



Compact Cylinder: Axial Piping Type Double Acting, Single Rod Series **CQP2**

ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

How to Order

Without auto switch
CQP2 B [] 50-30 D []

With auto switch
CDQP2 B [] 50-30 D []-J79W S

Built-in magnet (points to B)

Axial piping type (points to B)

Mounting style
B Through-hole

Type

Nil	Pneumatic
H	Air-hydro ^{Note)}

Note) Bore sizes available for air-hydro type are ø20 to ø100.

Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Action
D Double acting

Cylinder stroke (mm)
Refer to "Standard Stroke" on page 7-6-89.

Auto switch

Nil	Without auto switch (Built-in magnet)
-----	---------------------------------------

* For the applicable auto switch model, refer to the table below.
* Auto switches are shipped together, (but not assembled). (Except D-P5DWL)

Number of auto switches

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

Body option

Nil	Standard (Rod end female thread)
C	With rubber bumper ^{Note)}
M	Rod end male thread

* Combination of body option ("CM") is available.
Note) Air-hydro type with rubber bumper is not available.

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		Auto switch model		Lead wire length (m) *				Pre-wire connector	Applicable load				
					DC	AC	Perpendicular	In-line	0.5 (Nil)	3 (L)	5 (Z)	None (N)						
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	—	A76H	●	●	—	—	—	IC circuit	—		
				Connector	2-wire	24 V	12 V	200 V	A72	A72H	●	●	—	—	—	—	Relay, PLC	
		—				—	100 V	A73	A73H	●	●	●	—	—				
		Diagnostic indication (2-color indication)		Grommet	—	—	—	—	—	A73C	—	●	●	●	●	—	—	
Solid state switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	—	F79	F79	●	●	○	—	○	IC circuit	Relay, PLC		
				3-wire (PNP)				F7PV	F7P	●	●	○	—	○				
		Connector		2-wire	12 V	—	—	F7BV	J79	●	●	○	—	○	—			
								J79C	—	●	●	●	●	—	—			
		Diagnostic indication (2-color indication)		Grommet	3-wire (NPN)	5 V, 12 V	—	—	—	F7NWV	F79W	●	●	○	—		○	IC circuit
					3-wire (PNP)					—	F7PW	●	●	○	—		○	
		Water resistant (2-color indication)		Grommet	2-wire	24 V	12 V	—	—	F7BWV	J79W	●	●	○	—		○	—
										—	F7BA	—	●	●	○		—	
		With diagnostic output (2-color indication)		Grommet	4-wire (NPN)	5 V, 12 V	—	—	—	—	F79F	●	●	○	—		○	IC circuit
										—	—	—	●	●	○		—	○
Magnetic field resistant (2-color indication)	Grommet	2-wire	—	—	—	—	—	P5DW	—	●	●	—	○	—				

* Lead wire length symbols: 0.5 m.....Nil
3 m.....L
5 m.....Z
None.....N
(Example) A73C
(Example) A73CL
(Example) A73CZ
(Example) A73CN

* Solid state switches marked with "○" are produced upon receipt of order.

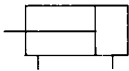
- D-P5DWL type is available from ø40 up to ø100 only.
- Since there are other applicable auto switches than listed, refer to page 7-6-23 for details.
- For details about auto switches with pre-wire connector, refer to page 7-9-36.

Compact Cylinder: Axial Piping Type Double Acting, Single Rod Series CQP2



Rod end male thread

JIS Symbol
Double acting,
Single rod



⚠ 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/Removing

- Do not remove the hexagon socket set screw on the side of the rod.
 - Be aware that if the hexagon socket set screw is removed with compressed air supplied to the cylinder, an internal steel ball could fly out or the compressed air could be discharged, leading to injury to humans or damage to peripheral equipment.

Type

Bore size (mm)		12	16	20	25	32	40	50	63	80	100
Pneumatic	Mounting Through-hole (Standard)	●	●	●	●	●	●	●	●	●	●
	Built-in magnet	●	●	●	●	●	●	●	●	●	●
	Piping Screw-in type	M5 x 0.8	M5 x 0.8	M5 x 0.8	M5 x 0.8	Rc 1/8	Rc 1/8	Rc 1/4	Rc 1/4	Rc 3/8	Rc 3/8
	Rod end male thread	●	●	●	●	●	●	●	●	●	●
	Rubber bumper	●	●	●	●	●	●	●	●	●	●
Air-hydro	Mounting Through-hole (Standard)	—	—	●	●	●	●	●	●	●	●
	Built-in magnet	—	—	●	●	●	●	●	●	●	●
	Piping Screw-in type	—	—	M5 x 0.8	M5 x 0.8	Rc 1/8	Rc 1/8	Rc 1/4	Rc 1/4	Rc 3/8	Rc 3/8
	Rod end male thread	—	—	●	●	●	●	●	●	●	●

Standard Specifications

Type	Pneumatic (Non-lube)	Air-hydro
Fluid	Air	Turbine oil ⁽¹⁾
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)	5 to 60°C
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	5 to 50 mm/s

Standard Stroke

Pneumatic (Non-lube)

Bore (mm)	Standard stroke
12, 16	5, 10, 15, 20, 25, 30
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100
50, 63 80, 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

Air-hydro

Bore (mm)	Standard stroke
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100
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 7-6-88.	
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, 16	1 to 29
	20, 25	1 to 49
	32 to 100	1 to 99
Example	Part no.: CQP2B50-57D CQP2B50-75D with 18 mm width spacer inside. B dimension is 115.5 mm.	

- Air-hydro type is excluded.
- In the case of spacer type, intermediate stroke with damper for $\phi 40$ to $\phi 100$, it can be manufactured by 5 mm intervals in 5 mm and 55 to 95 mm.

