



# Compact Cylinder: Standard Type

## Single Acting, Single Rod, Spring Return/Extend

# Series CQ2

ø12, ø16, ø20, ø25, ø32, ø40, ø50

### How to Order

**Without auto switch**

**CQ2** B 20   10 S  

**With auto switch**

**CDQ2** B 20   10 S   J79W S

**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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**Body option**

Nil	Standard (Rod end female thread)
F	With boss in head side
M	Rod end male thread

**Action**

S	Single acting, Spring return
T	Single acting, Spring extend

**Cylinder stroke (mm)**

Refer to "Standard Stroke" on page 7-6-43.

**Built-in magnet**

**Mounting style**

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

\* Mounting brackets are shipped together, (but not assembled).

**Bore size**

12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm

**Piping**

Nil	Screw-in piping
F	Built-in One-touch fittings (Note)

Note) Bore sizes available w/ One-touch fittings are ø32 to ø50.

### Applicable Auto Switch/Refer to page 7-9-1 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	ø12 to ø50		ø32 to ø50		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	●	●	—	—	—	IC circuit	—	
											2-wire	24 V	12 V	200 V				A72
				—	—	100 V	A73	A73H	—	—					●	●	●	—
							Connector	—	—	A73C	—	—	—	—	●	●	●	●
Diagnostic indication (2-color indication)	Grommet	—	—	A79W	—	—	—	—	—	●	●	—	—	—	—	—		
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	●	●	○	—	○		
				2-wire				F7BV	J79	M9BV	M9B	●	●	○	—	○		
				—				J79C	—	—	—	—	●	●	●	●		
		Connector	3-wire (NPN)	F7NWW	F79W	F9NWW	F9NW	●	●	○	—	○	IC circuit	Relay, PLC				
			3-wire (PNP)	—	F7PW	F9PWW	F9PW	●	●	○	—	○						
			2-wire	F7BWW	J79W	F9BWW	F9BW	●	●	○	—	○						
			—	—	F7BA	—	F9BA	—	●	○	—	○						
Water resistant (2-color indication)	Grommet	—	—	—	—	—	—	—	—	●	○	—	○	—	—	—	—	
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  
 3 m.....L (Example) A73CL  
 5 m.....Z (Example) A73CZ  
 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 7-6-23 for details.  
 • For details about auto switches with pre-wire connector, refer to page 7-9-36.



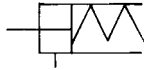
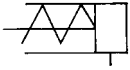
# Compact Cylinder: Standard Type Single Acting, Single Rod, Spring Return/Extend Series CQ2



### JIS Symbol

Single acting,  
Spring return

Single acting,  
Spring extend



## ⚠ Precautions

**Be sure to read before handling.**  
**For Safety Instructions and Actuator Precautions, refer to pages 7-13-3 to 7-13-6.**

### ⚠ Caution

#### Snap Ring Installation/Removal

- For installation and removal, use an appropriate pair of pliers (tool for installing a type C snap ring).
- Even if a proper plier (tool for installing type C snap ring) is used, it is likely to inflict damage to a human body or peripheral equipment, as a snap ring may be flown out of the tip of a plier (tool for installing a type C snap ring). Be much careful with the popping of a snap ring. Besides, be certain that a snap ring is placed firmly into the groove of rod cover before supplying air at the time of installment.

#### Mounting Bracket Part No.

Bore size (mm)	Foot (2)	Flange	Double (3) clevis
12	CQ-L012	CQ-F012	CQ-D012
16	CQ-L016	CQ-F016	CQ-D016
20	CQ-L020	CQ-F020	CQ-D020
25	CQ-L025	CQ-F025	CQ-D025
32	CQ-L032	CQ-F032	CQ-D032
40	CQ-L040	CQ-F040	CQ-D040
50	CQ-L050	CQ-F050	CQ-D050

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

Note 3) Parts belonging to each bracket are as follows.

Foot, Flange/Body mounting bolt, Double clevis/Clevis pin, Type C snap ring for axis, Body mounting bolt

### Type

Bore size (mm)		12	16	20	25	32	40	50	
Pneumatic	Mounting	Through-hole (Standard)	●	●	●	●	●	●	
		Both ends tapped style	●	●	●	●	●	●	
	Built-in magnet		●	●	●	●	●	●	
	Piping	Screw-in type	M5 x 0.8	M5 x 0.8	M5 x 0.8	M5 x 0.8	M5 x 0.8 Rc 1/8 (Note)	Rc 1/8	Rc 1/4
		Built-in One-touch fittings	—	—	—	—	ø6/4	ø6/4	ø8/6
	Rod end male thread		●	●	●	●	●	●	●
With boss in head side		●	●	●	●	●	●	●	

Note) In the case of without auto switch, M5 x 0.8 is used for 5 stroke only.

### Specifications

Type	Pneumatic (Non-lube)
Fluid	Air
Proof pressure	1.5 MPa
Maximum operating pressure	1.0 MPa
Ambient and fluid temperature	Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)
Rubber bumper	None
Rod end thread	Female thread
Rod end thread tolerance	JIS Class 2
Stroke length tolerance	+1.0 0
Mounting	Through-hole
Piston speed	50 to 500 mm/s

### Standard Stroke

Bore size (mm)	Standard stroke
12, 16, 20 25, 32, 40	5, 10
50	10, 20

### Manufacture of Intermediate Stroke (Single acting, Spring retract type is excluded.)

Description	Spacer is installed in the standard stroke body.	
Part no.	Refer to "How to Order" for the standard model no. on page 7-6-42.	
Description	Dealing with the stroke by the 1 mm interval is available by installing spacer with standard stroke cylinder.	
Stroke range	Bore size	Stroke range
	12 to 40	1 to 9
	50	1 to 19
Example	Part no.: CQ2B20-3T CQ2B20-5T with 2 mm width spacer inside. B dimension is 24.5 mm.	

### Allowable Kinetic Energy

Bore size (mm)	12	16	20	25	32	40	50
Allowable kinetic energy (J)	0.022	0.038	0.055	0.09	0.15	0.26	0.46

# Series CQ2



## Made to Order Specifications (For details, refer to page 7-10-1.)

Symbol	Specifications
-XA□	Change of rod end shape, S type only
-XB10	Intermediate stroke (Using exclusive body)
-XC6	Piston rod and rod end nut made of stainless steel
-XC18	NPT finish piping port
-XC36	With boss in rod side, Type T only
-X202	Same full length dimension as Series CQ1 Except ø12, 16, 25
-X203	Same L dimension from rod cover as Series CQ1
-X271	Fluoro rubber for seals

## Minimum Operating Pressure (MPa)

Bore size (mm)	Single acting (Spring return/extend)
12	0.25
16	0.25
20	0.18
25	0.18
32	0.17
40	0.15
50	0.13

## Theoretical Output (N)

Action	Bore size (mm)	Operating pressure (MPa)		
		0.3	0.5	0.7
Spring return	12	21	44	66
	16	45	86	126
	20	79	142	205
	25	126	224	323
	32	211	372	533
	40	338	589	841
	50	535	928	1316
Spring extend	12	14	31	48
	16	24	54	85
	20	44	91	138
	25	84	160	235
	32	152	273	393
	40	288	499	710
50	412	742	1072	

For the spring force, refer to page 7-12-3.

# Compact Cylinder: Standard Type Single Acting, Single Rod, Spring Return/Extend Series CQ2

## Weight

(g)

Action	Bore size (mm)	Cylinder stroke (mm)			
		5	10	15	20
Spring return	12	29	35	—	—
	16	42	51	—	—
	20	63	76	—	—
	25	87	101	—	—
	32	131	152	—	—
	40	206	229	—	—
	50	—	369	—	441
Spring extend	12	29	35	—	—
	16	43	50	—	—
	20	67	78	—	—
	25	92	104	—	—
	32	141	158	—	—
	40	216	235	—	—
	50	—	399	—	460

## Additional Weight

(g)

Bore size (mm)		12	16	20	25	32	40	50
Both ends tapped style		2	2	6	6	6	6	6
Rod end male thread	Male thread	1.5	3	6	12	26	27	53
	Nut	1	2	4	8	17	17	32
With boss in head side		0.7	1.3	2	3	5	7	13
Built-in One-touch fittings		—	—	—	—	6	6	10.5
Foot style (Including mounting bolt)		55	67	164	186	143	155	243
Rod side flange style (Including mounting bolt)		57	69	139	161	180	214	373
Rear flange style (Including mounting bolt)		54	65	133	152	165	198	348
Double clevis style (Including pin, snap ring, bolt)		32	39	88	123	151	196	393

Calculation: (Example) CQ2D32-10SM

- Cylinder weight: CQ2B32-10S..... 152 g
- Option weight: Both ends tapped style..... 6 g
- Rod end male thread..... 43 g
- Double clevis style..... 151 g
- 352 g

## Auto Switch Mounting Bracket Part No.

Bore size (mm)	Mounting bracket part no.	Note	Applicable auto switch	
			Reed switch	Solid state switch
12, 16 20, 25	BQ-1	<ul style="list-style-type: none"> <li>• Switch mounting screw (M3 x 0.5 x 8ℓ)</li> <li>• Square nut</li> </ul>	D-A7/A8 D-A73C/A80C D-A7□H/A80H D-A79W	D-F7□/J79 D-F7□V D-J79C D-F7□W/J79W D-F7□WV D-F7BAL D-F7BAVL D-F79F D-F7NTL
32, 40 50	BQ-2	<ul style="list-style-type: none"> <li>• Switch mounting screw (M3 x 0.5 x 10ℓ)</li> <li>• Switch spacer</li> <li>• Switch mounting nut</li> </ul>		



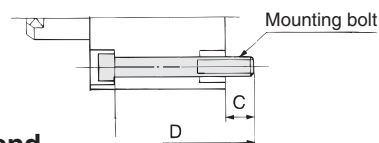
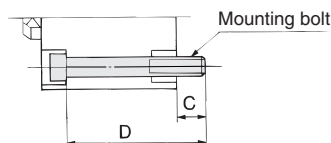
[Mounting screws set made of stainless steel]  
 The set of stainless steel mounting screws (with nuts) described below is available and can be used depending on the operating environment. (Since the spacer is not included, order it separately.)  
 BBA2: For D-A7/A8/F7/J7  
 D-F7BAL/F7BAVL switch is set on the cylinder with the stainless steel screws above when shipped. When only a switch is shipped independently, "BBA2" screws are attached.

## Mounting Bolt for CQ2

Mounting method: Mounting bolt for through-hole mounting style of CQ2B is available as an option.

Ordering: Add the word "Bolt" in front of the bolts to be used.

Example) Bolt M3 x 25ℓ 4 pcs.



