



Compact Cylinder

NCQ2/CQ2 Series

ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100, ø125, ø140, ø160

The cylinder is designed with ultra compact overall dimensions offering space saving features. Ideal for use on applications requiring compact size fixtures and equipment.

Series Variation	Action	Style	Standard Built in magnet Mounting thread (A) type Rod end M thread W/ rubber cushion End boss CQ2	Bore size (mm)	Std Stroke (mm)	Page
Standard 	Double Acting	Single rod (N)CQ2	••••••••••	12, 16, 20, 25 32, 40, 50, 63 80, 100	ø12-ø16/5-30 ø20-ø25/5-50 ø32-ø40/5-100 ø50-ø100/10-100	2
		Double rod (N)CQ2W	••••••••••	12, 16, 20, 25 32, 40, 50, 63 80, 100	ø12-ø16/5-30 ø20-ø40/5-50 ø50-ø100/10-50	24
	Single Acting	Extension/Retraction (N)CQ2	••••••••••	12, 16, 20, 25 32, 40, 50	ø12-ø40/5,10 ø50/10,20	38
Rod non-rotating 	Double Acting	Single rod (N)CQ2K	••••••••••	12, 16, 20, 25 32, 40, 50, 63	ø12, ø16/5-30 ø20, ø25/5-50 ø32, ø40/5-100 ø50, ø63/10-100	60
		Double rod CQ2KW	••••••••••	12, 16, 20, 25 32, 40, 50, 63	ø12, ø16/5-30 ø20-ø40/5-50 ø50, ø63/10-50	74
Large Bore Size 	Double Acting	Single rod CQ2	••••••••••	125, 140, 160	10~300	84
		Double rod CQ2W	••••••••••	125, 140, 160	10~300	88
Long Stroke 	Double Acting	Single rod CQ2	••••••••••	32, 40, 50 63, 80, 100	125~300	92

W/ one touch fitting (bore size ø22-ø63)
 Foot / flange mounting
 Clevis mounting
 Copper free
 Air-Hydro (Bore size ø20-ø100)
 Clean Room Series (Bore size ø12-ø63)

Applicable Auto Switch

Reed switch	D-A7•A8, D-A73C•A80C D-A7□H•A80H, D-A79W
Solid State	D-F7□•J79, D-F7□V, D-J79C, D-F7□W•J79W, D-F7□WV, D-F7BAL, D-F7□F, D-F7NTL

Made To Order

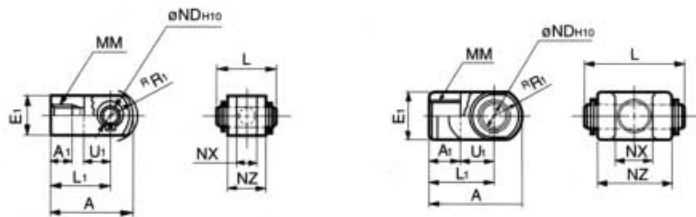
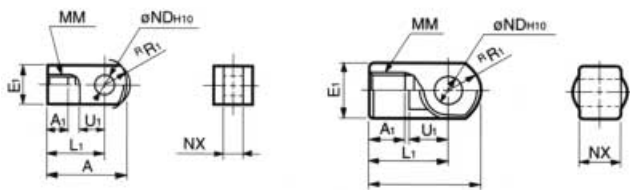
CQ2 Series made to order spec: see p. 98

Switch specifications see pg. 13

Accessories

SINGLE ROD CLEVIS (ROD EYE)

DOUBLE ROD CLEVIS (ROD EYE)



CQ2 - Single Rod Clevis

mm

Part Number	Applicable bore size	A	A ₁	E ₁	L ₁	MM	^R R ₁	U ₁	ND _{H10}	NX
I-G012	12	21.5	6	□10	16	M5x0.8	6.3	7	5 ^{+0.048} ₀	5 ^{-0.2} _{-0.4}
I-Z015	16	32	8	□12	25	M6x1	8.1	14	5 ^{+0.048} ₀	6.4 ^{-0.1} _{-0.3}
I-G02	20	34	8.5	□16	25	M8x1.25	10.3	11.5	8 ^{+0.058} ₀	8 ^{-0.2} _{-0.4}
I-G03	25	41	10.5	□20	30	M10x1.25	12.8	14	10 ^{+0.058} ₀	10 ^{-0.2} _{-0.4}
I-G04	32,40	42	14	∅22	30	M14x1.5	12	14	10 ^{+0.058} ₀	18 ^{-0.3} _{-0.5}
I-G05	50,63	56	18	∅28	40	M18x1.5	16	20	14 ^{+0.070} ₀	22 ^{-0.3} _{-0.5}
I-G08	80	71	21	∅38	50	M22x1.5	21	27	18 ^{+0.070} ₀	28 ^{-0.3} _{-0.5}
I-G10	100	79	21	∅44	55	M26x1.5	24	31	22 ^{+0.084} ₀	32 ^{-0.3} _{-0.5}

CQ2 - Double Rod Clevis

mm

Part Number	Applicable bore size	A	A ₁	E ₁	L ₁	MM	^R R ₁	U ₁	ND _{H10}	NX	NZ	L	PIN PART NO.
Y-G012	12	21.5	6	□10	16	M5x0.8	6.3	7	5 ^{+0.048} ₀	5 ^{-0.2} _{-0.4}	10	14.6	IY-G012
Y-Z015A	16	28	11	□12	21	M6x1	8.1	10	5 ^{+0.048} ₀	6.5 ^{-0.2} ₀	12	16.6	IY-J015
Y-G02	20	34	8.5	□16	25	M8x1.25	10.3	11.5	8 ^{+0.058} ₀	8 ^{-0.2} _{-0.4}	16	21	IY-G02
Y-G03	25	41	10.5	□20	30	M10x1.25	12.8	14	10 ^{+0.058} ₀	10 ^{-0.2} _{-0.4}	20	25.6	IY-G03
Y-G04	32,40	42	16	∅22	30	M14x1.5	12	14	10 ^{+0.058} ₀	18 ^{-0.3} _{-0.5}	36	41.6	IY-G04
Y-G05	50,63	56	20	∅28	40	M18x1.5	16	20	14 ^{+0.070} ₀	22 ^{-0.3} _{-0.5}	44	50.6	IY-G05
Y-G08	80	71	23	∅38	50	M22x1.5	21	27	18 ^{+0.070} ₀	28 ^{-0.3} _{-0.5}	56	64	IY-G08
Y-G10	100	79	24	∅44	55	M26x1.5	24	31	22 ^{+0.084} ₀	32 ^{-0.3} _{-0.5}	64	72	IY-G10

Clevis, Pin and Snap Ring are in the package

NCQ2 - Single Rod Clevis

mm

Part Number	Applicable bore size	A	A ₁	E ₁	L ₁	MM	^R R ₁	U ₁	ND _{H10} Inch	NX
RCS-01	12	21.5	6	□10	16	#8-32UNC	6.3	7	3/16 ^{+0.002} ₀	5 ^{-0.2} _{-0.4}
RCS-015	16	32	6	□12	25	#8-32UNC	12	14	3/16 ^{+0.002} ₀	6.4 ^{-0.1} _{-0.3}
RCS-02	20	34	6	□16	25	#10-32UNF	10.3	11.5	5/16 ^{+0.002} ₀	8 ^{-0.2} _{-0.4}
RCS-025	25	41	8	□20	30	1/4-28UNF	18	14	3/8 ^{+0.002} ₀	10 ^{-0.2} _{-0.4}
RCS-03	32	42	16	∅22	30	5/16-24UNF	12	14	3/8 ^{+0.002} ₀	18 ^{-0.3} _{-0.5}
RCS-04	40	42	11	∅22	30	3/8-24UNF	12	14	3/8 ^{+0.002} ₀	18 ^{-0.3} _{-0.5}
RCS-05	50, 63	56	18	∅28	40	1/2-20UNF	16	20	1/2 ^{+0.003} ₀	22 ^{-0.3} _{-0.5}
RCS-08	80	71	21	∅38	50	5/8-18UNF	21	27	3/4 ^{+0.003} ₀	28 ^{-0.3} _{-0.5}
RCS-10	100	79	21	∅44	55	3/4-16UNF	24	31	7/8 ^{+0.003} ₀	32 ^{-0.3} _{-0.5}

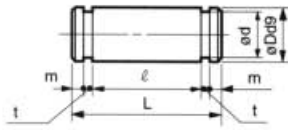
Clevis Pin and Retaining Rings not included, see RCSK "xx" on page 7

NCQ2 - Double Rod Clevis

mm

Part Number	Applicable bore size	A	A ₁	E ₁	L ₁	MM	^R R ₁	U ₁	ND _{H10} Inch	NX	NZ	L
RCD-01	12	21.5	6	□10	16	#8-32UNC	6.3	7	3/16 ^{+0.002} ₀	5 ^{-0.2} _{-0.4}	10	14
RCD-015	16	28	6	□12	21	#8-32UNC	12	10	3/16 ^{+0.002} ₀	6.5 ^{+0.2} _{+0.1}	12	16
RCD-02	20	34	6	□16	25	#10-32UNF	10.3	11.5	5/16 ^{+0.002} ₀	8 ^{-0.2} _{-0.4}	16	21
RCD-025	25	41	8	□20	30	1/4-28UNF	18	14	3/8 ^{+0.002} ₀	10 ^{-0.2} _{-0.4}	20	25
RCD-03	32	42	16	∅22	30	5/16-24UNF	12	14	3/8 ^{+0.002} ₀	18 ^{+0.5} _{+0.3}	36	41
RCD-04	40	42	16	∅22	30	3/8-24UNF	12	14	3/8 ^{+0.002} ₀	18 ^{+0.5} _{+0.3}	36	41
RCD-05	50,63	56	20	∅28	40	1/2-20UNF	16	20	1/2 ^{+0.003} ₀	22 ^{+0.5} _{+0.3}	44	50
RCD-08	80	71	23	∅38	50	5/8-18UNF	21	27	3/4 ^{+0.003} ₀	28 ^{+0.5} _{+0.3}	56	64
RCD-10	100	79	24	∅44	55	3/4-16UNF	24	31	7/8 ^{+0.003} ₀	32 ^{+0.5} _{+0.3}	64	72

Clevis Pin and Retaining Rings not included, see RCSK "xx" on page 7



CQ2 - Double Rod Clevis Pin

mm

Part Number	Applicable bore size	Dd9	L	d	ℓ	m	t	Snap ring
IY-G012	12	5 ^{-0.030} / _{-0.060}	14.6	4.8	10.2	1.5	0.7	Axial C style 5
IY-J015	16	5 ^{-0.030} / _{-0.060}	16.6	4.8	12.2	1.5	0.7	Axial C style 5
IY-G02	20	8 ^{-0.040} / _{-0.076}	21	7.6	16.2	1.5	0.9	Axial C style 8
IY-G03	25	10 ^{-0.040} / _{-0.076}	25.6	9.6	20.2	1.55	1.15	Axial C style 10
IY-G04	32, 40	10 ^{-0.040} / _{-0.076}	41.6	9.6	36.2	1.55	1.15	Axial C style 10
IY-G05	50, 63	14 ^{-0.050} / _{-0.093}	50.6	13.4	44.2	2.05	1.15	Axial C style 14
IY-G08	80	18 ^{-0.050} / _{-0.093}	64	17	56.2	2.55	1.35	Axial C style 18
IY-G10	100	22 ^{-0.065} / _{-0.117}	72	21	64.2	2.55	1.35	Axial C style 22

NCQ2 - Double Rod Clevis Pin

mm

Part Number	Applicable bore size	D	L	d	ℓ	m	t
PS-01	12	4.77 ^{-0.03} / _{-0.06}	14	4.45	10.2	1.44	0.46
PS-015	16	4.77 ^{-0.03} / _{-0.06}	16	4.45	12.2	1.44	0.46
PS-02	20	7.94 ^{-0.040} / _{-0.076}	21	7.37	16.2	1.66	0.74
PS-025	25	9.53 ^{-0.046} / _{-0.076}	25	8.94	20.2	1.66	0.74
PS-03	32, 40	9.53 ^{-0.040} / _{-0.076}	41	8.94	36.2	1.66	0.74
PS-05	50, 63	12.7 ^{-0.05} / _{-0.076}	50	11.89	44.2	1.9	1.0
PS-08	80	19.05 ^{-0.065} / _{-0.117}	64	17.89	56.2	2.73	1.17
PS-10	100	22.23 ^{-0.065} / _{-0.117}	72	20.85	64.2	2.73	1.17

Kits

NCQ2 Double Rod Clevis

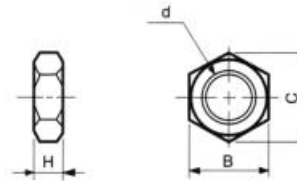
Kit Part Number	Applicable bore size	Includes		
		Clevis (1)	Pin (1)	Retaining Rings (2)
RCDK-01	12	RCD-01	PS-01	PC-01
RCDK-015	16	RCD-015	PS-015	PC-01
RCDK-02	20	RCD-02	PS-02	PC-02
RCDK-025	25	RCD-025	PS-025	PC-03
RCDK-03	32	RCD-03	PS-03	PC-03
RCDK-04	40	RCD-04	PS-04	PC-03
RCDK-05	50,63	RCD-05	PS-05	PC-05
RCDK-08	80	RCD-08	PS-08	PC-08
RCDK-10	100	RCD-10	PS-10	PC-10

NCQ2 Single Rod Clevis (Rod Eye)

Kit Part Number	Applicable bore size	Includes		
		Clevis (1)	Pin (1)	Retaining Rings (2)
RCSK-01	12	RCS-01	PS-01	PC-01
RCSK-015	16	RCS-015	PS-015	PC-01
RCSK-02	20	RCS-02	PS-02	PC-02
RCDK-025	25	RCS-025	PS-025	PC-03
RCSK-03	32	RCS-03	PS-03	PC-03
RCSK-04	40	RCS-04	PS-03	PC-03
RCSK-05	50,63	RCS-05	PS-05	PC-05
RCSK-08	80	RCS-08	PS-08	PC-08
RCSK-10	100	RCS-10	PS-10	PC-10

NCQ2 Rod Clevis Pin

Kit Part Number	Applicable bore size	Includes	
		Pin (1)	Retaining Rings (2)
PRA-01	12	PS-01	PC-01
PRA-015	16	PS-015	PC-01
PRA-02	20	PS-02	PC-02
PRA-025	25	PS-025	PC-03
PRA-03	32,40	PS-03	PC-03
PRA-05	50, 63	PS-05	PC-05
PRA-08	80	PS-08	PC-08
PRA-10	100	PS-10	PC-10



CQ2 - Jam Nut

mm

Part Number	Applicable bore size	d	H	B	C
NTJ-015A	12	M5x0.8	4	8	9.2
NT-015A	16	M6x1	5	10	11.5
NT-02	20	M8x1.25	5	13	15.0
NT-03	25	M10x1.25	6	17	19.6
NT-04	32, 40	M14x1.5	8	22	25.4
NT-05	50, 63	M18x1.5	11	27	31.2
NT-08	80	M22x1.5	13	32	37.0
NT-10	100	M26x1.5	16	41	47.3
NT-12	125,140	M30x1.5	18	46	53.1
NT-16	160	M36x1.5	21	55	63.5

NCQ2 - Jam Nut

mm

Model	Applicable bore size	d	H	B	C
JM-01	12, 16	8-32 UNC	3.3	8.7	10
JM-02	20	10-32 UNF	3.3	9.5	11
JM-025	25	1/4-28 UNF	4.1	11.2	13
JM-03	32	5/16-24 UNF	4.8	12.7	14.7
JM-04	40	3/8-24 UNF	5.6	14.3	16.5
JM-05	50, 63	1/2-20 UNF	7.9	19.1	22
JM-08	80	5/8-18 UNF	9.7	23.8	27.4
JM-10	100	3/4-16 UNF	10.7	28.7	33

NOTE: Jam Nut Included when option "M" is ordered



Compact Cylinder: Standard/ Single Acting Single Rod NCQ2 / CQ2 Series

ø12, ø16, ø20, ø25, ø32, ø40, ø50

How To Order

W/ Auto Switch NCQ2 **B 20 F 10 S M**

W/ Auto Switch NCDQ2 **B 20 F 10 S M A73 S**

Mounting

B	Through hole	F	Rod side flange
A	Both ends tapped	G	Head side flange
L	Foot	D	Double Clevis

Bore Size

12	12mm (1/2" Nom.)	32	32mm (1-1/4" Nom.)
16	16mm (5/8" Nom.)	40	40mm (1-1/2" Nom.)
20	20mm (3/4" Nom.)	50	50mm (2" Nom.)
25	25mm (1" Nom.)		

