

Spatter Resistant Cylinder for Arc Welding

Compact Cylinder: Standard, Double Acting, Single Rod

CDQ2-XC88/XC89

XC91

ø32, ø40, ø50, ø63, ø80, ø100

RoHS

How to Order

Built-in auto switch magnet

CDQ2 B 32 - 30 D Z - M9BW - XC89

CDQ2 B 32 - 30 D Z - M9BW - XC91

Mounting

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

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

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Port thread type

Nil	Rc
TN	NPT
TF	G

Cylinder stroke (mm)

Refer to page 18 for standard strokes and intermediate strokes.

Auto switch

Nil	Without auto switch
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* For applicable auto switches, refer to the table below.

Auto switch mounting groove

Z	4 surfaces
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Body option

Nil	Standard (Rod end female thread)
F	With boss on head end
C	With rubber bumper
M	Rod end male thread

* Combination of body options ("CM", "FC", "FM", "FCM") is available.

Action

D	Double acting
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Auto switch

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

Auto switch

Nil	Without auto switch
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* For applicable auto switches, refer to the table below.

Auto switch mounting groove

Z	4 surfaces
---	------------

Body option

Nil	Standard (Rod end female thread)
F	With boss on head end
C	With rubber bumper
M	Rod end male thread

* Combination of body options ("CM", "FC", "FM", "FCM") is available.

Made to Order

Part no.	Piston rod material (Hard chrome plated)		Coil scraper	Lube- retainer	Grease for welding
	S45C	Stainless steel 304			
-XC88	—	●	●	●	●
-XC89	●	—	●	●	●
-XC91	●	—	●	—	●

Note) Use the -XC91 in a place where the distance from the welding portion is far and the spatter scattering is minimized.

Built-in Auto Switch Magnet Cylinder Model

If a built-in auto switch magnet cylinder without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) CDQ2L32-25DZ-XC89

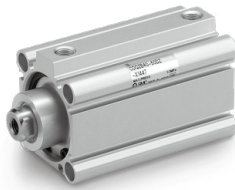
Applicable Auto Switches/Refer to the WEB catalog or the Best Pneumatics No. 2 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)					Pre-wired connector	Applicable load		
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)				
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	●	○	—	○	IC circuit	Relay, PLC
	3-wire (PNP)			M9PV		M9P		●	●	●	○	—	○				
	2-wire			M9BV		M9B		●	●	●	○	—	○	IC circuit			
	3-wire (NPN)			M9NVW		M9NW		●	●	●	○	—	○				
	3-wire (PNP)			M9PWV		M9PW		●	●	●	○	—	○				
	2-wire			M9BWW		M9BW		●	●	●	○	—	○	—			
	—			P3DWA		●		—	●	●	—	●					
	2-wire (Non-polar)			—		P4DW		—	—	●	●	—	●				
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—	●	—	—	—	IC circuit	—
	2-wire			24 V	12 V	100 V	A93V	A93	●	—	●	—	—	—	—	—	—
					5 V, 12 V	100 V or less	A90V	A90	●	—	●	—	—	—	—	—	—
					—	—	—	—	—	—	—	—	—	—	—	—	—

* Lead wire length symbols: 0.5 m Nil (Example) M9NV
1 m M (Example) M9NWM
3 m L (Example) M9NWL
5 m Z (Example) M9NWZ

* Please contact SMC for auto switches, auto switch proper mounting positions and operating ranges other than the above.

Spatter Resistant Cylinder for Arc Welding Compact Cylinder: Standard, Double Acting, Single Rod **CDQ2-XC88/XC89**



Specifications

Pneumatic type

Bore size (mm)	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	0.05 MPa					
Ambient and fluid temperature	-10 to 60°C (No freezing)					
Lubrication	Not required (Non-lube)					
Piston speed	50 to 500 mm/s					
Allowable kinetic energy (J)	Standard	0.15	0.26	0.46	0.77	1.36
	With rubber bumper	0.29	0.52	0.91	1.54	2.71
Stroke length tolerance	+1.0 mm (Note) 0					

Note) Stroke length tolerance does not include the amount of bumper change.

Standard Strokes

Pneumatic type

Bore size	Standard stroke
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100
50 to 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

- For long strokes exceeding the standard stroke range, refer to page 27.
- For intermediate strokes, refer below.

Mounting Brackets/Part No.

Bore size (mm)	Model	Foot Note 1)	Flange	Double clevis
32	CDQ2□□-□DZ	CQ-L032-XC35	CQ-F032-XC35	CQ-D032
40	CDQ2□□-□DZ	CQ-L040	CQ-F040	CQ-D040
50	CDQ2□□-□DZ	CQ-L050	CQ-F050	CQ-D050
63	CDQ2□□-□DZ	CQ-L063	CQ-F063	CQ-D063
80	CDQ2□□-□DZ	CQ-L080	CQ-F080	CQ-D080
100	CDQ2□□-□DZ	CQ-L100	CQ-F100	CQ-D100

Note 1) Order two foot brackets per cylinder. (except ø32)

For ø32 type, order 1 piece per cylinder. (Part number for a set of 2 foot brackets)

Note 2) Parts belonging to each bracket are as follows.

Foot or Flange: Body mounting bolts

Double clevis: Clevis pin, Type C retaining rings for axis, Body mounting bolts

Manufacture of Intermediate Strokes

Spacer-installed type: Standard model number

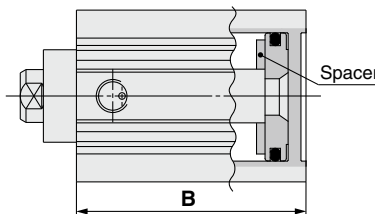
- A spacer is installed on the standard strokes.
- Available in 1 mm intervals
- A spacer is installed on tubes with a stroke longer than the specified stroke (◆).

◆: Standard stroke

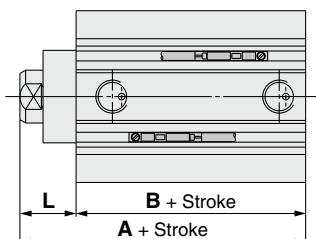
Bore size (mm)	Stroke range	Type	Stroke
32, 40	1 to 99	Spacer-installed type 1	5 10 15 20 25 30 35 40 45 50 75 100
50 to 100	1 to 99	Spacer-installed type 1	10 15 20 25 30 35 40 45 50 75 100

Ordering example: ø32-57 mm stroke, with through-hole and without auto switch

Type	Spacer-installed type 1
Part no.	Standard model number
Order no.	CDQ2B32-57DZ-XC89
Description	• Uses a standard stroke (75 mm) tube. • Makes 57 mm stroke with 18 mm spacer inside. • The B dimension is 108 mm.



Comparison of the Dimensions of Each Series

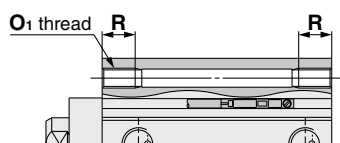


Bore size (mm)	XC88, 89			XC91			XC35			Standard		
	A	B	L	A	B	L	A	B	L	A	B	L
32	50	33	17	45	33	12	45	33	12	40	33	7
40	56.5	39.5	17	51.5	39.5	12	51.5	39.5	12	46.5	39.5	7
50	58.5	40.5	18	53.5	40.5	13	53.5	40.5	13	48.5	40.5	8
63	64	46	18	59	46	13	59	46	13	54	46	8
80	73.5	53.5	20	68.5	53.5	15	68.5	53.5	15	63.5	53.5	10
100	85	63	22	80	63	17	80	63	17	75	63	12

* At 0 stroke



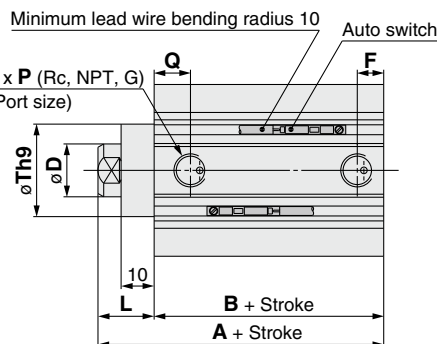
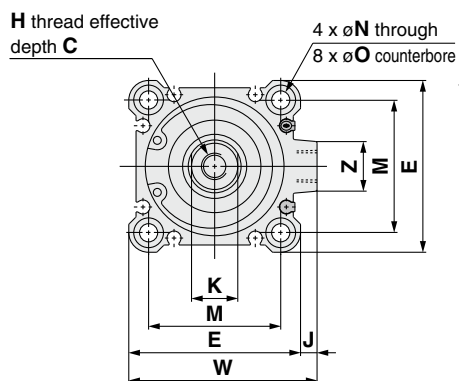
Both ends tapped: CDQ2A



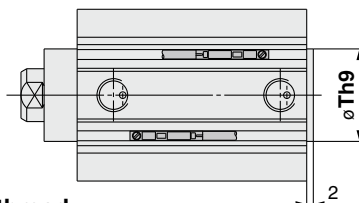
Both Ends Tapped (mm)

Bore size (mm)	O ₁	R
32	M6 x 1.0	10
40	M6 x 1.0	10
50	M8 x 1.25	14

Through-hole (Standard): CDQ2B



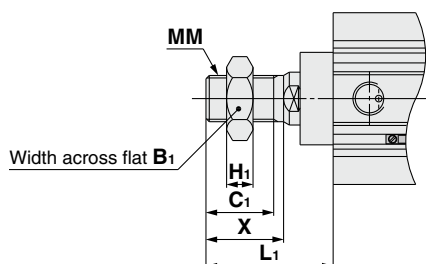
With boss on head end



With Boss on Head End (mm)

Bore size (mm)	Th9
32	21 ⁰ _{-0.052}
40	28 ⁰ _{-0.052}
50	35 ⁰ _{-0.062}

Rod end male thread



Rod End Male Thread (mm)

Bore size (mm)	B ₁	C ₁	H ₁	L ₁	MM	X
32	22	20.5	8	38.5	M14 x 1.5	23.5
40	22	20.5	8	38.5	M14 x 1.5	23.5
50	27	26	11	43.5	M18 x 1.5	28.5

Standard

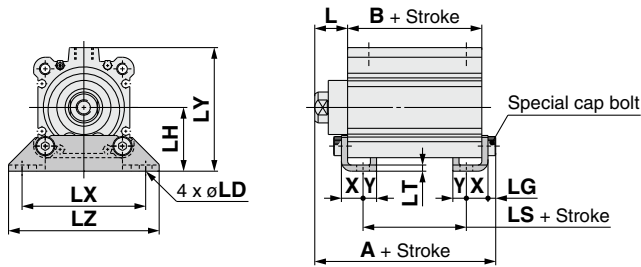
Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	H	J	K	L	M	N	O	P	Q	Th9	W	Z
32	5 to 50, 75, 100	50	33	13	16	45	7.5	M8 x 1.25	4.5	14	17	34	5.5	9 depth 7	1/8	10	23 ⁰ _{-0.052}	49.5	14
40	5 to 50, 75, 100	56.5	39.5	13	16	52	7.5	M8 x 1.25	5	14	17	40	5.5	9 depth 7	1/8	12.5	28 ⁰ _{-0.052}	57	15
50	10 to 50, 75, 100	58.5	40.5	15	20	64	10.5	M10 x 1.5	7	17	18	50	6.6	11 depth 8	1/4	10.5	35 ⁰ _{-0.062}	71	19

Note 1) The external dimensions with rubber bumper are same as those of the standard, as shown above.

