasket A	NBR	
㉘	Tube gasket B	NBR	
㉙	Scraper	NBR	
㉚	Hexagon socket countersunk head screw	Chromium molybdenum steel	Nickel plated
㉛	Spring pin	Carbon steel	JIS B 2808
㉜	Parallel pin	Stainless steel	JIS B 1354
㉝	Rod end nut	Carbon steel	Nickel plated

Series CLQ

Dimensions: $\varnothing 20$, $\varnothing 25$

Basic style (Through-hole/Both ends tapped common): C□LQB20/25



Bore size (mm)	Stroke range	Without auto switch		With auto switch		C	D	E	G	H	I	K	L	M	Q	S	U	VH	VV	W
		A	B	A	B															
20	5 to 50	51	19.5	61	29.5	7	10	36	27	M5 x 0.8	47	8	4.5	25.5	36	39.2	21.2	9.5	6.5	19
25	5 to 50	58.5	22.5	68.5	32.5	12	12	40	31	M6 x 1.0	52	10	5	28	42	43.2	23.2	10	7	21.5

Retraction Locking

Bore size (mm)	VH1	W1
20	20.5	12
25	23	14.5

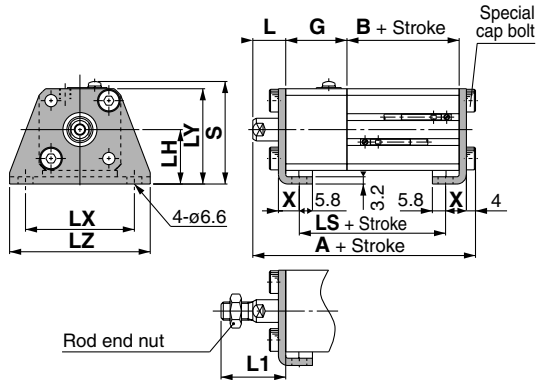
Rod End Male Thread

Bore size (mm)	C1	X	H1	H2	L1
20	12	14	M8 x 1.25	5	18.5
25	15	17.5	M10 x 1.25	6	22.5

Compact Cylinder with Lock Double Acting, Single Rod **Series CLQ**

Dimensions: $\varnothing 20, \varnothing 25$

Foot style: CLQL/CDLQL

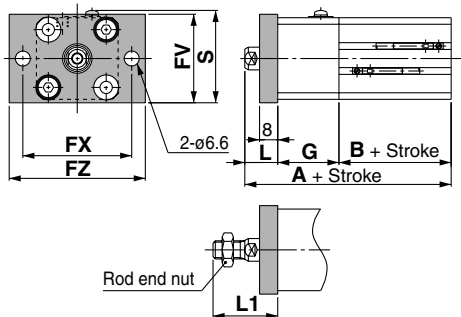


Foot Style

Bore size (mm)	Stroke range	Without auto switch			With auto switch		
		A	B	LS	A	B	LS
20	5 to 50	68.2	19.5	34.5	78.2	29.5	44.5
25	5 to 50	75.7	22.5	38.5	85.7	32.5	48.5

Bore size (mm)	G	L	L ₁	LH	LX	LY	LZ	S	X
20	27	14.5	28.5	24	48	42	62	45.2	9.2
25	31	15	32.5	26	52	46	66	49.2	10.7

Rod side flange style: CLQF/CDLQF

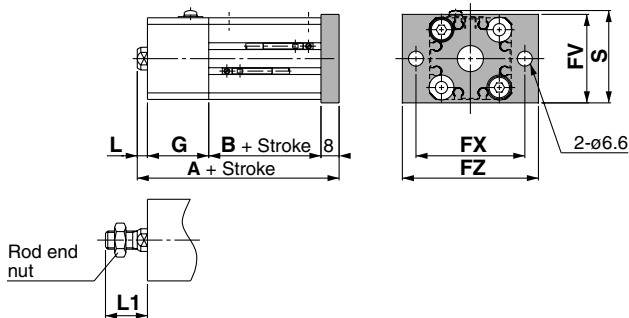


Rod Side Flange Style

Bore size (mm)	Stroke range	Without auto switch		With auto switch	
		A	B	A	B
20	5 to 50	61	19.5	71	29.5
25	5 to 50	68.5	22.5	78.5	32.5

Bore size (mm)	FV	FX	FZ	G	L	L ₁	S
20	39	48	60	27	14.5	28.5	40.7
25	42	52	64	31	15	32.5	44.2

Head side flange style: CLQG/CDLQG

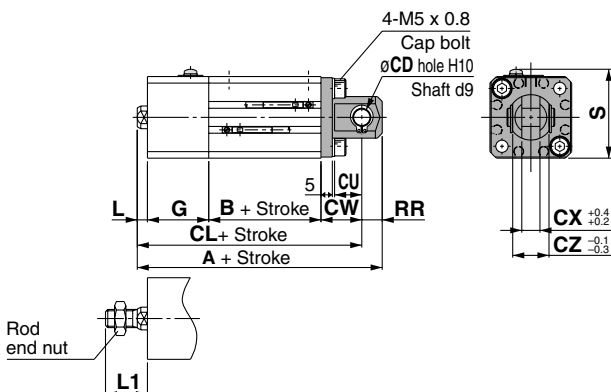


Head Side Flange Style

Bore size (mm)	Stroke range	Without auto switch		With auto switch	
		A	B	A	B
20	5 to 50	59	19.5	69	29.5
25	5 to 50	66.5	22.5	76.5	32.5

Bore size (mm)	FV	FX	FZ	G	L	L ₁	S
20	39	48	60	27	4.5	18.5	40.7
25	42	52	64	31	5	22.5	44.2

Double clevis style: CLQD/CDLQD



Double Clevis Style

Bore size (mm)	Stroke range	Without auto switch			With auto switch		
		A	B	CL	A	B	CL
20	5 to 50	78	19.5	69	88	29.5	79
25	5 to 50	88.5	22.5	78.5	98.5	32.5	88.5

Bore size (mm)	CD	CU	CW	CX	CZ	G	L	L ₁	RR	S
20	8	12	18	8	16	27	4.5	18.5	9	39.2
25	10	14	20	10	20	31	5	22.5	10	43.2

