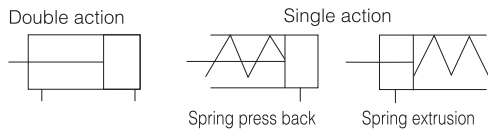


Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1



Symbol



Ordering code

N C D Q2 B **20** **30** **D** **M9N**

Built in magnetic ring

Blank	No built-in magnetic ring
D	Built-in magnet ring

Installation form

B	Through hole (Standard)
A	Screw holes at both ends
L	Foot seat type
F	Rod side flange
G	Rodless side flange type
D	Binaural ring type

Form

Blank	Compressed air type
-------	---------------------

Bore size

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

Stroke

(See table below)

Tube material

Blank	Thread piping
F*	Built-in quick-change connector

* It is only used for cylinder diameter $\Phi 32 \sim \Phi 63$.
There is no built-in fast replacement mode for gas-liquid combination.

Action mode

D	Double action
S	Single action (spring press back)
T	Single action (spring extrusion)

* The cylinder diameter of single acting mode is only $\Phi 12 \sim \Phi 50$.

Body option

Blank	Standard (Rod end internal thread)
C	Rubber cushion (Note)
M	Rod end male thread

* Combination of body options ("CM", "FC", "FM", "FCM") is available.
Note: Air-hydro type with rubber bumper is not available.

Magnetic switch type

Blank	Without magnetic switch
-------	-------------------------

* Type of magnetic switch refer to itinerary/Model table of magnetic switch.
* No built-in magnetic ring.

Number of magnetic switches

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

Specifications

Bore size(mm)		12	16	20	25	32	40	50	63	80	100
Fluid		Air (to be filtered by 40μm filter element)									
Action mode		Double action Single action: spring press back/spring press out									
Minimum operating pressure	Single action	0.25	0.18	0.17	0.15	0.13	-				
	Double action	0.07	0.05								
Maximum operating pressure		1.0MPa									
Ambient and fluid temperature		Without auto switch: -10 to 70℃ (No freezing) With auto switch: -10 to 60℃ (No freezing)									
Rod end thread		Internal thread (standard), external thread (optional)									
Cushion		None									
Piston speed		50~500mm/s									
Stroke length tolerance		$\begin{matrix} +1.0 \\ 0 \end{matrix}$									
Lubrication		Not required									
Installation form		Through hole(standard), screw hole at both ends(optional)									
Pipe size		M5×0.8			1/8"		1/4"		3/8"		

Note: If you need oil, please use turbine No.1 oil ISOVG32.

Stroke/magnetic switch type table

Bore size (mm)	Standard stroke (mm)		*Magnetic switch type		
	Double action	Single action	Two wire contact control	Two wire contactless control	Three wire NPN
12, 16	5, 10, 15, 20, 25, 30	5, 10	3C-D-A93(V)L	M9D	M9B
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50				
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	10, 20			
50, 63, 80, 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100				

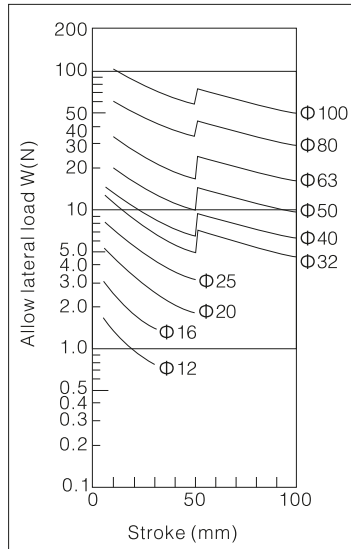
* The specifications and characteristics of magnetic switches can be referred to the magnetic open series. Behind the model of magnetic switch, the length of the attached wire indicates the mark: unlabeled-0.5m, L-3m, Z-5m
example: M9N, M9NL

Permissible kinetic energy (J)

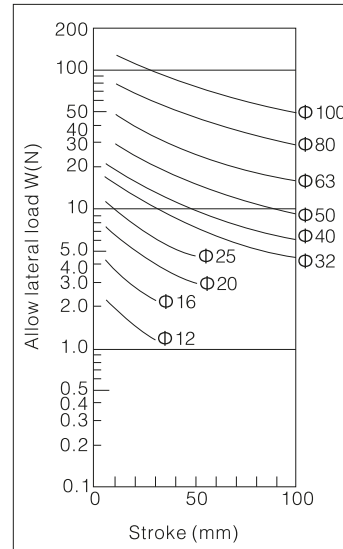
Bore size (mm)	12	16	20	25	32	40	50	63	80	100
Standard form	0.022	0.038	0.055	0.09	0.15	0.26	0.46	0.77	1.36	2.27
Cushioning pad	0.043	0.075	0.11	0.18	0.29	0.52	0.91	1.54	2.71	4.54

Allowable lateral load at rod end

Without auto switch



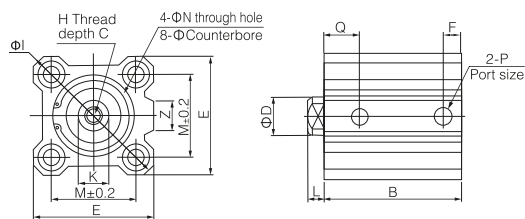
With auto switch



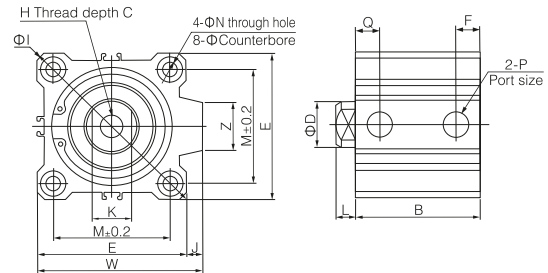
Dimensions

Through-hole Installation/CQ2B

Φ12~Φ25



Φ32~Φ100



Double acting cylinder size table

Model	Stroke range (mm) ^{Note 1)}	B	ΦD	E	F	H	C	ΦI	J	K	L	M	ΦN	ΦO	P	Q	W	Z
NCQ2B12-□D	5~30	17	6	25	5	M3×0.5	6	32	-	5	3.5	15.5	3.5	6.5 deep 3.5	M5×0.8	7.5	-	-
NCQ2B16-□D	5~30	18.5	8	29	5.5	M4×0.7	8	38	-	6	3.5	20	3.5	6.5 deep 3.5	M5×0.8	8	-	10
NCQ2B20-□D	5~50	19.5	10	36	5.5	M3×0.5	7	47	-	8	4.5	25.5	5.5	9 deep 7	M5×0.8	9	-	10
NCQ2B25-□D	5~50	22.5	12	40	5.5	M6×1.0	12	52	-	10	5	28	5.5	9 deep 7	M5×0.8	11	-	10
NCQ2B32-□D	5	23	16	45	5.5	M8×1.25	13	60	4.5	14	7	34	5.5	9 deep 7	M5×0.8	11.5	49.5	14
	10~50				7.5											10.5		
NCQ2B40-□D	5~50	29.5	16	52	8	M8×1.25	13	69	5	14	7	40	5.5	9 deep 7	1/8"	11	57	14
NCQ2B50-□D	10~50	30.5	20	64	10.5	M10×1.5	15	86	7	17	8	50	6.6	11 deep 8	1/4"	10.5	71	19
NCQ2B63-□D	10~50	36	20	77	10.5	M10×1.5	15	103	7	17	8	60	9	14 deep 10.5	1/4"	15	84	19
NCQ2B80-□D	10~50	43.5	25	98	12.5	M16×2.0	21	132	6	22	10	77	11	17.5 deep 13.5	3/8"	16	104	26
NCQ2B100-□D	10~50	53	30	117	13	M20×2.5	27	156	6.5	27	12	94	11	17.5 deep 13.5	3/8"	23	123.5	26

Long stroke ^{Note 2)}

Model	Stroke (mm)	B	F	P	Q
32	75, 100	33	7.5	1/8"	10.5
40	75, 100	39.5	8	1/8"	11
50	75, 100	40.5	10.5	1/4"	10.5
63	75, 100	46	10.5	1/4"	15
80	75, 100	53.5	12.5	3/8"	16
100	75, 100	63	13	3/8"	23

- Note: 1. Standard stroke is 5 mm apart
 2. Intermediate stroke (55, 60, 65, 70, 80, 85, 90, 95) between 55mm and 100mm plus 5, 10, 15 or 20mm thick pads.
 3. Unless other specified, the dimensions of through-hole cylinders are the same as those of screw-hole cylinders at both ends.

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

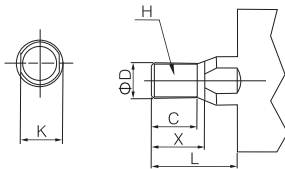
Cylinder

St= stroke

Size table of single-acting cylinder

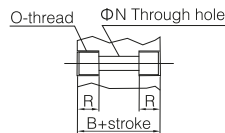
Model	B			ΦD	E	F		H	C	ΦI	J	K	L	M	ΦN	ΦO	P			Q		W	Z
	5st	10st	20st			5st	10st										5st	10st	20st	5st	10st		
NCQ2B12-□S	22	27	-	6	25	5	5	M3×0.5	6	32	-	5	3.5	15.5	3.5	6.5deep3.5	M5×0.8	-	7.5	7.5	-	-	-
NCQ2B16-□S	23.5	28.5	-	8	29	5.5	5.5	M4×0.7	8	38	-	6	3.5	20	3.5	6.5deep3.5	M5×0.8	-	8	8	-	10	-
NCQ2B20-□S	24.5	29.5	-	10	36	5.5	5.5	M5×0.8	7	47	-	8	4.5	25.5	5.5	9 deep 7	M5×0.8	-	9	9	-	10	-
NCQ2B25-□S	27.5	32.5	-	12	40	5.5	5.5	M6×1.0	12	52	-	10	5	28	5.5	9 deep 7	M5×0.8	-	11	11	-	10	-
NCQ2B32-□S	28	33	-	16	45	5.5	7.5	M8×1.25	13	60	4.5	14	7	34	5.5	9 deep 7	M5×0.8 1/8"	-	11.5	10.5	49.5	18	-
NCQ2B40-□S	34.5	39.5	-	16	52	8	8	M8×1.25	13	69	5	14	7	40	5.5	9 deep 7	1/8"	-	11	11	57	18	-
NCQ2B50-□S	-	40.5	50.5	20	64	10.5	10.5	M10×1.5	15	86	7	17	8	50	6.6	11 deep 8	-	1/4	10.5	10.5	71	22	-

Piston rod external thread



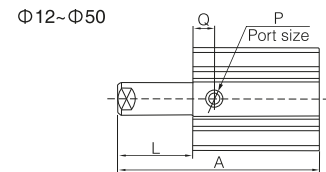
Bore size(mm)	C	X	ΦD	H	L	K
12	9	10.5	6	M5×0.8	14	5
16	10	12	8	M6×1.0	15.5	6
20	12	14	10	M8×1.25	18.5	8
25	15	17.5	12	M10×1.25	22.5	10
32	20.5	23.5	16	M14×1.5	28.5	14
40	20.5	23.5	16	M14×1.5	28.5	14
50	26	28.5	20	M18×1.5	33.5	17
63	26	28.5	20	M18×1.5	33.5	17
80	32.5	35.5	25	M22×1.5	43.5	22
100	32.5	35.5	30	M26×1.5	43.5	27

Two end screw hole installation type/CQ2A



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	M12×1.15	22

Single action/Spring extrusion



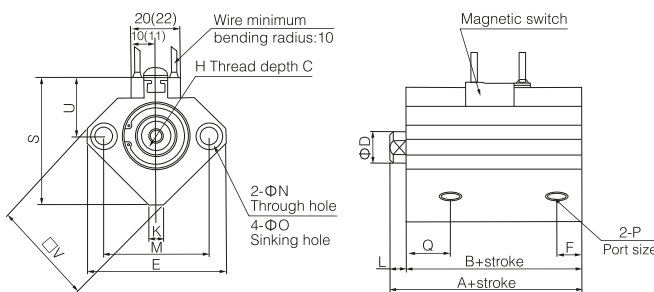
Bore size (mm)	A			L		
	5st	10st	20st	5st	10st	20st
12	30.5	40.5	-	8.5	13.5	-
16	32	42	-	8.5	13.5	-
20	34	44	-	9.5	14.5	-
25	37.5	47.5	-	10	15	-
32	40	50	-	12	17	-
40	46.5	56.5	-	12	17	-
50	-	58.5	78.5	-	18	28

Note: Unless other specified, the size of through-hole cylinders is same as that of screw-hole cylinders at both ends.

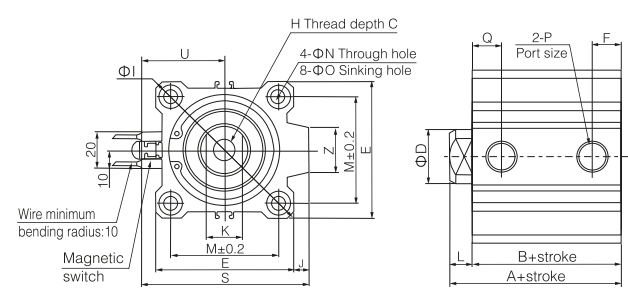
Dimensions

CDQ2B

Φ12~Φ25



Φ32~Φ100



Model	Stroke range(mm)	A	B	ΦD	E	F	H	C	ΦI	J	K	L	M	ΦN	ΦO	P	Q	S	U	V	Z
NCDQ2B12	5~30	31.5	28	6	32	6.5	M3×0.5	6	-	-	5	3.5	22	3.5	6.5 deep 3.5	M5×0.8	11	35.5	19.5	25	-
NCDQ2B16	5~30	34	30.5	8	38	5.5	M4×0.7	8	-	-	6	3.5	28	3.5	6.5 deep 3.5	M5×0.8	10	41.5	22.5	29	-
NCDQ2B20	5~50	36	31.5	10	46.8	5.5	M5×0.8	7	-	-	8	4.5	36	5.5	9 deep 7	M5×0.8	10.5	48	24.5	36	-
NCDQ2B25	5~50	37.5	32.5	12	52	5.5	M6×1.0	12	-	-	10	5	40	5.5	9 deep 7	M5×0.8	11	53.5	27.5	40	-
NCDQ2B32	5~50	40	33	16	45	7.5	M8×1.25	13	60	4.5	14	7	34	5.5	9 deep 7	1/8"	10.5	58.5	31.5	-	18
NCDQ2B40	5~50	46.5	39.5	16	52	8	M8×1.25	13	69	5	14	7	40	5.5	9 deep 7	1/8"	11	66	35	-	18
NCDQ2B50	10~50	48.5	40.5	20	64	10.5	M10×1.5	15	86	7	17	8	50	6.6	11 deep 8	1/4"	10.5	80	41	-	22
NCDQ2B63	10~50	54	46	20	77	10.5	M10×1.5	15	103	7	17	8	60	9	14 deep 10.5	1/4"	15	93	47.5	-	22
NCDQ2B80	10~50	63.5	53.5	25	98	12.5	M16×2.0	21	132	6	22	10	77	11	17.5 deep 13.5	3/8"	16	112.5	57.5	-	26
NCDQ2B100	10~50	75	63	30	117	13	M20×2.5	27	156	6.5	27	12	94	11	17.5 deep 13.5	3/8"	23	132.5	67.5	-	26

Long stroke Note 2)

Model	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	1/4"	10.5
63	75,100	54	46	10.5	1/4"	15
80	75,100	63.5	53.5	12.5	3/8"	16
100	75,100	75	63	13	3/8"	23

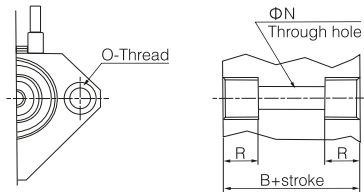
Note: 1. Standard stroke is 5 mm apart.

2. Intermediate stroke (55, 60, 65, 70, 80, 85, 90, 95) between 55mm and 100mm plus 5, 10, 15 or 20mm thick pads.

3. Unless other specified, the dimensions of through-hole cylinders are the same as those of screw-hole cylinders at both ends.

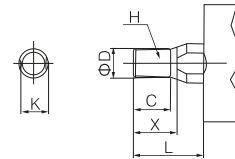
4. Only one magnetic switch can be installed in a 5 mm stroke cylinder.

Screw holes at both ends: CDQ2A Note 3)



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

External threads at rod end

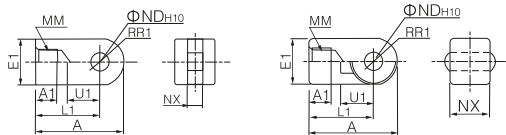


Bore size(mm)	C	X	ΦD	H	L	K
12	9	10.5	6	M5×0.8	14	5
16	10	12	6	M6×1.0	15.5	6
20	12	14	10	M8×1.25	18.5	8
25	15	17.5	12	M10×1.25	22.5	10
32	20.5	23.5	16	M14×1.5	28.5	14
40	20.5	23.5	16	M14×1.5	28.5	14
50	26	28.5	20	M18×1.5	33.5	17
63	26	28.5	20	M18×1.5	33.5	17
80	32.5	35.5	25	M22×1.5	43.5	22
100	32.5	35.5	30	M26×1.5	43.5	27

I Type single toggle joint

I-G012, I-Z015A
I-G012, I-G03A

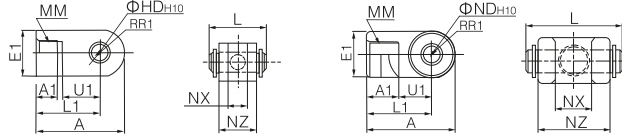
I-G04, I-G05
I-G08, I-G10



Y Type double toggle joint

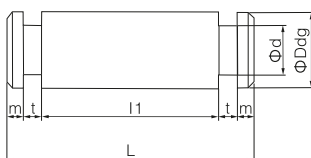
Y-G012, Y-Z015A
AY-G02, Y-G03

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



Applicable bore size (mm)	I Type single toggle joint										Y Type double toggle joint											
	Part No.	A	A1	E1	L1	MM	RR1	U1	NDH10	NX	Part No.	A	A1	E1	L1	MM	RR1	U1	ΦNDH10	NX	NZ	L
12	I-G012	21.5	6	□10	16	M5×0.8	6.3	7	5 ^{+0.048} ₀	5 ^{-0.2} _{-0.4}	Y-G012	21.5	6	□10	16	M5×0.8	6.3	7	5 ^{+0.048} ₀	5 ^{+0.4} _{+0.2}	10	14.6
16	I-Z015A	32	8	□12	25	M6×1	8.1	14	5 ^{+0.048} ₀	6.4 ^{-0.1} _{-0.3}	Y-Z015A	28	11	□12	21	M6×1	8.1	10	5 ^{+0.048} ₀	6.5 ^{+0.4} _{+0.2}	12	16.6
20	I-G02	34	8.5	□16	25	M8×1.25	10.3	11.5	8 ^{+0.058} ₀	8 ^{-0.2} _{-0.4}	Y-G02	34	8.5	□16	25	M8×1.25	10.3	11.5	8 ^{+0.058} ₀	8 ^{+0.4} _{+0.2}	16	21
25	I-G03	41	10.5	□20	30	M10×1.25	12.8	14	10 ^{+0.058} ₀	10 ^{-0.2} _{-0.4}	Y-G03	41	10.5	□20	30	M10×1.25	12.8	14	10 ^{+0.058} ₀	10 ^{+0.4} _{+0.2}	20	25.6
32,40	I-G04	42	14	Φ22	30	M14×1.5	12	14	10 ^{+0.058} ₀	18 ^{-0.3} _{-0.5}	Y-G04	42	16	Φ22	30	M14×1.5	12	14	10 ^{+0.058} ₀	18 ^{+0.5} _{+0.3}	36	41.6
50,63	I-G05	56	18	Φ28	40	M18×1.5	16	20	14 ^{+0.070} ₀	22 ^{-0.3} _{-0.5}	Y-G05	56	20	Φ28	40	M18×1.5	16	20	14 ^{+0.070} ₀	22 ^{+0.5} _{+0.3}	44	50.6
80	I-G08	71	21	Φ38	50	M22×1.5	21	27	18 ^{+0.070} ₀	28 ^{-0.3} _{-0.5}	Y-G08	71	23	Φ38	50	M22×1.5	21	27	18 ^{+0.070} ₀	28 ^{+0.5} _{+0.3}	56	64
100	I-G10	79	21	Φ44	55	M26×1.5	24	31	22 ^{+0.084} ₀	32 ^{-0.3} _{-0.5}	Y-G10	79	24	Φ44	55	M26×1.5	24	31	22 ^{+0.084} ₀	32 ^{+0.5} _{+0.3}	64	72

Toggle joint pins



Applicable bore size (mm)	Toggle joint pins						
	Part No.	ΦDdg	L	Φd	l	m	t
12	IY-G012	5 ^{-0.030} _{-0.060}	14.6	4.8	10.2	1.5	0.7
16	IY-J015	5 ^{-0.030} _{-0.060}	16.6	4.8	12.2	1.5	0.7
20	IY-G02	8 ^{-0.040} _{-0.076}	21	7.6	16.2	1.5	0.9
25	IY-G03	10 ^{-0.040} _{-0.076}	25.6	9.6	20.2	1.55	1.15
30, 40	IY-G04	10 ^{-0.040} _{-0.076}	41.6	9.6	36.3	1.55	1.15
50, 63	IY-G05	14 ^{-0.050} _{-0.093}	50.6	13.4	44.2	2.05	1.15
80	IY-G08	18 ^{-0.050} _{-0.093}	64	17	56.2	2.55	1.35
100	IY-G10	22 ^{-0.065} _{-0.117}	72	21	64.2	2.55	1.35

Cylinder

SC

SC(Big)

SCT

SCF

SU

SUF

SI

SIF

DNC

QGB

QGBZ

NCQ2

NCQ2(Big)

NCQ2(Long)

NCQS

NCQM

NRQ

SDA

ADVU

ACE(AND)

MAL

MA

MI

NCM2

NCJ2

NCG1

NCJP

TD

TN(TDA)

NCXS

NCXSW

NMGP

NMGG

NCU

NCUJ

NCY3B

NCY3R

NCY1S

NCY1L

STM

NMXH

NMXS

NMXQ

NMHZ2

NMHC2

NMHL2

NMHY2

NMHT2

NMHW2

NMHF2

NMHS2

NMHS3

NMHS4

NMRHQ

NMSQ

NCRA1

NCRQ2

NCRB2

ACK

SRC

QCK

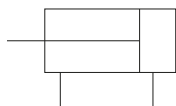
NCK1

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1



Symbol

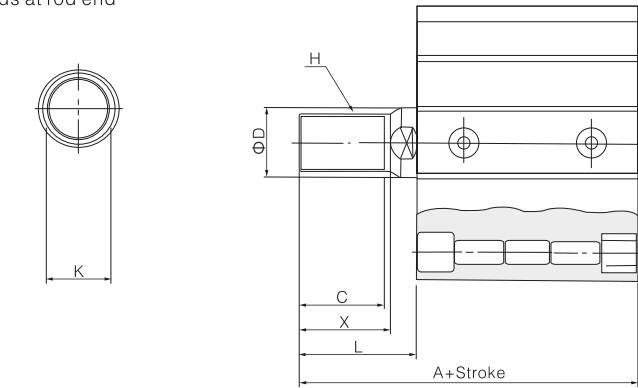


Ordering code

N C D Q2		B	125	-	30	D	C	Options		A73
Built in magnetic ring		Bore size								
Blank		125		125mm				Blank		
		140		140mm				Standard (rod end internal thread)		
		160		160mm				M		
		180		180mm				Rod end male thread		
		200		200mm						
D								Magnetic switch type		
								Blank		
								Without magnetic switch		
								* Refer to tour/magnetic switch model list for magnetic switch model		
								* No built-in magnetic ring cylinder no such item		
Piston rod form								Number of magnetic switches		
Blank								Blank		
								2 pcs.		
W								S		
								1 pc.		
								n		
								n pcs.		
Installation form										
Through holes and screw holes at both ends can be used.										