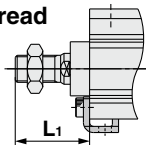
* For details about the rod end nut and accessory brackets, refer to the **WEB catalog** or Best Pneumatics No.2.

Note 2) For calculation on the longitudinal dimension of intermediate strokes, refer to page 18.

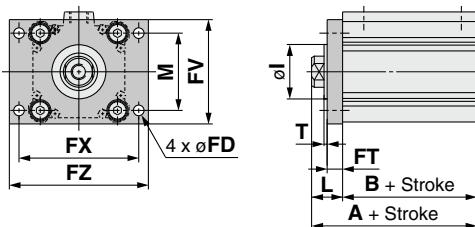
Foot: CDQ2L



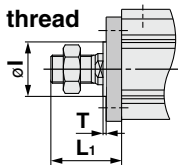
Rod end male thread



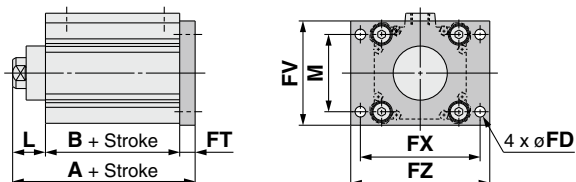
Rod flange: CDQ2F



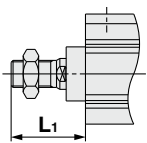
Rod end male thread



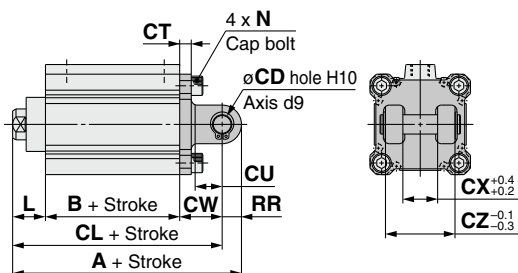
Head flange: CDQ2G



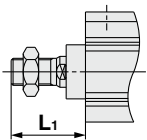
Rod end male thread



Double clevis: CDQ2D



Rod end male thread



Foot

Bore size (mm)	A	B	LS	L	L ₁	LD	LG	LH	LT	LX	LY	LZ	X	Y
32	57.2	33	17	17	38.5	6.6	4	30	3.2	57	57	71	11.2	5.8
40	63.7	39.5	23.5	17	38.5	6.6	4	33	3.2	64	64	78	11.2	7
50	66.7	40.5	17.5	18	43.5	9	5	39	3.2	79	78	95	14.7	8

Foot bracket material: Carbon steel
 Surface treatment: Nickel plating

Rod Flange

Bore size (mm)	A	B	FD	FT	FV	FX	FZ	L	L ₁	M	I	T
32	50	33	5.5	8	48	56	65	17	38.5	34	23	2
40	56.5	39.5	5.5	8	54	62	72	17	38.5	40	28	2
50	58.5	40.5	6.6	9	67	76	89	18	43.5	50	35	1

Flange bracket material: Carbon steel
 Surface treatment: Nickel plating

Head Flange

Bore size (mm)	A
32	58
40	64.5
50	67.5

(* The dimensions except A are the same as those of the rod flange.)

Flange bracket material: Carbon steel
 Surface treatment: Nickel plating

Double Clevis

Bore size (mm)	A	B	CL	CD	CT	CU	CW	CX	CZ	L	L ₁	N	RR
32	80	33	70	10	5	14	20	18	36	17	38.5	M6 x 1.0	10
40	88.5	39.5	78.5	10	6	14	22	18	36	17	38.5	M6 x 1.0	10
50	100.5	40.5	86.5	14	7	20	28	22	44	18	43.5	M8 x 1.25	14

Double clevis bracket material: Cast iron
 Surface treatment: Painted

* For details about the rod end nut and accessory brackets, refer to the **WEB catalog** or Best Pneumatics No.2.

* A double clevis pin and retaining rings are included.

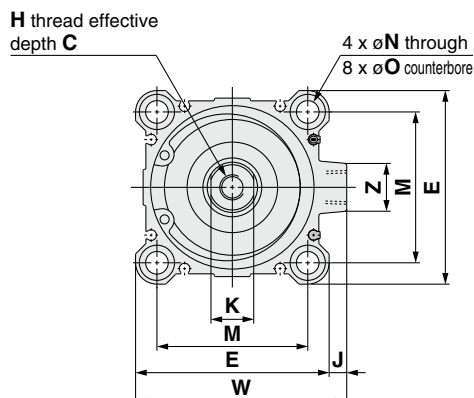
CDQ2-^{XC88} -^{XC89}

Bore Size

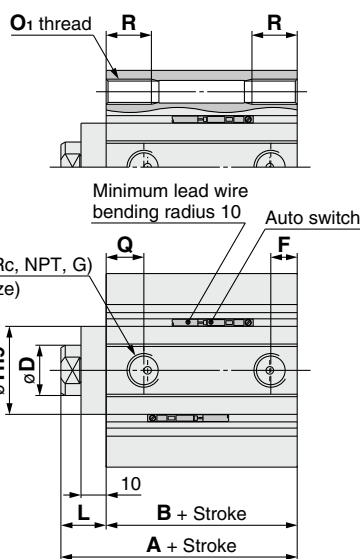
ø63 to ø100

CDQ2□-^{XC88}
-^{XC89}

Through-hole (Standard): CDQ2B



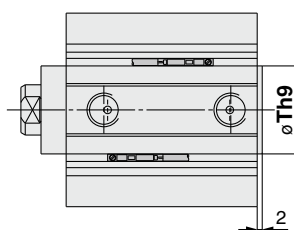
Both ends tapped: CDQ2A



Both Ends
Tapped (mm)

Bore size (mm)	O ₁	R
63	M10 x 1.5	18
80	M12 x 1.75	22
100	M12 x 1.75	22

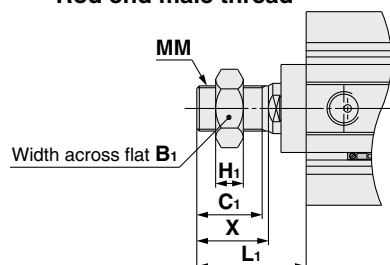
With boss on
head end



With Boss on
Head End (mm)

Bore size (mm)	Th9
63	35 ⁰ _{-0.062}
80	43 ⁰ _{-0.062}
100	59 ⁰ _{-0.074}

Rod end male thread



Rod End Male Thread (mm)

Bore size (mm)	B ₁	C ₁	H ₁	L ₁	MM	X
63	27	26	11	43.5	M18 x 1.5	28.5
80	32	32.5	13	53.5	M22 x 1.5	35.5
100	41	32.5	16	53.5	M26 x 1.5	35.5

Standard

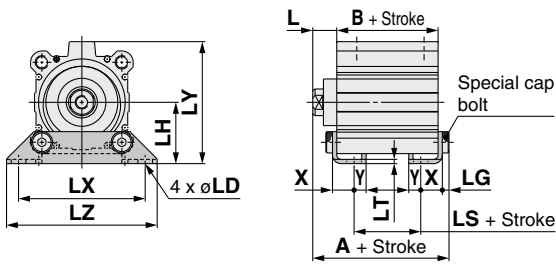
Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	H	J	K	L	M	N	O	P	Q	Th9	W	Z
63	10 to 50, 75, 100	64	46	15	20	77	10.5	M10 x 1.5	7	17	18	60	9	14 depth 10.5	1/4	15	35 ⁰ _{-0.062}	84	19
80	10 to 50, 75, 100	73.5	53.5	21	25	98	12.5	M16 x 2.0	6	22	20	77	11	17.5 depth 13.5	3/8	16	43 ⁰ _{-0.062}	104	25
100	10 to 50, 75, 100	85	63	27	30	117	13	M20 x 2.5	6.5	27	22	94	11	17.5 depth 13.5	3/8	23	59 ⁰ _{-0.074}	123.5	25

Note 1) The external dimensions with rubber bumper are same as those of the standard, as shown above.

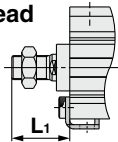
* For details about the rod end nut and accessory brackets, refer to the **WEB catalog** or Best Pneumatics No.2.

Note 2) For calculation on the longitudinal dimension of intermediate strokes, refer to page 18.

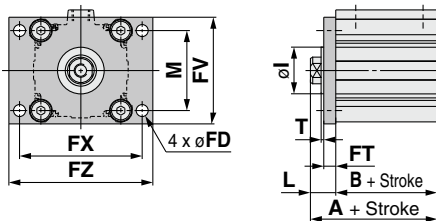
Foot: CDQ2L



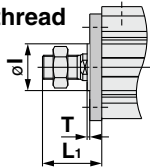
Rod end male thread



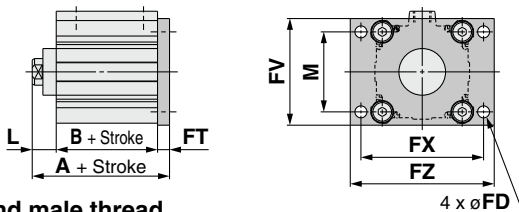
Rod flange: CDQ2F



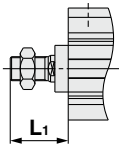
Rod end male thread



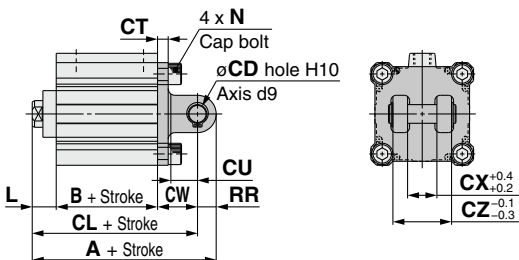
Head flange: CDQ2G



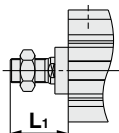
Rod end male thread



Double clevis: CDQ2D



Rod end male thread



Foot

Bore size (mm)	A	B	LS	L	L ₁	LD	LG	LH	LT	LX	LY	LZ	X	Y
63	72.2	46	20	18	43.5	11	5	46	3.2	95	91.5	113	16.2	9
80	85	53.5	23.5	20	53.5	13	7	59	4.5	118	114	140	19.5	11
100	98	63	29	22	53.5	13	7	71	6	137	136	162	23	12.5

Foot bracket material: Carbon steel
Surface treatment: Nickel plating

Rod Flange

Bore size (mm)	A	B	FD	FT	FV	FX	FZ	L	L ₁	M	I	T
63	64	46	9	9	80	92	108	18	43.5	60	35	1
80	73.5	53.5	11	11	99	116	134	20	53.5	77	—	—
100	85	63	11	11	117	136	154	22	53.5	94	—	—

Flange bracket material: Carbon steel
Surface treatment: Nickel plating

Head Flange

Bore size (mm)	A
63	73
80	84.5
100	96

Flange bracket material: Carbon steel
Surface treatment: Nickel plating

(* The dimensions except A are the same as those of the rod flange.)