### Spring Return

Model	C	D	Mounting bolt
CQ2B12-5S	6.5	25	M3 x 25ℓ
		30	x 30ℓ
CQ2B16-5S	5	25	M3 x 25ℓ
		30	x 30ℓ
CQ2B20-5S	7.5	25	M5 x 25ℓ
		30	x 30ℓ
CQ2B25-5S	9.5	30	M5 x 30ℓ
		35	x 35ℓ
CQ2B32-5S	9	30	M5 x 30ℓ
		35	x 35ℓ
CQ2B40-5S	7.5	35	M5 x 35ℓ
		40	x 40ℓ
CQ2B50-10S	12.5	45	M6 x 45ℓ
		55	x 55ℓ

### Spring Extend

Model	C	D	Mounting bolt
CQ2B12-5T	6.5	25	M3 x 25ℓ
		30	x 30ℓ
CQ2B16-5T	5	25	M3 x 25ℓ
		30	x 30ℓ
CQ2B20-5T	7.5	25	M5 x 25ℓ
		30	x 30ℓ
CQ2B25-5T	9.5	30	M5 x 30ℓ
		35	x 35ℓ
CQ2B32-5T	9	30	M5 x 30ℓ
		35	x 35ℓ
CQ2B40-5T	7.5	35	M5 x 35ℓ
		40	x 40ℓ
CQ2B50-10T	12.5	45	M6 x 45ℓ
		55	x 55ℓ

CUJ

CU

CQS

CQM

CQ2

RQ

MU

D-

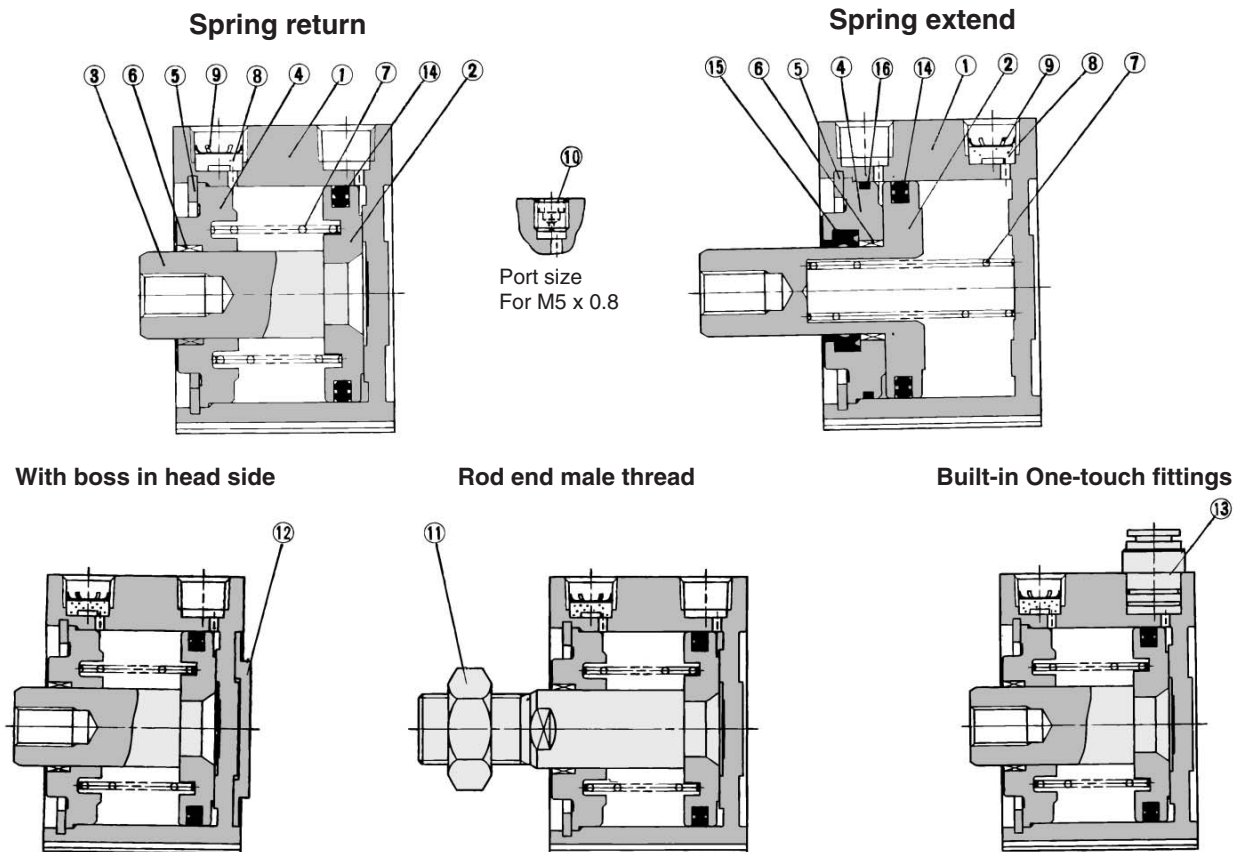
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20-

Data

# Series CQ2

## Construction



### Component Parts

No.	Description	Material	Note
①	Cylinder tube	Aluminum alloy	Hard anodized
②*	Piston	Aluminum alloy	Chromated
③	Piston rod	Stainless steel	ø12 to ø25
		Carbon steel	ø32 to ø50, Hard chrome plated
④	Collar	Aluminum bearing alloy	ø12 to ø40, Anodized
		Aluminum alloy casted	ø50, Chromate, Painted
⑤	Snap ring	Carbon tool steel	Phosphate coated
⑥	Bushing	Lead-bronze casted	ø50, Spring return
		Lead bronze casted	ø50, Spring extend
⑦	Return spring	Piano wire	Zinc chromated
⑧	Bronze element	Sintered metallic BC	Port size Rc 1/8, 1/4
⑨	Snap ring	Carbon tool steel	
⑩	Plug with fixed orifice	Alloy steel	
⑪	Rod end nut	Carbon steel	Nickel plated
⑫	Centering location ring	Aluminum alloy	ø20 to ø50, Anodized
⑬	One-touch fitting	—	ø32 to ø50

\* On spring extend (type T), piston and piston rod are integrated (stainless steel).

### Replacement Parts

No.	Description	Material	Note
⑭	Piston seal	NBR	
⑮	Rod seal	NBR	
⑯	Gasket	NBR	

### Replacement Parts: Seal Kit

Bore size (mm)	Single acting/Spring return	Single acting/Spring extend
12	CQ2B12-S-PS	CQ2B12-T-PS
16	CQ2B16-S-PS	CQ2B16-T-PS
20	CQ2B20-S-PS	CQ2B20-T-PS
25	CQ2B25-S-PS	CQ2B25-T-PS
32	CQ2B32-S-PS	CQ2B32-T-PS
40	CQ2B40-S-PS	CQ2B40-T-PS
50	CQ2B50-S-PS	CQ2B50-T-PS
Note	A set includes ⑭.	Kits include items ⑭, ⑮, ⑯ from the table above
How to order	* Seal kit includes ⑭. Order the seal kit, based on each bore size.	* Seal kit includes ⑭, ⑮, ⑯. Order the seal kit, based on each bore size.

### Copper-free (For CRT manufacturing process)

20 — CQ2B Bore size — Stroke  $\frac{S}{T}$  (M)  
 • Copper-free — ø12, ø16, ø20, ø25, ø32, ø40, ø50

To prevent the influence of copper ions or halogen ions during CRT manufacturing processes, copper and fluorine materials are not used in the component parts.

### Specifications

Action	Single acting, Single rod
Bore size (mm)	12, 16, 20, 25, 32, 40, 50
Proof pressure	1.5 MPa
Maximum operating pressure	1.0 MPa
Rubber bumper	None
Piping	Screw-in piping
Piston speed	50 to 500 mm/s
Mounting	Through-hole
Auto switch	Mountable

# Standard Type: Single Acting, Single Rod Series CDQ2 With Auto Switch



## 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-M9□ D-F9□W	D-A79W	D-F7□W D-J79W D-F7BAL D-F79F D-F9BAL	D-A9□
1 pc.	5	5	10	15	15	20	10
2 pcs.	5	10	15	15	20	20	10

## Weight (g)

Action	Bore size (mm)	Cylinder stroke (mm)			
		5	10	15	20
Spring return	12	48	54	—	—
	16	74	83	—	—
	20	109	123	—	—
	25	146	162	—	—
	32	190	211	—	—
	40	282	305	—	—
Spring extend	12	53	70	—	—
	16	73	82	—	—
	20	122	133	—	—
	25	160	175	—	—
	32	200	217	—	—
	40	292	311	—	—
	50	—	517	—	578

## Additional Weight (g)

Bore size (mm)	12	16	20	25	32	40	50
Both ends tapped style	1	1	3	3	6	6	6
Rod end	Male thread	1.5	3	6	12	26	53
	Nut	1	2	4	8	17	32
With boss in head side	0.7	1.3	2	3	5	7	13
Built-in One-touch fittings	—	—	—	—	6	6	10.5
Foot style (Including mounting bolt)	49	62	147	169	143	155	243
Rod side flange style (Including mounting bolt)	54	67	131	153	180	214	373
Rear flange style (Including mounting bolt)	52	63	124	144	165	198	348
Double clevis style (Including pin, snap ring, bolt)	29	35	78	114	151	196	393

Calculation: (Example) CDQ2D32-10SM

- Cylinder weight: CDQ2B32-10S ..... 211 g
- Option weight: Both ends tapped style ... 6 g  
Rod end male thread ... 43 g  
Double clevis style ..... 151 g  
411 g

If auto switches are to be installed, the weight that corresponds to the number of auto switches and mounting brackets to be used must be added.

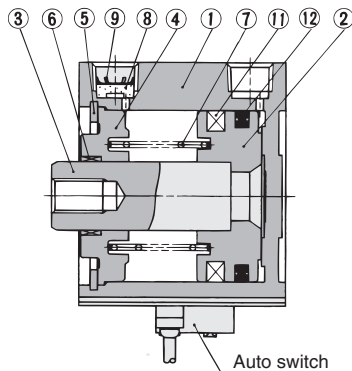
## Auto Switch Mounting Bracket Weight

Mounting bracket part no.	Applicable bore (mm)	Weight (g)
BQ-1	12 to 25	1.5
BQ-2	32 to 50	1.5

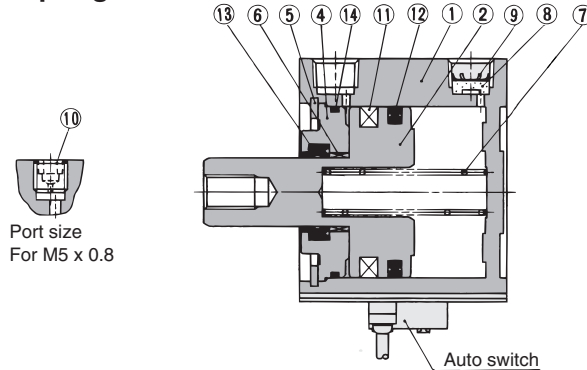
\* For the auto switch weight, refer to page 7-9-1.

## Construction

### Spring return



### Spring extend



## Component Parts

No.	Description	Material	Note
①	Cylinder tube	Aluminum alloy	Hard anodized
②	Piston	Aluminum alloy	Chromated
③	Piston rod	Stainless steel	ø12 to ø25
		Carbon steel	ø32 to ø50, Hard chrome plated
④	Collar	Aluminum alloy	ø12 to ø40, Anodized
		Aluminum alloy casted	ø50, Chromate, Painted
⑤	Snap ring	Carbon tool steel	Phosphate coated
⑥	Bushing	Lead-bronze casted	ø50, Spring return
		Lead bronze casted	ø50, Spring extend
⑦	Return spring	Piano wire	Zinc chromated
⑧	Bronze element	Sintered metallic BC	Port size Rc 1/8, 1/4.
⑨	Snap ring	Carbon tool steel	
⑩	Plug with fixed orifice	Alloy steel	Port size M5 x 0.8
⑪	Magnet	—	

\* On spring extend (type T), piston with ø20 or more and piston rod are integrated (Stainless steel).

No.	Description	Material	Note
⑫	Piston seal	NBR	
⑬	Rod seal	NBR	
⑭	Gasket	NBR	



## Replacement Parts: Seal Kit

Since the same as standard type, single acting, single rod, refer to page 7-6-46.

# Series CDQ2

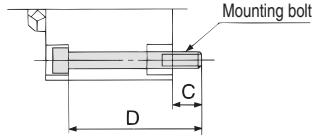
## Mounting Bolt for CDQ2 with Auto Switch

Mounting method: Mounting bolt for through-hole mounting style of CDQ2B is available as an option.

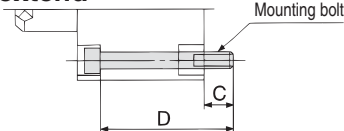
Ordering: Add the word "Bolt" in front of the bolts to be used.

Example) Bolt M3 x 35ℓ 2 pcs.