NCQ2B/NCQ2B

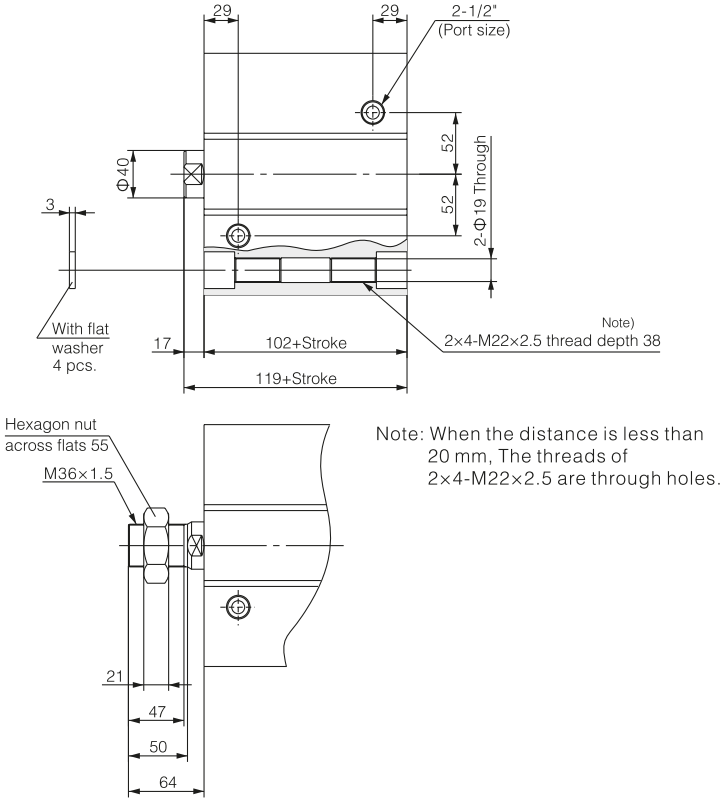
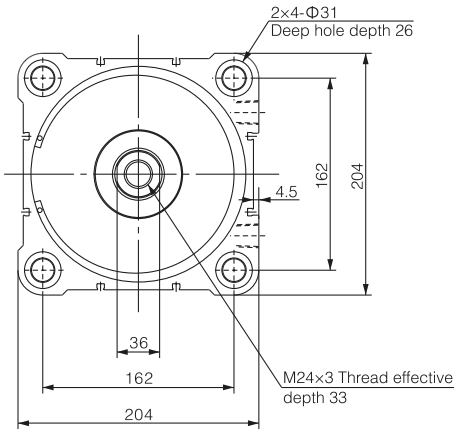
External threads at rod end



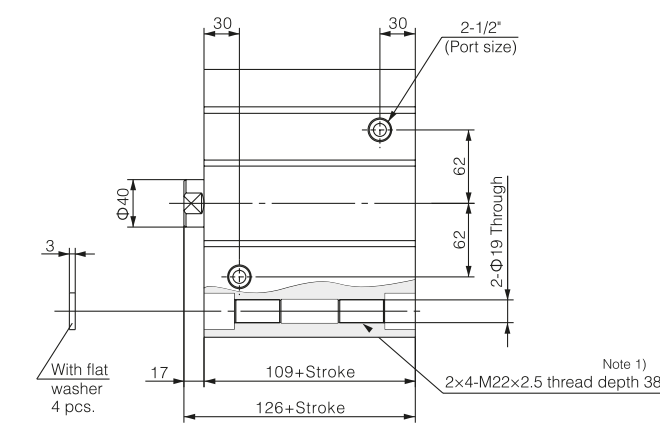
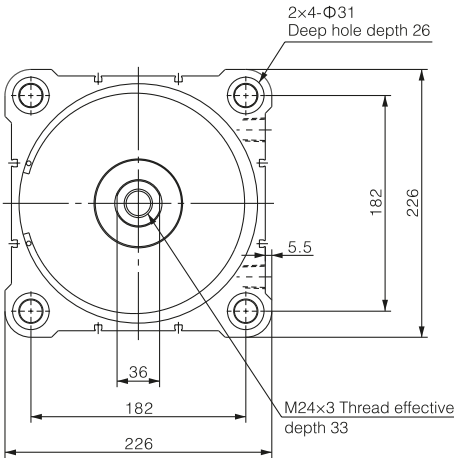
External threads at rod end

Bore size(mm)	A	C	ΦD	H	K	L	X
125	141	42	36	M30x1.5	32	58	45
140	141	42	36	M30x1.5	32	58	45
160	155	47	40	M36x1.5	36	64	50

$\Phi 180$



$\Phi 200$



Cylinder

SC

SC(Big)

SCT

SCF

SU

SUF

SI

SIF

DNC

QGB

QGBZ

NCQ2

NCQ2(Big)

NCQ2(Long)

NCQS

NCQM

NRQ

SDA

ADVU

ACE(AND)

MAL

MA

MI

NCM2

NCJ2

NCG1

NCJP

TD

TN(TDA)

NCXS

NCXSW

NMGP

NMGG

NCU

NCUJ

NCY3B

NCY3R

NCY1S

NCY1L

STM

NMXH

NMXS

NMXQ

NMHZ2

NMHC2

NMHL2

NMHY2

NMHT2

NMHW2

NMHF2

NMHS2

NMHS3

NMHS4

NMRHQ

NMSQ

NCRA1

NCRQ2

NCRB2

ACK

SRC

QCK

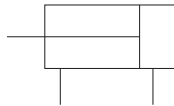
NCK1

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRA2
NCRB2
ACK
SRC
QCK
NCK1



Symbol



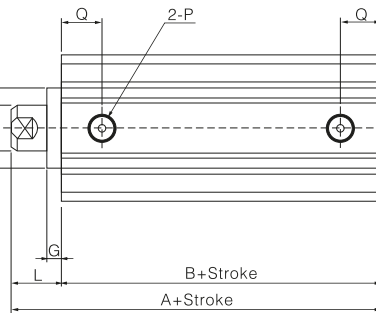
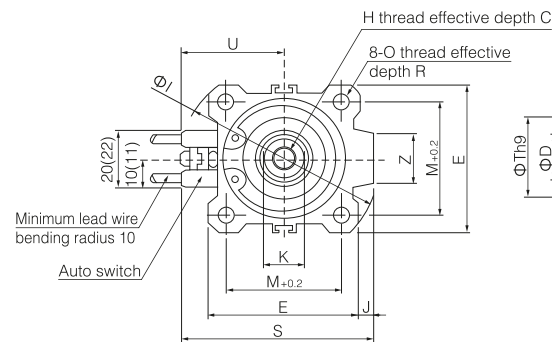
Ordering code

N C D Q2 A 32 - 200 D C		Options		A73	
Built in magnetic ring		Bore size		Options	
Blank	No built-in magnetic ring	32	32mm	Blank	Standard (rod end internal thread)
D	Built-in magnet ring	40	40mm	M	Rod end male thread
Installation form		50	50mm	Magnetic switch type	
A	Both ends tapped	63	63mm	Blank	Without magnetic switch
F	Rod flange	80	80mm	* Refer to tour/magnetic switch model list for magnetic switch model	
G	Head flange	100	100mm	* No built-in magnetic ring cylinder no such item	
L	Foot type	Stroke		Double action	
D	Double clevis	See the right table		Number of magnetic switches	
Piping mode		Rubber cushion		Blank	2 pcs.
Blank	Thread piping			S	1 pc.
F*	Built-in quick joint			n	"n" pcs.

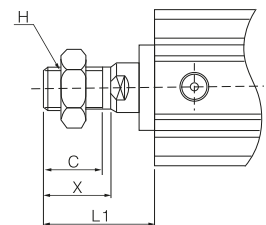
* Only phi Φ32~Φ63

Dimensions

Rod end female thread NCQ2A/NCDQ2A



Rod end male thread



() The dimensions of magnetic switches other than D-A7 are in parentheses.

Bore size (mm)	Stroke (mm)	Rod end female thread																		Rod end male thread					
		A	B	C	D	E	G	H	I	J	K	L	M	O	P	Q	R	S	Th9	U	Z	C	H	L1	X
32	125, 150 175, 200 250, 300	62.5	45.5	13	16	45	5	M8×1.25	60	4.5	14	17	34	M6×1.0	1/8"	12.5	10	58.5	22 ⁰ _{-0.052}	31.5	14	20.5	M14×1.5	38.5	23.5
40		72	55	13	16	52	5	M8×1.25	69	5	14	17	40	M6×1.0	1/8"	14	10	66	28 ⁰ _{-0.052}	35	14	20.5	M14×1.5	38.5	23.5
50		73.5	55.5	15	20	64	5	M10×1.5	86	7	17	18	50	M8×1.25	1/4"	14	14	80	35 ⁰ _{-0.062}	41	19	26	M18×1.5	43.5	28.5
53		75	57	15	20	77	5	M10×1.5	103	7	17	18	60	M10×1.5	1/4"	16.5	18	93	35 ⁰ _{-0.062}	47.5	19	26	M18×1.5	43.5	28.5
80		86	66	21	25	98	5	M16×2.0	132	6	22	20	77	M12×1.75	3/8"	19	22	112.5	43 ⁰ _{-0.062}	57.5	26	32.5	M22×1.5	53.5	35.5
100		97.5	75.5	27	30	117	5	M20×2.5	156	6.5	27	22	94	M12×1.75	3/8"	23	22	132.5	59 ⁰ _{-0.074}	67.5	26	32.5	M26×1.5	53.5	35.5

Specifications

Bore size(mm)	32	40	50	63	80	100
Use fluid	Air (to be filtered by 40μm filter element)					
Action mode	Double acting					
Proof pressure	1.5MPa					
Maximum operating pressure	1.0MPa					
Minimum operating pressure	0.05MPa					
Ambient and fluid temperature	Without auto switch: -10 to 70℃ (No freezing) With auto switch: -10 to 60℃ (No freezing)					
Rod end thread	Internal thread (standard), external thread (optional)					
Use piston speed	50~500mm/s					
Cushion	Standard rubber buffer					
Stroke tolerance (mm)	+1.4 0					
Lubrication	Don't need					
Installation form	Screw holes at both ends (standard)					
Pipe size	1/8"		1/4"		3/8"	

Note: If oil is supplied, please use turbine No.1 oil ISOVG32.

Stroke/magnetic switch type table

Bore size (mm)	Standard stroke (mm)	*Magnetic switch type		
		Two wire contact control	Two wire contactless control	Three wire NPN
32	125, 150 175, 200 250, 300	3C-D-A93(V)L	O-M9B(V)L	D-M9N(V)L
40				
50				
63				
80				
100				

* The specifications and characteristics of magnetic switches can be referred to the series of magnetic switches.
The type of installation is BQ-2.

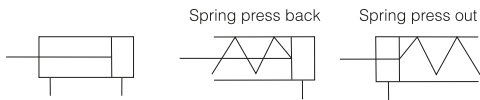
* The length of conductor is denoted as mark:
no mark - 0.5m, L - 3m. Example: A73, A73L.



Symbol

Double action

Single action



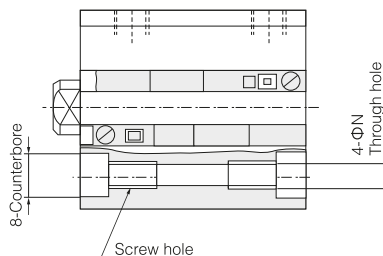
Ordering code

N C D QS		B	20	-	30	D	□		-	M9N	□
Built in magnetic ring		Bore size		Options							
Blank	No built-in magnetic ring	32	32mm	Blank Standard (rod end internal thread)							
		40	40mm	M Rod end male thread							
D	Built-in magnet ring	50	50mm								
		63	63mm								
		80	80mm								
		100	100mm								
Installation form		Stroke		Magnetic switch type							
B	Through-hole Both ends tapped common (Standard)	See the right table		Blank Without magnetic switch							
				* Refer to tour/magnetic switch model list							
				* No built-in magnetic ring cylinder no such item							
L	Foot type	Action		Number of magnetic switches							
F	Rod side flange type	D	Double action	Blank		2 pcs.					
G	Head side flange type	S	Single action(Spring press out)	S		1 pc.					
D	Double clevis type	T	Single action(Spring press back)	n		"n" pcs.					

Characteristic

Easy installation

Sharing of through holes and screw holes at both ends



Specifications

Bore size(mm)	12	16	20	25
Use fluid	Air (to be filtered by 40μm filter element)			
Action mode	Double acting, Single action: spring press back/spring press out			
Maximum operating pressure	1.0MPa			
Minimum operating pressure	0.07MPa		0.05MPa	
Ambient and fluid temperature	Without auto switch: -10 to 70℃ (No freezing) With auto switch: -10 to 60℃ (No freezing)			
Rod end thread	Internal thread (standard), external thread (optional)			
Buffer	Without			
Stroke tolerance (mm)	+1.0 0			
Cushion	Don't need			
Use piston speed	50~500mm/s			
Pipe size	M5×0.8			

Note: If oil is supplied, please use turbine No.1 oil ISOVG32.

Stroke/magnetic switch type table

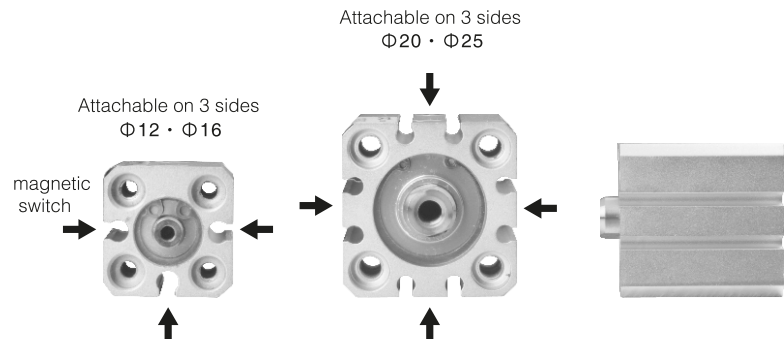
Bore size (mm)	Standard stroke (mm)		*Magnetic switch type (Track installation)
	Double action Note)	Single action	
12, 16	5, 10, 15, 20, 25, 30	5, 10	M9N M9B M9P
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50		

* The specifications and characteristics of magnetic switches can be referred to the series of magnetic switches. (Note: With long stroke)

* Wire length representation mark: Unmarked -0.5m, L-3m, Z-5m
Example: M9N, M9NL.

Save space

The miniature magnetic switch is installed in the cylinder groove and will not expose the outside of the cylinder block.



Position installation of magnetic switch can be selected from many sides
(Φ12 · Φ16: 3 sides, Φ20 · Φ25: 4 sides)

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)

NCQS

NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

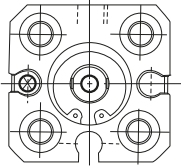
Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
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NMSQ
NCRA1
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NCRB2
ACK
SRC
QCK
NCK1

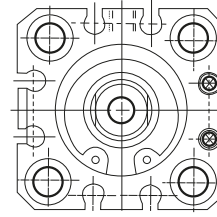
Dimensions

Through hole and screw hole sharing at both ends (Double action, Single action: Spring press back/Spring press out)

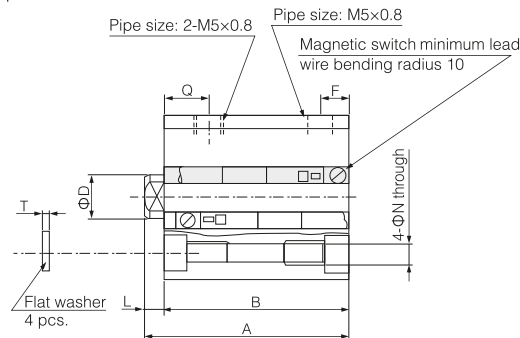
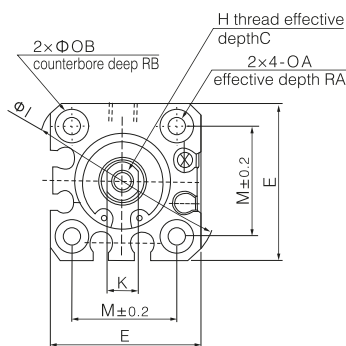
Φ12



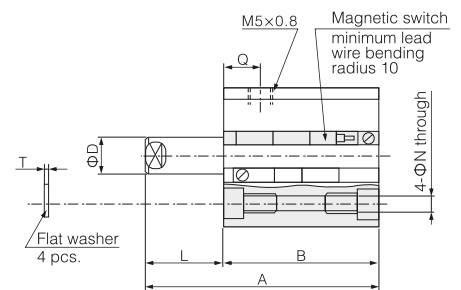
Φ20 - Φ25



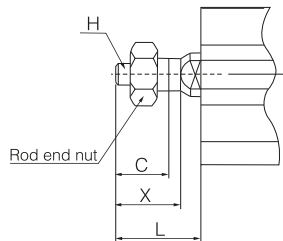
Φ16 Double action/Single action: Spring pressure back



Φ16 Single action(Spring press out)

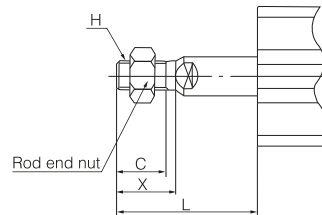


External threads at rod end (double action/single action: spring back)



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

External threads at rod end (single action: spring extrusion)



Bore size (mm)	C	H	L		X
			5 ST	10 ST	
12	9	M5x0.8	19	24	10.5
16	10	M6x1.0	20.5	25.5	12
20	12	M8x1.25	23.5	28.5	14
25	15	M10x1.25	27.5	32.5	17.5

Dual-acting and single-acting shared size table

Bore size (mm)	Basic type													
	C	D	E	H	I	K	M	N	OA	OB	RA	RB	T	Q
12	6	6	25	M3x0.5	32	5	15.5	3.5	M4x0.7	6.5	7	4	0.5	7.5
16	8	8	29	M4x0.7	38	6	20	3.5	M4x0.7	6.5	7	4	0.5	7.5
20	7	10	36	M5x0.8	47	8	25.5	5.4	M6x1.0	9	10	7	1	9
25	12	12	40	M6x1.0	52	10	28	5.4	M6x1.0	9	10	7	1	11

Double action

ST=Stroke

Bore size (mm)	Stroke range (mm)	Basic type					Built-in magnetic ring	
		A	B	F	L	Q	A	B
12	5~30	20.5+st	17+st	5	3.5	7.5	25.5+st	22+st
16	5~30	20.5+st	17+st	5	3.5	7.5	25.5+st	22+st
20	5~50	24+st	19.5+st	5.5	4.5	9	34+st	29.5+st
25	5~50	27.5+st	22.5+st	5.5	5	11	37.5+st	32.5+st

Single action: spring press back

ST=Stroke

Bore size (mm)	Stroke range (mm)	Basic type						Built-in magnetic ring			
		A		B		F		L		Q	
		5 ST	10 ST	5 ST	10 ST	5 ST	10 ST	5 ST	10 ST	5 ST	10 ST
12	5, 10	25.5	30.5	22	27	5	3.5	30.5	35.5	27	32
16		25.5	30.5	22	27	5	3.5	30.5	35.5	27	32
20		29	34	24.5	29.5	5.5	4.5	39	44	34.5	39.5
25		32.5	37.5	27.5	32.5	5.5	5	42.5	47.5	37.5	42.5

Single action: spring extrusion

ST=Stroke

Bore size (mm)	Stroke range (mm)	Basic type						Built-in magnetic ring			
		A		B		L		Q		A	
		5 ST	10 ST	5 ST	10 ST	5 ST	10 ST	5 ST	10 ST	5 ST	10 ST
12	5, 10	30.5	40.5	22	27	8.5	13.5	7.5	35.5	45.5	27
16		30.5	40.5	22	27	8.5	13.5	7.5	35.5	45.5	27
20		34	39	24.5	29.5	9.5	14.5	9	44	49	34.5
25		37.5	42.5	27.5	32.5	10	15	11	47.5	52.5	37.5

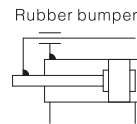


Specifications

Action mode		Double acting, Single rod
Maximum operating pressure		1.0 MPa
Minimum operating pressure	Φ12~Φ16	0.12 MPa
	Φ20~Φ100	0.1 MPa
Ambient and fluid temperature		Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)
Buffer		Rubber bumper on both ends
Stroke tolerance (mm)		+1.0 0
Use piston speed	Φ12~Φ40	50~500mm/s
	Φ50~Φ100	50~300mm/s

- * Installation dimensions are interchangeable with NCQS and NCQ2 series.
- * The accuracy of non-rotation is less than 0.2 degrees.
- * Do not use as a stop.