Double Clevis

Bore size (mm)	A	B	CL	CD	CT	CU	CW	CX	CZ	L	L ₁	N	RR
63	108	46	94	14	8	20	30	22	44	18	43.5	M10 x 1.5	14
80	129.5	53.5	111.5	18	10	27	38	28	56	20	53.5	M12 x 1.75	18
100	152	63	130	22	13	31	45	32	64	22	53.5	M12 x 1.75	22

Double clevis bracket material: Cast iron
Surface treatment: Painted

* For details about the rod end nut and accessory brackets, refer to the **WEB catalog** or Best Pneumatics No.2.

* A double clevis pin and retaining rings are included.

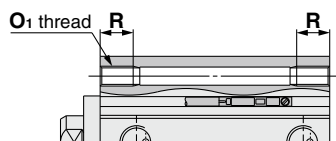
CDQ2-XC91

Bore Size

ø32 to ø50

CDQ2□-XC91

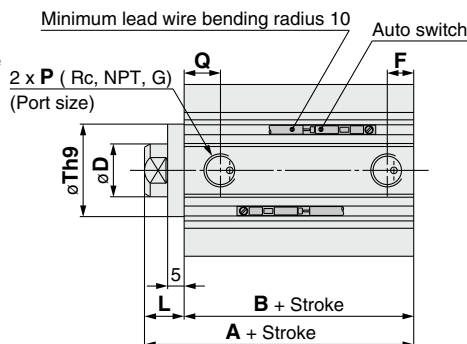
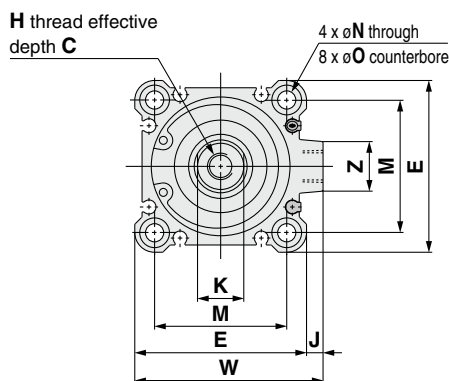
Both ends tapped: CDQ2A



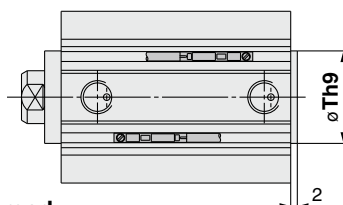
Both Ends Tapped (mm)

Bore size (mm)	O ₁	R
32	M6 x 1.0	10
40	M6 x 1.0	10
50	M8 x 1.25	14

Through-hole (Standard): CDQ2B



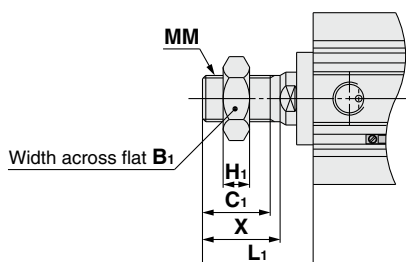
With boss on head end



With Boss on Head End (mm)

Bore size (mm)	Th9
32	21 ⁰ _{-0.052}
40	28 ⁰ _{-0.052}
50	35 ⁰ _{-0.062}

Rod end male thread



Rod End Male Thread (mm)

Bore size (mm)	B ₁	C ₁	H ₁	L ₁	MM	X
32	22	20.5	8	38.5	M14 x 1.5	23.5
40	22	20.5	8	38.5	M14 x 1.5	23.5
50	27	26	11	43.5	M18 x 1.5	28.5

Standard

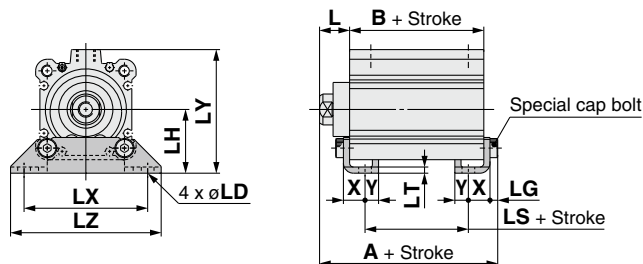
Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	H	J	K	L	M	N	O	P	Q	Th9	W	Z
32	5 to 50, 75, 100	45	33	13	16	45	7.5	M8 x 1.25	4.5	14	12	34	5.5	9 depth 7	1/8	10	23 ⁰ _{-0.052}	49.5	14
40	5 to 50, 75, 100	51.5	39.5	13	16	52	7.5	M8 x 1.25	5	14	12	40	5.5	9 depth 7	1/8	12.5	28 ⁰ _{-0.052}	57	15
50	10 to 50, 75, 100	53.5	40.5	15	20	64	10.5	M10 x 1.5	7	17	13	50	6.6	11 depth 8	1/4	10.5	35 ⁰ _{-0.062}	71	19

Note 1) The external dimensions with rubber bumper are same as those of the standard, as shown above.

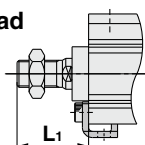
* For details about the rod end nut and accessory brackets, refer to the **WEB catalog** or Best Pneumatics No.2.

Note 2) For calculation on the longitudinal dimension of intermediate strokes, refer to page 18.

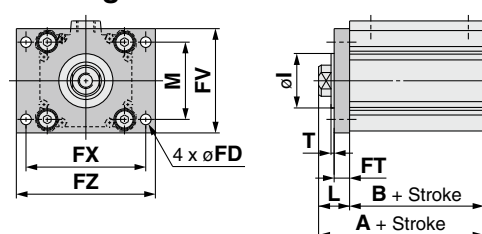
Foot: CDQ2L



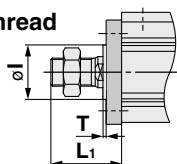
Rod end male thread



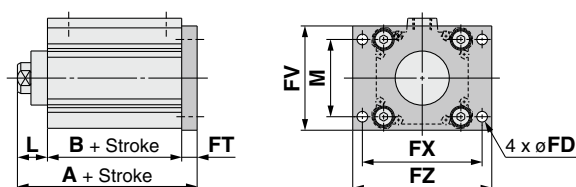
Rod flange: CDQ2F



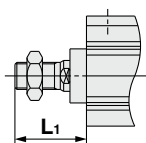
Rod end male thread



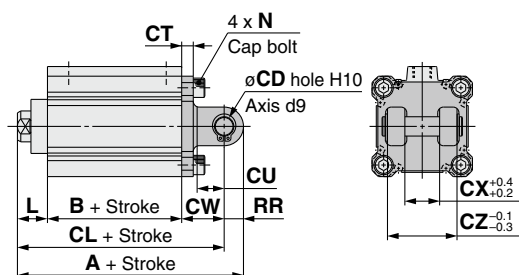
Head flange: CDQ2G



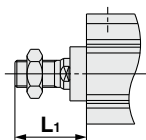
Rod end male thread



Double clevis: CDQ2D



Rod end male thread



Foot

Bore size (mm)	A	B	LS	L	L ₁	LD	LG	LH	LT	LX	LY	LZ	X	Y
32	52.2	33	17	12	38.5	6.6	4	30	3.2	57	57	71	11.2	5.8
40	58.7	39.5	23.5	12	38.5	6.6	4	33	3.2	64	64	78	11.2	7
50	61.7	40.5	17.5	13	43.5	9	5	39	3.2	79	78	95	14.7	8

Foot bracket material: Carbon steel
 Surface treatment: Nickel plating

Rod Flange

Bore size (mm)	A	B	FD	FT	FV	FX	FZ	L	L ₁	M	I	T
32	45	33	5.5	8	48	56	65	12	38.5	34	23	2
40	51.5	39.5	5.5	8	54	62	72	12	38.5	40	28	2
50	53.5	40.5	6.6	9	67	76	89	13	43.5	50	35	1

Flange bracket material: Carbon steel
 Surface treatment: Nickel plating

Head Flange

Bore size (mm)	A
32	53
40	59.5
50	62.5

(* The dimensions except A are the same as those of the rod flange.)

Flange bracket material: Carbon steel
 Surface treatment: Nickel plating

Double Clevis

Bore size (mm)	A	B	CL	CD	CT	CU	CW	CX	CZ	L	L ₁	N	RR
32	75	33	65	10	5	14	20	18	36	12	38.5	M6 x 1.0	10
40	83.5	39.5	73.5	10	6	14	22	18	36	12	38.5	M6 x 1.0	10
50	95.5	40.5	81.5	14	7	20	28	22	44	13	43.5	M8 x 1.25	14

Double clevis bracket material: Cast iron
 Surface treatment: Painted

* For details about the rod end nut and accessory brackets, refer to **the WEB catalog** or Best Pneumatics No. 2.
 * A double clevis pin and retaining rings are included.

CDQ2-XC91

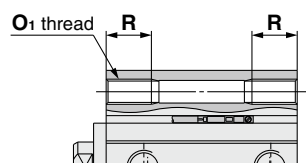
Bore Size

Ø63 to Ø100

CDQ2□-XC91

Through-hole (Standard): CDQ2B

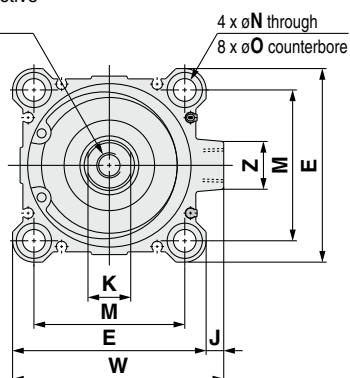
Both ends tapped: CDQ2A



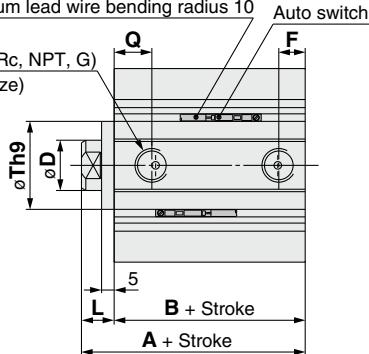
Both Ends Tapped (mm)

Bore size (mm)	O ₁	R
63	M10 x 1.5	18
80	M12 x 1.75	22
100	M12 x 1.75	22

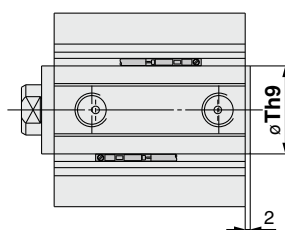
H thread effective depth C



Minimum lead wire bending radius 10
2 x P (Rc, NPT, G)
(Port size)



