

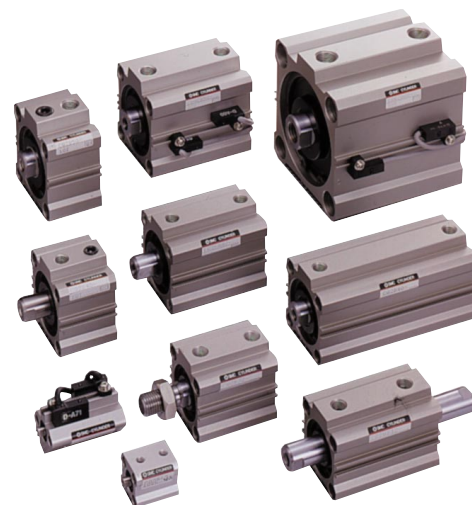
COMPACT CYLINDER SERIES CQ2

Ø12, 16, 20, 25, 32, 40, 50, 63, 80, 100mm

- ✓ Unique range of products and sizes
- ✓ Compact, light weight, space-saving design
- ✓ Magnetic option
- ✓ Single or double acting
- ✓ Non-rotating piston rod option
- ✓ Bore Sizes: Ø12 - 160mm*
- ✓ Rubber cushion option
- ✓ Unique NPL figure-8 seal

* See also CQS range.

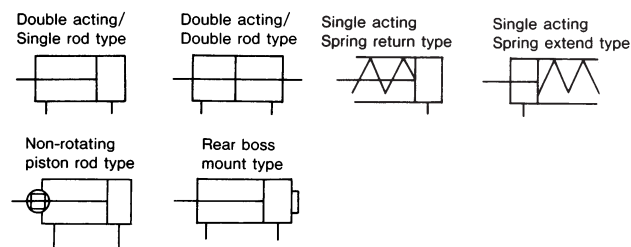
**The Biggest Selling
Pneumatic Cylinder
-in the World!**



TECHNICAL SPECIFICATIONS

Fluid	Air
Proof Pressure	1.5MPa (15.3kgf/cm ²)
Max. Operating Pressure	1.0MPa (10.2kgf/cm ²)
Min. Operating Pressure	0.05MPa (0.51kgf/cm ²)
Ambient and Fluid Temperature	Without auto switch: -10 ~ +70°C (No freezing allowed) With auto switch: -10 ~ +60°C (No freezing allowed)
Lubrication	Non-lube
Cushion	Rubber Cushion
Rod End Thread	Female Thread (Standard)
Thread Tolerance	JIS 2 Class
Stroke Length Tolerance	+1.4, 0
Mounting	Basic Type
Mounting types	Through hole (standard), Both ends tapped

SYMBOLS



MODEL: STANDARD STROKE

Bore size (mm)	Double Acting				Single Acting	
	Single rod type	Double rod type	Non-rotating piston rod type	Rear boss mount type	Spring return type	Spring Extend type
	Standard Stroke (mm)				Standard	Stroke (mm)
12	5, 10, 15, 20, 25, 30	5, 10, 15, 20, 25, 30	5, 10, 15, 20, 25, 30	5, 10, 15, 20, 25, 30	5, 10	5, 10
16	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10	5, 10
20	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10	5, 10
25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10	5, 10
32	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10	5, 10
40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10	5, 10
50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	10, 20	10, 20
63	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	-	-
80	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	-	-
100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	-	-

*See following section for Ø125, Ø140, Ø160mm sizes

Note: When a non standard stroke is required SMC will fit a spacer to adjust the stroke.
When a magnet is fitted the overall length is 10mm longer than non magnetic.
When non standard stroke or long stroke are required consult SMC for dimensions.

NON-ROTATING ROD ACCURACY SPECIFICATIONS

Bore Size (mm)	Ø12	Ø16	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63
Non-rotating rod accuracy	±2°	±1°	±1°	±1°	±1°	±1°	±1°	±1°

MINIMUM OPERATING PRESSURE

Bore size (mm)	12	16	20	25	32	40	50	63	80	100
Type										
Double acting	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Single acting	2.5	2.5	1.8	1.8	1.7	1.5	1.3	-	-	-

How To
ORDER
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HOW TO ORDER
CQ2 COMPACT CYLINDER SERIES
SEE RELEVANT PAGES FOR Ø125-160MM SIZES)

TYPE
BThrough hole
 (Standard type)
ABoth ends tapped
LAxial Foot Type
FRod side flange type
GHead side flange type
DClevis type

MODEL
Nil ...Single rod
WDouble Rod
KNon-rotating

STANDARD TYPE CQ2

WITH AUTO SWITCH CAPABILITY CDQ2

WITH AUTO SWITCH

BORE SIZE
12 ...12mm
16 ...16mm
20 ...20mm
25 ...25mm
32 ...32mm
40 ...40mm
50 ...50mm
63 ...63mm
80 ...80mm
100 ...100mm

CYLINDER STROKE (SEE BELOW)

ACTION
DDouble acting
SSingle acting/Spring return
TSingle acting/Spring extend

BODY OPTION
Nil ...Standard type (female)
CBumper cushion
MRod end male thread
FRear boss mount

Body options/Available ● - Standard ○ - Optional

Code Action	Single rod						Double Rod				Non-rotating rod				
	Nil	M	C	CM	F	FC	FCM	Nil	M	C	CM	Nil	M	C	CM
Double acting	ø12-ø25	●	●	●	○	●	●	○	●	●	○	●	○	●	-
	ø32-ø63	●	●	●	●	●	●	●	●	●	○	○	●	●	-
	ø80-ø100	●	●	●	●	●	●	●	●	●	○	○	-	-	-
	Single acting Spring return Spring Extend	●	-	-	-	●	●	-	-	-	-	-	-	-	-

NON AUTO SWITCH TYPE

Body options/Available ● - Standard ○ - Optional

BODY OPTION

Note1) Nil ...Standard type (female)
Note2) CBumper cushion
MRod end male thread
FRear boss mount

Note 1: Cushion type is standard for ø12
Note 2: Model number of the rear boss mount type shall be as follows.
Example: CDQ2B12-10DFC
Note 3: Front boss mount type is optional

Code Action		Single rod						Double Rod				Non-rotating rod					
Double acting		Nil	M	C	CM	F	FM	FC	FCM	Nil	M	C	CM	Nil	M	C	CM
	ø12~ø25	-	-	●	●	-	-	●	●	-	-	○	○	-	-	●	●
	ø32~ø63	●	●	●	○	●	●	●	○	●	●	○	○	●	●	-	-
	ø80~ø100	●	●	●	●	●	●	●	●	●	●	○	○	●	●	-	-
	Single acting Spring return Spring Extend	●	●	●	●	●	●	●	●	●	○	○	-	-	-	-	-

AUTO SWITCH TYPE

EXAMPLES
CQ2B16-30D

A double acting, non-magnetic, 16mm bore -30mm stroke cylinder with standard through hole mounting.

EXAMPLES
CDQ2KB20-50DCM

A double acting, magnetic, non-rotating, standard through hole mounting type, 20mm bore - 50mm stroke, cushioned cylinder with male thread rod end

CYLINDER STROKE (MAGNETIC & NON-MAGNETIC)

Bore	Standard Stroke					
	Double Acting, Single Rod	Double Acting, Double Rod	Double Acting, Non-Rotating Rod	Single Acting, Spring Return	Single Acting, Spring Extend	Large Bore Double Acting Single Rod & Double Rod
12	5,10,15,20,25,30	5,10,15,20,25,30	5,10,15,20,25,30	5,10	5,10	-
16	5,10,15,20,25,30	5,10,15,20,25,30	5,10,15,20,25,30	5,10	5,10	-
20	5,10,15,20,25,30,45,50	5,10,15,20,25,30,45,50	5,10,15,20,25,30,45,50	5,10	5,10	-
25	5,10,15,20,25,30,45,50	5,10,15,20,25,30,45,50	5,10,15,20,25,30,45,50	5,10	10	-
32	5,10,15,20,25,30,45,50,75,100	5,10,15,20,25,30,45,50	5,10,15,20,25,30,45,50,75,100	5,10	10	-
40	5,10,15,20,25,30,45,50,75,100	5,10,15,20,25,30,45,50	5,10,15,20,25,30,45,50,75,100	5,10	10	-
50	10,15,20,25,30,45,50,75,100	10,15,20,25,30,45,50	10,15,20,25,30,45,50,75,100	10,20	10,20	-
63	10,15,20,25,30,45,50,75,100	10,15,20,25,30,45,50	10,15,20,25,30,45,50,75,100	-	-	-
80	10,15,20,25,30,45,50,75,100	10,15,20,25,30,45,50	10,15,20,25,30,45,50,75,100	-	-	-
100	10,15,20,25,30,45,50,75,100	10,15,20,25,30,45,50	10,15,20,25,30,45,50,75,100	-	-	-
125	-	-	-	-	-	10,20,30,40,50,75,125,150,200,250,300
140	-	-	-	-	-	10,20,30,40,50,75,125,150,200,250,300
160	-	-	-	-	-	10,20,30,40,50,75,125,150,200,250,300



THE CQ2 RANGE OF COMPACT CYLINDERS

Standard Models

- Double Acting Single Rod
- Double Acting Double Rod
- Double Acting Non-Rotating Rod
- Double Acting Rear Boss Mount Type
- Single Acting Spring Return
- Single Acting Spring Extend

