

SECTION 3

Page No.

CYLINDERS

Precautions in Installing and Operating Cylinders	3.001
Caution in Installing Cylinder	3.002
ISO Standard Cylinder	
QC85 Series ISO6432 Standard Small Size Cylinder (Φ10 ~ Φ25)	3.003
QDNC Series ISO15552 Standard Square Cylinder (Φ32 ~ Φ100)	3.005
QC95 Series ISO15552 Standard Cylinder (Φ32 ~ Φ200)	3.010
XSC Series ISO6430 Standard Square Cylinder (Φ32 ~ Φ100)	3.013
QSC Series ISO6430 Standard Cylinder (Φ32 ~ Φ100)	3.015
General Cylinder	
QCJ2 Series Mini Cylinder (Φ6 ~ Φ16, Japanese Type)	3.020
QCM2 Series Small Size Cylinder (Φ20 ~ Φ40, Japanese Type)	3.024
QC75 Series Small Size Cylinder (Φ32 ~ Φ40, European Type)	3.028
XQGAx Series Small Size Cylinder (Φ12 ~ Φ32)	3.030
XQGAxD(D1) Series Small Single Acting Cylinder (Φ12 ~ Φ32)	3.034
XQGAx2 Series Small Double Piston Rod Cylinder (Φ12 ~ Φ32)	3.036
XQGAxKn Series Small Auto Switch Cylinder (Φ12 ~ Φ32)	3.037
QMAL Series Aluminium Alloy Small Size Cylinder (Φ20 ~ Φ40)	3.038
XQGA(B) Series General Double Acting Cylinder (Φ32 ~ Φ320)	3.043
XQGAD(D1) Series General Single Acting Cylinder (Φ32 ~ Φ63)	3.051
XQGA2(B2) Series General Double Piston Rod Cylinder (Φ32 ~ Φ320)	3.053
XQGL(L1) Series General Adjustable Stroke Cylinder (Φ32 ~ Φ320)	3.054
XQGA(B)F Series General Valve Cylinder (Φ32 ~ Φ320)	3.055
XQGA(B)Kn Series General Auto Switch Cylinder (Φ32 ~ Φ200)	3.060
QMB Series Japanese Tape Cylinder (Φ32 ~ Φ100)	3.061
Compact Cylinder	
QCQS Series Compact Cylinder (Φ12 ~ Φ25, New Japanese Type)	3.064

SECTION 3

Page No.

CYLINDERS

Compact Cylinder

QCQ2 Series Compact Cylinder (Φ12 ~ Φ100, Japanese Type)	3.066
QCN Series Compact Cylinder (Φ16 ~ Φ100, European Type)	3.068
QADVU Series Compact Type Shot Stroke Cylinder (Φ16 ~ Φ100)	3.073

Special Cylinder

XQGAx0 Series Small Square Cylinder (Φ20 ~ Φ25)	3.078
XQGAy(By) Series Light Cylinder (Φ40 ~ Φ63)	3.079
XQGAyD(D1) Series Light Single Acting Cylinder (Φ40 ~ Φ63)	3.080
XQGAy2(By2) Series Light Double Piston Rod Cylinder (Φ40 ~ Φ63)	3.081
QTN Series Twin-rod Cylinder (Φ10 ~ Φ32)	3.082
QRSQ Series Stopper Cylinder (Φ20 ~ Φ50)	3.084
QCKA Series Clamp Cylinder (Φ40 ~ Φ63)	3.089
QRC Series Rotary Cylinder (Φ40 ~ Φ125)	3.091
XQGA(B)J Series Tandem Cylinder (Φ32 ~ Φ320)	3.092
XQGA(B)P Series Multi-Position Cylinder (Φ32 ~ Φ320)	3.093
XQGBSJ Series Locking Cylinder (Φ40 ~ Φ100)	3.094
XQGASF Series Servo Cylinder (Φ63 ~ Φ80)	3.095

Precautions in Installing and Operating Cylinders

1. Before installation, check whether the cylinder has been damaged during the transportation and whether there is any loosen connection.
2. Avoid any big radial load to the piston rod whether during installation or operation.
3. No matter what kind of mounting is used the cylinder should not be deformed. The mounting should be rigid enough. Connecting the load and piston rod by welding is absolutely not permitted.
4. When a cylinder is installed horizontally, especially a cylinder of long stroke, the extending and returning of the piston rod should be kept in the same axial line.
5. When adjusting the piston speed, firstly set the speed control valves (one way flow control valves) at the middle position of the regulating ranges. Gradually adjust the output pressure of the regulator (in the air combination set) to the operating pressure needed. Then adjust the piston speed by the speed control valves. Finally adjust the air cushions by the regulating needles (or screws) so that inertia of piston can be absorbed and the piston does not compact on the front and rear covers.
6. After complete the installation, the cylinder should be run two or three times without load in the operating pressure range to check whether the cylinder is in proper condition.
7. If CA, CB, TA, TB, TC or TC-M type mounting is used, the moving parts of the mounting should be lubricated.
8. There is an additional air port, threaded and plugged, on the front and rear covers of the cylinder to facilitate selecting the inlet port of the cylinder (except 125, 160, 250, 320). The holes should be checked whether there is leakage and sealant tape or glue should be used.

About ordering

If the stroke is out of the range stipulated in the catalogue or the rod end thread needed is special, please contact us in advance. Please try to use the standard strokes. The cylinders of non-standard strokes are made to order. Please use our models to order our products.

Port thread codes:

R_c — Female taper thread (**PT** Female thread)

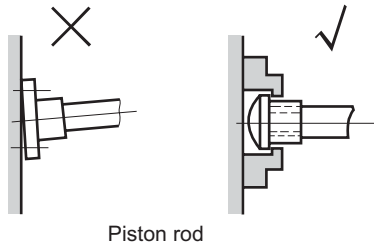
R — Male taper thread (**PT** Male thread)

G — Female and Male parallel threads

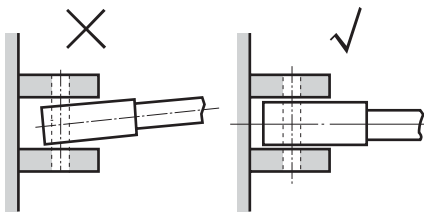
(**BSPP** Female and Male threads)

Caution in Installing Cylinder

Piston rod connection

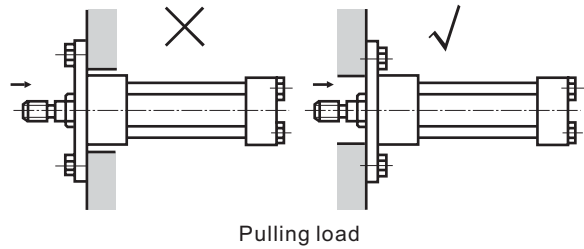


Piston rod

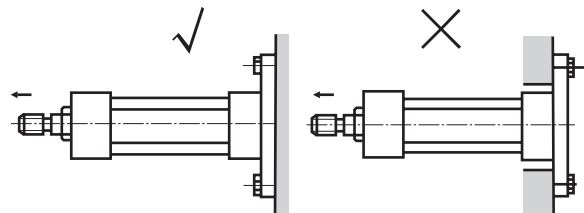


Piston rod

FA, FB Front, Rear flange connection

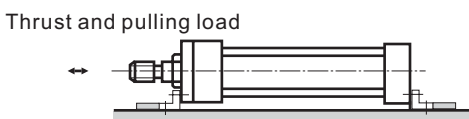
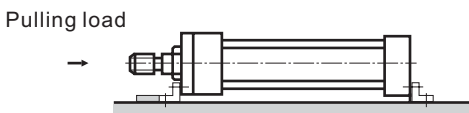
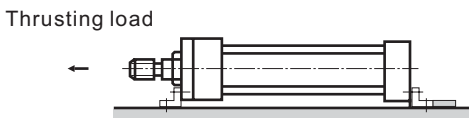


Pulling load

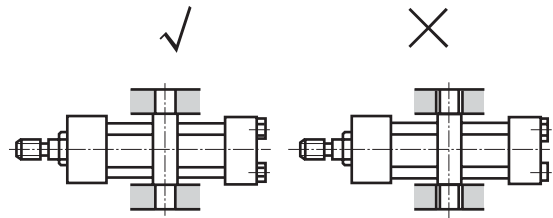


Thrusting load

LB Foot Brackets



TA, TB, TC Front, Rear, Middle Trunnion

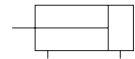


ISO6432 Standard Small Size Cylinder

QC85 Series (Φ10~Φ25)

Meeting the Standards of ISO 6432 CETOP RP52P

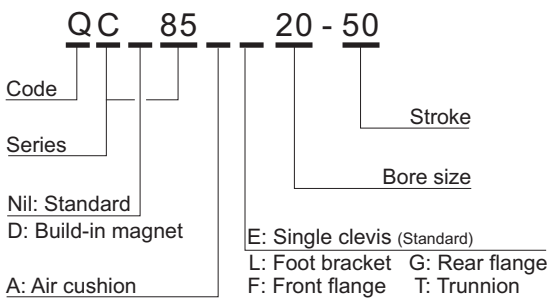
Symbol



Bore size mm	10	12	16	20	25
Fluid	Filtered compressed air				
Acting type	Double acting				
Max. Operating pressure	1.0MPa				
Min. Operating pressure	0.1MPa		0.05MPa		
Cushion	Rubber cushion (standard), Air cushion(option)				
Ambient temperature	5~80°C (Build-in magnet: <60°C)				
Piston speed	50~750mm/s				
*Lubrication	Pro-lubrication in factory				
Port size	M5×0.8			G1/8	

*If used, turbine oil #1 (ISO VG32) is recommended.

How to Order



Standard Stroke / Auto Switch

Bore size mm	Standard stroke mm	Longest stroke mm	Auto switch	Mounting band
10	10 25 40	400	AL-03R	PBK-10
	50 80 100			PBK-12
12	10 25 40	400	AL-03R	PBK-12
	50 80 100			PBK-16
16	125 160 200	1000	QCK2400 QCK2422	PBK-16
20	10 25 40 50			A-20
25	80 100 125 160	1000	QCK2400 QCK2422	A-25
	200 250 300			A-25

Option: Non-standard stroke.

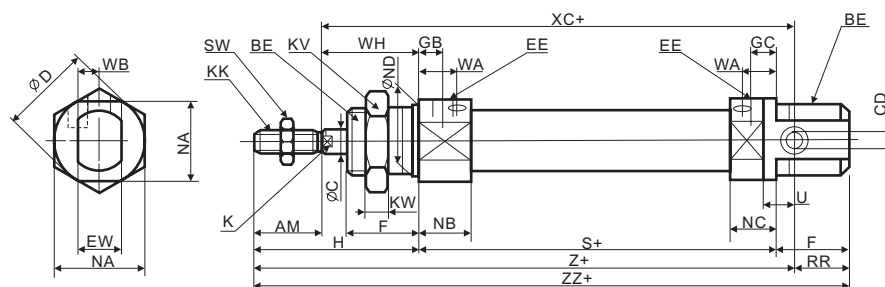
Notes:

1. Voltage and current should not be overloaded.
2. Auto switch should not be linked directly to power, should be linked in series with a load in series.
3. Auto switch should not be close to strong magnetic bodies or magnetic shield is used.

Dimensions(mm)

Basic Type

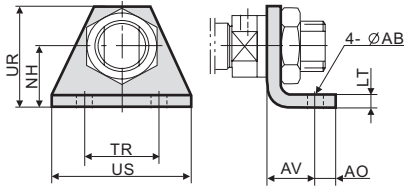
QC85E



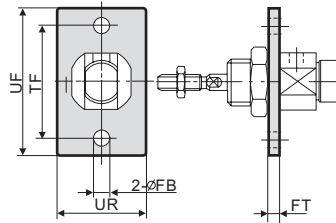
Bore size mm	AM	BE	C	CD	D	EE	EW	F	GB	GC	WA	WB	H	K	KK	KV	KW	NB	NC	NA	ND	RR	S	SW	WH	XC	Z	ZZ	U
10	12	M12×1.25	4	4	17	M5×0.8	8	12	7	5	10.5	4.5	28	-	M4×0.7	19	6	11.5	9.5	15	12	10	46	7	16	64	76	86	6
12	16	M16×1.5	6	6	20	M5×0.8	12	17	8	6	9.5	5.5	38	5	M6×1	24	8	12.5	10.5	18	16	14	50	10	22	75	91	105	9
16	16	M16×1.5	6	6	20	M5×0.8	12	17	8	6	9.5	5.5	38	5	M6×1	24	8	12.5	10.5	18	16	13	56	10	22	82	98	111	9
20	20	M22×1.5	8	8	28	G1/8	16	20	8	8	11.5	8.5	44	6	M8×1.25	32	11	15	15	24	22	11	62	12	24	95	115	126	12
25	22	M22×1.5	10	8	33.5	G1/8	16	22	8	8	11.5	10	50	8	M10×1.25	32	11	15	15	30	22	11	65	15	28	104	126	137	12

Accessories

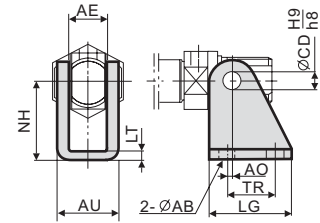
Foot Bracket



Front Flange



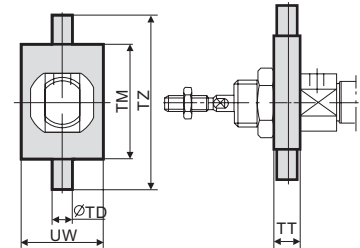
Single Clevis Bracket / With Pin



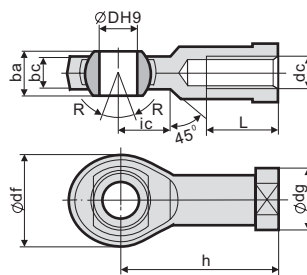
Applicable bore size mm	Foot bracket										Front flange						Single clevis bracket / With pin									
	Parts No.	AB	A0	AV	LT	TR	US	NH	UR		Parts No.	FT	FB	UR	TF	UF	Parts No.	AB	AO	TR	LG	CD	AE	AU	NH	LT
10	C85-L10	4.5	5	11	3.2	25	35	16	26		C85-F10	3.2	4.5	22	30	40	C85-E10	4.5	1.5	12.5	20	4	8.1	13.1	24	2.5
12~16	C85-L12	5.5	6	14	4	32	42	20	33		C85-F12	4	5.5	30	40	52	C85-E12	5.5	2	15	25	6	12.1	18.5	27	3.2
20~25	C85-L20	6.6	8	17	5	40	54	25	42		C85-F20	5	6.6	40	50	66	C85-E20	6.6	4	20	32	8	16.1	24.1	30	4

3

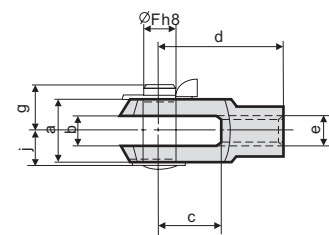
Trunnion



I-Type Rod Spherical Bearing Clevis / DIN648



Y-Type Rod Clevis / DIN71751



Applicable bore size mm	Trunnion						I-type rod clevis / DIN648											Y-type rod clevis / DIN71751									
	Parts No.	TT	TD	UW	TM	TZ	Parts No.	dc	D	h	df	ba	bc	L	dg	R°	ic	Parts No.	e	b	d	F	g	c	j	a	
10	C85-T10	6	4	20	26	38	KJ4D	M4	5	27	18	8	6	10	11	7.5	10	GKM4-8	M4	4	16	4	8	8	6	8	
12-16	C85-T12	8	6	25	38	58	KJ6D	M6	6	30	20	9	6.75	12	13	6.5	10	GKM6-10	M6	6	24	6	10	12	8	12	
20	C85-T20	8	6	32	46	66	KJ8D	M8	8	36	24	12	9	16	16	13	12	GKM8-16	M8	8	32	8	12	16	10	16	
25		KJ10D	M10×1.25	10	43	28	14	10.5	20	19	13	14						GKM10-20	M10×1.25	10	40	10	18	20	12	20	

ISO15552 Standard Square Cylinder

QDNC Series ($\Phi 32 \sim \Phi 100$)

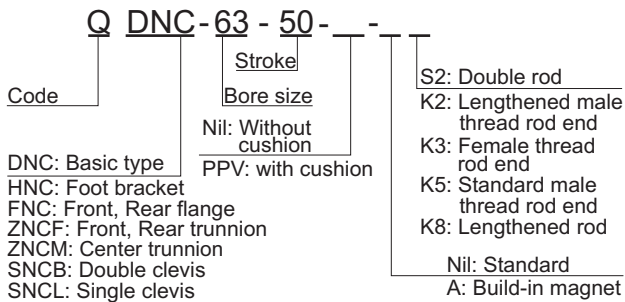
Meeting the Standards of ISO15552
DIN24335 VDMA24562-1



Bore size mm	32	40	50	63	80	100	125
Fluid	Filtered compressed air						
Acting type	Double acting						
Max. Operating pressure	1.0MPa						
Min. Operating pressure	0.1MPa						
Cushion	Air cushion (standard)						
Ambient temperature	5~60°C						
Piston speed	50~500mm/s						
Stroke allowance mm	0~250 ^{+1.0} ₀		251~1000 ^{+1.5} ₀		1001~1500 ^{+2.0} ₀		
*Lubrication	Pro-lubrication in factory						
Port size	G1/8	G1/4		G3/8		G1/2	

*If used, turbine oil *1 (ISO VG32) is recommended.

How to Order



Notes:

1. Voltage and current should not be overloaded.
2. Auto switch should not be linked directly to power, should be linked in series with a load in series.
3. Auto switch should not be close to strong magnetic bodies or magnetic shield is used.
4. In order to let magnetic switches sense the correct positions of piston, the Min. strokes in the table should be kept.

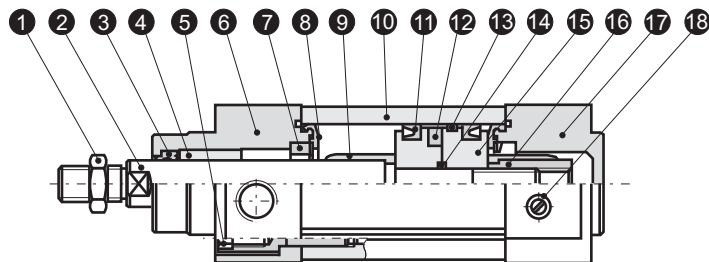
Standard Stroke / Cushion Stroke / Stroke Range

Bore size mm	Standard stroke mm	Cushion stroke mm	Stroke range
32	25 40 50 80	20	10~2000
40	100 125 160		
50	200 250 320	22	
63	400 500 800		
80	1000 1200	32	
100	1500 2000		
125		36	

Auto Switch / Min. Stroke when Auto Switches are Used

Bore size mm	Min. Stroke when auto switches are used mm	Auto switch
32	17	AL-30R (Groove mounted)
40	21	
50	25	
63	25	
80	25	
100	25	
125	25	

Construction



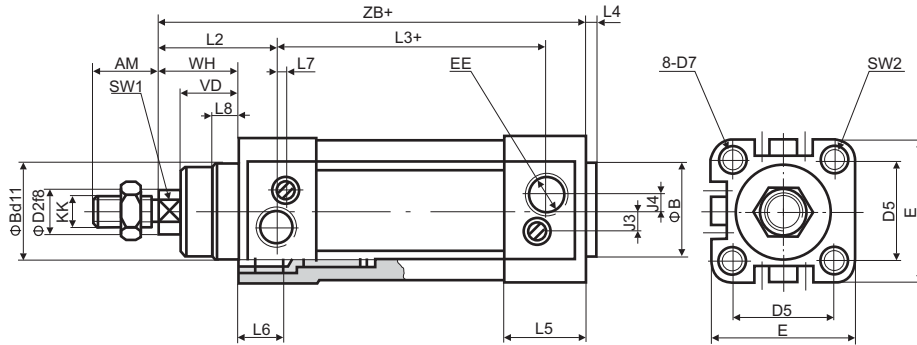
Parts List

No.	Description	Material	No.	Description	Material
1	Nut	35	10	Tube	A6063-TS
2	Rod	45	11	Y-ring	NBR
3	Rod seal	PU	12	Magnet	Magnetic plastic
4	Bushing	Oil impregnated alloy	13	Bushing ring	F4
5	Tie bolt	35	14	O-ring	NBR
6	Front cover	ZZnAl4-1	15	Front, Rear piston	LY12
7	Cushion seal	PU	16	Back nut	LY12
8	Cushion sealing pad	PU	17	Rear cover	ZZnAl4-1
9	Cushion piston	POM	18	Adjusting screw	HPb59-1

Dimensions (mm)

Basic Type
QDNC...PPV-A

Symbol

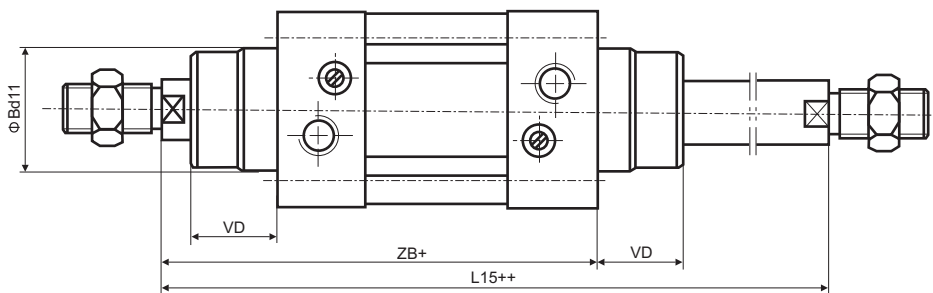
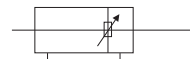


Bore size mm	AM	B	D2	D5	D7	E	EE	J3	J4	KK	L2	L3	L4	L5	L6	L7	L8	SW1	SW2	VD	WH	ZB
32	22	30	12	32.5	M6	45	G1/8	6	5.2	M10×1.25	41.6	62.8	4	25.1	16	3.3	10	10	6	18	26	120
40	24	35	16	38	M6	54	G1/4	8	6	M12×1.25	44	77	4	29.6	16	3.6	10.5	13	6	21.5	30	135
50	32	40	20	46.5	M8	64	G1/4	10	8.5	M16×1.5	51	78	4	29.6	17	5.1	11.5	17	8	28	37	143
63	32	45	20	56.5	M8	75	G3/8	12.4	10	M16×1.5	54	87	4	35.6	17	6.6	15	17	8	28.5	37	158
80	40	45	25	72	M10	93	G3/8	12.5	8	M20×1.5	62.4	95.2	4	35.9	17	10.5	15.7	22	10	34.7	46	174
100	40	55	25	89	M10	110	G1/2	11.8	10	M20×1.5	69.8	100.4	4	38.8	17	8	19.2	22	10	38.2	51	189
125	54	60	32	110	M12	134	G1/2	13	8	M27×2	84	122	6	46	22	14		22	10	46	65	225

Double Rod

QDNC...PPV-A-S2

Symbol

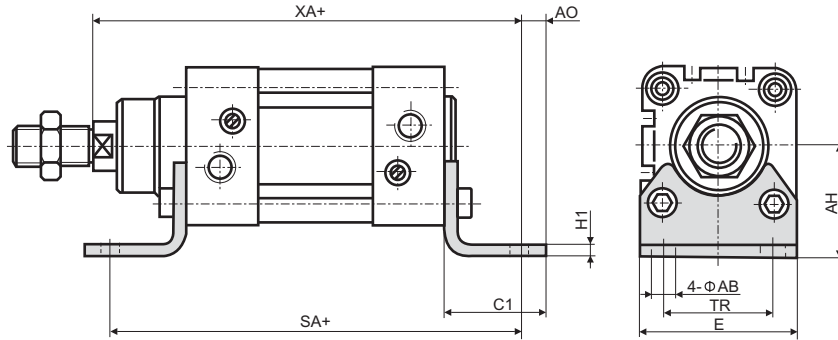


Bore size mm	B	L15	VD	ZB
32	30	146	18	120
40	35	165	21.5	135
50	40	180	28	143
63	45	195	28.5	158
80	45	220	34.7	174
100	55	240	38.2	189
125	60	290	46	225

Accessories

Foot Bracket

QHNC...PPV-A

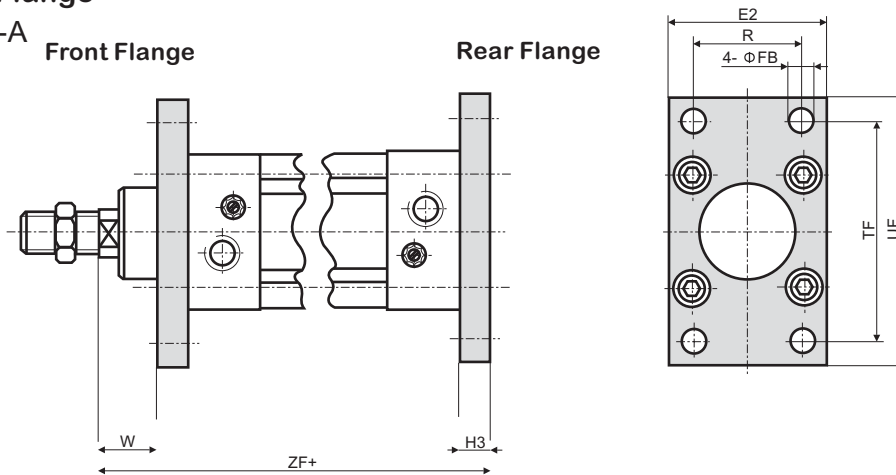


Bore size mm	Parts No.	AB	AH	AO	C1	E	H1	SA	TR	XA
32	DNC-L03	7	32	6.5	30.5	45	5	142	32	144
40	DNC-L04	10	36	9	37	54	5	161	36	163
50	DNC-L05	10	45	10.5	41.5	64	6	170	45	175
63	DNC-L06	10	50	12.5	44.5	75	6	185	50	190
80	DNC-L08	12	63	15	56	93	6	210	63	215
100	DNC-L10	14.5	71	17.5	58.5	110	6	220	75	230
125	DNC-L12	16	90	18	63	134	8	250	90	270