CL

CL1

MLGC

CNG

MNB

CNA

CNS

CLS

CLQ

MLGP

RLQ

MLU

ML1C

D-

-X

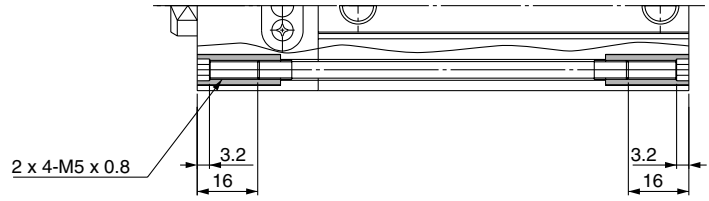
20-

Data

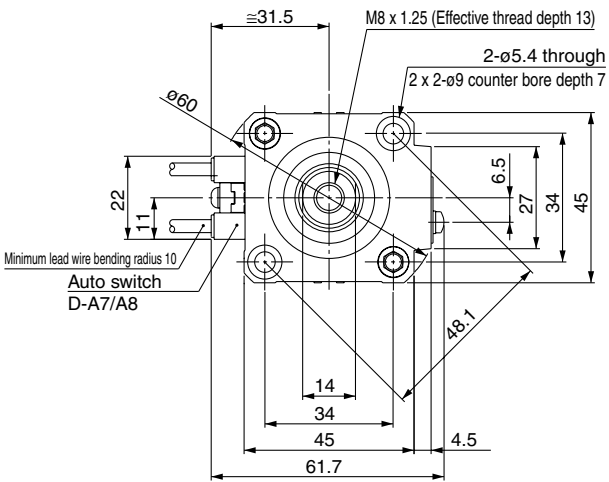
Series CLQ

Dimensions: $\phi 32$

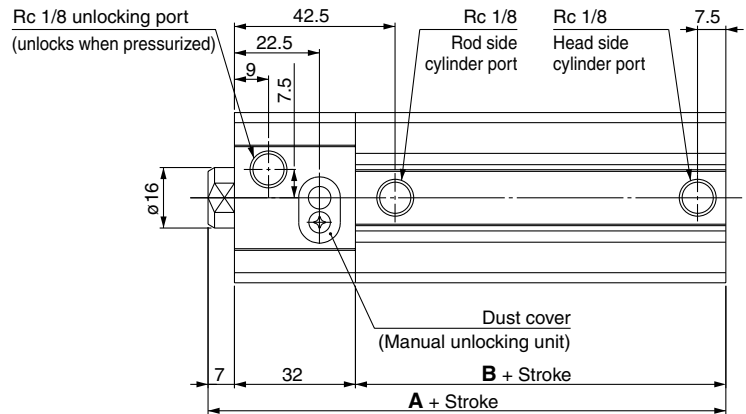
Both ends tapped style: C□LQA32



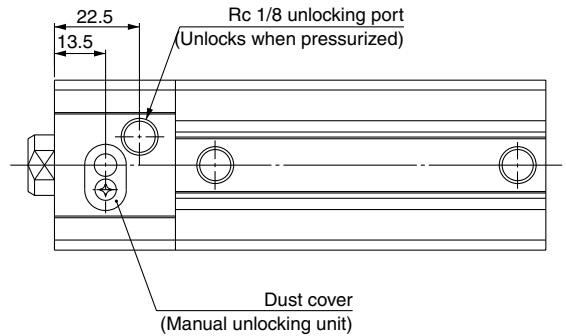
Basic style (Through-hole): C□LQB32



Extension locking



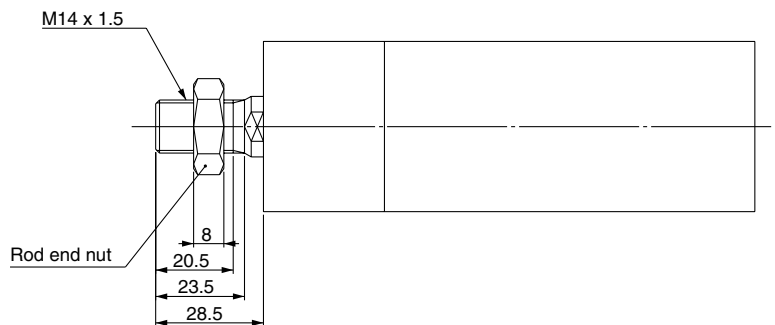
Retraction locking



A, B Dimensions

Bore size (mm)	Stroke range	Without auto switch		With auto switch	
		A	B	A	B
32	10 to 50	62	23	72	33
	75, 100	72	33		

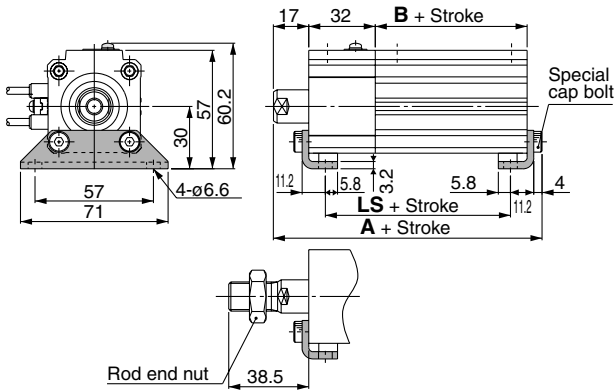
Rod end male thread



Compact Cylinder with Lock Double Acting, Single Rod Series **CLQ**

Dimensions: $\phi 32$

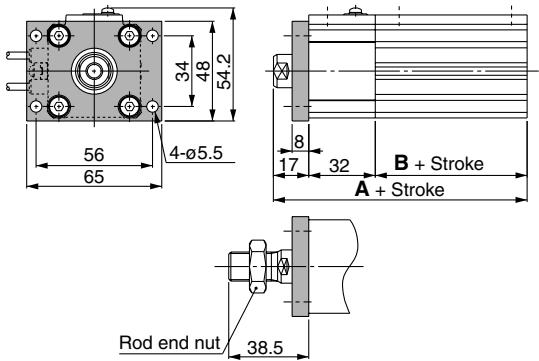
Foot style: C□LQL32



Foot Style

Bore size (mm)	Stroke range	Without auto switch			With auto switch		
		A	B	LS	A	B	LS
32	10 to 50	79.2	23	39	89.2	33	49
	75, 100	89.2	33	49			

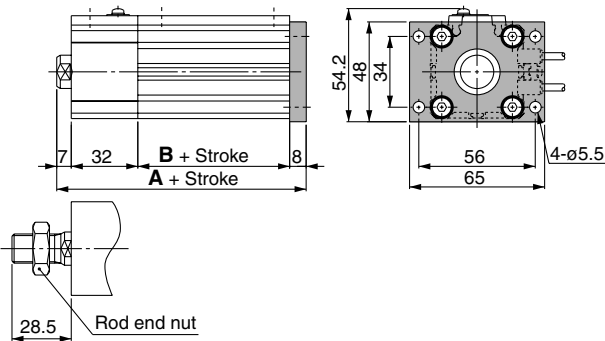
Rod side flange style: C□LQF32



Rod Side Flange Style

Bore size (mm)	Stroke range	Without auto switch		With auto switch	
		A	B	A	B
32	10 to 50	72	23	82	33
	75, 100	82	33		

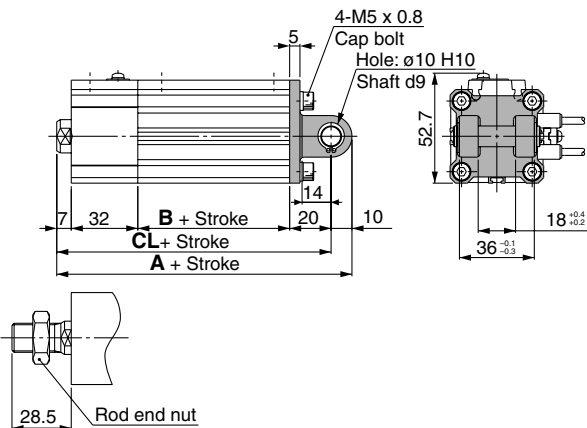
Head Side flange style: C□LQG32



Head Side Flange Style

Bore size (mm)	Stroke range	Without auto switch		With auto switch	
		A	B	A	B
32	10 to 50	70	23	80	33
	75, 100	80	33		

Double clevis style: C□LQD32



Double Clevis Style

Bore size (mm)	Stroke range	Without auto switch			With auto switch		
		A	B	CL	A	B	CL
32	10 to 50	92	23	82	102	33	92
	75, 100	102	33	92			

CL

CL1

MLGC

CNG

MNB

CNA

CNS

CLS

CLQ

MLGP

RLQ

MLU

ML1C

D-

-X

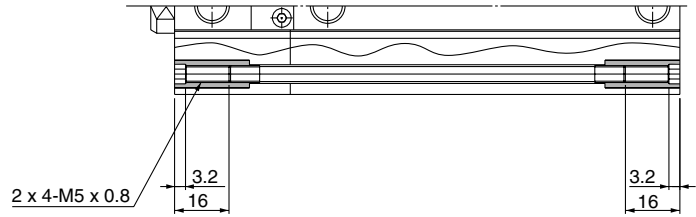
20-

Data

Series CLQ

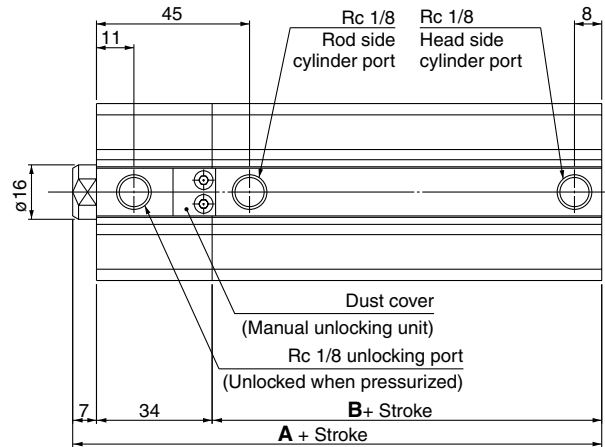
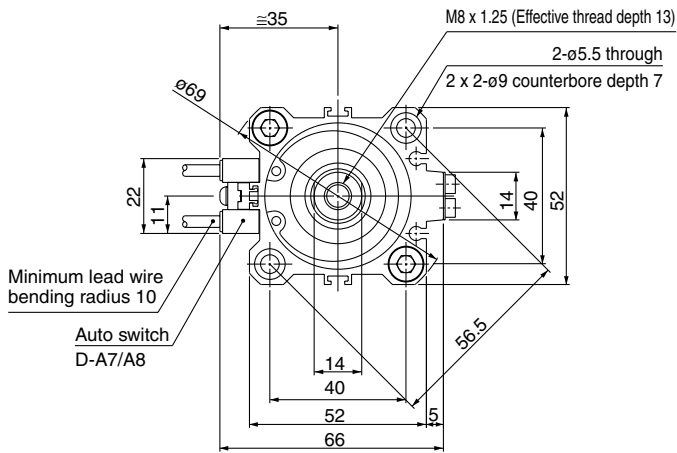
Dimensions: $\phi 40$