Also Available

- Adjustable Stroke Cylinder/Extension Adjustable Type
- Adjustable Stroke Cylinder/Retraction Adjustable Type
- Dual Stroke Cylinder/Double Rod Type
- Dual Stroke Cylinder/Single Rod Type
- High Temperature Cylinder
- Low Temperature Cylinder
- Air Hydro Cylinder
- Slow Speed Cylinder
- Clean Room Cylinder
- Copper Free Cylinder
- Stainless Steel Piston and Nut Cylinder
- Plus Others

LONG STROKE MODELS

Bore	Long stroke models
All bore sizes	75, 100, 125, 150, 175, 200, 250, 300mm



THEORETICAL FORCE

SINGLE ACTING TYPE

(Kgf)

Action	Bore size (mm)	Operating pressure (bar)			Spring extend position	Spring returned position	Rod end Max. axial load
		3	5	7			
Spring Return	12	1.9	4.2	6.5	1.4	0.4	0.23
	16	4.5	8.5	12.5	1.5	0.6	0.61
	20	7.8	14.1	20.3	1.6	0.6	0.67
	25	12.6	22.4	32.2	2.1	1.1	1.63
	32	21.7	37.8	53.8	2.4	1.5	1.77
	40	34.5	59.7	84.8	3.1	1.3	1.77
	50	52.9	92.1	131.4	5.5	2.5	3.1
Spring Extend	12	1.4	3.2	4.8	1.1	0.3	0.23
	16	2.4	5.4	8.4	2.1	0.4	0.61
	20	4.2	8.9	13.6	2.8	0.5	0.67
	25	8.3	15.8	23.4	3.0	1.0	1.63
	32	15.0	27.1	39.2	3.0	2.0	1.77
	40	28.6	49.7	70.8	3.0	2.0	1.77
	50	40.9	73.9	106.9	8.5	2.5	3.1

DOUBLE ACTING TYPE

(Kgf)

Bore size (mm)	Acting direction	Operating pressure (bar)		
		3	5	7
12	IN	2.5	4.2	5.9
	OUT	3.3	5.6	7.9
16	IN	4.5	7.5	10.5
	OUT	6	10	14
20	IN	7	11.7	16.4
	OUT	9.4	15.7	21.9
25	IN	11.3	18.8	26.4
	OUT	14.7	24.5	34.3
32	IN	18	30	42
	OUT	24	40	56
40	IN	31	52	73
	OUT	37	62	87
50	IN	49	82	115
	OUT	58	98	137
63	IN	84	140	196
	OUT	93	155	218
80	IN	136	227	317
	OUT	150	251	352
100	IN	214	357	500
	OUT	236	393	550
125	IN	338	563	788
	OUT	368	614	859
140	IN	431	719	1006
	OUT	461	770	1077
160	IN	565	942	1319
	OUT	603	1005	1407

SPACE ECONOMY

Compact CQ cylinder models can perform the same work as a much larger traditional ISO cylinder. The compact nature of the product does mean that it has, however, slightly lower resistance to side loads. SMC's CQ2 cylinders are 50% shorter and weigh 50% less than equivalent tie-rod cylinders.



C95 x Bore Y Stroke



CQ2 x Bore Y Stroke



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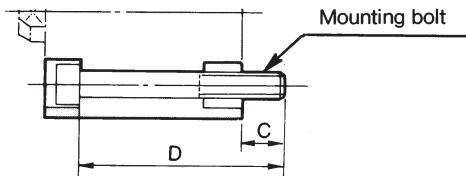
ACCESSORIES
MOUNTING BOLTS
CQ2 COMPACT CYLINDER

Model	C	D	Mounting Bolt
CQ2B12-5D	6.5	25	M3X25L
-10D		30	X30L
-15D		35	X35L
-20D		40	X40L
-25D		45	X45L
-30D		50	X50L
CQ2B16-5D	5	25	M3X25L
-10D		30	X30L
-15D		35	X35L
-20D		40	X40L
-25D		45	X45L
-30D		50	X50L
CQ2B20-5D	7.5	25	M5X25L
-10D		30	X30L
-15D		35	X35L
-20D		40	X40L
-25D		45	X45L
-30D		50	X50L
-35D		55	X55L
-40D		60	X60L
-45D		65	X65L
-50D		70	X70L
CQ2B25-5D	9.5	30	M5X30L
-10D		35	X35L
-15D		40	X40L
-20D		45	X45L
-25D		50	X50L
-30D		55	X55L
-35D		60	X60L
-40D		65	X65L
-45D		70	X70L
-50D		75	X75L

Model	C	D	Mounting Bolt
CQ2B32-5D	9	30	M5X30L
-10D		35	X35L
-15D		40	X40L
-20D		45	X45L
-25D		50	X50L
-30D		55	X55L
-35D		60	X60L
-40D		65	X65L
-45D		70	X70L
-50D		75	X75L
-75D		110	X110L
-100D		135	X135L
CQ2B40-5D	7.5	35	M5X35L
-10D		40	X40L
-15D		45	X45L
-20D		50	X50L
-25D		55	X55L
-30D		60	X60L
-35D		65	X65L
-40D		70	X70L
-45D		75	X75L
-50D		80	X80L
-75D		115	X115L
-100D		140	X140L
CQ2B50-10D	12.5	45	M6X45L
-15D		50	X50L
-20D		55	X55L
-25D		60	X60L
-30D		65	X65L
-35D		70	X70L
-40D		75	X75L
-45D		80	X80L
-50D		85	X85L
-75D		120	X120L
-100D		145	X145L

Model	C	D	Mounting Bolt
CQ2B63-10D	14.5	50	M8X50L
-15D		55	X55L
-20D		60	X60L
-25D		65	X65L
-30D		70	X70L
-35D		75	X75L
-40D		80	X80L
-45D		85	X85L
-50D		90	X90L
-75D		125	X125L
-100D		150	X150L
CQ2B80-10D	15	55	M10X55L
-15D		60	X60L
-20D		65	X65L
-25D		70	X70L
-30D		75	X75L
-35D		80	X80L
-40D		85	X85L
-45D		90	X90L
-50D		95	X95L
-75D		130	X130L
-100D		155	X155L
CQ2B100-10D	15.5	65	M10X65L
-15D		70	X70L
-20D		75	X75L
-25D		80	X80L
-30D		85	X85L
-35D		90	X90L
-40D		95	X95L
-45D		100	X100L
-50D		105	X105L
-75D		140	X140L
-100D		165	X165L

DIMENSIONS
MOUNTING BOLTS
CQ2 COMPACT CYLINDER



ACCESSORIES
SEAL KITS
CQ2 COMPACT CYLINDER

- SEAL KITS
(NITRILE - STANDARD)
- CQ2B12-PS
 - CQ2B16-PS
 - CQ2B20-PS
 - CQ2B25-PS
 - CQ2B32-PS
 - CQ2B40-PS
 - CQ2B50-PS
 - CQ2B63-PS
 - CQ2B80-PS
 - CQ2B100-PS
- SEAL KITS
(NITRILE - NON ROTATING)
- CQ2KB12-PS
 - CQ2KB16-PS
 - CQ2KB20-PS
 - CQ2KB25-PS
 - CQ2KB32-PS
 - CQ2KB40-PS
 - CQ2KB50-PS
 - CQ2KB63-PS

ACCESSORIES
AUTO SWITCHES

MODEL		SPECIFICATIONS					
Part no	Part no						
Grommet Type	Connector Type	TYPE	LOAD VOLTAGE	LOAD CURRENT	POWER SOURCE	INTERNAL VOLTAGE DROP	INDICATOR LAMP
D-A73L	D-A73CL	REED	24VDC 100VAC	5~40mA 5~20mA		MAX 2.4V	ON:RED LED
D-A80L	D-A80CL	REED	24VDC/AC OR LESS 100VDC/AC	MAX 50mA MAX 20mA		0	NONE
D-F79L-Q	~	3 WIRE SOLID STATE NPN	28VDC OR LESS	MAX 150mA	5~28VDC	0.8V MAX	ON:RED LED
D-F7PL-Q	~	3 WIRE SOLID STATE PNP	28VDC OR LESS	MAX 100mA	5~28VDC	0.8V MAX	ON:RED LED
D-J79L-Q	D-J79CL-Q	2 WIRE SOLID STATE	28VDC OR LESS	5~ 150mA	~	3V MAX	ON:RED LED

ACCESSORIES
AUTO SWITCH MOUNTING SCREW

- BQ-1(Ø12~25)
BQ-2(Ø32~160)

MORE ACCESSORIES
SEE NEXT PAGE



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ACCESSORIES

MOUNTING BOLTS

CDQ2 COMPACT CYLINDER Ø12-100MM

Model	C	D	Mounting Bolt
CDQ2B12-5D	5.5	35	M3X35L
-10D		40	X40L
-15D		45	X45L
-20D		50	X50L
-25D		55	X55L
-30D		60	X60L
CDQ2B16-5D	8	40	M3X40L
-10D		45	X45L
-15D		50	X50L
-20D		55	X55L
-25D		60	X60L
-30D		65	X65L
CDQ2B20-5D	10.5	40	M5X40L
-10D		45	X45L
-15D		50	X50L
-20D		55	X55L
-25D		60	X60L
-30D		65	X65L
-35D		70	X70L
-40D		75	X75L
-45D		80	X80L
-50D		85	X85L
CDQ2B25-5D	9.5	40	M5X40L
-10D		45	X45L
-15D		50	X50L
-20D		55	X55L
-25D		60	X60L
-30D		65	X65L
-35D		70	X70L
-40D		75	X75L
-45D		80	X80L
-50D		85	X85L