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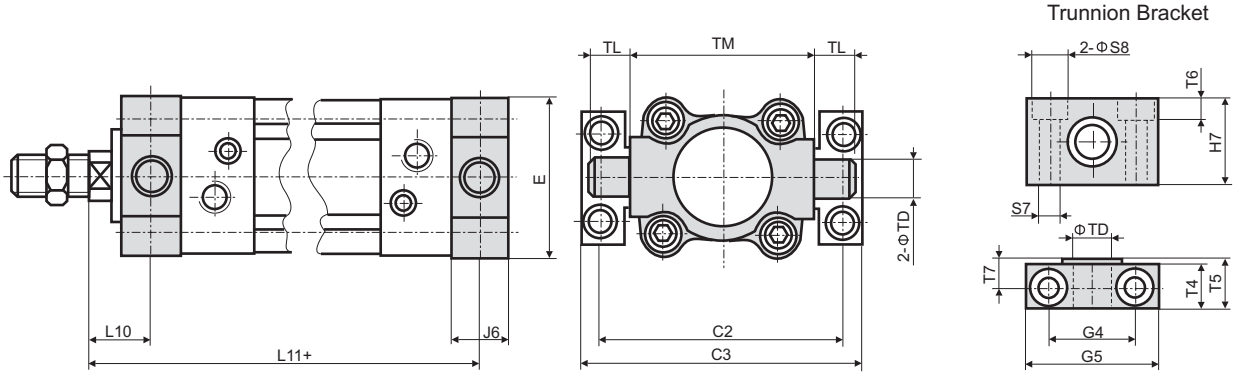
Front, Rear Flange

QFNC...PPV-A



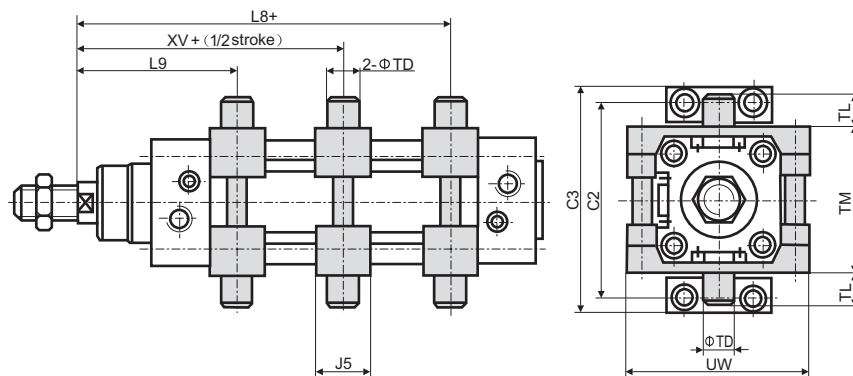
Bore size mm	Parts No.	E2	FB H13	H3	R	TF	UF	W	ZF
32	DNC-F03	50	7	10	32	64	80	16	130
40	DNC-F04	55	9	10	36	72	90	20	145
50	DNC-F05	65	9	12	45	90	110	25	155
63	DNC-F06	75	9	12	50	100	125	25	170
80	DNC-F08	100	12	16	63	126	154	30	190
100	DNC-F10	120	14	16	75	150	186	35	205
125	DNC-F12	140	16	20	90	180	224	45	245

Front, Rear Trunnion
QZNCF-...PPV-A



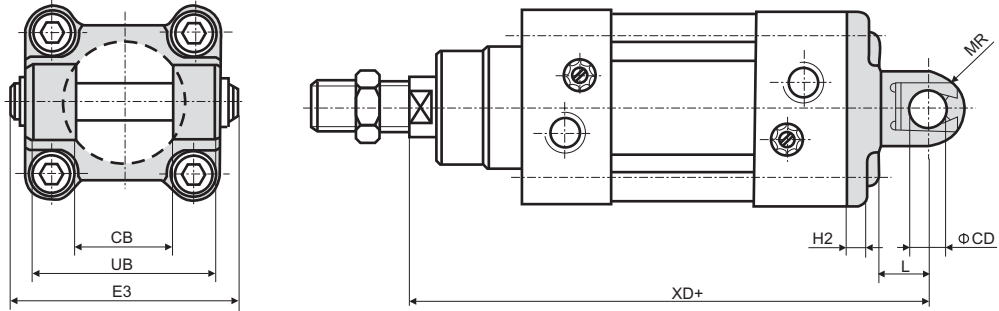
Bore size mm	Parts No.	C2	C3	E	G4	G5	H7	J6	L10	L11	S7	S8	T4	T5	T6	T7	TD e9/H7	TL	TM
32	DNC-T03	71	86	45	32	46	32	16	18	128	6.6	11	15	18	6.8	10.5	12	12	50
40	DNC-T04	87	105	54	36	55	36	20	20	145	9	15	18	21	9	12	16	16	63
50	DNC-T05	99	117	64	36	55	36	24	25	155	9	15	18	21	9	12	16	16	75
63	DNC-T06	116	136	75	42	65	42	24	25	170	11	18	20	23	11	13	20	20	90
80	DNC-T08	136	156	93	42	65	42	28	32	188	11	18	20	23	11	13	20	20	110
100	DNC-T10	164	189	110	50	75	50	38	32	208	14	20	25	28.5	13	16	25	25	132
125	DNC-T12	192	217	158	50	75	50	30	50	240	14	20	25	28.5	13	16	25	25	160

Center Trunnion
QZNCM-...PPV-A

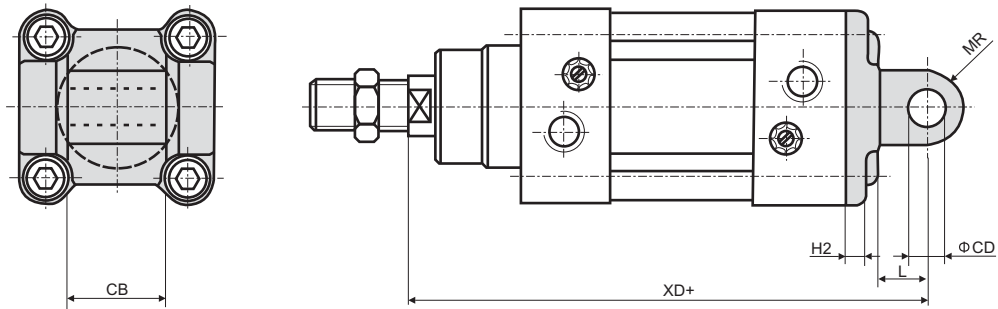


Bore size mm	Parts No.	C2	C3	J5	L8	L9	TD e9/H7	TL	TM	UW	XV
32	DNC-M03	71	86	30	79.9	66.1	12	12	50	65	73
40	DNC-M04	87	105	32	89.4	75.6	16	16	63	75	82.5
50	DNC-M05	99	117	34	94.4	83.6	16	16	75	95	90
63	DNC-M06	116	136	41	101.9	93.1	20	20	90	105	97.5
80	DNC-M08	136	156	44	118.1	103.9	20	20	110	130	110
100	DNC-M10	164	189	48	126.2	113.8	25	25	132	145	120
125	DNC-M12	192	217	30	155.3	134.7	25	25	160	158	145

Double Clevis
QSNCB...PPV-A



Single Clevis
QSNCL...PPV-A



Bore size mm	Parts No. (Double)	Parts No. (Single)	CB	CD	E3	H2	L	MR	UB	XD
32	DNC-D03	DNC-C03	26	10	55	6	13	10	45	142
40	DNC-D04	DNC-C04	28	12	63	6	16	12	52	160
50	DNC-D05	DNC-C05	32	12	71	7	16	12	60	170
63	DNC-D06	DNC-C06	40	16	83	7	21	16	70	190
80	DNC-D08	DNC-C08	50	16	103	10.5	22	16	90	210
100	DNC-D10	DNC-C10	60	20	127	10.5	27	20	110	230
125	DNC-D12	DNC-C12	70	25	138	10.5	36	25	120	275

Note: The double clevis bracket of QC95 series (C95-E03~E10) can be used in this series.

ISO15552 Standard Cylinder

QC95 Series (Φ32~Φ200)

Meeting the Standards of VDMA24562
DIN24335 ISO15552

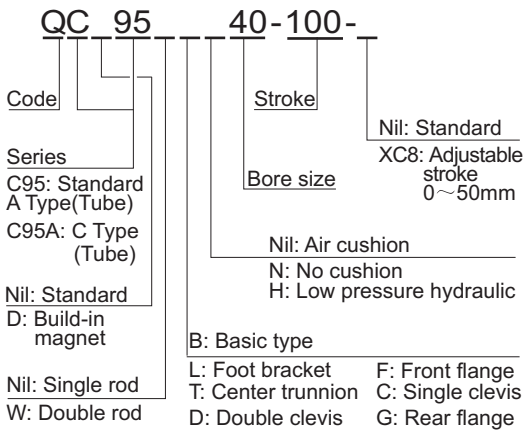


Bore size mm	32	40	50	63	80	100	125	160	200
Fluid	Filtered compressed air								
Acting type	Double acting								
Max. Operating pressure	1.0MPa								
Min. Operating pressure	0.1MPa								
Cushion	Air cushion (standard)								
Ambient temperature	5~60°C								
Piston speed	50~500mm/s								
Stroke allowance mm	0~250 ^{+1.0}			251~1000 ^{+1.5}			1001~1500 ^{+2.0}		
*Lubrication	Pro-lubrication in factory								
Port size	G1/8	G1/4	G3/8	G1/2	G3/4				

*If used, turbine oil #1 (ISO VG32) is recommended.

3

How to Order



Standard Stroke / Cushion Stroke / Auto Switch

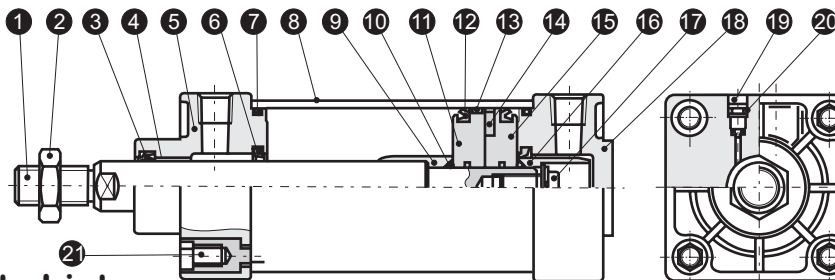
Bore size mm	Standard stroke mm	Cushion stroke mm	Auto switch and Mounting parts	
			Applicable tube A type	Applicable tube C type
32	25 40 50 75	18.8	BT-03	AL-30R QCK2400A QCK2422A
40		18.8		
50	21.3	BT-05		
63	80 125 150	21.3	BT-08	
80	160 175 200	30.3	BT-12 BT-16 BT-20	
100	250 300 400	29.3		
125	500	40.0		
160		40.0		
200		50.0		

Option: Non-standard stroke.

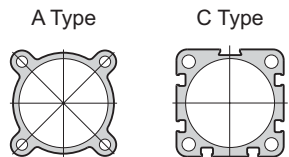
Notes:

1. Voltage and current should not be overloaded.
2. Auto switch should not be linked directly to power, should be linked in series with a load in series.
3. Auto switch should not be close to strong magnetic bodies or magnetic shield is used.
4. For trunnion, please consult factory.

Construction



Aluminium alloy tube



Standard of ISO6431

Parts List

No.	Description	Material	No.	Description	Material
1	Rod	Carbon steel	12	Y-ring	NBR
2	Rod nut	Carbon steel	13	Wearing ring	F4
3	Rod seal	NBR	14	Magnet	Magnetic plastic
4	Bushing	F4	15	Rear piston	Aluminium Alloy
5	Front cover	Die casting aluminium	16	Rear cushion piston	Aluminium Alloy
6	Cushion seal	NBR	17	Screw	Carbon steel
7	Tube seal	NBR	18	Rear cover	Die casting aluminium
8	Tube	Aluminium Alloy	19	Adjusting screw	Brass
9	Front cushion piston	Aluminium Alloy	20	O-ring	NBR
10	O-ring	NBR	21	Tie bolt	Carbon steel
11	Front piston	Aluminium Alloy			

Seal List

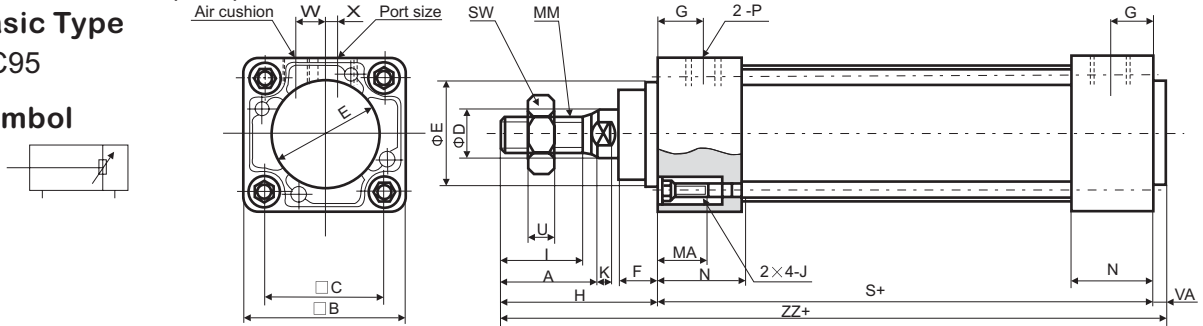
No.	Description	Material	Parts No.								
			Φ32	Φ40	Φ50	Φ63	Φ80	Φ100	Φ125	Φ160	Φ200
3	MITSUBISHI Combination wiper	NBR	DRP12	DRP16	DRP20	DRP20	DRP25	DRP30	Ay3002 P5008 PARKER	DRP40	DRP40
6	PARKER Cushion seal	NBR	PP1622 N3589	PP2028 N3589	PP2533 N3589	PP2533 N3589	PP3040 N3589	PP4050 N3589	PP4050 N3589	PP5060 N3589	PP5060 N3589
12	MITSUBISHI Y-ring	NBR	COP32	DOL30	DOL40	DOL53	DOL70	DOL85	DOL110	DOL145	DOL180

Dimensions (mm)

Basic Type

QC95

Symbol

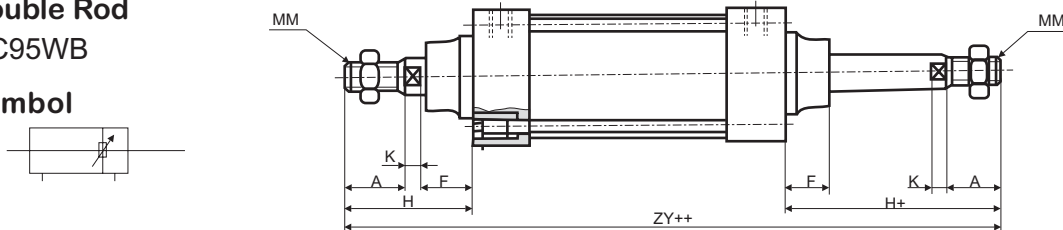


Bore size mm	Stroke range mm	A	B	C	D	E	F	G	H	I	J	MA	MM	N	P	S	SW	VA	X	ZZ	K	W	U
32	~500	22	46	32.5	12	30	15	13	48	19.5	M6×1.0	16	M10×1.25	26	G1/8	94	15	4	4	146	6	6.5	6
40	~500	24	52	38	16	35	17	14	54	21	M6×1.0	16	M12×1.25	26	G1/4	105	17	4	4	163	6.5	9	6
50	~600	32	65	46.5	20	40	24	15.5	69	29	M8×1.25	16	M16×1.5	29.5	G1/4	106	22	4	5	179	8	10.5	7
63	~600	32	75	56.5	20	45	24	16.5	69	29	M8×1.25	16	M16×1.5	29.5	G3/8	121	22	4	9	194	8	12	7
80	~1000	40	95	72	25	45	30	19	86	37	M10×1.5	16	M20×1.5	35	G3/8	128	26	4	11.5	218	10	14	8
100	~1000	40	114	89	30	55	32	19	91	37	M10×1.5	16	M20×1.5	35	G1/2	138	26	4	17	233	10	15	8
125	~1200	54	140	110	32	60	45	23	119	51	M12	20	M27×2	46	G1/2	160	38	6	10	279	16	17	12
160	~1200	72	180	140	40	65	58	25	152	69	M16	24	M36×2	50	G3/4	180	48	4	18	332	12	25	15
200	~1500	72	220	175	40	75	60	25	167	69	M16	24	M36×2	50	G3/4	180	48	5	18	347	16	25	15

Double Rod

QC95WB

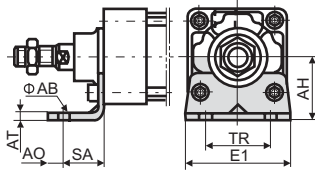
Symbol



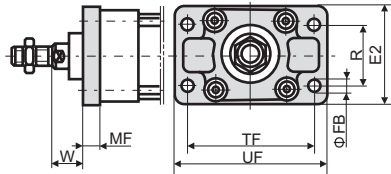
Bore size mm	ZY	H	F	MM
32	190	48	15	M10×1.25
40	213	54	17	M12×1.25
50	244	69	24	M16×1.5
63	259	69	24	M16×1.5
80	300	86	30	M20×1.5
100	320	91	32	M20×1.5
125	398	119	45	M27×2
160	484	152	58	M36×2
200	514	167	60	M36×2

Accessories

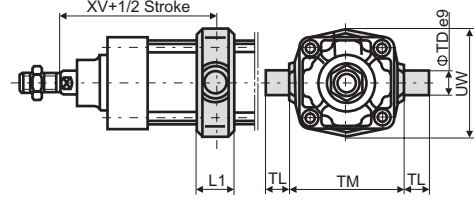
Foot Bracket



Front Flange



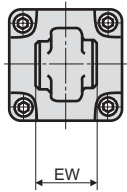
Center Trunnion



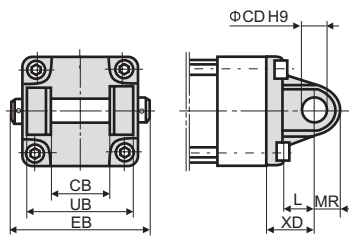
Applicable bore size mm	Foot bracket								Front flange								Center trunnion						
	Parts no.	AH	E1	TR	AB	SA	AO	AT	Parts no.	FB	R	E2	TF	UF	W	MF	Parts no.	TL	TM	TD	UW	XV	L1
32	C95-L03	32	48	32	7	24	10	4	C95-F03	7	32	50	64	79	16	10	C95-T03	12	50	12	49	73	18
40	C95-L04	36	55	36	9	28	11	4	C95-F04	9	36	55	72	90	20	10	C95-T04	16	63	16	58	82.5	22
50	C95-L05	45	68	45	9	32	12	5	C95-F05	9	45	70	90	110	25	12	C95-T05	16	75	16	71	90	24
63	C95-L06	50	80	50	9	32	12	5	C95-F06	9	50	80	100	120	25	12	C95-T06	20	90	20	87	97.5	28
80	C95-L08	63	100	63	12	41	14	6	C95-F08	12	63	100	126	153	30	16	C95-T08	20	110	20	110	110	34
100	C95-L10	71	120	75	14	41	16	6	C95-F10	14	75	120	150	178	35	16	C95-T10	25	132	25	136	120	40
125	C95-L12	90	140	90	16	45	20	8	C95-F12	16	90	140	180	220	45	20	C95-T12	25	160	25	160	145	44
160	C95-L16	115	184	115	18	60	25	9	C95-F16	18	115	180	230	280	60	20	C95-T16	32	200	32	200	170	48
200	C95-L20	135	228	135	24	70	30	12	C95-F20	22	135	220	270	315	70	25	C95-T20	32	250	32	240	185	48

3

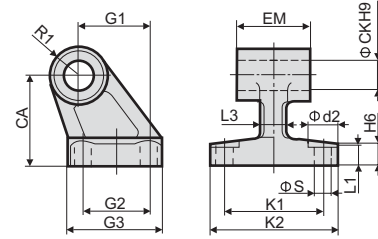
Single Clevis



Double Clevis

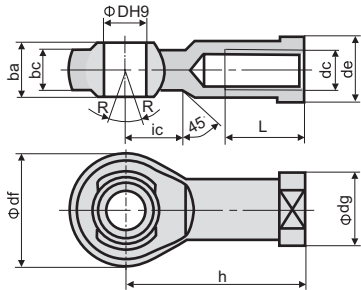


Double Clevis Bracket

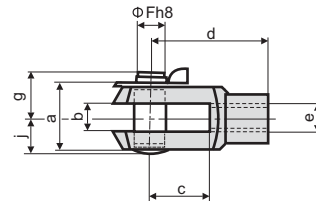


Applicable bore size mm	Single clevis and Double clevis										Double clevis bracket														
	Parts no. (Single)	EW	CD	L	MR	XD	CB	UB	EB	Parts no. (Double)	Parts no.	d2	CK	S	K1	K2	L3	G1	L1	G2	EM	G3	CA	H6	R1
32	C95-C03	26	10	12	9.5	22	26	45	65	C95-D03	C95-E03	11	10	6.6	38	51	10	21	7	18	26	31	32	8	10
40	C95-C04	28	12	15	12	25	28	52	75	C95-D04	C95-E04	11	12	6.6	41	54	10	24	9	22	28	35	36	10	11
50	C95-C05	32	12	15	12	27	32	60	80	C95-D05	C95-E05	15	12	9	50	65	12	33	11	30	32	45	45	12	12
63	C95-C06	40	16	20	16	32	40	70	90	C95-D06	C95-E06	15	16	9	52	67	14	37	11	35	40	50	50	12	15
80	C95-C08	50	16	20	16	36	50	90	110	C95-D08	C95-E08	18	16	11	66	86	18	47	12.5	40	50	60	63	14	15
100	C95-C10	60	20	25	20	41	60	110	140	C95-D10	C95-E10	18	20	11	76	96	20	55	13.5	50	60	70	71	15	19
125	C95-C12	70	25	30	25	50	70	120	148	C95-D12															
160	C95-C16	90	30	35	25	55	90	160	188	C95-D16															
200	C95-C20	90	30	35	25	60	90	160	188	C95-D20															

I-Type Rod Spherical Bearing Clevis



Y-Type Rod Clevis



Applicable bore size mm	I-Type Rod Clevis												Applicable bore size mm	Y-Type Rod Clevis									
	Parts no.	dc	ba	bc	D	de	df	dg	h	L	ic	R		Parts no.	a	e	b	c	d	F	g	j	
32	KJ10D	M10×1.25	14	10.5	10	17	26	19	43	20	14	13	32	GKM10-20	20	M10×1.25	10	20	40	10	26	12	
40	KJ12D	M12×1.25	16	12	12	19	30	22	50	22	16	13	40	GKM12-24	24	M12×1.25	12	24	48	12	31	15	
50	KJ16D	M16×1.5	21	15	16	22	42	27	64	28	22	15	50	GKM16-32	32	M16×1.5	16	32	64	16	39	19	
63		M16×1.5	21	15	16	22	42	27	64	28	22	15	63		32	M16×1.5	16	32	64	16	39	19	
80	KJ20D	M20×1.5	25	18	20	30	50	34	77	33	26	15	80	GKM20-40	40	M20×1.5	20	40	80	20	53	24	
100		M20×1.5	25	18		30	50	34	77	33	26	15	100		40	M20×1.5	20	40	80	20	53	24	
125	KJ27D	M27×2	37	25	30	41	70	50	110	51	36	15	125	GKM27-54	55	M27×2	30	54	110	30	74	30	
160	KJ36D	M36×2	43	28	35	50	80	58	125	56	41	15	160	GKM36-72	70	M36×2	35	72	144	35	91	40	
200		M36×2	43	28	35	50	80	58	125	56	41	15	200		70	M36×2	35	72	144	35	91	40	

ISO6430 Standard Square Cylinder

XSC Series (Φ32~Φ100)

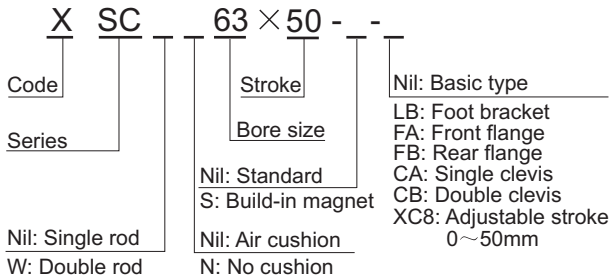
Meeting the Standard of ISO6430



Bore size mm	32	40	50	63	80	100
Fluid	Filtered compressed air					
Acting type	Double acting					
Max. Operating pressure	1.0MPa					
Min. Operating pressure	0.1MPa					
Cushion	Air cushion (Standard)					
Ambient temperature	5~60°C					
Fluid temperature	-10~+60°C					
Piston speed	50~500mm/s					
Stroke allowance mm	0~250 ^{+1.0} ₀ 251~1000 ^{+1.5} ₀ 1001~2000 ^{+2.0} ₀					
*Lubrication	Pro-lubrication in factory					
Port size	G1/8	G1/4	G3/8		G1/2	

*If used, turbine oil*1 (ISO VG32) is recommended.

How to Order



Cushion Stroke/Standard Stroke/Auto Switch

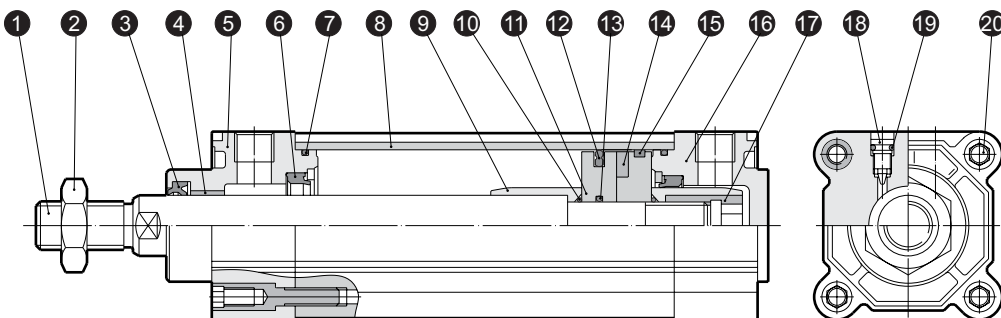
Bore size mm	Cushion stroke mm	Standard stroke mm	Auto switch
32	20	25 40 50 75 80 100	KT-50R
40		125 150 160 175 200	
50	25	250 300 400 500 600	
63		700 800 900 1000	
80	30		
100			

Notes: Non-standard stroke cylinders made to order.

Features

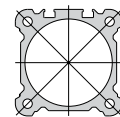
- The cylinder adopted square tube.
- The cylinder bore size is from Φ32 to Φ100, installation size is meeting the standards of ISO6430.
- On the same side of the port, a slot is available so that auto switch can be built-in and debugged easier.
- More mounting types available except TC (central trunnion type).
- The longest stroke is 2 meters.
- The cylinder's front cover and rear cover can be assemble or unassembled respectively so it is much easier to maintain and install.