CUJ

CU

CQS

CQM

CQ2

RQ

MU

D-

-X

20-

Data

Series CQP2



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

Symbol	Specifications
-XA□	Change of rod end shape
-XB6	Heat resistant cylinder (150°C)
-XB7	Cold resistant cylinder
-XB9	Low speed cylinder (10 to 50 mm/s)
-XB13	Low speed cylinder (5 to 50 mm/s)
-XC4	With heavy duty scraper
-XC6	Piston rod and rod end nut made of stainless steel
-XC18	NPT finish piping port
-XC35	With coil scraper
-XC36	With boss in rod side
-X271	Fluoro rubber for seals

Minimum Operating Pressure

(MPa)

Bore size (mm)	12	16	20	25	32	40	50	63	80	100
Pneumatic (Non-lube)	0.07	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Air-hydro	—	—	0.18	0.18	0.18	0.10	0.10	0.10	0.10	0.10

Allowable Kinetic Energy

(J)

Bore size (mm)	12	16	20	25	32	40	50	63	80	100
Standard	0.022	0.038	0.055	0.09	0.15	0.26	0.46	0.77	1.36	2.27
With rubber bumper	0.043	0.075	0.11	0.18	0.29	0.52	0.91	1.54	2.71	4.54

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"> Switch mounting screw (M3 x 0.5 x 8ℓ) Square nut 	D-A7□/A80 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-F79F, D-F7NTL D-F7BAVL
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 		
40 to 100	BQP-050	<ul style="list-style-type: none"> Switch mounting bracket Switch mounting nut Hexagon socket head cap bolt (M3 x 0.5 x 14ℓ spring washer 2 pcs.) Round head Phillips screw (M3 x 0.5 x 16ℓ spring washer 2 pcs.) 	—	D-P5DWL



* 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.

Compact Cylinder: Axial Piping Type Double Acting, Single Rod Series CQP2



Theoretical Output

Bore size (mm)	Operating direction	Operating pressure (MPa)		
		0.3	0.5	0.7
12	IN	25	42	59
	OUT	34	57	79
16	IN	45	75	106
	OUT	60	101	141
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

Bore size (mm)	Cylinder stroke (mm)											
	5	10	15	20	25	30	35	40	45	50	75	100
12	32	39	46	53	60	67	—	—	—	—	—	—
16	54	63	72	81	90	98	—	—	—	—	—	—
20	70	84	98	112	126	140	154	168	182	196	—	—
25	102	117	132	147	161	176	191	206	220	235	—	—
32	149	173	199	222	246	270	295	319	343	367	487	607
40	224	258	280	310	336	362	388	414	440	467	602	737
50	—	414	455	496	538	579	620	662	703	744	949	1154
63	—	584	632	679	727	774	822	870	917	965	1205	1445
80	—	1085	1163	1242	1320	1399	1477	1556	1634	1713	2108	2503
100	—	1894	1992	2091	2189	2287	2385	2483	2581	2679	3169	3659

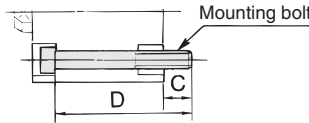
Additional Weight

Bore size (mm)											
	12	16	20	25	32	40	50	63	80	100	
Rod end male thread	Male thread	1.5	3	6	12	26	27	53	53	120	175
	Nut	1	2	4	8	17	17	32	32	49	116
With rubber bumper		0	0	-2	-3	-3	-7	-9	-18	-31	-56

Calculation: (Example) CQP2B32-20DCM
 • Cylinder weight: CQP2B32-20D..... 222 g
 • Option weight: Rod end male thread..... 43 g
 Rubber bumper..... -3 g
 262 g

Mounting Bolt for CQP2

Mounting method: Mounting bolt for through-hole mounting style of CQP2B is available as an option.
 Ordering: Add the word "Bolt" in front of the bolts to be used.
 Example) Bolt M3 x 25ℓ 2 pcs.



Model	C	D	Mounting bolt
CQP2B12-5D	6.5	25	M3 x 25ℓ
-10D		30	x 30ℓ
-15D		35	x 35ℓ
-20D		40	x 40ℓ
-25D		45	x 45ℓ
-30D	50	x 50ℓ	
CQP2B16-5D	5	25	M3 x 25ℓ
-10D		30	x 30ℓ
-15D		35	x 35ℓ
-20D		40	x 40ℓ
-25D		45	x 45ℓ
-30D	50	x 50ℓ	
CQP2B20-5D	7.5	25	M5 x 25ℓ
-10D		30	x 30ℓ
-15D		35	x 35ℓ
-20D		40	x 40ℓ
-25D		45	x 45ℓ
-30D		50	x 50ℓ
-35D		55	x 55ℓ
-40D		60	x 60ℓ
-45D		65	x 65ℓ
-50D	70	x 70ℓ	
CQP2B25-5D	9.5	30	M5 x 30ℓ
-10D		35	x 35ℓ
-15D		40	x 40ℓ
-20D		45	x 45ℓ
-25D		50	x 50ℓ
-30D		55	x 55ℓ
-35D		60	x 60ℓ
-40D		65	x 65ℓ
-45D		70	x 70ℓ
-50D		75	x 75ℓ