Symbol



Ordering code

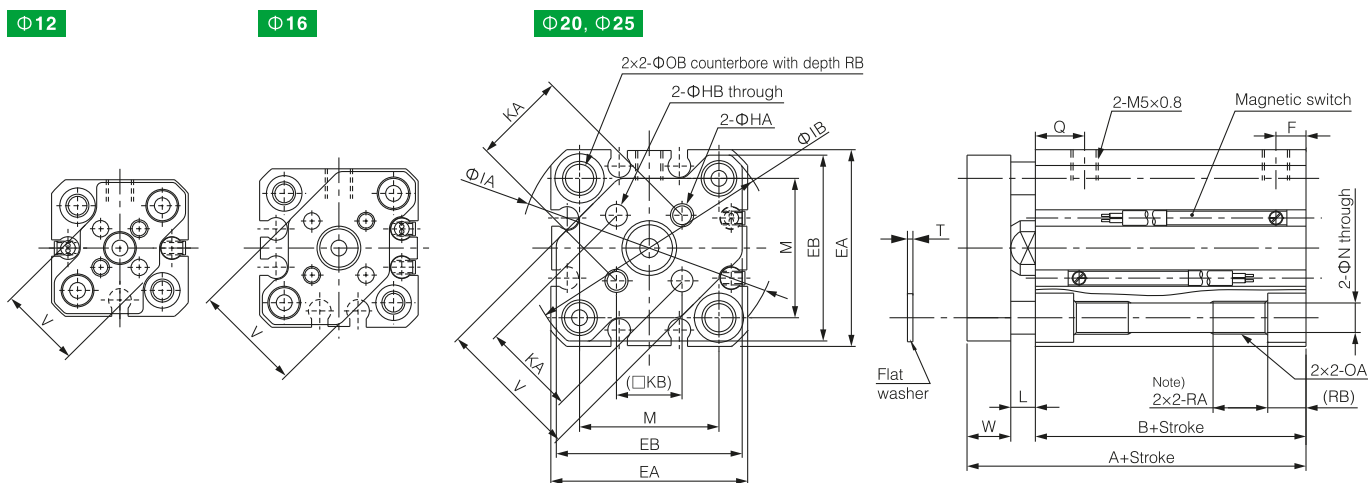
Built in magnetic ring		Bore size		Stroke		Magnetic switch type	
Blank	No built-in magnetic ring	12	12mm	40	40mm	Blank	Without magnetic switch
D	Built-in magnet ring	16	16mm	50	50mm	Refer to the right table for the type of magnetic switch. * No built-in magnetic ring cylinder no such item	
		20	20mm	63	63mm		
		25	25mm	80	80mm		
		32	32mm	100	100mm		
Installation form		Thread type		Number of magnetic switches			
B	Through-hole (Standard)	Blank	M thread	Φ12~Φ25	Blank	2 pcs.	
A	Both ends tapped (Φ32 to Φ100)		Rc	Φ32~Φ100	S	1 pc.	
		TN	NPT		n	"n" pcs.	
		TF	G				

Note: Φ32 without magnetic switch, when the stroke is 5 mm, is M thread.

Stroke/magnetic switch type table

Bore size (mm)	Standard stroke (mm)	*Magnetic switch type	
		Track installation	Direct installation
12, 16	5, 10, 15, 20, 25, 30	M9N M9B M9P	
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50		
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100		
50, 63, 80, 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100		

Dimensions



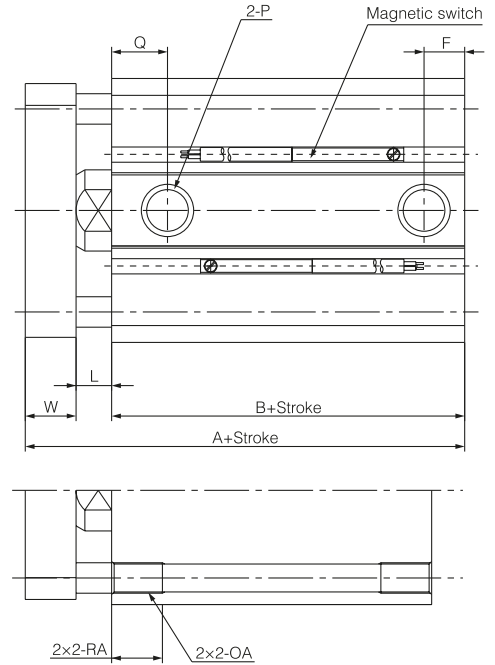
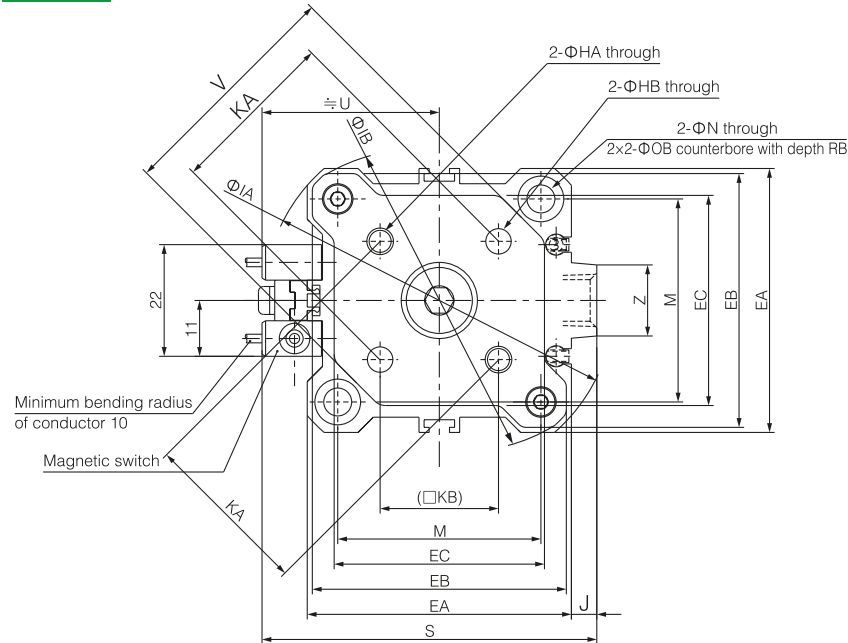
Bore size (mm)	Stroke range (mm)	Without auto switch		With auto switch		EA	EB	F	HA	OA	HB	IA	IB	KA	KB	L	M	N	OB	Q	RA	RB	T	V	W
		A	B	A	B																				
12	5~30	26.5	17	31.5	22	25	24	5	M3×0.5	M4×0.7	3	32	31.5	10	7.1	3.5	15.5	3.5	6.5	7.5	7	4	0.5	14.9	6
16	5~30	26.5	17	31.5	22	29	28	5	M3×0.5	M4×0.7	3	38	37	14	9.9	3.5	20	3.5	6.5	7.5	7	4	0.5	20	6
20	5~50	32	19.5	42	29.5	36	34	5.5	M4×0.7	M6×1.0	4	47	45.5	17	12	4.5	25.5	5.4	9	9	10	7	1	26	8
25	5~50	35.5	22.5	45.5	32.5	40	38	5.5	M5×0.8	M6×1.0	5	52	50.5	22	15.6	5	28	5.4	9	11	10	7	1	30	8

Note: Standard type without magnetic switch.

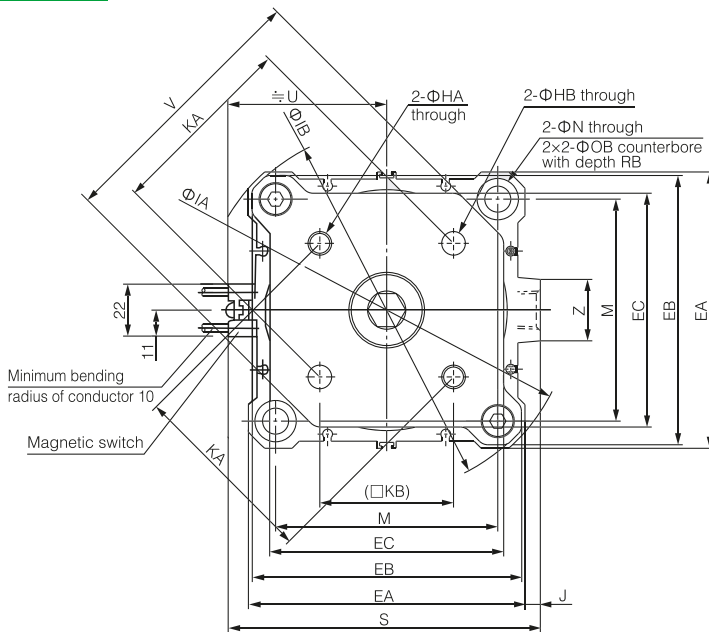
Φ12, Φ16: 5mm, Φ20: 5-15mm, Φ25: 5-10mm and magnetic switch ring built-in type are all through-hole threads.

Cylinder

Φ32~Φ50



Φ63~Φ100



Two end screw hole (NCQMA)

Bore size (mm)	HA	OA	HB	IA	IB	J	KA
32	M5×0.8	M6×1.0	5	60	58.5	4.5	28
40	M5×0.8	M6×1.0	5	69	67.5	5	33
50	M6×1.0	M8×1.25	6	86	84.5	7	42
63	M6×1.0	M10×1.5	6 ^{+0.2} ₀	103	100	7	50 ^{+0.2} ₀
80	M8×1.25	M12×1.75	8 ^{+0.2} ₀	132	129	6	65 ^{+0.2} ₀
100	M10×1.5	M12×1.75	10 ^{+0.2} ₀	156	153	6.5	80 ^{+0.2} ₀

Bore size (mm)	KB	L	M	N	OB	RA	RB	S	U	V	W	Z
32	19.8	7	34	5.5	9	10	7	58.5	31.5	38	10	14
40	23.3	7	40	5.5	9	10	7	66	35	46	10	14
50	29.7	8	50	6.6	11	14	8	80	41	58	12	19
63	35.4	8	60	9	14	18	10.5	93	47.5	69	12	19
80	46	10	77	11	17.5	22	13.5	112.5	57.5	89	14	26
100	56.6	10	94	11	17.5	22	13.5	132.5	67.5	113	16	26

Bore size (mm)	Stroke range (mm)	Without auto switch							With auto switch							EA	EB	EC
		A	B	F	Q	P			A	B	F	Q	P					
						—	TN	TF					—	TN	TF			
32	5	40	23	5.5	11.5	M5x0.8	—	—	50	33	7.5	10.5	Rc1/8	NPT1/8	G1/8	45	43	34.4
	10~50			7.5	10.5	Rc1/8	NPT1/8	G1/8										
	75・100	50	33	Rc1/8	NPT1/8	G1/8												
40	5~50	46.5	29.5	8	11	Rc1/8	NPT1/8	G1/8	56.5	39.5	8	11	Rc1/8	NPT1/8	G1/8	52	50	41.4
	75・100	56.5	39.5															
50	10~50	50.5	30.5	10.5	10.5	Rc1/4	NPT1/4	G1/4	60.5	40.5	10.5	10.5	Rc1/4	NPT1/4	G1/4	64	62	53.4
	75・100	60.5	40.5															
63	10~50	56	36	10.5	15	Rc1/4	NPT1/4	G1/4	66	46	10.5	15	Rc1/4	NPT1/4	G1/4	77	74	59.6
	75・100	66	46															
80	10~50	67.5	43.5	12.5	16	Rc3/8	NPT3/8	G3/8	77.5	53.5	12.5	16	Rc3/8	NPT3/8	G3/8	98	95	79.5
	75・100	77.5	53.5															
100	10~50	79	53	13	23	Rc3/8	NPT3/8	G3/8	89	63	13	23	Rc3/8	NPT3/8	G3/8	117	114	99
	75・100	89	63															

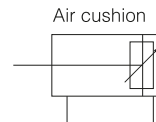


A new type of air cushion mechanism without cushion sleeve is designed. Compared with NCQ2 and NCQS, the total cylinder length increases by only a few millimeters, but the cushioning capacity increases by two times, and the repetition accuracy increases.

Specifications

Bore size(mm)	20	25	32, 40	50, 63	80, 100
Fluid	Air (to be filtered by 40µm filter element)				
Action mode	Single rod double action				
Use pressure range	0.05~1.0MPa				
Ambient and fluid temperature	Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)				
Rod end thread	Internal thread				
Stroke length tolerance (mm)	+1.0 0				
Piston speed	50~500mm/s				
Installation form	Through hole, screw hole at both ends, pedestal type, flange type, double earing type				
Pipe size	M5×0.8	1/8"	1/4"	3/8"	

Symbol



Ordering code

N	R	D	Q	B
Built in magnetic ring				
Blank	No built-in magnetic ring			
D	Built-in magnetic ring			
Installation form				
B	Through-hole (standard)			
A	Both ends tapped type			
L	Foot type			
F	Rod side flange type			
G	Head side flange type			
D	Double clevis type			

* Φ20, Φ25 through holes are common to both ends of the screw holes, expressed only by "B"

32	50	M9BV
Bore size		
20	20mm	
25	25mm	
32	32mm	
40	40mm	
50	50mm	
63	63mm	
80	80mm	
100	100mm	
Thread type		
Blank	Rc, M5×0.8*	
TN	NPT	
TF	G	
* Suitable for cylinder diameter Φ20, Φ25		
Stroke		
See the right table		
Rod end thread		
Blank	Rod end female thread (Standard)	
M	Rod end male thread	

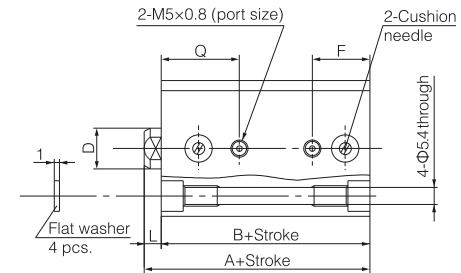
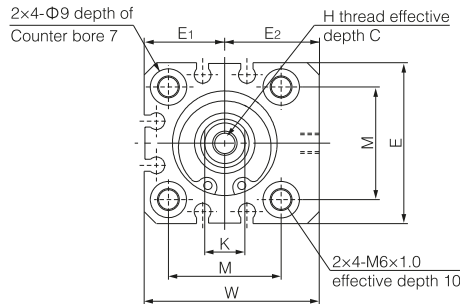
Stroke/magnetic switch type table

Bore size (mm)	Standard stroke (mm)	*Magnetic switch type		
		Two wire contact control	Two wire contactless control	Three wire NPN
20,25	15,20,25,30,40,50	3C-D-A93(V)L	D-M9B (V)L	D-M9N (V)L
32,40	20,25,30,40,50,75,100			
50,63	30,40,50,75,100	[A93 (V)L]	[M9B (V)L]	[M9N (V)L]
80,100	40,50,75,100			

* At the end of the model, the length of the attached conductor no: mark is 0.5m, L is 3m, Z is 5m, for example: M9N, M9NL.

Dimensions

Φ20, Φ25 Installation form: through hole, screw hole at both ends

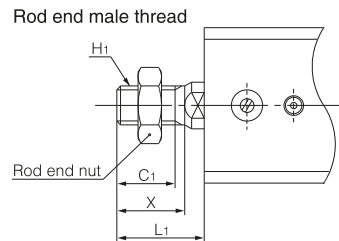


Rod end male thread

Bore size(mm)	C1	X	H1	L1
20	12	14	M8×1.25	18.5
25	15	17.5	M10×1.25	22.5

Standard type

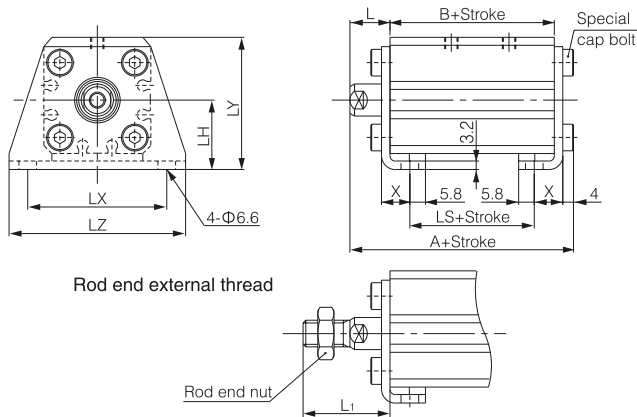
Bore size(mm)	Stroke range(mm)	A	B	C	D	E	E1	E2	F	H	K	L	M	Q	W
20	15~50	36.5	32	7	10	36	18	21	15.5	M5×0.8	8	4.5	25.5	21	39
25	15~50	41.5	36.5	12	12	40	20	23.5	17	M6×1.0	10	5	28	23	43.5



Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMH22
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

Foot type: NRQL/NRDQL



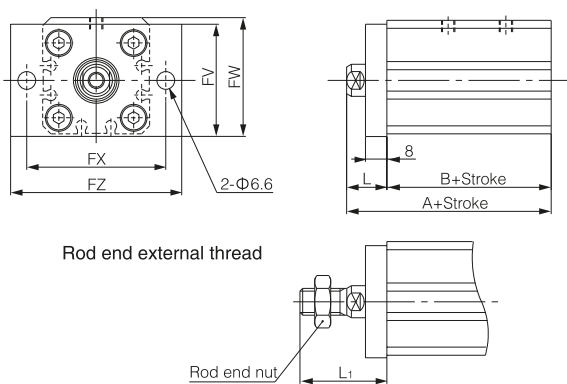
Foot type

Bore size (mm)	Installation type	Stroke range (mm)	A	LS	L	L ₁
20	NCQS-L020	15~50	53.7	20	14.5	28.5
25	NCQS-L025	15~50	58.7	21.5	15	32.5

Bore size(mm)	B	LH	LX	LY	LZ	X
20	32	24	48	45	62	9.2
25	36.5	26	52	49.5	66	10.7

(Dimensions A, LS, L, L₁ are different, other sizes are the same.)

Rod side flange type: NRQF/NRDQF



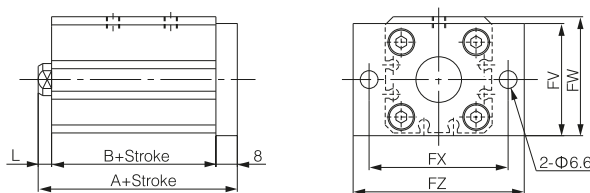
Rod side flange type

Bore size (mm)	Installation type	Stroke range (mm)	A	L	L ₁
20	NCQS-F020	15~50	46.5	14.5	28.5
25	NCQS-F025	15~50	51.5	15	32.5

Bore size(mm)	B	FV	FW	FX	FZ
20	32	39	40.5	48	60
25	36.5	42	44.5	52	64

(Dimensions A, L, L₁ are different, other sizes are the same.)

Rodless side flange type: NRQG/NRDQG

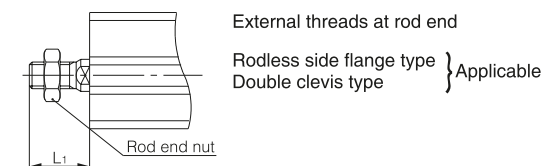


Rodless side flange type

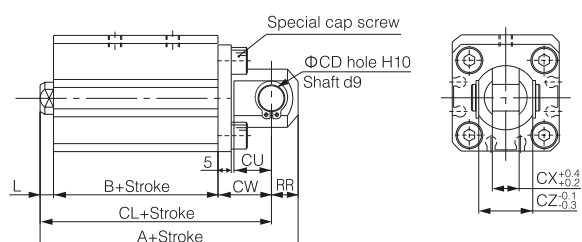
Bore size(mm)	Installation type	Stroke range(mm)	A
20	NCQS-F020	15~50	44.5
25	NCQS-F025	15~50	49.5

Bore size(mm)	B	L	FV	FW	FX	FZ
20	32	4.5	39	40.5	48	60
25	36.5	5	42	44.5	52	64

(Dimension A is different, other sizes are the same.)