Construction



Aluminium alloy tube

Standard of ISO6430



Parts List

No.	Description	Material
1	Piston rod	Carbon steel
2	Rod end nut	Carbon steel
3	Rod seal	NBR
4	Bushing	F4
5	Front cover	Die casting aluminium
6	Cushion seal	PU
7	O-ring	NBR
8	Tube	Aluminium alloy
9	Front cushion piston	Aluminium alloy
10	O-ring	NBR

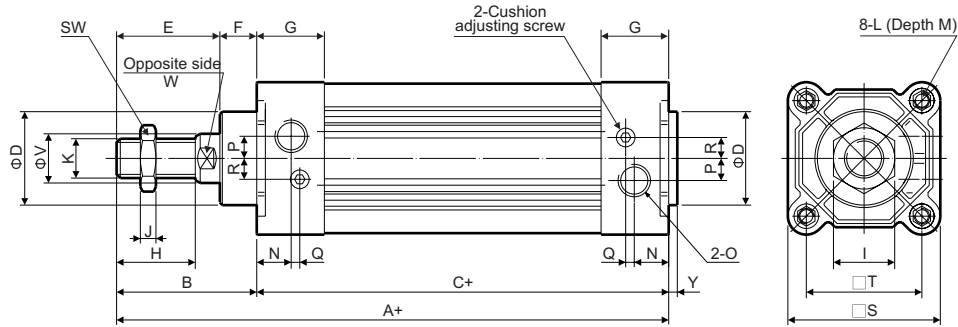
No.	Description	Material
11	Piston	Aluminium alloy
12	8-ring	NBR
13	O-ring	NBR
14	Magnet	Magnetic plastics
15	Wearing ring	F4
16	Rear cover	Die casting aluminium
17	Nut	Carbon steel
18	Adjusting screw	Brass
19	O-ring	NBR
20	Tie bolt	Carbon steel

Dimensions (mm)

Basic Type

XSC

Symbol

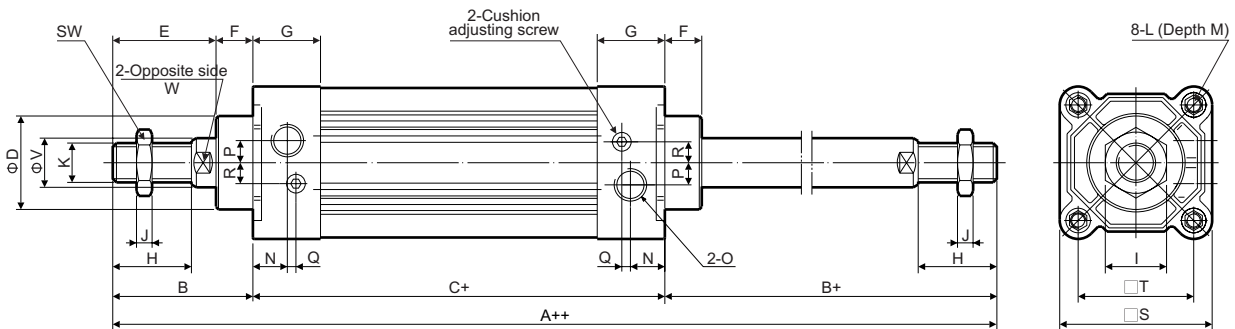


Bore size mm	A	B	C	D	E	F	G	H	I	J	K	L	N	M	O	P	Q	R	S	T	V	W	Y	SW
32	140	47	93	28	32	15	27.5	22	17	6	M10×1.25	M6×1	13	14	G1/8	5.5	6.5	6	46	33	12	10	3.5	15
40	142	49	93	32	34	15	27.5	24	17	6	M12×1.25	M6×1	13	14	G1/4	6	5.5	8.5	50	37	16	14	3.5	17
50	150	57	93	38	42	15	27.5	32	23	7	M16×1.5	M6×1	14	14	G1/4	9	3.5	8.5	62	47	20	17	3.5	22
63	153	57	96	38	42	15	27.5	32	23	7	M16×1.5	M8×1.25	15.5	16	G3/8	9	2	10	75	56	20	17	3.5	22
80	183	75	108	47	54	21	33	40	26	8	M20×1.5	M10×1.5	18.5	19	G3/8	11.5	2.5	12	94	70	25	22	4	26
100	189	75	114	47	54	21	33	40	26	8	M20×1.5	M10×1.5	18.5	19	G1/2	11	1.5	13	112	84	25	22	4	26

Double Rod

XSCW

Symbol



Bore size mm	A	B	C	D	E	F	G	H	I	J	K	L	N	M	O	P	Q	R	S	T	V	W	SW
32	187	47	93	28	32	15	27.5	22	17	6	M10×1.25	M6×1	13	14	G1/8	5.5	6.5	6	46	33	12	10	15
40	191	49	93	32	34	15	27.5	24	17	6	M12×1.25	M6×1	13	14	G1/4	6	5.5	8.5	50	37	16	14	17
50	207	57	93	38	42	15	27.5	32	23	7	M16×1.5	M6×1	14	14	G1/4	9	3.5	8.5	62	47	20	17	22
63	210	57	96	38	42	15	27.5	32	23	7	M16×1.5	M8×1.25	15.5	16	G3/8	9	2	10	75	56	20	17	22
80	258	75	108	47	54	21	33	40	26	8	M20×1.5	M10×1.5	18.5	19	G3/8	11.5	2.5	12	94	70	25	22	26
100	264	75	114	47	54	21	33	40	26	8	M20×1.5	M10×1.5	18.5	19	G1/2	11	1.5	13	112	84	25	22	26

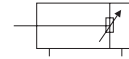
Note:

More mounting types and dimensions refer to P3.016 ~ P3.019, the same as QSC series standard cylinders (without TC, TC-M mountings).

ISO6430 Standard Cylinder

QSC Series (Φ32~Φ100)

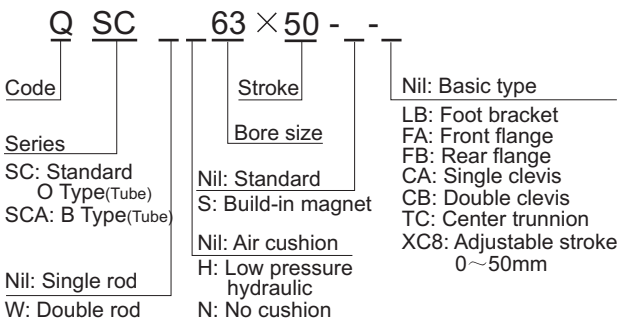
Meeting the Standard of ISO6430



Bore size mm	32	40	50	63	80	100
Fluid	Filtered compressed air					
Acting type	Double acting					
Max. Operating pressure	1.0MPa					
Min. Operating pressure	0.1MPa					
Cushion	Air cushion (Standard)					
Ambient temperature	5~60°C					
Fluid temperature	-10~+60°C					
Piston speed	50~500mm/s					
Stroke allowance mm	0~250 ^{+1.0} ₀ 251~1000 ^{+1.5} ₀ 1001~1500 ^{+2.0} ₀					
*Lubrication	Pro-lubrication in factory					
Port size	G1/8	G1/4		G3/8		G1/2

How to Order

*If used, turbine oil*1 (ISO VG32) is recommended.



Cushion Stroke / Auto Switch

Bore size mm	Cushion stroke mm	Auto switch and Mounting parts	
		Applicable tube O type	Applicable tube B type
32	20	QCK2400	B32
40	20		BT-03
50	25	QCK2422	B40
63			BT-05
80	30	QCK2422	B100
100			BT-08

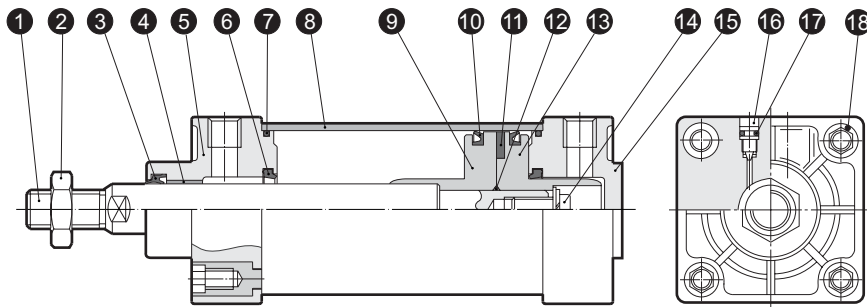
Notes:

1. Non-standard stroke cylinders made to order.
2. Option: Profile tube B type (without tie rod).

Standard Stroke (mm)

25 40 50 75 80 100 125 150 160 175 200
250 300 400 500 600 700 800 900 1000

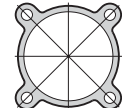
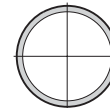
Construction



Aluminium alloy tube

O Type

B Type



Standard of ISO6430

Parts List

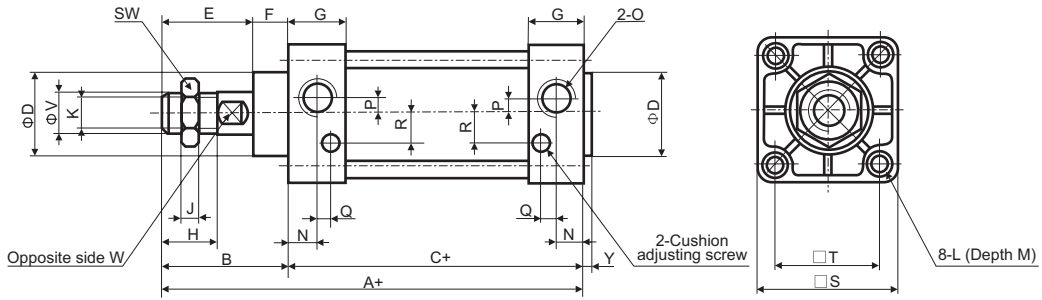
No.	Description	Material
1	Piston rod	Carbon steel
2	Rod end nut	Carbon steel
3	Rod seal	NBR
4	Bushing	Sintered powder brass
5	Front cover	Die casting aluminium
6	Cushion seal	NBR
7	O-ring	NBR
8	Tube	Aluminium alloy
9	Front piston	Modified plastics

No.	Description	Material
10	Y-ring	NBR
11	Magnet	Magnetic plastics
12	O-ring	NBR
13	Rear piston	Modified plastics
14	Screw	Carbon steel
15	Rear cover	Die casting aluminium
16	Adjusting screw	Brass
17	O-ring	NBR
18	Tie bolt	Carbon steel

Dimensions (mm)

Basic Type

QSC



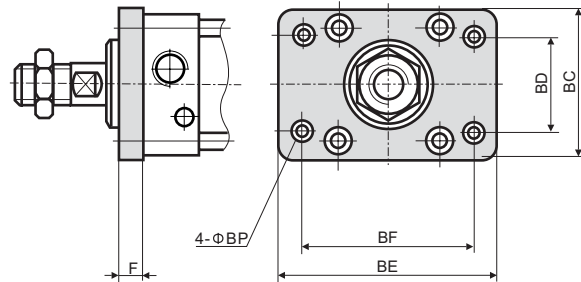
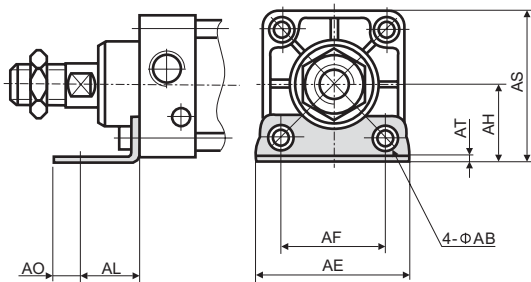
3

Bore size mm	A	B	C	D	E	F	G	H	J	K	L	N	M	O	P	Q	R	S	T	V	W	Y	SW
32	140	47	93	28	32	15	27.5	22	6	M10×1.25	M6×1	14	13	G1/8	6	8.5	6	46	33	12	10	3.5	15
40	142	49	93	32	34	15	27.5	24	6	M12×1.25	M6×1	14	13	G1/4	6	8.5	8.5	50	37	16	14	3.5	17
50	150	57	93	38	42	15	27.5	32	7	M16×1.5	M6×1	14	13	G1/4	7	8.5	8.5	62	47	20	17	3.5	22
63	153	57	96	38	42	15	27.5	32	7	M16×1.5	M8×1.25	14	13	G3/8	7	8.5	8.5	75	56	20	17	3.5	22
80	183	75	108	47	54	21	33	40	8	M20×1.5	M10×1.5	16.5	15	G3/8	7	10	10	94	70	25	22	4	26
100	189	75	114	47	54	21	33	40	8	M20×1.5	M10×1.5	16.5	15	G1/2	7	10	10	112	84	25	22	4	26

Accessories

LB Foot Bracket

FA,FB Front, Rear Flange

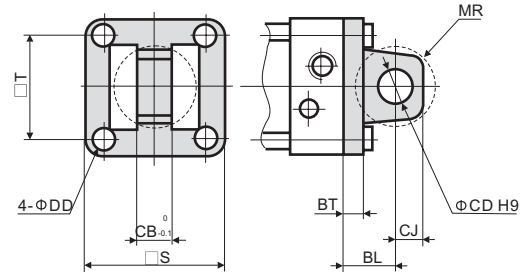
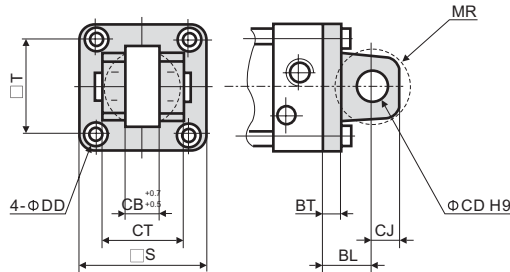


Applicable bore size mm	LB Foot bracket								
	Parts No.	AB	AE	AF	AH	AL	AO	AS	AT
32	SC-L03	9	50	33	28	20.5	9.5	50	3.2
40	SC-L04	12	57	36	30	23.5	12.5	55	3.2
50	SC-L05	12	68	47	36.5	28	12	67.5	3.2
63	SC-L06	12	80	56	41	31	13	79	3.2
80	SC-L08	14	97	70	49	30	16	96	4
100	SC-L10	14	112	84	57	30	16	114	4

Applicable bore size mm	FA,FB Front, rear flange						
	Parts No.	BD	BC	BE	BF	BP	F
32	SC-F03	33	47	72	58	7	10
40	SC-F04	36	52	84	70	7	10
50	SC-F05	47	65	104	86	9	10
63	SC-F06	56	75	116	98	9	12
80	SC-F08	70	95	143	119	11	16
100	SC-F10	84	115	162	138	11	16

CB Double clevis

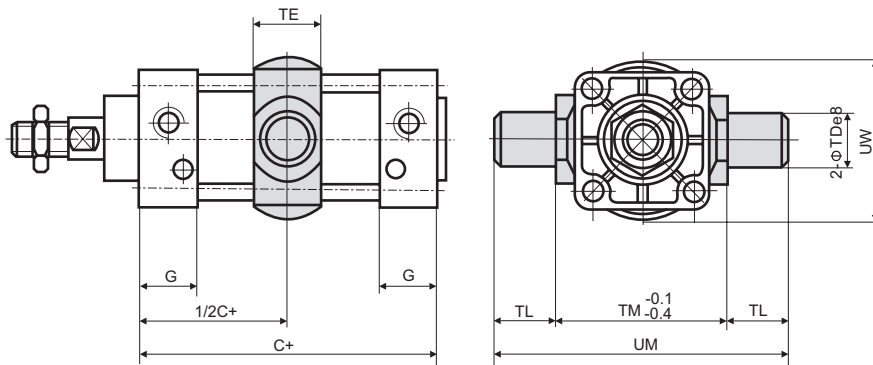
CA Single Clevis



Applicable bore size mm	CB Double clevis										
	Parts No.	BL	BT	CB	CD	CJ	CT	DD	MR	S	T
32	SC-D03	19	8	16	12	13	32	6.5	15	46	33
40	SC-D04	19	8	20	14	13	44	6.5	15	50	37
50	SC-D05	19	8	20	14	15	52	6.5	17	62	47
63	SC-D06	19	8	20	14	15	52	8.5	17	75	56
80	SC-D08	32	11	32	20	21	64	11	23	94	70
100	SC-D10	32	11	32	20	21	64	11	23	112	84

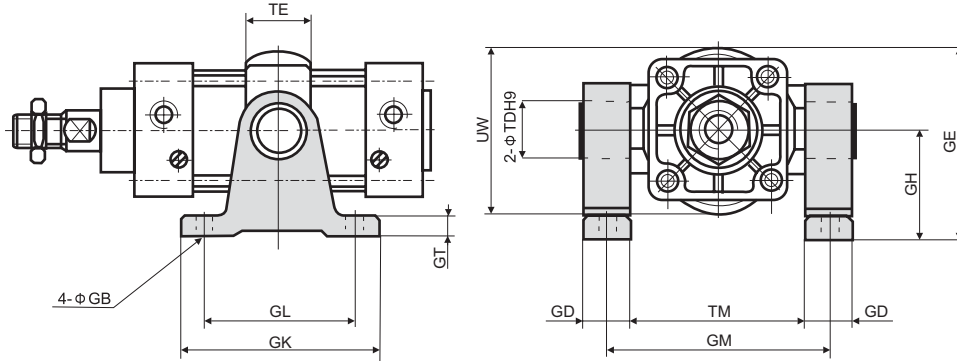
Applicable bore size mm	CA Single clevis										
	Parts No.	BL	BT	CB	CD	CJ	DD	MR	S	T	
32	SC-C03	19	8	16	12	12	6.5	14	46	33	
40	SC-C04	19	8	20	14	14	6.5	16	50	37	
50	SC-C05	19	10	20	14	14	6.5	16	62	47	
63	SC-C06	19	13	20	14	14	8.5	16	75	56	
80	SC-C08	32	18	32	20	20	11	22	94	70	
100	SC-C10	32	18	32	20	20	11	22	112	84	

TC Center Trunnion



Applicable bore size mm	TC Center trunnion								
	Parts No.	C	G	TD	TE	TL	TM	UM	UW
32	SC-T03	93	27.5	16	30	16	55	87	52
40	SC-T04	93	27.5	25	30	25	63	113	59
50	SC-T05	93	27.5	25	30	25	76	126	71
63	SC-T06	96	27.5	25	30	25	88	138	86
80	SC-T08	108	33	25	35	25	114	164	104
100	SC-T10	114	33	25	40	25	132	182	128

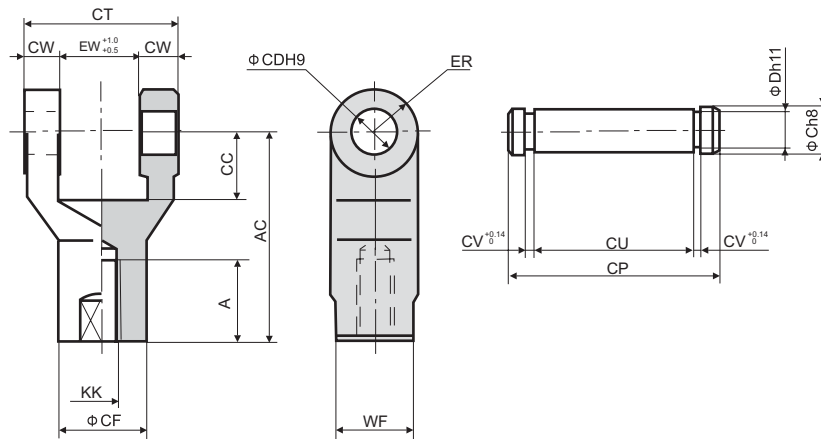
TC-M Center Trunnion with Bracket



3

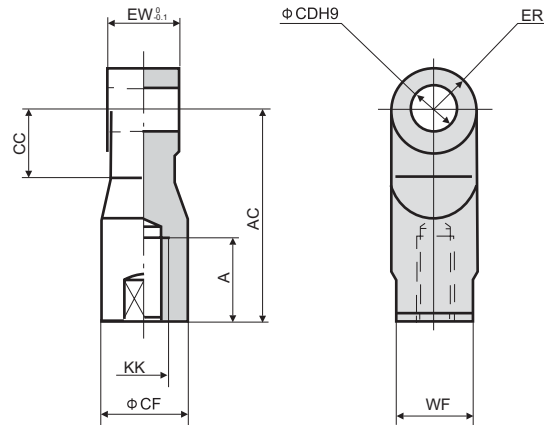
Applicable bore size mm	TC-M Center trunnion bracket												
	Parts No.	GD	GB	GE	GH	GK	GL	GM	GT	TD	TE	TM	UW
32	SC-S03	15	9	66	40	80	60	70	12	16	30	55	52
40	SC-S04	23	12	79.5	50	110	80	86	12	25	30	63	59
50	SC-S05	23	12	85.5	50	110	80	99	12	25	30	76	71
63	SC-S06	23	12	93	50	110	80	111	12	25	30	88	86
80	SC-S08	23	14	122	70	120	85	137	14	25	35	114	104
100	SC-S10	23	14	134	70	120	85	155	14	25	40	132	128

Y-Type Rod Clevis with Pin



Applicable bore size mm	Y-type rod clevis with pin															
	Parts No.	A	AC	CC	CD	CF	CP	CT	CU	CV	CW	D	ER	EW	KK	WF
32	SC-Y03	23	55	20	12	24	37	32	32.5	1.1	8	11.5	12	16	M10×1.25	22
40	SC-Y04	33	60	20	14	24	49	44	44.5	1.1	12	13.4	12	20	M12×1.25	22
50	SC-Y05	33	60	18	14	28	49	44	44.5	1.1	12	13.4	14	20	M16×1.5	24
63	SC-Y06	33	60	18	14	28	49	44	44.5	1.1	12	13.4	14	20	M16×1.5	24
80	SC-Y08	41	80	28	20	36	70	64	64.5	1.1	16	19	19	32	M20×1.5	34
100	SC-Y10	41	80	28	20	36	70	64	64.5	1.1	16	19	19	32	M20×1.5	34

I-Type Rod Clevis



Applicable bore size mm	I-type rod clevis									
	Parts No.	A	AC	CC	CD	CF	ER	EW	KK	WF
32	SC-I03	23	55	20	12	24	12	16	M10×1.25	22
40	SC-I04	33	60	20	14	24	12	20	M12×1.25	22
50	SC-I05	33	60	20	14	28	14	20	M16×1.5	24
63	SC-I06	33	60	20	14	28	14	20	M16×1.5	24
80	SC-I08	41	85	30	20	36	19	32	M20×1.5	34
100	SC-I10	41	85	30	20	36	19	32	M20×1.5	34

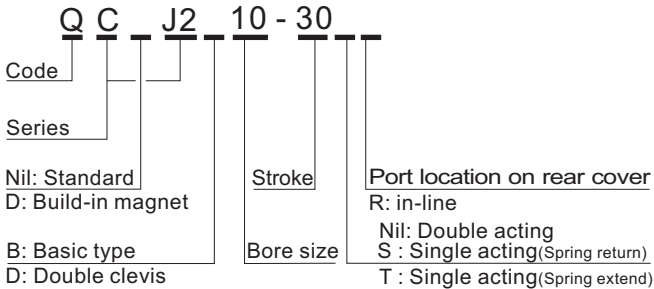
Mini Cylinder (Japanese Type) QCJ2 Series (Φ6~Φ16)



Bore size mm	6	10	16
Fluid	Filtered compressed air		
Acting type	Double acting / Single acting		
Max. Operating pressure	0.7MPa		
Min. Operating pressure	Double acting: Ø6mm: 120KPa Ø10mm~Ø16mm: 60KPa Single acting: Ø6mm: 250KPa Ø10mm~Ø16mm: 150KPa		
Cushion	Rubber cushion		
Ambient temperature	5~60°C		
Piston speed	50~750mm/s		
Stroke allowance mm	0~+1.0		
*Lubrication	Pro-lubrication in factory		
Port size	M5×0.8		
Port location on rear cover	In-line	Perpendicular 90°	
		In-line	

3

How to Order



Notes:

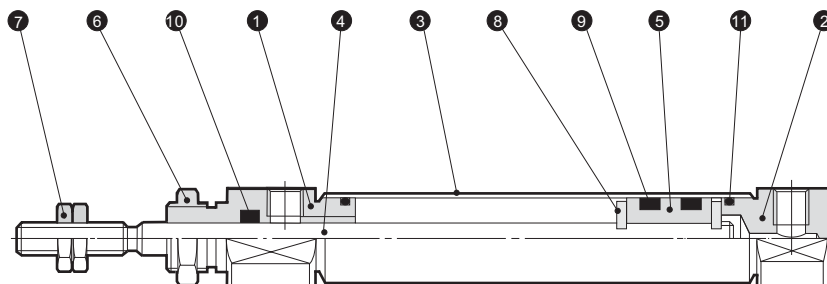
1. Voltage and current should not be overloaded.
2. Auto switch should not be linked directly to power, should be linked in series with a load.
3. Auto switch should not be close to strong magnetic bodies, or magnetic shield is used.

*If used, turbine oil #1 (ISO VG32) is recommended.