Model	C	D	Mounting bolt
CQP2B32-5D	9	30	M5 x 30ℓ
-10D		35	x 35ℓ
-15D		40	x 40ℓ
-20D		45	x 45ℓ
-25D		50	x 50ℓ
-30D		55	x 55ℓ
-35D		60	x 60ℓ
-40D		65	x 65ℓ
-45D		70	x 70ℓ
-50D		75	x 75ℓ
-75D	110	x 110ℓ	
-100D	135	x 135ℓ	
CQP2B40-5D	7.5	35	M5 x 35ℓ
-10D		40	x 40ℓ
-15D		45	x 45ℓ
-20D		50	x 50ℓ
-25D		55	x 55ℓ
-30D		60	x 60ℓ
-35D		65	x 65ℓ
-40D		70	x 70ℓ
-45D		75	x 75ℓ
-50D		80	x 80ℓ
-75D		115	x 115ℓ
-100D	140	x 140ℓ	
CQP2B50-10D	12.5	45	M6 x 45ℓ
-15D		50	x 50ℓ
-20D		55	x 55ℓ
-25D		60	x 60ℓ
-30D		65	x 65ℓ
-35D		70	x 70ℓ
-40D		75	x 75ℓ
-45D		80	x 80ℓ
-50D		85	x 85ℓ
-75D		120	x 120ℓ
-100D		145	x 145ℓ

Model	C	D	Mounting bolt
CQP2B63-10D	14.5	50	M8 x 50ℓ
-15D		55	x 55ℓ
-20D		60	x 60ℓ
-25D		65	x 65ℓ
-30D		70	x 70ℓ
-35D		75	x 75ℓ
-40D		80	x 80ℓ
-45D		85	x 85ℓ
-50D		90	x 90ℓ
-75D		125	x 125ℓ
-100D	150	x 150ℓ	
CQP2B80-10D	15	55	M10 x 55ℓ
-15D		60	x 60ℓ
-20D		65	x 65ℓ
-25D		70	x 70ℓ
-30D		75	x 75ℓ
-35D		80	x 80ℓ
-40D		85	x 85ℓ
-45D		90	x 90ℓ
-50D		95	x 95ℓ
-75D		130	x 130ℓ
-100D	155	x 155ℓ	
CQP2B100-10D	15.5	65	M10 x 65ℓ
-15D		70	x 70ℓ
-20D		75	x 75ℓ
-25D		80	x 80ℓ
-30D		85	x 85ℓ
-35D		90	x 90ℓ
-40D		95	x 95ℓ
-45D		100	x 100ℓ
-50D		105	x 105ℓ
-75D		140	x 140ℓ
-100D	165	x 165ℓ	

- CUJ
- CU
- CQS
- CQM
- CQ2
- RQ
- MU
- D-
- X
- 20-
- Data

Axial Piping: Double Acting, Single Rod Series **CDQP2** With Auto Switch



* Refer to page 7-9-1 for further information on auto switches.



Weight (g)

Bore size (mm)	Cylinder stroke (mm)											
	5	10	15	20	25	30	35	40	45	50	75	100
12	54	62	69	75	82	89	—	—	—	—	—	—
16	91	99	107	115	123	131	—	—	—	—	—	—
20	121	135	147	161	175	188	201	214	228	242	—	—
25	177	190	203	217	230	244	257	270	284	297	—	—
32	217	242	266	290	315	339	363	387	412	436	557	679
40	319	345	371	397	423	449	475	502	528	554	684	814
50	—	546	588	629	670	712	753	794	836	877	1084	1291
63	—	764	812	859	907	955	1002	1050	1098	1145	1384	1622
80	—	1377	1455	1534	1612	1691	1769	1848	1926	2005	2397	2790
100	—	2296	2394	2492	2590	2688	2786	2884	2982	3080	3570	4060

Calculation: (Example) CDQP2B32-20DCM
 • Cylinder weight: CDQP2B32-20D..... 290 g
 • Option weight: Rod end male thread... 43 g
 Rubber bumper..... -3 g
 330 g

Add each weight of auto switches and mounting brackets.

Auto Switch Mounting Bracket Weight

Mounting bracket part no.	Applicable bore size	Weight (g)
BQ-1	12 to 250	1.5
BQ-2	32 to 100	1.5

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

Additional Weight (g)

Bore size (mm)		12	16	20	25	32
Rod end	Male thread	1.5	3	6	12	26
	Nut	1	2	4	8	17
With rubber bumper		0	-1	-2	-3	-3

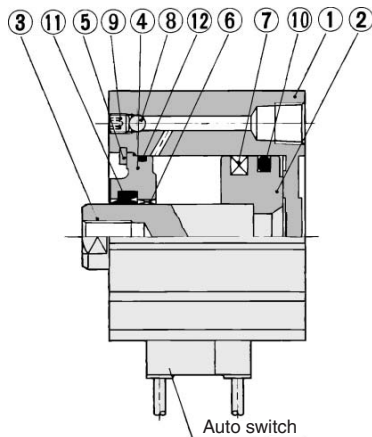
Bore size (mm)		40	50	63	80	100
Rod end	Male thread	27	53	53	120	175
	Nut	17	32	32	49	116
With rubber bumper		-7	-9	-18	-31	-56

Minimum Stroke for Auto Switch Mounting (mm)

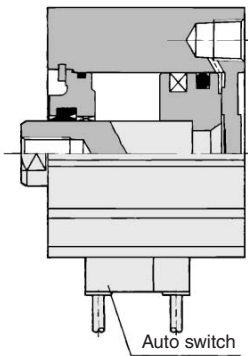
No. of auto switches mounted	D-F7□V D-J79C	D-A7□ D-A80 D-A73C D-A80C	D-F7□WV D-F7BAVL	D-A7□H D-A80H D-F7□ D-J79	D-A79W	D-F7□W D-J79W D-F7BAL D-F79F	D-P5DWL
1 pc.	5	5	10	15	15	20	30
2 pcs.	5	10	15	15	20	20	30

Note) For detailed specifications on auto switch, refer to page 7-9-1.