Double clevis type: NRQD/NRDQD



Double clevis type

Bore size(mm)	Installation type	Stroke range(mm)	A	CL
20	NCQS-D020	15~50	63.5	54.5
25	NCQS-D025	15~50	71.5	61.5

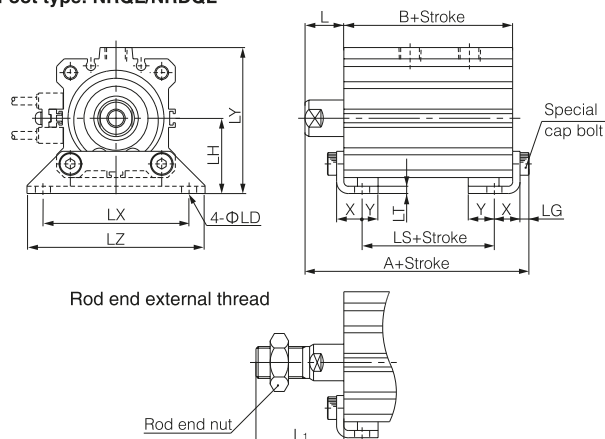
Bore size(mm)	B	L	L ₁	CD	CU	CW	CX	CZ	RR
20	32	4.5	18.5	8	12	18	8	16	9
25	36.5	5	22.5	10	14	20	10	20	10

(Dimensions A and CL are different, other sizes are the same.)

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMH22
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

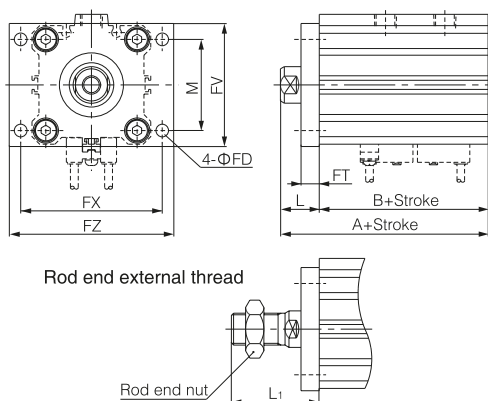
Foot type: NRQL/NRDQL



Rod end external thread

Rod end nut

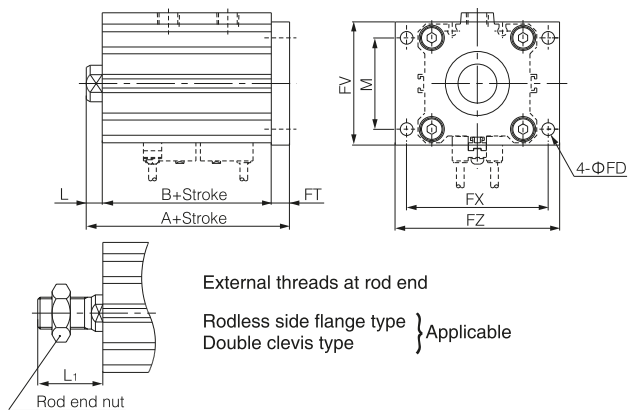
Rod side flange type: NRQF/NRDQF



Rod end external thread

Rod end nut

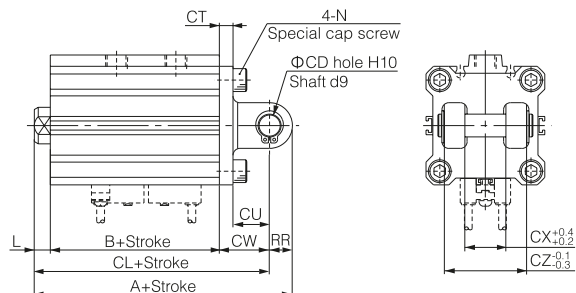
Rodless side flange type: NRQG/NRDQG



External threads at rod end

Rodless side flange type } Applicable
Double clevis type

Double clevis type: NRQD/NRDQD



Foot type

Bore size (mm)	Installation type	Stroke range (mm)	A	B	LS	L	L1	LD
32	CQ-L032	20~100	61.2	37	21	17	38.5	6.6
40	CQ-L040	20~100	68.2	44	28	17	38.5	6.6
50	CQ-L050	30~100	75.7	49.5	26.5	18	43.5	9
63	CQ-L063	30~100	81.2	55	29	18	43.5	11
80	CQ-L080	40~100	95	63.5	33.5	20	53.5	13
100	CQ-L100	40~100	111	76	42	22	53.5	13

Bore size(mm)	LG	LH	LX	LY	LZ	X	Y	LT
32	4	30	57	57	71	11.2	5.8	3.2
40	4	33	64	64	78	11.2	7	3.2
50	5	39	79	78	95	14.7	8	3.2
63	5	46	95	91.5	113	16.2	9	3.2
80	7	59	118	114	140	19.5	11	4.5
100	7	71	137	136	162	23	12.5	6

Rod side flange type

Bore size (mm)	Installation type	Stroke range (mm)	A	B	FD	FT	FV
32	CQ-F032	20~100	54	37	5.5	8	48
40	CQ-F040	20~100	61	44	5.5	8	54
50	CQ-F050	30~100	67.5	49.5	6.6	9	67
63	CQ-F063	30~100	73	55	9	9	80
80	CQ-F080	40~100	83.5	63.5	11	11	99
100	CQ-F100	40~100	98	76	11	11	117

Bore size(mm)	FX	FZ	L	L1	M
32	56	65	17	38.5	34
40	62	72	17	38.5	40
50	76	89	18	43.5	50
63	92	108	18	43.5	60
80	116	134	20	53.5	77
100	136	154	22	53.5	94

Rodless side flange type

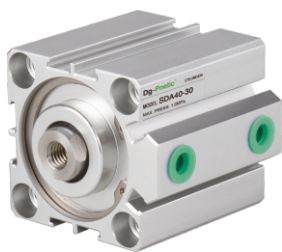
Bore size (mm)	Installation type	Stroke range (mm)	A	L	L1
32	CQ-F032	20~100	52	7	28.5
40	CQ-F040	20~100	59	7	28.5
50	CQ-F050	30~100	66.5	8	33.5
63	CQ-F063	30~100	72	8	33.5
80	CQ-F080	40~100	84.5	10	43.5
100	CQ-F100	40~100	99	12	43.5

* All dimensions but A, L and L1 are identical to those of the rod side flange type.

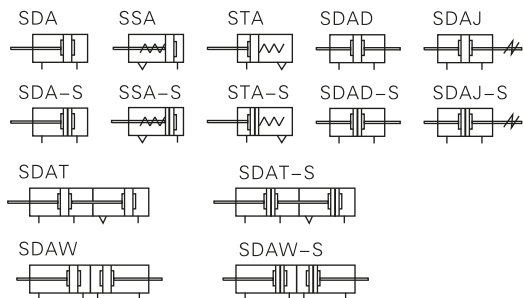
Double clevis type

Bore size (mm)	Installation type	Stroke range (mm)	A	B	CL	CD	CT	CU
32	CQ-D032	20~100	74	37	64	10	5	14
40	CQ-D040	20~100	83	44	73	10	6	14
50	CQ-D050	30~100	99.5	49.5	85.5	14	7	20
63	CQ-D063	30~100	107	55	93	14	8	20
80	CQ-D080	40~100	129.5	63.5	111.5	18	10	27
100	CQ-D100	40~100	155	76	133	22	13	31

Bore size(mm)	CW	CX	CZ	L	L1	N	RR
32	20	18	36	7	28.5	M6×1.0	10
40	22	18	36	7	28.5	M6×1.0	10
50	28	22	44	8	33.5	M8×1.25	147
63	30	22	44	8	33.5	M10×1.5	14
80	38	28	56	10	43.5	M12×1.75	18
100	45	32	64	12	43.5	M12×1.75	22



Symbol



Product feature

1. Manufactured by our enterprise.
2. Riveted structure is adopted to connect the cylinder body and back cover, and piston and piston rod to make it compact and reliable;
3. The inner diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent abrasion resistance and durability.
4. The seal of piston adopts heterogeneous two-way seal structure. It has compact dimension and the function of grease reservation.
5. Compact structure can effectively save installation space.
6. There are magnetic switch slots around the cylinder body, which is convenient to install sensor switch.
7. Mounting accessories with various specifications are optional.

Ordering code

SDA SDAD SDAJ Model	
SDA	Compact cylinder (Double acting)
SSA	Compact cylinder (Single acting-push)
STA	Compact cylinder (Single acting-pull)
SDAD	Compact cylinder (Double rod)
SDAJ	Compact cylinder (Adjustable stroke)

Bore size

SSA, STA	12 16 20 25 32 40 50 63
SDA, SDAD, SDAJ	12 16 20 25 32 40 50 63 80 100

SDAT	
Model	
SDAT	Compact cylinder(Duplex type)
SDAW	Compact cylinder(Duplex-end type)

Bore size

12 16 20 25 32 40 50 63 80 100

Specifications

Bore size(mm)		12	16	20	25	32	40	50	63	80	100
Acting type		Double acting									
		Single acting_ Push type, Single acting_ Pull type									-
Fluid		Air (to be filtered by 40μm filter element)									
Operating pressure	Double acting	0.15~1.0MPa(22~145psi)(1.5~10.0bar)									
	Single acting	0.2~1.0MPa(28~145psi)(2.0~10.0bar)									
Proof pressure		1.5MPa(215psi)(15bar)									
Temperature (°C)		-20~70									
Speed range (mm/s)		Double acting: 30~500, Single acting: 50~500									
Stroke tolerance		Stroke≤100 ₀ ^{+1.0} Stroke>100 ₀ ^{+1.5}									
Cushion type		Bumper									
Port size Note)		M5×0.8			1/8"			1/4"		3/8"	

Note: PT thread, G thread thread and NPT thread are available.

Stroke

Bore size(mm)			Standard stroke (mm)	Max.std stroke	Max. stroke
12 16	Double acting	With magnet	5 10 15 20 25 30 35 40 45 50	50	70
		Without magnet	5 10 15 20 25 30 35 40 45 50 55 60	60	80
	Single acting	5 10 15 20 25 30	30	-	
20	Double acting	With magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90	90	130
		Without magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100	100	140
	Single acting	5 10 15 20 25 30	30	-	
25 32 40 50 63	Double acting	With magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120	120	150
		Without magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120 130	130	160
	Single acting	5 10 15 20 25 30	23	-	
80 100	Double acting	With magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120	120	150
		Without magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120 130	130	160

Note: 1. Please contact the company for other special strokes.

2. The dimensions of non-std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder. e.g. 23mm stroke cylinder has the same dimensions of 25 std. stroke cylinder.

The diagram illustrates the layout of a 30mm SDAJ rod. It shows the following components and their positions:

- Stroke Markings:** Three 'x' marks are shown, each followed by the number '30'. A line connects the first '30' to the 'Stroke' table. A line connects the second '30' to the 'Adjustable Stroke' table. A line connects the third '30' to the 'Stroke 1' table.
- Adjustable Stroke Table:**

10: 10mm
20: 20mm
30: 30mm
40: 40mm
50: 50mm
75: 75mm
100: 100mm
Others: No this code
- Stroke 1 Markings:** An 'x' mark is shown, followed by the number '30'. A line connects the '30' to the 'Stroke 1' table.
- Stroke 1 Table:**

Refer to stroke table for details

- Stroke 2 Markings:** An 'x' mark is shown, followed by the number '10'. A line connects the '10' to the 'Stroke 2' table.
- Stroke 2 Table:**

Refer to stroke table for details

- Magnet Code Markings:** An 'S' marking is shown. A line connects it to the 'Magnet code' table.
- Magnet Code Table:**

Blank	Without magnet
S	With magnet
- Rod Type Markings:** A 'B' marking is shown. A line connects it to the 'Rod type' table.
- Rod Type Table:**

Blank	Female thread
B	Male thread
- Thread Type Markings:** A square symbol is shown. A line connects it to the 'Thread type' table.
- Thread Type Table:**

Blank	PT
G	G
T	NPT

Note: Standard thread is blank here.

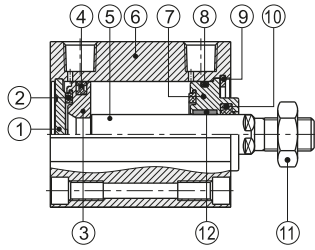
Cylinder
SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

Inner structure and material of major parts

SDA

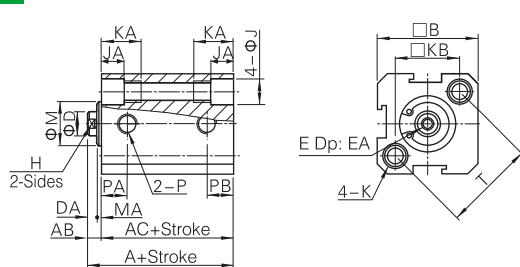


NO.	Item	Material
1	Back cover	No(Φ 12, 16)/Aluminum alloy (Others)
2	Bumper	NBR
3	Piston	Brass(Φ 12, 16)/Aluminum alloy (Others)
4	Piston seal	NBR
5	Piston rod	Carbon steel with 20μm chrome plated
6	Body	Aluminum alloy
7	Front cover	Aluminum alloy
8	O-ring	NBR
9	C clip	Spring steel
10	Front cover packing	NBR
11	Piston nut	Carbon steel
12	Bushing	No(Φ 12~32)/Wear resistant material (Others)

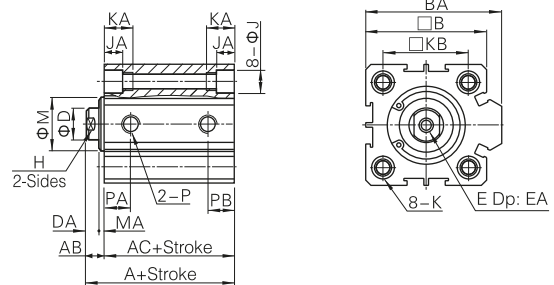
Dimensions

SDA

Φ12/Φ16



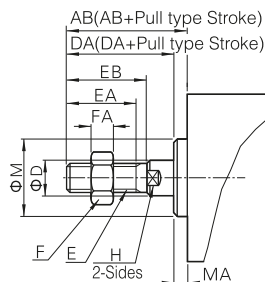
Φ20~Φ100



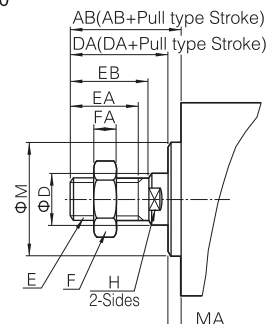
Item Bore size	A	AC	A	AC	AB	B	BA	D	DA	E	EA	H	J	JA	K	KA	KB	M	MA	P	PA		PB		T
	Without magnet	With magnet	St=5	St>5																	St=5	St>5			
12	22	17	32	27	5	25	-	6	4	M3×0.5	6	5	6.5	4.5	M5×0.8Thru.hole:Φ4.2	12	16.2	10.2	1	M5×0.8	7.5	7.5	5	5	23
16	24	18.5	34	28.5	5.5	29	-	6	4	M3×0.5	6	5	6.5	4.5	M5×0.8Thru.hole:Φ4.2	12	19.8	11	1.5	M5×0.8	8	8	5.5	5.5	28
20	25	19.5	35	29.5	5.5	34	36	8	4	M4×0.7	8	6	6.5	4.5	M5×0.8Thru.hole:Φ4.2	14	24	13	1.5	M5×0.8	9	9	5.5	5.5	-
25	27	21	37	31	6	40	42	10	4	M5×0.8	10	8	8.2	5.5	M6×1.0Thru.hole:Φ5.2	15	28	17	2	M5×0.8	9	9	5.5	5.5	-
32	31.5	24.5	41.5	34.5	7	44	50	12	4.5	M6×1.0	12	10	8.2	5.5	M6×1.0Thru.hole:Φ5.2	16	34	22	2.5	1/8"	9	9	6.5	9	-
40	33	26	43	36	7	52	58.5	16	4	M8×1.25	12	14	10.5	6.5	M8×1.25Thru.hole:Φ6.7	20	40	28	3	1/8"	9.5	9.5	7.5	7.5	-
50	37	28	47	38	9	62	71.5	20	5	M10×1.5	15	17	10.5	6.5	M8×1.25Thru.hole:Φ6.7	25	48	38	4	1/4"	8	10.5	8	10.5	-
63	41	32	51	42	9	75	84.5	20	5	M10×1.5	15	17	10.5	6.5	M8×1.25Thru.hole:Φ6.7	25	60	40	4	1/4"	9.5	12	9.5	11	-
80	52	41	62	51	11	94	104	25	6	M14×1.5	20	22	17	11	M12×1.75Thru.hole:Φ10.4	25	74	45	5	3/8"	11.5	14.5	11.5	14.5	-
100	63	51	73	61	12	114	124	32	7	M18×1.5	20	27	19	13	M14×2.0Thru.hole:Φ12.4	30	90	55	5	3/8"	16	20.5	16	20.5	-

Male thread

Φ12/Φ16



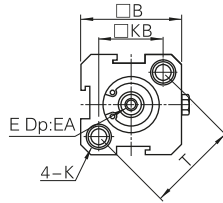
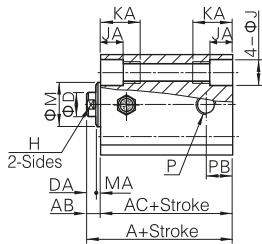
Φ20~Φ100



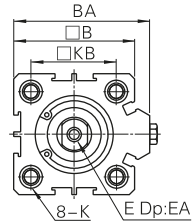
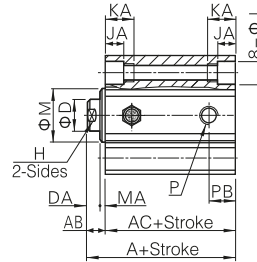
Bore size\Item	AB	D	DA	E	EA	EB	F	FA	H	M	MA	
											SDAD/SDAJ	Others
12	17	6	16	M5×0.8	10	12	8	4	5	10.2	1	1
16	17.5	6	16	M5×0.8	10	12	8	4	5	11	1.5	1.5
20	20.5	8	19	M6×1.0	13	15	10	5	6	13	1.5	1.5
25	23	10	21	M8×1.25	15	17	12	6	8	17	2	2
32	25	12	22	M10×1.25	15	18	17	6	10	22	3	2.5
40	35	16	32	M14×1.5	25	28	19	8	14	28	3	3
50	37	20	33	M18×1.5	25	28	27	11	17	38	4	4
63	37	20	33	M18×1.5	25	28	27	11	17	40	4	4
80	44	25	39	M22×1.5	30	33	32	13	22	45	5	5
100	50	32	45	M26×1.5	35	38	36	13	27	55	5	5

SSA

Φ12/Φ16

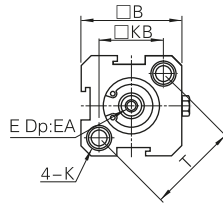
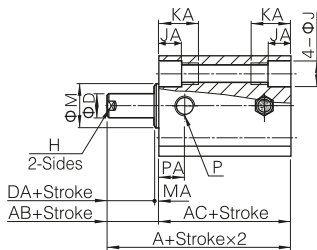


Φ20~Φ63

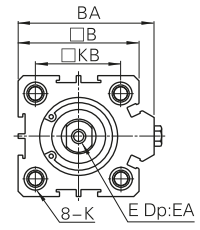
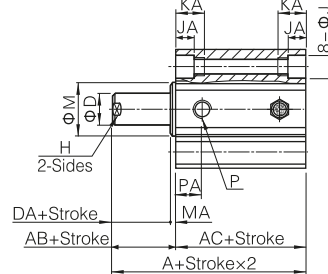


STA

Φ12/Φ16



Φ20~Φ63



Item Bore size	A(Without magnet)		A(With magnet)		AB	AC(Without magnet)		AC(With magnet)		B	BA
	St≤10	St>10	St≤10	St>10		St≤10	St>10	St≤10	St>10		
12	32	42	42	52	5	27	37	37	47	25	-
16	34	44	44	54	5.5	28.5	38.5	38.5	48.5	29	-
20	35	45	45	55	5.5	29.5	39.5	39.5	49.5	34	36
25	37	47	47	57	6	31	41	41	51	40	42
32	41.5	51.5	51.5	61.5	7	34.5	44.5	44.5	54.5	44	50
40	43	53	53	63	7	36	46	46	56	52	58.5
50	47	57	57	67	9	38	48	48	58	62	71.5
63	51	61	61	71	9	42	52	52	62	75	84.5

Bore size\Item	D	DA	E	EA	H	J	JA	K	KA	KB	M	MA	P	PA	PB	T
12	6	4	M5×0.8	6	5	6.5	4.5	M5×0.8 Thru.hole:Φ4.2	12	16.2	10.2	1	M5×0.8	7.5	5	23
16	6	4	M5×0.8	6	5	6.5	4.5	M5×0.8 Thru.hole:Φ4.2	12	19.8	11	1.5	M5×0.8	8	5.5	28
20	8	4	M5×0.8	8	6	6.5	4.5	M5×0.8 Thru.hole:Φ4.2	14	24	13	1.5	M5×0.8	9	5.5	-
25	10	4	M6×1.0	10	8	8.2	5.5	M6×1.0 Thru.hole:Φ5.2	15	28	17	2	M5×0.8	9	5.5	-
32	12	4	M6×1.0	12	10	8.2	5.5	M6×1.0 Thru.hole:Φ5.2	16	34	22	2.4	1/8"	9	9	-
40	16	4	M8×1.25	12	14	10.5	6.5	M8×1.25 Thru.hole:Φ6.7	20	40	28	3	1/8"	9.5	7.5	-
50	20	5	M8×1.25	15	17	10.5	6.5	M8×1.25 Thru.hole:Φ6.7	25	48	38	4	1/4"	10.5	10.5	-
63	20	5	M8×1.25	15	17	10.5	6.5	M8×1.25 Thru.hole:Φ6.7	25	60	40	4	1/4"	12	11	-