Standard Stroke / Auto Switch

Bore size mm	Standard stroke mm	Auto switch	Mounting band
6	15 30 45 60	AL-03R	PBK-06
10	15 30 45 60 75 100 125 150		PBK-10
16	15 30 45 60 75 100 125 150 175 200		PBK-16

Construction

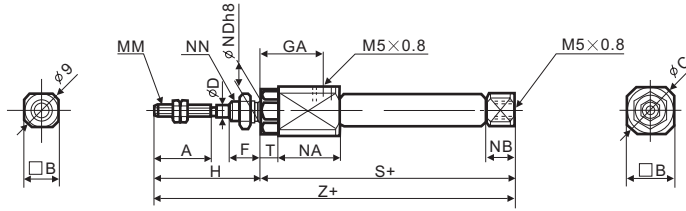
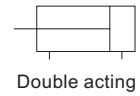


Parts List

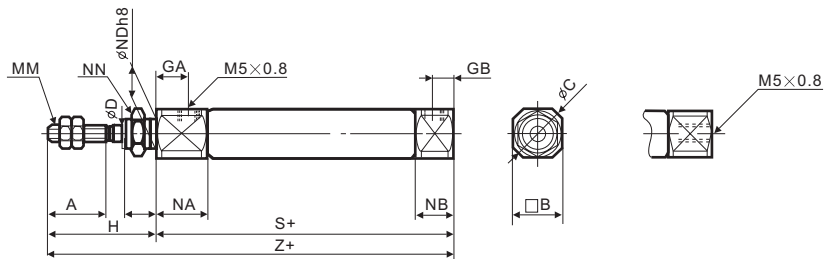
No.	Description	Material	No.	Description	Material
1	Front cover	Alum. Alloy	7	Rod nut	Carbon steel
2	Rear cover	Alum. Alloy	8	Cushion	Rubber-plastic composite
3	Tube	Cold-drawn stainless steel	9	Y-ring	NBR
4	Rod	Stainless steel	10	Combination wiper	NBR
5	Piston	Alum. Alloy	11	Seal	NBR
6	Mounting nut	Carbon steel			

Dimensions(mm)
Double Acting
QCJ2B6

Symbol

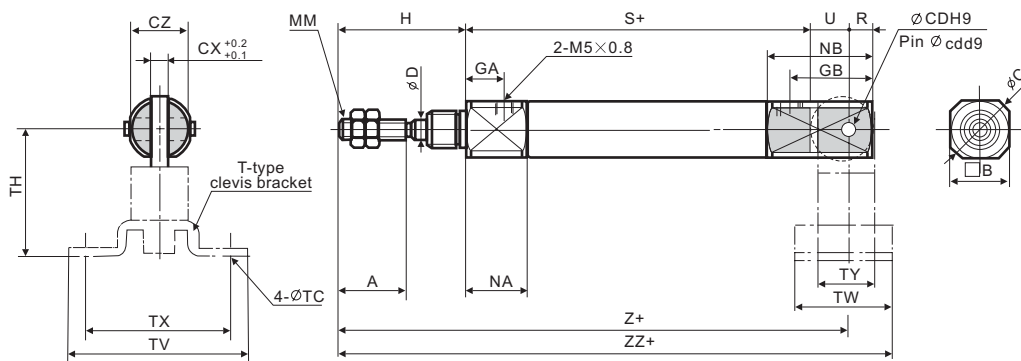


QCJ2B10~16



Bore size mm	A	B	C	D	F	GA	GB	H	MM	NA	NB	ND	NN	S	T	Z
6	15	12	14	3	8	14.5	-	28	M3×0.5	16	7	6	M6×1.0	49	3	77
10	15	12	14	4	8	8	5	28	M4×0.7	12.5	9.5	8	M8×1.0	46	-	74
16	15	18	20	5	8	8	5	28	M5×0.8	12.5	9.5	10	M10×1.0	47	-	75

Double Acting (Double Clevis)
QCJ2D10~16



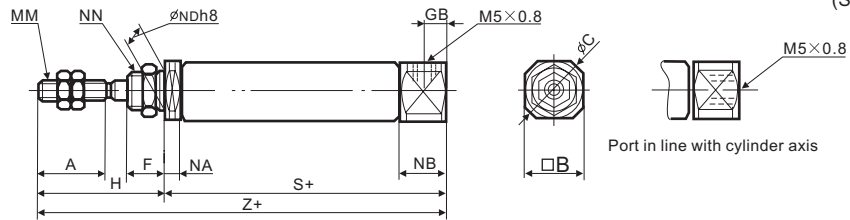
Bore size mm	A	B	C	CD (cd)	CX	CZ	D	GA	GB	H	MM	NA	NB	R	S	U	Z	ZZ
10	15	12	14	3.3	3.2	12	4	8	18	28	M4×0.7	12.5	22.5	5	46	8	82	93
16	15	18	20	5	6.5	18	5	8	23	28	M5×0.8	12.5	27.5	8	47	10	85	99

Symbol



Single Acting-S (Spring Return)

QCJ2B6~10~16



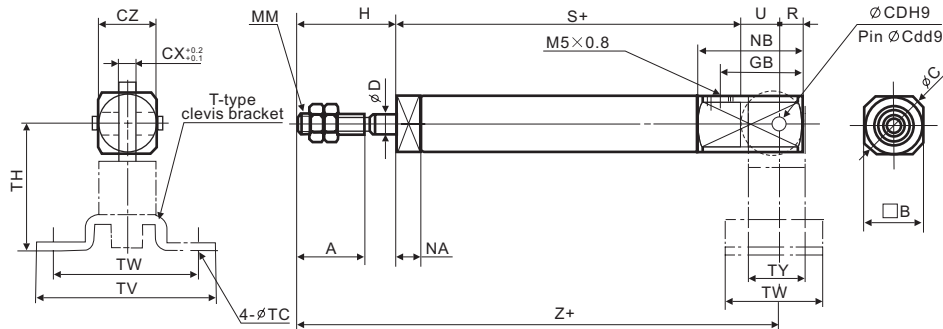
Bore size mm	A	B	C	D	F	GB	H	MM	NA	NB	ND	NN	S								Z							
													5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	15	8	14	3	8	-	28	M3×0.5	3	7	6	M6×1	34.5 (39.5)	43.5 (48.5)	47.5 (52.5)	61.5 (66.5)	-	-	-	-	62.5 (67.5)	71.5 (76.5)	75.5 (80.5)	89.5 (94.5)	-	-	-	-
10	15	12	14	4	8	5	28	M4×0.7	5.5	9.5	8	M8×1	45.5	53	65	77	-	-	-	-	73.5	81	93	105	-	-	-	-
16	15	18	20	5	8	5	28	M5×0.8	5.5	9.5	10	M10×1	45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

* () When auto switch is used

3

Single Acting-S (Spring Extend, Double Clevis)

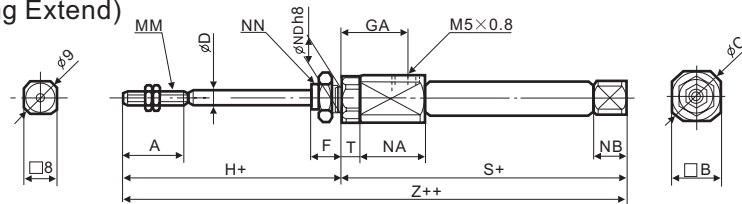
QCJ2D10~16



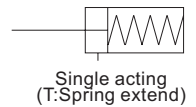
Bore size mm	A	B	C	CD	CX (cd)	CZ	D	GB	H	MM	NA	NB	R	U	S								Z							
															5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
10	15	12	14	3.3	3.2	12	4	18	20	M4×0.7	5.5	22.5	5	8	45.5	53	65	77	-	-	-	-	73.5	81	93	105	-	-	-	-
16	15	18	20	5	6.5	18	5	23	20	M5×0.8	5.5	27.5	8	10	45.5	54	66	78	84	108	126	138	75.5	84	96	108	114	138	156	168

Single Acting-T (Spring Extend)

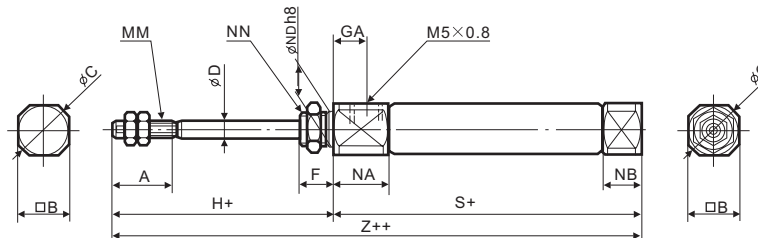
QCJ2B6



Symbol



QCJ2B10~16

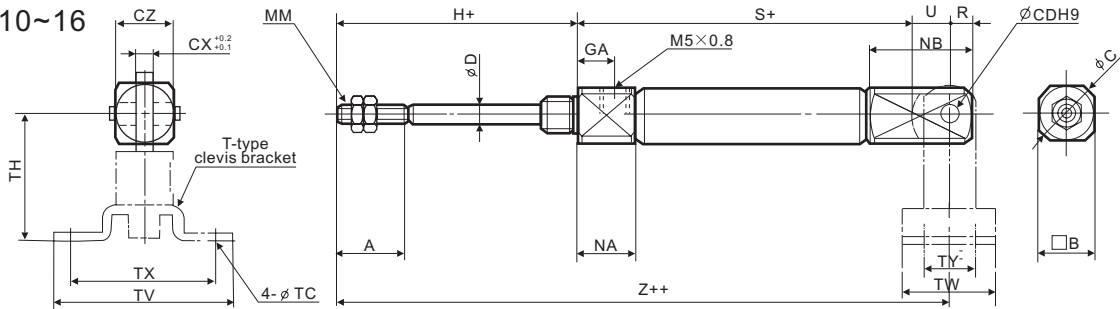


Bore size mm	A	B	C	D	F	GA	H	MM	NA	NB	ND	NN	T	S								Z							
														5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	15	12	14	3	8	14.5	28	M3×0.5	16	3	6	M6×1	3	46.5 (51.5)	55.5 (60.5)	59.5 (64.5)	73.5 (78.5)	-	-	-	-	74.5 (79.5)	83.5 (88.5)	87.5 (92.5)	101.5 (106.5)	-	-	-	-
10	15	12	14	4	8	8	28	M4×0.7	12.5	5.5	8	M8×1	-	48.5	56	68	80	-	-	-	-	76.5	84	96	108	-	-	-	-
16	15	18	20	5	8	8	28	M5×0.8	12.5	5.5	16	M10×1	-	48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169

* () When auto switch is used

Single Acting-T(Spring Extend, Double Clevis)

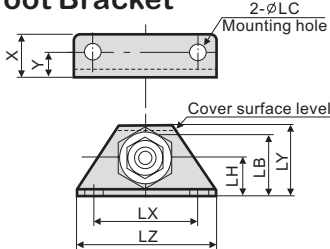
QCJ2D10~16



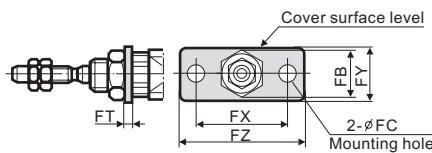
Bore size mm	A	B	C	CD (Cd)	CX	CZ	D	GA	H	MM	NA	NB	R	U	S								Z							
															5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
10	15	12	14	3.3	3.2	12	4	8	28	M4×0.7	12.5	18.5	5	8	48.5	56	68	80	-	-	-	-	84.5	92	104	116	-	-	-	-
16	15	18	20	5	6.5	18	5	8	28	M5×0.8	12.5	23.5	8	10	48.5	57	69	81	87	111	129	141	86.5	95	107	119	125	149	167	179

Accessories

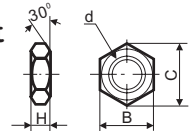
Foot Bracket



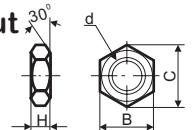
Flange



Rod End Nut

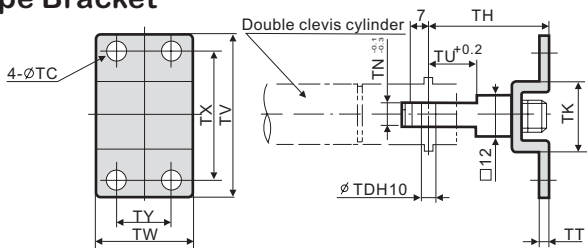


Mounting Nut

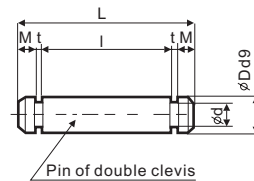


Applicable bore size mm	Parts No.	Foot bracket								Parts No.	Flange						Parts No.	Mounting nut				Parts No.	Rod end nut			
		LB	LC	LH	X	Y	LX	LY	LZ		FB	FC	FX	FY	FZ	FT		B	C	d	H		B	C	d	H
6	CJ-L06	13	4.5	9	12	7	24	16.5	32	CJ-F06	11	4.5	24	14	32	1.6	CJ-06B	8	9.2	M6×1	4	CJ-06A	5.5	6.4	M3×0.5	2.4
10	CJ-L10	15	4.5	9	12	7	24	16.5	32	CJ-F10	13	4.5	24	14	32	1.6	CJ-10B	11	12.7	M8×1	4	CJ-10A	7	8.1	M4×0.7	3.2
16	CJ-L16	23	5.5	14	15	9	33	25	42	CJ-F16	19	5.5	33	20	42	2.3	CJ-16B	14	16.2	M10×1	4	CJ-16A	8	9.2	M5×0.8	4

T-type Bracket

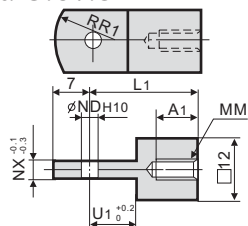


Pin of Double Clevis

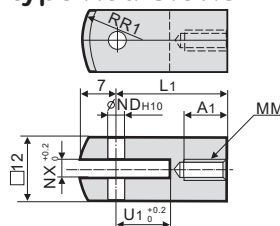


Applicable bore size mm	Parts No.	T-type bracket											Parts No.	Pin of double clevis					
		TC	TD	TH	TK	TN	TT	TU	TV	TW	TX	TY		D	d	L	I	M	t
10	CJ-T10	4.5	3.3	29	18	3.1	2	9	40	22	32	12	CJ-J10	3.3	3	15.2	12.2	1.2	0.3
16	CJ-T16	5.5	5	35	20	6.4	2.3	14	48	28	38	16	CJ-J16	5	4.8	22.7	18.3	1.5	0.7

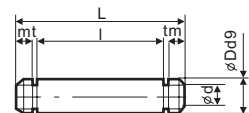
I-type Rod Clevis



Y-type Rod Clevis



Pin of Rod Clevis



Applicable bore size mm	Parts No.	I-type rod clevis								Parts No.	Y-type rod clevis								Parts No.	Pin of rod clevis					
		A1	ND	L1	MM	U1	NX	R1	A1		ND	L1	MM	U1	NX	R1	D	L		d	I	m	t		
10	CJ-I10	8	3.3	21	M4×0.7	9	3.1	8	CJ-Y10	8	3.3	21	M4×0.7	10	3.2	8	IY-J10	3.3	16.2	3	12.2	1.7	0.3		
16	CJ-I16	8	5	25	M5×0.8	14	6.4	12	CJ-Y16	11	5	21	M5×0.8	10	6.5	12	IY-J16	5	16.6	4.8	12.2	1.5	0.7		

Small Size Cylinder (Japanese Type)

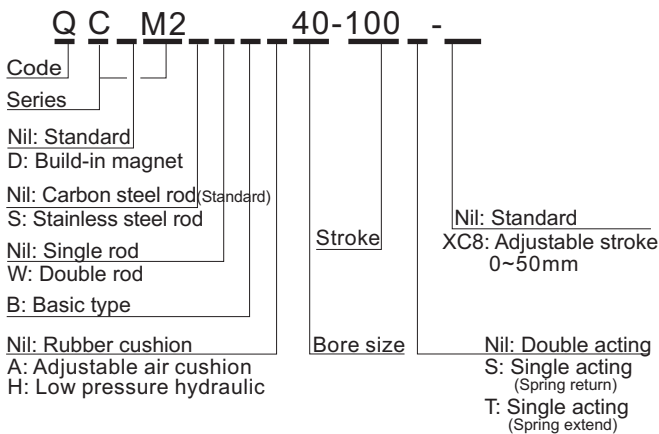
QCM2 Series (Φ20~Φ40)



Bore size mm	20	25	32	40
Fluid	Filtered compressed air			
Acting type	Double acting / Single acting			
Max. Operating pressure	1.0MPa			
Min. Operating pressure	Double acting: 0.1MPa			
	Single acting: 0.2MPa			
Cushion	Rubber cushion (standard), air cushion (option)			
Ambient temperature	5~60°C			
Piston speed	50~500mm/s			
Stroke allowance mm	0~250 ^{+0.1} ₀	251~1000 ^{+1.5} ₀	1001~1500 ^{+2.0} ₀	
*Lubrication	Pro-lubrication in factory			
Port size	G1/8			G1/4

*If used, turbine oil #1 (ISO VG32) is recommended.

How to Order



Standard Stroke / Auto Switch

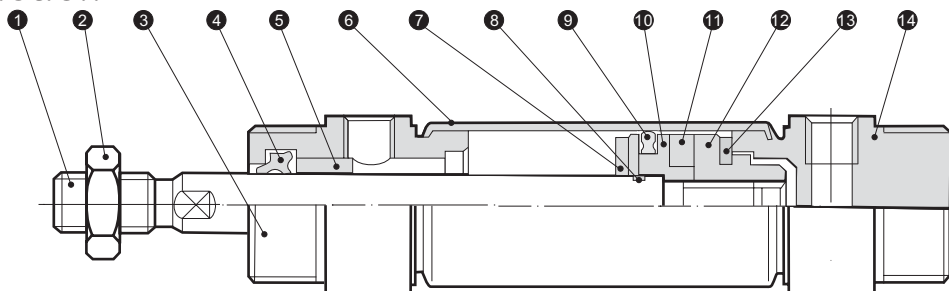
Bore size mm	Standard stroke mm	Auto switch			
		Auto switch	Mounting band	Auto switch	Mounting band
20	25 50 75 100	QCK2400 QCK2422	A-20	AL-03R	PBK-20
25	125 150 175		A-25		PBK-25
32	200 250 300		A-32		PBK-32
40	500		A-40		PBK-40

Option: Non-standard stroke.

Notes:

1. Voltage and current should not be overloaded.
2. Auto switch should not be linked directly to power, should be linked in series with a load in series.
3. Auto switch should not be close to strong magnetic bodies or magnetic shield is used.

Construction



Parts List

No.	Description	Material	No.	Description	Material
1	Piston rod	Carbon steel / Stainless steel	8	Seal glue	Anaerobic glue
2	Rod end nut	Carbon steel	9	8-ring	NBR
3	Front cover	Alum. Alloy	10	Front piston	Alum. Alloy
4	Combination wiper	PU	11	Magnet	Magnetic-plastics
5	Bushing	Sintered powder brass	12	Rear piston	Alum. Alloy
6	Tube	Cold-drawn stainless steel	13	Rear cushion	NBR
7	Front cushion	NBR	14	Rear cover	Alum. Alloy

Dimensions (mm)

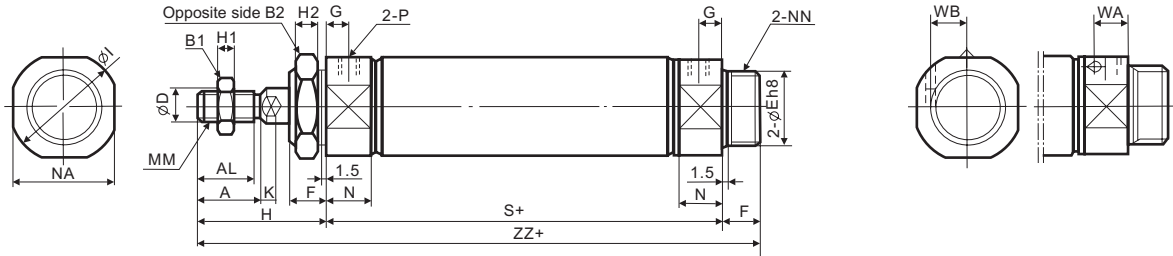
Basic Type

QCM2B

Symbol



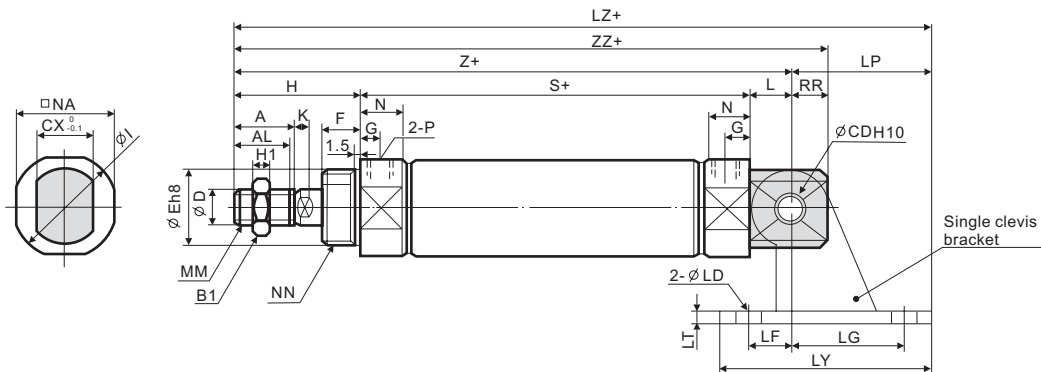
Air Cushion



Bore size mm	A	AL	B1	B2	D	E	F	G	H	H1	H2	I	K	MM	N	NA	NN	P	S	WA	WB	ZZ
20	18	15.5	12	26	8	20	13	8	41	5	8	28	5	M8×1.25	15	24	M20×1.5	G1/8	62	11.5	8.5	116
25	22	19.5	15	32	10	26	13	8	45	6	8	33.5	5.5	M10×1.25	15	30	M26×1.5	G1/8	62	11.5	10	120
32	22	19.5	15	32	12	26	13	8	45	6	8	37.5	5.5	M10×1.25	15	34.5	M26×1.5	G1/8	64	11.5	11.5	122
40	24	21	21	41	14	32	16	11	50	7	10	46.5	7	M14×1.5	21.5	42.5	M32×2	G1/4	88	14	15	154

Single Clevis Type

QCM2E



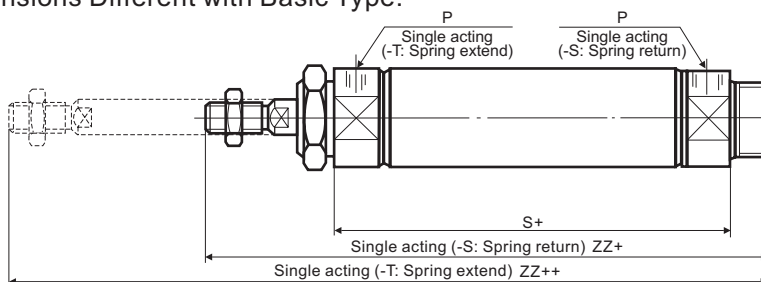
Bore size mm	A	AL	B1	CD	CX	D	E	F	G	H	H1	I	K	L	MM	N	NA	NN	P	RR	S	Z	ZZ
20	18	15.5	12	8	12	8	20	13	8	41	5	28	5	12	M8×1.25	15	24	M20×1.5	G1/8	9	62	115	124
25	22	19.5	15	8	12	10	26	13	8	45	6	33.5	5.5	12	M10×1.25	15	30	M26×1.5	G1/8	9	62	119	128
32	22	19.5	15	10	20	12	26	13	8	45	6	37.5	5.5	12	M10×1.25	15	34.5	M26×1.5	G1/8	12	64	124	136
40	24	21	21	10	20	14	32	16	11	50	7	46.5	7	12	M14×1.5	21.5	42.5	M32×2	G1/4	12	88	153	165

Single Acting

QCM2B (-S, -T)

Dimensions Different with Basic Type:

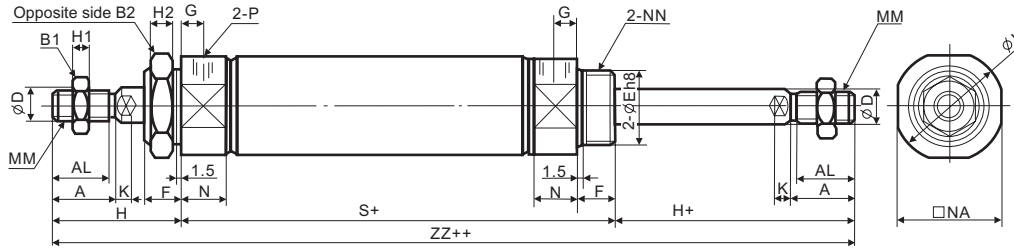
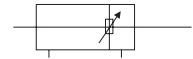
Symbol



Bore size (mm)	Stroke range (-S, -T)			
	1~50		51~75	
	S	ZZ	S	ZZ
20	87	141	112	166
25	87	145	112	170
32	89	147	114	172
40	113	179	138	204

**Double Rod
QCM2W**

Symbol



Air Cushion

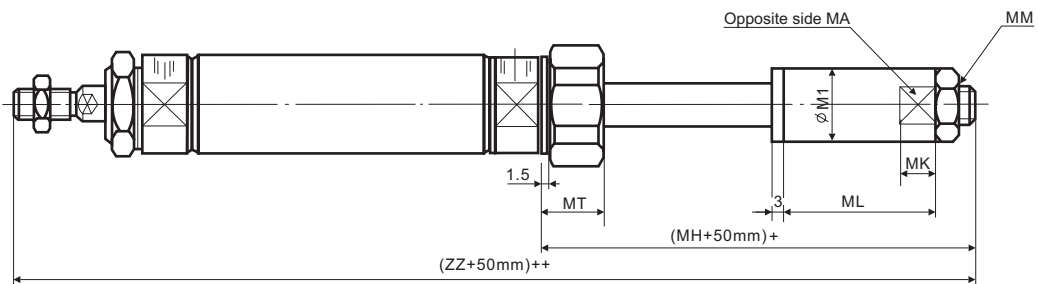
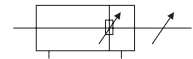


Bore size mm	Stroke mm	A	AL	B1	B2	D	E	F	G	H	H1	H2	I	K	MM	N	NA	NN	P	S	WA	WB	ZZ
20	~300	18	15.5	12	26	8	20	13	8	41	5	8	28	5	M8×1.25	15	24	M20×1.5	G1/8	62	11.5	8.5	144
25	~300	22	19.5	15	32	10	26	13	8	45	6	8	33.5	5.5	M10×1.25	15	30	M26×1.5	G1/8	62	11.5	10	152
32	~300	22	19.5	15	32	12	26	13	8	45	6	8	37.5	5.5	M10×1.25	15	34.5	M26×1.5	G1/8	64	11.5	11.5	154
40	~300	24	21	21	41	14	32	16	11	50	7	10	46.5	7	M14×1.5	21.5	42.5	M32×2	G1/4	88	14.5	15	188

3

**Adjustable Stroke
QCM2B -XC8**

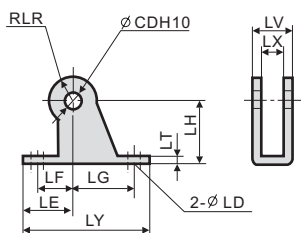
Symbol



**Adjustable Extending
Range: 0~50mm**

Bore size mm	MA	MH	M1	MK	ML	MM	MT	ZZ
20	12	47	15	8	68	M8×1.25	16.5	150
25	17	49	20	10	68	M8×1.25	17.5	156
32	17	49	20	10	68	M10×1.25	17.5	158
40	22	60	25	12	72	M14×1.5	21.5	198

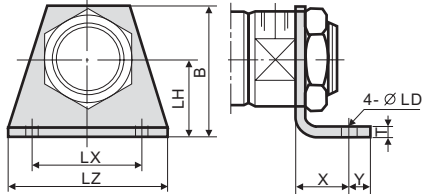
Single Clevis Bracket



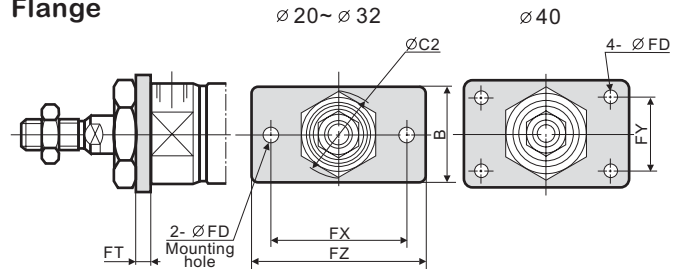
Applicable bore size mm	No.	LD	LE	LF	LG	LH	LP	LR	LT	LV	LY	LZ
20	CM-E02	6.8	22	15	30	30	37	10	3.2	18.4	59	152
25		6.8	22	15	30	30	37	10	3.2	18.4	59	156
32	CM-E03	9	25	15	40	40	50	13	4	28	75	174
40		9	25	15	40	40	50	13	4	28	75	203