Model	C	D	Mounting Bolt
CDQ2B32-5D	9	40	M5X40L
-10D		45	X45L
-15D		50	X50L
-20D		55	X55L
-25D		60	X60L
-30D		65	X65L
-35D		70	X70L
-40D		75	X75L
-45D		80	X80L
-50D		85	X85L
-75D		110	X110L
-100D		135	X135L
CDQ2B40-5D	7.5	45	M5X45L
-10D		50	X50L
-15D		55	X55L
-20D		60	X60L
-25D		65	X65L
-30D		70	X70L
-35D		75	X75L
-40D		80	X80L
-45D		85	X85L
-50D		90	X90L
-75D		115	X115L
-100D		140	X140L
CDQ2B50-10D	15.5	55	M6X55L
-15D		60	X60L
-20D		65	X65L
-25D		70	X70L
-30D		75	X75L
-35D		80	X80L
-40D		85	X85L
-45D		90	X90L
-50D		95	X95L
-75D		120	X120L
-100D		145	X145L

Model	C	D	Mounting Bolt
CDQ2B63-10D	14.5	60	M8X60L
-15D		65	X65L
-20D		70	X70L
-25D		75	X75L
-30D		80	X80L
-35D		85	X85L
-40D		90	X90L
-45D		95	X95L
-50D		100	X100L
-75D		125	X125L
-100D		150	X150L
CDQ2B80-10D	15	65	M10X65L
-15D		70	X70L
-20D		75	X75L
-25D		80	X80L
-30D		85	X85L
-35D		90	X90L
-40D		95	X95L
-45D		100	X100L
-50D		105	X105L
-75D		130	X130L
-100D		155	X155L
CDQ2B100-10D	15.5	75	M10X75L
-15D		80	X80L
-20D		85	X85L
-25D		90	X90L
-30D		95	X95L
-35D		100	X100L
-40D		105	X105L
-45D		110	X110L
-50D		115	X115L
-75D		140	X140L
-100D		165	X165L

ACCESSORIES

MOUNTING ATTACHMENTS CQ2 & CDQ2

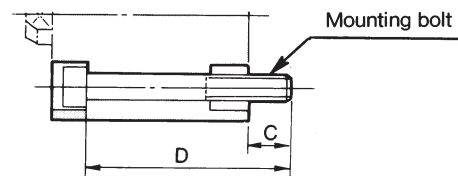
Bore (mm)	*Axial foot	Flange	Clevis
12	CQ-L012	CQ-F012	CQ-D012
16	CQ-L016	CQ-F016	CQ-D016
20	CQ-L020	CQ-F020	CQ-D020
25	CQ-L025	CQ-F025	CQ-D025
32	CQ-L032	CQ-F032	CQ-D032
40	CQ-L040	CQ-F040	CQ-D040
50	CQ-L050	CQ-F050	CQ-D050
63	CQ-L063	CQ-F063	CQ-D063
80	CQ-L080	CQ-F080	CQ-D080
100	CQ-L100	CQ-F100	CQ-D100

*Fit 2 foot fixtures on each cylinder.

DIMENSIONS

MOUNTING BOLTS

CDQ2 COMPACT CYLINDER



DIMENSIONAL DRAWING INDEX

		Page No.
Non-Magnetic CQ2 B (A)	Single Acting, Spring Return	1-126
	Single Acting, Spring Extend	1-126
	Double Acting, Single Rod	1-127
	Double Acting, Non-Rotate	1-128
	Double Acting, Double Rod	1-129
Magnetic CDQ2B (A)	Double Acting, Single Rod	1-130
	Double Acting, Non-Rotate	1-130
	Double Acting, Double Rod	1-132

Note: Double Acting/Axial Foot type
Double Acting/Rear Boss Mount type
Double Acting/Rod Side Flange type
Double Acting/Head Side Flange type
Double Acting/Clevis type

} Contact SMC or refer to Catalogue E210-B

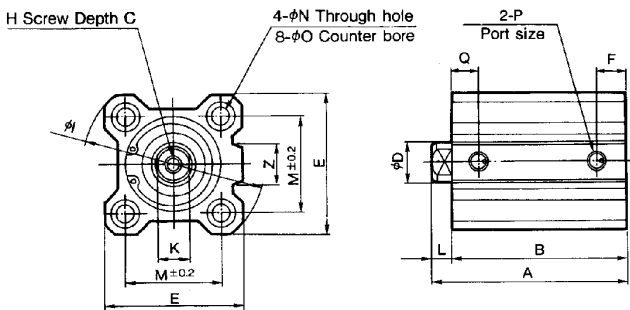


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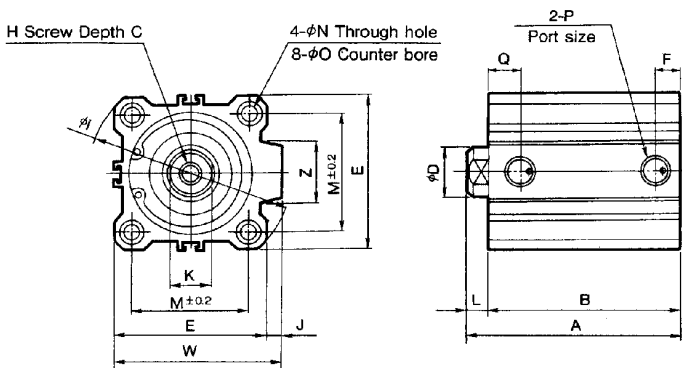


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DIMENSIONS
CQ2 SINGLE ACTING SPRING RETURN Ø12~25MM



DIMENSIONS
CQ2 SINGLE ACTING SPRING RETURN Ø32~50MM



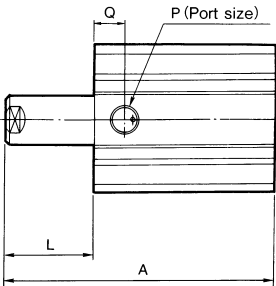
Bore size (mm)	A			B			ØD	E	F		H	C	ØI
	5st	10st	20st	5st	10st	20st			5st	10st			
12	25.5	30.5	-	22	27	-	6	25	5	5	M3X0.5	6	32
16	27	32	-	23.5	28.5	-	8	29	5.5	5.5	M4X0.7	8	38
20	29	34	-	24.5	29.5	-	10	36	5.5	5.5	M5X0.8	7	47
25	32.5	37.5	-	27.5	32.5	-	12	40	5.5	5.5	M6X1.0	12	52
32	35	40	-	28	33	-	16	45	5.5	7.5	M8X1.25	13	60
40	41.5	46.5	-	34.5	39.5	-	16	52	8	8	M8X1.25	13	69
50	-	48.5	58.5	-	40.5	50.5	20	64	10.5	10.5	M10X1.5	15	86

Bore size (mm)	J	K	L	M	ØN	ØO	P			Q		W	Z
							5st	10st	20st	5st	10st		
12	-	5	3.5	15.5	3.5	6.4Depth3.5	M5X0.8	-	-	7.5	7.5	-	-
16	-	6	3.5	20	3.5	6.5Depth3.5	M5X0.8	-	-	8	8	-	10
20	-	8	4.5	25.5	5.5	9Depth7	M5X0.8	-	-	9	9	-	10
25	-	10	5	28	5.5	9Depth7	M5X0.8	-	-	11	11	-	10
32	4.5	14	7	34	5.5	9Depth7	M5X0.8	1/8	-	11.5	10.5	49.5	18
40	5	14	7	40	5.5	9Depth7	1/8		-	11	11	57	18
50	7	17	8	50	6.6	11Depth8	-	1/4		10.5	10.5	71	22

Note) Magnetic version available

DIMENSIONS
CQ2 SINGLE ACTING SPRING EXTEND

Ø12~Ø50mm



Note1)
Single Acting/Spring Extend

Bore size (mm)	A			L		
	5st	10st	20st	5st	10st	20st
12	30.5	40.5	—	8.5	13.5	—
16	32	42	—	8.5	13.5	—
20	34	44	—	9.5	14.5	—
25	37.5	47.5	—	10	15	—
32	40	50	—	12	17	—
40	46.5	56.5	—	12	17	—
50	—	58.5	78.5	—	18	28

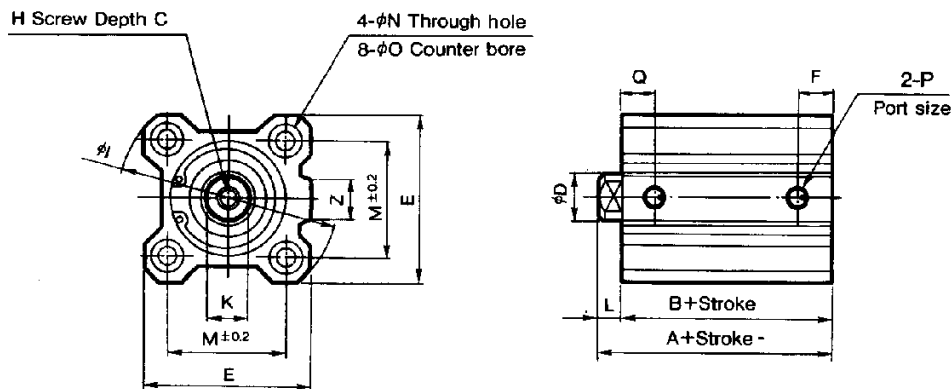
Note 1) Unless specified dimensions are same as spring return type.