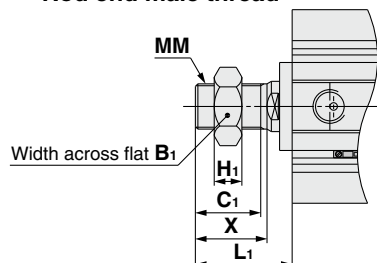
With boss on head end



With Boss on Head End (mm)

Bore size (mm)	Th9
63	35 ⁰ _{-0.062}
80	43 ⁰ _{-0.062}
100	59 ⁰ _{-0.074}

Rod end male thread



Rod End Male Thread (mm)

Bore size (mm)	B ₁	C ₁	H ₁	L ₁	MM	X
63	27	26	11	43.5	M18 x 1.5	28.5
80	32	32.5	13	53.5	M22 x 1.5	35.5
100	41	32.5	16	53.5	M26 x 1.5	35.5

Standard

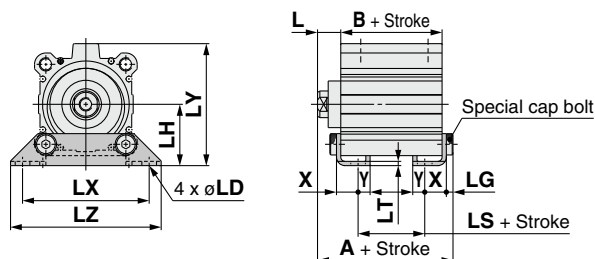
Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	H	J	K	L	M	N	O	P	Q	Th9	W	Z
63	10 to 50, 75, 100	59	46	15	20	77	10.5	M10 x 1.5	7	17	13	60	9	14 depth 10.5	1/4	15	35 ⁰ _{-0.062}	84	19
80	10 to 50, 75, 100	68.5	53.5	21	25	98	12.5	M16 x 2.0	6	22	15	77	11	17.5 depth 13.5	3/8	16	43 ⁰ _{-0.062}	104	25
100	10 to 50, 75, 100	80	63	27	30	117	13	M20 x 2.5	6.5	27	18	94	11	17.5 depth 13.5	3/8	23	59 ⁰ _{-0.074}	123.5	25

Note 1) The external dimensions with rubber bumper are same as those of the standard, as shown above.

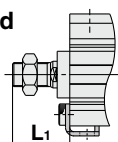
* For details about the rod end nut and accessory brackets, refer to the WEB catalog or Best Pneumatics No.2.

Note 2) For calculation on the longitudinal dimension of intermediate strokes, refer to page 18.

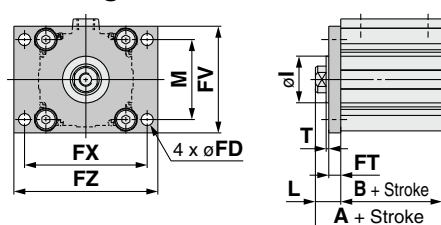
Foot: CDQ2L



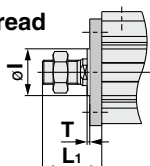
Rod end male thread



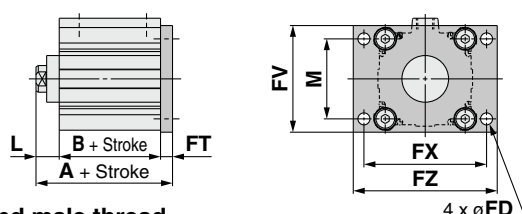
Rod flange: CDQ2F



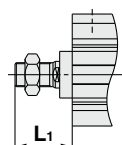
Rod end male thread



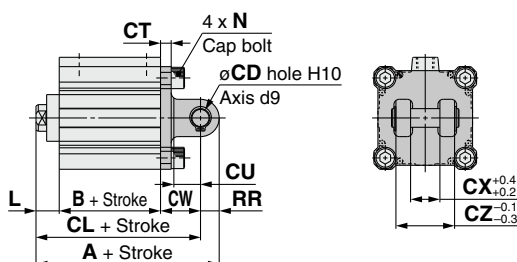
Head flange: CDQ2G



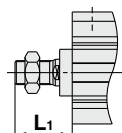
Rod end male thread



Double clevis: CDQ2D



Rod end male thread



Foot

Bore size (mm)	A	B	LS	L	L ₁	LD	LG	LH	LT	LX	LY	LZ	X	Y
63	67.2	46	20	13	43.5	11	5	46	3.2	95	91.5	113	16.2	9
80	80	53.5	23.5	15	53.5	13	7	59	4.5	118	114	140	19.5	11
100	93	63	29	17	53.5	13	7	71	6	137	136	162	23	12.5

Foot bracket material: Carbon steel
Surface treatment: Nickel plating

Rod Flange

Bore size (mm)	A	B	FD	FT	FV	FX	FZ	L	L ₁	M	I	T
63	59	46	9	9	80	92	108	13	43.5	60	35	1
80	68.5	53.5	11	11	99	116	134	15	53.5	77	—	—
100	80	63	11	11	117	136	154	17	53.5	94	—	—

Flange bracket material: Carbon steel
Surface treatment: Nickel plating

Head Flange

Bore size (mm)	A
63	68
80	79.5
100	91

(* The dimensions except A are the same as those of the rod flange.)

Flange bracket material: Carbon steel
Surface treatment: Nickel plating

Double Clevis

Bore size (mm)	A	B	CL	CD	CT	CU	CW	CX	CZ	L	L ₁	N	RR
63	103	46	89	14	8	20	30	22	44	13	43.5	M10 x 1.5	14
80	124.5	53.5	106.5	18	10	27	38	28	56	15	53.5	M12 x 1.75	18
100	147	63	125	22	13	31	45	32	64	17	53.5	M12 x 1.75	22

Double clevis bracket material: Cast iron
Surface treatment: Painted

* For details about the rod end nut and accessory brackets, refer to the **WEB catalog** or Best Pneumatics No. 2.
* A double clevis pin and retaining rings are included.

Spatter Resistant Cylinder for Arc Welding

Compact Cylinder: Long Stroke, Double Acting, Single Rod

CDQ2-XC88

CDQ2-XC89

ø32, ø40, ø50, ø63, ø80, ø100

RoHS

How to Order

CDQ2 A 32 - 200 DC Z - M9BW - XC89

Built-in auto switch magnet

Mounting

A	Both ends tapped
L	Foot
F	Rod flange
G	Head flange
D	Double clevis

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

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Port thread type

Nil	Rc
TN	NPT
TF	G

Cylinder stroke (mm)

Refer to page 28 for standard strokes.

Auto switch

Nil	Without auto switch
-----	---------------------

* Refer to the below table for applicable auto switches.

Auto switch mounting groove

Z	4 surfaces
---	------------

Body option

Nil	Standard (Rod end female thread)
M	Rod end male thread

Cushion

C	Rubber bumper
---	---------------

Action

D	Double acting
---	---------------

Rod material

XC88	Stainless steel 304
XC89	S45C

Number of auto switches

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

Made to Order

Part no.	Piston rod material (Hard chrome plated)		Coil scraper	Lube- retainer	Grease for welding
	S45C	Stainless steel 304			
-XC88	—	●	●	●	●
-XC89	●	—	●	●	●

Built-in Auto Switch Magnet Cylinder Model

If a built-in auto switch magnet cylinder without an auto switch is required, there is no need to enter the symbol for the auto switch.
(Example) CDQ2L40-200DCZ-XC89

Applicable Auto Switches/Refer to the WEB catalog or the Best Pneumatics No. 2 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-wired connector	Applicable load		
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)				
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	●	○	—	○	IC circuit	Relay, PLC
				3-wire (PNP)				M9PV	M9P	●	●	●	○	—	○		
	2-wire			M9BV				M9B	●	●	●	○	—	○			
	3-wire (NPN)			M9NVV				M9NV	●	●	●	○	—	○	IC circuit		
	3-wire (PNP)			M9PVV				M9PV	●	●	●	○	—	○			
	2-wire			M9BVV				M9BV	●	●	●	○	—	○			
	Magnetic field resistant (2-color indication)	2-wire (Non-polar)	—	P3DWA	●	—	●	●	—	●	—						
			—	P4DW	—	—	●	●	—	●							
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—	●	—	—	—	IC circuit	—
				2-wire	24 V	12 V 5 V, 12 V	100 V 100 V or less	A93V	A93	●	—	●	—	—	—	—	IC circuit
			A90V					A90	●	—	●	—	—	—	—		

* Lead wire length symbols: 0.5 m Nil (Example) M9NV
1 m M (Example) M9NWM
3 m L (Example) M9NWL
5 m Z (Example) M9NWZ

* Please contact SMC for auto switches, auto switch proper mounting positions and operating ranges other than the above.

Specifications

Bore size (mm)	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	0.05 MPa					
Ambient and fluid temperature	-10 to 60°C (No freezing)					
Lubrication	Not required (Non-lube)					
Piston speed	50 to 500 mm/s					
Allowable kinetic energy (J)	0.29	0.52	0.91	1.54	2.71	4.54
Stroke length tolerance	+1.4 mm (Note) 0					

Note) Stroke length tolerance does not include the amount of bumper change.

Standard Strokes

Bore size	Standard stroke
32, 40, 50 63, 80, 100	125, 150, 175, 200, 250, 300

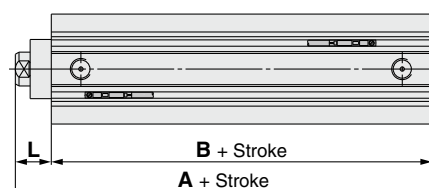
Manufacture of Intermediate Strokes

Type	A spacer is installed in the standard stroke body.	
Part no.	Refer to "How to Order" for the standard model number. (Page 27)	
Description	Strokes in 1 mm intervals are available by installing a spacer in the standard stroke cylinder.	
Stroke range	Bore size	Stroke range
	32 to 100	101 to 299
Example	Part no.: CDQ2A50-166DCZ-XC89 CDQ2A50-175DCZ-XC89 with 9 mm width spacer inside The B dimension is 235.5 mm.	