Accessories

Foot Bracket

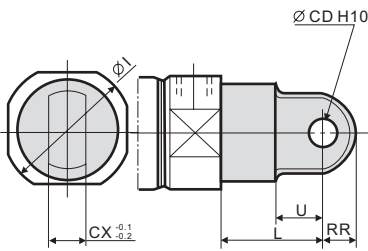


Flange

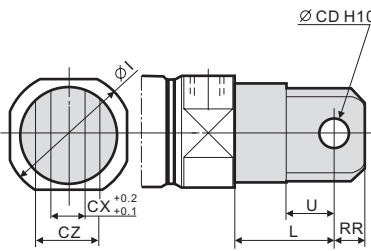


Applicable bore size mm	Foot bracket									Flange							
	Parts No.	X	Y	LD	LX	LZ	LH	LT	B	Parts No.	FD	FY	FX	FZ	C2	B	FT
20	CM-L02	20	8	6.8	40	55	25	3.2	40	CM-F02	7	-	60	75	30	34	4
25	CM-L03	20	8	6.8	40	55	28	3.2	47	CM-F03	7	-	60	75	37	40	4
32	CM-L03	20	8	6.8	40	55	28	3.2	47	CM-F03	7	-	60	75	37	40	4
40	CM-L04	23	10	7	55	75	30	3.2	54	CM-F04	7	36	66	82	47.5	52	5

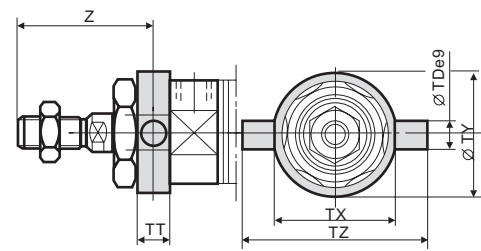
Single Clevis



Double Clevis

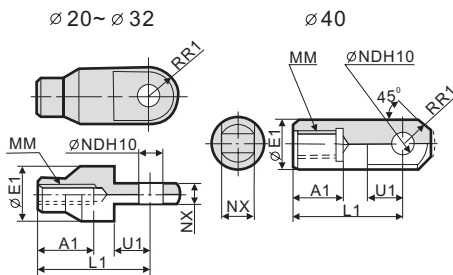


Trunnion

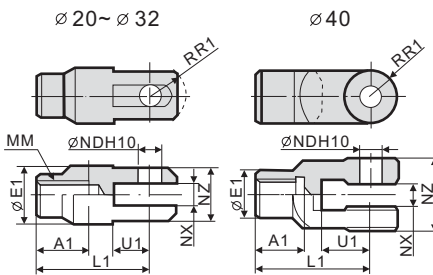


Applicable bore size mm	Single clevis							Double clevis							Trunnion							
	Parts No.	CD	CX	I	L	RR	U	Parts No.	CD	CX	CZ	I	L	RR	U	Parts No.	TD	TT	TX	TY	TZ	Z
20	CM-C02	9	10	28	30	9	14	CM-D02	9	10	19	28	30	9	14	CM-T02	8	10	32	32	52	36
25	CM-C03	9	10	33.5	30	9	14	CM-D03	9	10	19	33.5	30	9	14	CM-T03	9	10	40	40	60	40
32	CM-C03	9	10	37.5	30	9	14	CM-D03	9	10	19	37.5	30	9	14	CM-T03	9	10	40	40	60	40
40	CM-C04	10	15	46.5	39	11	18	CM-D04	10	15	30	46.5	39	11	18	CM-T04	10	11	53	53	77	44.5

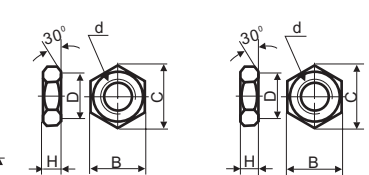
I-type Rod Clevis



Y-type Rod Clevis



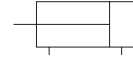
Rod End Nut Mounting Nut



Applicable bore size mm	I-type rod clevis									Y-type rod clevis									Rod end nut				Mounting nut						
	Parts No.	A1	E1	L1	MM	∅ND	NX	R1	U1	Parts No.	A1	E1	L1	MM	∅ND	NX	NZ	R1	U1	Parts No.	B	C	d	H	Parts No.	B	C	d	H
20	CM-I02	16	20	36	M8×1.25	9	9	10	14	CM-Y02	16	20	36	M8×1.25	9	9	18	12	14	NT-02	13	15	M8×1.25	5	SN-02	26	30	M20×1.5	8
25~32	CM-I03	18	20	38	M10×1.25	9	9	10	14	CM-Y03	18	20	38	M10×1.25	9	9	18	12	14	NT-03	17	19.6	M10×1.25	6	SN-03	32	37	M26×1.5	8
40	CM-I04	22	24	55	M14×1.5	12	16	15.5	20	CM-Y04	22	24	55	M14×1.5	12	16	38	13	25	NT-04	22	25.4	M14×1.5	8	SN-04	41	47.3	M32×2	10

Small Size Cylinder (European Type) QC75 Series (Φ32~Φ40)

Symbol

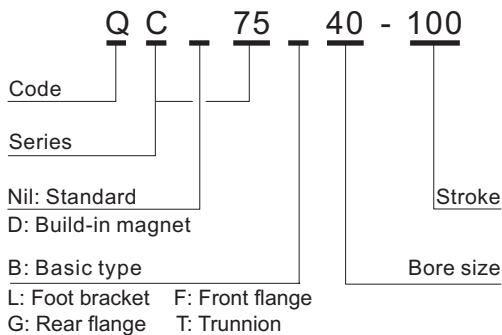


Bore size mm	32	40
Fluid	Filtered compressed air	
Acting type	Double acting	
Max. Operating pressure	1.0MPa	
Min. Operating pressure	0.05MPa	
Cushion	Rubber cushion (standard)	
Ambient temperature	5~60°C	
Piston speed	50~750mm/s	
Stroke allowance mm	0~250 ^{+0.1} ₀	251~1000 ^{+1.5} ₀ 1001~1500 ^{+2.0} ₀
*Lubrication	Pro-lubrication in factory	
Port size	G1/8	G1/4

*If used, turbine oil #1 (ISO VG32) is recommended.

3

How to Order



Standard Stroke / Auto Switch

Bore size mm	Standard stroke mm	Max. Stroke (mm)	Auto switch	Mounting band
32	10 25 40 50 80 100	1000	QCK2400	A-32
40	125 160 200 250 300		QCK2422	A-40

Option: Non-standard stroke.

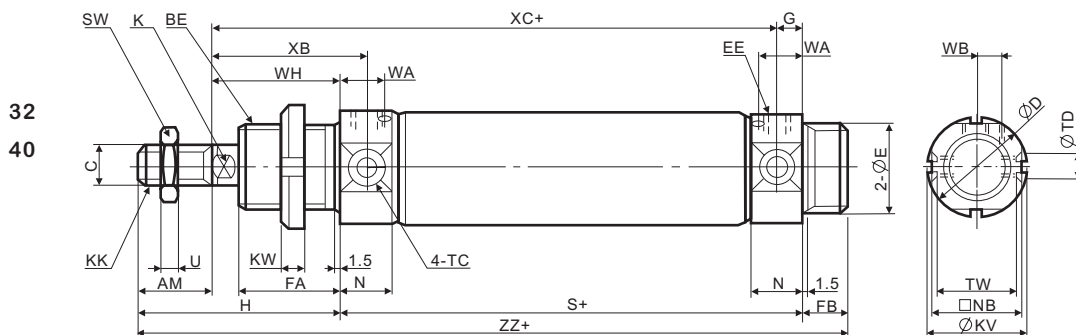
Notes:

1. Voltage and current should not be overloaded.
2. Auto switch should not be linked directly to power, should be linked in series with a load in series.
3. Auto switch should not be close to strong magnetic bodies or magnetic shield is used.

Dimensions(mm)

Basic Type

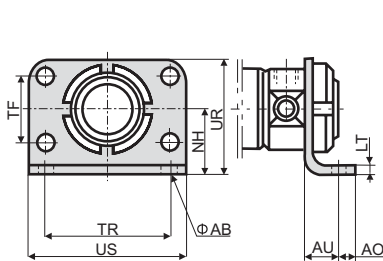
QC75B



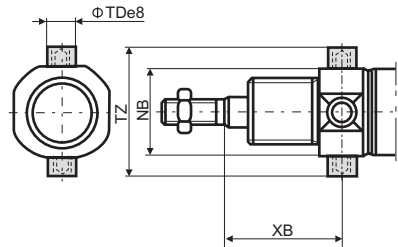
Bore size mm	AM	BE	C	D	E	EE	FA	FB	G	WA	H	WB	K	KK	KV	KW	N	NB	S	SW	TC	TD	TW	WH	XB	XC	ZZ	U
32	20	M30×1.5	12	37.5	30	G1/8	30	14	9	15.5	58	10.5	10	M10×1.5	38	7	17(19)	34.5	68	15	M8×1	10	32.5	38	47	97	140	6
40	24	M38×1.5	14	46.5	38	G1/4	35	16	12	19.5	69	13	12	M12×1.75	50	8	22(25)	42.5	89	17	M10×1	12	39.5	45	57	122	174	7

Accessories

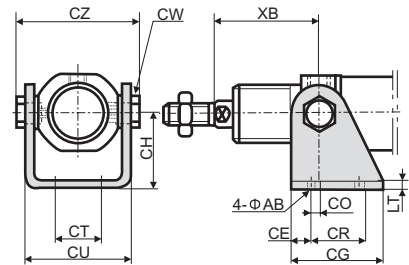
Foot Bracket / Flange



Trunnion

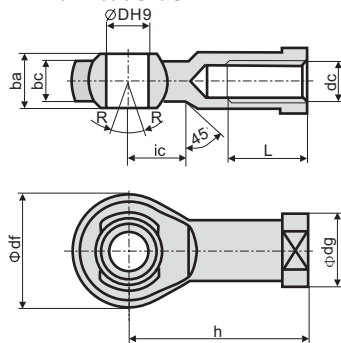


U-Type Bracket

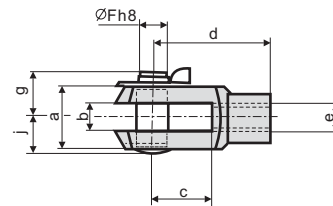


Applicable bore size mm	Foot bracket / Flange										Trunnion					U-type bracket													
	Parts No.	AB	AO	AU	LT	NH	TF	TR	UR	US	Parts No.	NB	TD	TZ	XB	XC	Parts No.	AB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB
32	C75-L03	7	7	14	4	28	28	52	49	66	C75-T03	34.5	10	47.9	47	97	C75-E03	7	9	41	35	4	24	20	46.8	13	55.9	4	47
40	C75-L04	9	10	20	5	33	30	60	58	80	C75-T04	42.5	12	59.3	57	122	C75-E04	9	12	52	40	3	30	28	58.2	17	69.3	5	57

I-Type Rod Spherical Bearing Clevis / DIN648



I-type Rod Clevis / DIN71751



Applicable bore size mm	I-type rod clevis / DIN648											I-type rod clevis / DIN71751									
	Parts No.	dc	D	h	df	bc	ba	L	dg	R°	ic	Parts No.	e	b	d	F	g	c	j	a	
32	KJ10DA	M10×1.5	10	43	20	10.5	14	20	19	13	14	GKM10-20A	M10×1.5	10	40	10	18	20	12	20	
40	KJ12DA	M12×1.75	12	50	30	12	16	22	22	13	16	GKM12-24A	M12×1.75	12	48	12	23	24	15	24	

Small Size Cylinder

XQGAx Series ($\Phi 12 \sim \Phi 32$)

Material: Precisely drawn stainless steel tube

Cover: Double rolled-in construction

Cushion: Non-adjustable cushion pad



Specifications

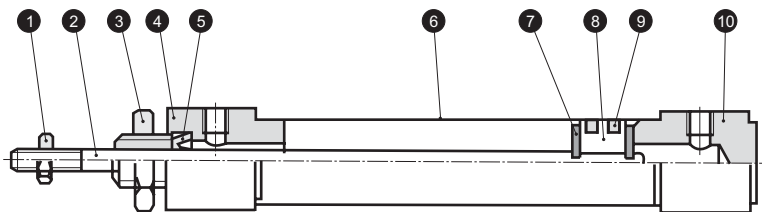
Acting type	Double acting	Single acting
Fluid	Filtered compressed air	
Max. Operating pressure	0.8MPa	
Min. Operating pressure	0.06MPa	0.2MPa
Fluid temperature	-10~+60°C	
Ambient temperature	5~60°C	
Piston speed	50~500mm/s	
Stroke allowance	0~250+1.0(mm);	251~500+1.5(mm)

3

Standard Stroke

Acting type	Bore size mm	Standard stroke mm	Max. Stroke mm
Double acting	12	25, 50, 80, 100, 125, 160	160
	16		
	20	25, 50, 80, 100, 125, 160, 200, 250, 320	320
	25		
	32	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500	500

Construction



Mounting

Code	Description
SD	Basic
LB	Foot bracket
FA	Front flange
FB	Rear flange
TA	Front trunnion
TB	Rear trunnion
CA	Single clevis
YC	Y-type rod clevis

Parts List

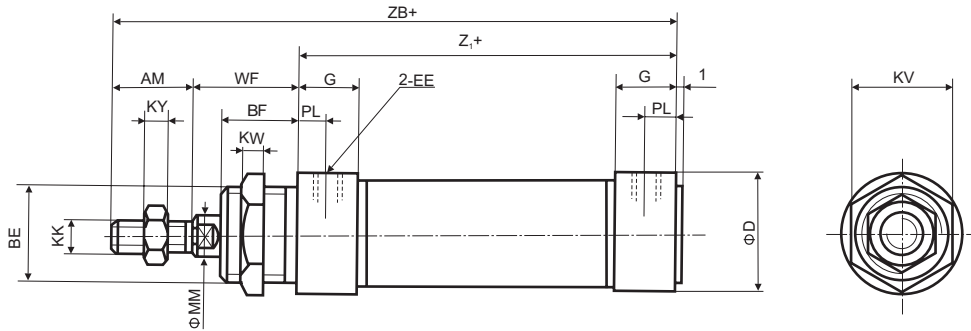
No.	Description	No.	Description
1	Nut	6	Tube
2	Piston rod	7	Cushion pad
3	Nut	8	Piston
4	Front cover	9	Y-ring
5	Seal	10	Rear cover

Dimensions (mm)

Symbol

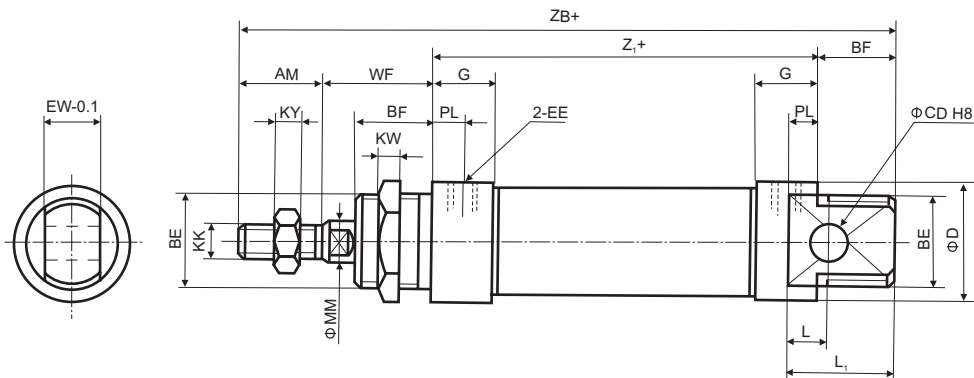


SD Basic (XQGAx Cylinder)



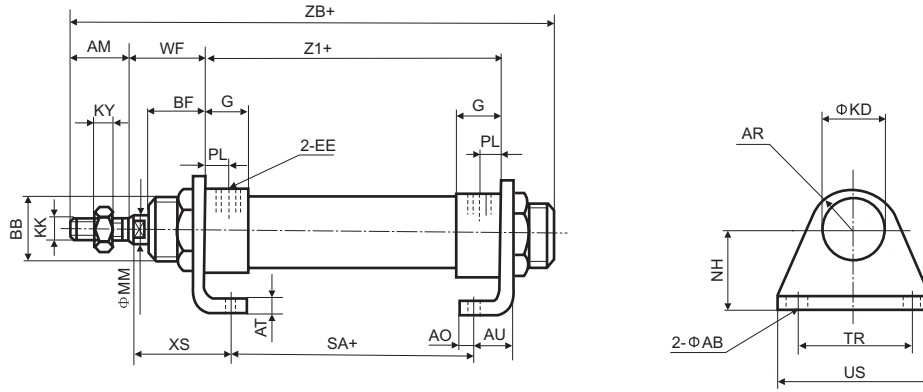
Bore size mm	AM	BE	BF	D	EE	G	KK	KV	KW	KY	MM	PL	WF	Z ₁	ZB
12	16	M16×1.5	17	20	M5×0.8	9	M6×1	24	8	5	6	4.5	22	48	86
16	16	M16×1.5	17	20	M5×0.8	10	M6×1	24	8	5	6	5	22	52	90
20	20	M22×1.5	18	28	G1/8	15	M8×1.25	32	8	6	8	7.5	24	67	111
25	22	M22×1.5	21	33.5	G1/8	16	M10×1.25	32	8	8	10	8	28	70	120
32	23	M27×2	21	37.5	G1/8	16	M10×1.25	36	9.5	8	12	8	28	72	123

CA Single Clevis (XQGAx Cylinder)



Bore size mm	AM	BE	BF	CD	D	EE	EW	G	KK	KW	KY	L	L ₁	MM	PL	WF	Z ₁	ZB
12	16	M16×1.5	17	6	20	M5×0.8	12	9	M6×1	8	5	11	22	6	4.5	22	48	103
16	16	M16×1.5	17	6	20	M5×0.8	12	10	M6×1	8	5	11	22	6	5	22	52	107
20	20	M22×1.5	18	8	28	G1/8	16	15	M8×1.25	8	6	12	24	8	7.5	24	67	129
25	22	M22×1.5	21	8	33.5	G1/8	16	16	M10×1.25	8	8	12	26	10	8	28	70	141
32	23	M27×2	21	10	37.5	G1/8	20	16	M10×1.25	9.5	8	15	29	12	8	28	72	144

LB Foot Bracket (XQGx Cylinder)

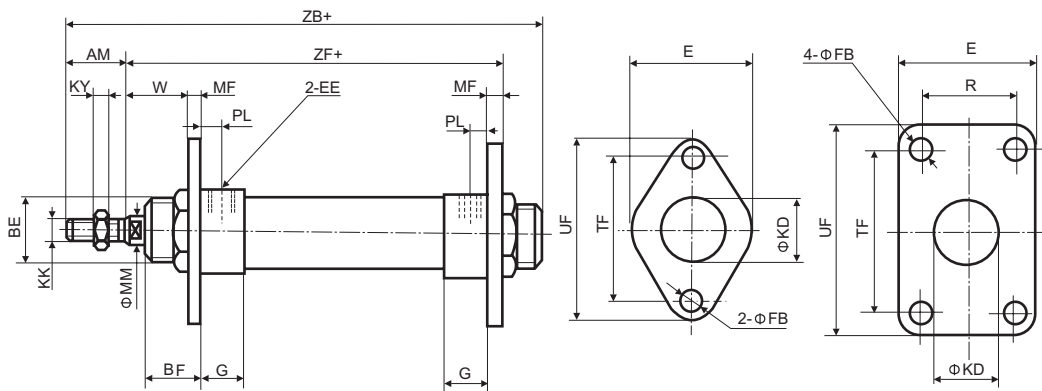


3

Bore size mm	AB	AM	AO	AR	AT	AU	BE	BF	EE	G	KK	KD	KY	MM	NH	PL	SA	TR	US	WF	XS	Z1	ZB	Parts No.
12	5.5	16	6	13	3	13	M16×1.5	17	M5×0.8	9	M6×1	16.1	5	6	20	4.5	28	32	42	22	32	48	103	GX-LB12
16	5.5	16	6	13	3	13	M16×1.5	17	M5×0.8	10	M6×1	16.1	5	6	20	5	32	32	42	22	32	52	107	GX-LB12
20	6.5	20	8	20	3	16	M22×1.5	18	G1/8	15	M8×1.25	22.1	6	8	25	7.5	43	40	54	24	36	67	129	GX-LB20
25	6.5	22	8	20	3	16	M22×1.5	21	G1/8	16	M10×1.25	22.1	8	10	25	8	46	40	54	28	40	70	141	GX-LB20
32	6.5	23	10	20	4	19	M27×2	21	G1/8	16	M10×1.25	27.1	8	12	35	8	42	40	55	28	43	72	144	GX-LB32

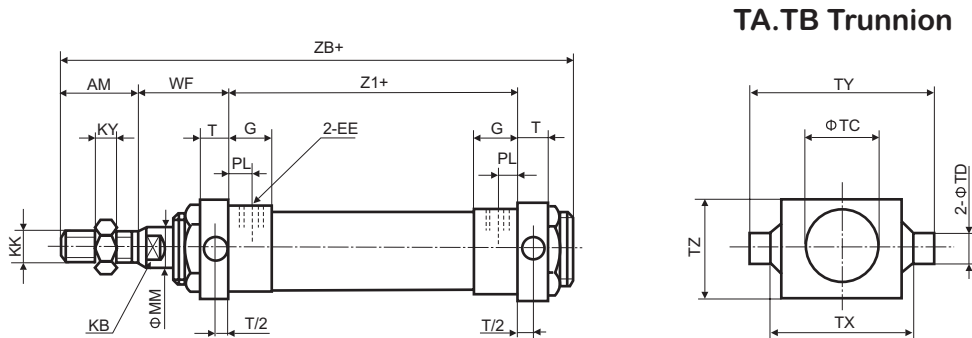
FA.FB Front, Rear Flange (XQGx Cylinder)

FA.FB Flange



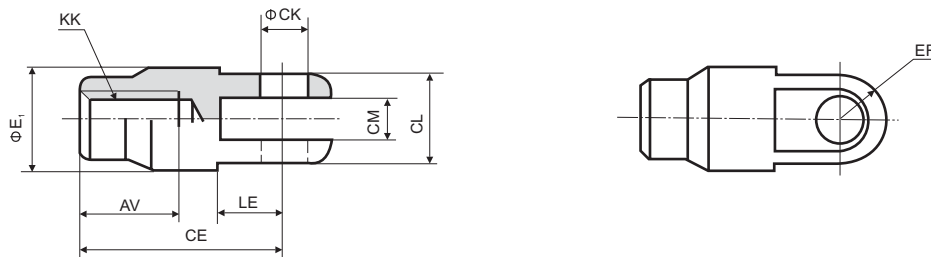
Bore size mm	AM	BE	BF	E	EE	FB	G	KK	KD	KY	MF	MM	PL	R	TF	UF	W	ZB	ZF	Parts No.
12	16	M16×1.5	17	30	M5×0.8	5.5	9	M6×1	16.1	5	3	6	4.5	-	40	53	19	103	73	GX-FA12
16	16	M16×1.5	17	30	M5×0.8	5.5	10	M6×1	16.1	5	3	6	5	-	40	53	19	107	77	GX-FA12
20	20	M22×1.5	18	40	G1/8	6.5	15	M8×1.25	22.1	6	3	8	7.5	-	50	66	21	129	94	GX-FA20
25	22	M22×1.5	21	40	G1/8	6.5	16	M10×1.25	22.1	8	3	10	8	-	50	66	25	141	101	GX-FA20
32	23	M27×2	21	45	G1/8	6.5	16	M10×1.25	27.1	8	3	12	8	20	60	80	25	144	103	GX-FA32

TA, TB Front, Rear Trunnion (XQGAx Cylinder)



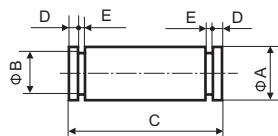
Bore size mm	AM	EE	G	KK	KY	MM	PL	T	TC	TD	TX	TY	TZ	WF	Z1	ZB	Parts No.
12	16	M5×0.8	9	M6×1	5	6	4.5	7	16.1	5	30	40	30	22	48	103	GX-TA12
16	16	M5×0.8	10	M6×1	5	6	5	7	16.1	5	30	40	30	22	52	107	GX-TA12
20	20	G1/8	15	M8×1.25	6	8	7.5	10	22.1	8	32	52	32	24	67	129	GX-TA20
25	22	G1/8	16	M10×1.25	8	10	8	11	22.1	9	40	60	40	28	70	141	GX-TA25
32	23	G1/8	16	M10×1.25	8	12	8	11	27.1	9	40	60	40	28	72	144	GX-TA32

Y-Type Rod Clevis



Parts No.	Bore size mm	AV	CE	CK	CL	CM	ER	E ₁	KK	LE
GX-Y12,GX-Y16	12,16	11	21	5	12	6.5	12	14	M6×1	10
GX-Y20	20	16	40	9	18	9	12	30	M8×1.25	16
GX-Y25,GX-Y32	25,32	18	40	9	18	9	12	20	M10×1.25	16

Pin of Rod Clevis



Parts No.	Bore size mm	A	B	C	D	E
GX-YP12, GX-YP16	12, 16	5	4.8	16.6	1.5	0.7
GX-YP20, GX-YP25, GX-YP32	20, 25, 32	9	8.6	25	1.8	1.2

Small Single Acting Cylinder

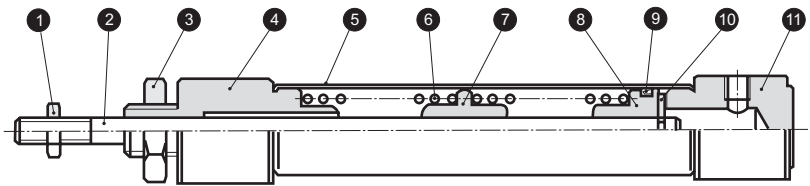
XQGxD(D₁) Series (Φ12~Φ32)

Stroke: 25~50

Bore size: Φ32

Stroke: 25~80

Construction



Mounting

Code	Description
SD	Basic
LB	Foot bracket
FA	Front flange
FB	Rear flange
TA	Front trunnion
TB	Rear trunnion
CA	Single clevis

Parts List

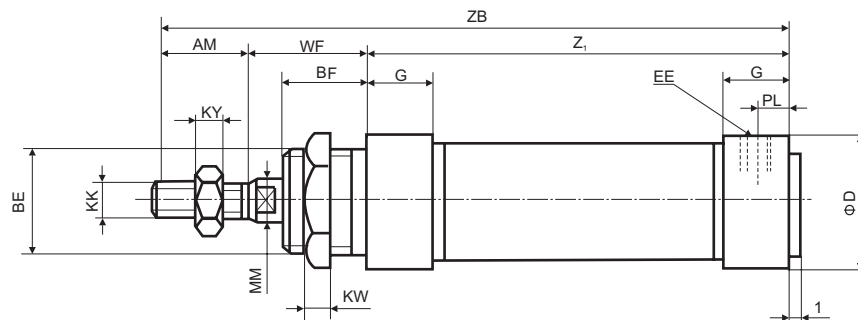
No.	Description	No.	Description
1	Nut	7	Guide bushing
2	Piston rod	8	Piston
3	Nut	9	Y-ring
4	Front cover	10	Cushion pad
5	Tube	11	Rear cover
6	Spring		

Acting type	Bore size mm	Standard stroke mm	Max. Stroke mm
Single acting	12	25, 50	80
	16		
	20	25, 50	
	25		
32	25, 40, 50, 80	80	

Dimensions(mm)

SD Basic (XQGxD Spring Return Single Acting Cylinder)

Symbol



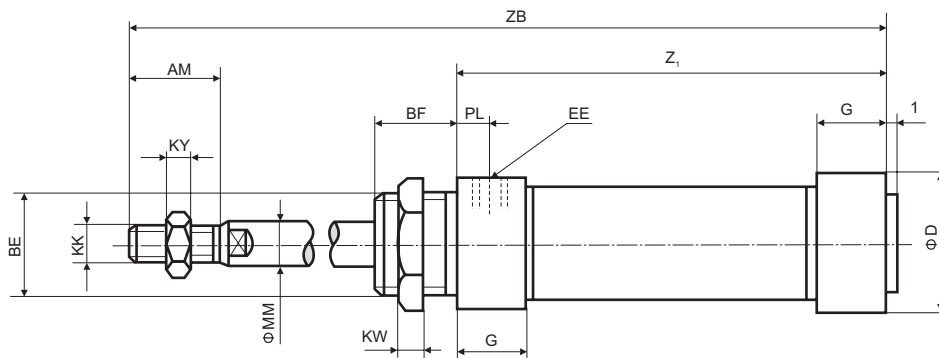
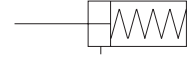
Bore size mm	AM	BE	BF	D	EE	G	KK	KW	KY	MM	PL	WF
12	16	M16×1.5	17	20	M5×0.8	9	M6×1	8	5	6	4.5	22
16	16	M16×1.5	17	20	M5×0.8	10	M6×1	8	5	6	5	22
20	20	M22×1.5	18	28	G1/8	15	M8×1.25	8	6	8	7.5	24
25	22	M22×1.5	21	33.5	G1/8	16	M10×1.25	8	8	10	8	28
32	23	M27×2	21	37.5	G1/8	16	M10×1.25	9.5	8	12	8	28

Stroke mm	25			40			50			80			
	Bore size mm	Z ₁	ZB	F ₁ (N)	Z ₁	ZB	F ₁ (N)	Z ₁	ZB	F ₂ (N)	Z ₁	ZB	F ₁ (N)
12	12	78.5	116.5	36.2	-	-	-	118	156	36.2	-	-	-
16	16	90	128	64.3	-	-	-	136	174	64.3	-	-	-
20	20	110.5	154.5	100.5	-	-	-	162.5	206.5	100.5	-	-	-
25	25	116	166	157.1	-	-	-	171	221	157.1	-	-	-
32	32	116	167	257.4	145	236	257.4	169.5	220.5	257.4	227.5	278.5	257.4

Note: Thrust F₁ is theoretical force at operating pressure 0.5MPa.