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E210-B

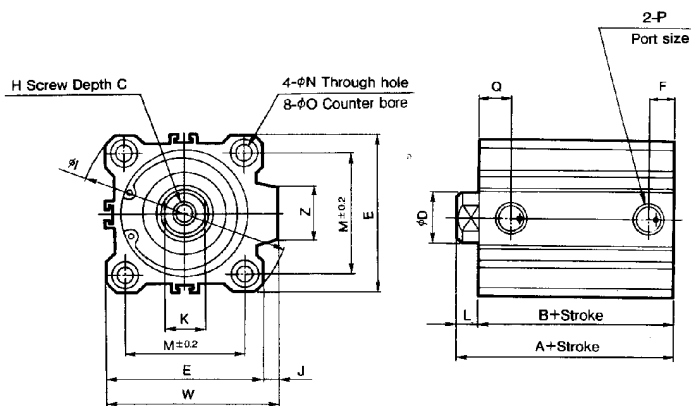
DIMENSIONS

CQ2 DOUBLE ACTING Ø12-25MM (NON-MAGNETIC)



DIMENSIONS

CQ2 DOUBLE ACTING Ø32-100MM (NON-MAGNETIC)



For magnetic type see Series CDQ

Model	(Note 1) Stroke Range (mm)	A	B	ØD	E	F	H	C	ØI	J	K	L	M	ØN	ØO	P	Q	W	Z
CQ2B12-•D	5-30	20.5	17	6	25	5	M3X0.5	6	32	-	5	3.5	15.5	3.5	6.5Depth3.5	M5X0.8	7.5	-	-
CQ2B16-•D	5-30	22.0	18.5	8	29	5.5	M4X0.7	8	38	-	6	3.5	20	3.5	6.5Depth3.5	M5X0.8	8	-	10
CQ2B20-•D	5-50	24	19.5	10	36	5.5	M5X0.8	7	47	-	8	4.5	25.5	5.5	9Depth7	M5X0.8	9	-	10
CQ2B25-•D	5-50	27.5	22.5	12	40	5.5	M6x1.0	12	52	-	10	5	28	5.5	9Depth7	M5X0.8	11	-	10
CQ2B32-•D	5	30	23	16	45	5.5	M8X1.25	13	60	4.5	14	7	34	5.5	9Depth7	M5X0.8	11.5	49.5	18
	10-50					7.5										1/8	10.5		
CQ2B40-•D	5-50	36.5	29.5	16	52	8	M8X1.25	13	69	5	14	7	40	5.5	9Depth7	1/8	11	57	18
CQ2B50-•D	10-50	38.5	30.5	20	64	10.5	M10X1.5	15	86	7	17	8	50	6.6	11Depth8	1/4	10.5	71	22
CQ2B63-•D	10-50	44	36	20	77	10.5	M10X1.5	15	103	7	17	8	60	9	14Depth10.5	1/4	15	84	22
CQ2B80-•D	10-50	53.5	43.5	25	98	12.5	M16X2.0	21	132	6	22	10	77	11	17.5Depth13.5	3/8	16	104	26
CQ2B100-•D	10-50	65	53	30	117	13	M20x2.5	27	156	6.5	27	12	94	11	17.4Depth13.5	3/8	23	123.5	26

NOTE: Standard stroke available at 5mm intervals

Note 2) Long Stroke

Bore Size (mm)	Stroke (mm)	A	B	F	P	Q
32	75,100	40	33	7.5	1/8	10.5
40	75,100	46.5	39.5	8	1/8	11
50	75,100	48.5	40.5	10.5	1/8	10.5
63	75,100	54	46	10.5	1/8	15
80	75,100	63.5	53.5	12.5	1/8	16
100	75,100	75	63	13	1/8	23

Note 1) Standard stroke available at 5mm intervals.
Note 2) A spacer of 5, 10, 15 and 20mm is used for intermediate stroke.

(55, 60, 65, 70, 80, 85, 90, 95) between 55 and 100mm stroke.
Note 3) Unless specifies, dimensions are same as above. (Both ends tapped type, Rod end male thread type)

MORE DIMENSIONS
SEE NEXT PAGE

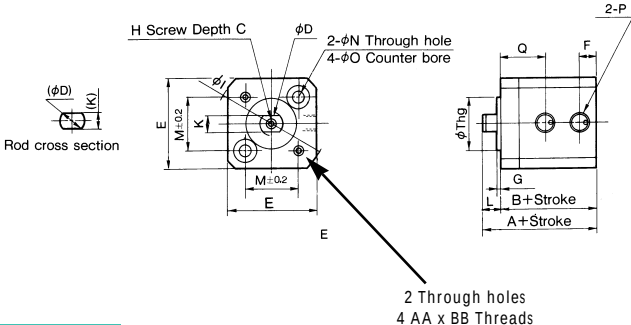


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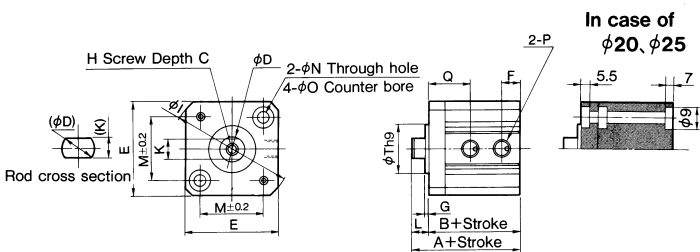


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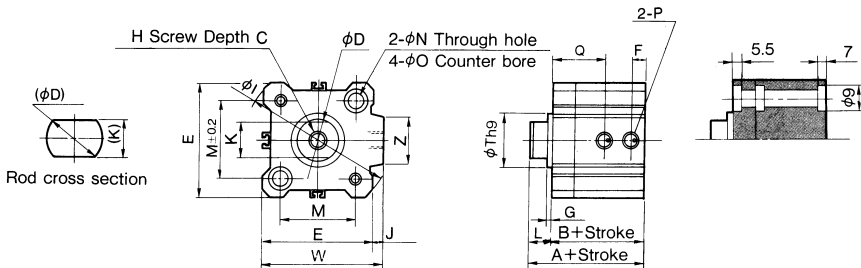
DIMENSIONS
DOUBLE ACTING, NON-MAGNETIC
NON-ROTATING ROD Ø12MM



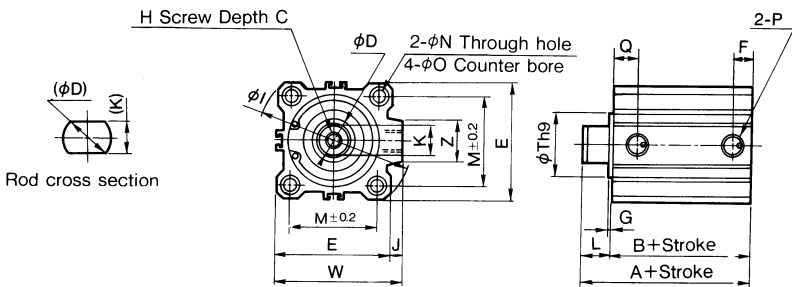
DIMENSIONS
DOUBLE ACTING, NON-MAGNETIC
NON-ROTATING ROD Ø16~25MM



DIMENSIONS
DOUBLE ACTING, NON-MAGNETIC
NON-ROTATING ROD Ø32MM



DIMENSIONS
DOUBLE ACTING, NON-MAGNETIC
NON-ROTATING ROD Ø40~63MM



Model	Note 1) Stroke range (mm)	A	B	ØD	E	F	G	H	C	ØI	J	K	L	M	ØN	ØO	P	Q	ØTh9	W	Z	AA	BB
CQ2KB12	5~30	25.5	22	6	25	5	1.5	M3x0.5	6	32	-	5.2	3.5	15.5	3.5	6.5Depth3.5	M5x0.8	12.5	15 ⁰ _{-0.043}	-	-	M4x0.7	7
CQ2KB16	5~30	27	23.5	8	29	5.5	1.5	M4x0.7	8	38	-	6	3.5	20	3.5	6.5Depth3.5	M5x0.8	13	20 ⁰ _{-0.052}			M4x0.7	7
CQ2KB20	5~50	32	27.5	10	36	5.5	2	M5x0.8	7	47	-	8	4.5	25.5	5.5	See Above Drawing	M5x0.8	17	13 ⁰ _{-0.043}	-	-	M6x1.0	10
CQ2KB25	5~50	35.5	30.5	12	40	5.5	2	M6x1.0	12	52	-	10	5	28	5.5		M5x0.8	19	15 ⁰ _{-0.043}	-	-	M6x1.0	10
CQ2KB32	5 10~50	39	32	16	45 ^{5.5} _{7.5}		2	M8x1.25	13	60	4.5	14	7	34	5.5		M5x0.8 1/8	20.5 19.5	21 ⁰ _{-0.052}	49.5	18	M6x1.0	10
CQ2KB40	5~50	36.5	29.5	16	52	8	2	M8x1.25	13	69	5	14	7	40	5.5	9Depth7	1/8	11	28 ⁰ _{-0.052}	57	18	N/A	N/A
CQ2KB50	5~50	38.5	30.5	20	64	10.5	2	M10x1.5	15	86	7	18	8	50	6.6	11Depth8	1/4	10.5	35 ⁰ _{-0.062}	71	22	N/A	N/A
CQ2KB63	5~50	44	36	20	77	10.5	2	M10x1.5	15	103	7	18	8	60	9	14Depth10.5	1/4	15	35 ⁰ _{-0.062}	84	22	N/A	N/A