### Spring return



### Spring extend



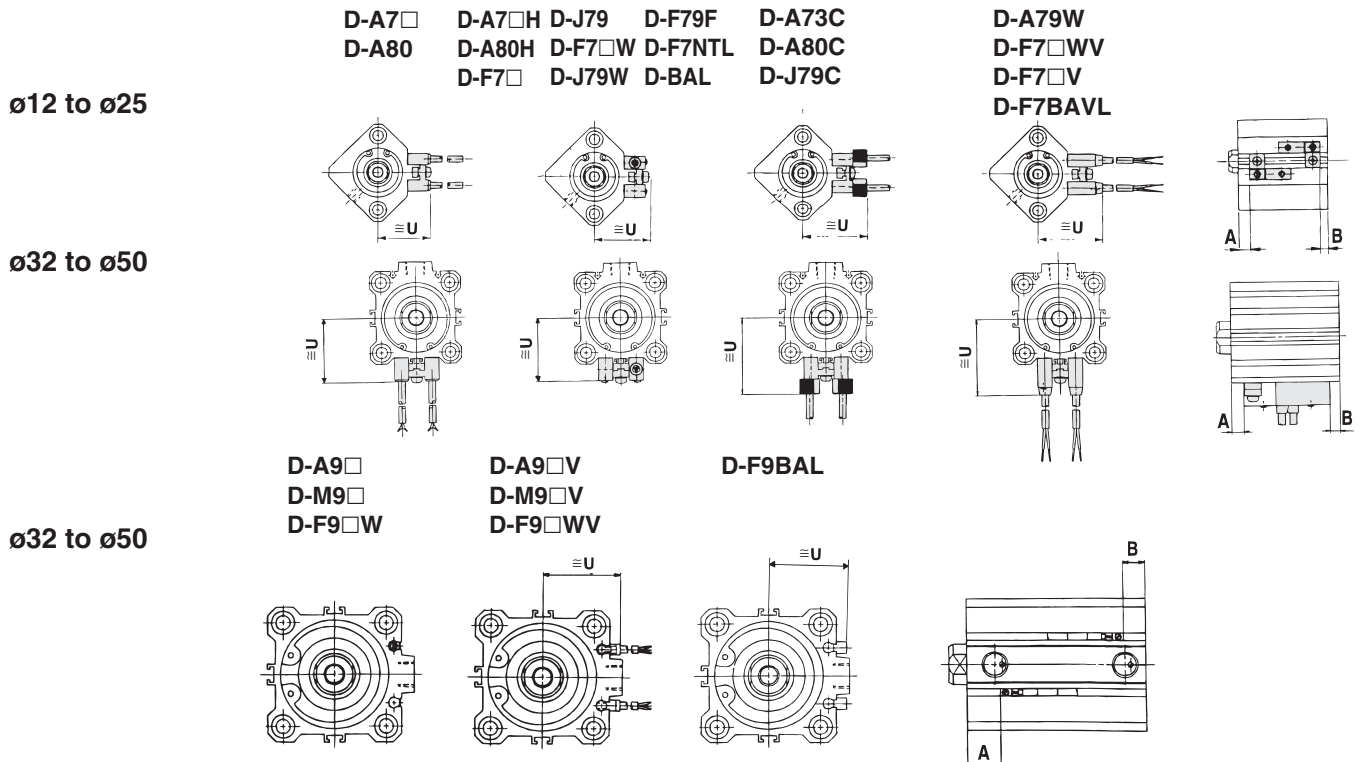
### Spring Return

Model	C	D	Mounting bolt
CDQ2B12-5S	5.5	35	M3 x 35ℓ
-10S		40	x 40ℓ
CDQ2B16-5S	8	40	M3 x 40ℓ
-10S		45	x 45ℓ
CDQ2B20-5S	10.5	40	M5 x 40ℓ
-10S		45	x 45ℓ
CDQ2B25-5S	9.5	40	M5 x 40ℓ
-10S		45	x 45ℓ
CDQ2B32-5S	9	40	M5 x 40ℓ
-10S		45	x 45ℓ
CDQ2B40-5S	7.5	45	M5 x 45ℓ
-10S		50	x 50ℓ
CDQ2B50-10S	12.5	55	M6 x 55ℓ
-20S		65	x 65ℓ

### Spring Extend

Model	C	D	Mounting bolt
CDQ2B12-5T	6.1	40	M3 x 40ℓ
-10T		45	x 45ℓ
CDQ2B16-5T	8	40	M3 x 40ℓ
-10T		45	x 45ℓ
CDQ2B20-5T	10.5	40	M5 x 40ℓ
-10T		45	x 45ℓ
CDQ2B25-5T	9.5	40	M5 x 40ℓ
-10T		45	x 45ℓ
CDQ2B32-5T	9	40	M5 x 40ℓ
-10T		45	x 45ℓ
CDQ2B40-5T	7.5	45	M5 x 45ℓ
-10T		50	x 50ℓ
CDQ2B50-10T	12.5	55	M6 x 55ℓ
-20T		65	x 65ℓ

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



### Proper Auto Switch Mounting Position

Bore size (mm)	D-A7□ D-A80		D-A7□H D-A80H D-A73C D-A80C D-F7□ D-F79F D-J79 D-F7□V D-J79C D-F7□W D-J79W D-F7□WV D-F7BAVL D-F7BAL		D-A79W		D-A9□ D-A9□V		D-M9□ D-M9□V D-F9□W D-F9□WV		D-F9BAL	
	A	B	A	B	A	B	A	B	A	B	A	B
12	4.5	5.5 (10)	5	6 (10.5)	2	3 (7.5)	—	—	—	—	—	—
16	7.5 (5.5)	5 (7)	8 (6)	5.5 (7.5)	5 (3)	2.5 (4.5)	—	—	—	—	—	—
20	7.5	6.5	8	7	5	4	—	—	—	—	—	—
25	7.5	7	8	7.5	5	4.5	—	—	—	—	—	—
32	9	6	9.5	6.5	3.5	8	5	12	9	11	8	—
40	13	8.5	13.5	9	10.5	6	12	7.5	16	11.5	15	10.5
50	11	11.5	11.5	12	8.5	9	10	10.5	14	14.5	13	13.5

### Auto Switch Mounting Height

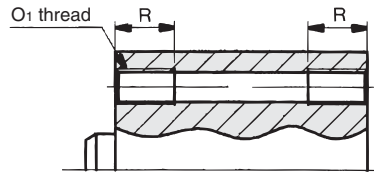
	D-A7□ D-A80	D-A7□H D-A80H D-A73C D-A80C	D-F7□V D-F7□WV D-F7BAVL	D-J79C	D-A79W	D-A9□V	D-M9□V D-F9□WV	D-F9BAL	(mm)
	U	U	U	U	U	U	U	U	
	19.5	20.5	26.5	23	26	22	—	—	—
	22.5	23.5	29.5	26	29	25	—	—	—
	24.5	25.5	31.5	28	31	27	—	—	—
	27.5	28.5	34.5	31	34	30	—	—	—
	31.5	32.5	38.5	35	38	34	27	29	26.5
	35	36	42	38.5	41.5	37.5	30.5	32.5	30
	41	42	48	44.5	47.5	43.5	36.5	38.5	36

# Series CQ2

## Dimensions: $\phi 12$ to $\phi 25$ /Spring Return without Auto Switch

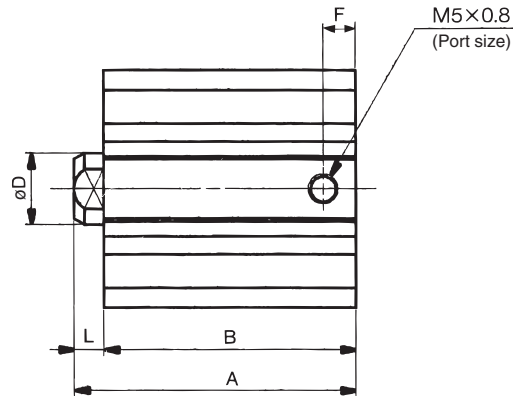
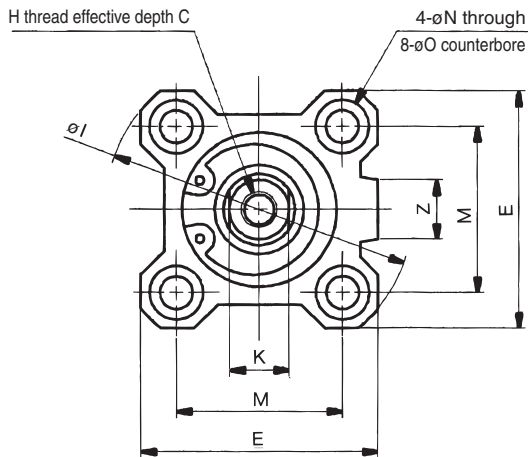
### Basic style (Through-hole): CQ2B

#### Both ends tapped style: CQ2A

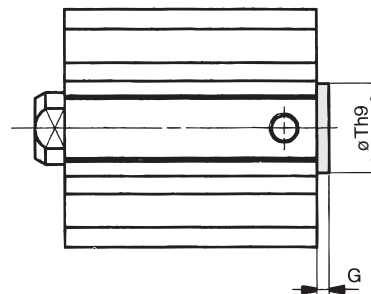


#### Both Ends Tapped Style

Bore size (mm)	O1	R
12	M4 x 0.7	7
16	M4 x 0.7	7
20	M6 x 1.0	10
25	M6 x 1.0	10



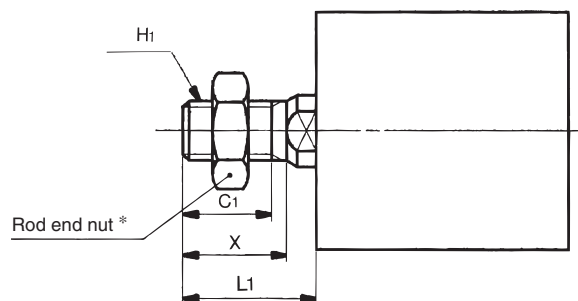
#### With boss in head side



#### With Boss in Head Side

Bore size (mm)	G	Th9
12	1.5	15 <sup>0</sup> <sub>-0.043</sub>
16	1.5	20 <sup>0</sup> <sub>-0.052</sub>
20	2	13 <sup>0</sup> <sub>-0.043</sub>
25	2	15 <sup>0</sup> <sub>-0.043</sub>

#### Rod end male thread



#### Rod End Male Thread

Bore size (mm)	C1	X	H1	L1
12	9	10.5	M5 x 0.8	14
16	10	12	M6 x 1.0	15.5
20	12	14	M8 x 1.25	18.5
25	15	17.5	M10 x 1.25	22.5

#### Basic Style

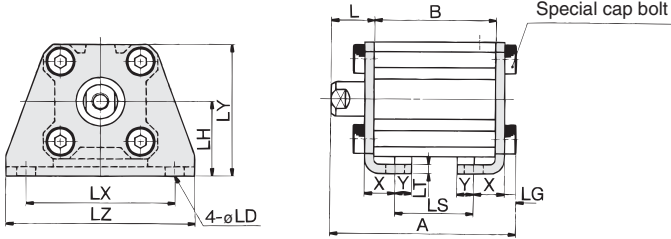
Bore size (mm)	A		B		C	D	E	F	H	I	K	L	M	N	O	Z
	5 st	10 st	5 st	10 st												
12	25.5	30.5	22	27	6	6	25	5	M3 x 0.5	32	5	3.5	15.5	3.5	6.5 depth 3.5	—
16	27	32	23.5	28.5	8	8	29	5.5	M4 x 0.7	38	6	3.5	20	3.5	6.5 depth 3.5	10
20	29	34	24.5	29.5	7	10	36	5.5	M5 x 0.8	47	8	4.5	25.5	5.5	9 depth 7	10
25	32.5	37.5	27.5	32.5	12	12	40	5.5	M6 x 1.0	52	10	5	28	5.5	9 depth 7	10

\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.