SD Basic (XQGAXD₁ Spring Extend Single Acting Cylinder)

Symbol



Bore size mm	AM	BE	BF	D	EE	G	KK	KW	KY	MM	PL
12	16	M16×1.5	17	20	M5×0.8	9	M6×1	8	5	6	4.5
16	16	M16×1.5	17	20	M5×0.8	10	M6×1	8	5	6	5
20	20	M22×1.5	18	28	G1/8	15	M8×1.25	8	6	8	7.5
25	22	M22×1.5	21	33.5	G1/8	16	M10×1.25	8	8	10	8
32	23	M27×2	21	37.5	G1/8	16	M10×1.25	9.5	8	12	8

Stroke mm	25			40			50			80		
Bore size mm	Z ₁	ZB	F ₂ (N)	Z ₁	ZB	F ₂ (N)	Z ₁	ZB	F ₂ (N)	Z ₁	ZB	F ₂ (N)
12	78.5	141.5	27.1	-	-	-	118	206	27.1	-	-	-
16	90	153	55.3	-	-	-	136	224	55.3	-	-	-
20	110.5	179.5	84.4	-	-	-	162.5	256.5	84.4	-	-	-
25	116	191	131.9	-	-	-	171	271	131.9	-	-	-
32	116	192	221.2	145	236	221.2	169.5	270.5	221.2	227.5	358.5	221.2

Note: Thrust F₁ is theoretical force at operating pressure 0.5MPa.

Small Double Piston Rod Cylinder

XQGA_{x2} Series (Φ12~Φ32)

The small double rod cylinders are based on XQGA_x cylinders. On the two sides, the length of rods, the thrust and pull forces, the moving directions, the speeds and strokes are all identical.

Specifications, standard stroke and dimensions are the same as those of the small cylinder XQGA_x.



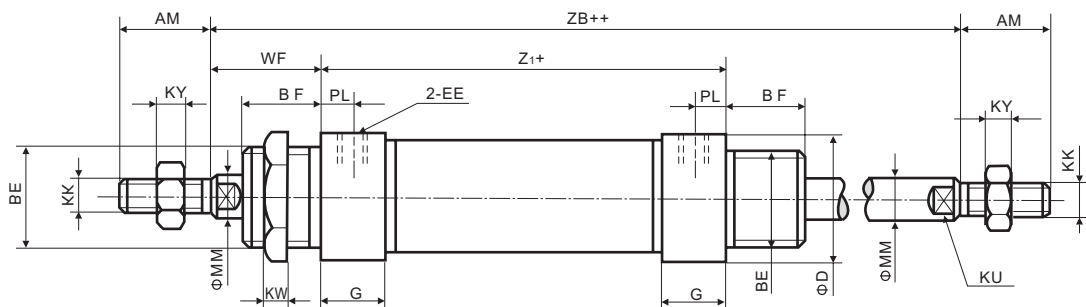
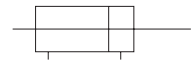
Mounting

3

Code	Description
SD	Basic
LB	Foot bracket
FA	Front flange
TA	Front trunnion

SD Basic (XQGA_{x2} Cylinder) Dimensions(mm)

Symbol



Bore size mm	AM	BE	BF	D	EE	G	KK	KW	KY	MM	PL	WF	Z ₁	ZB
12	16	M16×1.5	17	20	M5×0.8	9	M6×1	8	5	6	4.5	22	48	92
16	16	M16×1.5	17	20	M5×0.8	10	M6×1	8	5	6	5	22	52	96
20	20	M22×1.5	18	28	G1/8	15	M8×1.25	8	6	8	7.5	24	67	115
25	22	M22×1.5	21	33.5	G1/8	16	M10×1.25	8	8	10	8	28	70	126
32	23	M27×2	21	37.5	G1/8	16	M10×1.25	9.5	8	12	8	28	72	128

Small Auto Switch Cylinder XQGAxKn Series ($\Phi 12 \sim \Phi 32$)

The auto switch cylinders (XQGA_xKn, n: switch, number) are the cylinders (XQGA_x, $\Phi 12 \sim \Phi 32$) equipped with magnets and auto switches.

Their specifications and dimensions are respectively the same as those of their original cylinders.



Standard Stroke

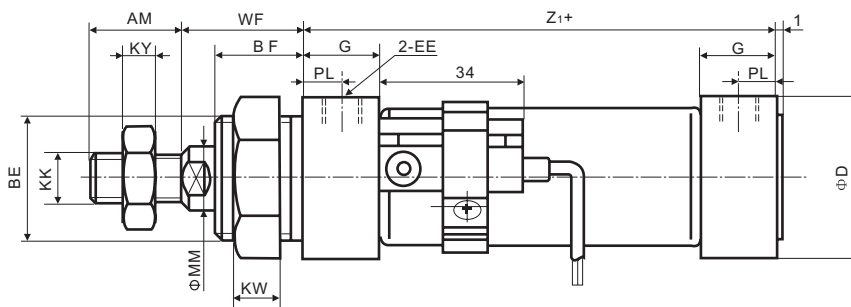
Bore size mm	Standard stroke mm	Max. Stroke mm
12	25, 50, 80, 100, 125, 160	160
16		
20	25, 50, 80, 100, 125, 160, 200, 250, 320	300
25		
32	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500	500

Mounting

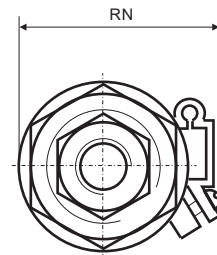
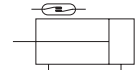
Code	Description
SD	Basic
LB	Foot bracket
FA	Front flange
FB	Rear flange
TA	Front trunnion
TB	Rear trunnion
CA	Single clevis

Dimensions(mm)

SD Basic (XQGAxKn Cylinder)



Symbol



Bore size mm	AM	BE	BF	D	EE	G	KK	KV	KW	KY	MM	PL	RN	WF	Z1
12	16	M16×1.5	17	20	M5×0.8	9	M6×1	24	8	5	6	4.5	23	22	51
16	16	M16×1.5	17	20	M5×0.8	10	M6×1	24	8	5	6	5	27	22	56
20	20	M22×1.5	18	28	G1/8	15	M8×1.25	32	8	6	8	7.5	38	24	70
25	22	M22×1.5	21	33.5	G1/8	16	M10×1.25	32	8	8	10	8	36.5	28	73
32	23	M27×2	21	37.5	G1/8	16	M10×1.25	35	9.5	8	12	8	44	28	75

Aluminium Alloy Small Size Cylinder

QMAL Series (Φ20~Φ40)

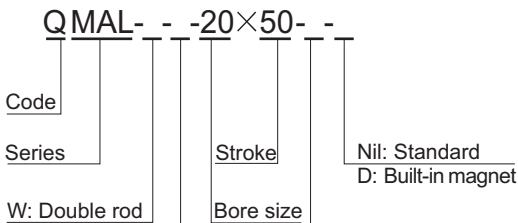


Bore size mm	20	25	32	40
Fluid	Filtered compressed air			
Acting type	Double acting			
Max. Operating pressure	1.0MPa			
Min. Operating pressure	0.1MPa			
Cushion	Rubber cushion			
Ambient temperature	5~60°C			
Fluid temperature	-10~+60°C			
Piston speed	30~800mm/s			
Port size	G1/8			G1/4

*If used, turbine oil*1 (ISO VG32) is recommended.

3

How to Order



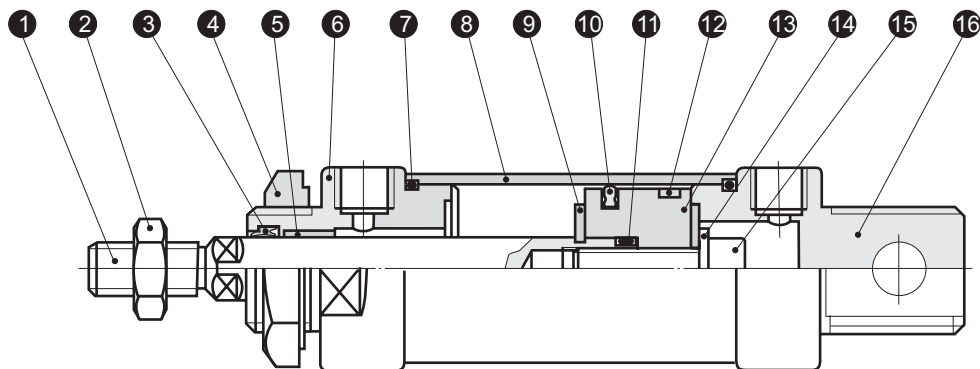
CA: Single clevis
CM: Threaded rear end
U: Boss cut rear end

Nil: Basic type
LB: Double end bracket
FA: Front flange
SDB: Single clevis bracket

Standard Stroke / Auto Switch

Bore size mm	Standard stroke mm	Max. Stroke mm	Permitted stroke mm	Auto switch	Mounting band
20	25 50 75 100 125 150 175 200 225 250 300	500	800	AL-20R	PAB - 20
	25				25 50 75 100 125 150
32		175 200 225 250 300	1000		1500
	40	350 400 450 500			

Construction

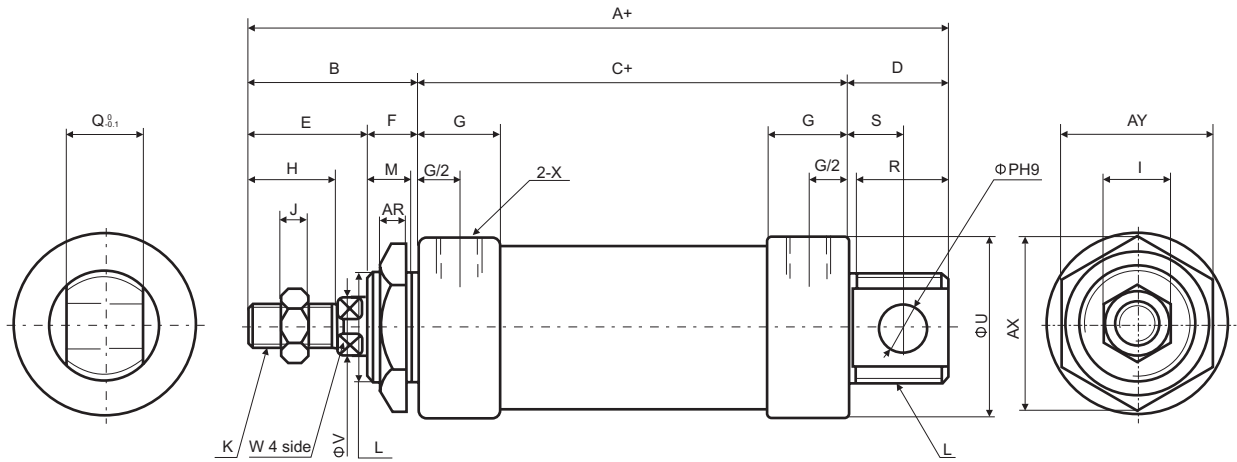
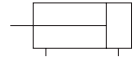


Parts List

No.	Description	Material	No.	Description	Material
1	Rod	Carbon steel	9	Cushion	PU
2	Nut	Carbon steel	10	8-ring	NBR
3	Rod seal	NBR	11	O-ring	NBR
4	Grand	Carbon steel	12	Bushing ring	F4
5	Bushing	F4	13	Piston	Aluminium alloy
6	Front cover	Aluminium alloy	14	Gasket	Carbon steel
7	O-ring	NBR	15	Inner hex. Screw	Carbon steel
8	Tube	Aluminium alloy	16	Rear cover	Aluminium alloy

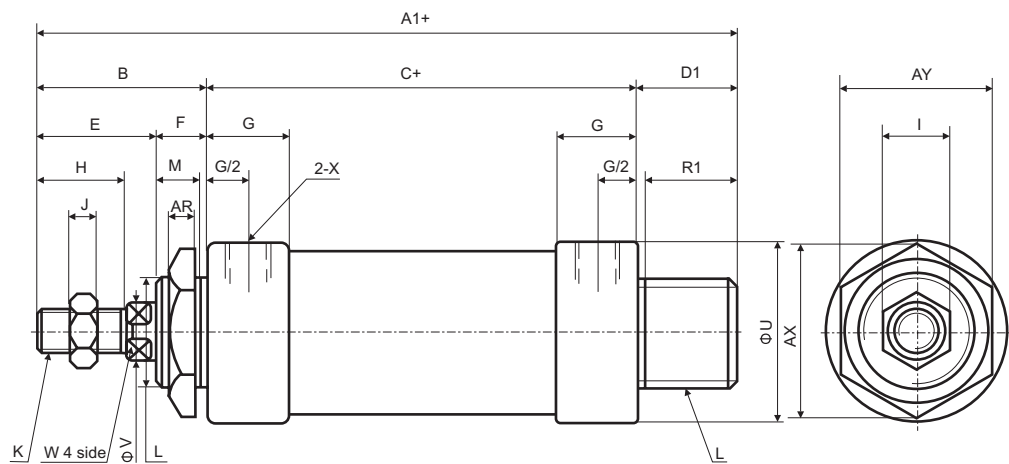
Dimensions (mm)
Double Acting (Basic Type)
CA Single Clevis

Symbol



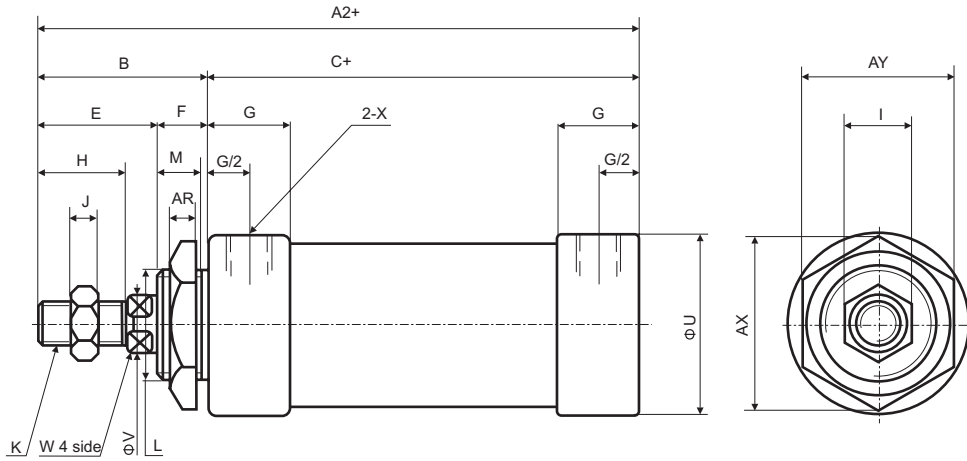
Bore size mm	A	B	C	D	E	F	G	H	I	J	K	L	M	P	Q	R	S	U	V	W	X	AR	AX	AY
20	131	40	70	21	28	12	16	20	12	5	M8×1.25	M22×1.5	10	8	16	19	12	30	8	6	G1/8	7	33	29
25	135	44	70	21	30	14	16	22	15	6	M10×1.25	M22×1.5	12	8	16	19	12	34	10	8	G1/8	7	33	29
32	141	44	70	27	30	14	16	22	15	6	M10×1.25	M24×2.0	12	10	16	25	15	39	12	10	G1/8	8	37	32
40	165	46	92	27	32	14	22	24	17	6	M12×1.25	M30×2.0	12	12	20	25	15	49	16	14	G1/4	9	47	41

CM Type Threaded Rear End



Bore size mm	A1	B	C	D1	E	F	G	H	I	J	K	L	M	R1	U	V	W	X	AR	AX	AY
20	122	40	70	12	28	12	16	20	12	5	M8×1.25	M22×1.5	10	10	30	8	6	G1/8	7	33	29
25	128	44	70	14	30	14	16	22	15	6	M10×1.25	M22×1.5	12	12	34	10	8	G1/8	7	33	29
32	128	44	70	14	30	14	16	22	15	6	M10×1.25	M24×2.0	12	12	39	12	10	G1/8	8	37	32
40	152	46	92	14	32	14	22	24	17	6	M12×1.25	M30×2.0	12	12	49	16	14	G1/4	9	47	41

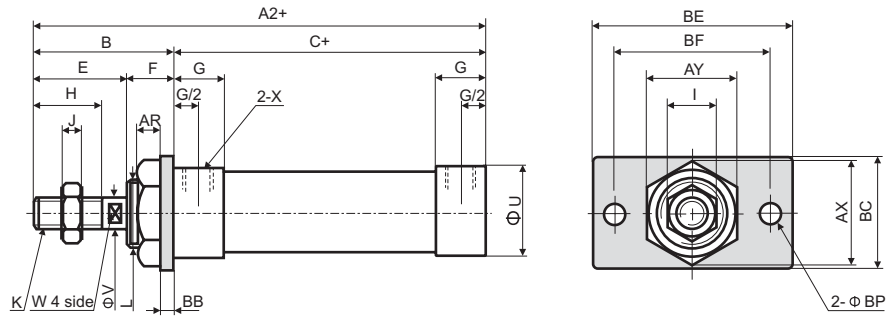
U Type Boss-Cut Rear End



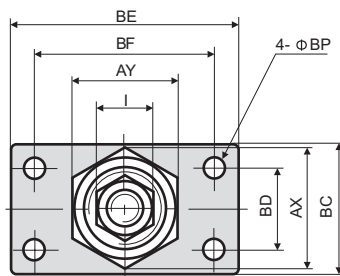
Bore size mm	A2	B	C	E	F	G	H	I	J	K	L	M	U	V	W	X	AR	AX	AY
20	110	40	70	28	12	16	20	12	5	M8×1.25	M22×1.5	10	30	8	6	G1/8	7	33	29
25	114	44	70	30	14	16	22	15	6	M10×1.25	M22×1.5	12	34	10	8	G1/8	7	33	29
32	114	44	70	30	14	16	22	15	6	M10×1.25	M24×2.0	12	39	12	10	G1/8	8	37	32
40	138	46	92	32	14	22	24	17	6	M12×1.25	M30×2.0	12	49	16	14	G1/4	9	47	41

FA Type Front Flange

∅20 ~ ∅25



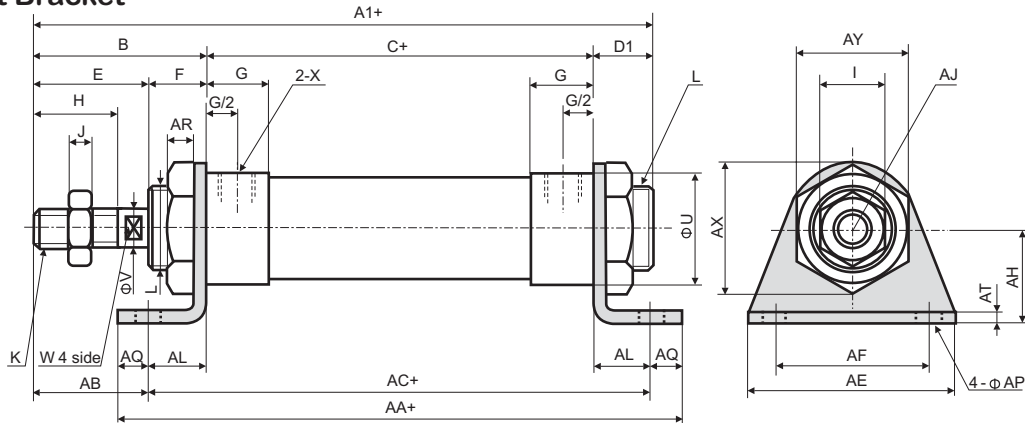
∅32 ~ ∅40



Bore size mm	Parts No.	A2	B	C	E	F	G	H	I	J	K	L	U	V	W	X	AR	AX	AY	BB	BC	BD	BE	BF	BP
20	MAL-FA20	110	40	70	28	12	16	20	12	5	M8×1.25	M22×1.5	30	8	6	G1/8	7	33	29	4	38	-	64	50	6.5
25	MAL-FA25	114	44	70	30	14	16	22	15	6	M10×1.25	M22×1.5	34	10	8	G1/8	7	33	29	4	38	-	64	50	6.5
32	MAL-FA32	114	44	70	30	14	16	22	15	6	M10×1.25	M24×2.0	39	12	10	G1/8	8	37	32	4	47	33	72	58	6.5
40	MAL-FA40	138	46	92	32	14	22	24	17	6	M12×1.25	M30×2.0	49	16	14	G1/4	9	47	41	4.5	50	36	84	70	6.5

LB Type Foot Bracket

∅20 ~ ∅40

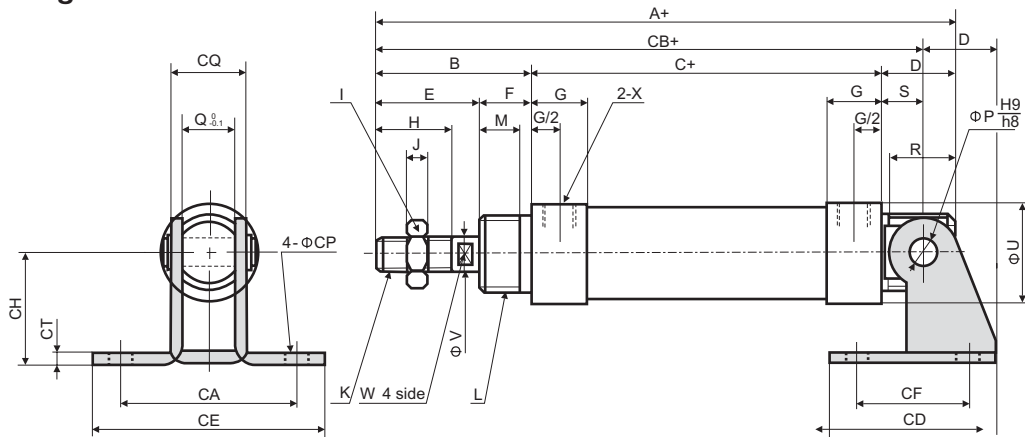


Bore size mm	A1	B	C	D1	E	F	G	H	I	J	K	L	U	V	W	X
20	122	40	70	12	28	12	16	20	12	5	M8×1.25	M22×1.5	30	8	6	G1/8
25	128	44	70	14	30	14	16	22	15	6	M10×1.25	M22×1.5	34	10	8	G1/8
32	128	44	70	14	30	14	16	22	15	6	M10×1.25	M24×2.0	39	12	10	G1/8
40	152	46	92	14	32	14	22	24	17	6	M12×1.25	M30×2.0	49	16	14	G1/4

Bore size mm	Parts No.	AA	AB	AC	AE	AF	AH	AJ	AL	AP	AQ	AR	AT	AX	AY
20	MAL - LB20	116	25	100	54	40	25	17	15	6.5	8	7	3.2	33	29
25	MAL - LB25	116	29	100	54	40	25	17	15	6.5	8	7	3.2	33	29
32	MAL - LB32	136	19	120	59	45	32	19	25	6.5	8	8	4	37	32
40	MAL - Lb40	158	21	142	64	50	36	23	25	6.5	8	9	4	47	41