Piping

-	Threaded ports
F	See note 2) Built-in one-touch fitting

Note 2) Available built-in one touch fitting bore size: ø32-ø50.

Cylinder Stroke (mm)
Please refer to p.39 for standard strokes

Action

S	Spring return
T	Spring extended

Auto Switch Specifications

Type	Autoswitch		Indicator light	Wire (Output type)	Load Voltage	
	Perpendicular entry	In-line entry			DC	AC
Reed switch	—	A76H	Yes	3 Wire	—	5V
	A72	A72H			—	200V
	A73	A73H			—	12V
	A80	A80H	No	2 Wire	24V	5V, 12V
	A73C	—	No			12V
	A80C	—	No			5V, 12V
	A79W	—	Yes			—
Solid State Switch	F7NV	F79	Yes	3 Wire NPN	24V	5V, 12V
	F7PV	F7P		3 Wire PNP		12V
	F7BV	J79		2 Wire	12V	
	J79C	—		3 Wire NPN	24V	5V, 12V
	F7NWV	F79W				
	—	F7PW				
	F7BWV	J79W		2 Wire	12V	
	—	F7BAL		3 Wire NPN	24V	5V, 12V
	—	F7NTL				
	—	F79F				
	—	F7LF				

Auto Switch

-	2 pcs.
S	1 pcs.
n	n pcs.

Auto Switch Capability

-	Without Auto Switch
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Preferred Option Program

Mounting Kits

Bore Size (mm)	Note 4) Foot	Flange	Note 6) Double clevis
12	(N)CQ-L012	(N)CQ-F012	(N)CQ-D012
16	(N)CQ-L016	(N)CQ-F016	(N)CQ-D016
20	(N)CQ-L020	(N)CQ-F020	(N)CQ-D020
25	(N)CQ-L025	(N)CQ-F025	(N)CQ-D025
32	(N)CQ-L032	(N)CQ-F032	(N)CQ-D032
40	(N)CQ-L040	(N)CQ-F040	(N)CQ-D040
50	(N)CQ-L050	(N)CQ-F050	(N)CQ-D050
63	(N)CQ-L063	(N)CQ-F063	(N)CQ-D063
80	(N)CQ-L080	(N)CQ-F080	(N)CQ-D080
100	(N)CQ-L100	(N)CQ-F100	(N)CQ-D100

Note 4) If foot bracket is required for a cylinder, order a pair

Note 5) Each bracket comes with the following accessories:
Foot / Flange; Body mounting bolt
Double clevis; Clevis pin, Axis C style snap ring,
Body mounting bolt

Note 6) The double-clevis is packaged with clevis pin and snap ring.

• Load length 0.5m.....Std. Connector A80C 5m.....Z Connector A80CZ
3m.....L A80CL No lead.....N A80CN

Body Option

-	Std. (Female thread)
M	Male thread
F	Head end boss

* Body option combination is available such as FM.

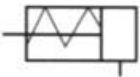


Compact Cylinder: Standard /
Single Acting Single Rod

(N)CQ2 Series



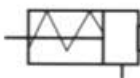
Single Acting/
Spring Return



Single Acting/
Spring Extend



Head end boss



Cautions

- ❶ When mounting, completely flush piping and be careful that dust and chips do not enter the cylinder.
- ❷ • The Piston rod load should always be aligned with the cylinder axis.
 - Cylinder installation requires accurate alignment.
 - When used as a stopper, avoid side loading of the piston rod.
- ❸ Prevent damage to the piston rod. A damaged piston rod will lead to damage of the rod seal and result in leakage.

Model

Bore Size		12	16	20	25	32	40	50	
Air-Pressure Type	Mounting	Through hole (std)	●	●	●	●	●	●	
		Both ends tapped	●	●	●	●	●	●	
	Built-In Magnet		●	●	●	●	●	●	
	Piping Method	Threaded PT on NPT	M5x 0.8	M5x 0.8	M5x 0.8	M5x 0.8	Note 1 M5x 0.8 1/8	1/8	1/4
		Built-In One Touch Fitting	-	-	-	-	Note 2 6/4	6/4	8/6
	Rod End Male Thread		●	●	●	●	●	●	●
W/Head End boss		●	●	●	●	●	●	●	

Note 1) In cases without autoswitch, only 5 stroke uses M5x0.8

Note 2) In case of built-in fitting, the external tube dimension for ø 32, 5 stroke and 10 stroke are the same.

Standard Specifications

Model	Air Pressure (Non-Lube)
Media	Air
Proof Pressure	217psi (15.3kgf/cm ²)
Max. Operating Pressure	145psi (10.2kgf/cm ²)
Ambient and Media temp.	15~160°F (-10°C~+70°C) (At freezing temp. air must be dry)
Rubber cushion	None
Rod end thread	Female Thread (std.)
Rod end thread tolerance	JIS Class II
Stroke Length tolerance	+1.0 0 mm
Mounting	Through hole (std.)
Piston Speed	2~20in/s (50~500mm/s)

Theoretical Output Force lbs.

Type	Bore size (mm)	Operating Pressure (psi)		
		43	72	100
Extend	12	4.7	9.9	14.8
	16	10.1	19.3	28.3
	20	17.8	31.9	46.1
	25	28.3	50.4	72.6
	32	47.4	83.6	119.8
	40	76.0	132.4	189.1
	50	120.3	208.6	295.8
Retract	12	3.1	7.0	10.8
	16	5.4	12.1	19.1
	20	16.0	26.5	37.1
	25	25.4	42.5	59.3
	32	40.7	67.9	94.9
	40	71.3	118.7	166.1
	50	111.3	185.5	258.5

Spring Force lbs.

Type	Bore size (mm)	Spring Force	
		Comp.	Rest
Spring Return	12	2.9	0.9
	16	3.4	1.3
	20	3.4	1.3
	25	4.7	2.5
	32	6.7	3.6
	40	8.8	4.7
	50	12.1	5.6
Spring Extend	12	2.5	5.6
	16	4.7	0.6
	20	6.1	1.2
	25	6.5	2.2
	32	6.5	4.5
	40	6.5	4.5
	50	18.7	5.6

Standard Stroke

Bore size	Stroke
12, 16, 20	5, 10
25, 32, 40	
50	10, 20

Min. Operating Pressure

Bore size	Single Acting (extend, retract) ^{psi}
12	36
16	36
20	26
25	26
32	25

Compact Cylinder: Standard / Single Acting Single Rod

Weight Adder

lbs.

Bore size	12	16	20	25	32	40	50
Both ends tapped	0.004	0.004	0.013	0.013	0.013	0.013	0.013
Rod end M thread	Thread	0.003	0.007	0.013	0.026	0.057	0.117
	Nut	0.002	0.004	0.009	0.018	0.037	0.071
Head end boss	0.002	0.003	0.004	0.007	0.011	0.015	0.029
W/ one touch fitting	-	-	-	-	0.013	0.013	0.023
Foot mounting	0.121	0.148	0.362	0.410	0.315	0.342	0.536
Rod side flange	0.126	0.152	0.306	0.355	0.397	0.472	0.822
Head side flange	0.119	0.143	0.293	0.335	0.364	0.437	0.767
Double rear clevis	0.071	0.086	0.194	0.271	0.333	0.432	0.867

Weight/Single Acting: Single Rod

lbs.

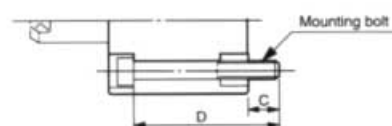
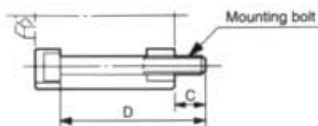
Type	Bore size (mm)	Stroke		
		5	10	20
Spring Extend	12	0.06	0.08	-
	16	0.09	0.11	-
	20	0.14	0.17	-
	25	0.19	0.22	-
	32	0.29	0.34	-
	40	0.45	0.50	-
Spring Retract	50	-	0.81	0.97
	12	0.06	0.08	-
	16	0.09	0.11	-
	20	0.15	0.17	-
	25	0.20	0.23	-
	32	0.31	0.35	-
40	0.48	0.52	-	
50	-	0.88	1.01	

How to obtain the total weight (lbs) (N)CQ2D32-10SM

Std wt.:	(N)CQ2B32-20S	0.34
Wt. adder:	Both ends tapped	0.013
	Male rod end	0.057
	Double rear clevis	0.333
	Total	0.743

Mounting Bolt For (N)CQ2

Special long mounting bolt for through hole mounting is available as an option.
How to Order:
Specify the required bolts
Example) Bolt M3x25L 4pcs.



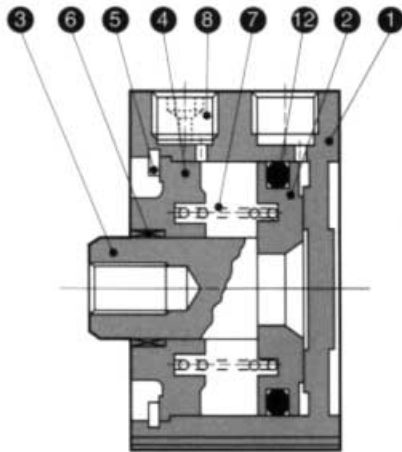
Thread	Pitch
M3	0.5
M5	0.8
M6	1.0
M8	1.25
M10	1.5

Model	C	D	Mounting bolt
(N)CQ2B12-5S	6.5	25	M3x25L
-10S		30	x30L
(N)CQ2B16-5S	5	25	M3x25L
-10S		30	x30L
(N)CQ2B20-5S	7.5	25	M5x25L
-10S		30	x30L
(N)CQ2B25-5S	9.5	30	M5x30L
-10S		35	x35L
(N)CQ2B32-5S	9	30	M5x30L
-10S		35	x35L
(N)CQ2B40-5S	7.5	35	M5x35L
-10S		40	x40L
(N)CQ2B50-10S	12.5	45	M6x45L
-20S		55	x55L

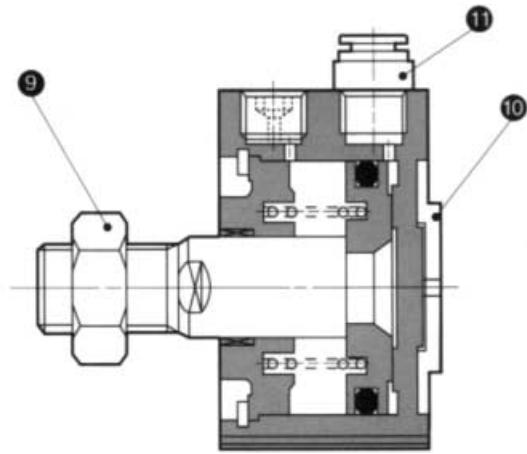
Model	C	D	Mounting bolt
(N)CQ2B12-5T	6.5	25	M3x25L
-10T		30	x30L
(N)CQ2B16-5T	5	25	M3x25L
-10T		30	x30L
(N)CQ2B20-5T	7.5	25	M5x25L
-10T		30	x30L
(N)CQ2B25-5T	9.5	30	M5x30L
-10T		35	x35L
(N)CQ2B32-5T	9	30	M5x30L
-10T		35	x35L
(N)CQ2B40-5T	7.5	35	M5x35L
-10T		40	x40L
(N)CQ2B50-10T	12.5	45	M6x45L
-20T		55	x55L

Series (N)CQ2
Compact Cylinder: Standard / Single Acting Single Rod

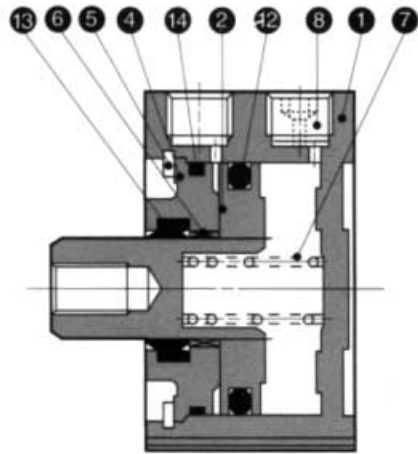
Construction / Part List



Spring Return



One Touch Fitting
End Boss
Rod End Nut



Spring Extend

Parts List

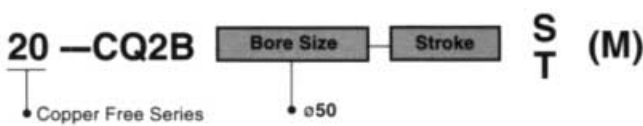
No.	Description	Material	Remarks
1	Cylinder tube	Aluminum alloy	Hard anodized
2	*Piston	Aluminum alloy	Chromate
3	Piston rod	Stainless steel	Bore $\phi 12-\phi 25$
		Carbon steel	Bore $\phi 32-\phi 50$, hard chrome plated
4	Collar	Bearing grade aluminum	Bore $\phi 12-\phi 40$, Black anodized
		Aluminum alloy casting	Bore $\phi 50$, Black paint
5	Retaining ring	Carbon tool steel	Phosphate coating
6	Bushing	Leaded tin bronze casting	Used for only $\phi 50$
7	Return spring	Piano wire	Zinc chromate
8	Plug	Steel alloy	Black zinc chromate
9	Rod end nut	Carbon steel	Nickel plated
10	End boss	Aluminum alloy	$\phi 20-\phi 50$ Anodized
11	One touch fittings	-	Bore $\phi 32-\phi 50$
14	Piston gasket	NBR	-

* The Piston and Piston rod (T type) is one piece construction made of stainless steel

Seals List

No.	Description	Material	Parts No.						
			$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$
12	Piston seal	NBR	NLP-12-7L	NLP-16L	NLP-20L	NLP-25L	NLP-32L	NLP-40L	NLP-50L
13	Rod seal	NBR	DYR-6K	DYR-8K	DYR-10SK	DYR-12	DYR-16	DYR-16Z	DYR-20Z
14	Gasket	NBR	SO-013-6	C14	C18	C22	C29	C36	C46

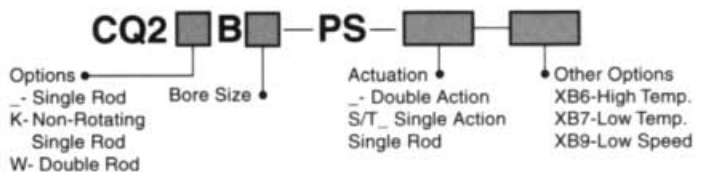
Copper Free Series Air Cylinder (CQ2 only)



To protect against adverse effects on the cathode ray tubes due to copper ion and fluorine contained in resin, the copper free series uses electroless nickel plated material, no copper is exposed allowing the generation of copper ions.