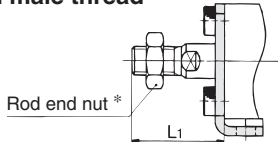


# Compact Cylinder: Standard Type Single Acting, Single Rod, Spring Return/Extend **Series CQ2**

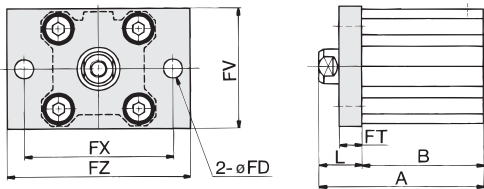
## Foot style: CQ2L



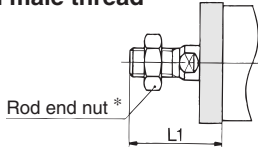
### Rod end male thread



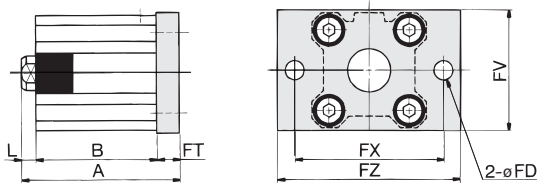
## Rod side flange style: CQ2F



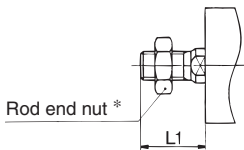
### Rod end male thread



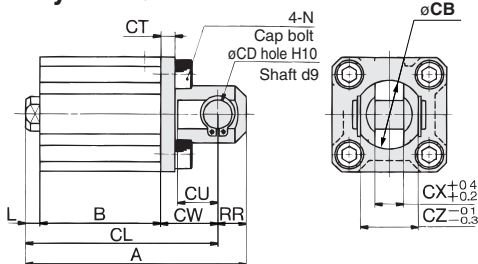
## Head side flange style: CQ2G



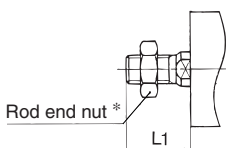
### Rod end male thread



## Double clevis style: CQ2D



### Rod end male thread



## Foot Style

Bore size (mm)	A		B		L	L1	LD	LG	LH	LS		LT	LX	LY	LZ	X	Y
	5 st	10 st	5 st	10 st						5 st	10 st						
12	40.3	45.3	22	27	13.5	24	4.5	2.8	17	10	15	2	34	29.5	44	8	4.5
16	41.8	46.8	23.5	28.5	13.5	25.5	4.5	2.8	19	11.5	16.5	2	38	33.5	48	8	5
20	46.2	51.2	24.5	29.5	14.5	28.5	6.6	4	24	12.5	17.5	3.2	48	42	62	9.2	5.8
25	49.7	54.7	27.5	32.5	15	32.5	6.6	4	26	12.5	17.5	3.2	52	46	66	10.7	5.8

Foot bracket material: Carbon steel

## Rod Side Flange Style

Bore size (mm)	A		B		FD	FT	FV	FX	FZ	L	L1
	5 st	10 st	5 st	10 st							
12	35.5	40.5	22	27	4.5	5.5	25	45	55	13.5	24
16	37	42	23.5	28.5	4.5	5.5	30	45	55	13.5	25.5
20	39	44	24.5	29.5	6.6	8	39	48	60	14.5	28.5
25	42.5	47.5	27.5	32.5	6.6	8	42	52	64	15	32.5

Flange bracket material: Carbon steel

## Head Side Flange Style

Bore size (mm)	A		L	L1
	5 st	10 st		
12	31	36	3.5	14
16	32.5	37.5	3.5	15.5
20	37	42	4.5	18.5
25	40.5	45.5	5	22.5

Flange bracket material: Carbon steel

(\* Dimensions except A, L and L1 are the same as rod side flange style.)

## Double Clevis Style

Bore size (mm)	A		B		CB	CD	CL		CT	CU	CW	CX	CZ	L	L1	N	RR
	5 st	10 st	5 st	10 st			5 st	10 st									
12	45.5	50.5	22	27	12	5	39.5	44.5	4	7	14	5	10	3.5	14	M4 x 0.7	6
16	48	53	23.5	28.5	14	5	42	47	4	10	15	6.5	12	3.5	15.5	M4 x 0.7	6
20	56	61	24.5	29.5	20	8	47	52	5	12	18	8	16	4.5	18.5	M6 x 1.0	9
25	62.5	67.5	27.5	32.5	24	10	52.5	57.5	5	14	20	10	20	5	22.5	M6 x 1.0	10

Double clevis bracket material: Carbon steel

\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.

\*\* Clevis pin and snap ring are shipped together.

CUJ

CU

CQS

CQM

**CQ2**

RQ

MU

D-

-X

20-

Data

# Series CDQ2

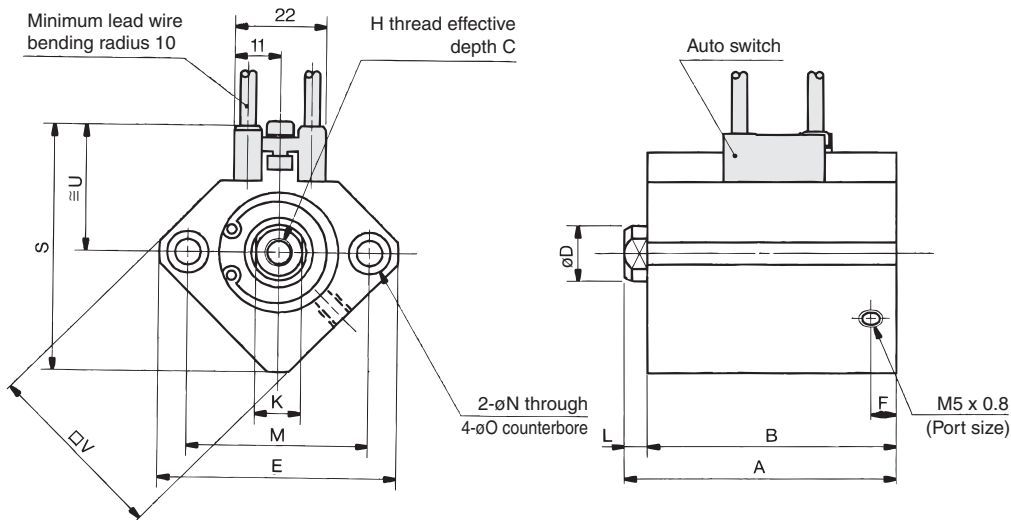
## Dimensions: $\phi 12$ to $\phi 25$ /Spring Return with Auto Switch

### Basic style (Through-hole): CDQ2B

### Double clevis style: CDQ2A

### Both Ends Tapped Style

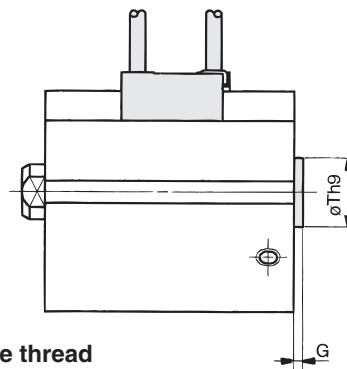
Bore size (mm)	O1	R
12	M4 x 0.7	7
16	M4 x 0.7	7
20	M6 x 1.0	10
25	M6 x 1.0	10



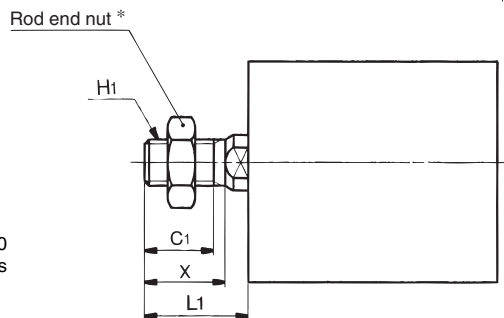
### With boss in head side

### With Boss in Head Side

Bore size (mm)	G	Th9
12	1.5	15 <sup>0</sup> <sub>-0.043</sub>
16	1.5	20 <sup>0</sup> <sub>-0.052</sub>
20	2	13 <sup>0</sup> <sub>-0.043</sub>
25	2	15 <sup>0</sup> <sub>-0.043</sub>



### Rod end male thread



### Rod End Male Thread

Bore size (mm)	C1	X	H1	L1
12	9	10.5	M5 x 0.8	14
16	10	12	M6 x 1.0	15.5
20	12	14	M8 x 1.25	18.5
25	15	17.5	M10 x 1.25	22.5

Auto switch shown above is D-A73 type and D-A80 type. For the auto switch mounting position and its mounting height, refer to page 7-6-48.

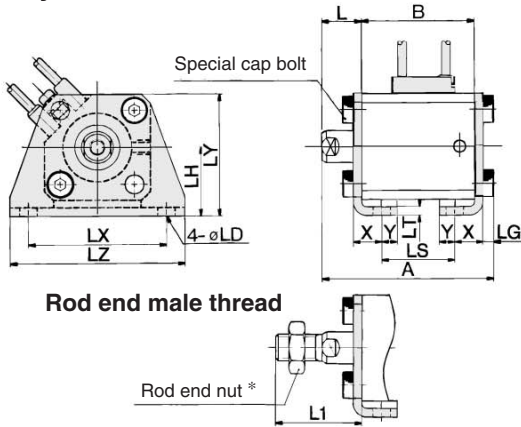
### Basic Style

Bore size (mm)	A		B		C	D	E	F	H	K	L	M	N	O	S	U	V
	5 st	10 st	5 st	10 st													
12	36.5	41.5	33	38	6	6	32	6.5	M3 x 0.5	5	3.5	22	3.5	6.5 depth 3.5	35.5	19.5	25
16	39	44	35.5	40.5	8	8	38	5.5	M4 x 0.7	6	3.5	28	3.5	6.5 depth 3.5	41.5	22.5	29
20	41	46	36.5	41.5	7	10	47	5.5	M5 x 0.8	8	4.5	36	5.5	9 depth 7	48	24.5	36
25	42.5	47.5	37.5	42.5	12	12	52	5.5	M6 x 1.0	10	5	40	5.5	9 depth 7	53.5	27.5	40

\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.

# Compact Cylinder: Standard Type Single Acting, Single Rod, Spring Return/Extend **Series CDQ2**

## Foot style: CDQ2L

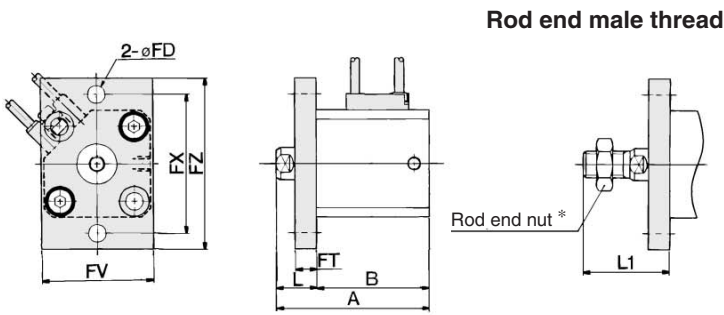


## Foot Style

Bore size (mm)	A		B		L	L1	LD	LG	LH	LS		LT	LX	LY	LZ	X	Y
	5 st	10 st	5 st	10 st						5 st	10 st						
12	51.3	56.3	33	38	13.5	24	4.5	2.8	17	21	26	2	34	29.5	44	8	4.5
16	53.8	58.8	35.5	40.5	13.5	25.5	4.5	2.8	19	23.5	28.5	2	38	33.5	48	8	5
20	58.2	63.2	36.5	41.5	14.5	28.5	6.6	4	24	24.5	29.5	3.2	48	42	62	9.2	5.8
25	59.7	64.7	37.5	42.5	15	32.5	6.6	4	26	22.5	27.5	3.2	52	46	66	10.7	5.8

Foot bracket material: Carbon steel

## Rod side flange style: CDQ2F

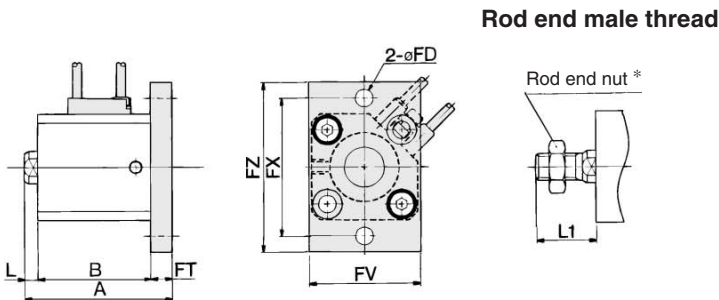


## Rod Side Flange Style

Bore size (mm)	A		B		FD	FT	FV	FX	FZ	L	L1
	5 st	10 st	5 st	10 st							
12	46.5	51.5	33	38	4.5	5.5	25	45	55	13.5	24
16	49	54	35.5	40.5	4.5	5.5	30	45	55	13.5	25.5
20	51	56	36.5	41.5	6.6	8	39	48	60	14.5	28.5
25	52.5	57.5	37.5	42.5	6.6	8	42	52	64	15	32.5

Flange bracket material: Carbon steel

## Head side flange style: CDQ2G



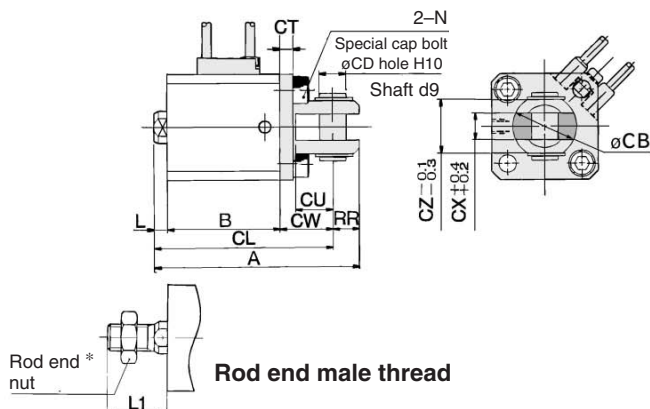
## Head Side Flange Style

Bore size (mm)	A		L	L1
	5 st	10 st		
12	46.4	51.4	3.5	14
16	44.5	49.5	3.5	15.5
20	49	54	4.5	18.5
25	50.5	55.5	5	22.5

(\* Dimensions except A, L and L1 are the same as rod side flange style.)