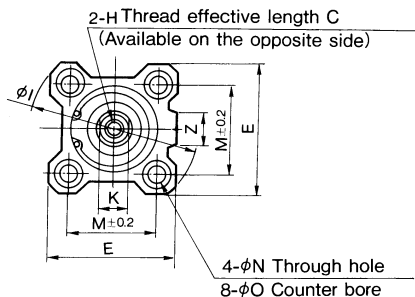
MORE DIMENSIONS
SEE NEXT PAGE



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E210-B

DIMENSIONS CQ2WB

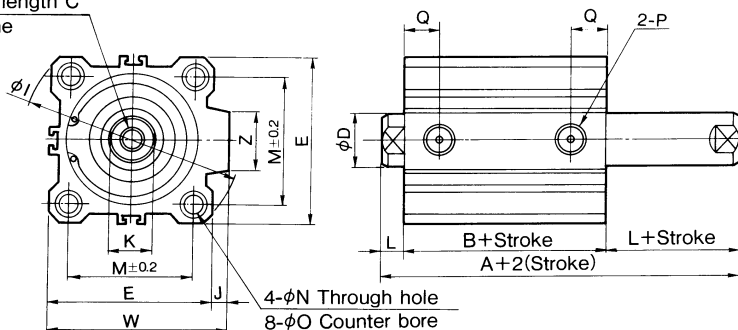
DOUBLE ACTING, DOUBLE ROD, NON-MAGNETIC
Ø12~25MM



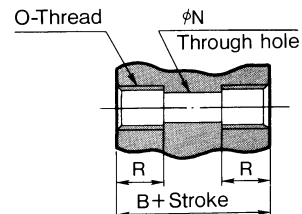
DIMENSIONS CQ2WB

DOUBLE ACTING, DOUBLE ROD, NON-MAGNETIC
Ø32~100MM

Thread effective length C
(Available on the opposite side)



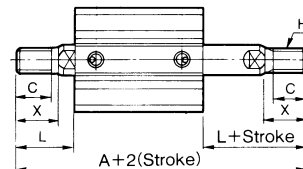
Both Ends Tapped: CQ2WA



Both Ends Tapped

Bore size (mm)	O	R
12	M4×0.7	7
16	M4×0.7	7
20	M6×1.0	10
25	M6×1.0	10
32	M6×1.0	10
40	M6×1.0	10
50	M8×1.25	14
63	M10×1.5	18
80	M12×1.75	22
100	M12×1.75	22

Rod End Male Thread



Rod End Male Thread

Bore size (mm)	A	C	H	L	X
12	53.2	9	M5×0.8	14	10.5
16	57	10	M6×1.0	15.5	12
20	63	12	M8×1.25	18.5	14
25	74	15	M10×1.25	22.5	17.5
32	87.5	20.5	M14×1.5	28.5	23.5
40	97	20.5	M14×1.5	28.5	23.5
50	107.5	26	M18×1.5	33.5	28.5
63	109	26	M18×1.5	33.5	28.5
80	138	32.5	M22×1.5	43.5	35.5
100	147.5	32.5	M26×1.5	43.5	35.5

Model	Note1) Stroke range (mm)	A	B	D	E	H	C	I	J	K	L	M	φN	φO	P	Q	W	Z
CQ2WB12	5~30	32.2	25.2	6	25	M3×0.5	6	32	—	5	3.5	15.5	3.5	6.5Depth3.5	M5×0.8	10	—	—
CQ2WB16	5~30	33	26	8	29	M4×0.7	8	38	—	6	3.5	20	3.5	6.5Depth3.5	M5×0.8	10	—	—
CQ2WB20	5~50	35	26	10	36	M5×0.8	7	47	—	8	4.5	25.5	5.5	9Depth7	M5×0.8	9.5	—	—
CQ2WB25	5~50	39	29	12	40	M6×1.0	12	52	—	10	5	28	5.5	9Depth7	M5×0.8	11	—	—
CQ2WB32	5 10~50	44.5	30.5	16	45	M8×1.25	13	60	4.5	14	7	34	5.5	9Depth7	M5×0.8 1/8	12.5	49.5	18
CQ2WB40	5~50	54	40	16	52	M8×1.25	13	69	5	14	7	40	5.5	9Depth7	1/8	14	57	18
CQ2WB50	10~50	56.5	40.5	20	64	M10×1.5	15	86	7	17	8	50	6.6	11Depth8	1/4	14	71	22
CQ2WB63	10~50	58	42	20	77	M10×1.5	15	103	7	17	8	60	9	14Depth10.5	1/4	15.5	84	22
CQ2WB80	10~50	71	51	25	98	M16×2.0	21	132	6	22	10	77	11	17.5Depth13.5	3/8	18	104	26
CQ2WB100	10~50	84.5	60.5	30	117	M20×2.5	27	156	6.5	27	12	94	11	17.5Depth13.5	3/8	22	123.5	26

Note 1) Standard stroke available at 5mm intervals.



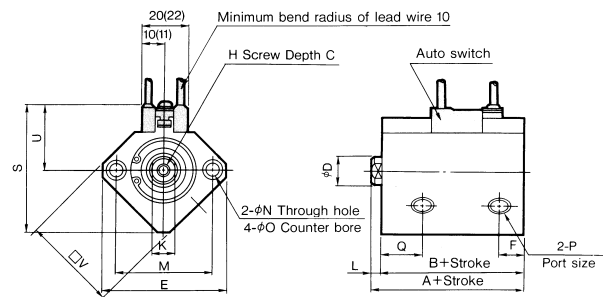
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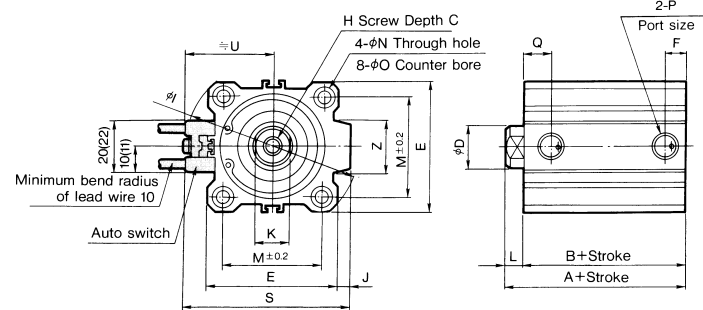
DIMENSIONS

DOUBLE ACTING MAGNETIC CDQ• Ø12~25MM



DIMENSIONS

DOUBLE ACTING MAGNETIC CDQ• Ø32~100MM

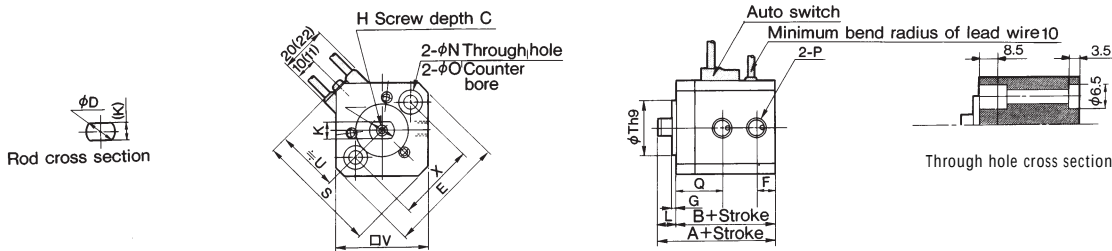


Model	Note 1) Stroke range (mm)	A	B	ØD	E	F	H	C	ØI	J	K	L	M	ØN	ØO	P	Q	S	U	V	Z
CDQ2B12	5~30	31.5	28	6	32	6.5	M3X0.5	6	-	-	5	3.5	22	3.5	6.5Depth3.5	M5x0.8	11	35.5	19.5	25	-
CDQ2B16	5~30	34	30.5	8	38	5.5	M4X0.7	8	-	-	6	3.5	28	3.5	6.5Depth3.5	M5x0.8	10	41.5	22.5	29	-
CDQ2B20	5~50	36	31.5	10	47	5.5	M5X0.8	7	-	-	8	4.5	36	5.5	9Depth7	M5x0.8	10.5	48	24.5	36	-
CDQ2B25	5~50	37.5	32.5	12	52	5.5	M6X1.0	12	-	-	10	5	40	5.5	9Depth7	M5x0.8	11	53.5	27.5	40	-
CDQ2B32	5~50	40	33	16	45	7.5	M8X1.25	13	60	4.5	14	7	34	5.5	9Depth7	1/8	10.5	58.5	31.5	-	18
CDQ2B40	5~50	46.5	39.5	16	52	8	M8X1.25	13	69	5	14	7	40	5.5	9Depth7	1/8	11	66	35	-	18
CDQ2B50	10~50	48.5	40.5	20	64	10.5	M10X1.5	15	86	7	17	8	50	6.6	11Depth8	1/4	10.5	80	41	-	22
CDQ2B63	10~50	54	46	20	77	10.5	M10X1.5	15	103	7	17	8	60	9	14Depth10.5	1/4	15	93	47.5	-	22
CDQ2B80	10~50	63.5	53.5	25	98	12.5	M16X2.0	21	132	6	22	10	77	11	17.5Depth13.5	3/8	16	112.5	57.5	-	26
CDQ2B100	10~50	75	63	30	117	13	M20x2.5	27	156	6.5	27	12	94	11	17.5Depth13.5	3/8	23	132.5	67.5	-	26