SDB Type Single Clevis Bracket

∅20 ~ ∅40



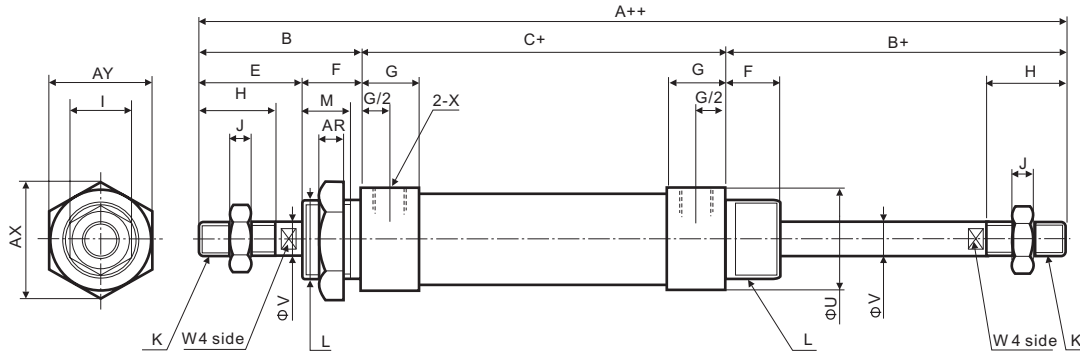
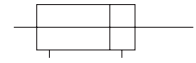
Bore size mm	A	B	C	D	E	F	G	H	I	J	K	L	M	P	Q	R	S	U	V	W	X
20	131	40	70	21	28	12	16	20	12	5	M8×1.25	M22×1.5	10	8	16	19	12	30	8	6	G1/8
25	135	44	70	21	30	14	16	22	15	6	M10×1.25	M22×1.5	12	8	16	19	12	34	10	8	G1/8
32	141	44	70	27	30	14	16	22	15	6	M10×1.25	M24×2.0	12	10	16	25	15	39	12	10	G1/8
40	165	46	92	27	32	14	22	24	17	6	M12×1.25	M30×2.0	12	12	20	25	15	49	16	14	G1/4

Bore size mm	Parts No.	CA	CB	CD	CE	CF	CH	CP	CQ	CT
20	MAL - SDB20	51	122	48	67	32	32	6.5	22	3
25	MAL - SDB25	51	126	48	67	32	32	6.5	22	3
32	MAL - SDB32	51	129	52	67	36	36	6.5	24	4
40	MAL - SDB40	55	153	56	71	40	40	6.5	28	4

Double Rod Basic Type

∅20 ~ ∅40

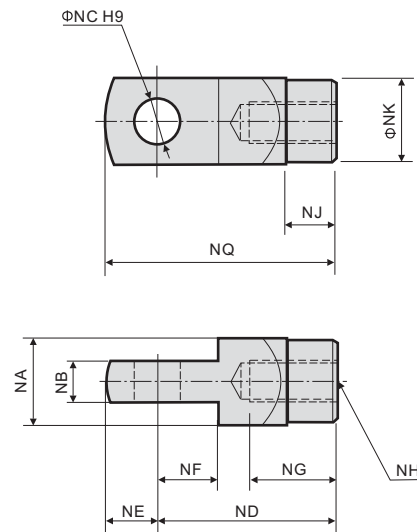
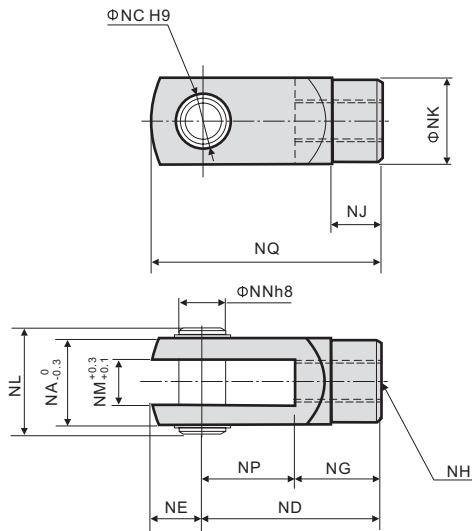
Symbol



Bore size mm	A	B	C	E	F	G	H	I	J	K	L	M	U	V	W	X	AR	AX	AY
20	150	40	70	28	12	16	20	12	5	M8×1.25	M22×1.5	10	30	8	6	G1/8	7	33	29
25	158	40	70	30	14	16	22	15	6	M10×1.25	M22×1.5	12	34	10	8	G1/8	7	33	29
32	158	40	70	30	14	16	22	15	6	M10×1.25	M24×2.0	12	39	12	10	G1/8	8	37	32
40	184	46	92	32	14	22	24	17	6	M12×1.25	M30×2.0	12	49	16	14	G1/4	9	47	41

Y-Type Rod Clevis

I-Type Rod Clevis



Bore size mm	Parts No.	Parts No.	NA	NB	NC	ND	NE	NF	NG	NH	NJ	NK	NL	NM	NN	NP	NQ
20	MAL-Y20	MAL-I20	16	8	8	30	12	11	15	M8×1.25	10	14	21	8	8	15	42
25 ~ 32	MAL-Y25~32	MAL-I25~32	19	10	10	40	12	13	20	M10×1.25	12	16	25	10	10	20	52
40	MAL-Y40	MAL-I40	24	14	10	45	12	13	25	M12×1.25	15	22	30	14	10	20	62

General Double Acting Cylinder XQGA(B) Series ($\Phi 32 \sim \Phi 320$)

Cushion: Non-cushioned (XQGA),
Cushioned (XQGB)

Material: $\Phi 32 \sim \Phi 200$ high quality aluminum alloy tube
 $\Phi 250 \sim \Phi 320$ high precisely round steel tube



Features:

Cylinder tube—High quality and high precisely drawn aluminum alloy tube, anodized inner surface, $30 \mu\text{m}$ thick, hardness MHV400.

Cylinder cover—Die-casting.

Piston rod—Pre-rolled high strength surface, hard chrome-plating, precisely ground, anti-corrosion and anti-wear.

Seal—High quality, advanced structure, long service life. Cylinder can start at low pressure and can operate without additional lubrication.

Threaded air hole— On both covers of cylinder to make the selection of air inlet port easy (except $\Phi 125$, $\Phi 160$, $\Phi 200$, $\Phi 250$, $\Phi 320$).

Specifications

Fluid	Filtered compressed air		
Max. Operating pressure	1.0MPa		
Min. Operating pressure	0.1MPa		
Fluid temperature	$-10 \sim +60^{\circ}\text{C}$		
Ambient temperature	$5 \sim 60^{\circ}\text{C}$		
Piston speed	50~500mm/s		
Stroke allowance	0~250+1.0	251~1000+1.5	1001~2000+2.0(mm)

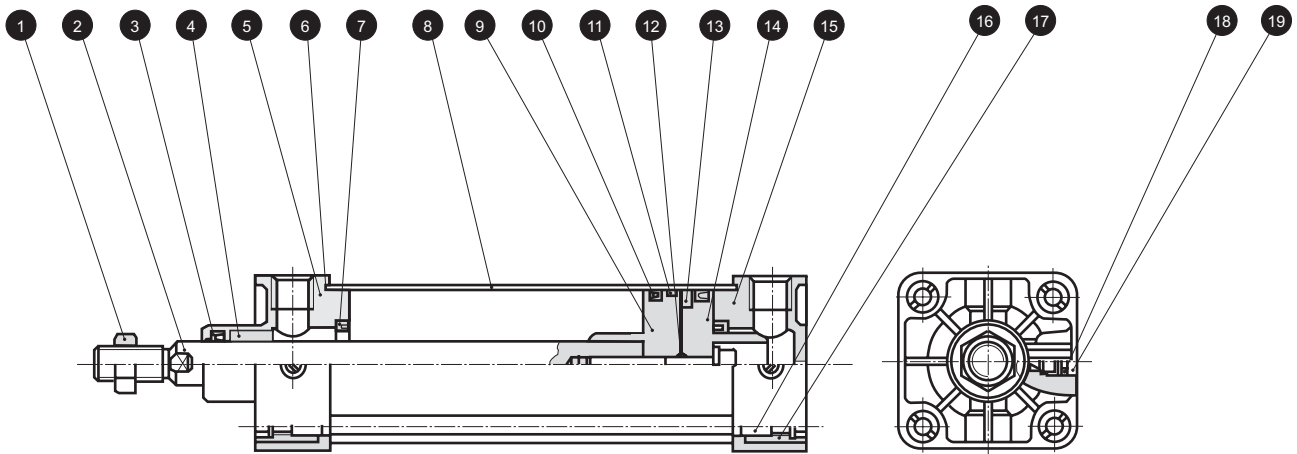
Standard Stroke

Bore size mm	Standard stroke mm	Max. stroke mm	Cushion stroke mm	
32	25,50,80,125,160,200,250,320,400,500 600,700,800,900,1000,1100,1200,1500	500	12	
40			15	
50		600	20	
63			1000	25
80		1200		40
100				
125		2000	50	
160			1100	55
200				60
250				
320				

Symbol



Construction



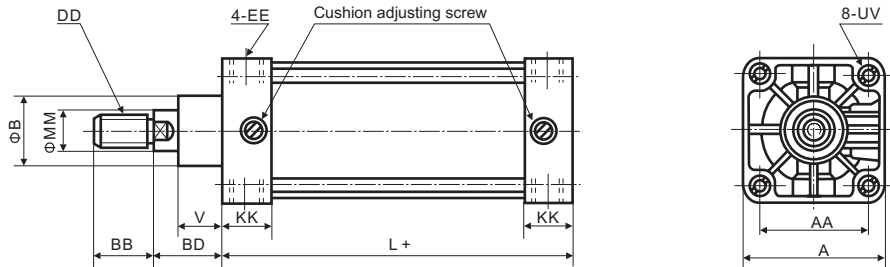
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Parts List

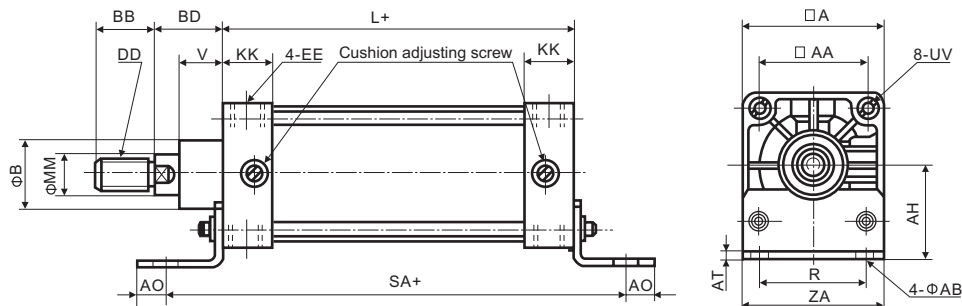
No.	Description	No.	Description
1	Nut	11	Piston ring
2	Piston rod	12	O-ring
3	Combination wiper	13	Magnet
4	Bushing	14	Rear piston
5	Front cover	15	Rear cover
6	Sealing pad	16	Tie rod
7	Cushion seal	17	Nut
8	Tube	18	O-ring
9	Front piston	19	Adjusting screw
10	Y-ring		

Mounting

No.	Description	No.	Description
SD	Basic	TC	Center trunnion
LB	Foot bracket	CA	Single clevis
FA	Front flange	CB	Double clevis
FB	Rear flange	IC	I-type rod clevis
TA	Front trunnion	YC	Y-type rod clevis
TB	Rear trunnion		

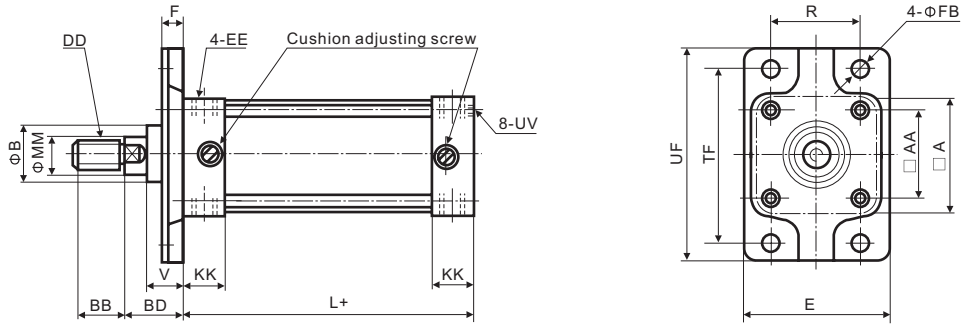
Dimensions(mm)
SD Basic (XQGA, XQGB Cylinder)


Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	97	12	M5	9
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82

LB Foot Bracket (XQGA, XQGB Cylinder)


Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	AB	AH	AO	AT	R	SA	ZA	Parts No.
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	97	12	M5	9	8	40	10	3	26	117	40	G-LB32
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12	10	40	7	4	36	165	53	G-LB40
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15	10	45	8	4	45	165	62	G-LB50
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15	12	55	13	5	60	175	78	G-LB63
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18	15	60	13	5	71	195	94	G-LB80
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20	15	75	17	5	85	210	114	G-LB100
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45	16	90	18	8	90	250	140	G-LB125
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58	18	115	20	8	115	300	180	G-LB160
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60	22	135	30	10	135	320	220	G-LB200
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67	28	165	37	20	165	350	270	G-LB250
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82	35	200	40	23	200	390	340	G-LB320

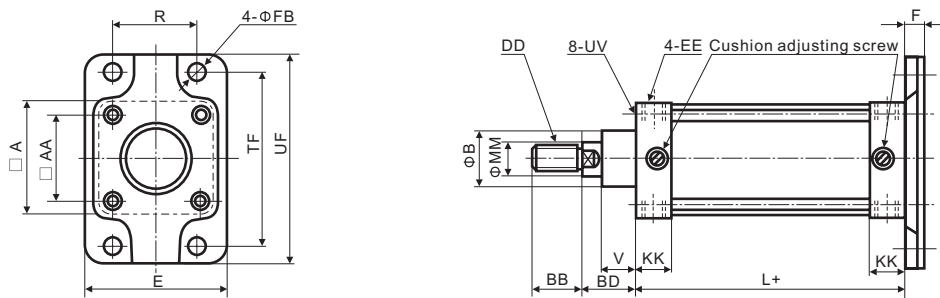
FA Front Flange (XQGA, XQGB Cylinder)



Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	E	F	FB	R	TF	UF	Parts No.
32	40	30	24.5	20	20	M10×1.25	Rc1/8	26	97	12	M5	9	45	8	6.8	20	60	80	G-FA32
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12	64	10	9	40	85	104	G-FA40
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15	78	12	9	45	104	124	G-FA50
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15	95	12	11	60	120	146	G-FA63
80	98	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18	118	16	14	71	145	174	G-FA80
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20	138	18	14	85	170	200	G-FA100
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45	140	20	16	90	180	224	G-FA125
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58	180	20	18	115	230	280	G-FA160
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60	220	25	22	135	270	320	G-FA200
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67	270	25	26	180	330	390	G-FA250
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82	340	30	33	240	400	470	G-FA320

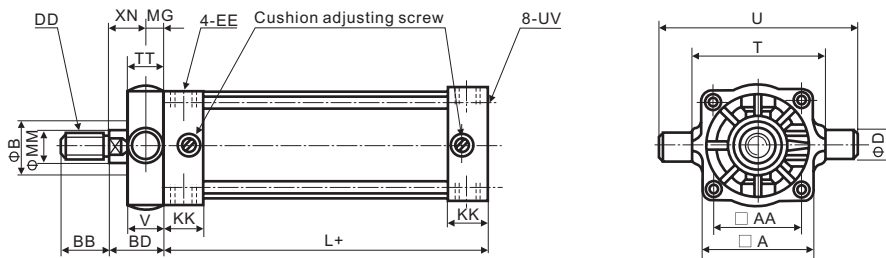
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FB Rear Flange (XQGA, XQGB Cylinder)



Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	E	F	FB	R	TF	UF	Parts No.
32	40	30	24.5	20	20	M10×1.25	Rc1/8	26	97	12	M5	9	45	8	6.8	20	60	80	G-FA32
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12	64	10	9	40	85	104	G-FA40
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15	78	12	9	45	104	124	G-FA50
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15	95	12	11	60	120	146	G-FA63
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18	118	16	14	71	145	174	G-FA80
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20	138	18	14	85	170	200	G-FA100
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45	140	20	16	90	180	224	G-FA125
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58	180	20	18	115	230	280	G-FA160
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60	220	25	25	135	270	320	G-FA200
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67	270	25	26	180	330	390	G-FA250
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82	340	30	33	240	400	470	G-FA320

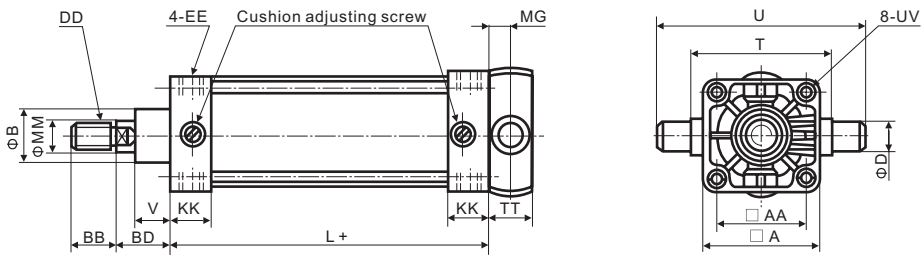
TA Front Trunnion (XQGA, XQGB Cylinder)



Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	D	T	TT	U	XN	MG	Parts No.
32	40	30	24.5	20	20	M10×1.25	Rc1/8	26	97	12	M5	9	9	44	9.5	60	21.75	4.75	G-TA32
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12	16	65	21	101	22.5	10.5	G-TA40
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15	16	80	24	116	25	12	G-TA50
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15	20	100	24	144	25	12	G-TA63
80	98	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18	25	112	30	168	32	15	G-TA80
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20	31.5	136	38	203	45	19	G-TA100
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45	25	160	30	210	50	15	G-TA125
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58	32	200	38	264	61	19	G-TA160
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60	32	250	38	314	73	22	G-TA200
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67	40	320	60	400	75	30	G-TA250
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82	50	400	70	500	85	35	G-TA320

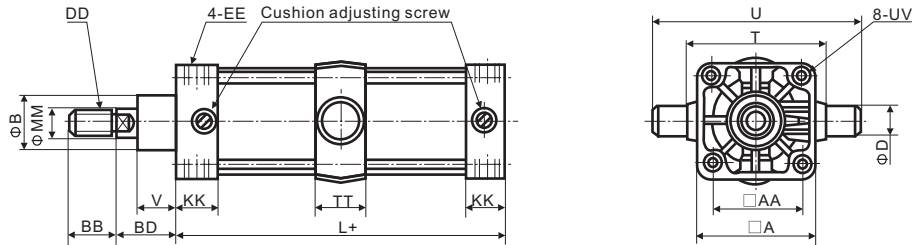
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TB Rear Trunnion (XQGA, XQGB Cylinder)



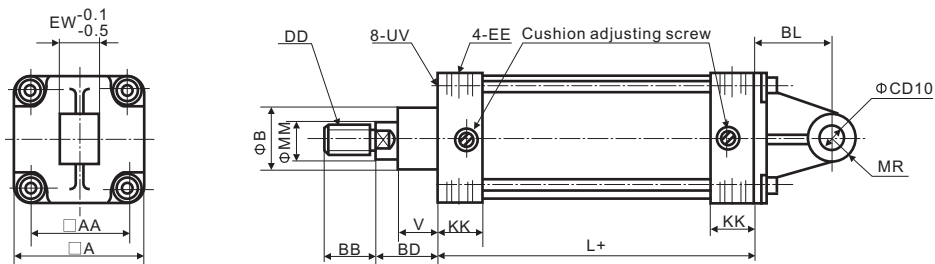
Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	D	T	TT	U	MG	Parts No.
32	40	30	24.5	20	20	M10×1.25	Rc1/8	26	97	12	M5	9	9	44	9.5	60	4.75	G-TA32
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12	16	65	21	101	10.5	G-TA40
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15	16	80	24	116	12	G-TA50
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15	20	100	24	144	12	G-TA63
80	98	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18	25	112	30	168	15	G-TA80
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20	31.5	136	38	203	19	G-TA100
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45	25	160	30	210	15	G-TA125
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58	32	200	38	264	19	G-TA160
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60	32	250	38	314	22	G-TA200
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67	40	320	60	400	30	G-TA250
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82	50	400	70	500	35	G-TA320

TC Central Trunnion (XQGA, XQGB Cylinder)

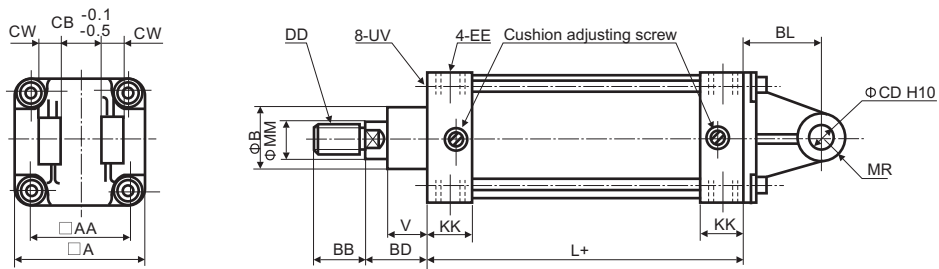


Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	D	T	TT	U	Parts No.
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	97	12	M5	9	9	44	9.5	60	G-TC32
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12	16	65	21	101	G-TC40
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15	16	80	24	116	G-TC50
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15	20	100	24	144	G-TC63
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18	25	112	30	168	G-TC80
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20	31.5	136	38	203	G-TC100
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45	25	160	30	210	G-TC125
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58	32	200	38	264	G-TC160
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60	32	250	38	314	G-TC200
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67	40	320	60	400	G-TC250
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82	50	400	70	500	G-TC320

CA Single Clevis (XQGA, XQGB Cylinder)

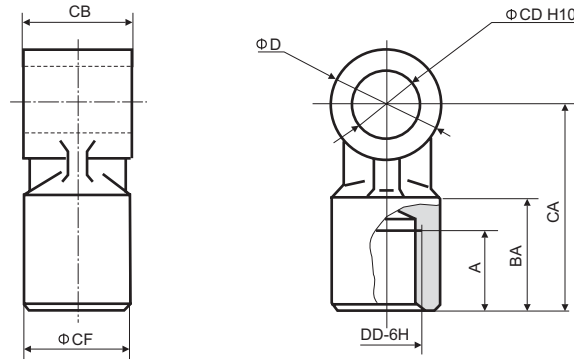


Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	BL	CD	EW	MR	Parts No.
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	97	12	M5	9	23	10	9	10	G-CA32
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12	38	10	15	10	G-CA40
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15	37	12	18	11.5	G-CA50
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15	47	16	25	14.5	G-CA63
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18	57	20	31.5	16.5	G-CA80
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20	64	25	35.5	20.5	G-CA100
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45	50	25	70	25	G-CA125
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58	55	30	90	30	G-CA160
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60	60	30	90	30	G-CA200
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67	70	40	110	40	G-CA250
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82	80	45	120	45	G-CA320

CB Double Clevis (XQGA, XQGB Cylinder)


Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	BL	CB	CD	CW	MR	Parts No.
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	97	12	M5	9	23	9	10	5	10	G-CB32
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12	38	15	10	7.5	10	G-CB40
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15	37	18	12	9	11.5	G-CB50
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15	47	25	16	12.5	14.5	G-CB63
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18	57	31.5	20	16	16.5	G-CB80
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20	64	35.5	25	18	20.5	G-CB100
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45	50	70	25	25	25	G-CB125
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58	55	90	30	35	30	G-CB160
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60	60	90	30	35	30	G-CB200
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67	70	110	40	40	40	G-CB250
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82	82	120	45	50	45	G-CB320

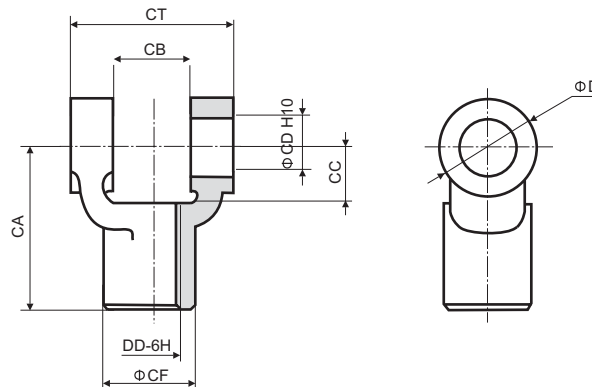
I-Type Rod Clevis



Bore size mm	A	BA	CA	CB	CD	CF	D	DD	Parts No.
40	15	20	37	15	10	21	20	M14×1.5	G-I 40
50	18	23	44	18	12	25	22	M18×1.5	G-I 50
63	22	27	49	25	16	28	28	M18×1.5	G-I 63
80	25	32	58	31.5	20	32	32	M22×1.5	G-I 80
100	25	32	59	35.5	25	38	39	M27×1.5	G-I 100
125	28	37	68	45	25	39	39	M27×2	G-I 125
160	36	48	86	58	30	50	46	M36×2	G-I 160
200	36	55	105	58	30	52	48	M36×2	G-I 200
250	48	65	125	63	40	58	64	M42×2	G-I 250
320	55	75	150	80	45	68	72	M48×2	G-I 320

3

Y-Type Rod Clevis



Bore size (mm)	CA	CB	CC	CD	CF	CT	D	DD	Parts No.
40	37	15	15	10	21	30	20	M14×1.5	G-Y40
50	44	18	16	12	25	36	22	M18×1.5	G-Y50
63	49	25	18	16	28	50	28	M18×1.5	G-Y63
80	58	31.5	22	20	32	63	32	M22×1.5	G-Y80
100	59	35.5	25	25	38	71	39	M27×1.5	G-Y100
125	68	45	27	25	39	90	39	M27×2	G-Y125
160	86	58	31	30	50	116	46	M36×2	G-Y160
200	105	58	32	30	52	116	48	M36×2	G-Y200
250	125	63	40	40	58	126	64	M42×2	G-Y250
320	150	80	44	45	68	160	72	M48×2	G-Y320

General Single Acting Cylinder

XQGAD(D₁) Series (Φ32~Φ63)

Stroke: 25~80,

Mounting type: The same as those of the general double acting cylinder

Standard Stroke

Bore size mm	Standard Stroke mm	Max. Stroke mm
32	25,40,50,80	80
40		
50		
63		

Mounting

Code	Description
SD	Basic
LB	Foot bracket
FA	Front flange
FB	Rear flange
TA	Front trunnion
TB	Rear trunnion
TC	Center trunnion
CA	Single clevis
CB	Double clevis

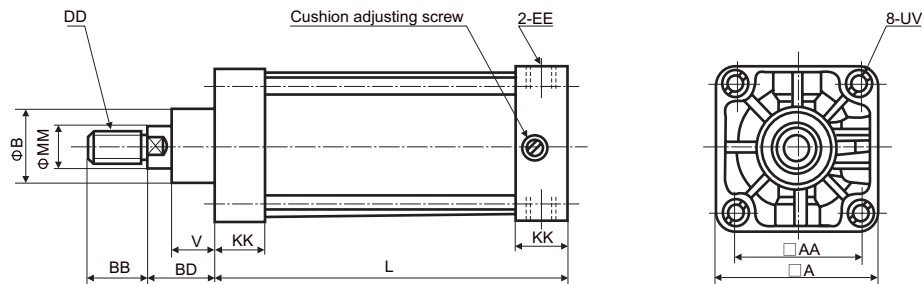
Specifications

Fluid	Filtered compressed air
Max. Operating pressure	1.0MPa
Min. Operating pressure	0.25MPa
Fluid temperature	-10~+60°C
Ambient temperature	5~60°C
Stroke allowance	+1.0mm

Dimensions(mm)

SD Basic (XQGAD Spring Return Single Acting Cylinder)

Symbol

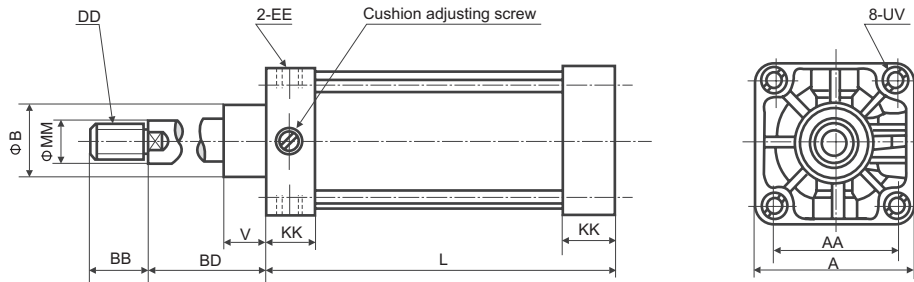


Bore size mm	A	AA	B	BB	BD	DD	EE	KK	MM	UV	V
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	12	M5	9
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	16	M6	12
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	20	M6	15
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	20	M8	15

Stroke mm	25		40		50		80	
Bore size mm	L	F ₁ (N)	L	F ₁ (N)	L	F ₁ (N)	L	F ₁ (N)
32	141	257	170	257	195	257	252	257
40	156	402	185	402	208	402	280	402
50	165	628	205	628	230	628	320	628
63	175	998	221	998	244	998	350	998

SD Basic (XQGAD₁ Spring Extend Single Acting Cylinder)

Symbol



3

Bore size mm	A	AA	B	BB	DD	EE	KK	MM	UV	V
32	40	30	24.5	22	M10×1.25	Rc1/8	26	12	M5	9
40	53	38	35.5	30	M14×1.5	Rc1/4	27	16	M6	12
50	62	46	40.5	35	M18×1.5	Rc3/8	27	20	M6	15
63	78	57	40.5	35	M18×1.5	Rc3/8	27	20	M8	15

Stroke mm	25			40			50			80		
Bore size mm	DB	L	F ₂ (N)	BD	L	F ₂ (N)	BD	L	F ₂ (N)	BD	L	F ₂ (N)
32	45	141	221	60	170	221	70	195	221	100	252	221
40	58	156	338	73	185	338	83	208	338	113	280	338
50	62	165	528	77	205	528	87	230	528	117	320	528
63	62	175	897	77	221	897	87	244	897	117	350	897

Note: Thrust F₁ and Pull F₂ are theoretical forces at operating pressure 0.5MPa.