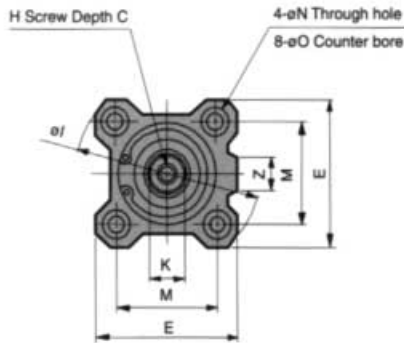
Note) Available as Standard Copper Free: $\phi 12-\phi 40$

Seal Kit Part Numbers

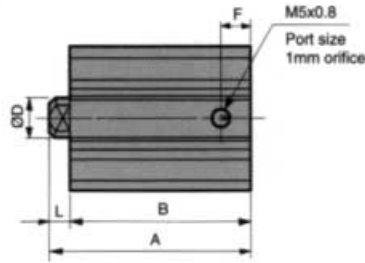
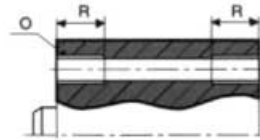


Bore Size $\phi 12 \sim \phi 25$ Spring Return

Through Hole / (N)CQ2B



Both Ends Tapped

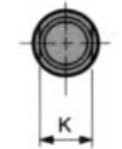
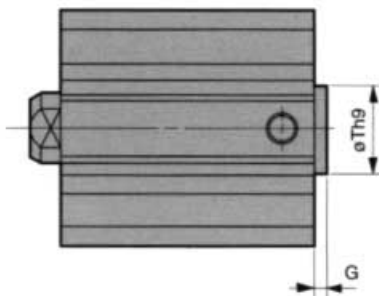


(N)CQ2A Both Ends Tapped

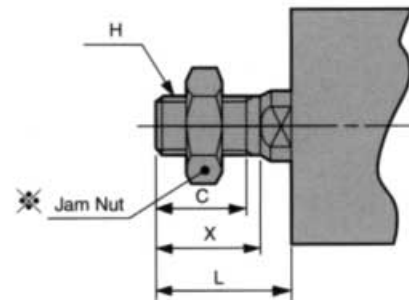
Bore size	CQ2 O	NCQ2 inch O	R
12	M4x0.7	8-32 UNC	7
16	M4x0.7	8-32 UNC	7
20	M6x1.0	1/4 - 20 UNC	10
25	M6x1.0	1/4 - 20 UNC	10

Standard / Spring Return (S)

Bore size	Stroke	A		B		CQ2 C	NCQ2 C	D	E	F	CQ2 H	NCQ2 inch H	I	K	L	M	N	O	Z
		5st	10st	5st	10st														
12	5, 10	25.5	30.5	22	27	6	5.4	6	25	5	M3x0.5	#8-32	32	5	3.5	15.5	3.5	6.5 depth 3.5	-
16	5, 10	27	32	23.5	28.5	8	5.4	8	29	5.5	M4x0.7	#8-32	38	6	3.5	20	3.5	6.5 depth 3.5	10
20	5, 10	29	34	24.5	29.5	7	7	10	36	5.5	M5x0.8	#10-32	47	8	4.5	25.5	5.5	9 depth 7	10
25	5, 10	32.5	37.5	27.5	32.5	12	10	12	40	5.5	M6x1.0	1/4-28 UNF	52	10	5	28	5.5	9 depth 7	10



Piston Rod



End Boss (CQ2) mm

Bore size	G	Th9
12	1.5	15 $\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$
16	1.5	20 $\begin{smallmatrix} 0 \\ -0.052 \end{smallmatrix}$
20	2	13 $\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$
25	2	15 $\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$

NCQ2 Male Rod End mm

Bore size	X	H inch	L	K
12	8	#8-32UNC	11.5	5
16	8	#8-32UNC	11.5	6
20	8	#10-32UNF	12.5	8
25	9.5	1/4-28UNF	14.5	10

CQ2 Male Rod End mm

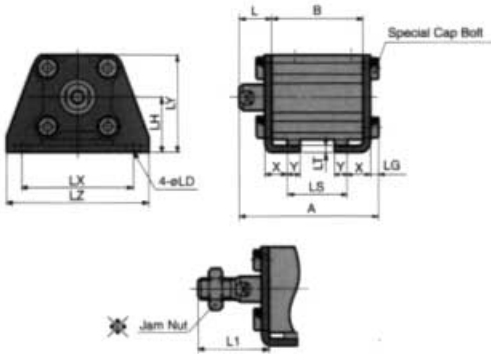
Bore size	C	X	H	L	K
12	9	10.5	M5x0.8	14	5
16	10	12	M6x1.0	15.5	6
20	12	14	M8x1.25	18.5	8
25	15	17.5	M10x1.25	22.5	10

Note 1) Rod side End Boss is offered as an option.
(Add - XC36 at the end of part no.)

⊗ Rod end nut and accessories detail: see p. 6.
"C" dim. not applicable

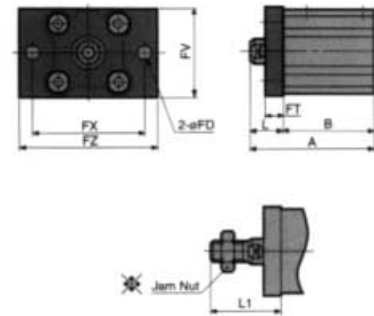
Compact Cylinder: Standard / Single Acting Single Rod (S)

Foot / (N)CQ2L



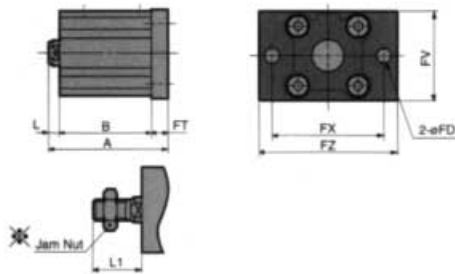
Bore size	Stroke	A		B		L	CQ2 L1	NCQ2 L1	LD	LG	LH	LS	
		5st	10st	5st	10st							5st	10st
12	5, 10	40.3	45.3	22	27	13.5	24	21.5	4.5	2.8	17	10	15
16	5, 10	41.8	46.8	23.5	28.5	13.5	25.5	21.5	4.5	2.8	19	11.5	16.5
20	5, 10	46.2	51.2	24.5	29.5	14.5	28.5	22.5	6.6	4	24	12.5	17.5
25	5, 10	49.7	54.7	27.5	32.5	15	32.5	24.5	6.6	4	26	12.5	17.5

Bore size	Stroke	LT	LX	LY	LZ	X	Y
12	5, 10	2	34	29.5	44	8	4.5
16	5, 10	2	38	33.5	48	8	5
20	5, 10	3.2	48	42	62	9.2	5.8
25	5, 10	3.2	52	46	66	10.7	5.8



Rod Side Flange / (N)CQ2F

Bore size (mm)	Stroke (mm)	A		B		FD	FT	FV	FX	FZ	L	CQ2 L1	NCQ2 L1
		5st	10st	5st	10st								
12	5, 10	35.5	40.5	22	27	4.5	5.5	25	45	55	13.5	24	21.5
16	5, 10	37	42	23.5	28.5	4.5	5.5	30	45	55	13.5	25.5	21.5
20	5, 10	39	44	24.5	29.5	6.6	8	39	48	60	14.5	28.5	22.5
25	5, 10	42.5	47.5	27.5	32.5	6.6	8	42	52	64	15	32.5	24.5

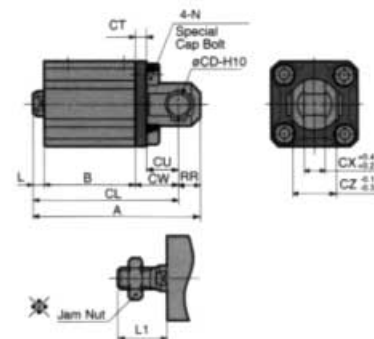


Head Side Flange / (N)CQ2G mm

Bore size (mm)	Stroke range (mm)	A		L	CQ2 L1	NCQ2 L1
		5st	10st			
12	5, 10	31	36	3.5	14	11.5
16	5, 10	32.5	37.5	3.5	15.5	11.5
20	5, 10	37	42	4.5	18.5	12.5
25	5, 10	40.5	45.5	5	22.5	14.5

*Dimensions for the head flange cylinder are the same as rod flange except A, L, L1.

Double Clevis / (N)CQ2D

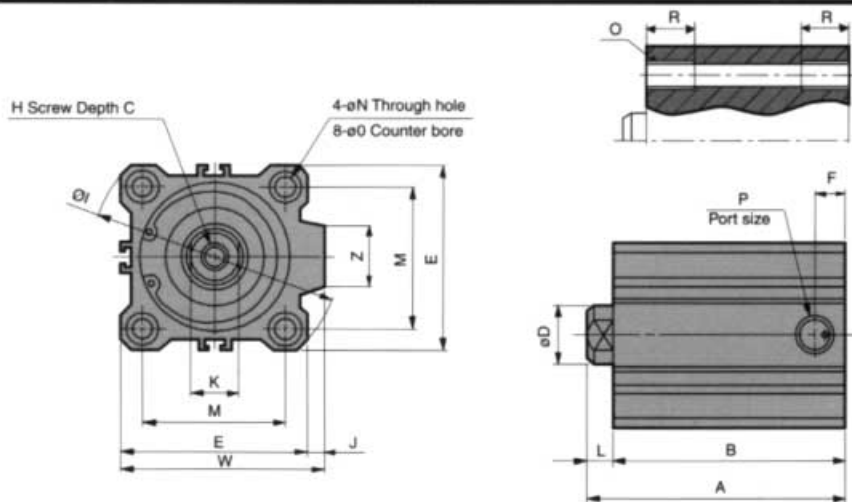


Bore size	Stroke	A		B		CQ2 CD	NCQ2 Inch CD	CL		CT	CU	CW	CX	CZ	L
		5st	10st	5st	10st										
12	5, 10	45.5	50.5	22	27	5	3/16	39.5	44.5	4	7	14	5	10	3.5
16	5, 10	48	53	23.5	28.5	5	3/16	42	47	4	10	15	6.5	12	3.5
20	5, 10	56	61	24.5	29.5	8	5/16	47	52	5	12	18	8	16	4.5
25	5, 10	62.5	67.5	27.5	32.5	10	3/8	52.5	57.5	5	14	20	10	20	5

Bore size	Stroke	CQ2 L1	NCQ2 L1	CQ2 N	NCQ2 N	NCQ2 Inch CD	RR
12	5, 10	14	11.5	M4x0.7	8-32	8-32	6
16	5, 10	15.5	11.5	M4x0.7	8-32	8-32	6
20	5, 10	18.5	12.5	M6x1.0	1/4-20	1/4-20	9
25	5, 10	22.5	14.5	M6x1.0	1/4-20	1/4-20	10

* Rod end nut and accessories detail: see p. 6.
 ** Clevis pin and snap rings are included in the package.

Bore Size $\phi 32 \sim \phi 50$ Spring Return



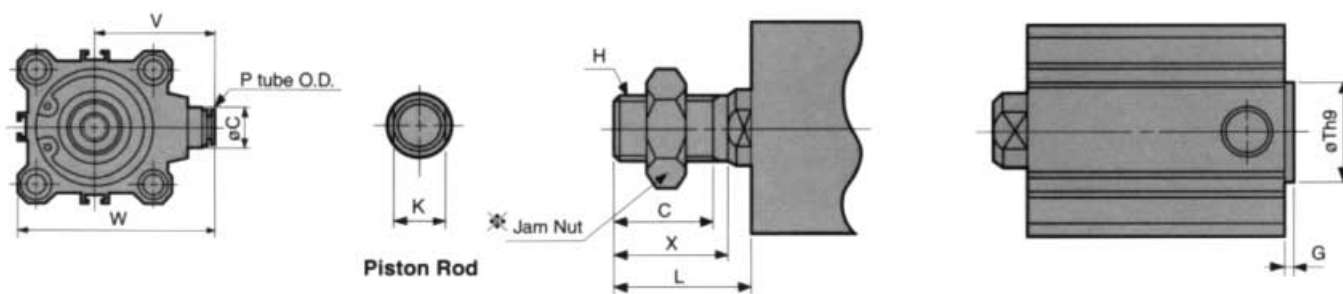
(N)CQ2A Both Ends Tapped

Bore size	CQ2 O	NCO2 inch O	R
32	M6x1.0	1/4 20 UNC	10
40	M6x1.0	1/4 - 20 UNC	10
50	M8x1.25	5/16 - 18 UNC	14

Standard / Spring Return(s)

Bore size	Stroke	A			B			CQ2 C	NCO2 C	D	E	F			CQ2 H	NCO2 Inch H	I	J	K
		5st	10st	20st	5st	10st	20st					5st	10st	20st					
32	5, 10	35	40	-	28	33	-	13	13.3	16	45	5.5	7.5	-	M8x1.25	5/16-24UNF	60	4.5	14
40	5, 10	41.5	46.5	-	34.5	39.5	-	13	18.3	16	52	8	8	-	M8x1.25	3/8-24UNF	69	5	14
50	10, 20	-	48.5	58.5	-	40.5	50.5	15	17.6	20	64	-	10.5	10.5	M10x1.5	1/2-20UNF	86	7	17

Bore size	Stroke	L	M	N	O	P			Orifice	W	Z
						5st	10st	20st			
32	5, 10	7	34	5.5	9depth7	M5x0.8	1/8	-	1.7	49.5	14
40	5, 10	7	40	5.5	9depth7	1/8	-	2	57	14	
50	10, 20	8	50	6.6	11depth8	-	1/4	2.2	71	19	



One Touch Fittings mm

Bore size	C	P	V	W
32	13	6	38	60.5
40	13	6	42	68
50	16	8	50	82

NCO2 Male Rod End mm

Bore size	X	H Inch	L	K
32	12.7	5/16-24UNF	19.7	14
40	16	3/8-24UNF	23	14
50	19.5	1/2-20UNF	27.5	17

CQ2 Male Rod End mm

Bore size	C	X	H	L	K
32	20.5	23.5	M14x1.5	28.5	14
40	20.5	23.5	M14x1.5	28.5	14
50	26	28.5	M18x1.5	33.5	17

End Boss (CQ2 only) mm

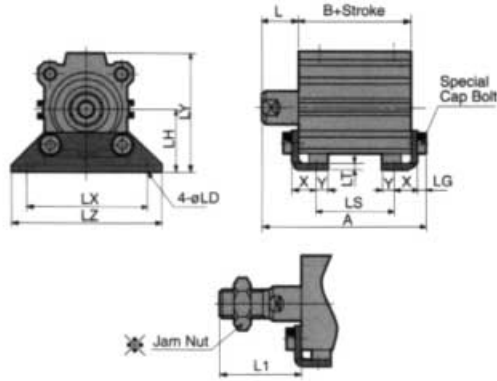
Bore size	G	Th9
32	2	21 $\phi_{.052}$
40	2	28 $\phi_{.052}$
50	2	35 $\phi_{.062}$

"C" dim. not applicable

*Rod end nut and accessories are detailed on p. 6.

Note) With rod end inlets an option.
(Add - XC36 at the end of part no.)