DIMENSIONS

DOUBLE ACTING MAGNETIC

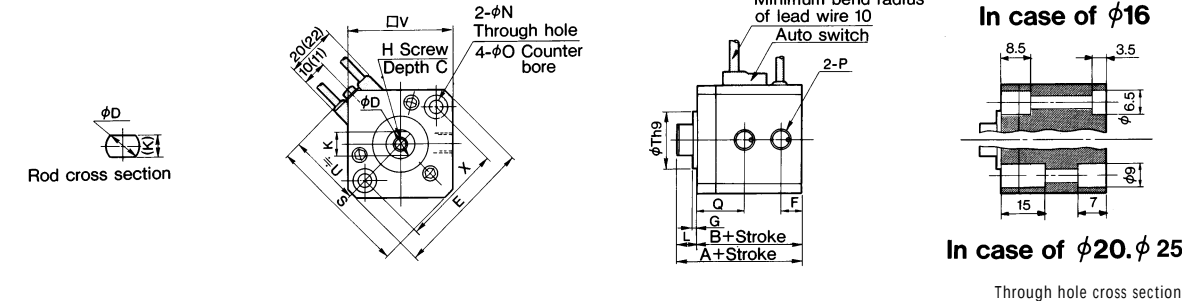
NON-ROTATING PISTON TYPE Ø12MM



DIMENSIONS

DOUBLE ACTING MAGNETIC

NON-ROTATING PISTON TYPE Ø16~25MM



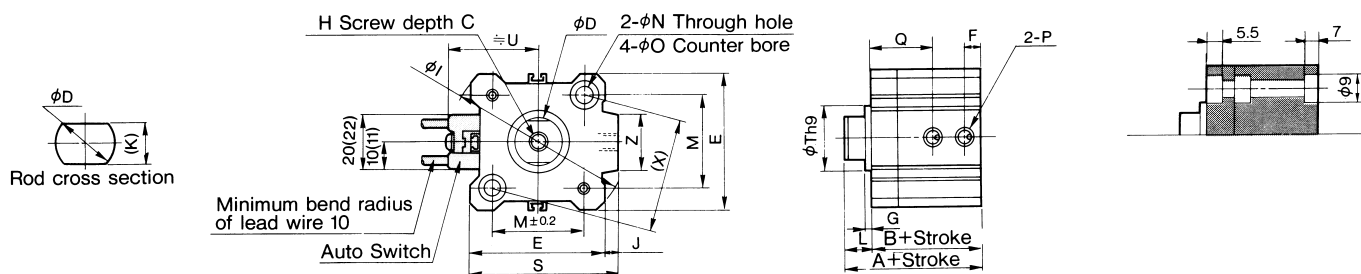
MORE DIMENSIONS

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DIMENSIONS

DOUBLE ACTING MAGNETIC

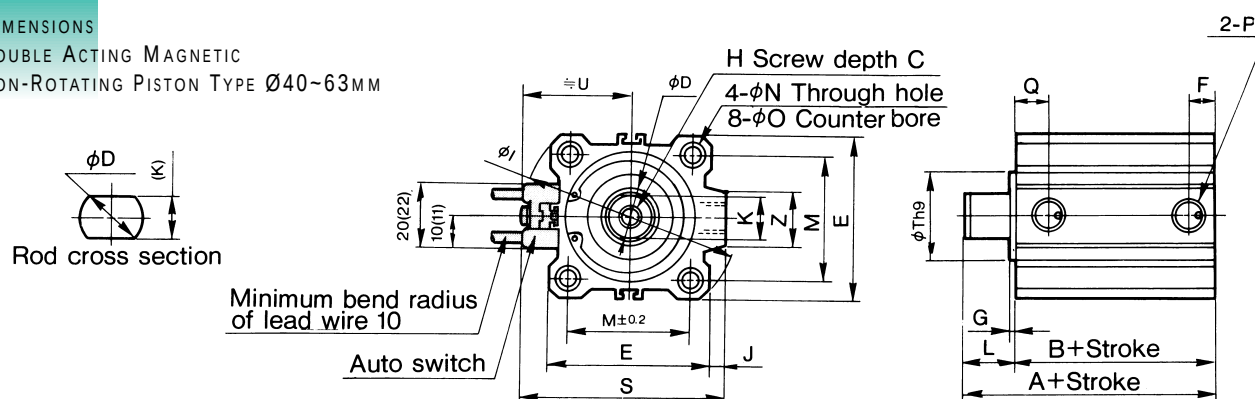
NON-ROTATING PISTON TYPE Ø32MM



DIMENSIONS

DOUBLE ACTING MAGNETIC

NON-ROTATING PISTON TYPE Ø40~63MM

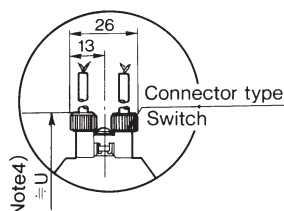


Model	Note 1) Stroke range (mm)	A	B	ØD	E	F	G	H	C	ØI	J	K	L	M	ØN	ØO	P	Q	S	ØTh9	U	V	X	Z
CDQ2KB12	5-30	36.5	33	6	32	6.5	1.5	M3x0.5	6	-	-	5.2	3.5	-	3.5	See above drawing	M5x0.8	16	35.5	15 0/-0.043	19.5	25	22	-
CDQ2KB16	5-30	39	35.5	8	38	5.5	1.5	M4x0.7	8	-	-	6	3.5	-	3.5		M5x0.8	15	41.5	20 0/-0.052	22.5	29	28	-
CDQ2KB20	5-50	44	39.5	10	46.8	5.5	2	M5x0.8	7	-	-	8	4.5	-	5.5		M5x0.8	18.5	48	13 0/-0.043	24.5	36	36	-
CDQ2KB25	5-50	45.5	40.5	12	40	5.5	2	M6x1.0	12	-	-	10	5	-	5.5		M5x0.8	19	53.5	15 0/-0.043	27.5	40	40	-
CDQ2KB32	5-50	49	42	16	45	7.5	2	M8x1.25	13	60	4.5	14	7	34	5.5		1/8	19.5	58.5	21 0/-0.052	31.5	-	48	18
CDQ2KB40	5-50	46.5	39.5	16	52	8	2	M8x1.25	13	69	5	14	7	40	5.5	9 Depth 7	1/8	11	66	28 0/-0.052	35	-	-	18
CDQ2KB50	10-50	48.5	40.5	20	64	10.5	2	M10x1.5	15	86	7	18	8	50	6.6	11 Depth 8	1/4	10.5	80	35 0/-0.062	41	-	-	22
CDQ2KB63	10-50	54	46	20	77	10.5	2	M10x1.5	15	103	18	8	60	9	9	14 Depth 10.5	1/4	15	93	35 0/-0.062	47.5	-	-	22

() shows dimensions of solid state type and reed switch type (DF-A70H, A80H).

DIMENSIONS

In Case of Connector Type Auto Switch

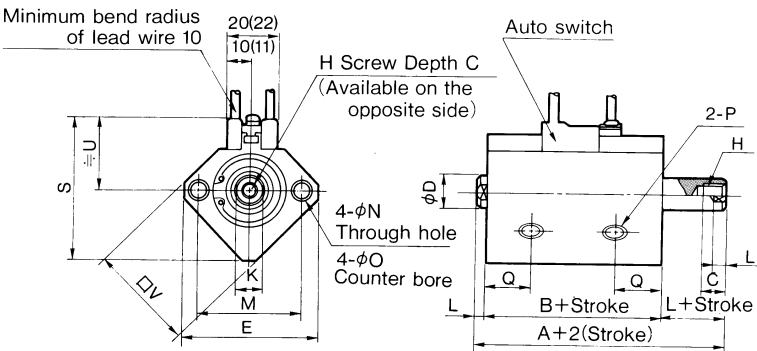


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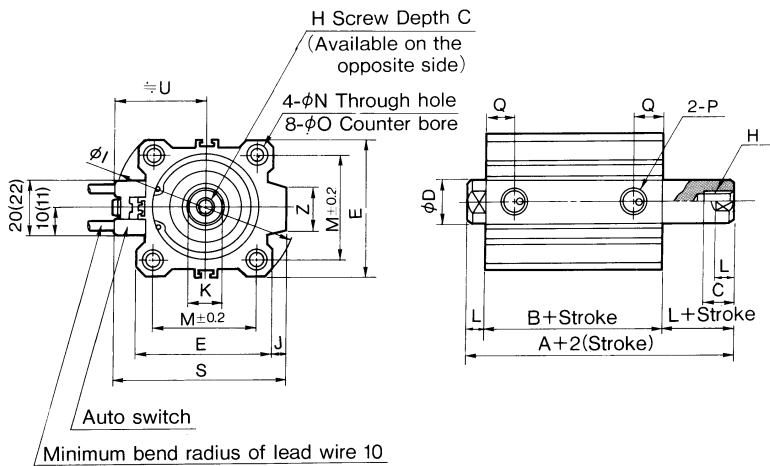