Type

Bore size (mm)				32	40	50	63	80	100
Pneumatic	Built-in magnet for auto switch			●	●	●	●	●	●
	Piping	Pipe thread	—	Rc1/8	Rc1/8	Rc1/4	Rc1/4	Rc3/8	Rc3/8
			TN	NPT1/8	NPT1/8	NPT1/4	NPT1/4	NPT3/8	NPT3/8
			TF	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8
	Rod end male thread			●	●	●	●	●	●

Comparison of the Dimensions of Each Series



Bore size (mm)	XC88, 89			Standard		
	A	B	L	A	B	L
32	67.5	50.5	17	62.5	45.5	17
40	77	60	17	72	55	17
50	78.5	60.5	18	73.5	55.5	18
63	80	62	18	75	57	18
80	91	71	20	86	66	20
100	102.5	80.5	22	97.5	75.5	22

* At 0 stroke

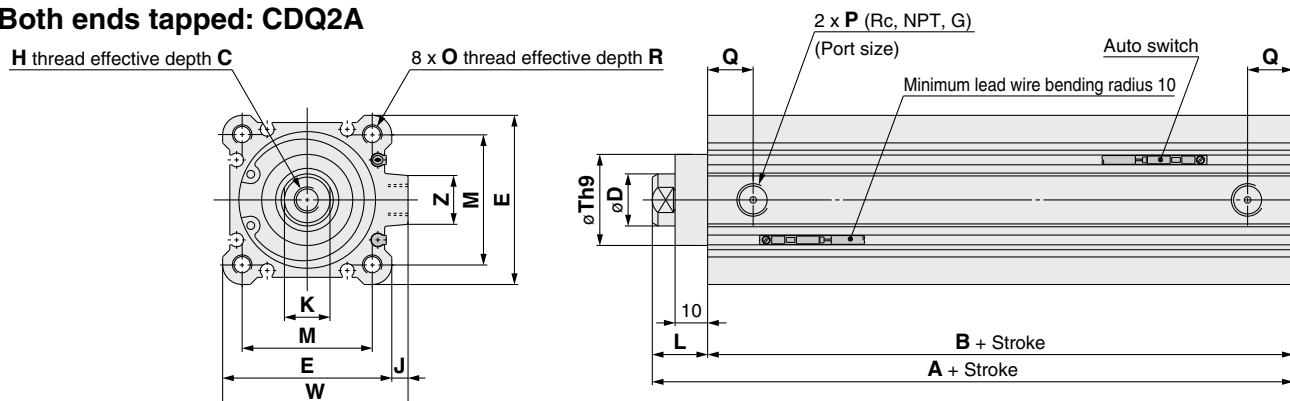
CDQ2-XC88 -XC89

Bore Size

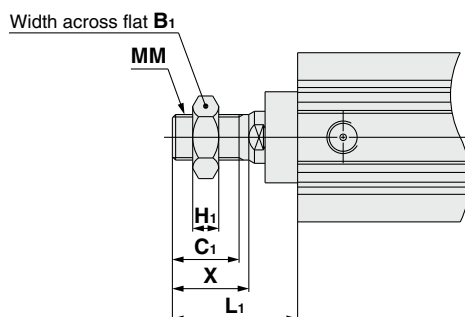
Ø32 to Ø50

CDQ2-
XC88
-XC89

Both ends tapped: CDQ2A



Rod end male thread



Rod End Male Thread (mm)

Bore size (mm)	B ₁	C ₁	H ₁	L ₁	MM	X
32	22	20.5	8	38.5	M14 x 1.5	23.5
40	22	20.5	8	38.5	M14 x 1.5	23.5
50	27	26	11	43.5	M18 x 1.5	28.5

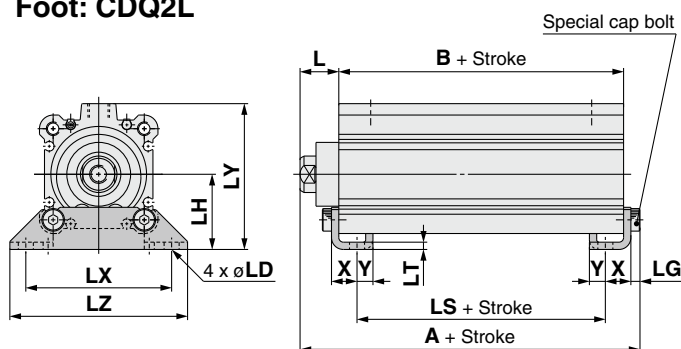
Both Ends Tapped

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	H	J	K	L	M	O	P	Q	R	Th9	W	Z
32	125 to 200 Note 1) 250, 300	67.5	50.5	13	16	45	M8 x 1.25	4.5	14	17	34	M6 x 1.0	1/8	10	10	23 ⁰ _{-0.052}	49.5	14
40		77	60	13	16	52	M8 x 1.25	5	14	17	40	M6 x 1.0	1/8	12.5	10	28 ⁰ _{-0.052}	57	15
50		78.5	60.5	15	20	64	M10 x 1.5	7	17	18	50	M8 x 1.25	1/4	14	14	35 ⁰ _{-0.062}	71	19

Note 1) For 125 to 200 strokes, strokes are available in 25 mm intervals.

Note 2) For calculation on the longitudinal dimension of intermediate strokes, refer to page 18.

Foot: CDQ2L



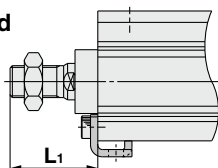
Foot

Bore size (mm)	A	B	L	L ₁	LD	LG	LH	LS	LT	LX	LY	LZ	X	Y
32	74.7	50.5	17	38.5	6.6	4	30	34.5	3.2	57	57	71	11.2	5.8
40	84.2	60	17	38.5	6.6	4	33	44	3.2	64	64	78	11.2	7
50	86.7	60.5	18	43.5	9	5	39	37.5	3.2	79	78	95	14.7	8

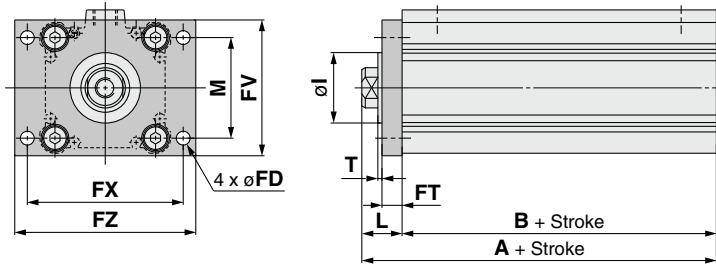
Foot bracket material: Carbon steel
Surface treatment: Nickel plating

* For details about the rod end nut and accessory brackets, refer to the **WEB catalog** or Best Pneumatics No.2.

Rod end male thread



Rod flange: CDQ2F



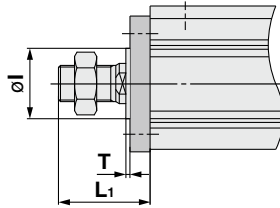
Rod Flange

Bore size (mm)	A	B	FD	FT	FV	FX	FZ	L	L ₁	M
32	67.5	50.5	5.5	8	48	56	65	17	38.5	34
40	77	60	5.5	8	54	62	72	17	38.5	40
50	78.5	60.5	6.6	9	67	76	89	18	43.5	50

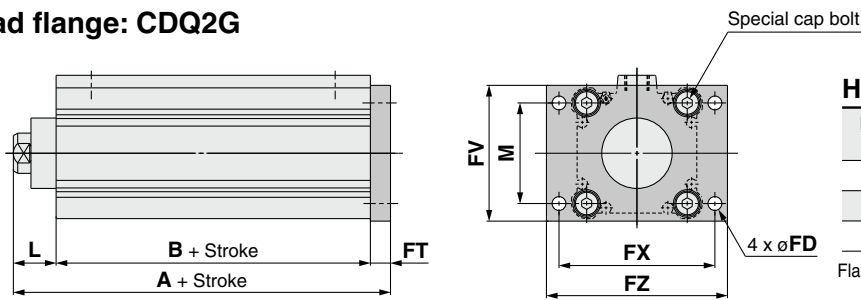
Flange bracket material: Carbon steel
Surface treatment: Nickel plating

Bore size (mm)	I	T
32	23	2
40	28	2
50	35	1

Rod end male thread



Head flange: CDQ2G



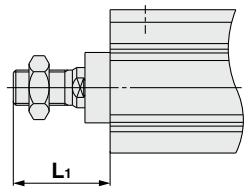
Head Flange

Bore size (mm)	A
32	75.5
40	85
50	87.5

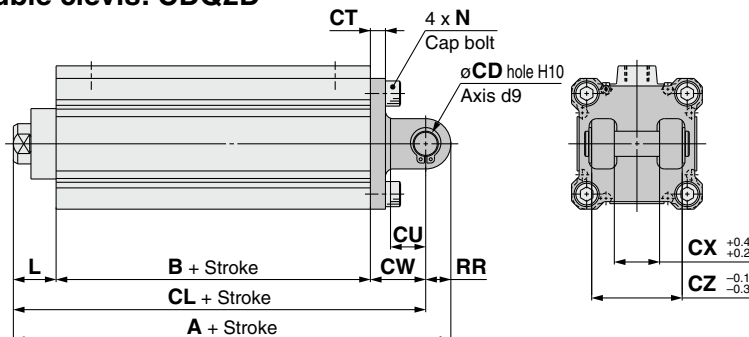
Flange bracket material: Carbon steel
Surface treatment: Nickel plating

(* The dimensions except A are the same as those of the rod flange.)

Rod end male thread



Double clevis: CDQ2D



Double Clevis

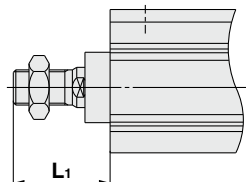
Bore size (mm)	A	B	CD	CL	CT	CU	CW	CX	CZ
32	97.5	50.5	10	87.5	5	14	20	18	36
40	109	60	10	99	6	14	22	18	36
50	120.5	60.5	14	106.5	7	20	28	22	44

Bore size (mm)	L	L ₁	N	RR
32	17	38.5	M6 x 1.0	10
40	17	38.5	M6 x 1.0	10
50	18	43.5	M8 x 1.25	14

Double clevis bracket material: Cast iron
Surface treatment: Painted

* For details about the rod end nut and accessory brackets, refer to **the WEB catalog** or Best Pneumatics No.2.
* A double clevis pin and retaining rings are included.