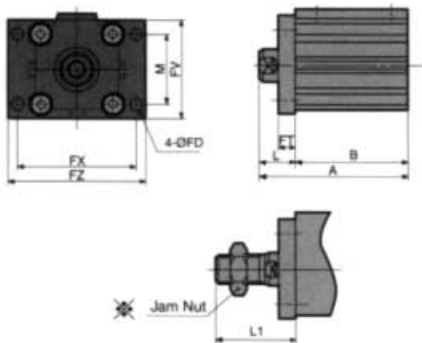
Compact Cylinder: Standard / Single Acting Single Rod(s)



Foot / (N)CQ2L

mm

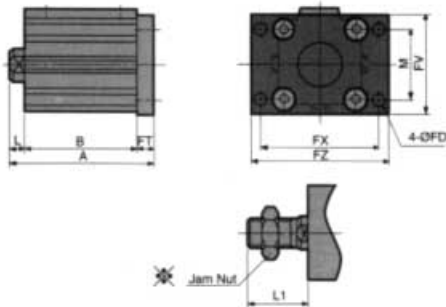
Bore size	Stroke	A			B			L	CQ2 L1	NCQ2 L1	LD	LG	LH	LS		
		5st	10st	20st	5st	10st	20st							5st	10st	20st
32	5, 10	52.2	57.2	-	28	33	-	17	38.5	29.7	6.6	4	30	12	17	-
40	5, 10	58.7	63.7	-	34.5	39.5	-	17	38.5	33	6.6	4	33	18.5	23.5	-
50	10, 20	-	66.7	76.7	-	40.5	50.5	18	43.5	37.5	9	5	39	-	17.5	27.5
Bore size	Stroke	LT	LX	LY	LZ	X	Y									
32	5, 10	3.2	57	57	71	11.2	5.8									
40	5, 10	3.2	64	64	78	11.2	7									
50	10, 20	3.2	79	78	95	14.7	8									



Rod Flange / (N)CQ2F

mm

Bore size	Stroke	A			B			FD	FT	FV	FX	FZ	L	CQ2 L1	NCQ2 L1	M
		5st	10st	20st	5st	10st	20st									
32	5, 10	45	50	-	28	33	-	5.5	8	48	56	65	17	38.5	29.7	34
40	5, 10	51.5	56.5	-	34.5	39.5	-	5.5	8	54	62	72	17	38.5	33	40
50	10, 20	-	58.5	68.5	-	40.5	50.5	6.6	9	67	76	89	18	43.5	37.5	50



Head Flange / (N)CQ2G

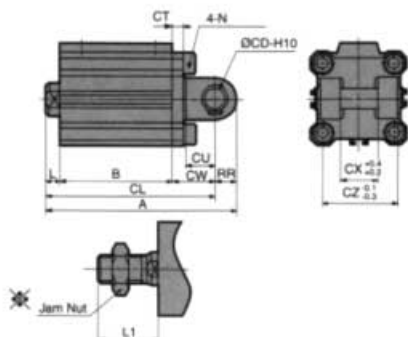
mm

Bore size	Stroke	A			L	CQ2 L1	NCQ2 L1
		5st	10st	20st			
32	5, 10	43	48	-	7	28.5	19.7
40	5, 10	49.5	54.5	-	7	28.5	23
50	10, 20	-	57.5	67.5	8	33.5	27.5

* Dimensions for the head flange cylinder are the same as rod flange except A, L, L1.

Double Clevis / (N)CQ2D

mm



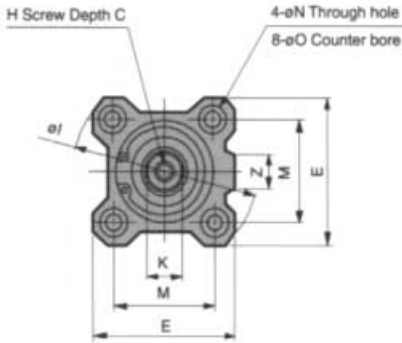
Bore size	Stroke	A			B			CQ2 CD	NCQ2 Inch CD	CL			CT	CU	CW	CX
		5st	10st	20st	5st	10st	20st			5st	10st	20st				
32	5, 10	65	70	-	28	33	-	10	3/8	55	60	-	5	14	20	18
40	5, 10	73.5	78.5	-	34.5	39.5	-	10	3/8	63.5	68.5	-	6	14	22	18
50	10, 20	-	90.5	100.5	-	40.5	50.5	14	1/2	-	76.5	86.5	7	20	28	22
Bore size	Stroke	CZ	CQ2 L	L1	NCQ2 L1	CQ2 N	NCQ2 Inch N	RR								
32	5, 10	36	7	28.5	19.7	M6x1.0	1/4-20	10								
40	5, 10	36	7	28.5	23	M6x1.0	1/4-20	10								
50	10, 20	44	8	33.5	27.5	M8x1.25	5/16-18	14								

* Rod end nut and accessories detail: see p. 6.

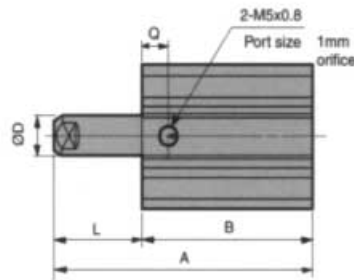
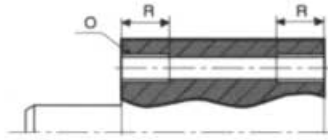
* Clevis pin and snapping are included in the package.

Bore Size $\phi 12 \sim \phi 25$ Spring Extended

Through Hole / (N)CQ2B



Both ends tapped



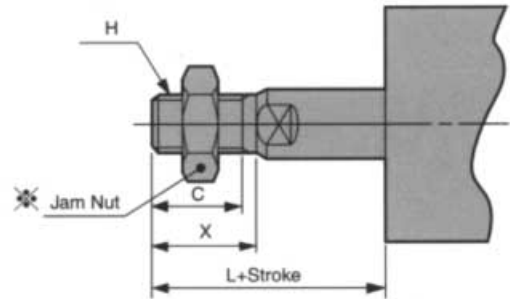
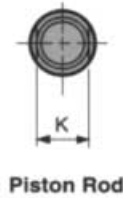
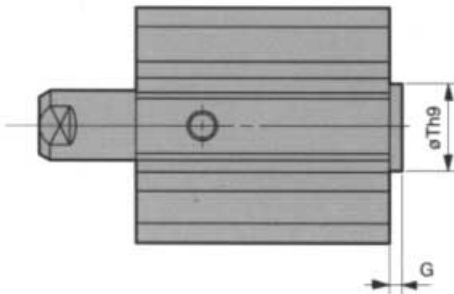
(N)CQ2A
Both Ends Tapped

Bore size	CQ2 O	NCQ2 inch O	R
12	M4x0.7	8-32 UNC	7
16	M4x0.7	8-32 UNC	7
20	M6x1.0	1/4 - 20 UNC	10
25	M6x1.0	1/4 - 20 UNC	10

Standard / Spring Extend (T)

Bore size	Stroke	A		B		CQ2 C	NCQ2 C	D	E	CQ2 H	NCQ2 inch H	I	K	L	
		5st	10st	5st	10st									5st	10st
12	5, 10	30.5	40.5	22	27	6	5.4	6	25	M3x0.5	#8-32	32	5	8.5	13.5
16	5, 10	32	42	23.5	28.5	8	5.4	8	29	M4x0.7	#8-32	38	6	8.5	13.5
20	5, 10	34	44	24.5	29.5	7	7	10	36	M5x0.8	#10-32	47	8	9.5	14.5
25	5, 10	37.5	47.5	27.5	32.5	12	10	12	40	M6x1.0	1/4-28 UNF	52	10	10	15

Bore size	Stroke	M	N	O	Q	Z
12	5, 10	15.5	3.5	6.5 depth 3.5	7.5	-
16	5, 10	20	3.5	6.5 depth 3.5	8	10
20	5, 10	25.5	5.5	9 depth 7	9	10
25	5, 10	28	5.5	9 depth 7	11	10



End Boss (CQ2) mm

Bore size	G	Th9
12	1.5	15 $\phi_{0.043}$
16	1.5	20 $\phi_{0.052}$
20	2	13 $\phi_{0.043}$
25	2	15 $\phi_{0.043}$

NCQ2 Male Rod End mm

Bore size	X	H inch	L	K
12	8	#8-32UNC	11.5	5
16	8	#8-32UNC	11.5	6
20	8	#10-32UNF	12.5	8
25	9.5	1/4-28UNF	14.5	10

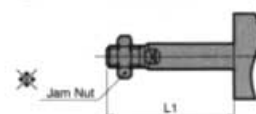
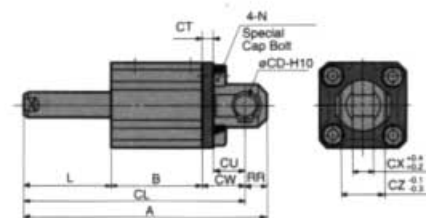
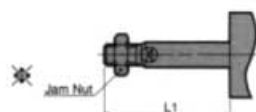
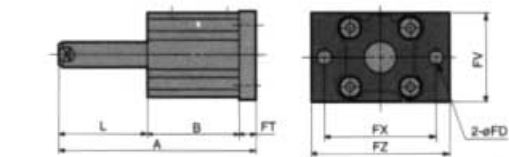
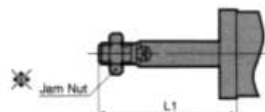
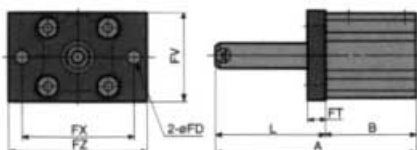
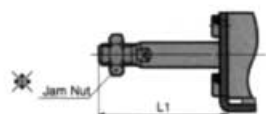
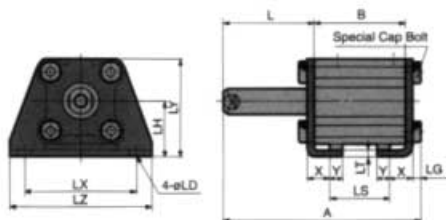
CQ2 Male Rod End mm

Bore size	C	X	H	L	K
12	9	10.5	M5x0.8	14	5
16	10	12	M6x1.0	15.5	6
20	12	14	M8x1.25	18.5	8
25	15	17.5	M10x1.25	22.5	10

Note 1) Rod side End Boss is offered as an option.
(Add - XC36 at the end of part no.)

"C" dim. not applicable
* Rod end nut and accessories detail: see p. 6.

Compact Cylinder: Standard / Single Acting Single Rod (T)



Foot / (N)CQ2L

mm

Bore size	Stroke	A		B		L		CQ2 L1		NCQ2 L1		LD	LG	LH	LS	
		5st	10st	5st	10st	5st	10st	5st	10st	5st	10st				5st	10st
12	5, 10	45.3	55.3	22	27	18.5	23.5	29	34	26.5	31.5	4.5	2.8	17	10	15
16	5, 10	46.8	56.8	23.5	28.5	18.5	23.5	30.5	35.5	26.5	31.5	4.5	2.8	19	11.5	16.5
20	5, 10	51.2	61.2	24.5	29.5	19.5	24.5	33.5	38.5	27.5	32.5	6.6	4	24	12.5	17.5
25	5, 10	54.7	64.7	27.5	32.5	20	25	37.5	42.5	29.5	34.5	6.6	4	26	12.5	17.5
Bore size	Stroke	LT	LX	LY	LZ	X	Y									
12	5, 10	2	34	29.5	44	8	4.5									
16	5, 10	2	38	33.5	48	8	5									
20	5, 10	3.2	48	42	62	9.2	5.8									
25	5, 10	3.2	52	46	66	10.7	5.8									

Rod Flange / (N)CQ2F

mm

Bore size	Stroke	A		B		FD	FT	FV	FX	FZ	L		CQ2 L1		NCQ2 L1	
		5st	10st	5st	10st						5st	10st	5st	10st	5st	10st
12	5, 10	40.5	50.5	22	27	4.5	5.5	25	45	55	18.5	23.5	29	34	26.5	31.5
16	5, 10	42	52	23.5	28.5	4.5	5.5	30	45	55	18.5	23.5	30.5	35.5	26.5	31.5
20	5, 10	44	54	24.5	29.5	6.6	8	39	48	60	19.5	24.5	33.5	38.5	27.5	32.5
25	5, 10	47.5	57.5	27.5	32.5	6.6	8	42	52	64	20	25	37.5	42.5	29.5	34.5

Head Flange / (N)CQ2G

mm

Bore size	Stroke	A		L		CQ2 L1		NCQ2 L1	
		5st	10st	5st	10st	5st	10st	5st	10st
12	5, 10	36	46	8.5	13.5	19	24	16.5	21.5
16	5, 10	37.5	47.5	8.5	13.5	20.5	25.5	16.5	21.5
20	5, 10	42	52	9.5	14.5	23.5	28.5	17.5	22.5
25	5, 10	45.5	55.5	10	15	27.5	32.5	19.5	24.5

*Dimensions for the head flange cylinder are the same as rod flange except A, L, L1.

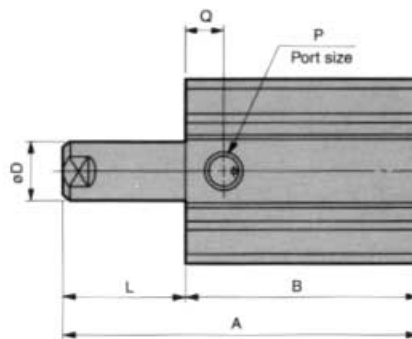
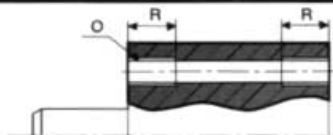
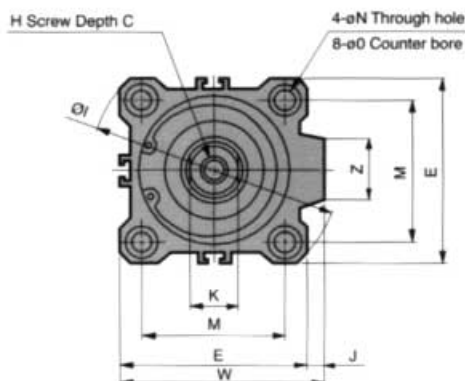
Double Clevis / (N)CQ2D

mm

Bore size	Stroke	A		B		CQ2 CD	NCQ2 Inch CD	CL		CT	CU	CW	CX	CZ	L	
		5st	10st	5st	10st			5st	10st						5st	10st
12	5, 10	50.5	60.5	22	27	5	3/16	44.5	54.5	4	7	14	5	10	8.5	13.5
16	5, 10	53	63	23.5	28.5	5	3/16	47	57	4	10	15	6.5	12	8.5	13.5
20	5, 10	61	71	24.5	29.5	8	5/16	52	62	5	12	18	8	16	9.5	14.5
25	5, 10	67.5	77.5	27.5	32.5	10	3/8	57.5	67.5	5	14	20	10	20	10	15
Bore size	Stroke	CQ2 L1		NCQ2 L1		CQ2 N	NCQ2 Inch N	RR								
12	5, 10	19	24	16.5	21.5				M4x0.7	8-32	6					
16	5, 10	20.5	25.5	16.5	21.5	M4x0.7	8-32	6								
20	5, 10	23.5	28.5	17.5	22.5	M6x1.0	1/4-20	9								
25	5, 10	27.5	32.5	19.5	24.5	M6x1.0	1/4-20	10								

* Rod end nut and accessories detail: see p. 6.
 ** Clevis pin and snap rings are included in the package.