Both ends tapped style: C□LQA40

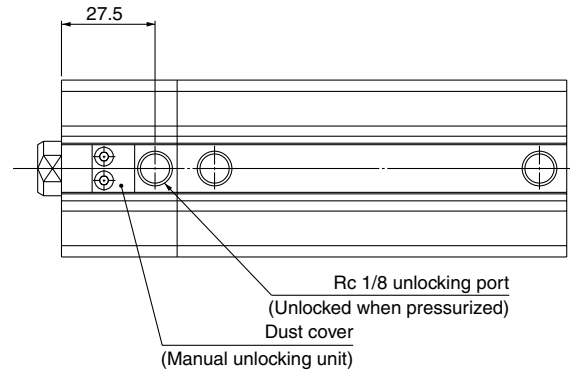


Basic style (Through-hole): C□LQB40

Extension locking



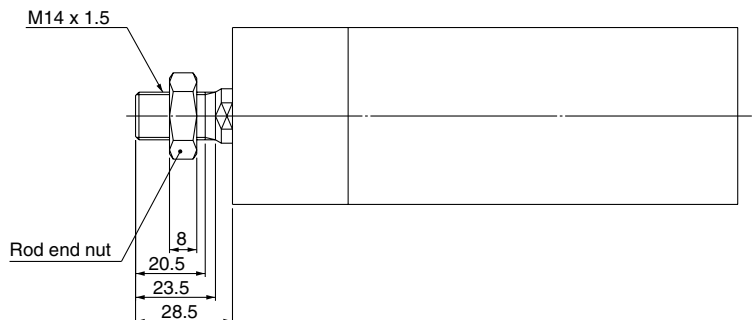
Retraction locking



A, B Dimensions

Bore size (mm)	Stroke range (mm)	Without auto switch		With auto switch	
		A	B	A	B
40	10 to 50	70.5	29.5	80.5	39.5
	75, 100	80.5	39.5		

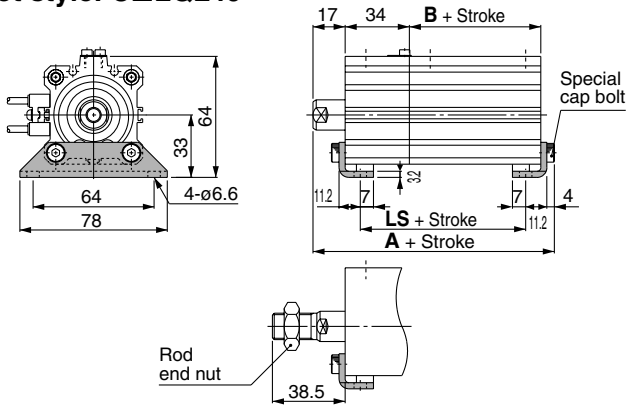
Rod end male thread



Compact Cylinder with Lock Double Acting, Single Rod Series **CLQ**

Dimensions: $\phi 40$

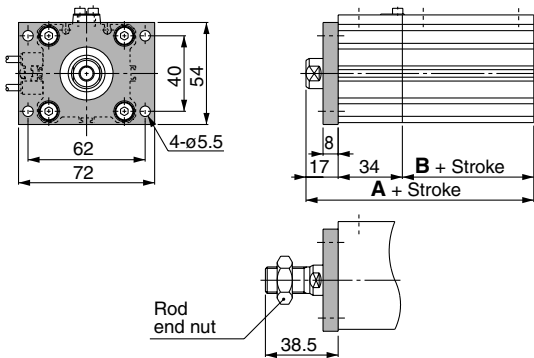
Foot style: C□LQL40



Foot Style

Bore size (mm)	Stroke range	Without auto switch			With auto switch		
		A	B	LS	A	B	LS
40	10 to 50	87.7	29.5	47.5	97.7	39.5	57.5
	75, 100	97.7	39.5	57.5			

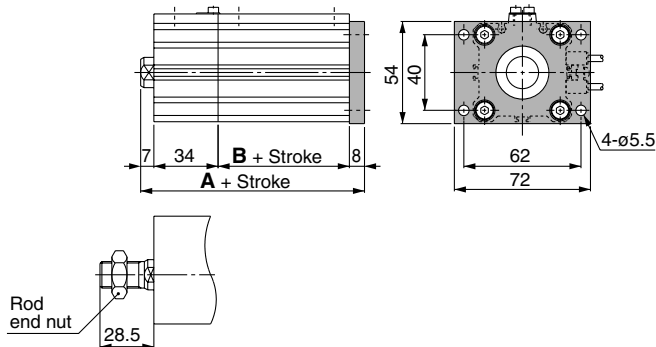
Rod side flange style: C□LQF40



Rod Side Flange Style

Bore size (mm)	Stroke range	Without auto switch		With auto switch	
		A	B	A	B
40	10 to 50	80.5	29.5	90.5	39.5
	75, 100	90.5	39.5		

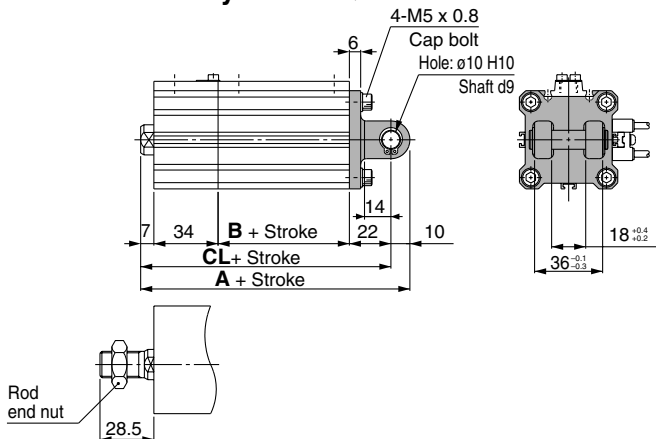
Head Side flange style: C□LQG40



Head Side Flange Style

Bore size (mm)	Stroke range	Without auto switch		With auto switch	
		A	B	A	B
40	10 to 50	78.5	29.5	88.5	39.5
	75, 100	88.5	39.5		

Double clevis style: C□LQD40



Double Clevis Style

Bore size (mm)	Stroke range	Without auto switch			With auto switch		
		A	B	CL	A	B	CL
40	10 to 50	102.5	29.5	92.5	112.5	39.5	102.5
	75, 100	112.5	39.5	102.5			

CL

CL1

MLGC

CNG

MNB

CNA

CNS

CLS

CLQ

MLGP

RLQ

MLU

ML1C

D-

-X

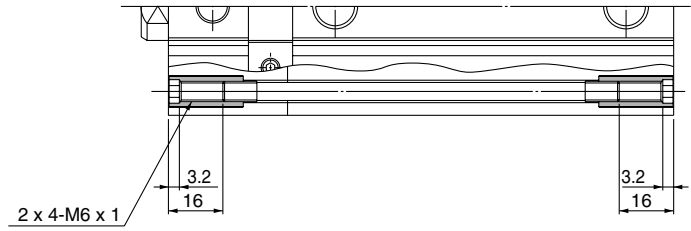
20-

Data

Series CLQ

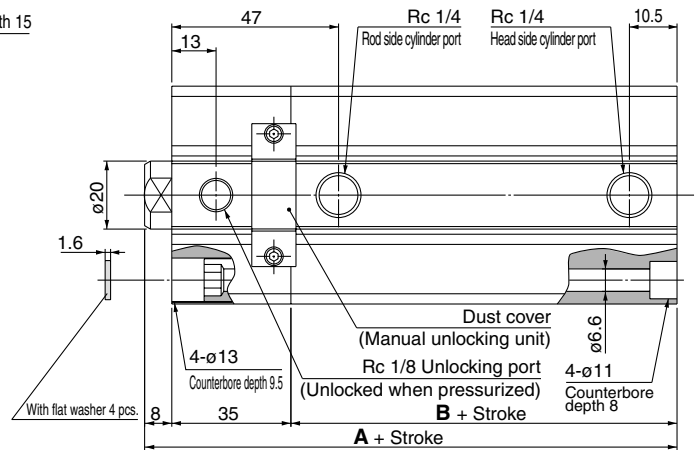
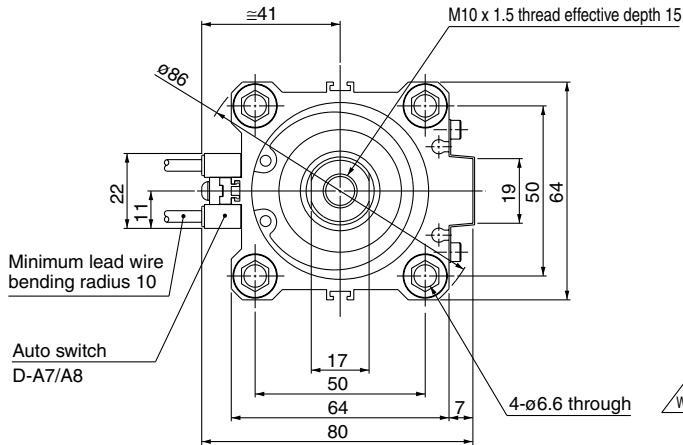
Dimensions: $\phi 50$