Flange bracket material: Carbon steel

## Double clevis style: CDQ2A



## Double Clevis Style

Bore size (mm)	A		B		CB	CD	CL		CT	CU	CW	CX	CZ	L	L1	N	RR
	5 st	10 st	5 st	10 st			5 st	10 st									
12	56.5	61.5	33	38	12	5	50.5	55.5	4	7	14	5	10	3.5	14	M4 x 0.7	6
16	60	65	35.5	40.5	14	5	54	59	4	10	15	6.5	12	3.5	15.5	M4 x 0.7	6
20	68	73	36.5	41.5	20	8	59	64	5	12	18	8	16	4.5	18.5	M6 x 1.0	9
25	72.5	77.5	37.5	42.5	24	10	62.5	67.5	5	14	20	10	20	5	22.5	M6 x 1.0	10

Double clevis bracket material: Carbon steel

\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.  
\*\* Clevis pin and snap ring are shipped together.

CUJ

CU

CQS

CQM

**CQ2**

RQ

MU

D-

-X

20-

Data

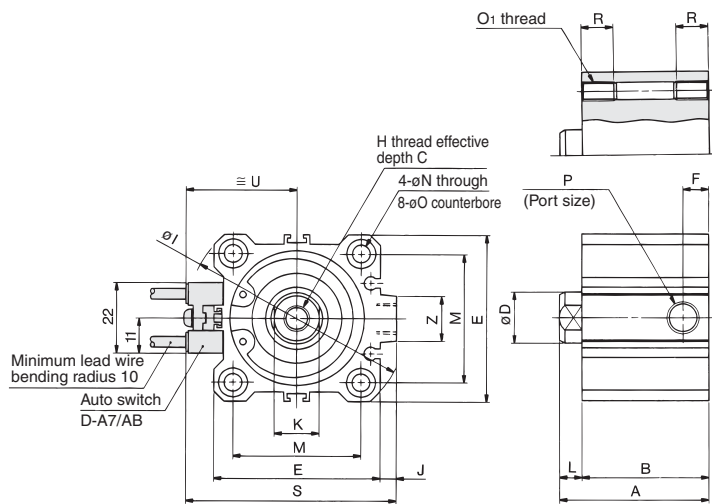
# Series CQ2/CDQ2

(In the case of without auto switches, A, B, F and P dimensions will be only changed. Refer to the dimension chart.)

## Dimensions: $\phi 32$ to $\phi 50$ /Spring Return With Auto Switch

### Basic style (Through-hole): CQ2B/CDQ2B

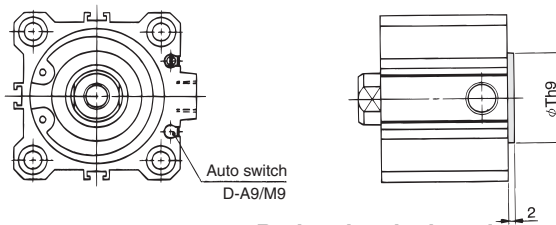
#### Both ends tapped style: CDQ2A



#### Both Ends Tapped Style

Bore size (mm)	O1	R
32	M6 x 1.0	10
40	M6 x 1.0	10
50	M8 x 1.25	14

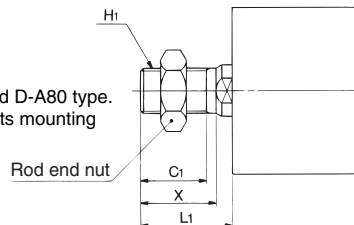
#### With boss in head side



#### With Boss in Head Side

Bore size (mm)	Th9
32	21 <sup>0</sup> <sub>-0.052</sub>
40	28 <sup>0</sup> <sub>-0.052</sub>
50	35 <sup>0</sup> <sub>-0.062</sub>

#### Rod end male thread



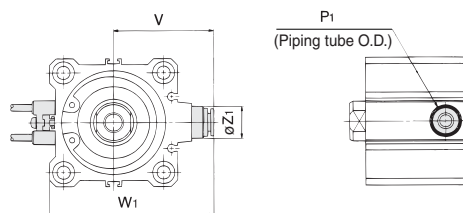
#### Rod End Male Thread

Bore size (mm)	C1	X	H1	L1
32	20.5	23.5	M14 x 1.5	28.5
40	20.5	23.5	M14 x 1.5	28.5
50	26	28.5	M18 x 1.5	33.5



Auto switch shown above is D-A73 type and D-A80 type.  
\*\* For the auto switch mounting position and its mounting height, refer to page 7-6-48.

#### Built-in One-touch fittings: $\phi 32$ to $\phi 50$



#### Built-in One-touch Fittings

Bore size (mm)	Z1	P1	V	W1
32	13	6	36.5	59
40	13	6	40.5	66.5
50	16	8	50	82

#### Basic Style

Bore size (mm)	Without auto switch												With auto switch							
	A			B			F			P			A			B			F	P
	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st		
32	35	40	—	28	33	—	5.5	7.5	—	M5 x 0.8	Rc 1/8	—	45	50	—	38	43	—	7.5	Rc 1/8
40	41.5	46.5	—	34.5	39.5	—	8	8	—	Rc 1/8	—	—	51.5	56.5	—	44.5	49.5	—	8	Rc 1/8
50	—	48.5	58.5	—	40.5	50.5	—	10.5	10.5	—	Rc 1/4	—	—	58.5	68.5	—	50.5	60.5	10.5	Rc 1/4

Bore size (mm)	C	D	E	H	I	J	K	L	M	N	O	S	U	Z
32	13	16	45	M8 x 1.25	60	4.5	14	7	34	5.5	9 depth 7	58.5	31.5	14
40	13	16	52	M8 x 1.25	69	5	14	7	40	5.5	9 depth 7	66	35	14
50	15	20	64	M10 x 1.5	86	7	17	8	50	6.6	11 depth 8	80	41	19

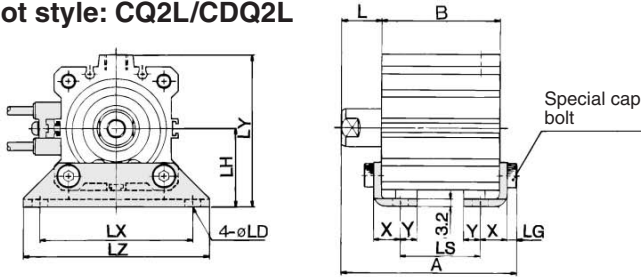


\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.

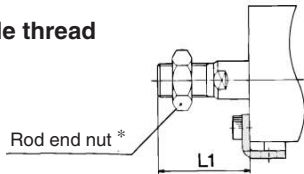
Note) A, B dimensions of  $\phi 32$ -5 stroke with One-touch fitting without auto switch are the same dimensions as the stroke  $\phi 32$ -10 without auto switch.

# Compact Cylinder: Standard Type Single Acting, Single Rod, Spring Return/Extend **Series CQ2/CDQ2**

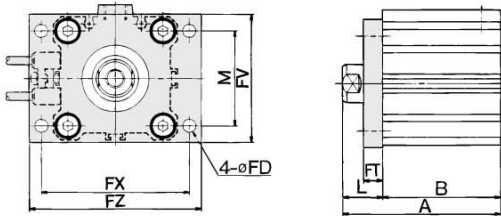
## Foot style: CQ2L/CDQ2L



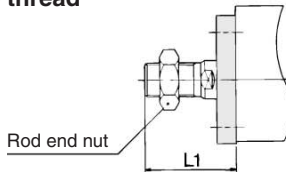
### Rod end male thread



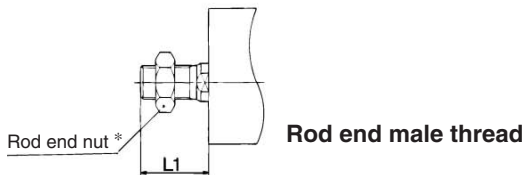
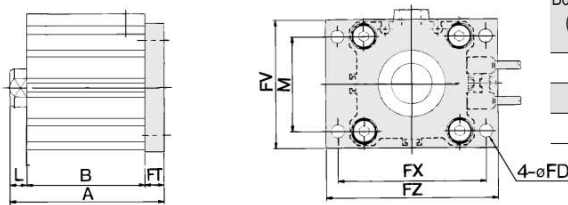
## Rod side flange style: CQ2F/CDQ2F



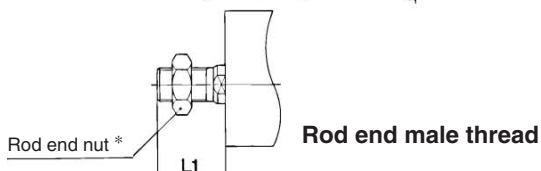
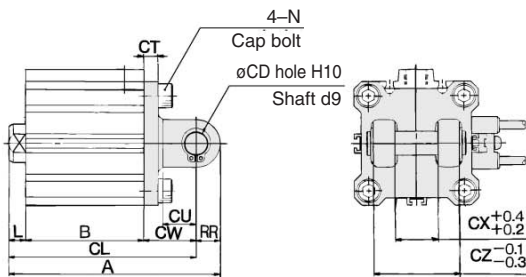
### Rod end male thread



## Head side flange style: CQ2G/CDQ2G



## Head side flange style: CQ2D/CDQ2D



## Foot Style

Bore size (mm)	Without auto switch									With auto switch								
	A			B			LS			A			B			LS		
	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st
32	52.5	57.2	—	28	33	—	12	17	—	62.2	67.2	—	38	43	—	22	27	—
40	58.7	63.7	—	34.5	39.5	—	18.5	23.5	—	68.7	73.7	—	44.5	49.5	—	28.5	33.5	—
50	—	66.7	76.7	—	40.5	50.5	—	17.5	27.5	—	76.7	86.7	—	50.5	60.5	—	27.5	37.5

Bore size (mm)	L	L1	LD	LG	LH	LX	LY	LZ	X	Y
32	17	38.5	6.6	4	30	57	57	71	11.2	5.8
40	17	38.5	6.6	4	33	64	64	78	11.2	7
50	18	43.5	9	5	39	79	78	95	14.7	8

Foot bracket material: Carbon steel

## Rod Side Flange Style

Bore size (mm)	Without auto switch						With auto switch					
	A			B			A			B		
	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st
32	45	50	—	28	33	—	55	60	—	38	43	—
40	51.5	56.5	—	34.5	39.5	—	61.5	66.5	—	44.5	49.5	—
50	—	58.5	68.5	—	40.5	50.5	—	68.5	78.5	—	50.5	60.5

Bore size (mm)	FD	FT	FV	FX	FZ	L	L1	M
32	5.5	8	48	56	65	17	38.5	34
40	5.5	8	54	62	72	17	38.5	40
50	6.6	9	67	76	89	18	43.5	50

Flange bracket material: Carbon steel

## Head Side Flange Style

Bore size (mm)	Without auto switch			With auto switch			L	L1
	A			B				
	5 st	10 st	20 st	5 st	10 st	20 st		
32	43	48	—	53	58	—	7	28.5
40	49.5	54.5	—	59.5	64.5	—	7	28.5
50	—	57.5	67.5	—	67.5	77.5	8	33.5

Flange bracket material: Carbon steel

(\* Dimensions except A, L and L1 are the same as rod side flange style.)