Bore Size $\varnothing 32\sim\varnothing 50$ Spring Extend



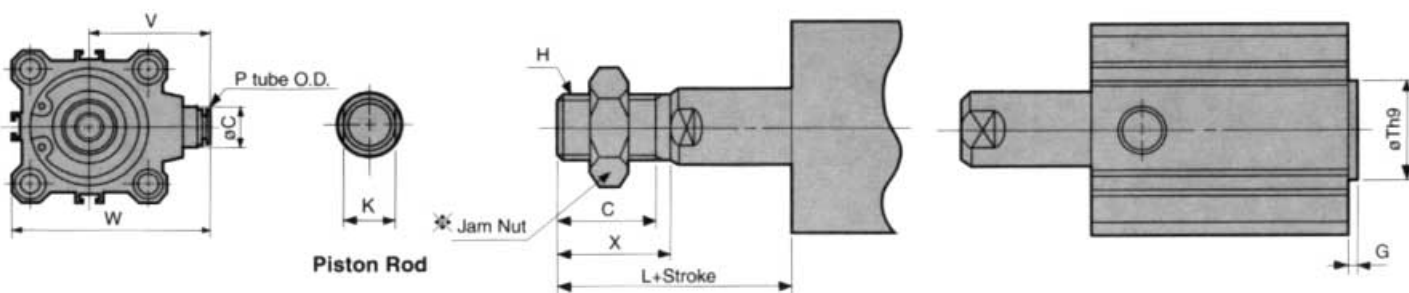
(N)CQ2A Both Ends Tapped

Bore size	CQ2 O	NCQ2 inch O	R
32	M6x1.0	1/4 20 UNC	10
40	M6x1.0	1/4 - 20 UNC	10
50	M8x1.25	5/16 - 18 UNC	14

Standard / Spring Extend (T)

Bore size	Stroke	A			B			CQ2 C	NCQ2 C	D	E	CQ2 H	NCQ2 Inch H	I	J	K	L		
		5st	10st	20st	5st	10st	20st										5st	10st	20st
32	5, 10	40	50	-	28	33	-	13	13.3	16	45	M8x1.25	5/16-24UNF	60	4.5	14	12	17	-
40	5, 10	46.5	56.5	-	34.5	39.5	-	13	18.3	16	52	M8x1.25	3/8-24UNF	69	5	14	12	17	-
50	10, 20	-	58.5	78.5	-	40.5	50.5	15	17.5	20	64	M10x1.5	1/2-20UNF	86	7	17	-	18	28

Bore size	Stroke	M	N	O	P			Q			Orifice	W	Z
					5st	10st	20st	5st	10st	20st			
32	5, 10	34	5.5	9depth7	M5x 0.8	1/8	-	11.5	10.5	-	1.7	49.5	14
40	5, 10	40	5.5	9depth7	1/8	-	11	11	-	2	57	14	
50	10, 20	50	6.6	11depth8	-	1/4	-	10.5	10.5	2.2	71	19	



One Touch Fittings mm

Bore size	C	P	V	W
32	13	6	38	60.5
40	13	6	42	68
50	16	8	50	82

NCQ2 Male Rod End mm

Bore size	X	H Inch	L	K
32	12.7	5/16-24UNF	19.7	14
40	16	3/8-24UNF	23	14
50	19.5	1/2-20UNF	27.5	17

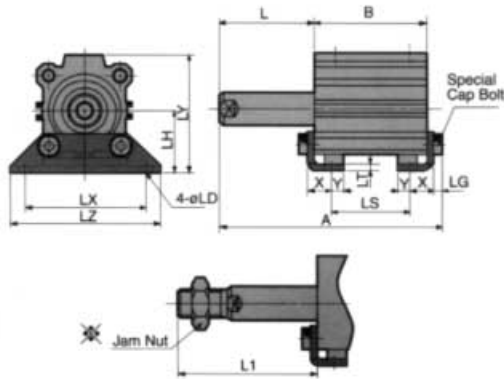
CQ2 Male Rod End mm

Bore size	C	X	H	L	K
32	20.5	23.5	M14x1.5	28.5	14
40	20.5	23.5	M14x1.5	28.5	14
50	26	28.5	M18x1.5	33.5	17

End Boss (CQ2 only) mm

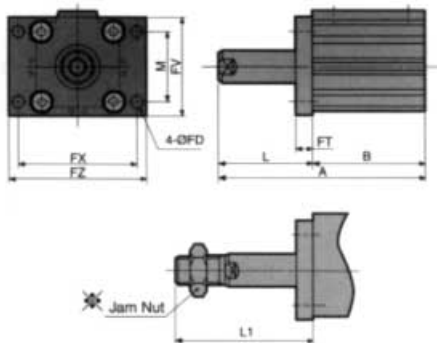
Bore size	G	Th9
32	2	21 $^{0}_{-0.052}$
40	2	28 $^{0}_{-0.052}$
50	2	35 $^{0}_{-0.062}$

Compact Cylinder: Standard / Single Acting Single Rod (T)



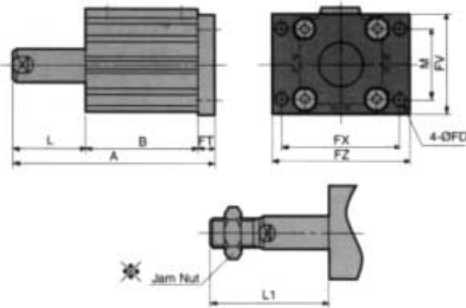
Foot / (N)CQ2L

Bore size	Stroke	A			B			L			CQ2 L1			NCQ2 L1		
		5st	10st	20st	5st	10st	20st	5st	10st	20st	5st	10st	20st	5st	10st	20st
32	5, 10	57.2	67.2	-	28	33	-	22	27	-	43.5	48.5	-	34.7	39.7	-
40	5, 10	63.7	73.7	-	34.5	39.5	-	22	27	-	43.5	48.5	-	38	43	-
50	10, 20	-	76.7	96.7	-	40.5	50.5	-	28	38	-	53.5	63.5	-	47.5	57.5
Bore size	Stroke	LD	LG	LH	LS			LT	LX	LY	LZ	X	Y			
					5st	10st	20st									
32	5, 10	6.6	4	30	12	17	-	3.2	57	57	71	11.2	5.8			
40	5, 10	6.6	4	33	18.5	23.5	-	3.2	64	64	78	11.2	7			
50	10, 20	9	5	39	-	17.5	27.5	3.2	79	78	95	14.7	8			



Rod Flange / (N)CQ2F

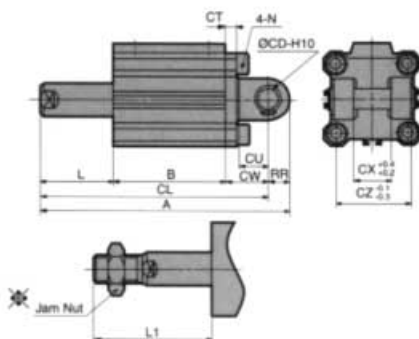
Bore size	Stroke	A			B			FD	FT	FV	FX	FZ	L		
		5st	10st	20st	5st	10st	20st						5st	10st	20st
32	5, 10	50	60	-	28	33	-	5.5	8	48	56	65	22	27	-
40	5, 10	56.5	66.5	-	34.5	39.5	-	5.5	8	54	62	72	22	27	-
50	10, 20	-	68.5	88.5	-	40.5	50.5	6.6	9	67	76	89	-	28	38
Bore size	Stroke	CQ2 L1			NCQ2 L1			M							
		5st	10st	20st	5st	10st	20st								
32	5, 10	43.5	48.5	-	34.7	39.7	-	34							
40	5, 10	43.5	48.5	-	38	43	-	40							
50	10, 20	-	53.5	63.5	42.5	-	57.5	50							



Head Flange / (N)CQ2G

Bore size	Stroke	A			L			CQ2 L1			NCQ2 L1		
		5st	10st	20st	5st	10st	20st	5st	10st	20st	5st	10st	20st
32	5, 10	48	58	-	12	17	-	33.5	38.5	-	24.7	29.7	-
40	5, 10	45.5	64.5	-	12	17	-	33.5	38.5	-	28	33	-
50	10, 20	-	67.5	87.5	-	18	28	-	43.5	53.5	-	37.5	47.5

* Dimensions for the head flange cylinder are the same as rod flange except A, L, L1.



Double Clevis / (N)CQ2D

Bore size	Stroke	A			B			CQ2 CD	NCQ2 Inch CD	CL			CT	CU	CW	CX
		5st	10st	20st	5st	10st	20st			5st	10st	20st				
32	5, 10	70	80	-	28	33	-	10	3/8	60	70	-	5	14	20	18
40	5, 10	78.5	88.5	-	34.5	39.5	-	10	3/8	68.5	78.5	-	6	14	22	18
50	10, 20	-	100.5	120.5	-	40.5	50.5	14	1/2	-	86.5	106.5	7	20	28	22
Bore size	Stroke	CZ	L			CQ2 L1			NCQ2 L1			CQ2 N	NCQ2 Inch N	RR		
			5st	10st	20st	5st	10st	20st	5st	10st	20st					
32	5, 10	36	12	17	-	33.5	38.5	-	24.7	29.7	-	M6x1.0	1/4-20	10		
40	5, 10	36	12	17	-	33.5	38.5	-	28	33	-	M6x1.0	1/4-20	10		
50	10, 20	44	-	18	28	-	43.5	53.5	-	37.5	47.5	M8x1.25	5/16-18	14		

* Rod end nut and accessories detail: see p. 6.

* Clevis pin and snap ring are included in the package.



Compact Cylinder: Single Rod Single Acting With Auto Switch

(N)CDQ2 Series



Standard Specifications

Model	Air pressure type (Non-lube type)
Media	Air
Ambient and fluid temp.	15~140°F (-10°C~+60°C)(At freezing temp. Air must be dry.)

The rest of the specifications are the same as that of standard (See p. 39).

Auto Switch Mounting Available / Minimum Stroke

# of Auto Switch Mounting	D-F7□V D-J79C	D-A7 D-A8 D-A73C D-A80C	D-F7□WV	D-A7□H D-A80H D-F7□ D-J79	D-A79W	D-F7□W D-J79W D-F7BAL D-F79F	D-F7LF
1pcs	5mm	5mm	10mm	15mm	15mm	20mm	25mm
2pcs	5mm	10mm	15mm	15mm	20mm	20mm	25mm

Note) See page 13 for Auto Switch Specifications

How To Order

Auto Switch How To Order: See p. 38

Weight/Single Acting: Single Rod

Type	Bore size (mm)	Cylinder Stroke (mm)			lbs.
		5	10	20	
Spring Extend	12	0.11	0.12	-	
	16	0.16	0.18	-	
	20	0.24	0.27	-	
	25	0.32	0.36	-	
	32	0.42	0.47	-	
	40	0.62	0.67	-	
Spring Return	50	-	1.07	1.23	
	12	0.12	0.15	-	
	16	0.16	0.18	-	
	20	0.27	0.29	-	
	25	0.35	0.39	-	
	32	0.44	0.48	-	
40	0.64	0.69	-		
50	-	1.14	1.27		

Weight Adder

Bore size	12	16	20	25	32	40	50	lbs.
Both ends tapped	0.002	0.002	0.007	0.007	0.013	0.013	0.013	
Rod end M thread	Thread	0.003	0.007	0.013	0.026	0.057	0.060	0.117
		Nut	0.002	0.004	0.009	0.018	0.037	0.037
Head end boss	0.002	0.003	0.004	0.007	0.011	0.015	0.029	
W/ one touch fitting	-	-	-	-	0.013	0.013	0.023	
Foot mounting	0.108	0.137	0.324	0.373	0.315	0.342	0.536	
Rod side flange	0.119	0.148	0.289	0.337	0.397	0.472	0.822	
Head side flange	0.115	0.139	0.273	0.318	0.364	0.437	0.767	
Double rear clevis	0.064	0.077	0.172	0.251	0.333	0.432	0.867	

When mounting auto switch, add for additional mounting bracket weight

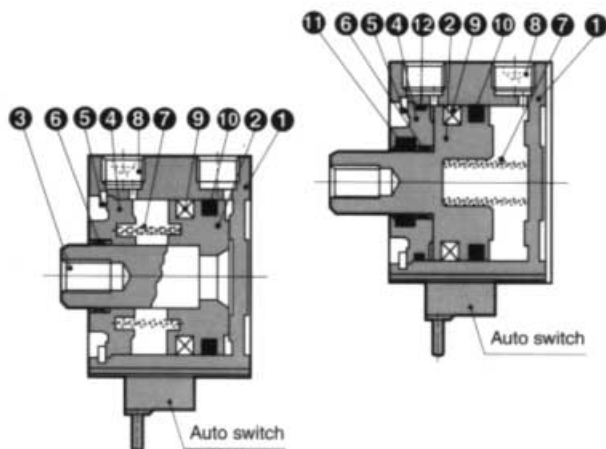
Auto Switch Mounting Bracket Weight

Part no.	Applicable cylinder bore size	Weight lbs.
BQ-1	12~ 25	.003
BQ-2	32~ 50	.003

How to obtain the total weight (lbs) (N)CDQ2D32-10SM

Std wt.:	(N)CQ2B32-20S	0.47
Wt. adder:	Both ends tapped	0.013
	Male rod end	0.057
	Double rear clevis	0.333
	Total	0.873

Construction / Parts List



Parts List

No.	Description	Material	Remarks
1	Cylinder tube	Aluminum alloy	Hard anodized
2	*Piston	Aluminum alloy	Chromate
3	Piston rod	Stainless steel	Bore ø12-ø25
		Carbon steel	Bore ø32-ø100, hard chrome plated
4	Collar	Brass	Bore ø12-ø40, Black anodized
		Aluminum alloy	Bore ø50, Black paint
5	Retaining ring	Carbon tool steel	Phosphate coating
6	Bushing	Leaded tin bronze casting	Used for ø50 only
7	Return spring	Piano wire	Zinc chromate
8	Plug	Steel alloy	Black zinc chromate
9	Magnet	-	

* Note) The Piston and Piston rod assembly is made of one piece of stainless steel. (T-Type) 20~50 bore.

Seals List

No.	Description	Material	Parts No.						
			ø12	ø16	ø20	ø25	ø32	ø40	ø50
10	Piston seal	NBR	NLP-12-7L	NLP-16L	NLP-20L	NLP-25L	NLP-32L	NLP-40L	NLP-50L
11	Rod seal	NBR	DYR-6K	DYR-8K	DYR-10SK	DYR-12	DYR-16	PDU-16Z	PDU-20Z
12	Gasket	NBR	SO-013-6	C14	C18	C22	C29	C36	C46

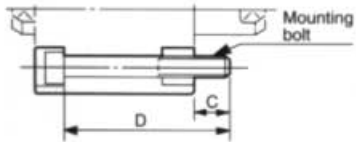
Mounting Bolt For Single Acting Single Rod (S) / With Auto Switch

Special long mounting bolt for through hole mounting is available as an option.

How to Order:

Specify the required bolts

Example) Bolt M3x35L 4pcs.