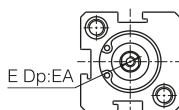
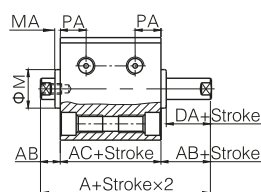
Cylinder

- SC
- SC(Big)
- SCT
- SCF
- SU
- SUF
- SI
- SIF
- DNC
- QGB
- QGBZ
- NCQ2
- NCQ2(Big)
- NCQ2(Long)
- NCQS
- NCQM
- NRQ
- SDA**
- ADVU
- ACE(AND)
- MAL
- MA
- MI
- NCM2
- NCJ2
- NCG1
- NCJP
- TD
- TN(TDA)
- NCXS
- NCXSW
- NMGP
- NMGG
- NCU
- NCUJ
- NCY3B
- NCY3R
- NCY1S
- NCY1L
- STM
- NMXH
- NMXS
- NMXQ
- NMHZ2
- NMHC2
- NMHL2
- NMHY2
- NMHT2
- NMHW2
- NMHF2
- NMHS2
- NMHS3
- NMHS4
- NMRHQ
- NMSQ
- NCRA1
- NCRQ2
- NCRB2
- ACK
- SRC
- QCK
- NCK1

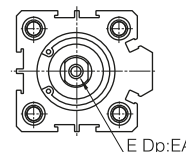
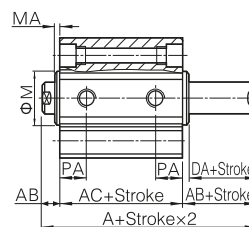
Cylinder

SDAD

Φ12/Φ16



Φ20~Φ63

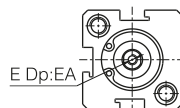
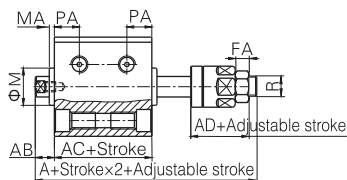


Bore size\Item	A	AC	A	AC	AB	DA	E	EA		M	MA	PA	
	Without magnet	With magnet	With magnet	With magnet				St≤10	St>10			St=5	St>5
12	27	17	37	27	5	4	M3×0.5	6	6	10.2	1	5.5	6.3
16	29.5	18.5	39.5	28.5	5.5	4	M3×0.5	6	6	11	1.5	6.5	7.3
20	30.5	19.5	40.5	29.5	5.5	4	M4×0.7	8(6.5 for St=5)		15	1.5	7.5	7.5
25	33	21	43	31	6	4	M5×0.8	10(7 for St=5)		17	2	8	8
32	38.5	24.5	48.5	34.5	7	4	M6×1.0	8	12	22	3	8	9
40	40	26	50	36	7	4	M8×1.25	8	12	28	3	8	10
50	46	28	56	38	9	5	M10×1.5	8	15	38	4	8	10.5
63	50	32	60	42	9	5	M10×1.5	10	15	40	4	9.5	11.8
80	63	41	73	51	11	6	M14×1.5	13	20	45	5	11.5	14.5
100	75	51	85	61	12	7	M18×1.5	18	20	55	5	16	20.5

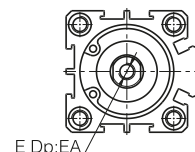
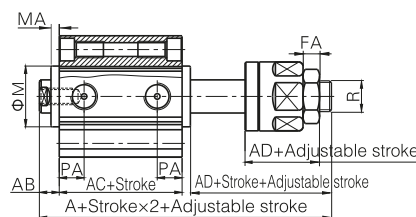
Note: The unmarked dimension is the same as SDA standard type.

SDAJ

Φ12/Φ16



Φ20~Φ63

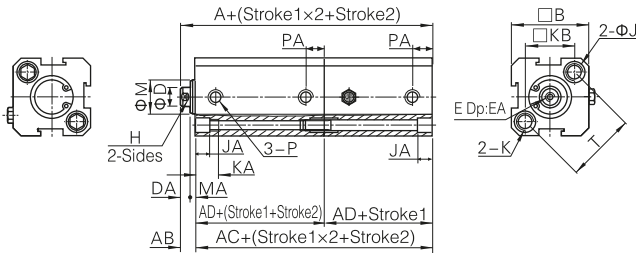


Bore size\Item	A	AC	A	AC	AB	AD	E	EA		FA	M	MA	PA		R
	Without magnet	With magnet	With magnet	With magnet				St≤10	St>10				St=5	St>5	
12	40	17	50	27	5	17	M3×0.5	6	6	4	10.2	1	5.5	6.3	M5×0.8
16	42.5	18.5	52.5	28.5	5.5	17	M3×0.5	6	6	4	11	1.5	6.5	7.3	M5×0.8
20	47.5	19.5	57.5	29.5	5.5	21	M4×0.7	8(6.5 for St=5)		5	15	1.5	7.5	7.5	M6×1.0
25	54	21	64	31	6	25	M5×0.8	10(7 for St=5)		6	17	2	8	8	M8×1.25
32	61.5	24.5	71.5	34.5	7	27	M6×1.0	8	12	6	22	3	8	9	M10×1.25
40	64	26	74	36	7	28	M8×1.25	8	12	7	28	3	8	10	M12×1.25
50	70	28	80	38	9	29	M10×1.5	8	15	8	38	4	8	10.5	M16×1.5
63	74	32	84	42	9	29	M10×1.5	10	15	8	40	4	9.5	11.8	M16×1.5
80	92.5	41	102.5	51	11	35.5	M14×1.5	13	20	10	45	5	11.5	14.5	M20×1.5
100	110.5	51	120.5	61	12	42.5	M18×1.5	18	20	13.5	55	5	16	20.5	M27×2.0

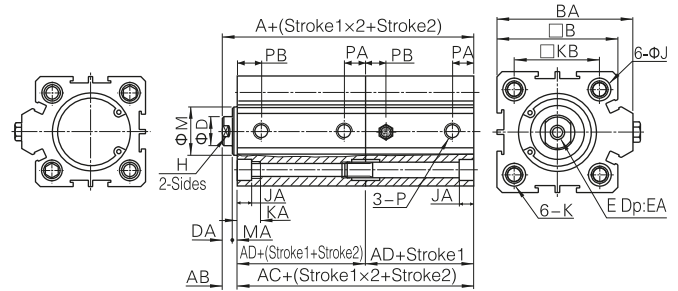
Note: The unmarked dimension is the same as SDA standard type.

SDAT

Φ12/Φ16



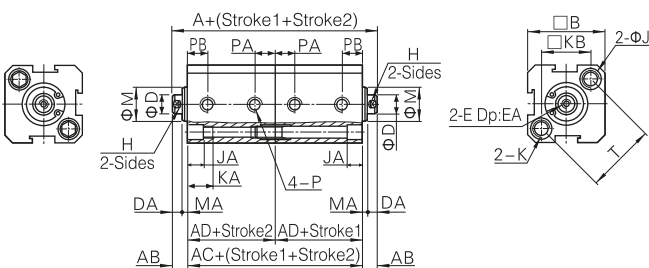
Φ20~Φ100



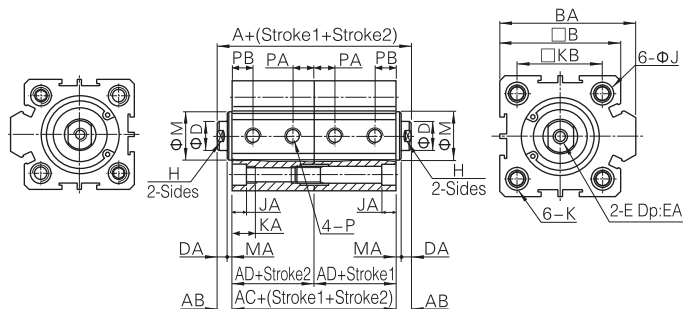
Item Bore size	A	AC	AD	A	AC	AD	AB	B	BA	D	DA	E	EA	H	J	JA	K	KA	KB	M	MA	P	PA		PB	
	Without magnet			With magnet																			St=5	St>5	St=5	St>5
12	39	34	17	59	54	27	5	25	-	6	4	M3x0.5	6	5	6.5	4.5	M5x0.8 Thru.hole:Φ4.2	12	16.2	10.2	1	M5x0.8	5	5	7.5	7.5
16	42.5	37	18.5	62.5	57	28.5	5.5	29	-	6	4	M3x0.5	6	5	6.5	4.5	M5x0.8 Thru.hole:Φ4.2	12	19.8	11	1.5	M5x0.8	5.5	5.5	8	8
20	44.5	39	19.5	64.5	59	29.5	5.5	34	36	8	4	M4x0.7	8	6	6.5	4.5	M5x0.8 Thru.hole:Φ4.2	14	24	13	1.5	M5x0.8	5.5	5.5	9	9
25	48	42	21	68	62	31	6	40	42	10	4	M5x0.8	10	8	8.2	5.5	M6x1.0 Thru.hole:Φ5.2	15	28	17	2	M5x0.8	5.5	5.5	9	9
32	56	49	24.5	76	69	34.5	7	44	50	12	4	M6x1.0	12	10	8.2	5.5	M6x1.0 Thru.hole:Φ5.2	16	34	22	2.5	1/8"	6.5	9	9	9
40	59	52	26	79	72	36	7	52	58.5	16	4	M8x1.25	12	14	10.5	6.5	M8x1.25 Thru.hole:Φ6.7	20	40	28	3	1/8"	7.5	7.5	9.5	9.5
50	65	56	28	85	76	38	9	62	71.5	20	5	M10x1.5	15	17	10.5	6.5	M8x1.25 Thru.hole:Φ6.7	25	48	38	4	1/4"	8	10.5	8	10.5
63	73	64	32	93	84	42	9	75	84.5	20	5	M10x1.5	15	17	10.5	6.5	M8x1.25 Thru.hole:Φ6.7	25	60	40	4	1/4"	9.5	11	9.5	12
80	93	82	41	113	102	51	11	94	104	25	6	M14x1.5	20	22	17	11	M12x1.75 Thru.hole:Φ10.4	25	74	45	5	3/8"	11.5	14.5	11.5	14.5
100	114	102	51	134	122	61	12	114	124	32	7	M18x1.5	20	27	19	13	M14x2.0 Thru.hole:Φ12.4	30	90	55	5	3/8"	16	20.5	16	20.5

SDAW

Φ12/Φ16



Φ20~Φ100



Item Bore size	A	AC	AD	A	AC	AD	AB	B	BA	D	DA	E	EA	H	J	JA	K	KA	KB	M	MA	P	PA		PB	
	Without magnet			With magnet																			St=5	St>5	St=5	St>5
12	44	34	17	64	54	27	5	25	-	6	4	M3x0.5	6	5	6.5	4.5	M5x0.8 Thru.hole:Φ4.2	12	16.2	10.2	1	M5x0.8	5	5	7.5	7.5
16	48	37	18.5	68	57	28.5	5.5	29	-	6	4	M3x0.5	6	5	6.5	4.5	M5x0.8 Thru.hole:Φ4.2	12	19.8	11	1.5	M5x0.8	5.5	5.5	8	8
20	50	39	19.5	70	59	29.5	5.5	34	36	8	4	M4x0.7	8	6	6.5	4.5	M5x0.8 Thru.hole:Φ4.2	14	24	13	1.5	M5x0.8	5.5	5.5	9	9
25	54	42	21	74	62	31	6	40	42	10	4	M5x0.8	10	8	8.2	5.5	M6x1.0 Thru.hole:Φ5.2	15	28	17	2	M5x0.8	5.5	5.5	9	9
32	63	49	24.5	83	69	34.5	7	44	50	12	4	M6x1.0	12	10	8.2	5.5	M6x1.0 Thru.hole:Φ5.2	16	34	22	2.5	1/8"	6.5	9	9	9
40	66	52	26	86	72	36	7	52	58.5	16	4	M8x1.25	12	14	10.5	6.5	M8x1.25 Thru.hole:Φ6.7	20	40	28	3	1/8"	7.5	7.5	9.5	9.5
50	74	56	28	94	76	38	9	62	71.5	20	5	M10x1.5	15	17	10.5	6.5	M8x1.25 Thru.hole:Φ6.7	25	48	38	4	1/4"	8	10.5	8	10.5
63	82	64	32	102	84	42	9	75	84.5	20	5	M10x1.5	15	17	10.5	6.5	M8x1.25 Thru.hole:Φ6.7	25	60	40	4	1/4"	9.5	11	9.5	12
80	104	82	41	124	102	51	11	94	104	25	6	M14x1.5	20	22	17	11	M12x1.75 Thru.hole:Φ10.4	25	74	45	5	3/8"	11.5	14.5	11.5	14.5
100	126	102	51	146	122	61	12	114	124	32	7	M18x1.5	20	27	19	13	M14x2.0 Thru.hole:Φ12.4	30	90	55	5	3/8"	16	20.5	16	20.5

Cylinder

SC

SC(Big)

SCT

SCF

SU

SUF

SI

SIF

DNC

QGB

QGBZ

NCQ2

NCQ2(Big)

NCQ2(Long)

NCQS

NCQM

NRQ

SDA

ADVU

ACE(AND)

MAL

MA

MI

NCM2

NCJ2

NCG1

NCJP

TD

TN(TDA)

NCXS

NCXSW

NMGP

NMGG

NCU

NCUJ

NCY3B

NCY3R

NCY1S

NCY1L

STM

NMXH

NMXS

NMXQ

NMHZ2

NMHC2

NMHL2

NMHY2

NMHT2

NMHW2

NMHF2

NMHS2

NMHS3

NMHS4

NMRHQ

NMSQ

NCRA1

NCRQ2

NCRB2

ACK

SRC

QCK

NCK1

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMH22
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRA2
NCRB2
ACK
SRC
QCK
NCK1



Symbol



Ordering code

ADVU	50	80	A	P	A
Model	Bore size	Stroke	Buffer form	Position sensing	
			P Double ended unadjustable buffer	A By approaching sensor	
Rod end thread					
Blank	Internal thread				
A	External thread				

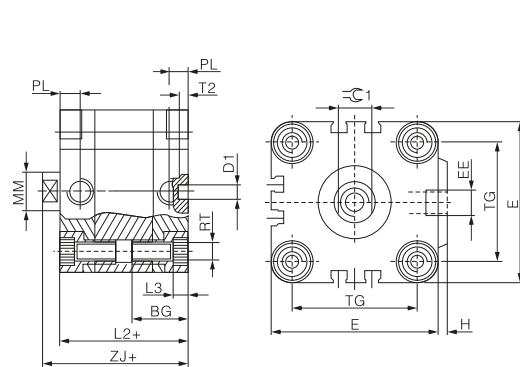
Specifications

Bore size(mm)		12	16	20	25	32	40	50	63	80	100	125	
Action pattern		Double action											
Working medium		Air											
Proof pressure		1.5MPa											
Working pressure		0.1~1.0MPa											
Port size		M5	M5	M5	M5	1/8"	1/8"	1/8"	1/8"	1/8"	1/4"	1/4"	
Piston rod terminal	Internal thread	M3	M4	M5	M5	M6	M6	M8	M8	M10	M12	M16	
	External thread	M6	M8	M10×1.25				M12×1.25		M16×1.5	M20×1.5	M27×2	
Buffer form		Dual-ended with non-adjustable buffer											
Position sensing		Using proximity sensors											
Installation form		Installation through through through-hole											-
		Installation through internal threads											
		Installation through accessories											
Installation location		Arbitrarily											

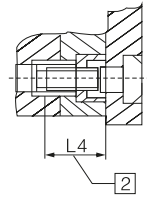
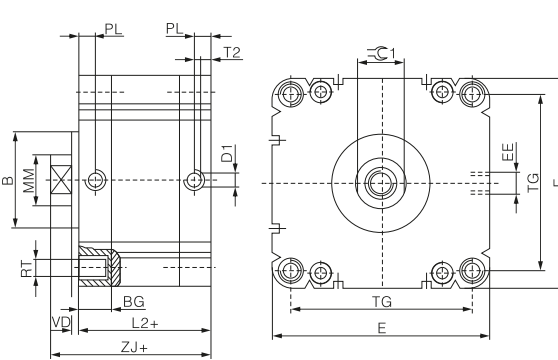
Note: PT thread, G thread and NPT thread are available.

Dimensions

Φ12-100mm



Φ125mm



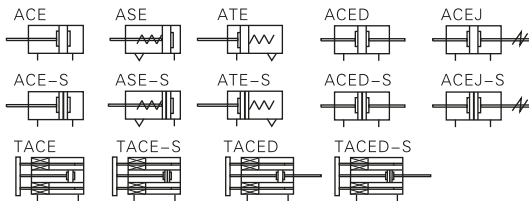
+=Add travel length
② Minimum spinning depth
Minimum spinning depth 18 mm
Please keep distance between the inner-hexagon screw and the bottom of hole.
+=Add travel length

Note: When installing Φ12 and Φ16 mm cylinders from the front cap, the two installation screws are diagonally layout, and the other arrangement can only use non-magnetic screws.

Bore size	Symbol	Bd11	BG	D1ΦH9	E	EE	H	L2	L3	L4	MMΦ	PL	RT	T2-0.2	TG	VD	ZJ	① h13
12	-	-	18.5	6	29	M5	1	38	3	16	6	8	M4	4	18	-	42.5	5
16	-	-	18.5	6	29	M5	1	38	3	16	8	8	M4	4	18	-	42.5	7
20	-	-	18.5	6	36	M5	1.5	38	4	18	10	8	M5	4	22	-	42.5	9
25	-	-	18.5	6	40	M5	1.5	39.5	4	18	10	8	M5	4	26	-	45	9
32	-	-	21.5	6	50	1/8"	2	44.5	5	20	12	8	M6	4	32	-	50.5	10
40	-	-	21.5	6	60	1/8"	2.5	45.5	5	20	12	8	M6	4	42	-	52	10
50	-	-	22	6	68	1/8"	3	45.5	6	20	16	8	M8	4	50	-	53	13
63	-	-	24.5	8	87	1/8"	4	50	8	25	16	8	M10	4	62	-	57.5	13
80	-	-	27.5	8	107	1/8"	4	56	8	25	20	8.5	M10	4	82	-	64	17
100	-	-	32.5	8	128	1/4"	5	66.5	8	25	25	10.5	M10	4	103	-	76.5	22
125	-	60	19.5	10	132	1/4"	-	81	-	18	25	10.5	M12	6	110	4	99	27



Symbol



Product feature

- In accordance with ISO21287 standard, the mounting size is popular.
- The cylinder body connects with the threads of the front and back cover, forming high strength and convenient maintenance.
- The internal diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent abrasion resistance and durability.
- The seal of piston adopts heterogeneous two-way seal structure. It has compact dimension and the function of oil reservation.
- Compact structure can effectively save fifty percent installation space with ISO15552 standard cylinder.
- There are magnetic switch slots around the cylinder body, which is convenient to install inducting switch.
- Bumper is available and it can availably absorb excrement energy.
- Installing accessories with various specifications are optional.

Ordering code

Model		Bore size		Adjustable Stroke		Magnet code		Rod type		Mounting type		Thread type	
ACE	Compact cylinder(Double acting)	20 × 30	30	10: 10mm		Blank	Without magnet	ACE/ASE/ATE	Blank: Female thread	All model	Blank: No accessories	Blank	PT
ASE	Compact cylinder(Single acting-push)	20 × 30	30	20: 20mm		S	With magnet	ACED/ACEJ	B: Male thread	ACE	FA: FA type	G	G
ATE	Compact cylinder(Single acting-pull)	20 × 30	30	30: 30mm		S		TACE	No this code	ASE	FB: FB type	T	NPT
ACED	Compact cylinder(Double rod)			40: 40mm				TACED		ATE	CA: CA type		
ACEJ	Compact cylinder(Adjustable stroke)			50: 50mm							CB: CB type		
TACE	Compact cylinder (Double acting non-rotating with yoke)			75: 75mm							CR: CR type		
TACED	Compact cylinder (Double rod non-rotating with yoke)			100: 100mm							FTC: FTC type		
				Others	No this code						LB: LB type		
											SDB: SDB type		
											FA: FA type		
											FTC: FTC type		
											LB: LB type		
											FB: FB type		
											CA: CA type		
											CB: CB type		
											CR: CR type		
											FTC: FTC type		
											FB: FB type		

Note: 1. Standard thread is blank here.
2. CR must be used with CA, FTC must be used with TCM2.