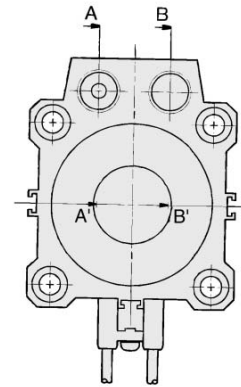
Construction



A-A' section
(Rod side port)



B-B' section
(Head side port)



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 ø100, Hard chrome plated
④	Collar	Aluminum alloy	ø12 to ø40, Anodized
		Aluminum alloy casted	ø50 to ø100, Chromated, painted
⑤	Snap ring	Carbon tool steel	Phosphate coated
⑥	Bushing	Lead-bronze casted	ø50 to ø100
⑦	Magnet	—	
⑧	Steel balls	Bearing steel	
⑨	Hexagon socket head set screw	Alloy steel	Zinc chromated
⑩	Piston seal	NBR	
⑪	Rod seal	NBR	
⑫	Gasket	NBR	

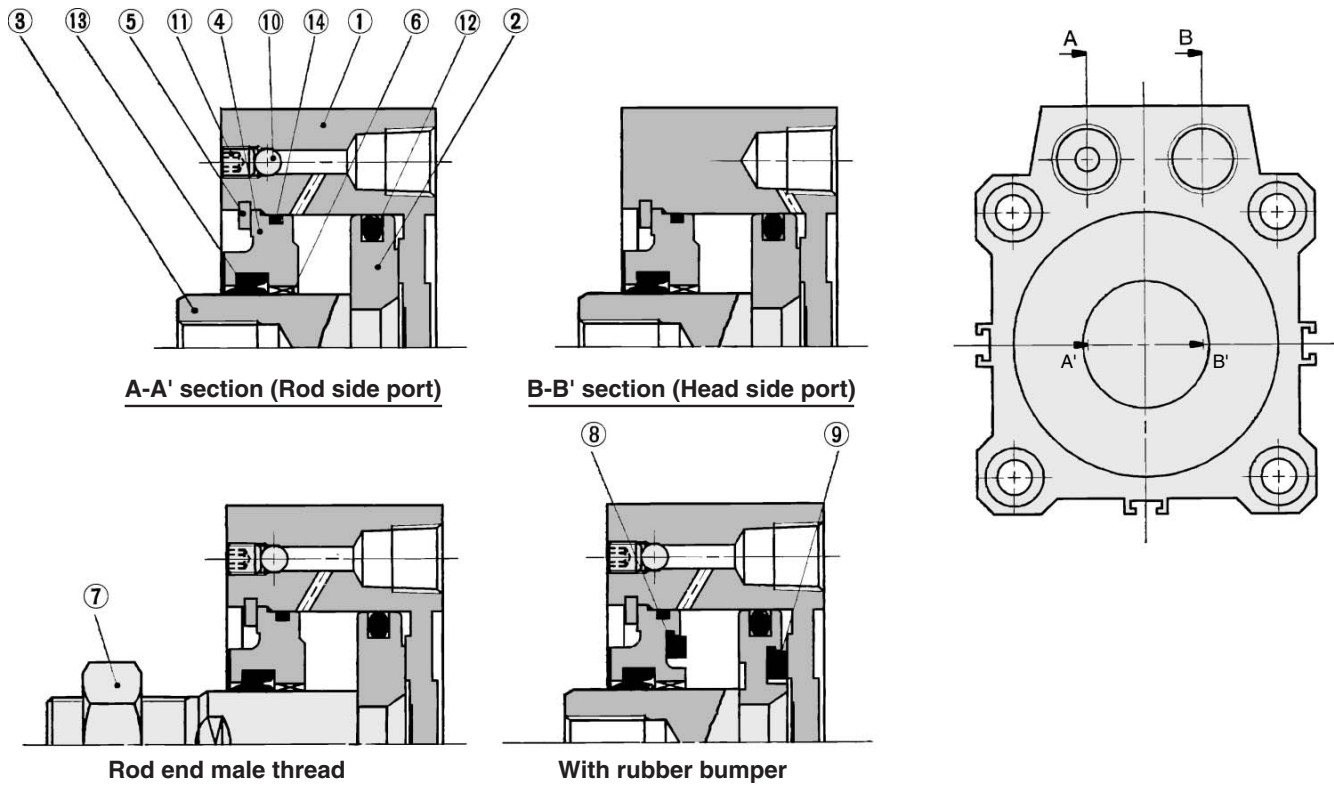
Replacement Parts: Seal Kit

Bore size (mm)	Kit no.		Note
	Pneumatic (Non-lube)	Air-hydro	
12	CQ2B12-PS	—	Set of left nos. ⑩, ⑪, ⑫
16	CQ2B16-PS	—	
20	CQ2B20-PS	CQ2BH20-PS	
25	CQ2B25-PS	CQ2BH25-PS	
32	CQ2B32-PS	CQ2BH32-PS	
40	CQ2B40-PS	CQ2BH40-PS	
50	CQ2B50-PS	CQ2BH50-PS	
63	CQ2B63-PS	CQ2BH63-PS	
80	CQ2B80-PS	CQ2BH80-PS	
100	CQ2B100-PS	CQ2BH100-PS	

* Seal kit includes ⑩, ⑪, ⑫. Order the seal kit, based on each bore size.

Compact Cylinder with Auto Switch: Axial Piping Type Double Acting, Single Rod Series **CDQP2**

Construction



- CUJ
- CU
- CQS
- CQM
- CQ2**
- RQ
- MU
- D-
- X
- 20-
- Data

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 ø100, Hard chrome plated
④	Collar	Aluminum alloy	ø12 to ø40, Anodized
		Aluminum alloy casting	ø50 to ø100, Chromated, Painted
⑤	Snap ring	Carbon tool steel	Phosphate coated
⑥	Bushing	Lead-bronze casting	ø50 to ø100
⑦	Rod end nut	Carbon steel	Nickel plated
⑧	Bumper A	Urethane	
⑨	Bumper B	Urethane	
⑩	Steel balls	Bearing steel	
⑪	Hexagon socket head set screw	Alloy steel	Zinc chromated
⑫	Piston seal	NBR	
⑬	Rod seal	NBR	
⑭	Gasket	NBR	

* On bore size ø12 with rubber bumper style, piston and piston rod are integrated (Stainless steel).