## Double Clevis Style

Bore size (mm)	Without auto switch									With auto switch								
	A			B			CL			A			B			CL		
	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st
32	65	70	—	28	33	—	55	60	—	75	80	—	38	43	—	65	70	—
40	73.5	78.5	—	39.5	39.5	—	63.5	68.5	—	83.5	88.5	—	44.5	49.5	—	73.5	78.5	—
50	—	90.5	100.5	—	40.5	50.5	—	76.5	86.5	—	100.5	110.5	—	50.5	60.5	—	86.5	96.5

Bore size (mm)	CD	CT	CU	CW	CX	CZ	L	L1	N	RR
32	10	5	14	20	18	36	7	28.5	M6 x 1.0	10
40	10	6	14	22	18	36	7	28.5	M6 x 1.0	10
50	14	7	20	28	22	44	8	33.5	M8 x 1.25	14

Double clevis bracket material: Cast iron

\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.



\*\* Clevis pin and snap ring are attached.

CUJ

CU

CQS

CQM

**CQ2**

RQ

MU

D-

-X

20-

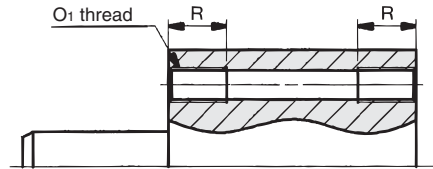
Data

# Series CQ2

## Dimensions: $\phi 12$ to $\phi 25$ /Spring Extend without Auto Switch

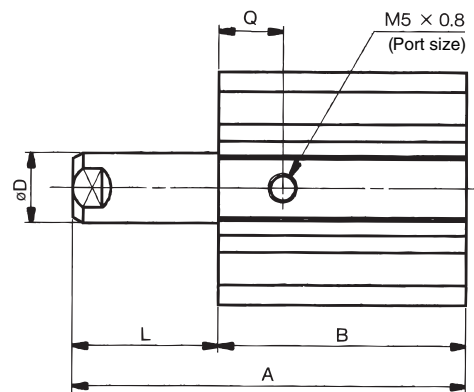
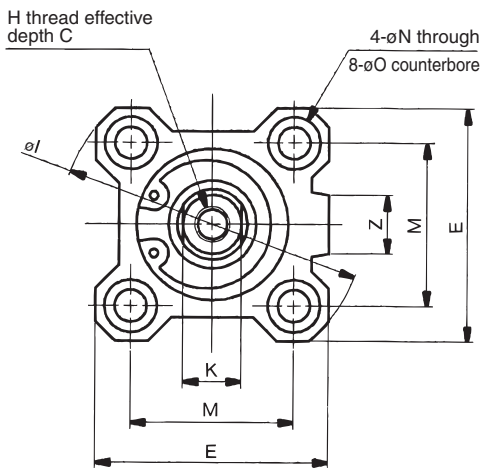
### Basic style (Through-hole): CQ2B

#### Both end tapped style: CQ2A

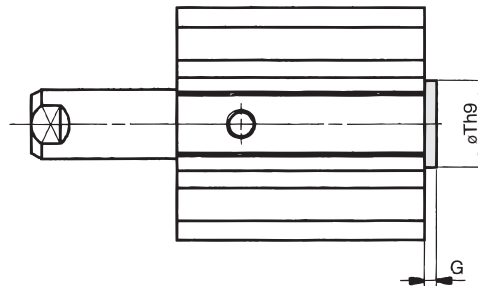


#### Both Ends Tapped Style

Bore size (mm)	O1	R
12	M4 x 0.7	7
16	M4 x 0.7	7
20	M6 x 1.0	10
25	M6 x 1.0	10



#### With boss in head side

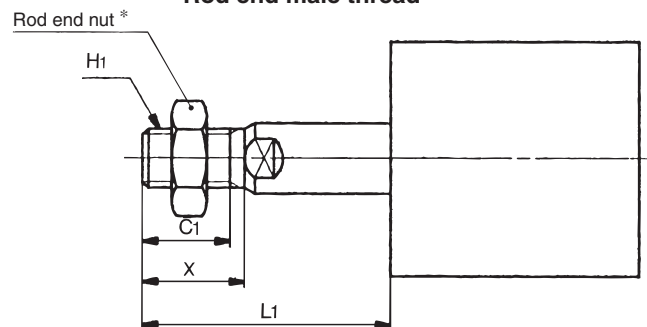


#### With Boss in Head Side

Bore size (mm)	G	Th9
12	1.5	15 <sup>0</sup> <sub>-0.043</sub>
16	1.5	20 <sup>0</sup> <sub>-0.052</sub>
20	2	13 <sup>0</sup> <sub>-0.043</sub>
25	2	15 <sup>0</sup> <sub>-0.043</sub>

Note) With boss in rod side would be optional. (Suffix "-XC36" to the end of model number.)

#### Rod end male thread



#### Rod End Male Thread

Bore size (mm)	C1	X	H1	L1	
				5 st	10 st
12	9	10.5	M5 x 0.8	19	24
16	10	12	M6 x 1.0	20.5	25.5
20	12	14	M8 x 1.25	23.5	28.5
25	15	17.5	M10 x 1.25	27.5	32.5

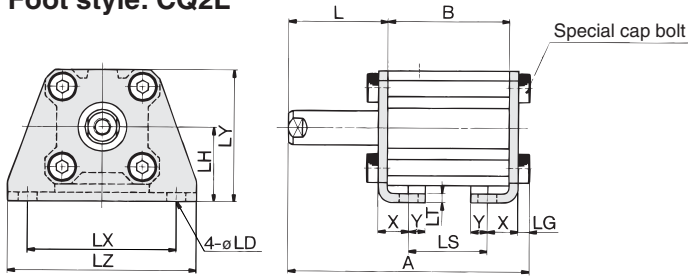
#### Basic Style

Bore size (mm)	A		B		C	D	E	H	I	K	L		M	N	O	Q	Z
	5 st	10 st	5 st	10 st							5 st	10 st					
12	30.5	40.5	22	27	6	6	25	M3 x 0.5	32	5	8.5	13.5	15.5	3.5	6.5 depth 3.5	7.5	—
16	32	42	23.5	28.5	8	8	29	M4 x 0.7	38	6	8.5	13.5	20	3.5	6.5 depth 3.5	8	10
20	34	44	24.5	29.5	7	10	36	M5 x 0.8	47	8	9.5	14.5	25.5	5.5	9 depth 7	9	10
25	37.5	47.5	27.5	32.5	12	12	40	M6 x 1.0	52	10	10	15	28	5.5	9 depth 7	11	10

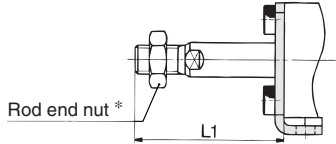
\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.

# Compact Cylinder: Standard Type Single Acting, Single Rod, Spring Return/Extend **Series CQ2**

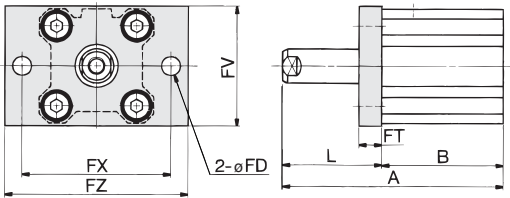
## Foot style: CQ2L



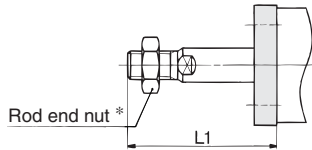
Rod end male thread



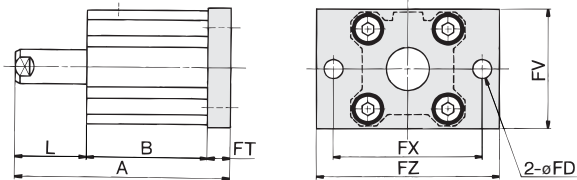
## Rod side flange style: CQ2F



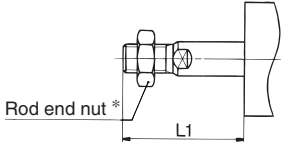
Rod end male thread



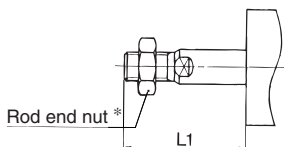
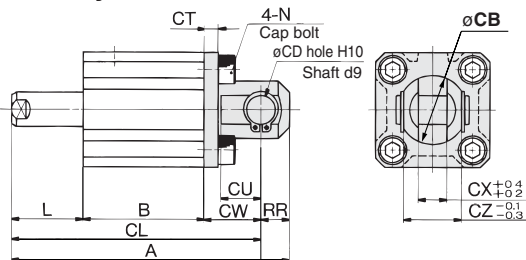
## Head side flange style: CQ2G



Rod end male thread



## Double clevis style: CQ2D



Rod end male thread

## Foot Style

Bore size (mm)	A		B		L		L1		LD	LG	LH	LS		LT	LX	LY	LZ	X	Y
	5 st	10 st	5 st	10 st	5 st	10 st	5 st	10 st				5 st	10 st						
12	45.3	55.3	22	27	18.5	23.5	29	34	4.5	2.8	17	10	15	2	34	29.5	44	8	4.5
16	46.8	56.8	23.5	28.5	18.5	23.5	30.5	35.5	4.5	2.8	19	11.5	16.5	2	38	33.5	48	8	5
20	51.2	61.2	24.5	29.5	19.5	24.5	33.5	38.5	6.6	4	24	12.5	17.5	3.2	48	42	62	9.2	5.8
25	54.7	64.7	27.5	32.5	20	25	37.5	42.5	6.6	4	26	12.5	17.5	3.2	52	46	66	10.7	5.8

Foot bracket material: Carbon steel

## Rod Side Flange Style

Bore size (mm)	A		B		FD	FT	FV	FX	FZ	L		L1	
	5 st	10 st	5 st	10 st						5 st	10 st	5 st	10 st
12	40.5	50.5	22	27	4.5	5.5	25	45	55	18.5	23.5	29	34
16	42	52	23.5	28.5	4.5	5.5	30	45	55	18.5	23.5	30.5	35.5
20	44	54	24.5	29.5	6.6	8	39	48	60	19.5	24.5	33.5	38.5
25	47.5	57.5	27.5	32.5	6.6	8	42	52	64	20	25	37.5	42.5

Flange bracket material: Carbon steel

## Head Side Flange Style

Bore size (mm)	A		L		L1	
	5 st	10 st	5 st	10 st	5 st	10 st
12	36	46	8.5	13.5	19	24
16	37.5	47.5	8.5	13.5	20.5	25.5
20	42	52	9.5	14.5	23.5	28.5
25	45.5	55.5	10	15	27.5	32.5

Flange bracket material: Carbon steel

(\* Dimensions except A, L and L1 are the same as rod side flange style.)

## Double Clevis Style

Bore size (mm)	A		B		CB	CD	CL		CT	CU	CW	CX	CZ	L		L1		N	RR
	5 st	10 st	5 st	10 st			5 st	10 st						5 st	10 st				
12	50.5	60.5	22	27	12	5	44.5	54.5	4	7	14	5	10	8.5	13.5	19	24	M4 x 0.7	6
16	53	63	23.5	28.5	14	5	47	57	4	10	15	6.5	12	8.5	13.5	20.5	25.5	M4 x 0.7	6
20	61	71	24.5	29.5	20	8	52	62	5	12	18	8	16	9.5	14.5	23.5	28.5	M6 x 1.0	9
25	67.5	77.5	27.5	32.5	24	10	57.5	67.5	5	14	20	10	20	10	15	27.5	32.5	M6 x 1.0	10

Double clevis bracket material: Carbon steel



\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.  
\*\* Clevis pin and snap ring are attached.