Both ends tapped style: C□LQA50

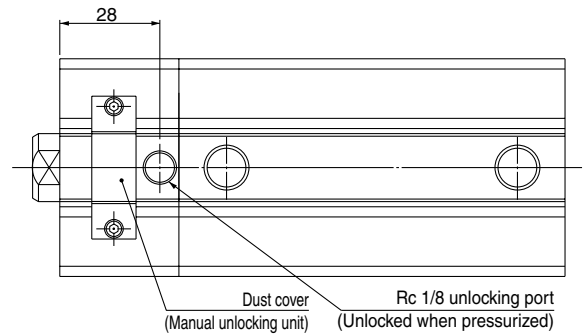


Basic style (Through-hole): C□LQB50

Extension locking



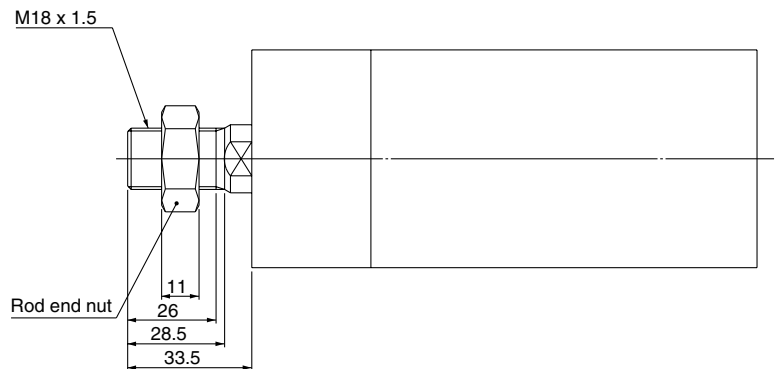
Retraction locking



A, B Dimensions

Bore size (mm)	Stroke range (mm)	Without auto switch		With auto switch	
		A	B	A	B
50	10 to 50	73.5	30.5	83.5	40.5
	75, 100	83.5	40.5		

Rod end male thread

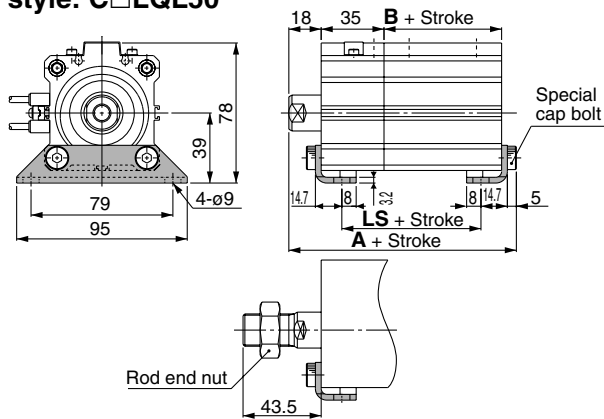


Note) Be sure to use the attached flat washers when mounting a cylinder from the rod side.

Compact Cylinder with Lock Double Acting, Single Rod Series **CLQ**

Dimensions: $\phi 50$

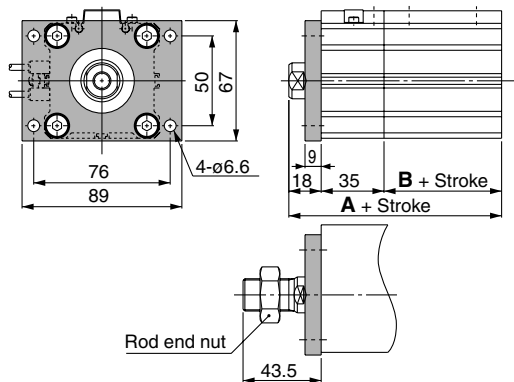
Foot style: C□LQL50



Foot Style

Bore size (mm)	Stroke range	Without auto switch			With auto switch		
		A	B	LS	A	B	LS
50	10 to 50	91.7	30.5	42.5	101.7	40.5	52.5
	75, 100	101.7	40.5	52.5			

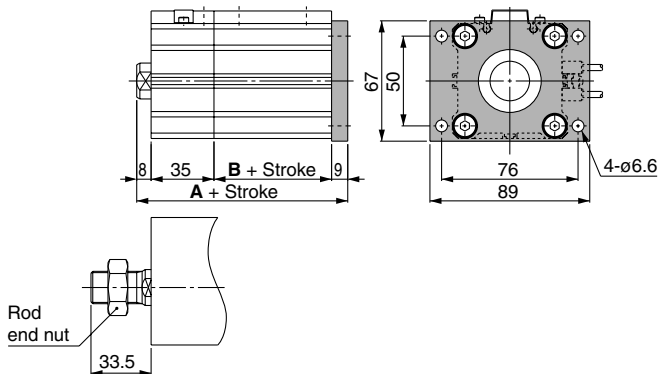
Rod side flange style: C□LQF50



Rod Side Flange Style

Bore size (mm)	Stroke range	Without auto switch		With auto switch	
		A	B	A	B
50	10 to 50	83.5	30.5	93.5	40.5
	75, 100	93.5	40.5		

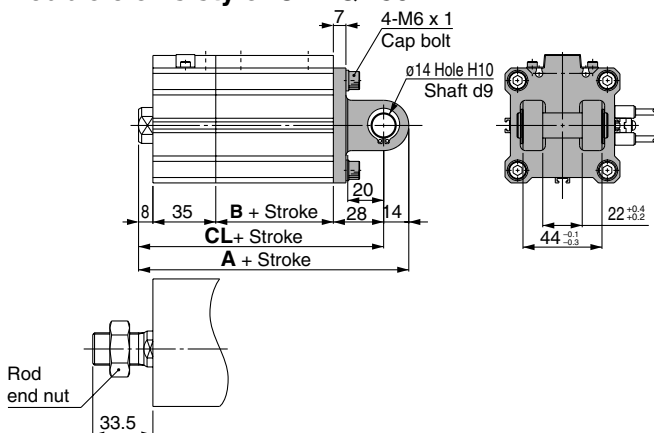
Head Side flange style: C□LQG50



Head Side Flange Style

Bore size (mm)	Stroke range	Without auto switch		With auto switch	
		A	B	A	B
50	10 to 50	82.5	30.5	92.5	40.5
	75, 100	92.5	40.5		

Double clevis style: C□LQD50



Double Clevis Style

Bore size (mm)	Stroke range	Without auto switch			With auto switch		
		A	B	CL	A	B	CL
50	10 to 50	115.5	30.5	101.5	125.5	40.5	111.5
	75, 100	125.5	40.5	111.5			