Replacement Parts: Seal Kit

Bore size (mm)	Kit no.		Note
	Pneumatic (Non-lube)	Air-hydro	
12	CQ2B12-PS	—	Set of left nos. ⑫, ⑬, ⑭
16	CQ2B16-PS	—	
20	CQ2B20-PS	CQ2BH20-PS	
25	CQ2B25-PS	CQ2BH25-PS	
32	CQ2B32-PS	CQ2BH32-PS	
40	CQ2B40-PS	CQ2BH40-PS	
50	CQ2B50-PS	CQ2BH50-PS	
63	CQ2B63-PS	CQ2BH63-PS	
80	CQ2B80-PS	CQ2BH80-PS	
100	CQ2B100-PS	CQ2BH100-PS	

* Seal kit includes ⑫, ⑬, ⑭. Order the seal kit, based on each bore size.

Copper-free (For CRT manufacturing process)

20 — CQP2B **Bore size** — **Stroke** D
 Copper-free — ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

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	Double acting, Single rod
Bore size (mm)	12, 16, 20, 25, 32, 40, 50, 63, 80, 100
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

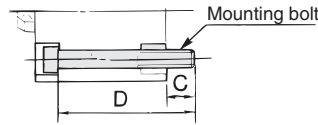
Series CDQP2

Mounting Bolt for CDQP2 with Auto Switch

Mounting method: Mounting bolt for through-hole mounting style of CDQP2B 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.



Model	C	D	Mounting bolt
CDQP2B12-5D	5.5	35	M3 x 35ℓ
-10D		40	x 40ℓ
-15D		45	x 45ℓ
-20D		50	x 50ℓ
-25D		55	x 55ℓ
-30D		60	x 60ℓ
CDQP2B16-5D	8	40	M3 x 40ℓ
-10D		45	x 45ℓ
-15D		50	x 50ℓ
-20D		55	x 55ℓ
-25D		60	x 60ℓ
-30D		65	x 65ℓ
CDQP2B20-5D	10.5	40	M5 x 40ℓ
-10D		45	x 45ℓ
-15D		50	x 50ℓ
-20D		55	x 55ℓ
-25D		60	x 60ℓ
-30D		65	x 65ℓ
-35D		70	x 70ℓ
-40D		75	x 75ℓ
-45D		80	x 80ℓ
-50D		85	x 85ℓ
CDQP2B25-5D	9.5	40	M5 x 40ℓ
-10D		45	x 45ℓ
-15D		50	x 50ℓ
-20D		55	x 55ℓ
-25D		60	x 60ℓ
-30D		65	x 65ℓ
-35D		70	x 70ℓ
-40D		75	x 75ℓ
-45D		80	x 80ℓ
-50D		85	x 85ℓ

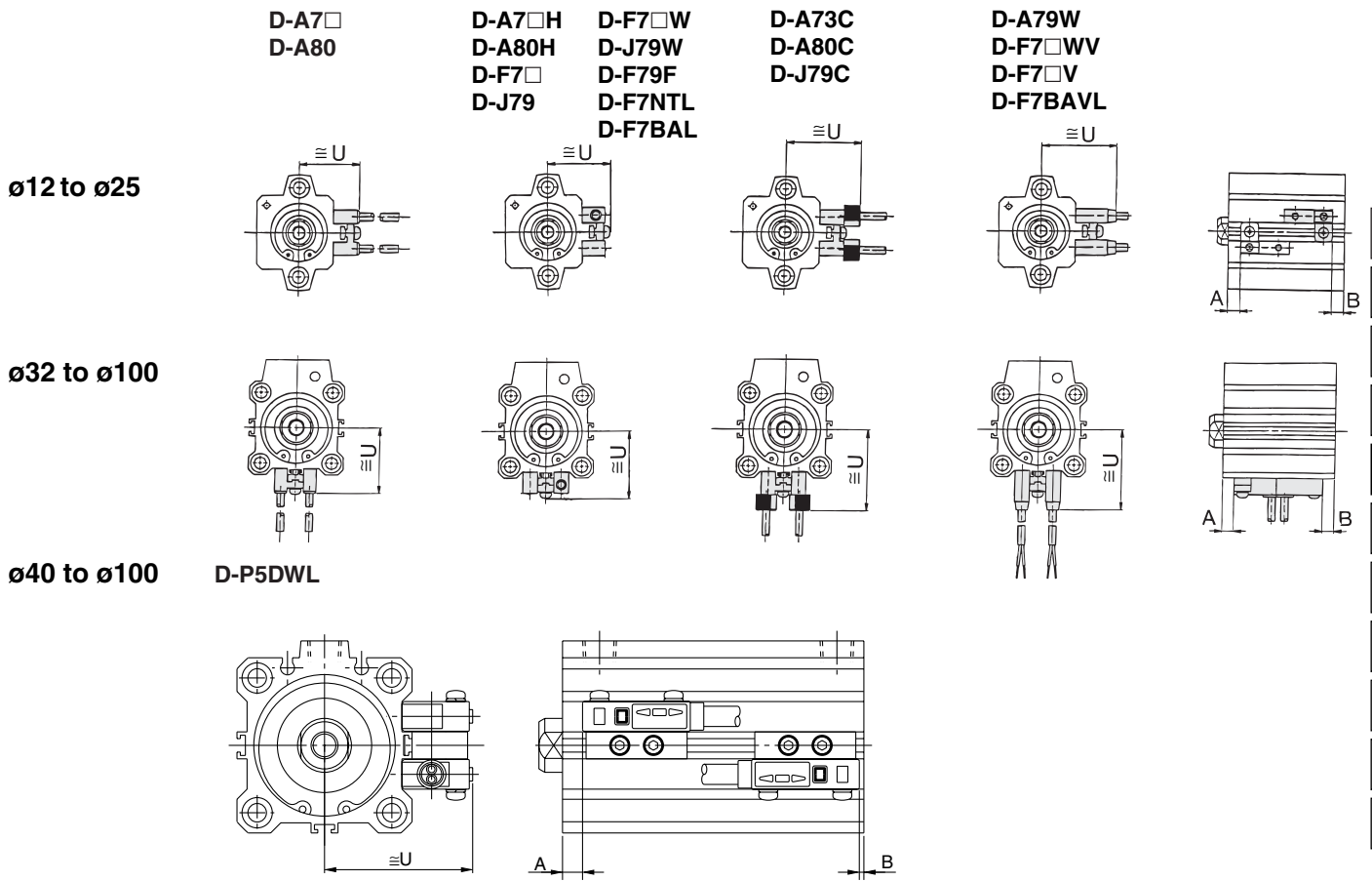
Model	C	D	Mounting bolt	
CDQP2B32-5D	9	40	M5 x 40ℓ	
-10D		45	x 45ℓ	
-15D		50	x 50ℓ	
-20D		55	x 55ℓ	
-25D		60	x 60ℓ	
-30D		65	x 65ℓ	
-35D		70	x 70ℓ	
-40D		75	x 75ℓ	
-45D		80	x 80ℓ	
-50D		85	x 85ℓ	
-75D	7.5	110	x 110ℓ	
-100D		135	x 135ℓ	
CDQP2B40-5D		7.5	45	M5 x 45ℓ
-10D			50	x 50ℓ
-15D			55	x 55ℓ
-20D			60	x 60ℓ
-25D			65	x 65ℓ
-30D			70	x 70ℓ
-35D			75	x 75ℓ
-40D			80	x 80ℓ
-45D	85		x 85ℓ	
-50D	90		x 90ℓ	
-75D	12.5	115	x 115ℓ	
-100D		140	x 140ℓ	
CDQP2B50-10D		12.5	55	M6 x 55ℓ
-15D			60	x 60ℓ
-20D			65	x 65ℓ
-25D			70	x 70ℓ
-30D			75	x 75ℓ
-35D			80	x 80ℓ
-40D			85	x 85ℓ
-45D			90	x 90ℓ
-50D	95		x 95ℓ	
-75D	120		x 120ℓ	
-100D	145	x 145ℓ		