Specifications

Bore size(mm)		12	16	20	25	32	40	50	63	80	100	125
Acting type		Double acting										
		Single acting_ Push type, Single acting_ Pull type										
Fluid		Air (to be filtered by 40μm filter element)										
Operating pressure	Double acting	0.15~1.0MPa(22~145psi)										
	Single acting	0.2~1.0MPa(28~145psi)										
Proof pressure		1.5MPa(215psi)										
Temperature (°C)		-20~70										
Speed range (mm/s)		Double acting: 30~500, Single acting: 50~500										
Stroke tolerance		Stroke≤100 ^{+1.0} Stroke>100 ^{+1.5}										
Cushion type		Bumper										
Port size Note)		M5×0.8					1/8"				1/4"	

Note: PT thread, G thread and NPT thread are available.

Stroke

Bore size(mm)		Standard stroke (mm)											Max. stroke
Common type	Double acting	12	5	10	15	20	25	30	35	40	45	50	50
		16	5	10	15	20	25	30	35	40	45	50	75
		20	5	10	15	20	25	30	35	40	45	50	100
		25	5	10	15	20	25	30	35	40	45	50	150
		32	5	10	15	20	25	30	35	40	45	50	200
		50	5	10	15	20	25	30	35	40	45	50	250
	Single acting	12	5	10									10
		16~100	5	10	15	20	25						25
Non-rotating with yoke	Double acting	12	5	10	15	20	25	30	35	40	45	50	50
		16	5	10	15	20	25	30	35	40	45	50	75
		20	5	10	15	20	25	30	35	40	45	50	100
		32	5	10	15	20	25	30	35	40	45	50	100
		50	5	10	15	20	25	30	35	40	45	50	100
		80	5	10	15	20	25	30	35	40	45	50	100

Note: 1. Please contact the company for other special strokes.
2. The dimensions of non-std stroke cylinder has the same dimensions as the longer std. stroke cylinder. e.g. 23mm stroke cylinder has the same dimensions of 25 std. stroke cylinder.

Cylinder

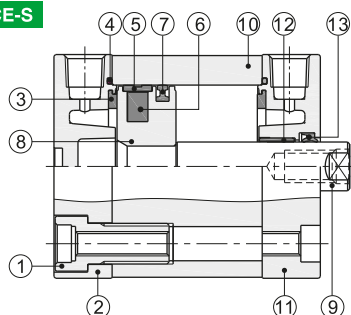
SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

Cylinder

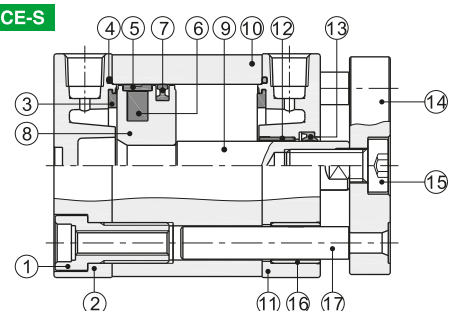
SC
SC(Big)
SCT
SCF
SU
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SI
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DNC
QGB
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NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRO2
NCRB2
ACK
SRC
QCK
NCK1

Inner structure and material of major parts

ACE-S



TACE-S

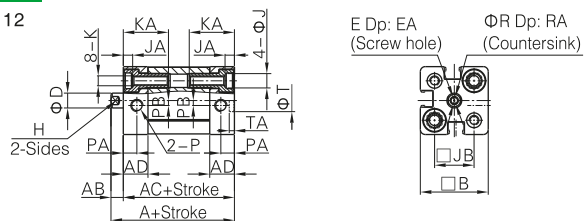


NO.	Item	Material
1	Screw	Carbon steel
2	Back cover	Aluminum alloy
3	Bumper	TPU
4	O-ring	NBR
5	Wear ring	No(Φ 12~20)\Wear resistant material(Others)
6	Magnet	Sintered metal(Neodymium-iron-boron)(Φ 12~20)\Plastic(Others)
7	Piston seal	NBR
8	Piston	Aluminum alloy
9	Piston rod	S45C
10	Body	Aluminum alloy
11	Front cover	Aluminum alloy
12	Bushing	No(Φ 12~20)\Wear resistant material(Others)
13	Front cover packing	NBR
14	Panel	Aluminum alloy
15	Screw	Carbon steel
16	Bushing	Wear resistant material
17	Guide rod	Stainless steel(Φ 12~40)\S45C(Others)

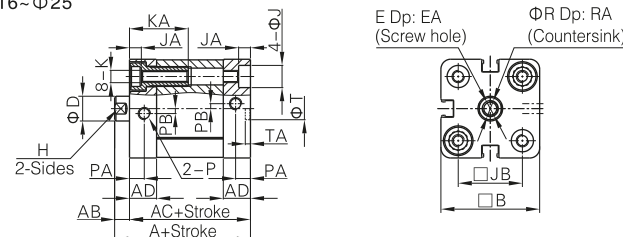
Dimensions

ACE

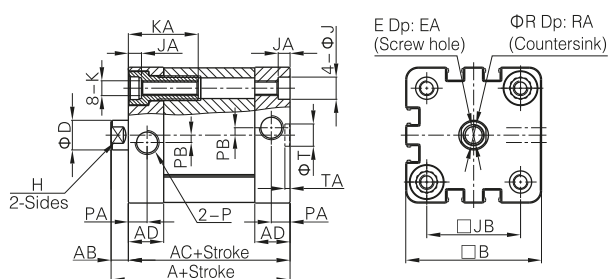
Φ 12



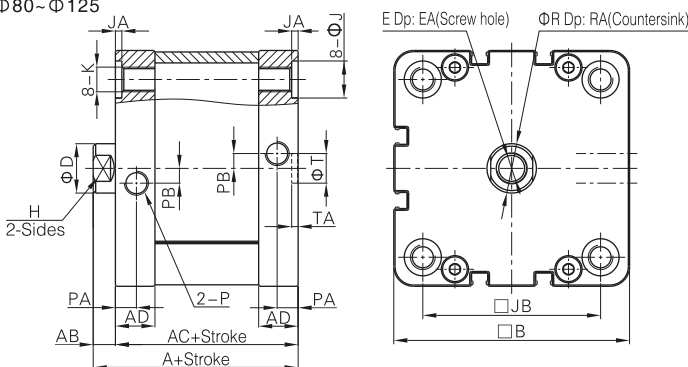
Φ 16~Φ 25



Φ 32~Φ 63



Φ 80~Φ 125

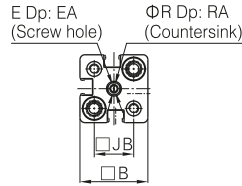
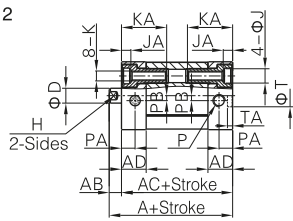


Bore size\Item	A	AB	AC	AD	B	D	E	EA	H	J	JA	JB	K	KA	P	PA	PB	R	RA	T	TA
12	40	5	35	10	27.5	6	M3×0.5	8	5	6	3.5	16	M4×0.7	18.5	M5×0.8	5.5	2	3.5	1.5	9	2.1
16	40	5	35	10	30	8	M4×0.7	10	7	6	3.5	18	M4×0.7	18.5	M5×0.8	5.5	2	4.5	1.5	9	2.1
20	43	6	37	10.5	35.5	10	M6×1.0	14	9	9	4.5	22	M5×0.8	23.5	M5×0.8	6	2	6.5	2.5	9	2.1
25	45	6	39	11	40	10	M6×1.0	14	9	9	4.5	26	M5×0.8	23.5	M5×0.8	6	2	6.5	2.5	9	2.1
32	51	7	44	14	49.5	12	M8×1.25	16	10	9	4.5	32.5	M6×1.0	28.5	1/8"	7.5	3	8.5	3.5	9	2.1
40	52.5	7	45.5	14.5	55	12	M8×1.25	16	10	9	4.5	38	M6×1.0	28.5	1/8"	7.5	3	8.5	3.5	9	2.1
50	53.5	8	45.5	14.5	65.5	16	M10×1.5	20	13	11	4.5	46.5	M8×1.25	30.5	1/8"	7.5	3	10.5	4.5	12	2.6
63	57	8	49	15	75.5	16	M10×1.5	20	13	11	4.5	56.5	M8×1.25	30.5	1/8"	7.5	4	10.5	4.5	12	2.6
80	63	9	57	16	95.5	20	M12×1.75	20	17	15	2.5	72	M10×1.5	-	1/8"	8.5	6	12.5	6	12	2.6
100	76	9	67	19	113.5	20	M12×1.75	20	17	15	2.5	89	M10×1.5	-	1/8"	10.5	7	12.5	6	12	2.6
125	92	11	81	20	134.5	25	M16×2.0	25	21	-	-	110	M12×1.75	-	1/4"	10.5	8	16.5	7	12	2.6

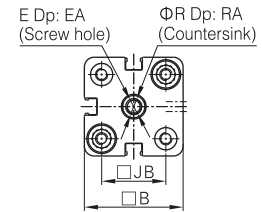
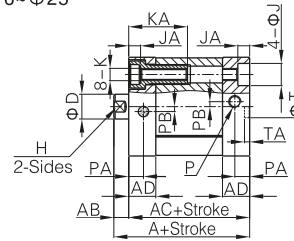
Note: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

ASE

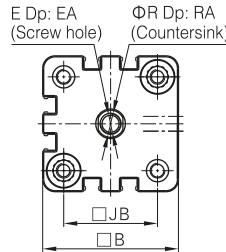
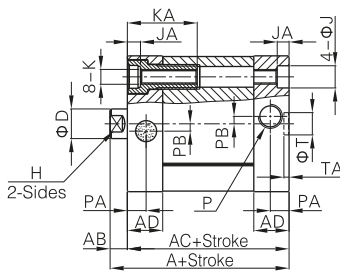
Φ12



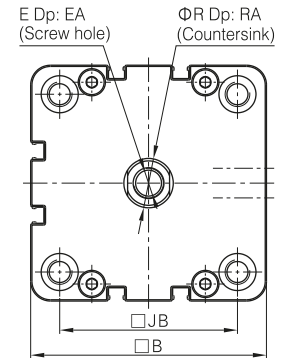
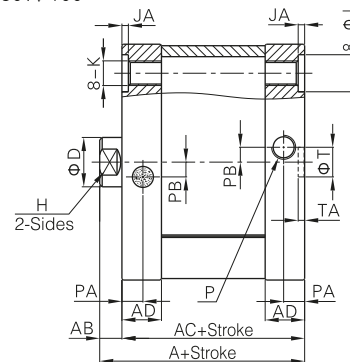
Φ16~Φ25



Φ32~Φ63

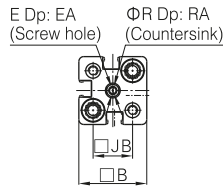
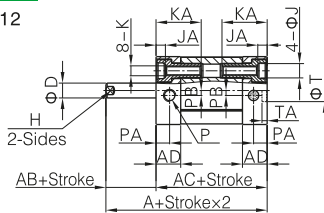


Φ80\Φ100

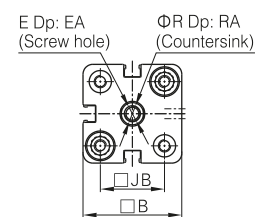
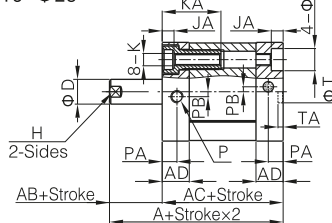


ATE

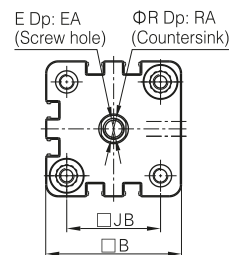
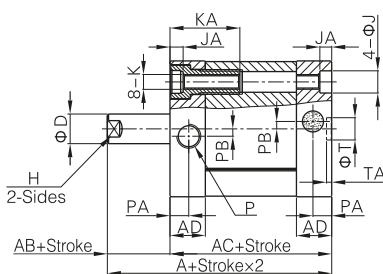
Φ12



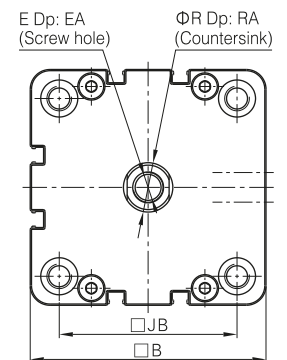
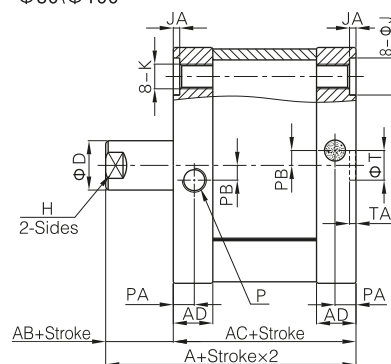
Φ16~Φ25



Φ32~Φ63



Φ80\Φ100



Bore size\Item	A	AB	AC	AD	B	D	E	EA	H	J	JA	JB	K	KA	P	PA	PB	R	RA	T	TA
12	40	5	35	10	27.5	6	M3×0.5	8	5	6	3.5	16	M4×0.7	18.5	M5×0.8	5.5	2	3.5	1.5	9	2.1
16	40	5	35	10	30	8	M4×0.7	10	7	6	3.5	18	M4×0.7	18.5	M5×0.8	5.5	2	4.5	1.5	9	2.1
20	43	6	37	10.5	35.5	10	M6×1.0	14	9	9	4.5	22	M5×0.8	23.5	M5×0.8	6	2	6.5	2.5	9	2.1
25	45	6	39	11	40	10	M6×1.0	14	9	9	4.5	26	M5×0.8	23.5	M5×0.8	6	2	6.5	2.5	9	2.1
32	51	7	44	14	49.5	12	M8×1.25	16	10	9	4.5	32.5	M6×1.0	28.5	1/8"	7.5	3	8.5	3.5	9	2.1
40	52.5	7	45.5	14.5	55	12	M8×1.25	16	10	9	4.5	38	M6×1.0	28.5	1/8"	7.5	3	8.5	3.5	9	2.1
50	53.5	8	45.5	14.5	65.5	16	M10×1.5	20	13	11	4.5	46.5	M8×1.25	30.5	1/8"	7.5	3	10.5	4.5	12	2.6
63	57	8	49	15	75.5	16	M10×1.5	20	13	11	4.5	56.5	M8×1.25	30.5	1/8"	7.5	4	10.5	4.5	12	2.6
80	63	9	57	16	95.5	20	M12×1.75	20	17	15	2.5	72	M10×1.5	-	1/8"	8.5	6	12.5	6	12	2.6
100	76	9	67	19	113.5	20	M12×1.75	20	17	15	2.5	89	M10×1.5	-	1/8"	10.5	7	12.5	6	12	2.6

Note: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

Cylinder

SC

SC(Big)

SCT

SCF

SU

SUF

SI

SIF

DNC

QGB

QGBZ

NCQ2

NCQ2(Big)

NCQ2(Long)

NCQS

NCQM

NRQ

SDA

ADVU

ACE(AND)

MAL

MA

MI

NCM2

NCJ2

NCG1

NCJP

TD

TN(TDA)

NCXS

NCXSW

NMGP

NMGG

NCU

NCUJ

NCY3B

NCY3R

NCY1S

NCY1L

STM

NMXH

NMXS

NMXQ

NMHZ2

NMHC2

NMHL2

NMHY2

NMHT2

NMHW2

NMHF2

NMHS2

NMHS3

NMHS4

NMRHQ

NMSQ

NCRA1

NCRQ2

NCRB2

ACK

SRC

QCK

NCK1

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ

NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU

ACE(AND)
MAL
MA
MI

NCM2

NCJ2

NCG1

NCJP

TD

TN(TDA)

NCXS

NCXSW

NMGP

NMGG

NCU

NCUJ

NCY3B

NCY3R

NCY1S

NCY1L

STM

NMXH

NMXS

NMXQ

NMH22

NMHC2

NMHL2

NMHY2

NMHT2

NMHW2

NMHF2

NMHS2

NMHS3

NMHS4

NMRHQ

NMSQ

NCRA1

NCRQ2

NCRB2

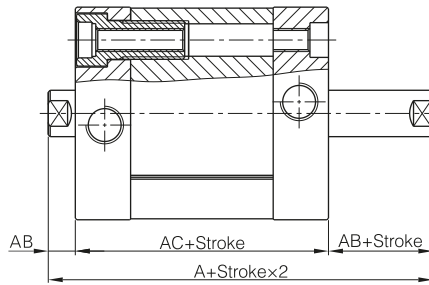
ACK

SRC

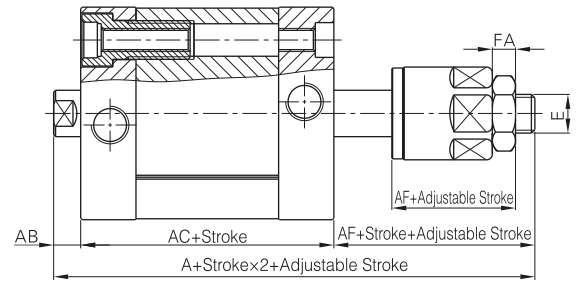
QCK

NCK1

ACED



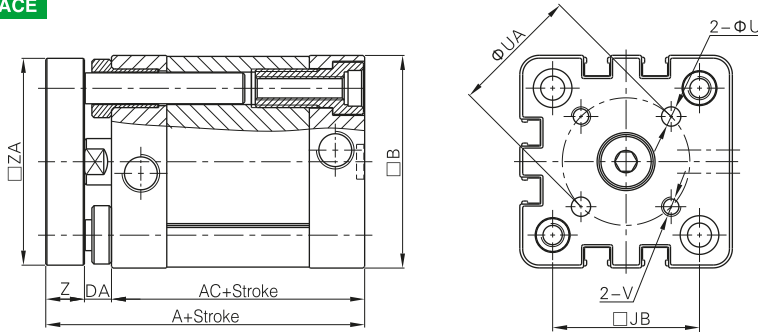
ACEJ



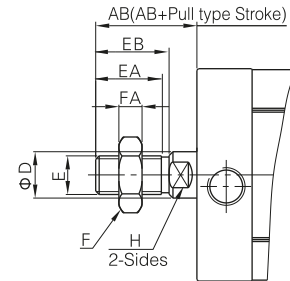
Bore size/Item	A(ACED)	A(ACEJ)	AB	AC	AF	FA	E
12	45	57	5	35	17	4	M5x0.8
16	45	61	5	35	21	5	M6x1.0
20	49	68	6	37	25	6	M8x1.25
25	51	70	6	39	25	6	M8x1.25
32	58	78	7	44	27	6	M10x1.25
40	59.5	79.5	7	45.5	27	6	M10x1.25
50	61.5	81.5	8	45.5	28	7	M12x1.25
63	65	85	8	49	28	7	M12x1.25
80	72	92	9	54	29	8	M16x1.5
100	85	105	9	67	29	8	M16x1.5
125	103	127.5	11	81	35.5	10	M20x1.5

Note:
1. The unmarkde dimension is the same as ACE standard type;
2. The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

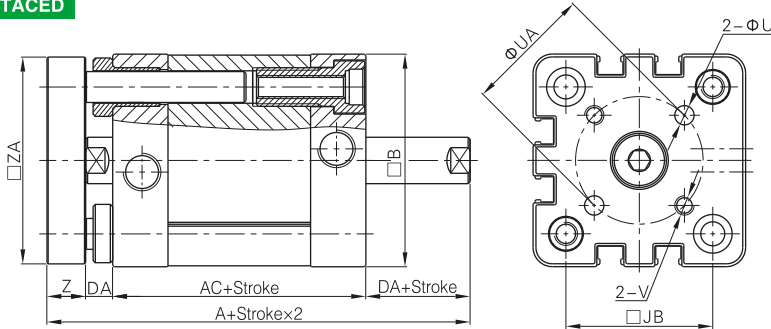
TACE



Male thread



TACED



Bore size/Item	AB	D	E	EA	EB	F	FA	H
12	15	6	M5x0.8	9	10	8	4	5
16	17	8	M6x1.0	11	12	10	5	7
20	22	10	M8x1.25	15	16	12	6	9
25	22	10	M8x1.25	15	16	12	6	9
32	26	12	M10x1.25	17	19	17	6	10
40	26	12	M10x1.25	17	19	17	6	10
50	30	16	M12x1.25	20	22	17	7	13
63	30	16	M12x1.25	20	22	17	7	13
80	34	20	M16x1.5	26	28	23	8	17
100	34	20	M16x1.5	26	28	23	8	17
125	51	25	M20x1.5	38	40	26	10	21

Bore size/Item	A(TACE)	A(TACED)	AC	B	DA	JB	U	UA	V	Z	ZA
12	46	51	35	27.5	5	16	3	12	M3x0.5	6	26.5
16	46	51	35	30	5	18	3	14	M3x0.5	6	29
20	51	57	37	35.5	6	22	5	17	M4x0.7	8	34.5
25	53	59	39	40	6	26	5	22	M5x0.8	8	39
32	61	68	44	49.5	7	32.5	5	28	M5x0.8	10	48
40	62.5	69.5	45.5	55	7	38	5	33	M5x0.8	10	53.5
50	65.5	73.5	45.5	65.5	8	46.5	6	42	M6x1.0	12	64
63	69	77	49	75.5	8	56.5	6	50	M6x1.0	12	74
80	77	86	54	95.5	9	72	8	65	M8x1.25	14	94
100	90	99	67	113.5	9	89	10	80	M10x1.5	14	112

Note: 1. The unmarkde dimension is the same as ACE standard type;
2. The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