CL

CL1

MLGC

CNG

MNB

CNA

CNS

CLS

CLQ

MLGP

RLQ

MLU

ML1C

D-

-X

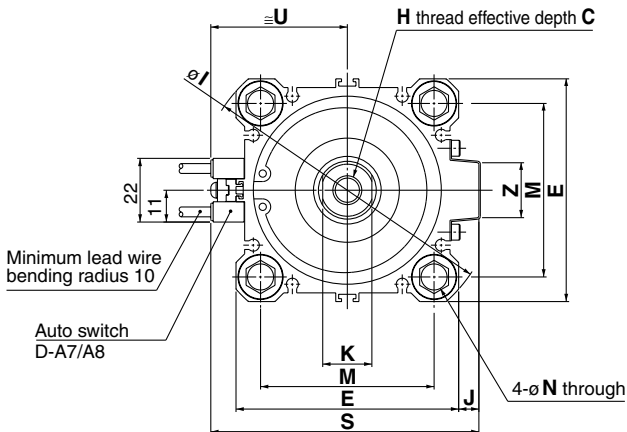
20-

Data

Series CLQ

Dimensions: $\phi 63$, $\phi 80$, $\phi 100$

Basic style (Through-hole): C□LQB63/80/100

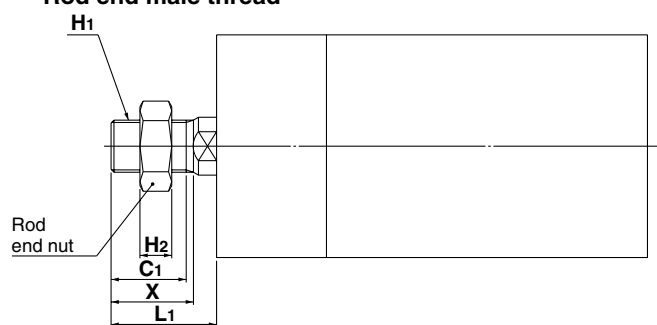


Retraction Locking

Bore size (mm)	V1
63	30.5
80	35.5
100	40.5

Rod End Male Thread

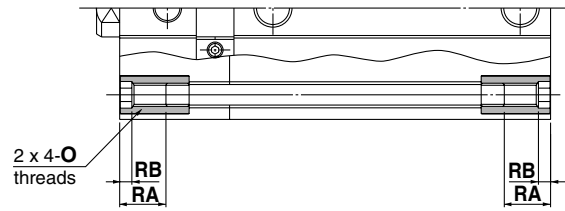
Bore size (mm)	C1	X	H1	H2	L1
63	26	28.5	M18 x 1.5	11	33.5
80	32.5	35.5	M22 x 1.5	13	43.5
100	32.5	35.5	M26 x 1.5	16	43.5



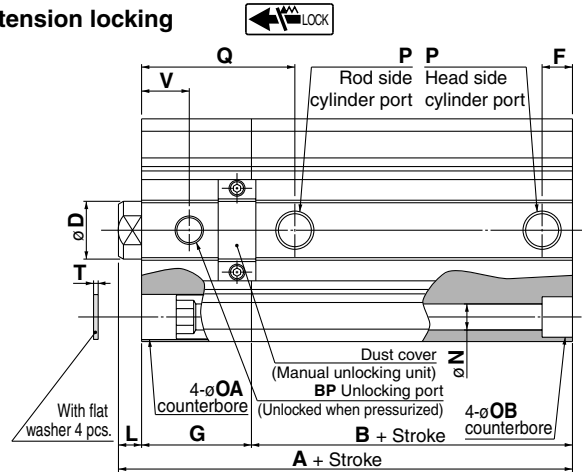
Note) Be sure to use the attached flat washers when mounting a cylinder from the rod side.

Bore size (mm)	Stroke range	Without auto switch		With auto switch		BP	C	D	E	F	G	H	I	J	K	L	M	N	O	OA	OB	P	Q	RA	RB	S	T	U	V	Z
		A	B	A	B																									
63	10 to 50	82	36			Rc 1/8	15	20	77	10.5	38	M10 x 1.5	103	7	17	8	60	9	M8 x 1.25	15.6 depth 12	14 depth 10.5	Rc 1/4	53	16	4.2	93	1.6	47.5	16.5	19
	75, 100	92	46	92	46	Rc 1/8	21	25	98	12.5	43	M16 x 2.0	132	6	22	10	77	11	M10 x 1.5	19.6 depth 15.5	17.5 depth 13.5	Rc 3/8	59	16	4.2	112.5	2	57.5	18.5	26
80	10 to 50	96.5	43.5			Rc 1/4	21	25	98	12.5	43	M16 x 2.0	132	6	22	10	77	11	M10 x 1.5	19.6 depth 15.5	17.5 depth 13.5	Rc 3/8	59	16	4.2	112.5	2	57.5	18.5	26
	75, 100	106.5	53.5	106.5	53.5	Rc 1/4	27	30	117	13	50	M20 x 2.5	156	6.5	27	12	94	11	M10 x 1.5	19.6 depth 15.5	17.5 depth 13.5	Rc 3/8	73	16	4.2	132.5	2	67.5	23	26
100	10 to 50	115	53			Rc 1/8	27	30	117	13	50	M20 x 2.5	156	6.5	27	12	94	11	M10 x 1.5	19.6 depth 15.5	17.5 depth 13.5	Rc 3/8	73	16	4.2	132.5	2	67.5	23	26
	75, 100	125	63	125	63	Rc 1/8	27	30	117	13	50	M20 x 2.5	156	6.5	27	12	94	11	M10 x 1.5	19.6 depth 15.5	17.5 depth 13.5	Rc 3/8	73	16	4.2	132.5	2	67.5	23	26

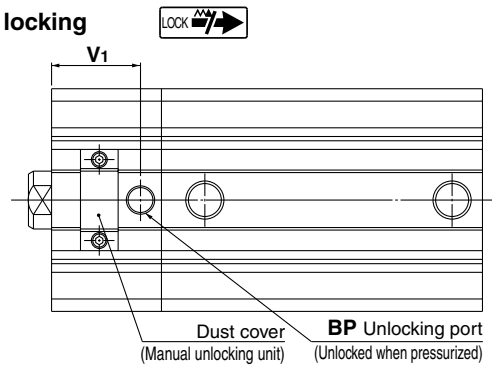
Both ends tapped style: C□LQA63/80/100



Extension locking



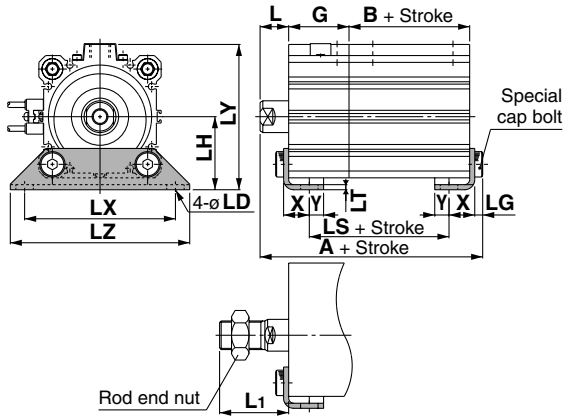
Retraction locking



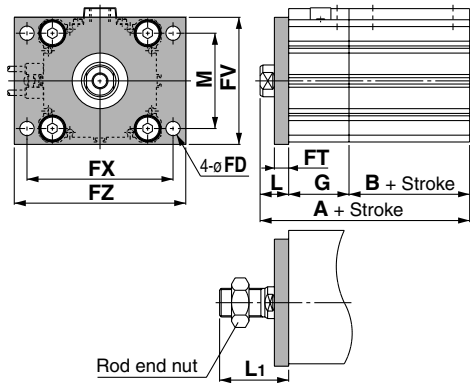
Compact Cylinder with Lock Double Acting, Single Rod Series **CLQ**

Dimensions: $\phi 63$, $\phi 80$, $\phi 100$

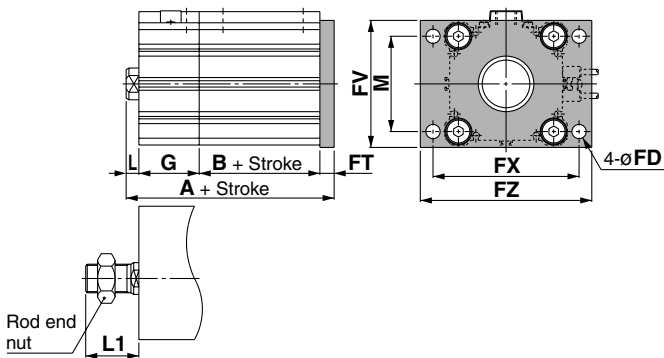
Foot style: CLQL/CDLQL



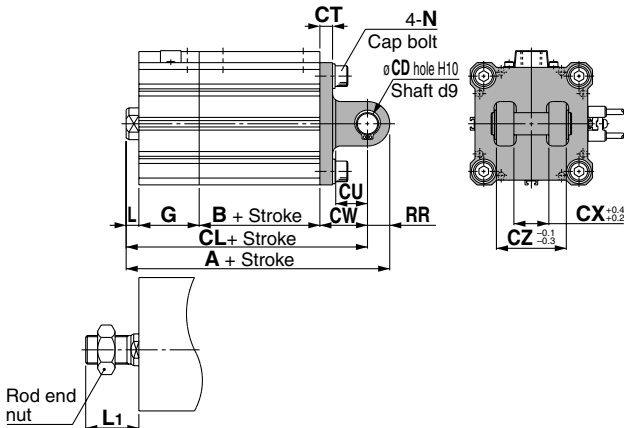
Rod side flange style: CLQF/CDLQF



Head Side flange style: CLQG/CDLQG



Double clevis style: CLQD/CDLQD



Foot Style

Bore size (mm)	Stroke range	Without auto switch			With auto switch			G	L
		A	B	LS	A	B	LS		
63	10 to 50	100.2	36	48	110.2	46	58	38	18
	75, 100	110.2	46	58					
80	10 to 50	118	43.5	56.5	128	53.5	66.5	43	20
	75, 100	128	53.5	66.5					
100	10 to 50	138	53	69	148	63	79	50	22
	75, 100	148	63	79					