Model	C	D	Mounting bolt
CDQP2B63-10D	14.5	60	M8 x 60ℓ
-10D		65	x 65ℓ
-20D		70	x 70ℓ
-25D		75	x 75ℓ
-30D		80	x 80ℓ
-35D		85	x 85ℓ
-40D		90	x 90ℓ
-45D		95	x 95ℓ
-50D		100	x 100ℓ
-75D		125	x 125ℓ
-100D	150	x 150ℓ	
CDQP2B80-10D	15	65	M10 x 65ℓ
-15D		70	x 70ℓ
-20D		75	x 75ℓ
-25D		80	x 80ℓ
-30D		85	x 85ℓ
-35D		90	x 90ℓ
-40D		95	x 95ℓ
-45D		100	x 100ℓ
-50D		105	x 105ℓ
-75D		130	x 130ℓ
-100D	155	x 155ℓ	
CDQP2B100-10D	15.5	75	M10 x 75ℓ
-15D		80	x 80ℓ
-20D		85	x 85ℓ
-25D		90	x 90ℓ
-30D		95	x 95ℓ
-35D		100	x 100ℓ
-40D		105	x 105ℓ
-45D		110	x 110ℓ
-50D		115	x 115ℓ
-75D		140	x 140ℓ
-100D	165	x 165ℓ	

Compact Cylinder with Auto Switch: Axial Piping Type Series CDQP2

Double Acting, Single Rod

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/A80H D-A73C/A80C D-F7□/J79 D-F7□V/J79C D-F7BAL/F7□W D-J79W/F7□WV D-F7BAVL/F79F		D-A79W		D-P5DWL	
	A	B	A	B	A	B	A	B
12	4.5	5.5	5	6	2	3	—	—
16	7.5	5	8	5.5	5	2.5	—	—
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	6.5	3.5	—	—
40	13	8.5	13.5	9	10.5	6	9	4.5
50	11	11.5	11.5	12	8.5	9	7	7.5
63	13.5	14.5	14	15	11	12	9.5	10.5
80	17.5	18	18	18.5	15	15.5	13.5	14
100	21	24	21.5	24.5	18.5	21.5	17	20

Auto Switch Mounting Height

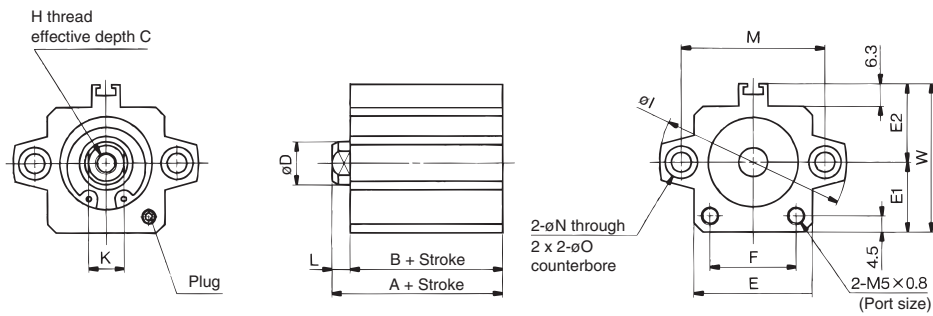
(mm)