List for ordering code of accessories

Accessories Bore size	Mounting accessories								Knuckle				Sensor switch	
	LB	FA/FB	CA	CB	CR	SDB	FTC	TCM2	I	Y	F	U	CS1-E	DS1-E
12	F-ACE12LB	F-ACE12FA	F-ACE12CA	-	-	F-MI12SDB	-	-	F-ACQ12I	F-ACQ12Y	F-M5×080F	F-M5×080U	CS1-E	DS1-E
16	F-ACP12LB	F-ACE16FA	F-ACE16CA	-	-	F-MI12SDB	-	-	F-M6×100I	F-M6×100Y	F-M6×100F	F-M6×100U		
20	F-ACP20LB	F-ACE20FA	F-ACE20CA	-	-	F-MI20SDB	-	-	F-M8×125I	F-M8×125Y	F-M8×125F	F-M8×125U		
25	F-ACP25LB	F-ACE25FA	F-ACE25CA	-	-	F-MI20SDB	-	-	F-M8×125I	F-M8×125Y	F-M8×125F	F-M8×125U		
32	F-ACE32LB	F-SI32FA	F-SE32CA	F-SE32CB	F-SI32CR	-	F-SI32FTC	F-SI32TCM2	F-M10×125I	F-M10×125Y	F-M10×125F	F-M10×125U		
40	F-ACE40LB	F-SI40FA	F-SE40CA	F-SE40CB	F-SI40CR	-	F-SI40FTC	F-SI40TCM2	F-M10×125I	F-M10×125Y	F-M10×125F	F-M10×125U		
50	F-ACE50LB	F-SI50FA	F-SE50CA	F-SE50CB	F-SI50CR	-	F-SI50FTC	F-SI50TCM2	F-M12×125I	F-M12×125Y	F-M12×125F	F-M12×125U		
63	F-ACE63LB	F-SI63FA	F-SE63CA	F-SE63CB	F-SI63CR	-	F-SI63FTC	F-SI63TCM2	F-M12×125I	F-M12×125Y	F-M12×125F	F-M12×125U		
80	F-ACE80LB	F-SI80FA	F-SE80CA	F-SE80CB	F-SI80CR	-	F-SI80FTC	F-SI80TCM2	F-M16×150I	F-M16×150Y	F-M16×150F	F-M16×150U		
100	F-ACE100LB	F-SI100FA	F-SE100CA	F-SE100CB	F-SI100CR	-	F-SI100FTC	F-SI100TCM2	F-M16×150I	F-M16×150Y	F-M16×150F	F-M16×150U		
125	-	F-SI125FA	F-SE125CA	F-SE125CB	F-SI125CR	-	F-SI125FTC	F-SI125TCM2	F-M20×150I	F-M20×150Y	F-M20×150F	F-M20×150U		

Accessory selection

Cylinder model\Accessories			Mounting accessories								Knuckle				Sensor switch			
			LB	FA	FB	CA	CB	CR	SDB	FTC	TCM2	I	Y	F	U	CS1-E	DS1-E	
ACE	Female thread	Without magnet	●	●	●	●	●	●	●	●	×	×	×	×	×	×		
		With magnet									●	●	●	●	●	●		
	Male thread	Without magnet									●	●	●	●	●	●	×	×
		With magnet									●	●	●	●	●	●	●	●
ASE ATE	Female thread	Without magnet	●	●	●	●	●	●	●	●	×	×	×	×	×	×		
		With magnet									●	●	●	●	●	●	●	●
	Male thread	Without magnet									●	●	●	●	●	●	×	×
		With magnet									●	●	●	●	●	●	●	●
ACED ACEJ	Female thread	Without magnet	●	●	×	×	×	×	●	●	×	×	×	×	×	×		
		With magnet									●	●	●	●	●	●	●	●
	Male thread	Without magnet									●	●	●	●	●	●	×	×
		With magnet									●	●	●	●	●	●	●	●
TACE	Female thread	Without magnet	×	×	●	●	●	●	●	●	×	×	×	×	×	×		
		With magnet	●	●	●	●	●	●	●	●	●	●	●	●	●			
TACED	Female thread	Without magnet	×	×	×	●	×	×	×	×	×	×	×	×	×	×		
		With magnet	●	●	●	●	●	●	●	●	●	●	●	●	●	●		

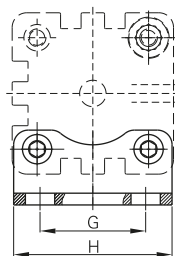
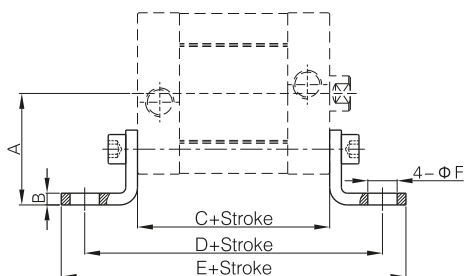
Material of accessories

Accessories Bore size	Mounting accessories									Knuckle			
	LB	FA	FB	CA	CB	CR	SDB	FTC	TCM2	I	Y	F	U
12~25	△	●	●	●	—	—	△	■	●	□	□	□	□
32~100	△	●	●	●	◇	◇	—	■	●	□	□	□	□
125	—	◇	◇	◇	◇	◇	—	■	●	□	□	□	□

●—Aluminum alloy; ■—Cast iron; ◇—Ductile Iron; △—SPCC; □—Carbon Steel

Accessories dimensions

LB



Bore size\Item	A	B	C	D	E	F	G	H
12	21	3	35	61	71	5.5	16	25
16	22	3	35	61	70.6	5.5	18	27
20	27	3.8	37	69	81.6	6.5	22	34
25	29	3.8	39	71	83.6	6.5	26	38
32	33.5	4	44	76	89	7	32	48
40	38	4	45.5	81.5	97.5	10	36	54
50	45	5	45.5	87.5	103.5	10	45	65
63	50	5	49	91	107	10	50	75
80	63	6	54	106	127	12	63	95
100	74	6	67	121	146	14.5	75	112

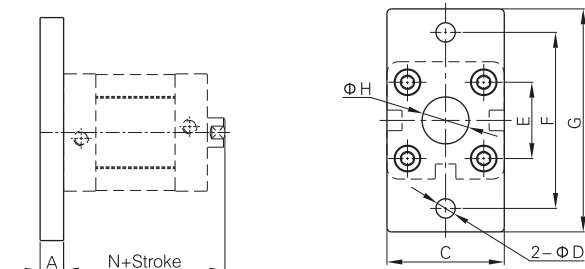
Note: Value C in the above table is only for ACE series.
Please refer to relevant content for value C of other series.

Cylinder

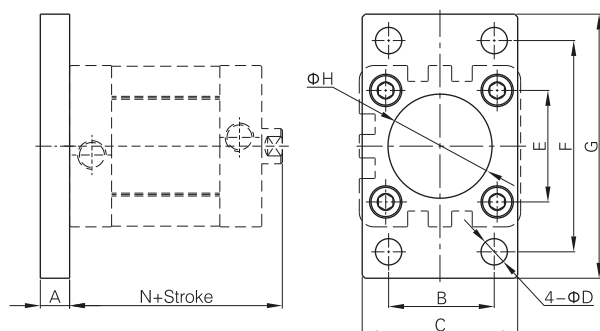
SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

FA/FB

Φ12~Φ25



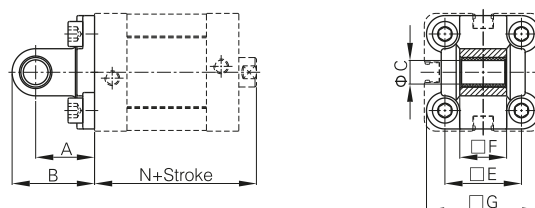
Φ32~Φ125



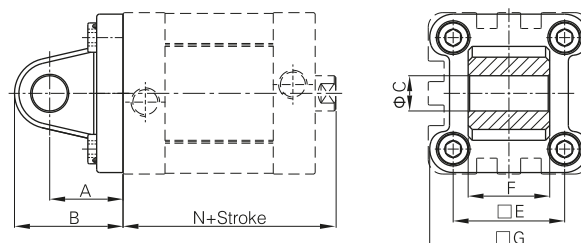
Bore size\Item	A	B	C	D	E	F	G	H	N
12	8	-	25	5.5	16	40	55	10	40
16	8	-	30	5.5	18	53	55	10	40
20	8	-	35	6.6	22	55	68	16	43
25	8	-	39.5	6.6	26	60	76	16	45
32	10	32	47	7	32.5	64	80	30.5	51
40	10	36	53	9	38	72	90	35.5	52.5
50	12	45	65	9	46.5	90	108	40.5	53.5
63	12	50	75	9	56.5	100	118	45.5	57
80	16	63	95	12.5	72	126	150	45.5	63
100	16	75	115	14.5	89	150	176	55.5	76
125	20	90	139	16.5	110	180	218	60.5	92

CA

Φ12~Φ25

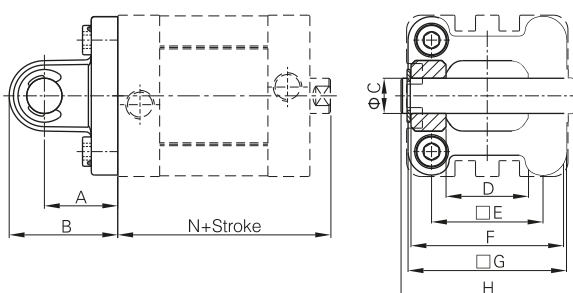


Φ32~Φ125



Bore size\Item	A	B	C	E	F	G	N
12	16	22	6	16	11.9	24	40
16	16	22	6	18	11.9	28.5	40
20	20	28	8	22	15.9	34.5	43
25	20	28	8	26	15.9	38.5	45
32	22	32.5	10	32.5	25.8	46.5	51
40	25	37	12	38	27.8	54	52.5
50	27	39	12	46.5	31.7	64	53.5
63	32	47	16	56.5	39.7	75	57
80	36	51.5	16	72	49.7	93	63
100	41	61	20	89	59.7	110	76
125	50	74	25	110	69.7	134	92

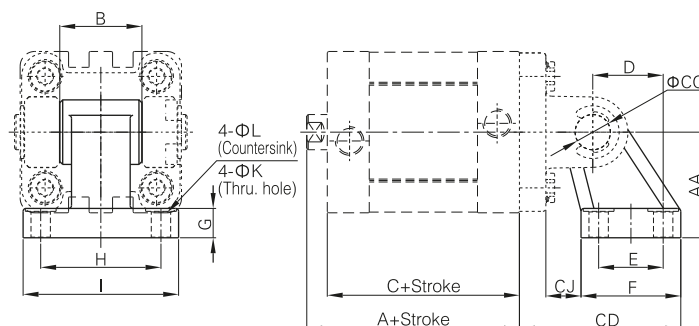
CB Φ32~Φ125



Bore size\Item	A	B	C	D	E	F	G	H	N
32	22	32.5	10	26	32.5	45	46.5	51	51
40	25	37	12	28	38	52	54	59	52.5
50	27	39	12	32	46.5	60	64	67	53.5
63	32	47	16	40	56.5	70	75	77	57
80	36	51.5	16	50	72	90	93	97	63
100	41	61	20	60	89	110	110	119	76
125	50	74	25	70	110	130	134	139	92

Note: CB is attached with relevant PIN.

CR Φ32~Φ125

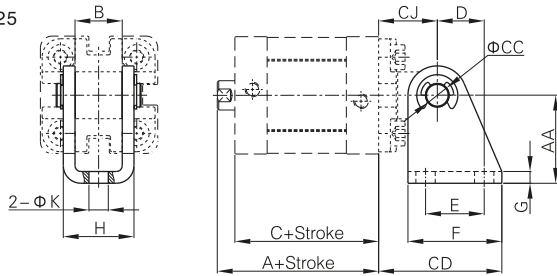


Bore size\Item	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	I	K	L
32	51	32	26	44	10	50	10	21	18	31	8	38	51	6.6	11
40	52.5	36	28	45.5	12	56	12	24	22	35	10	41	54	6.6	11
50	53.5	45	32	45.5	12	68	13	33	30	45	12	50	65	9	14
63	57	50	40	49	16	77	17	37	55	50	12	52	67	9	14
80	63	63	50	54	16	93	19	47	40	60	14	66	86	11	17
100	76	71	60	67	20	106	22	55	50	70	15	76	96	11	17
125	92	90	70	81	25	135	26	70	60	90	20	94	124	14	20

Note: CR can't be used alone, it must be used with CB.

SDB

Φ12~Φ25

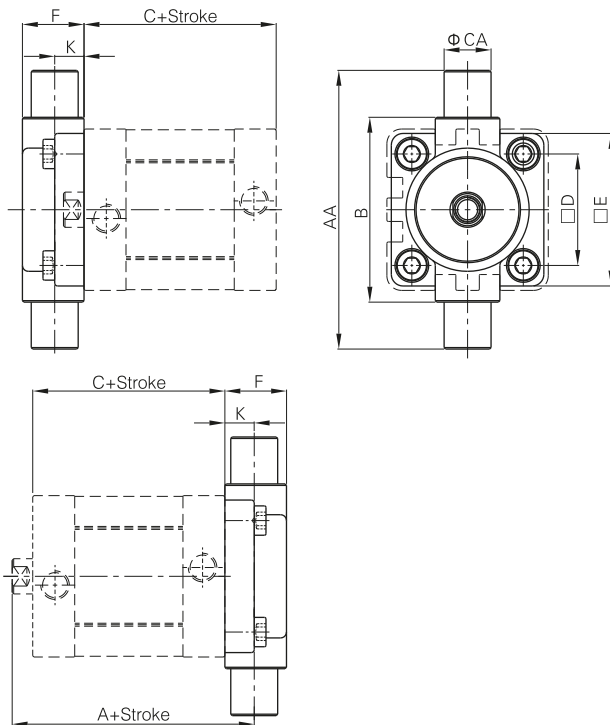


Bore size/Item	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	K
12	40	27	12.1	35	6	34	16	13	15	25	2	18.1	5.5
16	40	27	12.1	35	6	34	16	13	15	25	2	18.1	5.5
20	43	30	16.1	37	8	42	20	16	20	32	2.5	24.1	6.6
25	45	30	16.1	39	8	42	20	16	20	32	2.5	24.1	6.6

Note: SDB can't be used alone, it must be used with CA.

FTC

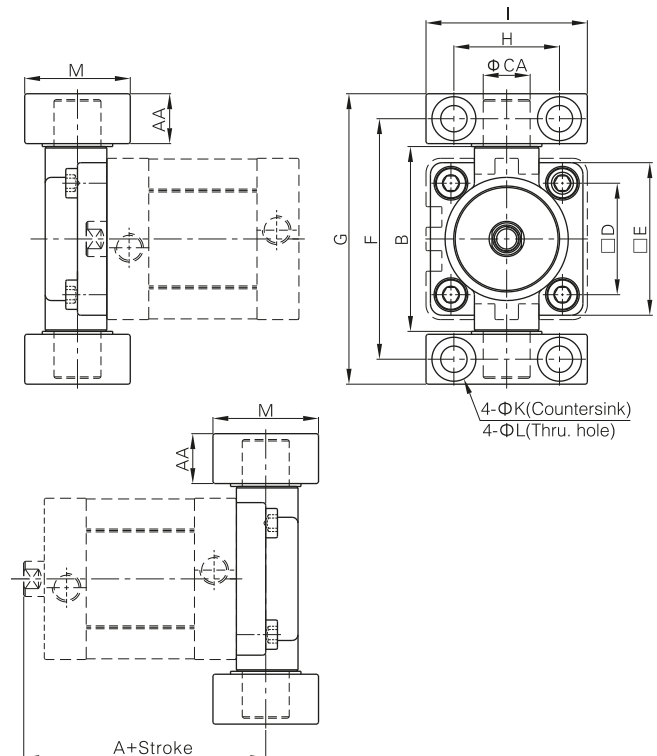
Φ32~Φ125



Bore size/Item	A	AA	B	C	CA	D	E	F	K
32	63	74	50	44	12	32.5	46	19	10
40	66.5	95	63	45.5	16	38	52	21	10
50	71.5	107	75	45.5	16	46.5	64	26	12
63	77	130	90	49	20	56.5	74	28	12
80	85	150	110	54	20	72	94	31	16
100	102	185	132	67	25	89	114	35	16
125	124	210	160	81	25	110	139	43	20

TCM2

Φ32~Φ125

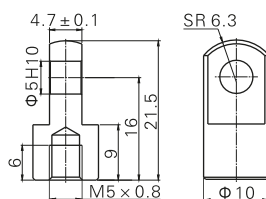


Bore size/Item	A	AA	B	CA	D	E	F	G	H	I	K	L	M
32	63	14	52	12	32.5	46	66	80	32	46	11	7	30
40	66.5	17	65	16	38	52	85	99	36	55	15	9	36
50	71.5	17	75	16	46.5	64	94	111	36	55	15	9	36
63	77	20.5	90	20	56.5	74	113.5	134	42	65	18	11	40
80	85	20.5	112	20	72	94	133.5	154	42	65	18	11	40
100	102	24.5	135	25	89	114	159.5	184	50	75	20	14	50
125	124	24.5	170	25	110	139	187.5	212	50	75	20	14	50

Note: TCM2 can't be used alone, it must be used with FTC.
The installation position of the accessories can not be adjusted arbitrarily.

I Knuckle

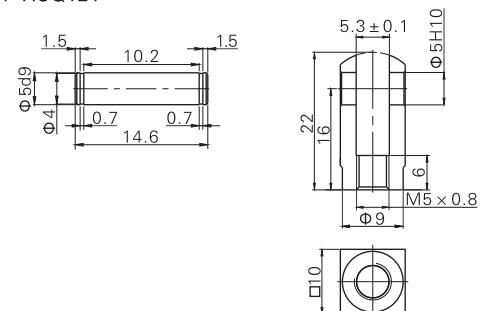
F-ACQ12I



Note: Other I knuckle are common parts.

Y Knuckle

F-ACQ12Y



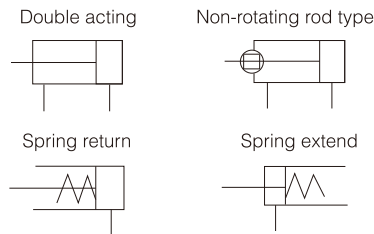
Note: Other Y knuckle are common parts.

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1



Symbol



Ordering code

N	C	D	U	K	6	30	D	M9N
Built in magnetic ring					Bore size	Stroke	Number of magnetic switches	
Blank					6 6mm	Refer to stroke table for details	Blank 2 pcs.	
D					10 10mm		S 1 pc.	
					16 16mm		n "n" pcs.	
					20 20mm			
					25 25mm			
					32 32mm			
Mounting type					Action		Port thread type	
Blank					D Double acting		Mark type Bore size	
K					S Single action (Spring return)		Blank M thread Φ6~25	
W					T Single action (Spring extend)		TN NPT Φ32	
KW							TF G	

* Single acting cylinder and long stroke double acting cylinder have no W and KW types.

Adaptive installation / rectangular cylinder

Mounting Type	Axial mounting (Body tapped)	Vertical mounting (Body through-holes)	Lateral mounting (Body through-holes)

Specifications

Bore size(mm)		6	10	16	20	25	32
Fluid		Air (to be filtered by 40μm filter element)					
Action		Double acting Single action: spring return, spring extend					
Maximum operating pressure		0.7MPa					
Minimum operating pressure (MPa)	Double acting	Single rod	0.12	0.06	0.05		
		Double rod, non-rotating rod, air cushioning	0.15	0.10	0.08		
		Non-rotating rod, double rod	0.18	0.13	0.11		
	Single acting	Standard	0.20	0.15	0.13		
Ambient and fluid temperature		Magnetic switch: -10-60℃, non-magnetic switch: -10-70℃					
Cushion		Rubber cushion at both ends					
Piston speed (mm/s)		50~500					
Stroke length tolerance (mm)		+1.0 0					
Lubrication (Note)		Not required (Non-lube)					
Installation form		Free (multifaceted installation)					
Non-rotation accuracy of piston rod		±0.8°			±0.5°		
Port size		M5×0.8					1/8"

Note: If lubrication is required, please use turbine No.1 oil ISO VG32.

Stroke/magnetic switch model table

Bore size (mm)	Standard stroke		Long stroke (Double acting)	Magnetic switch model (Direct mounting) (Note)
	Double acting	Single action		
6	5, 10, 15, 20, 25, 30		40	M9N M9B M9P
10			50	
16			60	
20	5, 10, 15, 20, 25, 30, 40, 50	5, 10, 15	60, 70 80, 90 100	

Note: The specifications and characteristics of magnetic switches can be referred to the series of magnetic switches.
Wire length representation mark: no mark-0.5m, L-3m, Z-5m, Example: M9N, M9NL.