Bore size (mm)	L1	LD	LG	LH	LT	LX	LY	LZ	X	Y
63	43.5	11	5	46	3.2	95	91.5	113	16.2	9
80	53.5	13	7	59	4.5	118	114	140	19.5	11
100	53.5	13	7	71	6	137	136	162	23	12.5

Rod Side Flange Style

Bore size (mm)	Stroke range	Without auto switch		With auto switch		FD	FT	FV	FX	FZ	G	L	L1	M
		A	B	A	B									
63	10 to 50	92	36	102	46	9	9	80	92	108	38	18	43.5	60
	75, 100	102	46											
80	10 to 50	106.5	43.5	116.5	53.5	11	11	99	116	134	43	20	53.5	77
	75, 100	116.5	53.5											
100	10 to 50	125	53	135	63	11	11	117	136	154	50	22	53.5	94
	75, 100	135	63											

Head Side Flange Style

Bore size (mm)	Stroke range	Without auto switch		With auto switch		FD	FT	FV	FX	FZ	G	L	L1	M
		A	B	A	B									
63	10 to 50	91	36	101	46	9	9	80	92	108	38	8	33.5	60
	75, 100	101	46											
80	10 to 50	107.5	43.5	117.5	53.5	11	11	99	116	134	43	10	43.5	77
	75, 100	117.5	53.5											
100	10 to 50	126	53	136	63	11	11	117	136	154	50	12	43.5	94
	75, 100	136	63											

Double Clevis Style

Bore size (mm)	Stroke range	Without auto switch			With auto switch			CD	CT
		A	B	CL	A	B	CL		
63	10 to 50	126	36	112	136	46	122	14	8
	75, 100	136	46	122					
80	10 to 50	152.5	43.5	134.5	162.5	53.5	144.5	18	10
	75, 100	162.5	53.5	144.5					
100	10 to 50	182	53	160	192	63	170	22	13
	75, 100	192	63	170					

Bore size (mm)	CU	CW	CX	CZ	G	L	L1	N	RR
63	20	30	22	44	38	8	33.5	M8 x 1.25	14
80	27	38	28	56	43	10	43.5	M10 x 1.5	18
100	31	45	32	64	50	12	43.5	M10 x 1.5	22

- CL
- CL1
- MLGC
- CNG
- MNB
- CNA
- CNS
- CLS
- CLQ**
- MLGP
- RLQ
- MLU
- ML1C
- D-
- X
- 20-
- Data

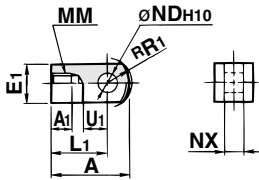
Series CLQ

Accessory Bracket Dimensions

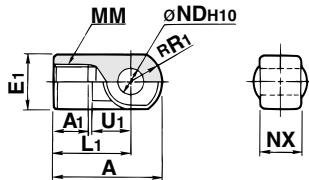
Single Knuckle Joint

I-G02, I-G03

I-G04, I-G05
I-G08, I-G10



Material: Rolled steel



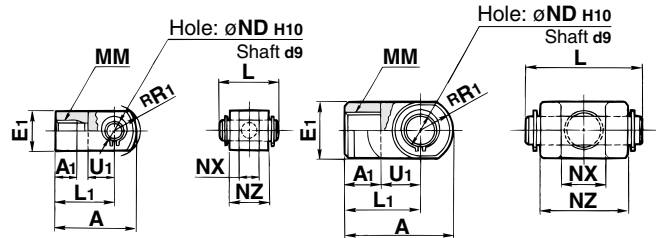
Material: Cast iron

Part no.	Applicable bore size (mm)	A	A1	E1	L1	MM	RR1	U1	ND	NX
I-G02	20	34	8.5	□16	25	M8 x 1.25	10.3	11.5	8 ^{+0.058} ₀	8 ^{-0.2} _{-0.4}
I-G03	25	41	10.5	□20	30	M10 x 1.25	12.8	14	10 ^{+0.058} ₀	10 ^{-0.2} _{-0.4}
I-G04	32, 40	42	14	∅22	30	M14 x 1.5	12	14	10 ^{+0.058} ₀	18 ^{-0.3} _{-0.5}
I-G05	50, 63	56	18	∅28	40	M18 x 1.5	16	20	14 ^{+0.070} ₀	22 ^{-0.3} _{-0.5}
I-G08	80	71	21	∅38	50	M22 x 1.5	21	27	18 ^{+0.070} ₀	28 ^{-0.3} _{-0.5}
I-G10	100	79	21	∅44	55	M26 x 1.5	24	31	22 ^{+0.084} ₀	32 ^{-0.3} _{-0.5}

Double Knuckle Joint

Y-G02, Y-G03

Y-G04, Y-G05
Y-G08, Y-G10



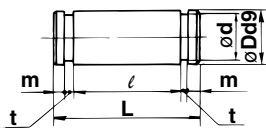
Material: Rolled steel

Material: Cast iron

Part no.	Applicable bore size (mm)	A	A1	E1	L1	MM	RR1	U1	ND	NX	NZ	L	Applicable pin part no.
Y-G02	20	34	8.5	□16	25	M8 x 1.25	10.3	11.5	8 ^{+0.058} ₀	8 ^{+0.4} _{+0.2}	16	21	IY-G02
Y-G03	25	41	10.5	□20	30	M10 x 1.25	12.8	14	10 ^{+0.058} ₀	10 ^{+0.4} _{+0.2}	20	25.6	IY-G03
Y-G04	32, 40	42	16	∅22	30	M14 x 1.5	12	14	10 ^{+0.058} ₀	18 ^{+0.5} _{+0.3}	36	41.6	IY-G04
Y-G05	50, 63	56	20	∅28	40	M18 x 1.5	16	20	14 ^{+0.070} ₀	22 ^{+0.5} _{+0.3}	44	50.6	IY-G05
Y-G08	80	71	23	∅38	50	M22 x 1.5	21	27	18 ^{+0.070} ₀	28 ^{+0.5} _{+0.3}	56	64	IY-G08
Y-G10	100	79	24	∅44	55	M26 x 1.5	24	31	22 ^{+0.084} ₀	32 ^{+0.5} _{+0.3}	64	72	IY-G10

* Knuckle pin and snap ring are included.

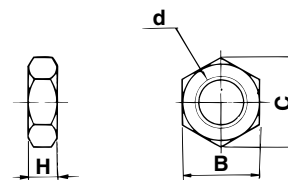
Knuckle Pin (Common with double clevis pin)



Material: Carbon steel

Part no.	Applicable bore size (mm)	D	L	d	l	m	t	Applicable snap ring
IY-G02	20	8 ^{-0.040} _{-0.076}	21	7.6	16.2	1.5	0.9	Type C 8 for axis
IY-G03	25	10 ^{-0.040} _{-0.076}	25.6	9.6	20.2	1.55	1.15	Type C 10 for axis
IY-G04	32, 40	10 ^{-0.040} _{-0.076}	41.6	9.6	36.2	1.55	1.15	Type C 10 for axis
IY-G05	50, 63	14 ^{-0.050} _{-0.093}	50.6	13.4	44.2	2.05	1.15	Type C 14 for axis
IY-G08	80	18 ^{-0.050} _{-0.093}	64	17	56.2	2.55	1.35	Type C 18 for axis
IY-G10	100	22 ^{-0.065} _{-0.117}	72	21	64.2	2.55	1.35	Type C 22 for axis

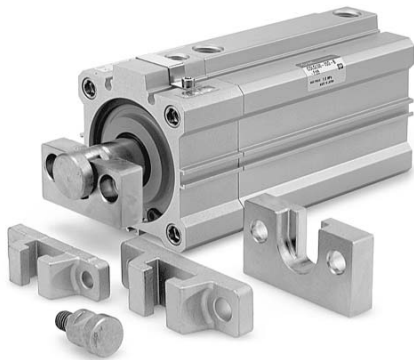
Rod End Nut



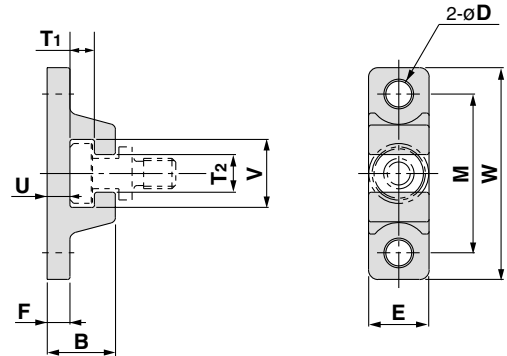
Material: Rolled steel

Part no.	Applicable bore size (mm)	d	H	B	C
NT-02	20	M8 x 1.25	5	13	15.0
NT-03	25	M10 x 1.25	6	17	19.6
NT-04	32, 40	M14 x 1.5	8	22	25.4
NT-05	50, 63	M18 x 1.5	11	27	31.2
NT-08	80	M22 x 1.5	13	32	37.0
NT-10	100	M26 x 1.5	16	41	47.3

Simple Joint: $\phi 32$ to $\phi 100$



Type A Mounting Bracket



Joint and Mounting Bracket (Type A, Type B) Part No.