D-A7□ D-A80	D-A7□H, D-A80H D-F7□/J79/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	D-P5DWL
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	—
35	36	42	38.5	41.5	37.5	44
41	42	48	44.5	47.5	43.5	50
47.5	48.5	54.5	51	54	50	56.5
57.5	58.5	64.5	61	64	60	66.5
67.5	68.5	74.5	71	74	70	76.5

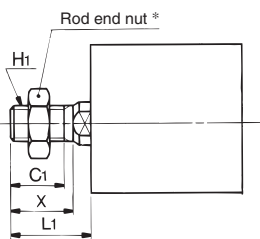
Series CDQP2

Dimensions: $\phi 12$ to $\phi 100$ /Without Auto Switch

$\phi 12$ to $\phi 25$



Rod end male thread



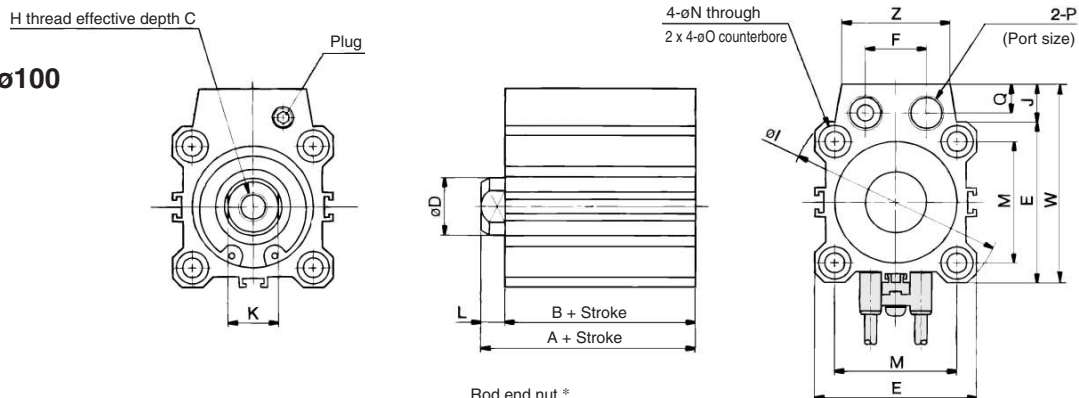
Rod End Male Thread

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

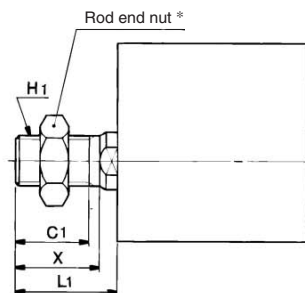
Basic Style

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	E1	E2	F	H	I	K	L	M	N	O	W
12	5 to 30	20.5	17	6	6	23	13	14	14	M3 x 0.5	32	5	3.5	22	3.5	6.5 depth 3.5	27
16	5 to 30	22	18.5	8	8	26	15	17	17	M4 x 0.7	38	6	3.5	28	3.5	6.5 depth 3.5	32
20	5 to 50	24	19.5	7	10	30	17	19	21	M5 x 0.8	47	8	4.5	36	5.5	9 depth 7	36
25	5 to 50	27.5	22.5	12	12	33	19.5	22	24	M6 x 1.0	52	10	5	40	5.5	9 depth 7	41.5

$\phi 32$ to $\phi 100$



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
63	26	28.5	M18 x 1.5	33.5
80	32.5	35.5	M22 x 1.5	43.5
100	32.5	35.5	M26 x 1.5	43.5

Basic Style

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	H	I	J	K	L	M	N	O	P	Q	W	Z
32	5 to 50	30	23	13	16	45	17	M8 x 1.25	60	10.5	14	7	34	5.5	9 depth 7	Rc 1/8	8	55.5	30
	75,100	40	33																
40	5 to 50	36.5	29.5	13	16	52	17	M8 x 1.25	69	10	14	7	40	5.5	9 depth 7	Rc 1/8	8	62	30
	75,100	46.5	39.5																
50	10 to 50	38.5	30.5	15	20	64	22	M10 x 1.5	86	13	17	8	50	6.6	11 depth 8	Rc 1/4	10	77	39
	75,100	48.5	40.5																
63	10 to 50	44	36	15	20	77	22	M10 x 1.5	103	13	17	8	60	9	14 depth 10.5	Rc 1/4	10	90	39
	75,100	54	46																
80	10 to 50	53.5	43.5	21	25	98	26	M16 x 2.0	132	16	22	10	77	11	17.5 depth 13.5	Rc 3/8	12.5	114	48
	75,100	63.5	53.5																
100	10 to 50	65	53	27	30	117	26	M20 x 2.5	156	17.5	27	12	94	11	17.5 depth 13.5	Rc 3/8	12.5	134.5	48
	75,100	75	63																



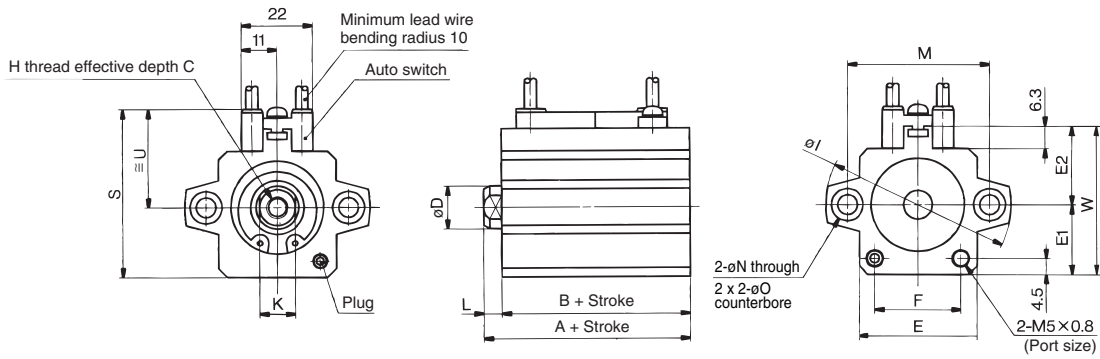
Note) External dimensions with rubber bumper are the same as standard type, as shown above.