CUJ

CU

CQS

CQM

**CQ2**

RQ

MU

D-

-X

20-

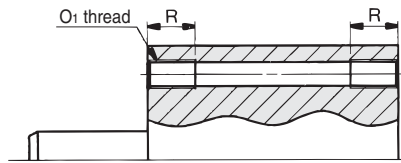
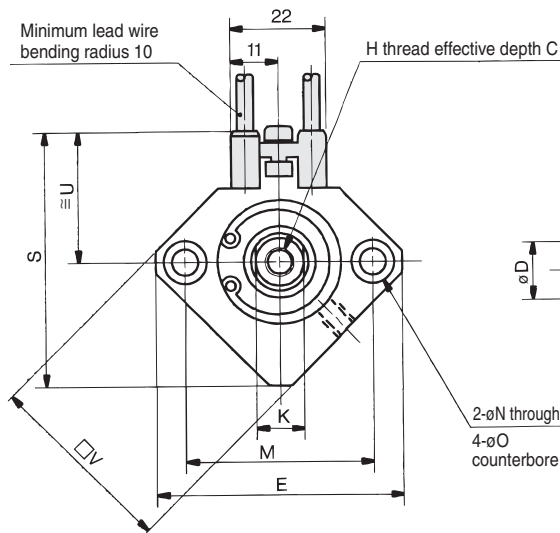
Data

# Series CDQ2

## Dimensions: $\phi 12$ to $\phi 25$ /Spring Extend with Auto Switch

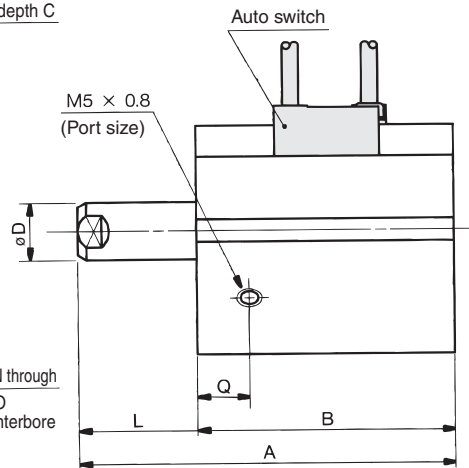
### Basic style (Through-hole): CDQ2B

### With boss in head side: CDQ2A

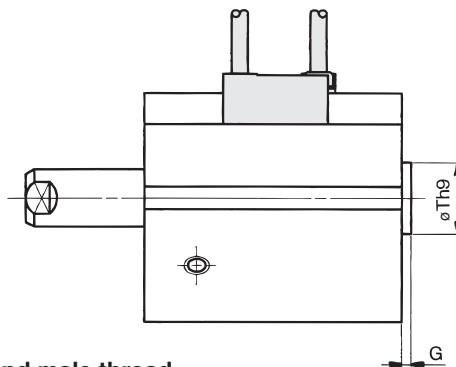


### Both Ends Tapped Style

Bore size (mm)	O1	R
12	M4 x 0.7	7
16	M4 x 0.7	7
20	M6 x 1.0	10
25	M6 x 1.0	10



### With boss in head side

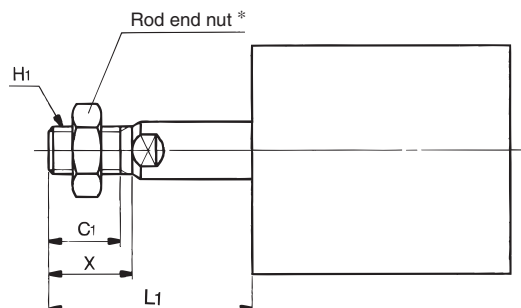


### With Boss in Head Side

Bore size (mm)	G	Th9
12	1.5	15 <sup>0</sup> <sub>-0.043</sub>
16	1.5	20 <sup>0</sup> <sub>-0.052</sub>
20	2	13 <sup>0</sup> <sub>-0.043</sub>
25	2	15 <sup>0</sup> <sub>-0.043</sub>

Note) With boss in rod side would be optional.  
(Suffix "-XC36" to the end of model number.)

### Rod end male thread



### Rod End Male Thread

Bore size (mm)	C1	X	H1	L1	
				5 st	10 st
12	9	10.5	M5 x 0.8	19	24
16	10	12	M6 x 1.0	20.5	25.5
20	12	14	M8 x 1.25	23.5	28.5
25	15	17.5	M10 x 1.25	27.5	32.5



Auto switch shown above is D-A73 type and D-A80 type. For the auto switch mounting position and its mounting height, refer to page 7-6-48.

### Basic Style

Bore size (mm)	A		B		C	D	E	H	K	L		M	N	O	Q	S	U	V
	5 st	10 st	5 st	10 st						5 st	10 st							
12	45.9	55.9	37.4	42.4	6	6	32	M3 x 0.5	5	8.5	13.5	22	3.5	6.5 depth 3.5	11	35.5	19.5	25
16	44	54	35.5	40.5	8	8	38	M4 x 0.7	6	8.5	13.5	28	3.5	6.5 depth 3.5	10	41.5	22.5	29
20	46	56	36.5	41.5	7	10	47	M5 x 0.8	8	9.5	14.5	36	5.5	9 depth 7	10.5	48	24.5	36
25	47.5	57.5	37.5	42.5	12	12	52	M6 x 1.0	10	10	15	40	5.5	9 depth 7	11	53.5	27.5	40

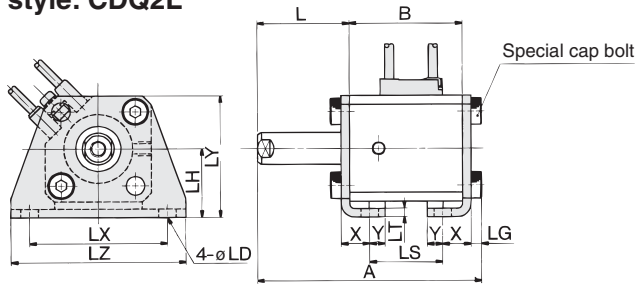


\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.

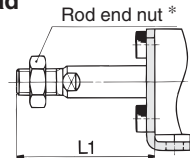


# Compact Cylinder: Standard Type Single Acting, Single Rod, Spring Return/Extend **Series CDQ2**

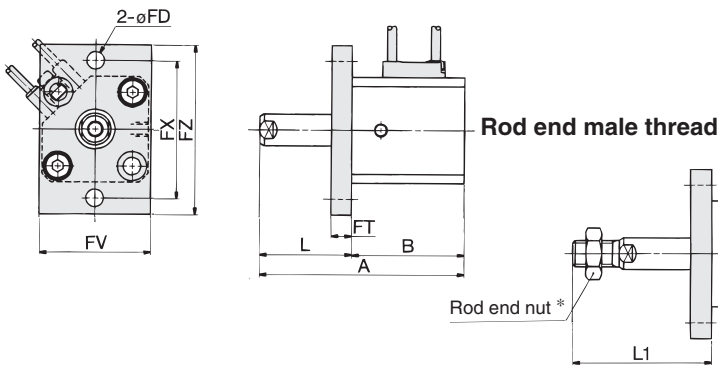
## Foot style: CDQ2L



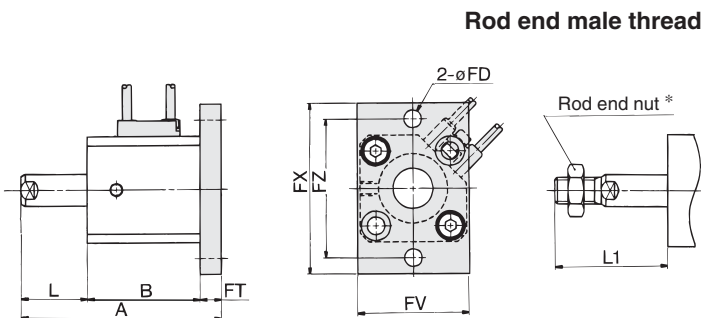
### Rod end male thread



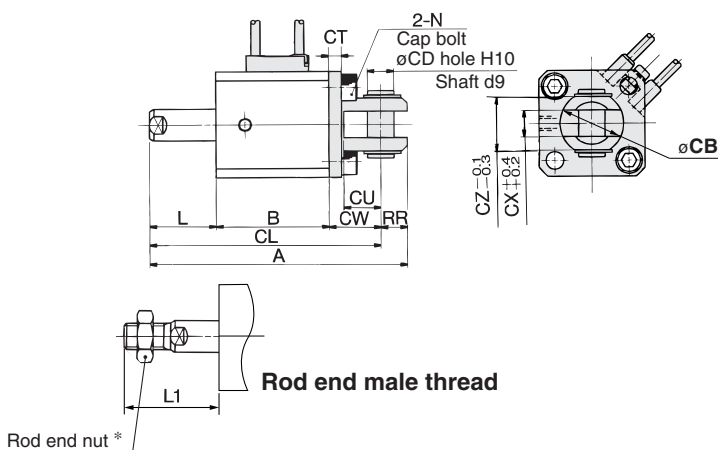
## Rod side flange style: CDQ2F



## Head side flange style: CDQ2G



## Double clevis style: CDQ2D



## Foot Style

Bore size (mm)	A		B		L		L1		LD	LG	LH	LS		LT	LX	LY	LZ	X	Y
	5 st	10 st	5 st	10 st	5 st	10 st	5 st	10 st				5 st	10 st						
12	60.7	70.7	37.4	42.4	18.5	23.5	29	34	4.5	2.8	17	25.4	30.4	2	34	29.5	44	8	4.5
16	58.8	68.8	35.5	40.5	18.5	23.5	30.5	35.5	4.5	2.8	19	23.5	28.5	2	38	33.5	48	8	5
20	63.2	73.2	36.5	41.5	19.5	24.5	33.5	38.5	6.6	4	24	24.5	29.5	3.2	48	42	62	9.2	5.8
25	64.7	74.7	37.5	42.5	20	25	37.5	42.5	6.6	4	26	22.5	27.5	3.2	52	46	66	10.7	5.8

Foot bracket material: Carbon steel

## Rod Side Flange Style

Bore size (mm)	A		B		FD	FT	FV	FX	FZ	L		L1	
	5 st	10 st	5 st	10 st						5 st	10 st	5 st	10 st
12	55.9	65.9	37.4	42.4	4.5	5.5	25	45	55	18.5	23.5	29	34
16	54	64	35.5	40.5	4.5	5.5	30	45	55	18.5	23.5	30.5	35.5
20	56	66	36.5	41.5	6.6	8	39	48	60	19.5	24.5	33.5	38.5
25	57.5	67.5	37.5	42.5	6.6	8	42	52	64	20	25	37.5	42.5

Flange bracket material: Carbon steel

## Head Side Flange Style

Bore size (mm)	A		L		L1	
	5 st	10 st	5 st	10 st	5 st	10 st
12	51.4	61.4	8.5	13.5	19	24
16	49.5	59.5	8.5	13.5	20.5	25.5
20	54	64	9.5	14.5	23.5	28.5
25	55.5	65.5	10	15	27.5	32.5

Flange bracket material: Carbon steel

(\* Dimensions except A, L and L1 are the same as rod side flange style.)

## Double Clevis Style

Bore size (mm)	A		B		CB	CD	CL		CT	CU	CW	CX	CZ	L	
	5 st	10 st	5 st	10 st			5 st	10 st						5 st	10 st
12	65.9	75.9	37.4	42.4	12	5	59.9	69.9	4	7	14	5	10	8.5	13.5
16	65	75	35.5	40.5	14	5	59	69	4	10	15	6.5	12	8.5	13.5
20	73	83	36.5	41.5	20	8	64	74	5	12	18	8	16	9.5	14.5
25	77.5	87.5	37.5	42.5	24	10	67.5	77.5	5	14	20	10	20	10	15

Double clevis bracket material: Carbon steel

\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.

\*\* Clevis pin and snap ring are shipped together.