YA 03

• Applicable air cylinder bore

• Mounting bracket

YA	Type A mounting bracket
YB	Type B mounting bracket
YU	Joint

03	$\phi 32, \phi 40$
05	$\phi 50, \phi 63$
08	$\phi 80$
10	$\phi 100$

Bore size (mm)	Joint	Applicable mounting bracket	
		Type A mounting bracket	Type B mounting bracket
32, 40	YU-03	YA-03	YB-03
50, 63	YU-05	YA-05	YB-05
80	YU-08	YA-08	YB-08
100	YU-10	YA-10	YB-10

Allowable Eccentricity

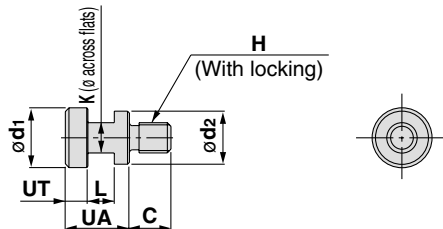
Bore size (mm)	32	40	50	63	80	100
Eccentricity tolerance	± 1				± 1.5	± 2
Backlash	0.5					

<Ordering>

- Joints are not included with the A or B type mounting brackets. Order them separately.
- (Example)

- Bore size $\phi 40$ Part no.
- Type A mounting bracket part number.....YA-03
- Joint.....YU-03

Joint

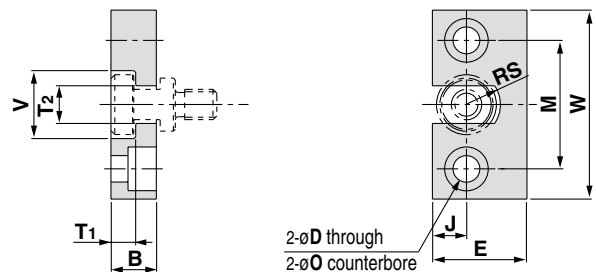


Part no.	Applicable bore size (mm)	UA	C	d1	d2	H	K	L	UT	Weight (g)
YU-03	32, 40	17	11	15.8	14	M8 x 1.25	8	7	6	25
YU-05	50, 63	17	13	19.8	18	M10 x 1.5	10	7	6	40
YU-08	80	22	20	24.8	23	M16 x 2	13	9	8	90
YU-10	100	26	26	29.8	28	M20 x 2.5	14	11	10	160

Part no.	Bore size (mm)	B	D	E	F	M	T1	T2
YA-03	32, 40	18	6.8	16	6	42	6.5	10
YA-05	50, 63	20	9	20	8	50	6.5	12
YA-08	80	26	11	25	10	62	8.5	16
YA-10	100	31	14	30	12	76	10.5	18

Part no.	Bore size (mm)	U	V	W	Weight (g)
YA-03	32, 40	6	18	56	55
YA-05	50, 63	8	22	67	100
YA-08	80	10	28	83	195
YA-10	100	12	36	100	340

Type B Mounting Bracket



Material: Precision die-casting material equivalent to stainless steel 304

Part no.	Bore size (mm)	B	D	E	J	M	O
YB-03	32, 40	12	7	25	9	34	11.5 depth 7.5
YB-05	50, 63	12	9	32	11	42	14.5 depth 8.5
YB-08	80	16	11	38	13	52	18 depth 12
YB-10	100	19	14	50	17	62	21 depth 14

Part no.	Bore size (mm)	RS	T1	T2	V	W	Weight (g)
YB-03	32, 40	9	6.5	10	18	50	80
YB-05	50, 63	11	6.5	12	22	60	120
YB-08	80	14	8.5	16	28	75	230
YB-10	100	18	10.5	18	36	90	455

CL

CL1

MLGC

CNG

MNB

CNA

CNS

CLS

CLQ

MLGP

RLQ

MLU

ML1C

D-

-X

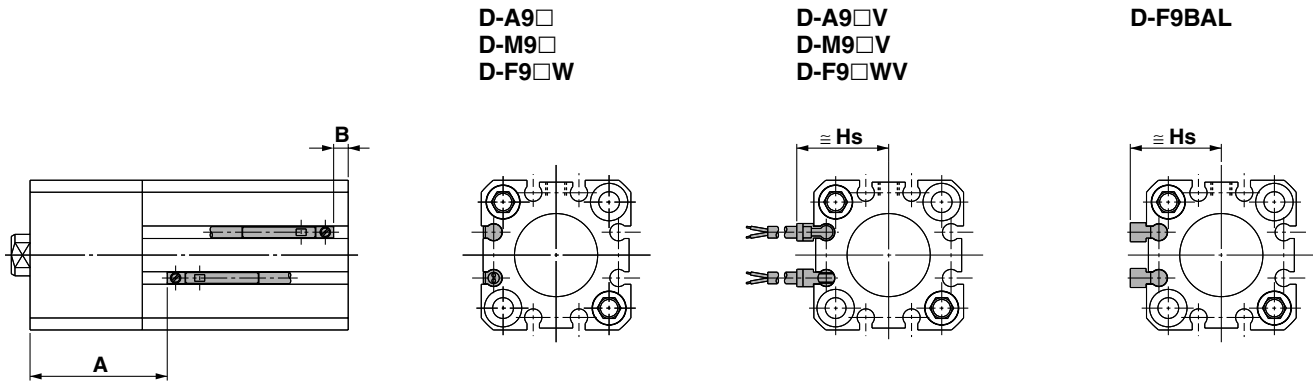
20-

Data

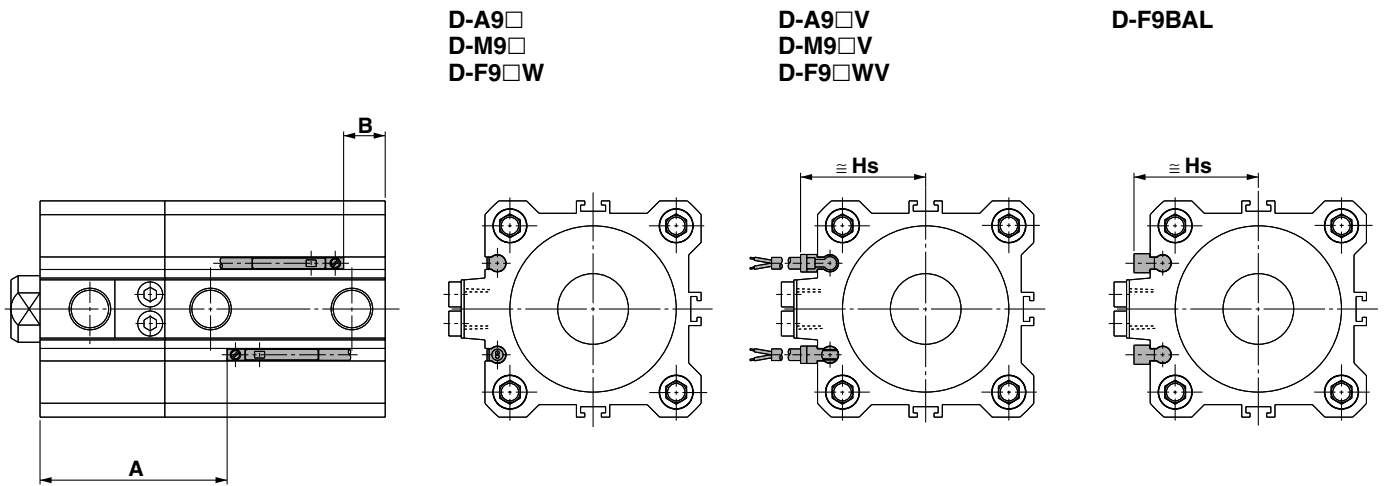
Series CLQ

Proper Auto Switch Mounting Position (Detection at stroke end) and Its Mounting Height