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

Compact Cylinder with Auto Switch: Axial Piping Type Double Acting, Single Rod Series **CDQP2**

Dimensions: $\phi 12$ to $\phi 100$ /With Auto Switch

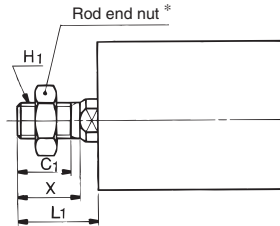
$\phi 12$ to $\phi 25$



Rod end male thread



Auto switch shown above is D-A73 and D-A80. For the auto switch mounting position and its mounting height, refer to page 7-6-95.



Rod End Male Thread

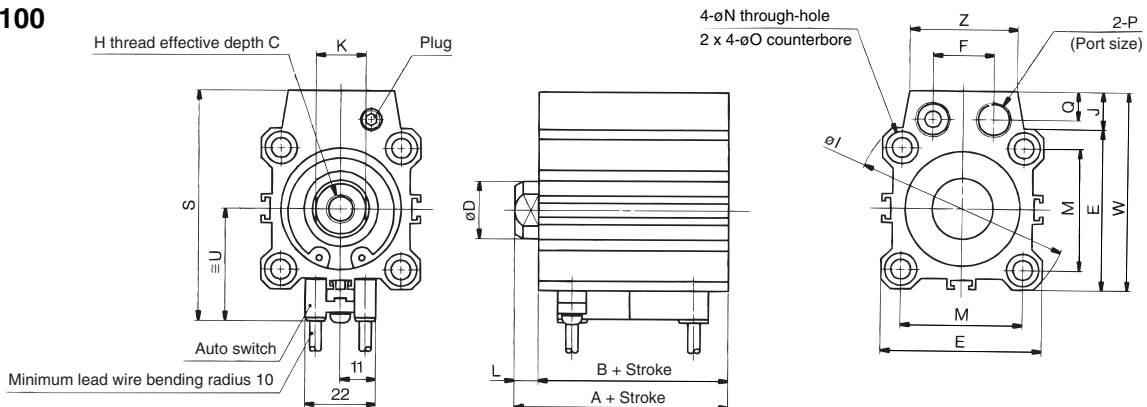
Bore size (mm)	C ₁	X	H ₁	L ₁
12	9	10.5	M5 x 0.8	14
16	10	12	M6 x 1.0	15.5
20	12	14	M8 x 1.25	18.5
25	15	17.5	M10 x 1.25	22.5

Basic Style

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	E ₁	E ₂	F	H	I	K	L	M	N	O	S	U	W
12	5 to 30	31.5	28	6	6	23	13	14	14	M3 x 0.5	32	5	3.5	22	3.5	6.5 depth 3.5	32.5	19.5	27
16	5 to 30	34	30.5	8	8	26	15	17	17	M4 x 0.7	38	6	3.5	28	3.5	6.5 depth 3.5	37.5	22.5	32
20	5 to 50	36	31.5	7	10	30	17	19	21	M5 x 0.8	47	8	4.5	36	5.5	9 depth 7	41.5	24.5	36
25	5 to 50	37.5	32.5	12	12	33	19.5	22	24	M6 x 1.0	52	10	5	40	5.5	9 depth 7	47	27.5	41.5

Note) External dimensions with rubber bumper are the same as standard type, as shown above.

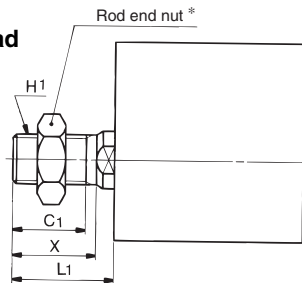
$\phi 32$ to $\phi 100$



Rod end male thread



Auto switch shown above is D-A73 and D-A80. For the auto switch mounting position and its mounting height, refer to page 7-6-95.



Rod End Male Thread

Bore size (mm)	C ₁	X	H ₁	L ₁
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
63	26	28.5	M18 x 1.5	33.5
80	32.5	35.5	M22 x 1.5	43.5
100	32.5	35.5	M26 x 1.5	43.5

Basic Style

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	H	I	J	K	L	M	N	O	P	Q	S	U	W	Z
32	5 to 100	40	33	13	16	45	17	M8 x 1.25	60	10.5	14	7	34	5.5	9 depth 7	Rc 1/8	8	64.5	31.5	55.5	30
40	5 to 100	46.5	39.5	13	16	52	17	M8 x 1.25	69	10	14	7	40	5.5	9 depth 7	Rc 1/8	8	71	35	62	30
50	10 to 100	48.5	40.5	15	20	64	22	M10 x 1.5	86	13	17	8	50	6.6	11 depth 8	Rc 1/4	10	86	41	77	39
63	10 to 100	54	46	15	20	77	22	M10 x 1.5	103	13	17	8	60	9	14 depth 10.5	Rc 1/4	10	99	47.5	90	39
80	10 to 100	63.5	53.5	21	25	98	26	M16 x 2.0	132	16	22	10	77	11	17.5 depth 13.5	Rc 3/8	12.5	122.5	57.5	114	48
100	10 to 100	75	63	27	30	117	26	M20 x 2.5	156	17.5	27	12	94	11	17.5 depth 13.5	Rc 3/8	12.5	143.5	67.5	134.5	48

Note) External dimensions with rubber bumper are the same as standard type, as shown above.

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