Rod end male thread



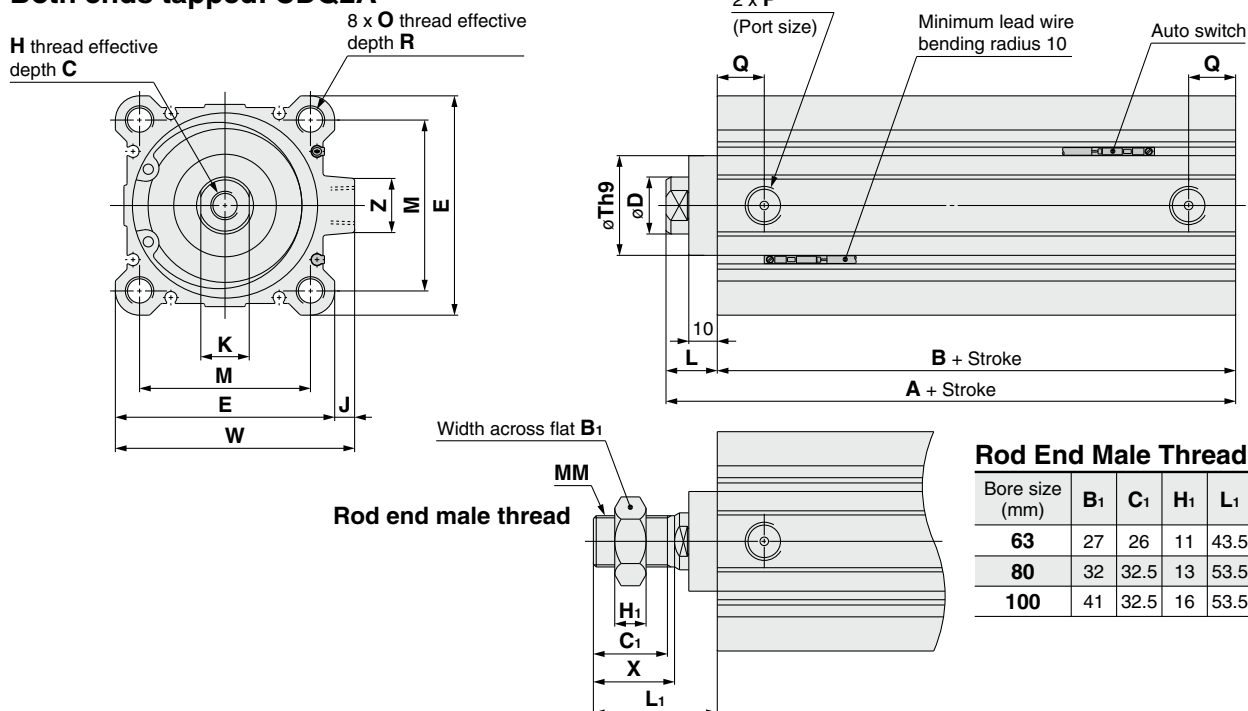
CDQ2^{-XC88} -XC89

Bore Size

Ø63 to Ø100

CDQ2^{-XC88}
-XC89

Both ends tapped: CDQ2A



Rod End Male Thread

Bore size (mm)	B ₁	C ₁	H ₁	L ₁	MM	X
63	27	26	11	43.5	M18 x 1.5	28.5
80	32	32.5	13	53.5	M22 x 1.5	35.5
100	41	32.5	16	53.5	M26 x 1.5	35.5

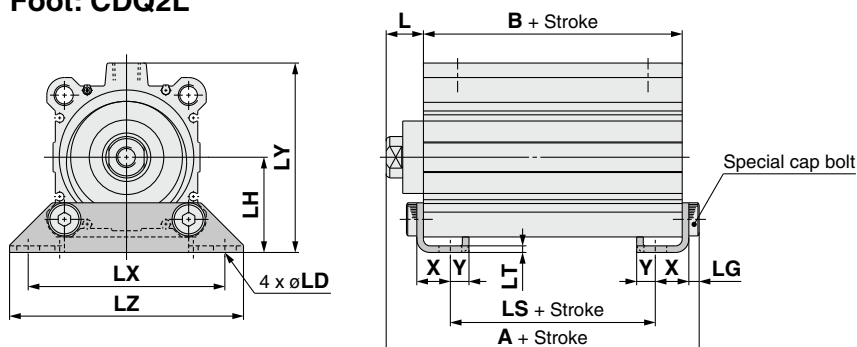
Both Ends Tapped

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	H	J	K	L	M	O	P	Q	R	Th9	W	Z
63	125 to 200 ^{Note 1)}	80	62	15	20	77	M10 x 1.5	7	17	18	60	M10 x 1.5	1/4	16.5	18	35 ⁰ _{-0.062}	84	19
80	250, 300	91	71	21	25	98	M16 x 2.0	6	22	20	77	M12 x 1.75	3/8	19	22	43 ⁰ _{-0.062}	104	25
100		102.5	80.5	27	30	117	M20 x 2.5	6.5	27	22	94	M12 x 1.75	3/8	23	22	59 ⁰ _{-0.074}	123.5	25

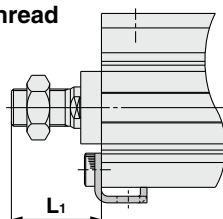
Note 1) For 125 to 200 strokes, strokes are available in 25 mm intervals.

Note 2) For calculation on the longitudinal dimension of intermediate strokes, refer to page 18.

Foot: CDQ2L



Rod end male thread



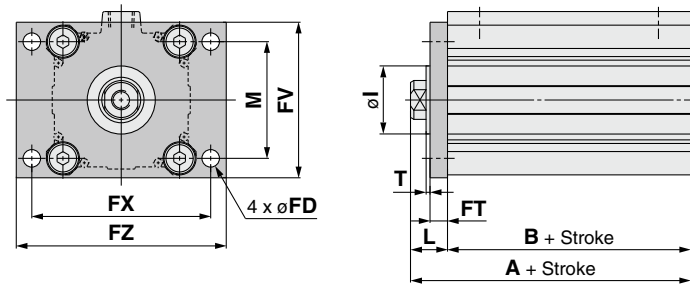
Foot

Bore size (mm)	A	B	L	L ₁	LD	LG	LH	LS	LT	LX	LY	LZ	X	Y
63	88.2	62	18	43.5	11	5	46	36	3.2	95	91.5	113	16.2	9
80	102.5	71	20	53.5	13	7	59	41	4.5	118	114	140	19.5	11
100	115.5	80.5	22	53.5	13	7	71	46.5	6	137	136	162	23	12.5

Foot bracket material: Carbon steel
Surface treatment: Nickel plating

* For details about the rod end nut and accessory brackets, refer to the **WEB catalog** or Best Pneumatics No.2.

Rod flange: CDQ2F



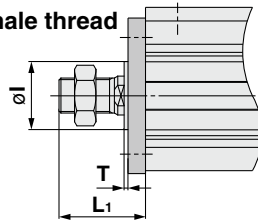
Rod Flange

Bore size (mm)	A	B	FD	FT	FV	FX	FZ	L	L ₁	M
63	80	62	9	9	80	92	108	18	43.5	60
80	91	71	11	11	99	116	134	20	53.5	77
100	102.5	80.5	11	11	117	136	154	22	53.5	94

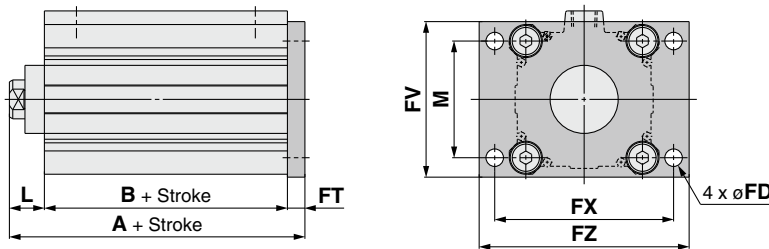
Flange bracket material: Carbon steel
Surface treatment: Nickel plating

Bore size (mm)	I	T
63	35	1
80	—	—
100	—	—

Rod end male thread



Head flange: CDQ2G



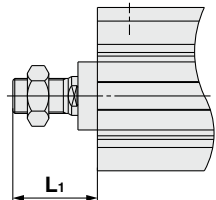
Head Flange

Bore size (mm)	A
63	89
80	102
100	113.5

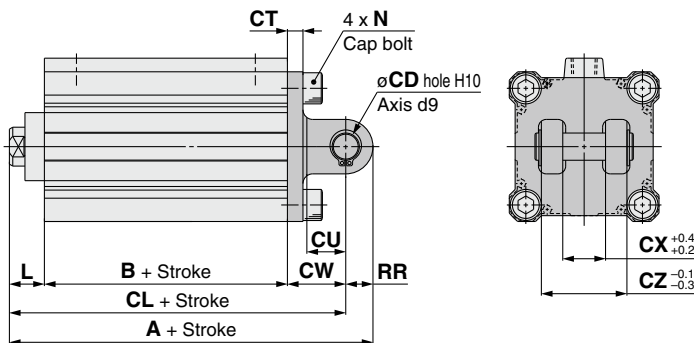
(* The dimensions except A are the same as those of the rod flange.)

Flange bracket material: Carbon steel
Surface treatment: Nickel plating

Rod end male thread



Double clevis: CDQ2D



Double Clevis

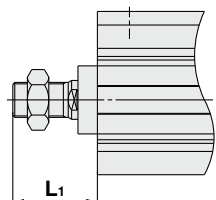
Bore size (mm)	A	B	CD	CL	CT	CU	CW	CX	CZ
63	124	62	14	110	8	20	30	22	44
80	147	71	18	129	10	27	38	28	56
100	169.5	80.5	22	147.5	13	31	45	32	64

Bore size (mm)	L	L ₁	N	RR
63	18	43.5	M10 x 1.5	14
80	20	53.5	M12 x 1.75	18
100	22	53.5	M12 x 1.75	22

Double clevis bracket material: Cast iron
Surface treatment: Nickel plating

* For details about the rod end nut and accessory brackets, refer to **the WEB catalog** or Best Pneumatics No.2.
* A double clevis pin and retaining rings are included.

Rod end male thread



Spatter Resistant Cylinder for Arc Welding Compact Cylinder: Anti-lateral Load

CDQ2 S-XC88 S-XC89

ø32, ø40, ø50, ø63, ø80, ø100

RoHS

How to Order

CDQ2 **B** **S** **32**  **-30** **D**  **C**  **Z** **-M9BW**  **-XC89**

Built-in auto switch magnet

Mounting

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

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

Type

S	Anti-lateral load
----------	-------------------

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Port thread type

Nil	Rc
TN	NPT
TF	G

Cylinder stroke (mm)
Refer to page 34 for standard strokes.

Rod material

XC88	Stainless steel 304
XC89	S45C

Number of auto switches

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

Auto switch

Nil	Without auto switch
------------	---------------------

* Refer to the below table for applicable auto switches.

Auto switch mounting groove

Z	4 surfaces
----------	------------

Body option 2

Nil	Standard (Rod end female thread)
M	Rod end male thread

Cushion

C	Rubber bumper
----------	---------------

Body option 1

Nil	Standard
F	With boss on head end

Action

D	Double acting
----------	---------------

Made to Order

Part no.	Piston rod material (Hard chrome plated)		Coil scraper	Lube- retainer	Grease for welding
	S45C	Stainless steel 304			
-XC88	—	●	●	●	●
-XC89	●	—	●	●	●

Built-in Auto Switch Magnet Cylinder Model

If a built-in auto switch magnet cylinder without an auto switch is required, there is no need to enter the symbol for the auto switch.
(Example) CDQ2LS40-30DCZ-XC89

Applicable Auto Switches/Refer to the WEB catalog or the Best Pneumatics No. 2 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-wired connector	Applicable load	
					DC		AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)			
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V,	—	M9NV	M9N	●	●	●	○	—	○	IC circuit	Relay, PLC
				12 V		M9PV		M9P	●	●	●	○	—	○			
				2-wire		12 V		M9BV	M9B	●	●	●	○	—	○		
	Diagnostic indication (2-color indication)			3-wire (NPN)		5 V,		M9NVW	M9NW	●	●	●	○	—	○	IC circuit	
				3-wire (PNP)		12 V		M9PVW	M9PW	●	●	●	○	—	○		
				2-wire		12 V		M9BWV	M9BW	●	●	●	○	—	○		
	Magnetic field resistant (2-color indication)			2-wire (Non-polar)		—		—	P3DWA	●	—	●	●	—	●	—	
						—		—	P4DW	—	—	●	●	—	●		
—		—	—		—	—	—	—	—	—	—						
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—	●	—	—	—	IC circuit	—
				2-wire	24 V	12 V	100 V	A93V	A93	●	—	●	—	—	—	—	—
						5 V, 12 V	100 V or less	A90V	A90	●	—	●	—	—	—	—	—

* Lead wire length symbols: 0.5 m Nil (Example) M9NV
1 m M (Example) M9NWM
3 m L (Example) M9NWL
5 m Z (Example) M9NWZ

* Please contact SMC for auto switches, auto switch proper mounting positions and operating ranges other than the above.