ø20, ø25



ø32 to ø100



Proper Auto Switch Mounting Position

Bore size (mm)	D-A9□ D-A9□V		D-M9□ D-M9□V D-F9□W D-F9□WV		D-F9BAL	
	A	B	A	B	A	B
	20	33	3.5	37	7.5	36
25	38	5.5	42	9.5	41	8.5
32	40	5	44	9	43	8
40	46	7.5	50	11.5	49	10.5
50	45	10.5	49	14.5	48	13.5
63	50.5	13.5	54.5	17.5	53.5	16.5
80	59.5	17	63.5	21	62.5	20
100	70	23	74	27	73	26

Auto Switch Mounting Height

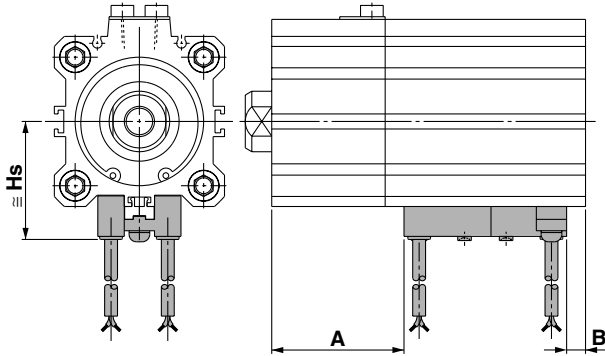
Bore size (mm)	D-A9□V	D-M9□V D-F9□WV	D-F9BAL
	Hs	Hs	Hs
20	22.5	25	22
25	24.5	27	24
32	27	29	26.5
40	30.5	32.5	30
50	36.5	38.5	36
63	40	42	39.5
80	50	52	49.5
100	60	62	59.5

Compact Cylinder with Lock Double Acting, Single Rod **Series CLQ**

Proper Auto Switch Mounting Position (Detection at stroke end) and Its Mounting Height

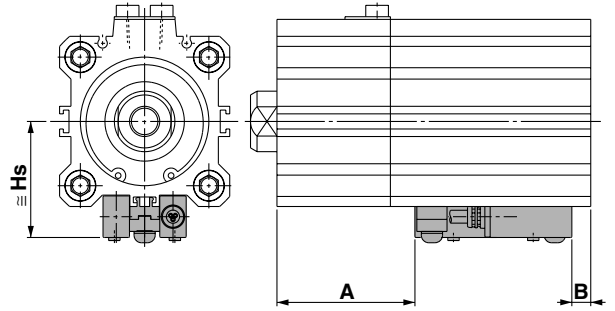
ø32 to ø100

D-A7□
D-A80



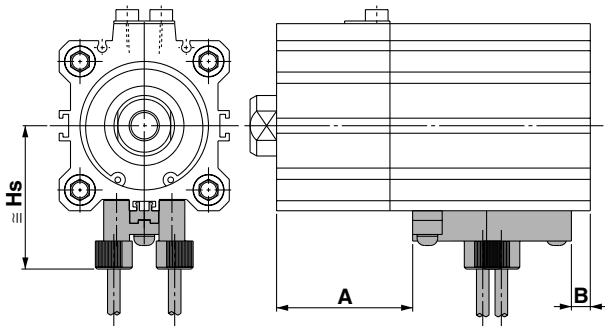
D-A7□H
D-A80H
D-F7□
D-J79
D-F7□W

D-J79W
D-F79F
D-F7NTL
D-F7BAL

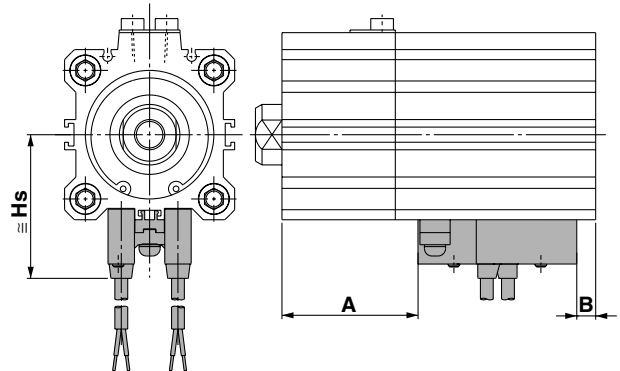


ø32 to ø100

D-A73C
D-A80C
D-J79C



D-A79W
D-F7□WV
D-F7□V
D-F7BAVL



CL

CL1

MLGC

CNG

MNB

CNA

CNS

CLS

CLQ

MLGP

RLQ

MLU

ML1C

D-

-X

20-

Data

Proper Auto Switch Mounting Position

Bore size (mm)	D-A7□/A80		D-A7□H/A80H D-A73C/A80C D-F7BAVL D-F7BAL/F79F D-F7□W D-F7□J79 D-F7□V/J79C D-J79W D-F7□WV		D-A79W	
	A	B	A	B	A	B
20	—	—	—	—	—	—
25	—	—	—	—	—	—
32	41	6	41.5	6.5	38.5	3.5
40	47	8.5	47.5	9	44.5	6
50	46	11.5	46.5	12	43.5	9
63	51.5	14.5	52	15	49	12
80	60.5	18	61	18.5	58	15.5
100	71	24	71.5	24.5	68.5	21.5

Auto Switch Mounting Height

Bore size (mm)	D-A7□ D-A80	D-A7□H D-A80H D-F7□ D-J79 D-F7□W	D-J79W D-F7BAL D-F79F D-F7NTL	D-A73C D-A80C	D-F7□V D-F7□WV D-F7BAVL	D-J79C	D-A79W
	Hs	Hs	Hs	Hs	Hs	Hs	Hs
20	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—
32	31.5	32.5	38.5	35	38	34	—
40	35	36	42	38.5	41.5	37.5	—
50	41	42	48	44.5	47.5	43.5	—
63	47.5	48.5	54.5	51	54	50	—
80	57.5	58.5	64.5	61	64	60	—
100	67.5	68.5	74.5	71	74	70	—

Series CLQ

Operating Range

Auto switch model	Bore size (mm)							
	20	25	32	40	50	63	80	100
D-A7□/F7□H D-A73C D-A80/A80H D-A80C	—	—	12	11	10	12	12	13
D-A79W	—	—	13	14	14	16	15	17
D-A9□/A9□V	10	10	9.5	9.5	9.5	11.5	9	11.5
D-F7□/F7□V D-J79/J79C D-F7□W/F7□WV D-J79W D-F7BAL/F7BAVL D-F7NTL	—	—	6	6	6	6.5	6.5	7
D-F7LF/F79F	—	—	7.5	7.5	7.5	8	8	8.5
D-M9□/M9□V	3.5	3.5	3	4	4	4	4.5	5
D-F9□W/F9□WV D-F9BAL	5	5.5	5.5	5.5	5.5	6.5	5.5	6.5

* Since this is a guideline including hysteresis, not meant to be guaranteed. (Assuming approximately ±30% dispersion)
There may be the case it will vary substantially depending on an ambient environment.

Minimum Stroke For Auto Switch Mounting

(mm)

No. of auto switches mounted	D-F7□V D-J79C D-M9□V	D-A7□ D-A80 D-A73C D-A80C D-A9□V	D-F7□WV D-F9□WV D-F7BAVL	D-A7□H D-A80H D-F7□ D-J79 D-F9□W	D-A79W	D-F7□W D-J79W D-F7BAL D-F79F D-F9BAL	D-A9□ D-M9□
1 pc.	5	5	10	15	15	20	10
2 pcs.	5	10	15	15	20	20	10

Other than the applicable auto switches listed in “How to Order”, the following auto switches can be mounted. For details, refer to page 9-15-1.

Type	Model	Electrical entry (Fetching direction)	Features	Applicable bore size (mm)
Reed switch	D-A80	Grommet (Perpendicular)	Without indicator light	32 to 100
	D-A80H	Grommet (In-line)		
	D-A80C	Connector (Perpendicular)		
	D-A90	Grommet (In-line)		20 to 100
	D-A90V	Grommet (Perpendicular)		
Solid state switch	D-F7NTL	Grommet (In-line)	With timer	32 to 100

* With pre-wire connector is available for D-F7NTL type, too. For details, refer to page 9-15-66.

* Normally closed (NC = b contact), solid state switch (D-F9G/F9H type) are also available. For details, refer to page 9-15-39.