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E210-B

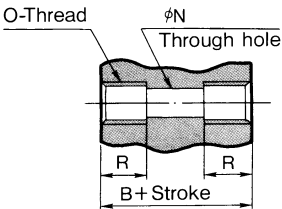
DIMENSIONS
DOUBLE ACTING, DOUBLE ROD, MAGNETIC
Ø12~25MM



DIMENSIONS
DOUBLE ACTING, DOUBLE ROD, MAGNETIC
Ø32~100MM



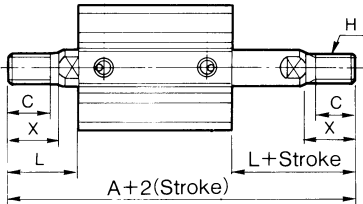
Both Ends Tapped:CDQ2WA



Both Ends Tapped

Bore size (mm)	O	R
12	M4×0.7	7
16	M4×0.7	7
20	M6×1.0	10
25	M6×1.0	10
32	M6×1.0	10
40	M6×1.0	10
50	M8×1.25	14
63	M10×1.5	18
80	M12×1.75	22
100	M12×1.75	22

Rod End Male Thread



Rod End Male Thread

Bore size (mm)	A	C	H	L	X
12	60.4	9	M5×0.8	14	10.5
16	67	10	M6×1.0	15.5	12
20	75	12	M8×1.25	18.5	14
25	84	15	M10×1.25	22.5	17.5
32	97.5	20.5	M14×1.5	28.5	23.5
40	107	20.5	M14×1.5	28.5	23.5
50	117.5	26	M18×1.5	33.5	28.5
63	119	26	M18×1.5	33.5	28.5
80	148	32.5	M22×1.5	43.5	35.5
100	157.5	32.5	M26×1.5	43.5	35.5

() shows dimensions of solid state type and reed switch type (D-A7OH, A80H).

Model	Note1) Stroke range (mm)	A	B	φD	E	H	C	φI	J	K	L	M	φN	φO	P	Q	S	U	V	Z
CDQ2WB12	5~30	39.4	32.4	6	32	M3×0.5	6	—	—	5	3.5	22	3.5	6.5Depth3.5	M5×0.8	10.5	35.5	19.5	25	—
CDQ2WB16	5~30	43	36	8	38	M4×0.7	8	—	—	6	3.5	28	3.5	6.5Depth3.5	M5×0.8	10	41.5	22.5	29	—
CDQ2WB20	5~50	47	38	10	46.8	M5×0.8	7	—	—	8	4.5	36	5.5	9Depth7	M5×0.8	10.5	48	24.5	36	—
CDQ2WB25	5~50	49	39	12	52	M6×1.0	12	—	—	10	5	40	5.5	9Depth7	M5×0.8	11	53.5	27.5	40	—
CDQ2WB32	5~50	54.5	40.5	16	45	M8×1.25	13	60	4.5	14	7	34	5.5	9Depth7	1/8	12.5	58.5	31.5	—	18
CDQ2WB40	5~50	64	50	16	52	M8×1.25	13	69	5	14	7	40	5.5	9Depth7	1/8	14	66	35	—	18
CDQ2WB50	10~50	66.5	50.5	20	64	M10×1.5	15	86	7	17	8	50	6.6	11Depth8	1/4	14	80	41	—	22
CDQ2WB63	10~50	68	52	20	77	M10×1.5	15	103	7	17	8	60	9	14Depth10.5	1/4	15.5	93	47.5	—	22
CDQ2WB80	10~50	81	61	25	98	M16×2.0	21	132	6	22	10	77	11	17.5Depth13.5	3/8	18	112.5	57.5	—	26
CDQ2WB100	10~50	94.5	70.5	30	117	M20×2.5	27	156	6.5	27	12	94	11	17.5Depth13.5	3/8	22	132.5	67.5	—	26

Note1) Standard stroke available at 5mm intervals.



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E210-B

LARGE BORE SIZE COMPACT CYLINDER SERIES CQ2 Ø125, 140, 160MM

- ✓ Compact, light weight, space-saving design
- ✓ Magnetic option
- ✓ Double acting
- ✓ Rubber cushion standard

TECHNICAL SPECIFICATIONS

Fluid	Air
Proof pressure	1.5 MPa (15.3kgf/cm ²)
Max. Operating pressure	1.0MPa (10.2kgf/cm ²)
Min. Operating pressure	0.5MPa (5.1kgf/cm ²)
Ambient and fluid temperature	5~60°C
Lubrication	Not required
Cushion	Rubber cushion standard
Rod end thread	Female (standard type)
Stroke allowance (mm)	+1.0 0
Mounting	Standard type
Mounting type (standard)	Through hole / Both ends tapped

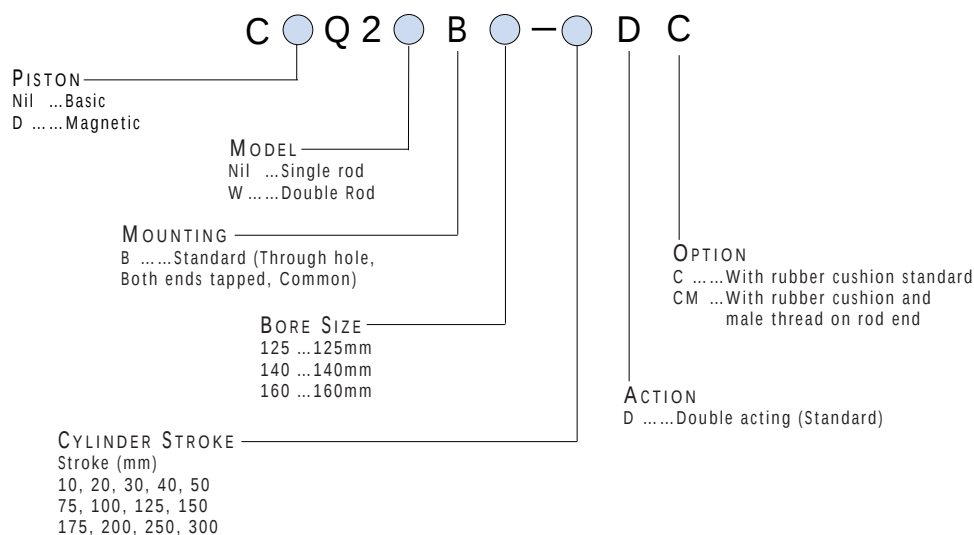
THEORETICAL FORCE DOUBLE ACTING TYPE

Bore size (mm)	Acting direction	Operating pressure (bar)		
		3	5	7
125	IN	337	562	787
	OUT	368	613	859
140	IN	431	718	1006
	OUT	461	769	1077
160	IN	565	942	1319
	OUT	603	1005	1407

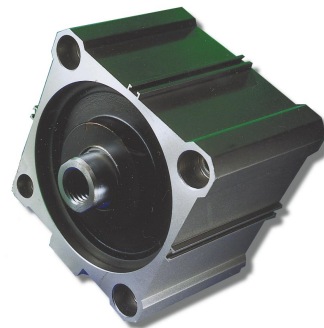
Units kgf

HOW TO ORDER

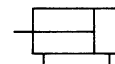
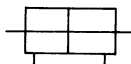
SERIES CQ2 LARGE BORE



Note! When non standard stroke is required SMC will fit a spacer to adjust the stroke.



SYMBOLS

Double acting/
Single rod type

Double acting/
Double rod type


ACCESSORIES

MOUNTING BOLTS

CDQ2 COMPACT CYLINDER
Ø125, 140, 160MM

Model	C	D	Mounting Bolt
CQ2B125/140-10DC	22.9	100	M12X100L
CQ2B125/140-20DC	22.9	110	M12X110L
CQ2B125/140-30DC	22.9	120	M12X120L
CQ2B125/140-40DC	22.9	130	M12X130L
CQ2B125/140-50DC	22.9	140	M12X140L
CQ2B125/140-75DC	22.9	165	M12X165L
CQ2B125/140-100DC	22.9	190	M12X190L
CQ2B125/140-125DC	22.9	215	M12X215L
CQ2B125/140-150DC	22.9	240	M12X240L
CQ2B125/140-175DC	22.9	265	M12X265L
CQ2B125/140-200DC	22.9	290	M12X290L
CQ2B125/140-250DC	22.9	340	M12X340L
CQ2B125/140-300DC	22.9	390	M12X390L
CQ2B160-10DC	27.7	110	M14X110L
CQ2B160-20DC	27.7	120	M14X120L
CQ2B160-30DC	27.7	130	M14X130L
CQ2B160-40DC	27.7	140	M14X140L
CQ2B160-50DC	27.7	150	M14X150L
CQ2B160-75DC	27.7	175	M14X175L
CQ2B160-100DC	27.7	200	M14X200L
CQ2B160-125DC	27.7	225	M14X225L
CQ2B160-150DC	27.7	250	M14X250L
CQ2B160-175DC	27.7	275	M14X275L
CQ2B160-200DC	27.7	300	M14X300L
CQ2B160-250DC	27.7	350	M14X350L
CQ2B160-300DC	27.7	400	M14X400

Ø125 & Ø140 use same bolts.