Specifications

Bore size (mm)	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	0.05 MPa					
Ambient and fluid temperature	-10 to 60°C (No freezing)					
Lubrication	Not required (Non-lube)					
Piston speed	50 to 500 mm/s					
Allowable kinetic energy (J)	0.29	0.52	0.91	1.54	2.71	4.54
Stroke length tolerance	+1.0 mm (Note) 0					

Note) Stroke length tolerance does not include the amount of dumper change.

Standard Strokes

Bore size	Standard stroke
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

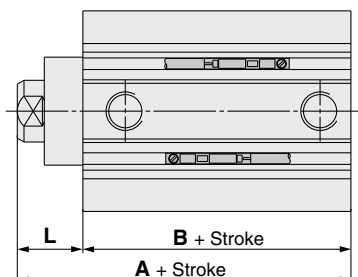
Manufacture of Intermediate Strokes

Type	A spacer is installed in the standard stroke body.	
Part no.	Refer to "How to Order" for the standard model number. (Page 33)	
Description	Strokes in 1 mm intervals are available by installing a spacer in the standard stroke cylinder.	
Stroke range	Bore size	Stroke range
	32 to 100	1 to 99
Example	Part no.: CDQ2BS50-57DCZ-XC89 CDQ2BS50-75DCZ-XC89 with 18 mm width spacer inside The B dimension is 125.5 mm.	

Type

Bore size (mm)			32	40	50	63	80	100
Pneumatic	Mounting	Through-hole (Standard)	●	●	●	●	●	●
		Both ends tapped	●	●	●	●	●	●
	Built-in magnet for auto switch		●	●	●	●	●	●
	Piping	Pipe thread	Rc1/8	Rc1/8	Rc1/4	Rc1/4	Rc3/8	Rc3/8
			NPT1/8	NPT1/8	NPT1/4	NPT1/4	NPT3/8	NPT3/8
			G1/8	G1/8	G1/4	G1/4	G3/8	G3/8
	Rod end male thread		●	●	●	●	●	●
	With rubber bumper (Standard)		●	●	●	●	●	●
	With boss on head end		●	●	●	●	●	●

Comparison of the Dimensions of Each Series



Bore size (mm)	XC88, 89			Standard		
	A	B	L	A	B	L
32	60	43	17	50	43	17
40	66.5	49.5	17	56.5	49.5	17
50	68.5	50.5	18	58.5	50.5	18
63	74	56	18	64	56	18
80	83.5	63.5	20	73.5	63.5	20
100	95	73	22	85	73	22

* At 0 stroke

CDQ2□S-XC88 -XC89

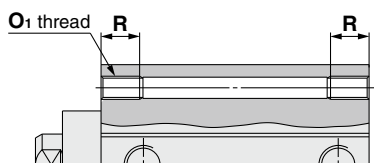
Bore Size

ø32 to ø50

CDQ2□S-XC88
-XC89

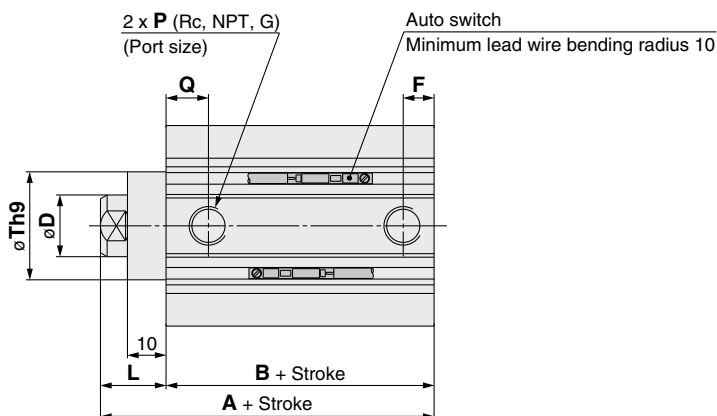
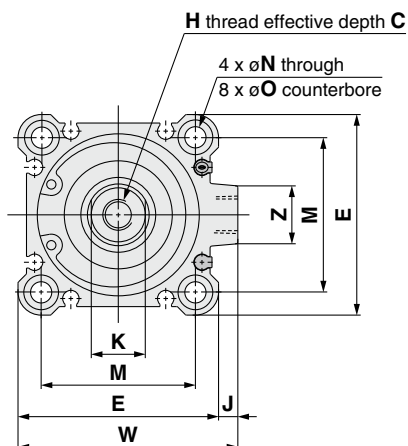
Both ends tapped: CDQ2AS

Through-hole (Standard): CDQ2BS

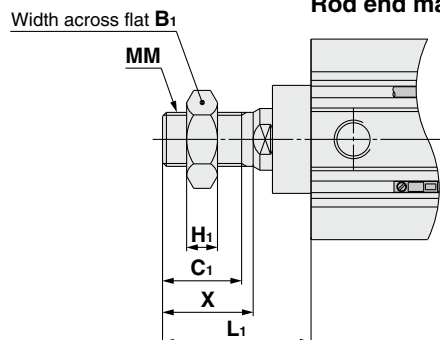


Both Ends
Tapped

Bore size (mm)	O ₁	R
32	M6 x 1.0	10
40	M6 x 1.0	10
50	M8 x 1.25	14



Rod end male thread



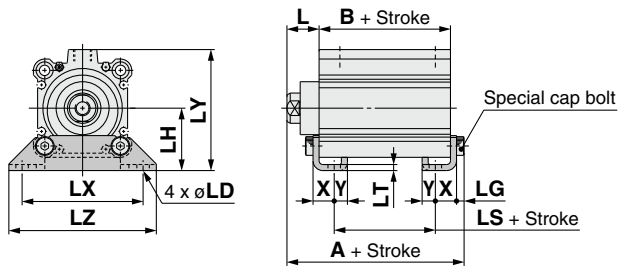
Rod End Male Thread

Bore size (mm)	B ₁	C ₁	H ₁	L ₁	MM	X
32	22	20.5	8	38.5	M14 x 1.5	23.5
40	22	20.5	8	38.5	M14 x 1.5	23.5
50	27	26	11	43.5	M18 x 1.5	28.5

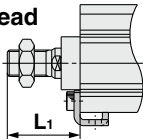
The dimensions with boss on head end are equivalent to those of the CDQ2 series, double acting, single rod. Refer to page 19.

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	H	J	K	L	M	N	O	Th9	P	Q	W	Z
32	5 to 50, 75, 100	60	43	13	16	45	7.5	M8 x 1.25	4.5	14	17	34	5.5	9 depth 7	23 ⁰ _{-0.052}	1/8	10	49.5	14
40	5 to 50, 75, 100	66.5	49.5	13	16	52	7.5	M8 x 1.25	5	14	17	40	5.5	9 depth 7	28 ⁰ _{-0.052}	1/8	12.5	57	15
50	10 to 50, 75, 100	68.5	50.5	15	20	64	10.5	M10 x 1.5	7	17	18	50	6.6	11 depth 8	35 ⁰ _{-0.062}	1/4	10.5	71	19

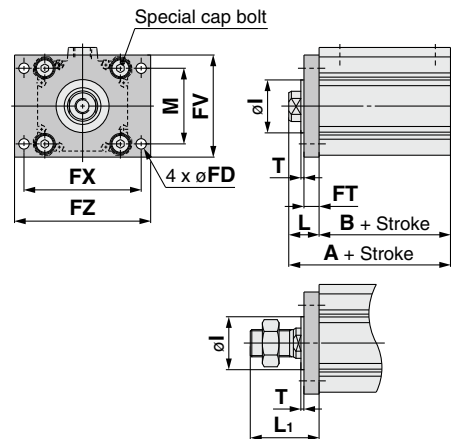
Foot: CDQ2LS



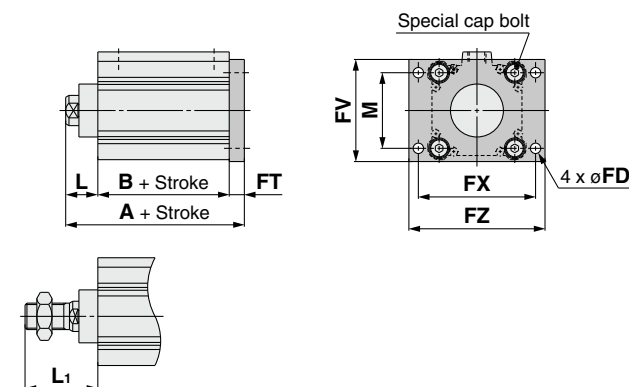
Rod end male thread



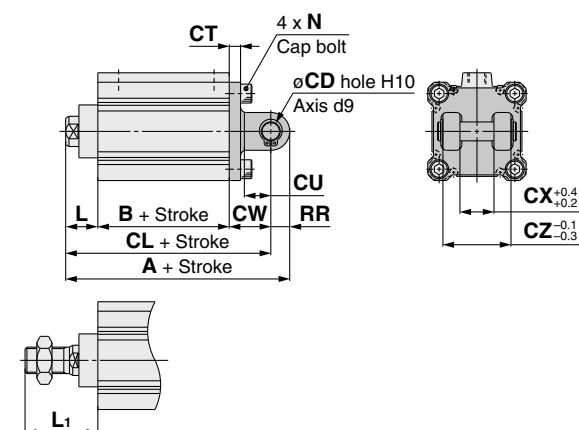
Rod flange: CDQ2FS



Head flange: CDQ2GS



Double clevis: CDQ2DS



Foot

(mm)

Bore size (mm)	A	B	LS	L	L ₁	LD	LG	LH	LT	LX	LY
32	67.2	43	27	17	38.5	6.6	4	30	3.2	57	57
40	73.7	49.5	33.5	17	38.5	6.6	4	33	3.2	64	64
50	76.7	50.5	27.5	18	43.5	9	5	39	3.2	79	78

Bore size (mm)	LZ	X	Y
32	71	11.2	5.8
40	78	11.2	7
50	95	14.7	8

Foot bracket material: Carbon steel
Surface treatment: Nickel plating

Rod Flange

(mm)

Bore size (mm)	A	B	FD	FT	FV	FX	FZ	L	L ₁	M
32	60	43	5.5	8	48	56	65	17	38.5	34
40	66.5	49.5	5.5	8	54	62	72	17	38.5	40
50	68.5	50.5	6.6	9	67	76	89	18	43.5	50

Bore size (mm)	I	T
32	23	2
40	28	2
50	35	1

Foot bracket material: Carbon steel
Surface treatment: Nickel plating

Head Flange

(mm)

Bore size (mm)	A
32	68
40	74.5
50	77.5

Foot bracket material: Carbon steel
Surface treatment: Nickel plating

(* The dimensions except A are the same as those of the rod flange.)