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

Cylinder

SC

SC(Big)

SCT

SCF

SU

SUF

SI

SIF

DNC

QGB

QGBZ

NCQ2

NCQ2(Big)

NCQ2(Long)

NCQS

NCQM

NRQ

SDA

ADVU

ACE(AND)

MAL

MA

MI

NCM2

NCJ2

NCG1

NCJP

TD

TN(TDA)

NCXS

NCXSW

NMGP

NMGG

NCU

NCUJ

NCY3B

NCY3R

NCY1S

NCY1L

STM

NMXH

NMXS

NMXQ

NMH22

NMHC2

NMHL2

NMHY2

NMHT2

NMHW2

NMHF2

NMHS2

NMHS3

NMHS4

NMRHQ

NMSQ

NCRA1

NCRQ2

NCRB2

ACK

SRC

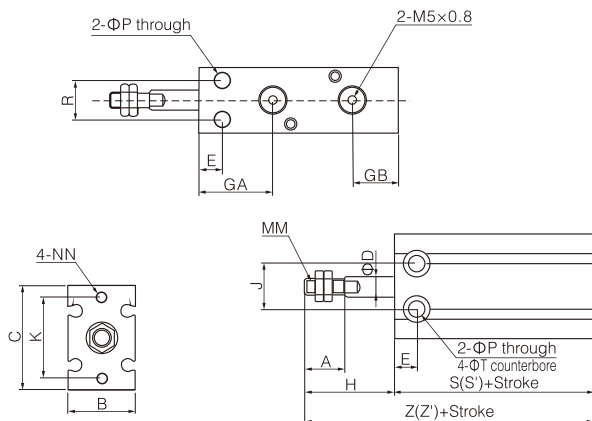
QCK

NCK1

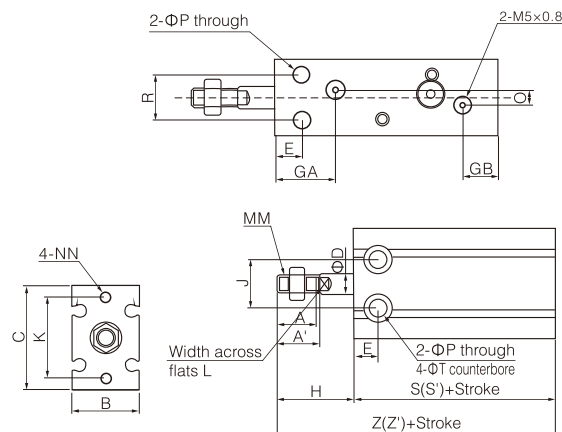
Dimensions

Basic type, built-in magnetic ring type (double-acting, single-acting spring return/extend)

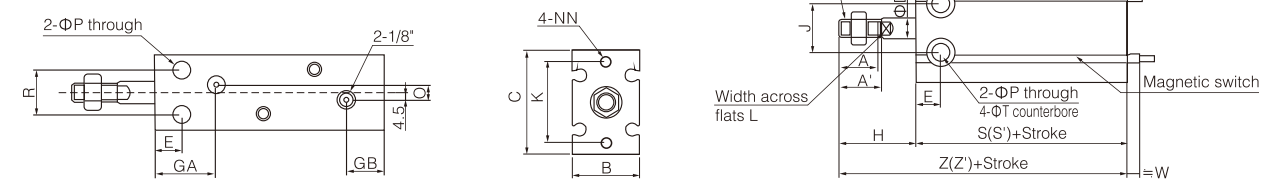
Φ6, Φ10



Φ16~Φ25



Φ32



Common dimension table

Model	A	A'	B	C	ΦD	E	GA	GB	J	K	L	MM	NN	ΦP	Q	R	ΦT
NC□U6	7	-	13	22	3	7	15	10	10	17	-	M3×0.5	M3×0.5 depth 5	3.2	-	7	6 depth 4.8
NC□U10	10	-	15	24	4	7	16.5	10	11	18	-	M4×0.7	M3×0.5 depth 5	3.2	-	9	6 depth 5
NC□U16	11	12.5	20	32	6	7	16.5	11.5	14	25	5	M5×0.8	M4×0.7 depth 6	4.5	4	12	7.6 depth 6.5
NC□U20	12	14	26	40	8	9	19	12.5	16	30	6	M6×1.0	M5×0.8 depth 8	5.5	9	16	9.3 depth 8
NC□U25	15.5	18	32	50	10	10	21.5	13	20	38	8	M8×1.25	M5×0.8 depth 8	5.5	9	20	9.3 depth 9
NC□U32	19.5	22	40	62	12	11	23	13	24	48	10	M10×1.25	M6×1.0 depth 9	6.6	13.5	24	11 depth 11.5

Double acting dimension table

Model	H	Basic type		Built-in magnetic ring type		
		S	Z	W	S'	Z'
NC□U6-□D	13	33	46	2.5	33	46
NC□U10-□D	16	36	52	1	36	52
NC□U16-□D	16	30	46	0	40	56
NC□U20-□D	19	36	55	1	46	65
NC□U25-□D	23	40	63	-1	50	73
NC□U32-□D	27	42	69	-4	52	79

Single action (Spring return) dimension table

*St+Stroke

Model	H	Basic type						Built-in magnetic ring type						
		S			Z			W	S'			Z'		
		5st	10st	15st	5st	10st	15st		5st	10st	15st	5st	10st	15st
NC□U6-□S	13	38	43	48	51	56	61	2.5	38	43	48	51	56	61
NC□U10-□S	16	41	46	56	57	62	72	1	41	46	56	57	62	72
NC□U16-□S	16	35	40	50	51	56	66	0	45	50	60	61	66	76
NC□U20-□S	19	41	46	56	60	65	75	1	51	56	66	70	75	85
NC□U25-□S	23	45	50	60	68	73	83	-1	55	60	70	78	83	93
NC□U32-□S	27	47	52	62	74	79	89	-4	57	62	72	84	89	99

Single action (spring extend) dimension table

*St+Stroke

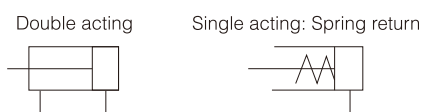
Model	H			Basic type						W	Built-in magnetic ring type					
				S			Z				S'			Z'		
	5st	10st	15st	5st	10st	15st	5st	10st	15st		5st	10st	15st	5st	10st	15st
NC□U6-□T	18	23	28	38	43	48	56	66	76	2.5	38	43	48	56	66	76
NC□U10-□T	21	26	31	41	46	56	62	72	87	1	41	46	56	62	72	87
NC□U16-□T	21	26	31	45	50	60	66	76	91	0	45	50	60	66	76	91
NC□U20-□T	24	29	34	41	46	56	65	75	90	1	51	56	66	75	85	100
NC□U25-□T	28	33	38	45	50	60	73	83	98	-1	55	60	70	83	93	108
NC□U32-□T	32	37	42	47	52	62	79	89	104	-4	57	62	72	89	99	114

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1



Symbol



Ordering code

Basic type: **NCUJ** **B** **4 - 6** **S** ☐
 Built-in magnetic ring: **NCDUJ** **B** **8 - 10** **D** **M** - **M9N** **S**
With magnetic switch
 Built in magnetic ring
Mounting type
 B Basic (Through-hole)
Bore size
 4 4mm
 6 6mm
 8 8mm
 10 40mm
 *Φ4mm cylinder has no built-in magnetic ring.
Stroke
Action
 D Double acting
 S Single action (Spring return)
Magnetic switch type
 Blank Without magnetic switch
 *Magnetic switch type refer stroke/Magnetic switch model table
Rod end thread
 Blank Rod end female threaded (Without thread for Φ4)
 M Rod end male threaded
Number of magnetic switches
 Blank 2 pcs.
 S 1 pc.
 n "n" pcs.

Specifications

Bore size(mm)	4	6	8	10
Fluid	Air (to be filtered by 40μm filter element)			
Action	Double acting/Single action:(spring return)			
Maximum operating pressure	0.7MPa			
Minimum operating pressure (MPa)	Double acting	0.15		0.1
	Single acting	0.35	0.3	0.2
Ambient and fluid temperature	With magnetic switch: -10-60℃, Without magnetic switch: -10-70℃			
Cushion	None			
Piston speed (mm/s)	50~500			
Stroke length tolerance (mm)	+0.5 0			
Lubrication Note)	Not required (Non-lube)			
Installation form	Through-hole, free (multi-faceted) installation			
Port size	M3×0.5			

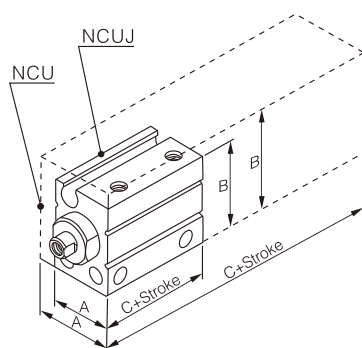
Note: If lubrication is required, please use turbine No. 1 oil ISO VG32.

Stroke/magnetic switch model table

Bore size (mm)	Standard stroke		Magnetic switch model (Track installation) Note)
	Double acting	Single action	
4	4, 6, 8, 10, 15, 20	4, 6	M9N M9B M9P
6	4, 6, 8, 10, 15, 20, 25, 30	4, 6, 8	
8	4, 6, 8, 10, 15, 20, 25, 30	4, 6, 8, 10	
10	4, 6, 8, 10, 15, 20, 25, 30	4, 6, 8, 10	

Note: The specifications and characteristics of magnetic switches can be referred to the series of magnetic switches.
 Wire length representation mark: no mark-0.5m, L-3m, Z-5m.

Mini free mount cylinder



Full length: maximum reduction of about 64%.
 Volume: Maximum reduction of about 70%.
 (Comparing with NCU series)

Smaller size Minimum diameter of cylinder Φ4 mm

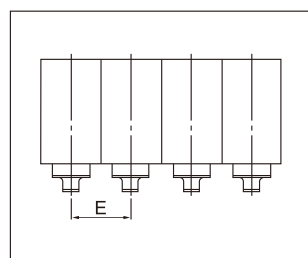
Bore size(mm)	A	B	C
4	10	15	13
6	13(13)	19(22)	13(33)
8	13	21	13
10	13.5(15)	22(24)	13(36)

(): The size of NCU Series in brackets

Spacing shorten

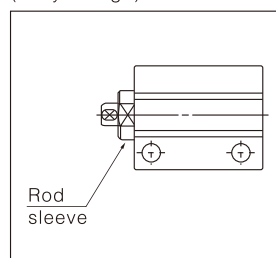
(Easy to use side by side)

Bore size(mm)	E
4	10
6	13
8	13
10	13.5



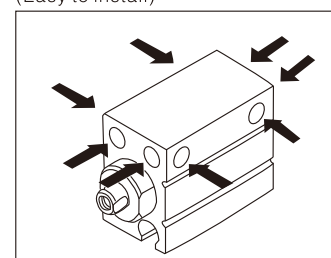
With boss (h9)

(Easy to align)



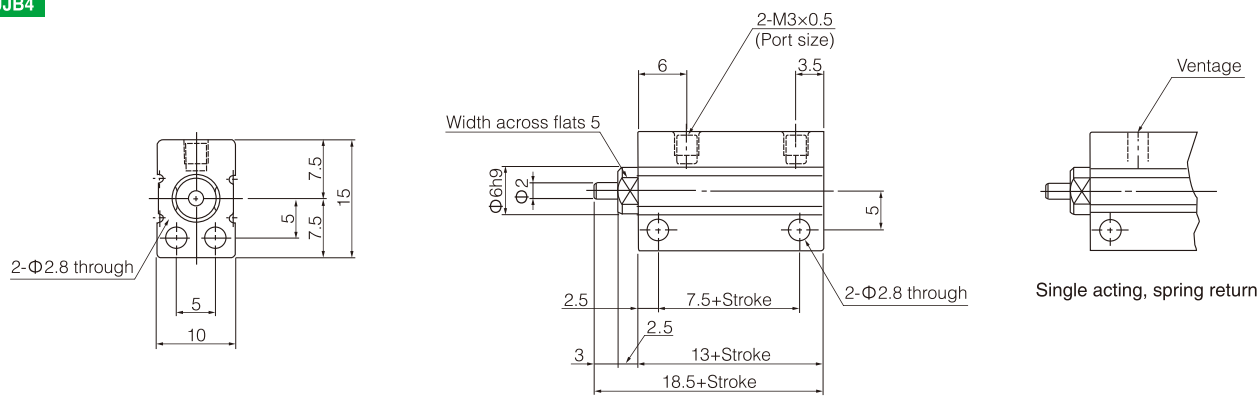
4 sides can be installed

(Easy to install)

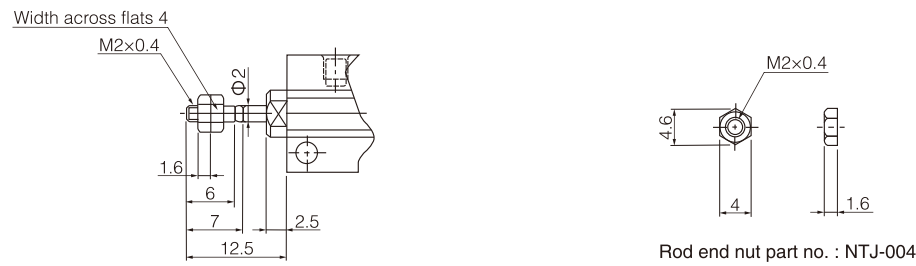


Dimensions

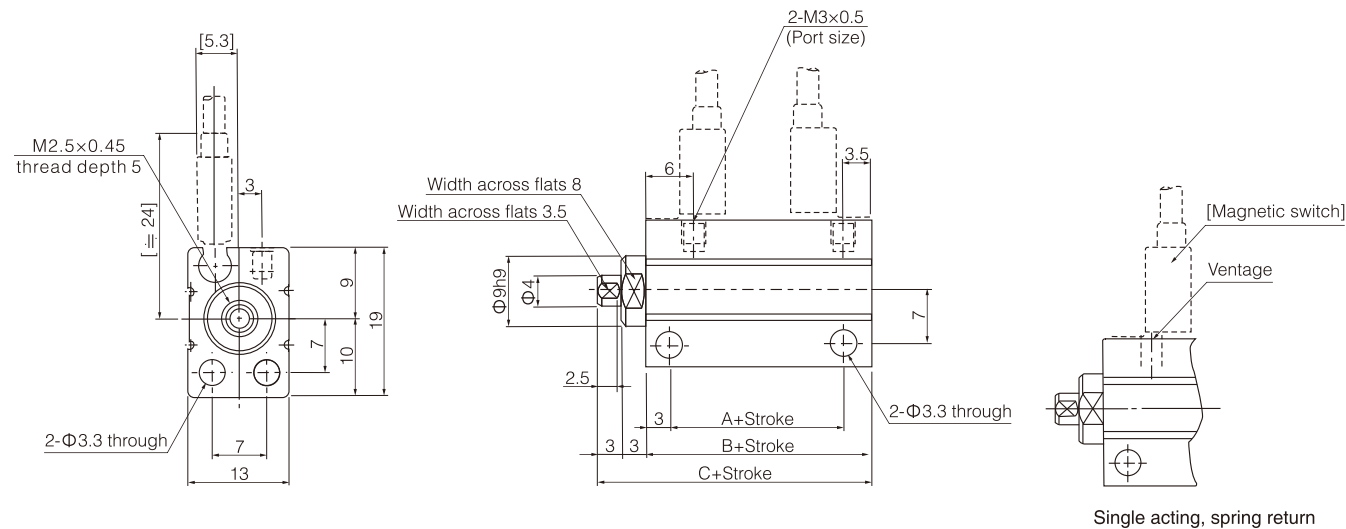
NCUJB4



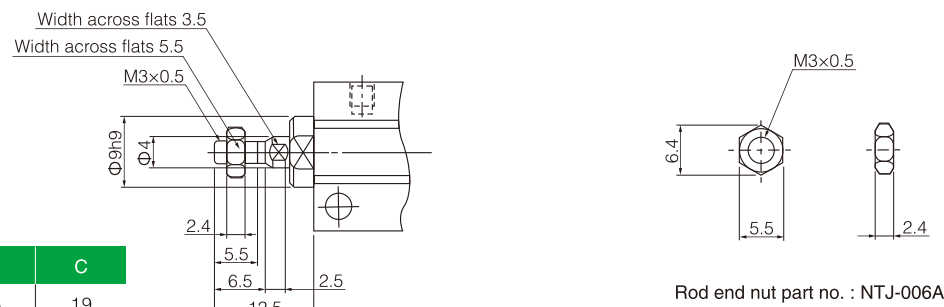
Rod end male threaded



NCUJB6 • NCDUJB6



Rod end male threaded



Model	A	B	C
NCUJB6	6.5	13	19
NCDUJB6	11.5	18	24

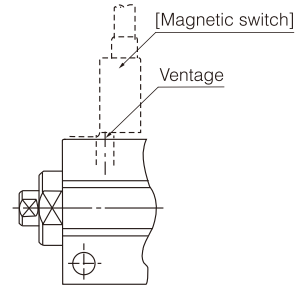
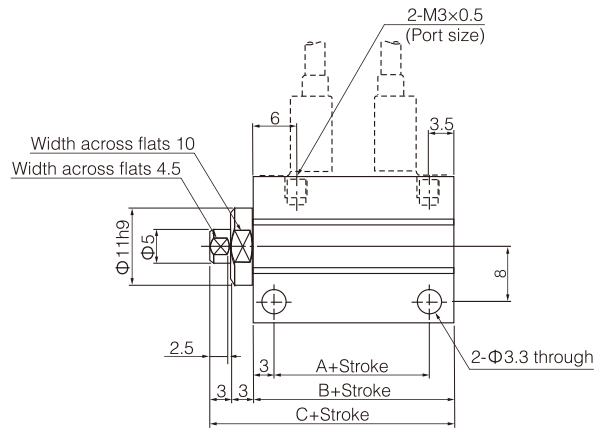
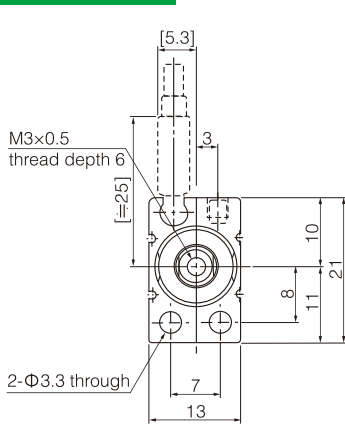
Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

Cylinder

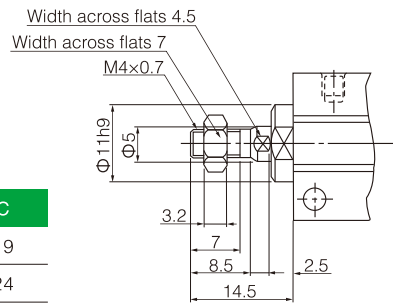
SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

NCUJB8 • NCDUJB8

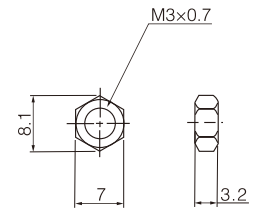


Single acting, spring return

Rod end male threaded

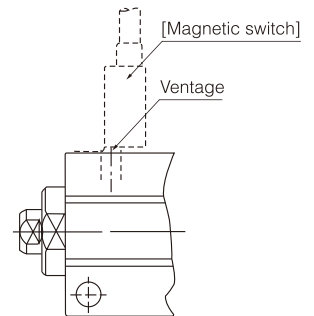
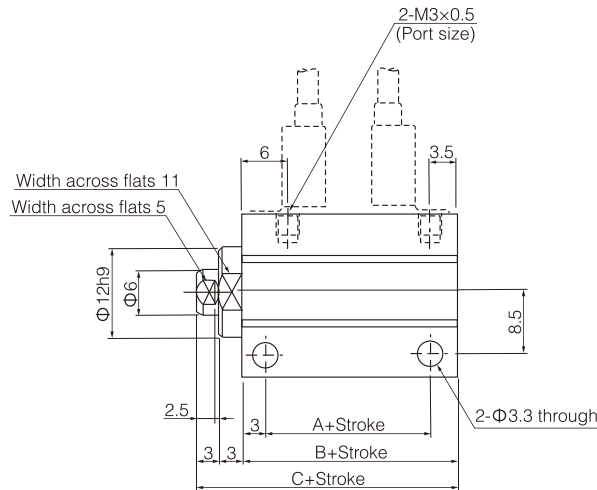
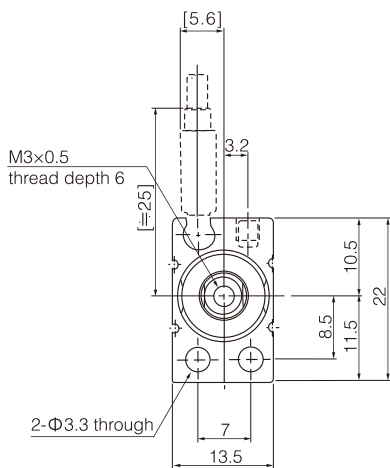


Model	A	B	C
NCUJB8	6.5	13	19
NCDUJB8	11.5	18	24



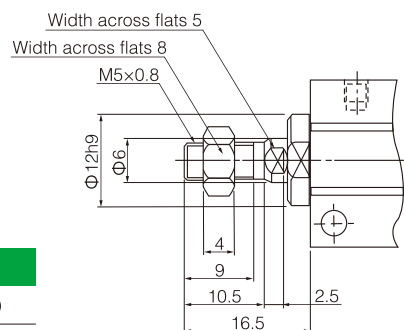
Rod end nut part no. : NTJ-010A

NCUJB10 • NCDUJB10

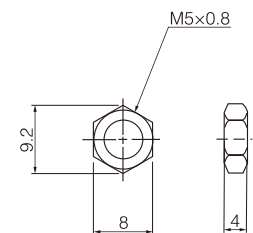


Single acting, spring return

Rod end male threaded



Model	A	B	C
NCUJB10	6.5	13	19
NCDUJB10	11.5	18	24



Rod end nut part no. : NTJ-015A