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E210-B



Bore Size	A	C	H	K	L	X
125	199	42	M30X1.5	32	58	45
140	199	42	M30X1.5	32	58	45
160	219	47	M36X1.5	36	64	50

Bore size	Standard stroke range	A	B	C	D	E	F	H	I	J	K	L	M	N	OA	OB	P	Q	RA	RB	Z
125	10, 20, 30, 40, 50,	99	83	30	36	142	24.5	M22X2.5	190	11	32	16	114	12.5	M14X2	21.2	3/8	24.5	25	18.4	32
140	75, 100, 125, 150,	99	83	30	36	158	24.5	M22X2.5	210	10	32	16	128	12.5	M14X2	21.2	3/8	24.5	25	18.4	32
160	175, 200, 250, 300	108	91	33	40	178	27.5	M24X3	238	10	36	17	144	14.5	M16X2	24.2	3/8	27.5	28	21.2	32

Note 1) The standard stroke type is equipped with a spacer, so the total length is the same as the longer standard stroke
Note 2) Be sure to use the attached flat washer to mount the cylinder using a through hole.

AUTO SWITCH MOUNTING

Bore size (mm)	D-A7,A8 D-F7■H,A80H D-F7■J,79 D-F7■F D-F7■W,J79W		D-A73C D-A80C		D-J79C		D-A79W		D-F7■V		D-F7■WV	
	S	U	S	U	S	U	S	U	S	U	S	U
125	163	81	169	87	167.5	85.5	164.5	82.5	165.5	83.5	168	86
140	178	89	184	95	182.5	93.5	179.5	90.5	180.5	91.5	183	94
160	198	99	199	100	197.5	98.5	199.5	100.5	200.5	101.5	203	104

() : For models other than the reed switches D-A7 and A8.

DOUBLE ACTING/
DOUBLE ROD Ø125, 140, 160



Bore Size	A	C	H	K	L	X
125	199	42	M30X1.5	32	58	45
140	199	42	M30X1.5	32	58	45
160	219	47	M36X1.5	36	64	50

AUTO SWITCH MOUNTING

Bore size (mm)	D-A7,A8 D-A7■H,A8OH D-F7■J79 D-F7■F D-F7■W,J79W		D-A73C D-A80C		D-J79C		D-A79W		D-F7■V		D-F7V■VV	
	S	U	S	U	S	U	S	U	S	U	S	U
125	163	81	169	87	167.5	85.5	164.5	82.5	165.5	83.5	168	86
140	178	89	184	95	182.5	93.5	179.5	90.5	180.5	91.5	183	94
160	198	99	199	100	197.5	98.5	199.5	100.5	200.5	101.5	203	104

() : For models other than the reed switches D-A7 and A8.

Bore size	Standard stroke range	A	B	C Note 3)	D	E	H	I	J	K	L	M	N	OA	OB	P	Q	RA	RB	Z
125	10, 20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300	115	83	30 (22.5)	36	142	M22X2.5	190	11	32	16	114	12.5	M14X2	21.2	3/8	24.5	25	18.4	32
140		115	83	30 (22.5)	36	158	M22X2.5	210	10	32	16	128	12.5	M14X2	21.2	3/8	24.5	25	18.4	32
160		125	91	33 (26.5)	40	178	M24X3	238	10	36	17	144	14.5	M16X2	24.2	3/8	27.5	28	21.2	32

Note 1) The standard stroke type is equipped with a spacer, so the total length is the same as the longer standard stroke.
 Note 2) Be sure to use the attached flat washer to mount the cylinder using a through hole.
 Note 3) () : Effective length on one side of the 10-stroke type.



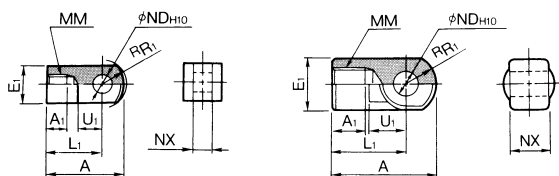
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F210-B

DIMENSIONS

SINGLE KNUCKLE JOINT

I-G012, I-Z015A
I-G02, I-G03

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



Material : Carbon steel

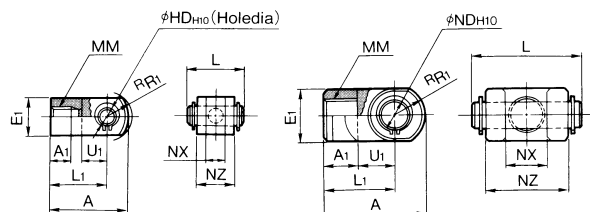
Part No.	Applicable bore (mm)	A	A ₁	E	L ₁	MM	R ₁	U ₁	ND _{H10}	NX
I-G012	12	21.5	6	10	16	M5×0.8	6.3	7	5 ^{+0.048} ₀	5 ^{+0.2} _{0.4}
I-Z015A	16	32	8	12	25	M6×1	8.1	14	5 ^{+0.048} ₀	6.4 ^{+0.1} _{0.3}
I-G02	20	34	8.5	16	25	M8×1.25	10.3	11.5	8 ^{+0.058} ₀	8 ^{+0.2} _{0.4}
I-G03	25	41	10.5	20	30	M10×1.25	12.8	14	10 ^{+0.058} ₀	10 ^{+0.2} _{0.4}
I-G04	32,40	42	14	22	30	M14×1.5	12	14	10 ^{+0.058} ₀	18 ^{+0.3} _{0.5}
I-G05	50,63	56	18	28	40	M18×1.5	16	20	14 ^{+0.070} ₀	22 ^{+0.3} _{0.5}
I-G08	80	71	21	38	50	M22×1.5	21	27	18 ^{+0.070} ₀	28 ^{+0.3} _{0.5}
I-G10	100	79	21	44	55	M26×1.5	24	31	22 ^{+0.084} ₀	32 ^{+0.3} _{0.5}

DIMENSIONS

FORK KNUCKLE JOINT

Y-G012, Y-Z015A
Y-G02, Y-G03

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



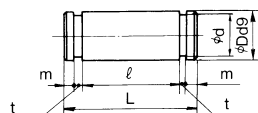
Material : Rolled steel

Material : Cast iron

Part No.	Applicable bore (mm)	A	A ₁	E	L ₁	MM	R ₁	U ₁	ND _{H10}	NX	NZ	L	Applicable retaining pin
Y-G012	12	21.5	6	10	16	M5×0.8	6.3	7	5 ^{+0.048} ₀	5 ^{+0.4} _{0.2}	10	14.6	IY-G012
Y-Z015A	16	28	11	12	21	M6×1	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	M8×1.25	10.3	11.5	8 ^{+0.058} ₀	8 ^{+0.4} _{0.2}	16	21	IY-G02
Y-G03	25	41	10.5	20	30	M10×1.25	12.8	14	10 ^{+0.058} ₀	10 ^{+0.4} _{0.2}	20	25.6	IY-G03
Y-G04	32,40	42	16	22	30	M14×1.5	12	14	10 ^{+0.058} ₀	18 ^{+0.5} _{0.3}	36	41.6	IY-G04
Y-G05	50,63	56	20	28	40	M18×1.5	16	20	14 ^{+0.070} ₀	22 ^{+0.5} _{0.3}	44	50.6	IY-G05
Y-G08	80	71	23	38	50	M22×1.5	21	27	18 ^{+0.070} ₀	28 ^{+0.5} _{0.3}	56	64	IY-G08
Y-G10	100	79	24	44	55	M26×1.5	24	31	22 ^{+0.084} ₀	32 ^{+0.5} _{0.3}	64	72	IY-G10

DIMENSIONS

KNUCKLE JOINT PIN



Material : Carbon steel

Part No.	Applicable bore (mm)	φDdg	L	φd	ℓ	m	t	Applicable retaining pin
IY-G012	12	5 ^{+0.030} _{0.060}	14.6	4.8	10.2	1.5	0.7	C5 type for pivot
IY-J015	16	5 ^{+0.030} _{0.060}	16.6	4.8	12.2	1.5	0.7	C5 type for pivot
IY-G02	20	8 ^{+0.040} _{0.076}	21	7.6	16.2	1.5	0.9	C8 type for pivot
IY-G03	25	10 ^{+0.040} _{0.076}	25.6	9.6	20.2	1.55	1.15	C10 type for pivot
IY-G04	32,40	10 ^{+0.040} _{0.076}	41.6	9.6	36.2	1.55	1.15	C10 type for pivot
IY-G05	50,63	14 ^{+0.050} _{0.093}	50.6	13.4	44.2	2.05	1.15	C14 type for pivot
IY-G08	80	18 ^{+0.050} _{0.093}	64	17	56.2	2.55	1.35	C18 type for pivot
IY-G10	100	22 ^{+0.065} _{0.117}	72	21	64.2	2.55	1.35	C22 type for pivot

ACCESSORIES

FLOATING JOINTS

See Series JB Floating Joints which are specifically designed to be used with compact cylinders including CQ2 and CQS.



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