Double Clevis

(mm)

Bore size (mm)	A	B	CL	CD	CT	CU	CW	CX	CZ	L	L ₁
32	90	43	80	10	5	14	20	18	36	17	38.5
40	98.5	49.5	88.5	10	6	14	22	18	36	17	38.5
50	110.5	50.5	96.5	14	7	20	28	22	44	18	43.5

Bore size (mm)	N	RR
32	M6 x 1.0	10
40	M6 x 1.0	10
50	M8 x 1.25	14

Double clevis bracket material: Cast iron
Surface treatment: Painted

* For details about the rod end nut and accessory brackets, refer to the **WEB catalog** or Best Pneumatics No.2.

* A double clevis pin and retaining rings are included.

CDQ2□S-XC88 -XC89

Bore Size

Ø63 to Ø100

CDQ2□S-XC88
-XC89

Through-hole (Standard): CDQ2BS

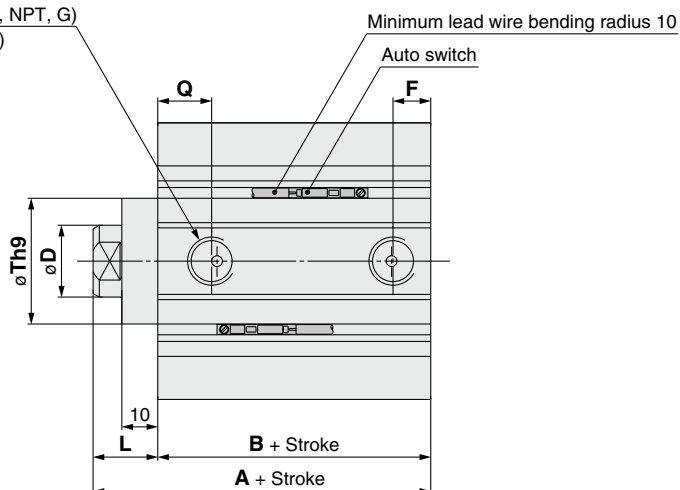
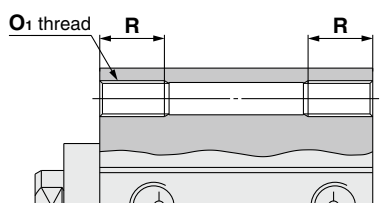
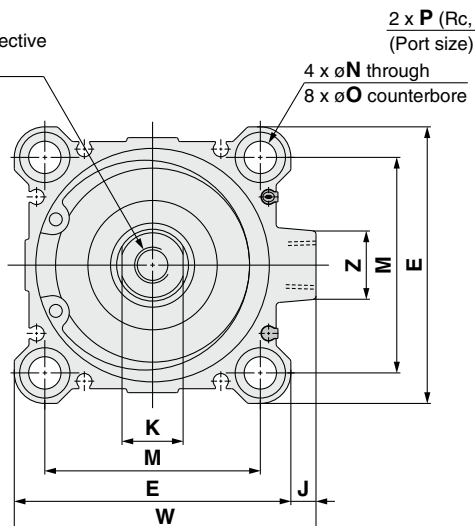
Both ends tapped: CDQ2AS

Both Ends
Tapped

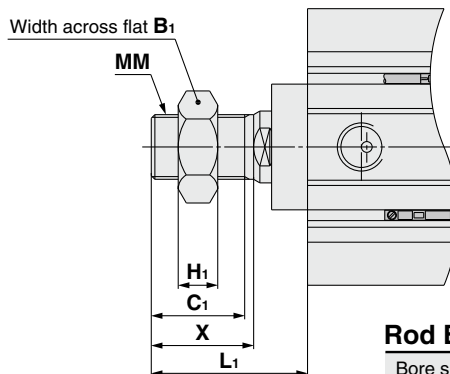
(mm)

Bore size (mm)	O ₁	R
63	M10 x 1.5	18
80	M12 x 1.75	22
100	M12 x 1.75	22

H thread effective depth C



Rod end male thread



Rod End Male Thread

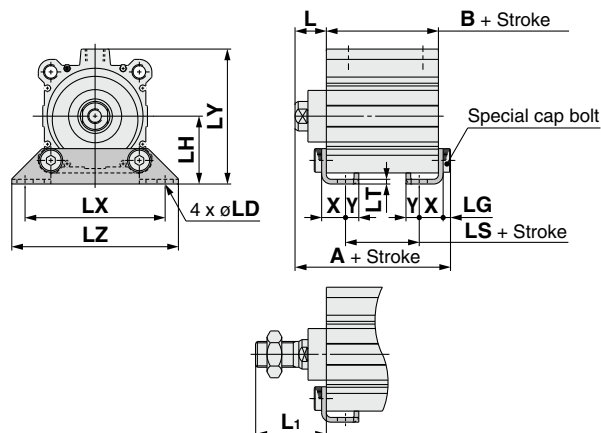
(mm)

Bore size (mm)	B ₁	C ₁	H ₁	L ₁	MM	X
63	27	26	11	43.5	M18 x 1.5	28.5
80	32	32.5	13	53.5	M22 x 1.5	35.5
100	41	32.5	16	53.5	M26 x 1.5	35.5

The dimensions with boss on head end are equivalent to those of the CDQ2 series, double acting, single rod. Refer to page 21.

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	H	J	K	L	M	N	O	P	Q	Th9	W	Z
63	10 to 50, 75, 100	74	56	15	20	77	10.5	M10 x 1.5	7	17	18	60	9	14 depth 10.5	1/4	15	35 ⁰ _{-0.062}	84	19
80	10 to 50, 75, 100	83.5	63.5	21	25	98	12.5	M16 x 2.0	6	22	20	77	11	17.5 depth 13.5	3/8	16	43 ⁰ _{-0.062}	104	25
100	10 to 50, 75, 100	95	73	27	30	117	13	M20 x 2.5	6.5	27	22	94	11	17.5 depth 13.5	3/8	23	59 ⁰ _{-0.074}	123.5	25

Foot: CDQ2LS



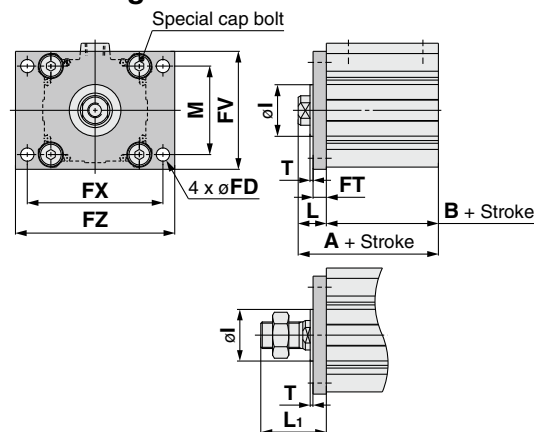
Foot

Bore size (mm)	A	B	LS	L	L ₁	LD	LG	LH	LT	LX	LY
63	82.2	56	30	18	43.5	11	5	46	3.2	95	91.5
80	95	63.5	33.5	20	53.5	13	7	59	4.5	118	114
100	108	73	39	22	53.5	13	7	71	6	137	136

Bore size (mm)	LZ	X	Y
63	113	16.2	9
80	140	19.5	11
100	162	23	12.5

Foot bracket material: Carbon steel
Surface treatment: Nickel plating

Rod flange: CDQ2FS



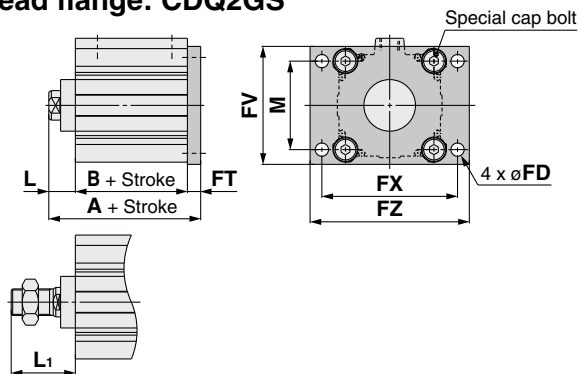
Rod Flange

Bore size (mm)	A	B	FD	FT	FV	FX	FZ	L	L ₁	M
63	74	56	9	9	80	92	108	18	43.5	60
80	83.5	63.5	11	11	99	116	134	20	53.5	77
100	95	73	11	11	117	136	154	22	53.5	94

Bore size (mm)	I	T
63	35	1
80	—	—
100	—	—

Foot bracket material: Carbon steel
Surface treatment: Nickel plating

Head flange: CDQ2GS



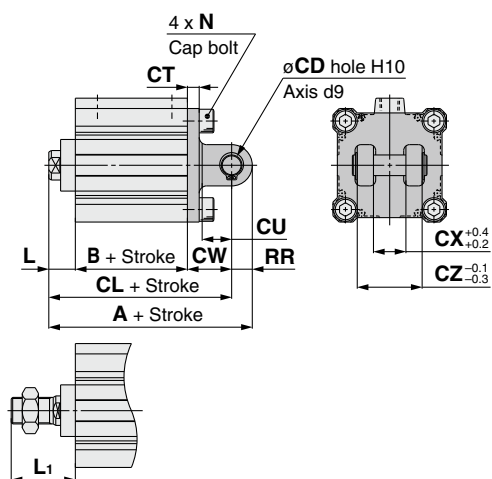
Head Flange

Bore size (mm)	A
63	83
80	94.5
100	106

Foot bracket material: Carbon steel
Surface treatment: Nickel plating

(* The dimensions except A are the same as those of the rod flange.)

Double clevis: CDQ2DS



Double Clevis

Bore size (mm)	A	B	CL	CD	CT	CU	CW	CX	CZ	L	L ₁
63	118	56	104	14	8	20	30	22	44	18	43.5
80	139.5	63.5	121.5	18	10	27	38	28	56	20	53.5
100	162	73	140	22	13	31	45	32	64	22	53.5

Bore size (mm)	N	RR
63	M10 x 1.5	14
80	M12 x 1.75	18
100	M12 x 1.75	22

Double clevis bracket material: Cast iron
Surface treatment: Painted

* For details about the rod end nut and accessory brackets, refer to the **WEB catalog** or Best Pneumatics No.2.

* A double clevis pin and retaining rings are included.