Thread	Pitch
M3	0.5
M5	0.8
M6	1.0
M8	1.25
M10	1.5

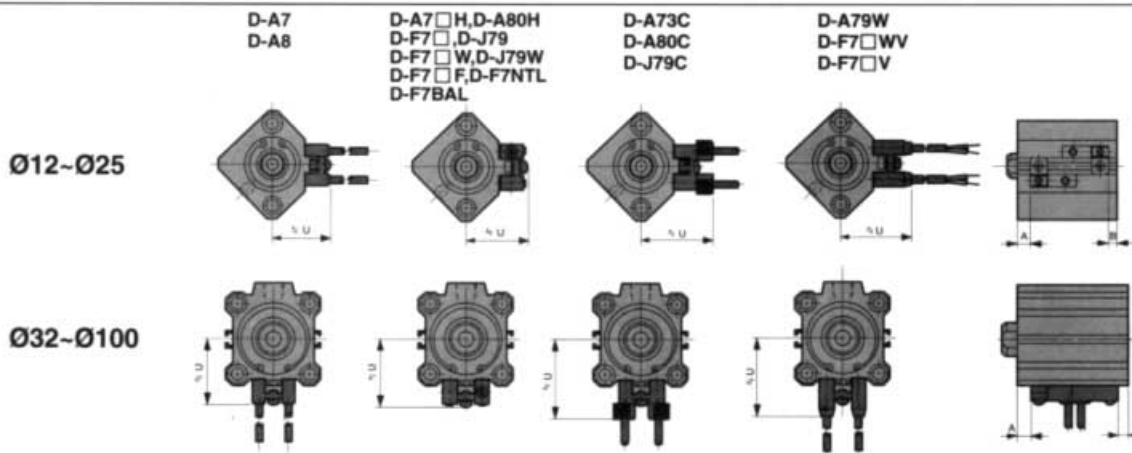
Spring Return

Model	C	D	Mounting bolt
(N)CDQ2B12-5S	5.5	35	M3x35L
-10S		40	x40L
(N)CDQ2B16-5S	8	40	M3x40L
-10S		45	x45L
(N)CDQ2B20-5S	10.5	40	M5x40L
-10S		45	x45L
(N)CDQ2B25-5S	9.5	40	M5x40L
-10S		45	x45L
(N)CDQ2B32-5S	9	40	M5x40L
-10S		45	x45L
(N)CDQ2B40-5S	7.5	45	M5x45L
-10S		50	x50L
(N)CDQ2B50-10S	12.5	55	M6x55L
-20S		65	x65L

Spring Extend

Model	C	D	Mounting bolt
(N)CDQ2B12-5T	6.1	40	M3x40L
-10T		45	x45L
(N)CDQ2B16-5T	8	40	M3x40L
-10T		45	x45L
(N)CDQ2B20-5T	10.5	40	M5x40L
-10T		45	x45L
(N)CDQ2B25-5T	9.5	40	M5x40L
-10T		45	x45L
(N)CDQ2B32-5T	9	40	M5x40L
-10T		45	x45L
(N)CDQ2B40-5T	7.5	45	M5x45L
-10T		50	x50L
(N)CDQ2B50-10T	12.5	55	M6x55L
-20T		65	x65L

Auto Switch Mounting Data



Auto Switch Mounting Position / S (T)

Bore Size (mm)	D-A7•A8		D-A7□H•A80H D-A73C•A80C D-F7□V•J79C		D-A79W		D-F7BAL D-F7PW D-F7□F D-J79W		D-F79W D-F7□VW	
	A	B	A	B	A	B	A	B	A	B
12	4.5	5.5(10)	5	6(10.5)	2	3(7.5)	9	10(14.5)	5.5	6.5(11)
16	7.5(5.5)	5(7)	8(6)	5.5(7.5)	5(3)	2.5(4.5)	12(10)	9.5(11.5)	8.5(6.5)	6(8)
20	7.5	6.5	8	7	5	4	12	11	8.5	7.5
25	7.5	7	8	7.5	5	4.5	12	11.5	8.5	8
32	9	6	9.5	6.5	6.5	3.5	13.5	10.5	10	7
40	13	8.5	13.5	9	10.5	6	17.5	13	14	9.5
50	11	11	11.5	12	8.5	9	15.5	16	12	12.5

Dimensions in parenthesis refer to spring extend (T) versions

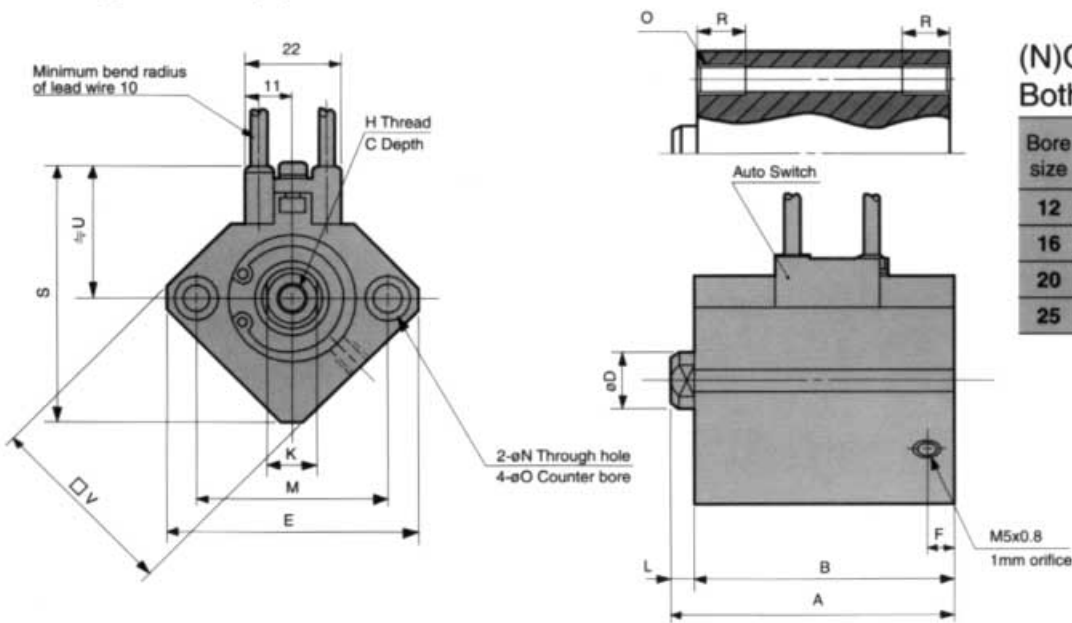
Auto Switch Mounting Height

Bore Size (mm)	D-A7 A8	D-A7□H D-A80H D-F7□ D-J79 D-F7□W	D-J79W D-F7BAL D-F7□F D-F7NTL	D-A73C D-A80C D-F7□VW	D-F7□V	D-J79C	D-A79W
	U	U	U	U	U	U	U
12	19.5	20.5	26.5	23	26	22	
16	22.5	23.5	29.5	26	29	25	
20	24.5	25.5	31.5	28	31	27	
25	27.5	28.5	34.5	31	34	30	
32	31.5	32.5	38.5	35	38	34	
40	35	36	42	38.5	41.5	37.5	
50	41	42	48	44.5	47.5	43.5	

(N)CDQ2 Series

Bore Size $\phi 12 \sim \phi 25$ Spring Return

Through Hole / (N)CDQ2B



(N)CDQ2A Both Ends Tapped

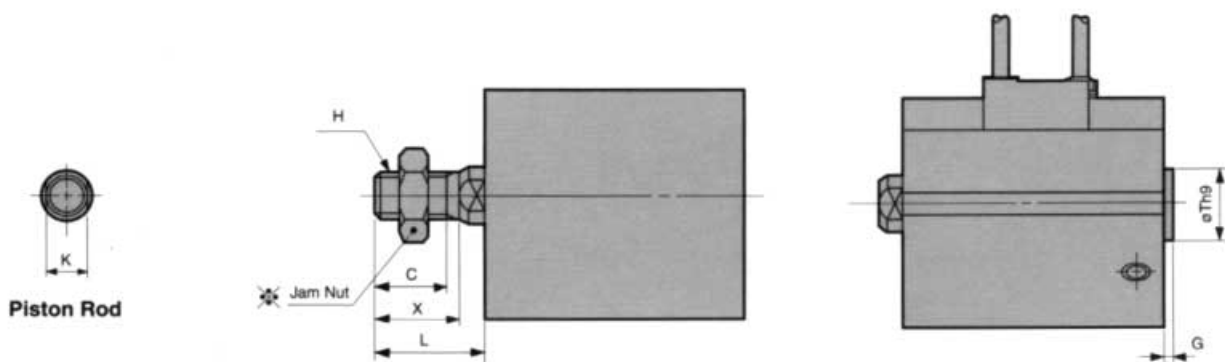
Bore size	CQ2 ϕ	NCQ2 inch ϕ	R
12	M4x0.7	8-32 UNC	7
16	M4x0.7	8-32 UNC	7
20	M6x1.0	1/4 - 20 UNC	10
25	M6x1.0	1/4 - 20 UNC	10

The above Auto Switch mounting is used for D-A73 and D-A80

Auto Switch set position and mounting height: See p. 51

Standard / Spring Return (S)

Bore size	Stroke	A		B		CQ2 C	NCQ2 C	D	E	F	CQ2 H	NCQ2 inch H	K	L	M	N	O	S	U	V
		5st	10st	5st	10st															
12	5, 10	36.5	41.5	33	38	6	5.4	6	32	6.5	M3x0.5	#8-32	5	3.5	22	3.5	6.5 depth 3.5	35.5	19.5	25
16	5, 10	39	44	35.5	40.5	8	5.4	8	38	5.5	M4x0.7	#8-32	6	3.5	28	3.5	6.5 depth 3.5	41.5	22.5	29
20	5, 10	41	46	36.5	41.5	7	7	10	47	5.5	M5x0.8	#10-32	8	4.5	36	5.5	9 depth 7	48	24.5	36
25	5, 10	42.5	47.5	37.5	42.5	12	10	12	52	5.5	M6x1.0	1/4-28 UNF	10	5	40	5.5	9 depth 7	53.5	27.5	40



NCQ2 Male Rod End

Bore size	X	H Inch	L	K
12	8	#8-32UNC	11.5	5
16	8	#8-32UNC	11.5	6
20	8	#10-32UNF	12.5	8
25	9.5	1/4-28UNF	14.5	10

CQ2 Male Rod End

Bore size	C	X	H	L	K
12	9	10.5	M5x0.8	14	5
16	10	12	M6x1.0	15.5	6
20	12	14	M8x1.25	18.5	8
25	15	17.5	M10x1.25	22.5	10

End Boss (CQ2)

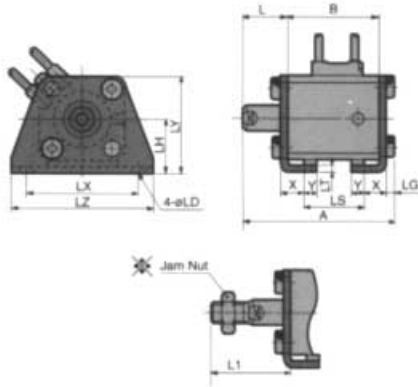
Bore size	G	Th9
12	1.5	15 $\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$
16	1.5	20 $\begin{smallmatrix} 0 \\ -0.052 \end{smallmatrix}$
20	2	13 $\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$
25	2	15 $\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$

*C" dim. not applicable

☒ For further info on Jam Nut and accessories detail: see p. 6.

Note 1) End Boss for Rod End is offered as an option.
(Add - XC36 at the end of part no.)

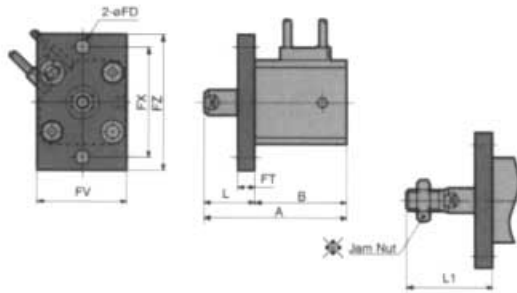
Compact Cylinder: Standard / Single Acting Single Rod(S) With Switches



Foot / (N)CDQ2L

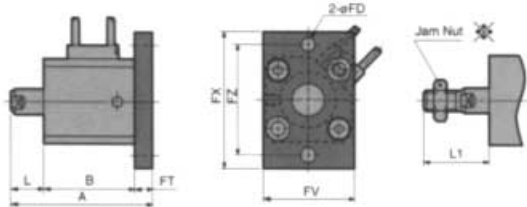
Bore size	Stroke	A		B		L	CQ2 L1	NCQ2 L1	LD	LG	LH	LS	
		5st	10st	5st	10st							5st	10st
12	5, 10	51.3	56.3	33	38	13.5	24	21.5	4.5	2.8	17	21	26
16	5, 10	53.8	58.8	35.5	40.5	13.5	25.5	21.5	4.5	2.8	19	23.5	28.5
20	5, 10	58.2	63.2	36.5	41.5	14.5	28.5	22.5	6.6	4	24	24.5	29.5
25	5, 10	59.7	64.7	37.5	42.5	15	32.5	24.5	6.6	4	26	22.5	27.5

Bore size	Stroke	LT	LX	LY	LZ	X	Y
12	5, 10	2	34	29.5	44	8	4.5
16	5, 10	2	38	33.5	48	8	5
20	5, 10	3.2	48	42	62	9.2	5.8
25	5, 10	3.2	52	46	66	10.7	5.8



Rod Side Flange / (N)CDQ2F

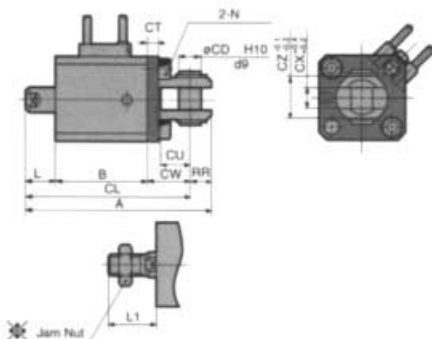
Bore size (mm)	Stroke (mm)	A		B		FD	FT	FV	FX	FZ	L	CQ2 L1	NCQ2 L1
		5st	10st	5st	10st								
12	5, 10	46.5	51.5	33	38	4.5	5.5	25	45	55	13.5	24	21.5
16	5, 10	49	54	35.5	40.5	4.5	5.5	30	45	55	13.5	25.5	21.5
20	5, 10	51	56	36.5	41.5	6.6	8	39	48	60	14.5	28.5	22.5
25	5, 10	52.5	57.5	37.5	42.5	6.6	8	42	52	64	15	32.5	24.5



Head Side Flange / (N)CDQ2G

Bore size (mm)	Stroke range (mm)	A		L	CQ2 L1	NCQ2 L1
		5st	10st			
12	5, 10	46.4	51.4	3.5	14	11.5
16	5, 10	44.5	49.5	3.5	15.5	11.5
20	5, 10	49	54	4.5	18.5	12.5
25	5, 10	50.5	55.5	5	22.5	14.5

*Dimensions for the head flange cylinder are the same as rod flange except A, L, L1.



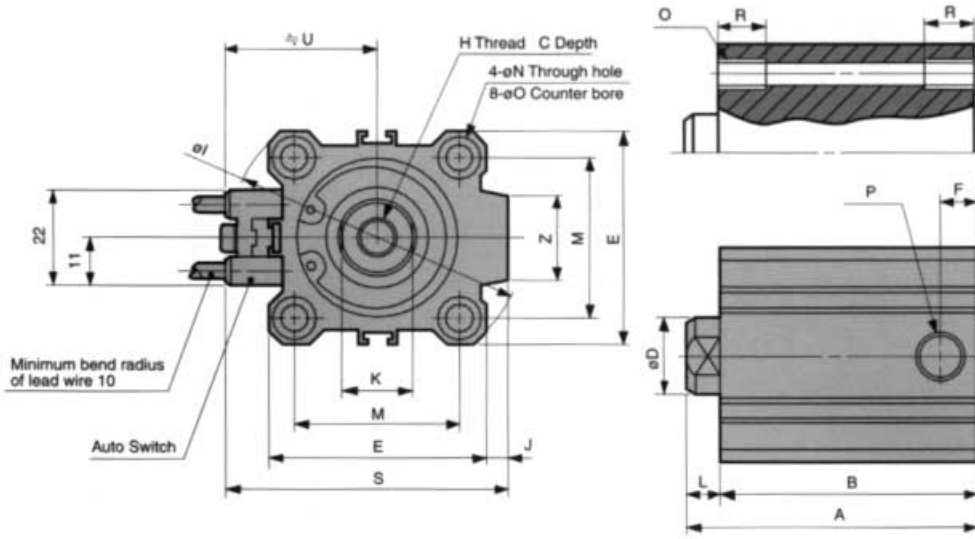
Double Clevis / (N)CDQ2D

Bore size	Stroke	A		B		CQ2 CD	NCQ2 Inch CD	CL		CT	CU	CW	CX	CZ
		5st	10st	5st	10st									
12	5, 10	56.5	61.5	33	38	5	3/16	50.5	55.5	4	7	14	5	10
16	5, 10	60	65	35.5	40.5	5	3/16	54	59	4	10	15	6.5	12
20	5, 10	68	73	36.5	41.5	8	5/16	59	64	5	12	18	8	16
25	5, 10	72.5	77.5	37.5	42.5	10	3/8	62.5	67.5	5	14	20	10	20

Bore size	Stroke	L	CQ2 L1	NCQ2 L1	CQ2 N	NCQ2 Inch N	RR
12	5, 10	3.5	14	11.5	M4x0.7	8-32	6
16	5, 10	3.5	15.5	11.5	M4x0.7	8-32	6
20	5, 10	4.5	18.5	12.5	M6x1.0	1/4-20	9
25	5, 10	5	22.5	14.5	M6x1.0	1/4-20	10

* Rod end nut and accessories detail: see p. 6.
 * Clevis pin and snap rings are included in the package.