CUJ

CU

CQS

CQM

**CQ2**

RQ

MU

D-

-X

20-

Data

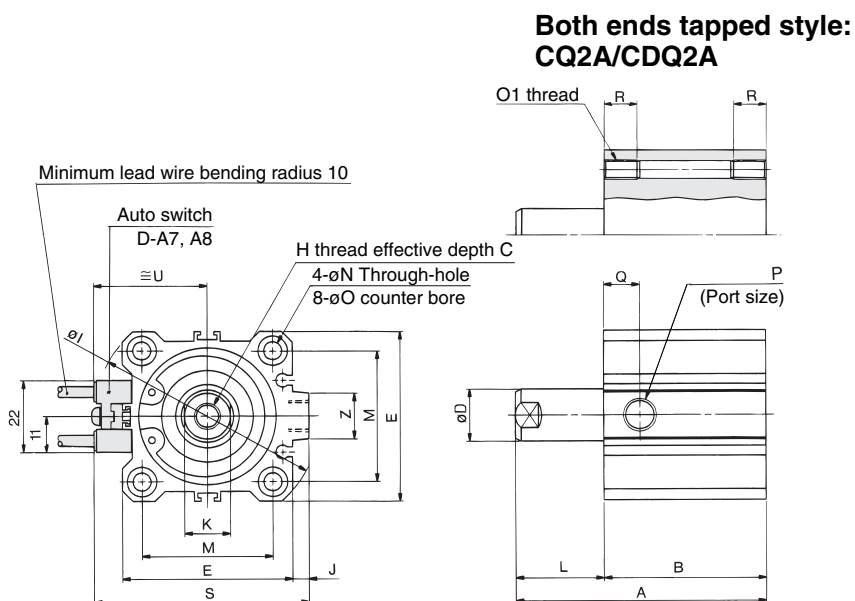


(In the case of without auto switches, A, B, P and Q dimensions will be only changed. Refer to the dimension table.)

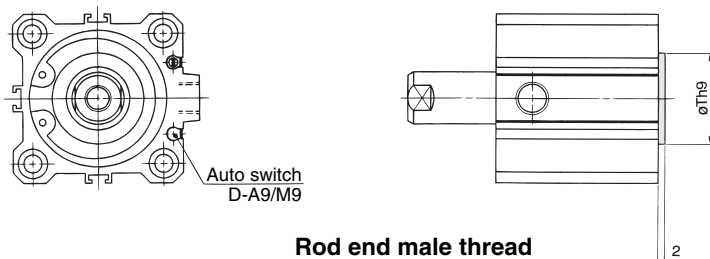
# Series CQ2/CDQ2

## Dimensions: ø32 to ø50/Spring Extend with Auto Switch

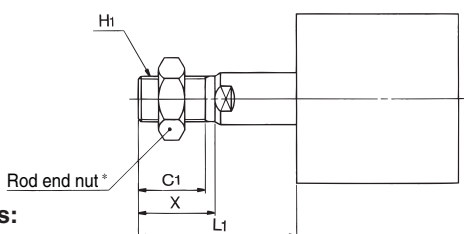
### Basic style (Through-hole): CQ2B, CDQ2B



### With boss in head side



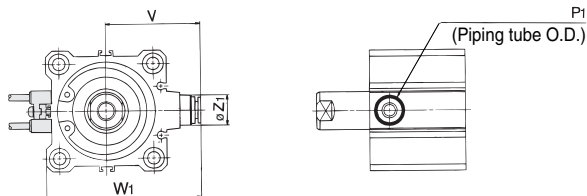
### Rod end male thread



### Built-in One-touch fittings: ø32 to ø50



Auto switch shown above is D-A73 and D-A80. For the auto switch mounting position and its mounting height, refer to page 7-6-48.



### Both Ends Tapped Style

Bore size (mm)	O1	R
32	M6 x 1.0	10
40	M6 x 1.0	10
50	M8 x 1.25	14

### With Boss in Head Side

Bore size (mm)	Th9
32	21 <sup>0</sup> <sub>-0.052</sub>
40	28 <sup>0</sup> <sub>-0.052</sub>
50	35 <sup>0</sup> <sub>-0.062</sub>

Note) With boss in rod side would be optional. (Suffix "-XC36" to the end of model number.)

### Rod End Male Thread

Bore size (mm)	C1	X	H1	L1		
				5 st	10 st	20 st
32	20.5	23.5	M14 x 1.5	33.5	38.5	—
40	20.5	23.5	M14 x 1.5	33.5	38.5	—
50	26	28.5	M18 x 1.5	—	43.5	53.5

### Built-in One-touch Fittings

Bore size (mm)	Z1	P1	V	W1
32	13	6	36.5	59
40	13	6	40.5	66.5
50	16	8	50	82

### Basic Style

Bore size (mm)	Without auto switch												With auto switch								
	A			B			P		Q			A			B		P	Q			
	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st			
32	40	50	—	28	33	—	M5 x 0.8	Rc 1/8	—	11.5	10.5	—	50	60	—	38	43	—	Rc 1/8	10.5	
40	46.5	56.5	—	34.5	39.5	—	Rc 1/8	—	11	11	—	56.5	66.5	—	44.5	49.5	—	Rc 1/8	11	—	
50	—	68.5	78.5	—	40.5	50.5	—	Rc 1/4	—	10.5	10.5	—	68.5	88.5	—	50.5	60.5	—	Rc 1/4	10.5	—

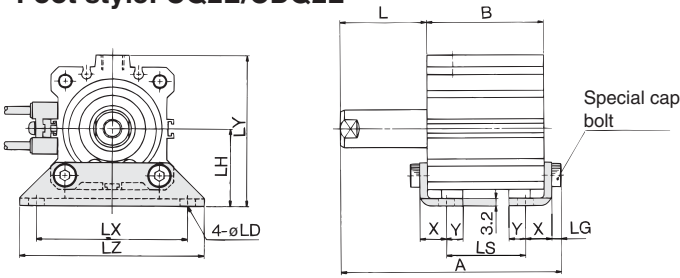
Bore size (mm)	C	D	E	H	I	J	K	L			M	N	O	S	U	Z
								5 st	10 st	20 st						
32	13	16	45	M8 x 1.25	60	4.5	14	12	17	—	34	5.5	9 depth 7	58.5	31.5	14
40	13	16	52	M8 x 1.25	69	5	14	12	17	—	40	5.5	9 depth 7	66	35	14
50	15	20	64	M10 x 1.5	86	7	17	—	18	28	50	6.6	11 depth 8	80	41	19



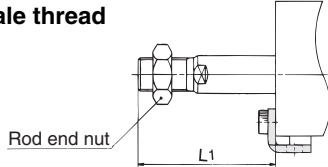
\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.

# Compact Cylinder: Standard Type Single Acting, Single Rod, Spring Return/Extend **Series CQ2/CDQ2**

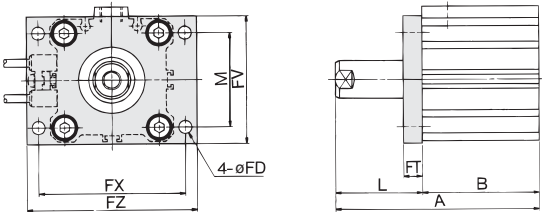
## Foot style: CQ2L/CDQ2L



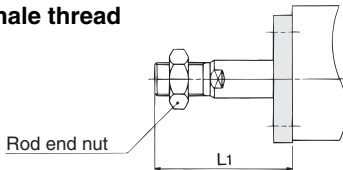
### Rod end male thread



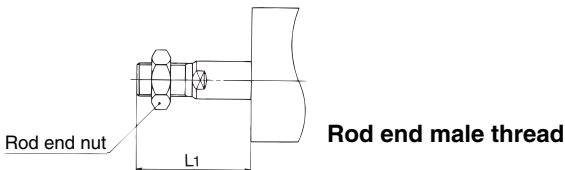
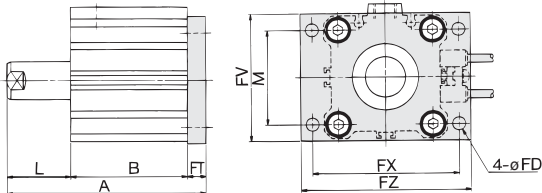
## Rod side flange style: CQ2F/CDQ2F



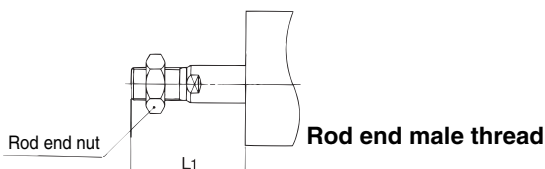
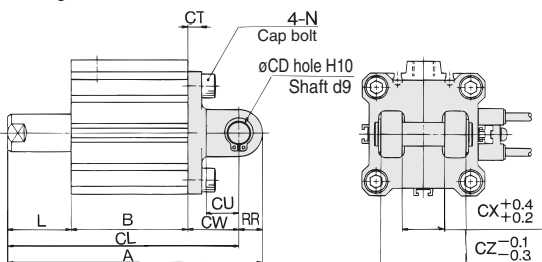
### Rod end male thread



## Head side flange style: CQ2G/CDQ2G



## Double clevis style: CQ2D/CDQ2D



## Foot Style

Bore size (mm)	Without auto switch									With auto switch								
	A			B			LS			A			B			LS		
	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st
32	57.2	67.2	—	28	33	—	12	17	—	67.2	77.2	—	38	43	—	22	27	—
40	63.7	73.7	—	34.5	39.5	—	18.5	23.5	—	73.7	83.7	—	44.5	49.5	—	28.5	33.5	—
50	—	76.7	96.7	—	40.5	50.5	—	17.5	27.5	—	86.7	106.7	—	50.5	60.5	—	27.5	37.5

Bore size (mm)	L			L1			LD	LG	LH	LX	LY	LZ	X	Y
	5 st	10 st	20 st	5 st	10 st	20 st								
	32	22	27	—	43.5	48.5								
40	22	27	—	43.5	48.5	—	6.6	4	33	64	64	78	11.2	7
50	—	28	38	—	53.5	63.5	9	5	39	79	78	95	14.7	8

Foot bracket material: Carbon steel

## Rod Side Flange Style

Bore size (mm)	Without auto switch						With auto switch						FD	FT	FV	FX	FZ
	A			B			A			B							
	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st					
32	50	60	—	28	33	—	60	70	—	38	43	—	5.5	8	45	56	65
40	56.5	66.5	—	34.5	39.5	—	66.5	76.5	—	44.5	49.5	—	5.5	8	54	62	72
50	—	68.5	88.5	—	40.5	50.5	—	78.5	98.5	—	50.5	60.5	6.6	9	67	76	89

Bore size (mm)	L			L1			M
	5 st	10 st	20 st	5 st	10 st	20 st	
	32	22	27	—	43.5	48.5	
40	22	27	—	43.5	48.5	—	40
50	—	28	38	—	53.5	63.5	50

Flange bracket material: Carbon steel

## Head Side Flange Style

Bore size (mm)	Without auto switch			With auto switch			L			L1					
	A			B			5 st			10 st			20 st		
	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st			
32	48	58	—	58	68	—	12	17	—	33.5	38.5	—			
40	45.5	64.5	—	64.5	74.5	—	12	17	—	33.5	38.5	—			
50	—	67.5	87.5	—	77.5	97.5	—	18	28	—	43.5	53.5			

Flange bracket material: Carbon steel

(\* Dimensions except A, L and L1 are the same as rod side flange style.)

## Double Clevis Style

Bore size (mm)	Without auto switch									With auto switch								
	A			B			CL			A			B			CL		
	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st	5 st	10 st	20 st
32	70	80	—	28	33	—	60	70	—	80	90	—	38	43	—	70	80	—
40	78.5	88.5	—	34.5	39.5	—	68.5	78.5	—	88.5	98.5	—	44.5	49.5	—	78.5	88.5	—
50	—	100.5	120.5	—	40.5	50.5	—	86.5	106.5	—	110.5	130.5	—	50.5	60.5	—	96.5	116.5

Bore size (mm)	CD	CT	CU	CW	CX	CZ	L			L1		
							5 st	10 st	20 st	5 st	10 st	20 st
							32	10	5	14	20	18
40	10	6	14	22	18	36	12	17	—	33.5	38.5	—
50	14	7	20	28	22	44	—	18	28	—	43.5	53.5

Double clevis bracket material: Cast iron



\* For details about the rod end nut and accessory brackets, refer to page 7-6-20.

\*\* Clevis pin and snap ring are shipped together.