Bore Size $\phi 32 \sim \phi 50$ Spring Return



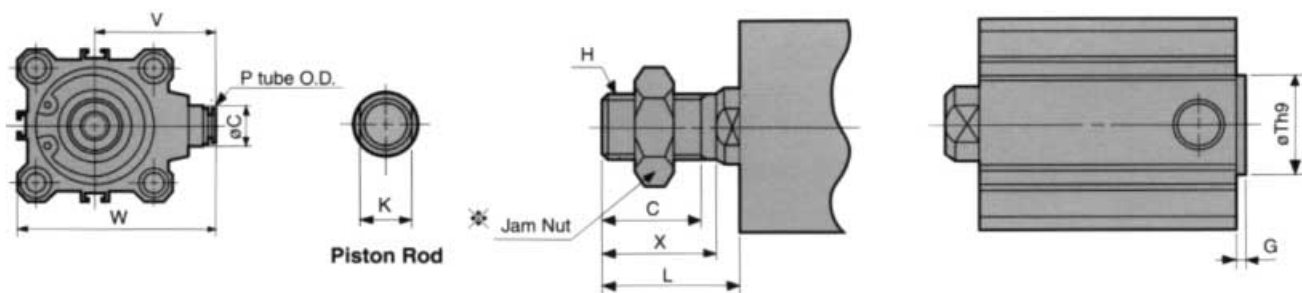
(N)CDQ2A
Both Ends Tapped

Bore size	CQ2 O	NCQ2 inch O	R
32	M6x1.0	1/4 20 UNC	10
40	M6x1.0	1/4 - 20 UNC	10
50	M8x1.25	5/16 - 18 UNC	14

Standard / Spring Return (S) The above Auto Switch mounting is used for D-A73 and D-A80.
The Auto Switch set position and mounting height: See p.51

Bore size	Stroke	A			B			CQ2 C	NCQ2 C	D	E	F	CQ2 H	NCQ2 Inch H	I	J	K	L
		5st	10st	20st	5st	10st	20st											
32	5, 10	45	50	-	38	43	-	13	13.3	16	45	7.5	M8x1.25	5/16-24UNF	60	4.5	14	7
40	5, 10	51.5	56.5	-	44.5	49.5	-	13	18.3	16	52	8	M8x1.25	3/8-24UNF	69	5	14	7
50	10, 20	-	58.5	68.5	-	50.5	60.5	15	17.6	20	64	10.5	M10x1.5	1/2-20UNF	86	7	17	8

Bore size	Stroke	M	N	O	P	Orifice	S	U	Z
32	5, 10	34	5.5	9depth7	1/8	1.7	58.5	31.5	14
40	5, 10	40	5.5	9depth7	1/8	2	66	35	14
50	10, 20	50	6.6	11depth8	1/4	2.2	80	41	19



One Touch Fittings mm

Bore size	C	P	V	W
32	13	6	38	60.5
40	13	6	42	68
50	16	8	50	82

NCDQ2 Male Rod End mm

Bore size	X	H Inch	L	K
32	12.7	5/16-24UNF	19.7	14
40	16	3/8-24UNF	23	14
50	19.5	1/2-20UNF	27.5	17

CDQ2 Male Rod End mm

Bore size	C	X	H	L	K
32	20.5	23.5	M14x1.5	28.5	14
40	20.5	23.5	M14x1.5	28.5	14
50	26	28.5	M18x1.5	33.5	17

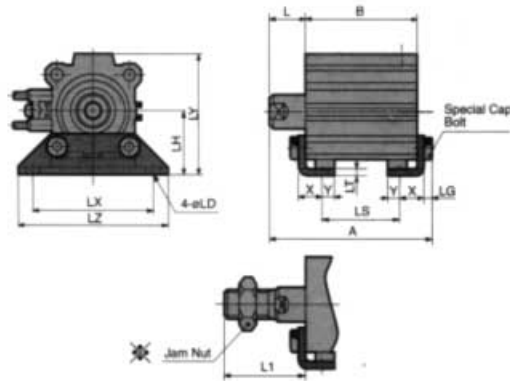
End Boss (CQ2) mm

Bore size	G	Th9
32	2	21 ± 0.052
40	2	28 ± 0.052
50	2	35 ± 0.062

*Rod end nut and accessories are detailed on p. 6.
"C" dim. not applicable

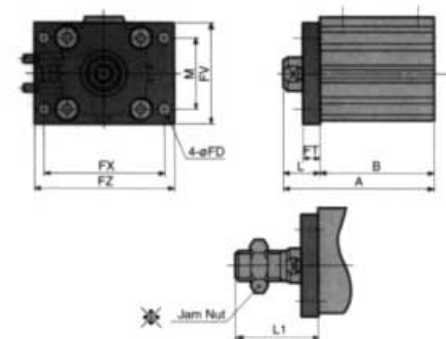
Note) With rod end inlets an option.
(Add - XC36 at the end of part no.).

Compact Cylinder: Standard / Single Acting Single Rod (S) With Switches



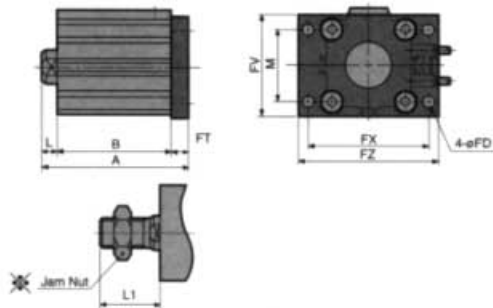
Foot / (N)CDQ2L

Bore size	Stroke	A						B			L	CQ2 L1	NCQ2 L1	LD	LG	LH	LS		
		5st	10st	20st	5st	10st	20st	5st	10st	20st									
32	5, 10	62.2	67.2	-	38	43	-	17	38.5	29.7	6.6	4	30	22	27	-			
40	5, 10	68.7	73.7	-	44.5	49.5	-	17	38.5	33	6.6	4	33	28.5	33.5	-			
50	10, 20	-	76.7	86.7	-	50.5	60.5	18	43.5	37.5	9	5	39	-	27.5	37.5			
Bore size	Stroke	LX	LY	LZ	X	Y													
32	5, 10	57	57	71	11.2	5.8													
40	5, 10	64	64	78	11.2	7													
50	10, 20	79	78	95	14.7	8													



Rod Flange / (N)CDQ2F

Bore size	Stroke	A						B			FD	FT	FV	FX	FZ	L	CQ2 L1	NCQ2 L1	M
		5st	10st	20st	5st	10st	20st												
32	5, 10	55	60	-	38	43	-	5.5	8	48	56	65	17	38.5	29.7	34			
40	5, 10	61.5	66.5	-	44.5	49.5	-	5.5	8	54	62	72	17	38.5	33	40			
50	10, 20	-	68.5	78.5	-	50.5	60.5	6.6	9	67	76	89	18	43.5	37.5	50			



Head Flange / (N)CDQ2G

Bore size	Stroke	A			L	CQ2 L1	NCQ2 L1	mm						
		5st	10st	20st										
32	5, 10	53	58	-	7	28.5	19.7							
40	5, 10	59.5	64.5	-	7	28.5	23							
50	10, 20	-	67.5	77.5	8	33.5	27.5							

* Dimensions for the head flange cylinder are the same as rod flange except A, L, L1.

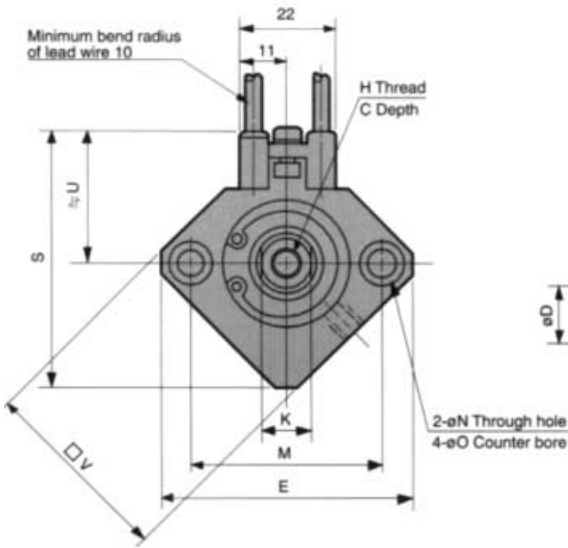
Double Clevis / (N)CDQ2D

Bore size	Stroke	A			B			CQ2 CD	CQ2 Inch CD	CL			CT	CU	CW	mm					
		5st	10st	20st	5st	10st	20st			5st	10st	20st									
32	5, 10	75	80	-	38	43	-	10	3/8	65	70	-	5	14	20						
40	5, 10	83.5	88.5	-	44.5	49.5	-	10	3/8	73.5	78.5	-	6	14	22						
50	10, 20	-	100.5	110.5	-	50.5	60.5	14	1/2	-	86.5	96.5	7	20	28						
Bore size	Stroke	CX	CZ	L	CQ2 L1	NCQ2 L1	CQ2 N	NCQ2 Inch N	RR												
32	5, 10	18	36	7	28.5	19.7	M6x1.0	1/4-20	10												
40	5, 10	18	36	7	28.5	23	M6x1.0	1/4-20	10												
50	10, 20	22	44	8	33.5	27.5	M8x1.25	5/16-18	14												

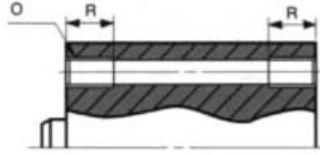
* Rod end nut and accessories detail: see p. 6.

* Clevis pin and snap ring are included in the package.

Through Hole / (N)CDQ2B

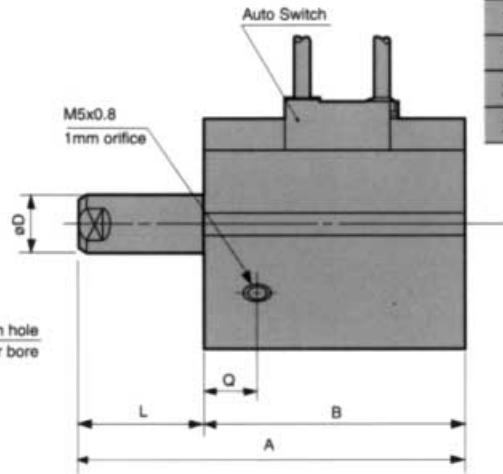


Both ends tapped



(N)CDQ2A Both Ends Tapped

Bore size	CQ2 O	NCQ2 inch O	R
12	M4x0.7	8-32 UNC	7
16	M4x0.7	8-32 UNC	7
20	M6x1.0	1/4 - 20 UNC	10
25	M6x1.0	1/4 - 20 UNC	10



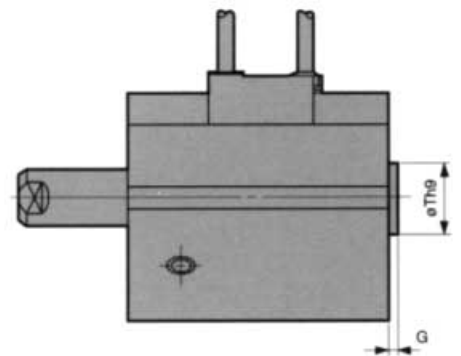
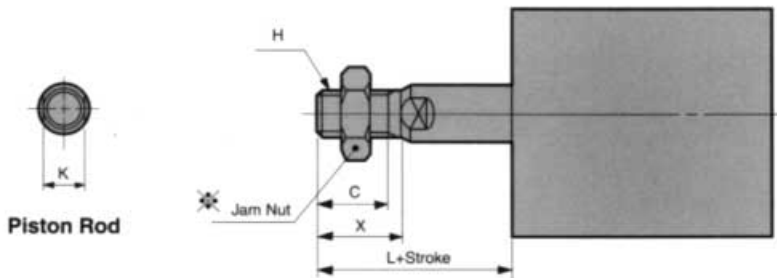
The above Autoswitch mounting is used for D-A73 and D-A80

Autoswitch set position and mounting height: See p. 51

Standard / Spring Extend (T)

Bore size	Stroke	A		B		CQ2 C	NCQ2 C	D	E	CQ2 H	NCQ2 inch H	K	L		M
		5st	10st	5st	10st								5st	10st	
12	5, 10	45.9	55.9	37.4	42.4	6	5.4	6	32	M3x0.5	#8-32	5	8.5	13.5	22
16	5, 10	44	54	35.5	40.5	8	5.4	8	38	M4x0.7	#8-32	6	8.5	13.5	28
20	5, 10	46	56	36.5	41.5	7	7	10	47	M5x0.8	#10-32	8	9.5	14.5	36
25	5, 10	47.5	57.5	37.5	42.5	12	10	12	52	M6x1.0	1/4-28 UNF	10	10	15	40

Bore size	Stroke	N	O	Q	S	U	V
12	5, 10	3.5	6.5 depth 3.5	11	35.5	19.5	25
16	5, 10	3.5	6.5 depth 3.5	10	41.5	22.5	29
20	5, 10	5.5	9 depth 7	10.5	48	24.5	36
25	5, 10	5.5	9 depth 7	11	53.5	27.5	40



NCQ2 Male Rod End

Bore size	X	H Inch	L	K
12	8	#8-32UNC	11.5	5
16	8	#8-32UNC	11.5	6
20	8	#10-32UNF	12.5	8
25	9.5	1/4-28UNF	14.5	10

CQ2 Male Rod End

Bore size	C	X	H	L	K
12	9	10.5	M5x0.8	14	5
16	10	12	M6x1.0	15.5	6
20	12	14	M8x1.25	18.5	8
25	15	17.5	M10x1.25	22.5	10

End Boss (CQ2)

Bore size	G	Th9
12	1.5	15 $^{0}_{-0.043}$
16	1.5	20 $^{0}_{-0.052}$
20	2	13 $^{0}_{-0.043}$
25	2	15 $^{0}_{-0.043}$

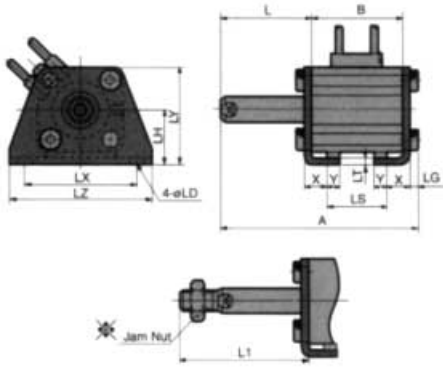
'C' dim. not applicable

For further info on Jam Nut and accessories detail: see p. 6.

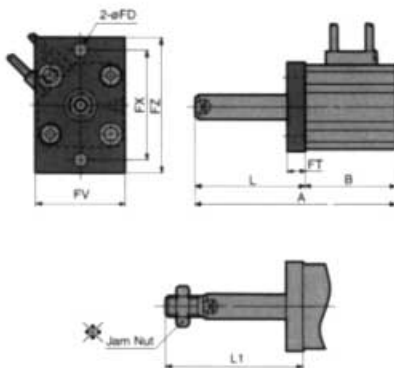
Note 1) End Boss for Rod End is offered as an option. (Add - XC36 at the end of part no.)

Compact Cylinder: Standard / Single Acting Single Rod (T) With Switches

Foot / (N)CDQ2L

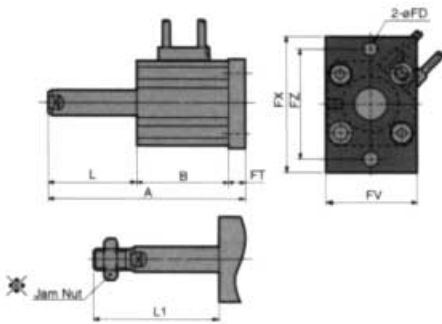


Bore size	Stroke	mm														
		A		B		L		CQ2 L1		NCQ2 L1		LD	LG	LH	LS	
		5st	10st	5st	10st	5st	10st	5st	10st	5st	10st				5st	10st
12	5, 10	60.7	70.7	37.4	42.4	18.5	23.5	29	34	26.5	31.5	4.5	2.8	17	21	26
16	5, 10	58.8	68.8	35.5	40.5	18.5	23.5	30.5	35.5	26.5	31.5	4.5	2.8	19	23.5	28.5
20	5, 10	63.2	73.2	36.5	41.5	19.5	24.5	33.5	38.5	27.5	32.5	6.6	4	24	24.5	29.5
25	5, 10	64.7	74.7	37.5	42.5	20	25	37.5	42.5	29.5	34.5	6.6	4	26	22.5	27.5
Bore size	Stroke	LT	LX	LY	LZ	X	Y									
12	5, 10	2	34	29.5	44	8	4.5									
16	5, 10	2	38	33.5	48	8	5									
20	5, 10	3.2	48	42	62	9.2	5.8									
25	5, 10	3.2	52	46	66	10.7	5.8									



Rod Flange / (N)CDQ2F

Bore size	Stroke	mm														
		A		B		FD	FT	FV	FX	FZ	L		CQ2 L1		NCQ2 L1	
		5st	10st	5st	10st						5st	10st	5st	10st	5st	10st
12	5, 10	55.9	65.9	37.4	42.4	4.5	5.5	25	45	55	18.5	23.5	29	34	26.5	31.5
16	5, 10	54	64	35.5	40.5	4.5	5.5	30	45	55	18.5	23.5	30.5	35.5	26.5	31.5
20	5, 10	56	66	36.5	41.5	6.6	8	39	48	60	19.5	24.5	33.5	38.5	27.5	32.5
25	5, 10	57.5	67.5	37.5	42.5	6.6	8	42	52	64	20	25	37.5	42.5	29.5	34.5

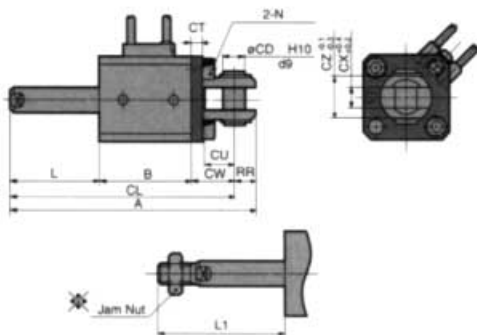


Head Flange / (N)CDQ2G

Bore size	Stroke	mm									
		A		L		CQ2 L1		NCQ2 L1			
		5st	10st	5st	10st	5st	10st	5st	10st		
12	5, 10	51.4	61.4	8.5	13.5	19	24	16.5	21.5		
16	5, 10	49.5	59.5	8.5	13.5	20.5	25.5	16.5	21.5		
20	5, 10	54	64	9.5	14.5	23.5	28.5	17.5	22.5		
25	5, 10	55.5	65.5	10	15	27.5	32.5	19.5	24.5		

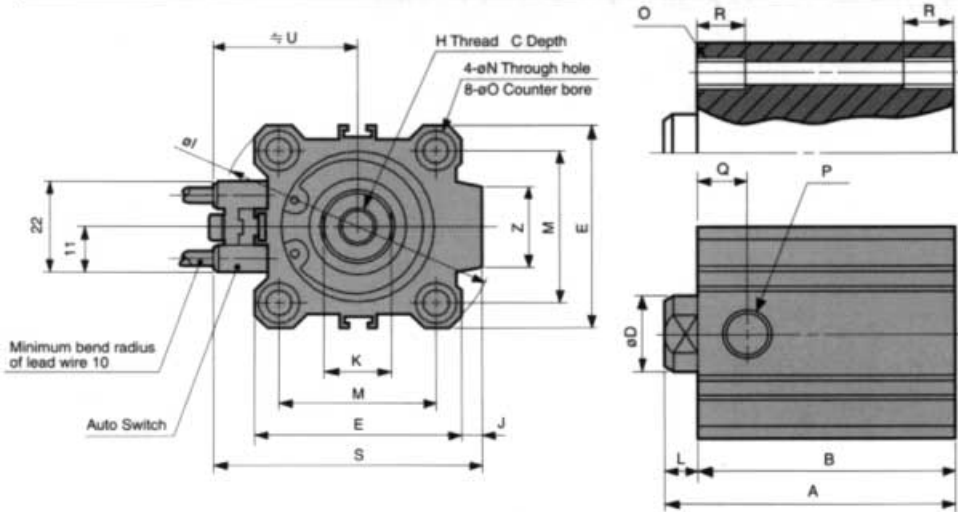
*Dimensions for the head flange cylinder are the same as rod flange except A, L, L1.

Double Clevis / (N)CDQ2D



Bore size	Stroke	mm														
		A		B		CQ2 CD	NCQ2 Inch CD	CL		CT	CU	CW	CX	CZ	L	
		5st	10st	5st	10st			5st	10st						5st	10st
12	5, 10	65.9	75.9	37.4	42.4	5	3/16	59.9	69.9	4	7	14	5	10	8.5	13.5
16	5, 10	65	75	35.5	40.5	5	3/16	59	69	4	10	15	6.5	12	8.5	13.5
20	5, 10	73	83	36.5	41.5	8	5/16	64	74	5	12	18	8	16	9.5	14.5
25	5, 10	77.5	87.5	37.5	42.5	10	3/8	67.5	77.5	5	14	20	10	20	10	15
Bore size	Stroke	CQ2 L1		NCQ2 L1		CQ2 N	NCQ2 Inch N	RR								
12	5, 10	19	24	16.5	21.5				M4x0.7	8-32	6					
16	5, 10	20.5	25.5	16.5	21.5	M4x0.7	8-32	6								
20	5, 10	23.5	28.5	17.5	22.5	M6x1.0	1/4-20	9								
25	5, 10	27.5	32.5	19.5	24.5	M6x1.0	1/4-20	10								

* Rod end nut and accessories detail: see p. 6.
 * Clevis pin and snap rings are included in the package.



(N)CDQ2A
Both Ends Tapped

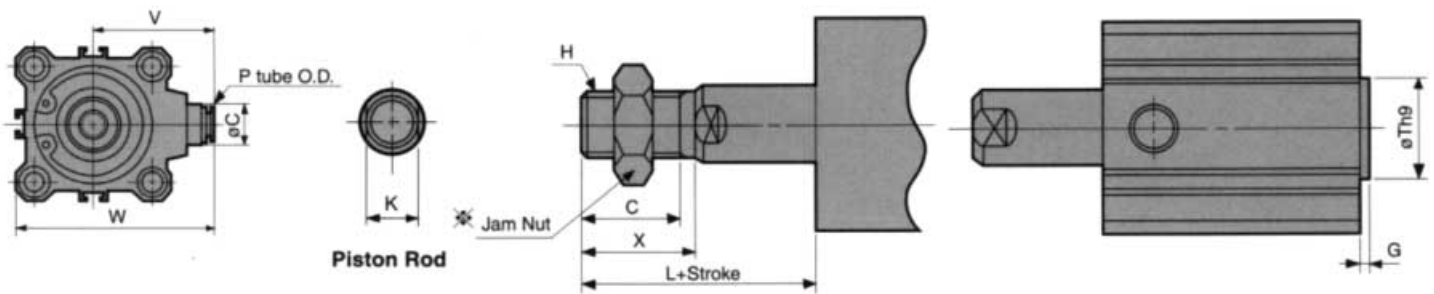
Bore size	CQ2 O	NCQ2 inch O	R
32	M6x1.0	1/4 20 UNC	10
40	M6x1.0	1/4 - 20 UNC	10
50	M8x1.25	5/16 - 18 UNC	14

Standard / Spring Extend (T)

The above Auto Switch mounting is used for D-A73 and D-A80.
The Auto Switch set position and mounting height: See p.51

Bore size	Stroke	A			B			CQ2 C	NCQ2 C	D	E	CQ2 H	NCQ2 Inch H	I	J	K	L		
		5st	10st	20st	5st	10st	20st										5st	10st	20st
32	5, 10	50	60	-	38	43	-	13	13.3	16	45	M8x1.25	5/16-24UNF	60	4.5	14	12	17	-
40	5, 10	56.5	66.5	-	44.5	49.5	-	13	18.3	16	52	M8x1.25	3/8-24UNF	69	5	14	12	17	-
50	10, 20	-	68.5	88.5	-	50.5	60.5	15	17.5	20	64	M10x1.5	1/2-20UNF	86	7	17	-	18	28

Bore size	Stroke	M	N	O	P	Orifice	Q	S	U	Z
32	5, 10	34	5.5	9depth7	1/8	1.7	10.5	58.5	31.5	14
40	5, 10	40	5.5	9depth7	1/8	2	11	66	35	14
50	10, 20	50	6.6	11depth8	1/4	2.2	10.5	80	41	19



One Touch Fittings mm

Bore size	C	P	V	W
32	13	6	38	60.5
40	13	6	42	68
50	16	8	50	82

NCDQ2 Male Rod End mm

Bore size	X	H	L	K
32	12.7	5/16-24UNF	19.7	14
40	16	3/8-24UNF	23	14
50	19.5	1/2-20UNF	27.5	17

CDQ2 Male Rod End mm

Bore size	C	X	H	L	K
32	20.5	23.5	M14x1.5	28.5	14
40	20.5	23.5	M14x1.5	28.5	14
50	26	28.5	M18x1.5	33.5	17

End Boss (CQ2) mm

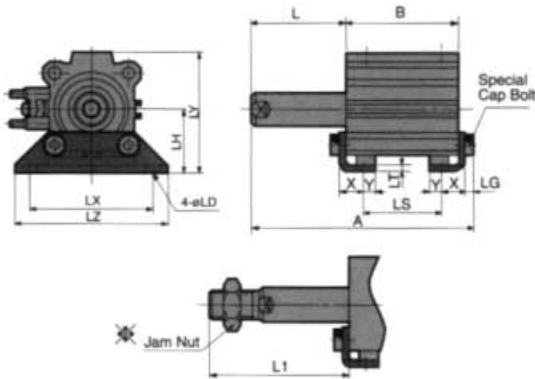
Bore size	G	Th9
32	2	21 $\begin{smallmatrix} 0 \\ -0.052 \end{smallmatrix}$
40	2	28 $\begin{smallmatrix} 0 \\ -0.052 \end{smallmatrix}$
50	2	35 $\begin{smallmatrix} 0 \\ -0.062 \end{smallmatrix}$

"C" dim. not applicable

* Rod end nut and accessories are detailed on p. 6.

Note) With End Boss is offered as an option.
(Add - XC36 at the end of part no.)

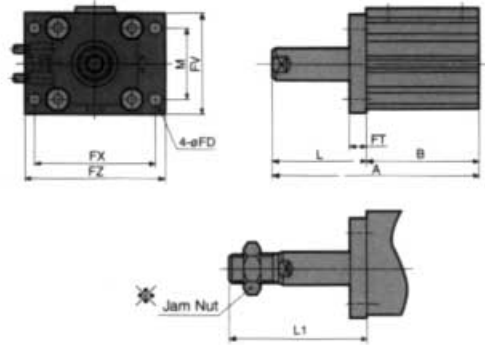
Compact Cylinder: Standard / Single Acting Single Rod (T) With Switches



Foot / (N)CDQ2L

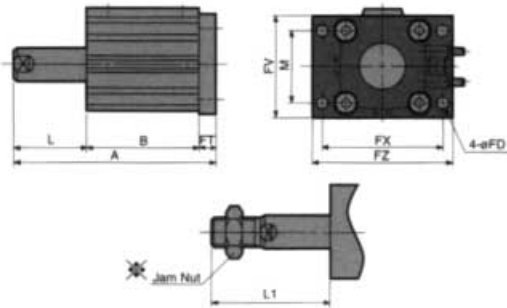
Bore size	Stroke	A			B			L			CQ2 L1			NCQ2 L1			mm
		5st	10st	20st	5st	10st	20st	5st	10st	20st	5st	10st	20st	5st	10st	20st	
32	5, 10	67.2	77.2	-	38	43	-	22	27	-	43.5	48.5	-	34.7	39.7	-	
40	5, 10	73.7	83.7	-	44.5	49.5	-	22	27	-	43.5	48.5	-	38	43	-	
50	10, 20	-	86.7	106.7	-	50.5	60.5	-	28	38	-	53.5	63.5	-	47.5	57.5	
Bore size	Stroke	LD	LG	LH	LS			LT	LX	LY	LZ	X	Y				
					5st	10st	20st										
32	5, 10	6.6	4	30	22	27	-	3.2	57	57	71	11.2	5.8				
40	5, 10	6.6	4	33	28.5	33.5	-	3.2	64	64	78	11.2	7				
50	10, 20	9	5	39	-	27.5	37.5	3.2	79	78	95	14.7	8				

Rod Flange / (N)CDQ2F



Bore size	Stroke	A			B			FD	FT	FV	FX	FZ	L			mm
		5st	10st	20st	5st	10st	20st						5st	10st	20st	
32	5, 10	60	70	-	38	43	-	5.5	8	48	56	65	22	27	-	
40	5, 10	66.5	76.5	-	44.5	49.5	-	5.5	8	54	62	72	22	27	-	
50	10, 20	-	78.5	98.5	-	50.5	60.5	6.6	9	67	76	89	-	28	38	
Bore size	Stroke	CQ2 L1			NCQ2 L1			M								
		5st	10st	20st	5st	10st	20st									
32	5, 10	43.5	48.5	-	34.7	39.7	-	34								
40	5, 10	43.5	48.5	-	38	43	-	40								
50	10, 20	-	53.5	63.5	-	47.5	57.5	50								

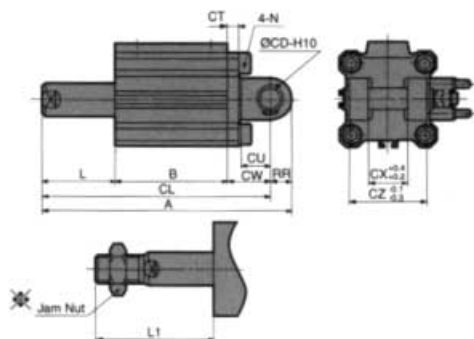
Head Flange / (N)CDQ2G



Bore size	Stroke	A			L			CQ2 L1			NCQ2 L1			mm
		5st	10st	20st	5st	10st	20st	5st	10st	20st	5st	10st	20st	
32	5, 10	58	68	-	12	17	-	33.5	38.5	-	24.7	29.7	-	
40	5, 10	64.5	74.5	-	12	17	-	33.5	38.5	-	28	33	-	
50	10, 20	-	77.5	97.5	-	18	28	-	43.5	53.5	-	37.5	47.5	

* Dimensions for the head flange cylinder are the same as rod flange except A, L, L1.

Double Clevis / (N)CDQ2D



Bore size	Stroke	A			B			CQ2/NCQ2		CL			CT	CU	CW	CX	mm
		5st	10st	20st	5st	10st	20st	CD	CD	5st	10st	20st					
32	5, 10	80	90	-	38	43	-	10	3/8	70	80	-	5	14	18	20	
40	5, 10	88.5	98.5	-	44.5	49.5	-	10	3/8	78.5	88.5	116.5	6	14	18	22	
50	10, 20	-	110.5	130.5	-	50.5	60.5	14	1/2	-	96.5	-	7	20	22	28	
Bore size	Stroke	CZ	L			CQ2 L1			NCQ2 L1			CQ2 N	NCQ2 N	RR			
			5st	10st	20st	5st	10st	20st	5st	10st	20st						
32	5, 10	36	12	17	-	33.5	38.5	-	24.7	29.7	-	M6x1.0	1/4-20	10			
40	5, 10	36	12	17	-	33.5	38.5	-	28	33	-	M6x1.0	1/4-20	10			
50	10, 20	44	-	18	28	-	43.5	53.5	-	37.5	47.5	M8x1.25	5/16-18	14			

* Rod end nut and accessories detail: see p. 6.

* Clevis pin and snap ring are included in the package.