General Double Piston Rod Cylinder

XQGA₂(B₂) Series (Φ32~Φ320)

The double rod cylinders are based on XQGA, XQGB general cylinders. On the two sides, the lengths of rods, the thrust and pull forces, the moving directions, the speeds and strokes are all identical.

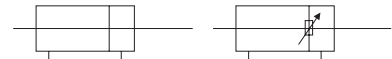
Specifications, standard stroke and dimension: are the same as those of the general double acting cylinder.



Mounting

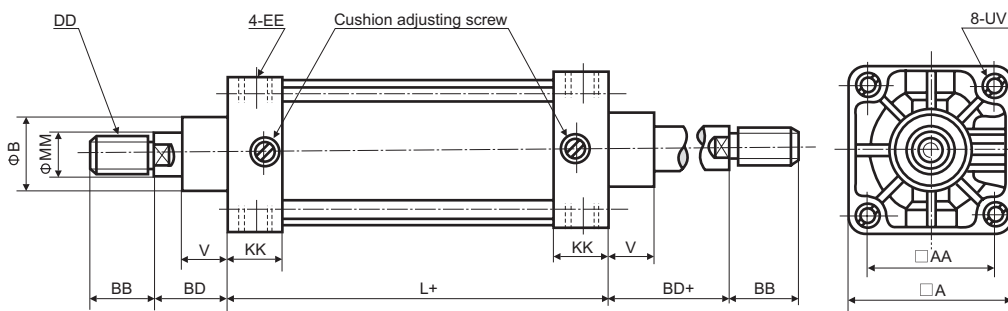
Code	Description
SD	Basic
LB	Foot bracket
FA	Front flange
TA	Front trunnion

Symbol



Dimensions(mm)

SD Basic (XQGA₂, XQGB₂ Double Piston Rod Cylinder)



Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	97	12	M5	9
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82

Adjustable Stroke Cylinder

XQGAL(L1) Series (Φ32~Φ320)

Piston rod: Adjustable structure

Adjusting range: 0~50mm

Dimensions and mountings:

The same as XQGA₂ (without CA, CB mountings).



Specifications

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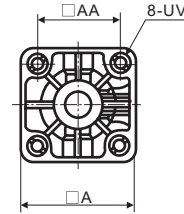
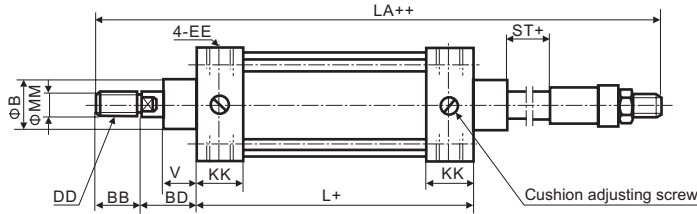
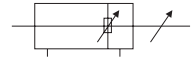
Fluid	Filtered compressed air		
Max. Operating pressure	1.0MPa		
Min. Operating pressure	0.1MPa		
Fluid temperature	-10~+60℃		
Ambient temperature	5-60℃		
Piston speed	50~500mm/s		
Stroke allowance	0~250+1.0	251~1000+1.5	1001~2000+2.0(mm)
Adjusting method	Manual		

Standard Stroke

Bore size mm	Standard stroke mm	Max. Stroke mm	Cushion stroke mm
32	25,50,80,100,125,160,200, 250,320,400,500,600,700 800,900,1000,1100,1200 1500,2000	500	0~50
40		600	
50		1000	
63		1200	
80		1500	
100		2000	
125		1100	
160			
200			
250			
320			

Dimensions(mm) Extension Adjustable Type (XQGal Cylinder)

Symbol

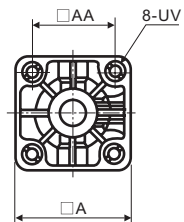
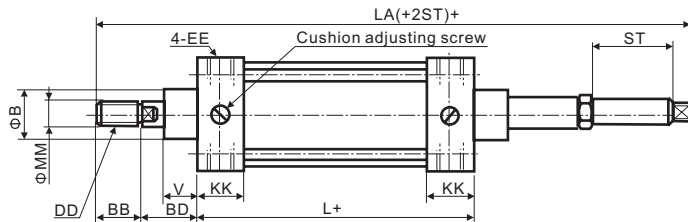
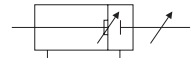


Bore size mm	Adjustable extending													
	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	LA	St
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	97	12	M5	9	233	0~50
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12	262	
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15	279	
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15	279	
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18	318	
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20	355	
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45	419	
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58	493	
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60	520	
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67	580	
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82	640	

Note: ST—adjustable stroke

Retraction Adjustable Type (XQGal₁ Cylinder)

Symbol



Bore size mm	Adjustable returning													
	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	LA	St
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	97	12	M5	9	164	0~50
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	M6	12	190	
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M6	15	216	
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	M8	15	216	
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	M8	18	280	
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	M10	20	310	
125	140	110	60	54	65	M27×2	G1/2	46	160	32	M12	45	336	
160	180	140	65	72	80	M36×2	G3/4	50	180	40	M16	58	420	
200	220	175	75	72	95	M36×2	G3/4	50	180	40	M16	60	442	
250	270	220	90	84	105	M42×2	G1	52	200	50	M20	67	495	
320	340	270	110	96	120	M48×2	G1	58	220	60	M24	82	558	

Note: ST—adjustable stroke

Valve Cylinder

XQGAF(B)F Series ($\Phi 32 \sim \Phi 320$)

SD Basic

The valve cylinders are cylinders (XQGA, XQGB, XQGAD, XQGAD1) equipped with solenoid direction control valves. Silencers or throttling silencers can be connected to the exhaust ports to control the speed and reduce noise.

The valve cylinders simplify air circuits and are easy for use.

The dimensions of valve cylinders are respectively identical to those of the original cylinders.

Refer to the list for the matching of cylinders valves and fittings.



3

Specifications

Acting type	Double acting	Single acting	
Fluid	Filtered compressed air		
Max. Operating pressure	1.0MPa		
Min. Operating pressure	0.1MPa	0.25MPa	
Fluid temperature	-10~+60°C		
Ambient temperature	5~60°C		
Piston speed	50~500mm/s		
Stroke allowance	0~250+1.0	251~1000+1.5	1001~2000+2.0(mm)

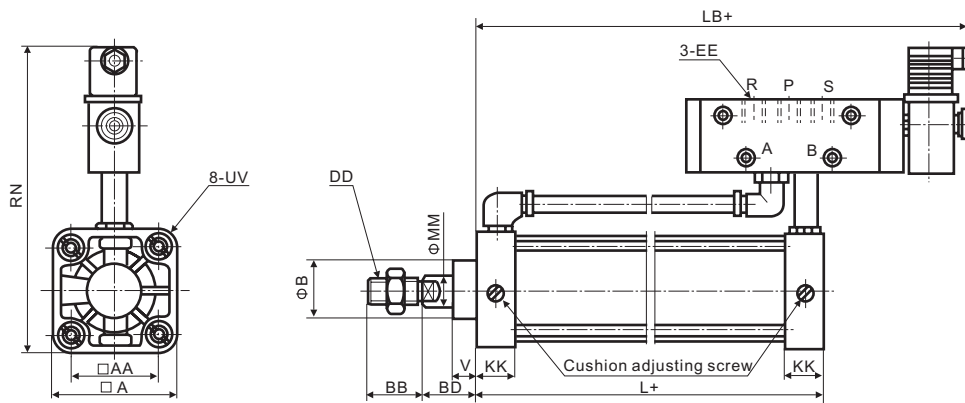
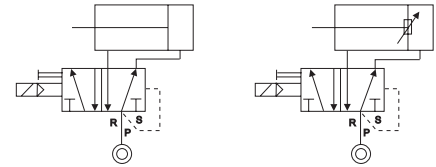
Matching List

Bore size mm	Standard stroke mm	Max. Stroke mm		Model of valve		Fitting model
		Double acting	Single acting	For double acting	For single acting	
32	25 40 50 80 100 125 160 200 250 320 400 500 600 700 800 900 1000 1100 1200 1500 2000	500	80	XQ240440 XQ230440		32090410
40				XQ250640 XQ230640		32090613
50		600		XQ251041 XQ251040		32090817
63				XQ251540		32091021
80		1000		XQ251541		32091221
100				XQ251541		
125			XQ251541			
160			XQ251541			
200		1100	XQ251541		32091421	
250			XQ251541			
320			XQ251541			

Dimensions(mm)

SD Basic (XQGAF, XQGBF Cylinder)

Symbol

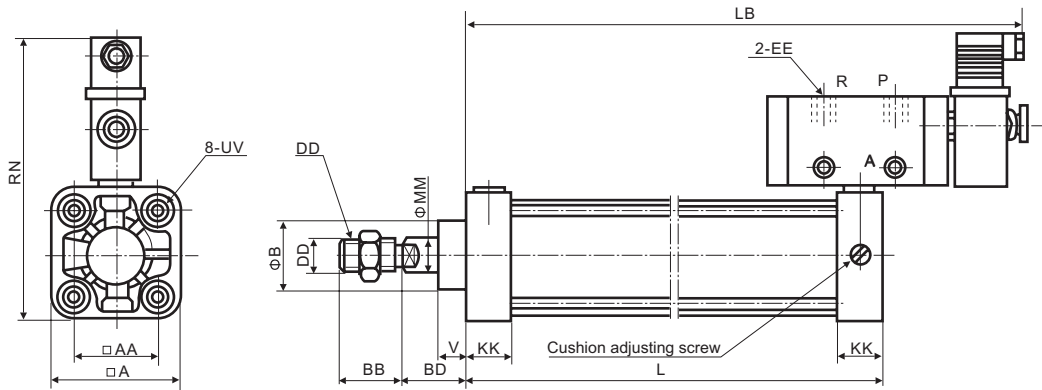
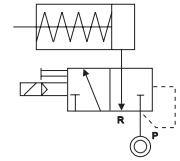


Bore size mm	A	AA	B	BB	BD	DD	KK	L	MM	RN	UV	V	EE	LB
32	40	30	24.5	22	20	M10×1.25	26	97	12	112	M5	9	G1/8	165
40	53	38	35.5	30	33	M14×1.5	27	99	16	125	M6	12	G1/4	186.5
50	62	46	40.5	35	37	M18×1.5	27	101	20	140	M6	15	G1/4	188.5
63	78	57	40.5	35	37	M18×1.5	27	101	20	156	M8	15	G1/4	188.5
80	94	73	46.5	40	47	M22×1.5	34	121	25	184	M8	18	G3/8	208
100	114	89	51.5	45	64	M27×1.5	36	132	30	204	M10	20	G1/2	237
125	140	110	60	54	65	M27×2	46	160	32	230	M12	45	G1/2	260
160	180	140	65	72	80	M36×2	50	180	40	179	M16	58	G1/2	278
200	220	175	75	72	95	M36×2	50	180	40	319	M16	60	G1/2	278
250	270	220	90	84	105	M42×2	52	200	50	370	M20	67	G1/2	280
320	340	270	110	96	120	M48×2	58	220	60	440	M24	82	G1/2	295

Note: The dimensions of valve cylinders are respectively identical to those of the original cylinders but the "LB" and "RN" depend on the valves used.

SD Basic (XQGADF Spring Return Single Acting Cylinder)

Symbol



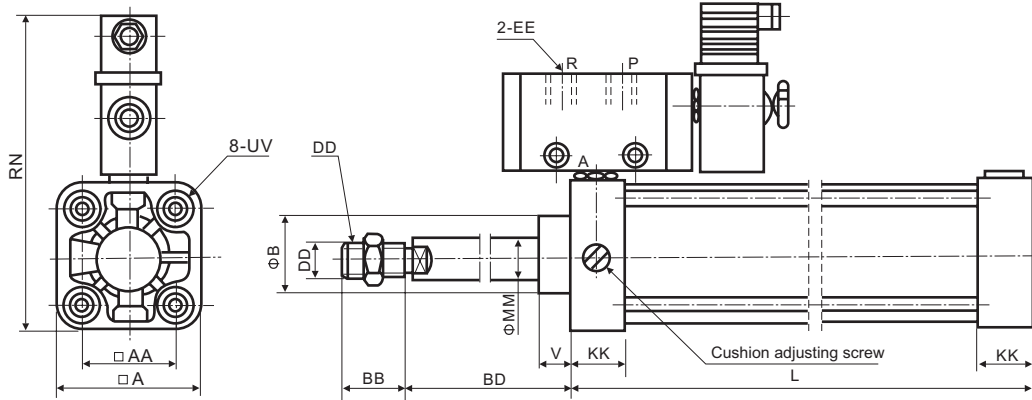
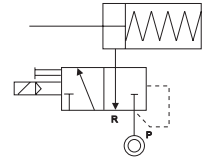
Bore size mm	A	AA	B	BB	BD	DD	EE	KK	MM	UV	V	RN
32	40	30	24.5	22	20	M10×1.25	G1/8	26	12	M5	9	112
40	53	38	35.5	30	33	M14×1.5	G1/4	27	16	M6	12	125
50	62	46	40.5	35	37	M18×1.5	G1/4	27	20	M6	15	140
63	78	57	40.5	35	37	M18×1.5	G1/4	27	20	M8	15	156

Stroke mm	25		40		50		80	
	L	F ₁ (N)	L	F ₁ (N)	L	F ₁ (N)	L	F ₁ (N)
32	141	257	170	257	195	257	252	257
40	156	402	185	402	208	402	280	402
50	165	628	205	628	230	628	320	628
63	175	998	221	998	244	998	350	998

Notes: 1. Thrust F₁ is the theoretical force at operating pressure 0.5MPa
 2. The dimensions of XQGADF are respectively identical to those of the original cylinders but the "LB" and "RN" depend on the valve used.

SD Basic (XQGAD1F Spring Extend Single Acting Cylinder)

Symbol



Bore size mm	A	AA	B	BB	DD	EE	KK	MM	UV	V	RN
32	40	30	24.5	22	M10×1.25	G1/8	26	12	M5	9	112
40	53	38	35.5	30	M14×1.5	G1/4	27	16	M6	12	125
50	62	46	40.5	35	M18×1.5	G1/4	27	20	M6	15	140
63	78	57	40.5	35	M18×1.5	G1/4	27	20	M8	15	156

Stroke mm	25			40			50			80		
Bore size mm	BD	L	F ₁ (N)	BD	L	F ₁ (N)	BD	L	F ₁ (N)	BD	L	F ₁ (N)
32	45	141	221	60	170	221	70	195	221	100	252	221
40	58	156	338	73	185	338	83	208	338	113	280	338
50	62	165	528	77	205	528	87	230	528	117	320	528
63	62	175	897	77	221	897	87	244	897	117	350	897

- Notes: 1. The Pull F₂ is the theoretical force at operating pressure 0.5MPa.
 2. The dimensions of XQGAD1F are respectively identical to those of the original cylinders but the "RN" depends on the valve used.

General Auto Switch Cylinder

XQGA(B)Kn Series (Φ32~Φ200)

The auto switch cylinders (XQGAKn, XQGBKn, n: switch number) are the cylinders (XQGA, XQGB, Φ32~Φ200, equipped with magnets and auto switches.

Their specifications and dimensions are respectively the same as those of their original cylinders.



Standard Stroke

Bore size mm	Standard stroke mm	Max. Stroke mm	Cushion stroke mm
32	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500, 600, 700	500	12
40			15
50		600	20
63			1000
80			
100		800, 900, 1000, 1100, 1200, 1500	
125	2000	50	
160			
200			

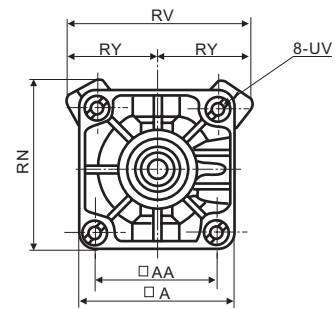
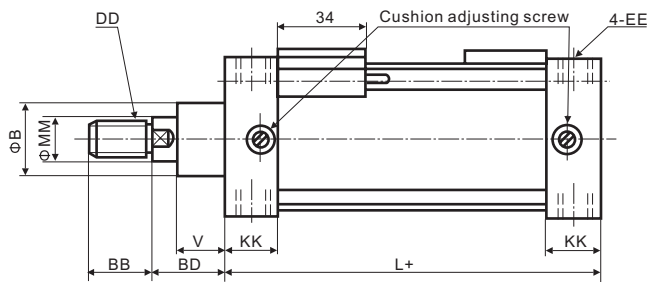
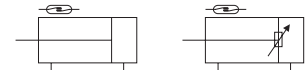
Mounting

Code	Description
SD	Basic
LB	Foot bracket
FA	Front flange
FB	Rear flange
TA	Front trunnion
TB	Rear trunnion
TC	Center trunnion
CA	Single clevis
CB	Double clevis

Dimensions(mm)

SD Basic (XQGAKn, XQGBKn Cylinder)

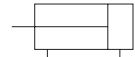
Symbol



Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	RN	RV	RY	UV	V
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	97	12	47	54	27	M5	9
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	99	16	60	67	33.5	M6	12
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	101	20	69	76	38	M6	15
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	101	20	85	92	46	M8	15
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	121	25	101	108	54	M8	18
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	132	30	121	128	64	M10	20
125	140	110	60	54	65	M27×2	G 1/2	46	160	32	147	154	77	M12	45
160	180	140	65	72	80	M36×2	G 3/4	50	180	40	187	194	97	M16	58
200	220	175	75	72	95	M36×2	G 3/4	50	180	40	227	234	117	M16	60

Japanese Type Cylinder QMB Series (Φ32~Φ100)

Symbol

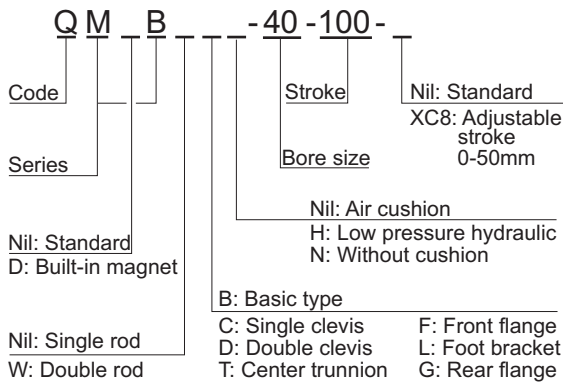


Bore size mm	32	40	50	63	80	100
Fluid	Filtered compressed air					
Acting type	Double acting					
Max. Operating pressure	1.0MPa					
Min. Operating pressure	0.1MPa					
Cushion	Air cushion					
Ambient temperature	5~60°C					
Piston speed	50~500mm/s					
Stroke allowance mm	0~250 ^{+1.0} ₀		251~1000 ^{+1.5} ₀		1001~1500 ^{+2.0} ₀	
*Lubrication	Pro-lubrication in factory					
Port size	G1/8	G1/4		G3/8		G1/2

*If used, turbine oil #1 (ISO Vg32) is recommended.

3

How to Order



Standard Stroke / Cushion Stroke / Auto Switch

Bore size mm	Standard stroke mm	Cushion Stroke mm	Auto switch	Mounting parts
32		18.8	QCK2400	BT-03
40	25 50 75 100	18.8		
50	125 150 175	21.3	QCK2422	BT-05
63	200 250 300	21.3		
80	400 500	30.3		BT-08
100		29.3		

Option: Non-standard stroke

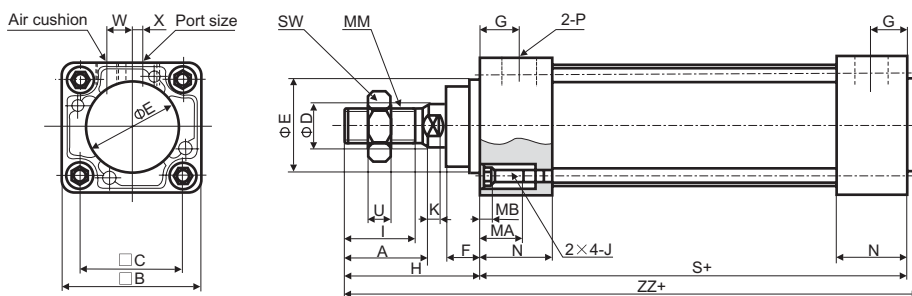
Notes:

1. Voltage and current should not be overloaded.
2. Auto switch should not be linked directly to power, should be linked in series with a load in series.
3. Auto switch should not be close to strong magnetic bodies or magnetic shield is used.
4. For trunnion, please consult factory.

Dimensions (mm)

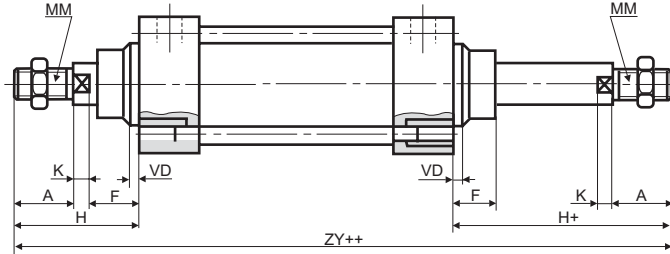
Basic Type

QMB



Bore size mm	Standard stroke mm	A	B	C	D	E	F	G	H	I	J	K	MA	MB	MM	N	P	S	X	W	ZZ	SW	U
32	~500	22	46	32.5	12	30	13	13	47	19.5	M6×1.0	6	16	4	M10×1.25	26	G1/8	84	4	6.5	135	15	6
40	~500	30	52	38	16	35	13	14	51	27	M6×1.0	6	16	4	M14×1.5	26	G1/4	84	4	9	135	21	7
50	~600	35	65	46.5	20	40	14	15.5	58	32	M8×1.25	7	16	5	M18×1.5	29.5	G1/4	94	5	10.5	156	24	8
63	~600	35	75	56.5	20	45	14	16.5	58	32	M8×1.25	7	16	5	M18×1.5	29.5	G3/8	94	9	12	156	24	8
80	~1000	40	95	72	25	45	20	19	72	37	M10×1.5	10	16	5	M22×1.5	35	G3/8	114	11.5	14	190	30	10
100	~1000	40	114	89	30	55	20	19	72	37	M10×1.5	10	16	5	M26×1.5	35	G1/2	114	17	15	190	36	12

Double Rod QMBWB

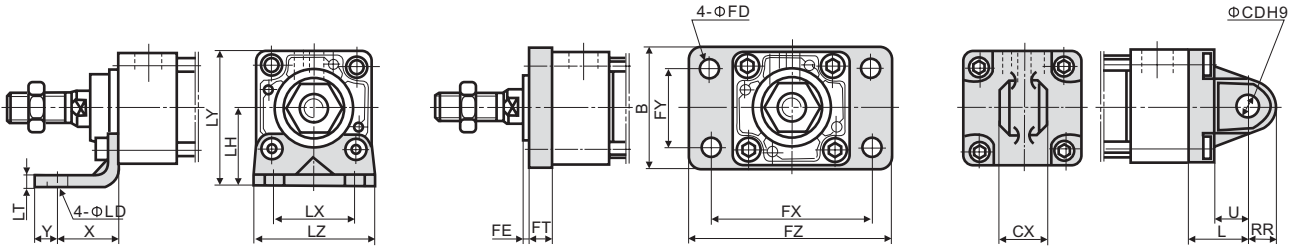


Bore size mm	ZY	H	VD	F	MM
32	178	47	4	13	M10×1.25
40	186	51	4	13	M14×1.5
50	210	58	6	14	M18×1.5
63	210	58	6	14	M18×1.5
80	258	72	8	20	M22×1.5
100	258	72	8	20	M26×1.5

Accessories Foot Bracket

Front Flange

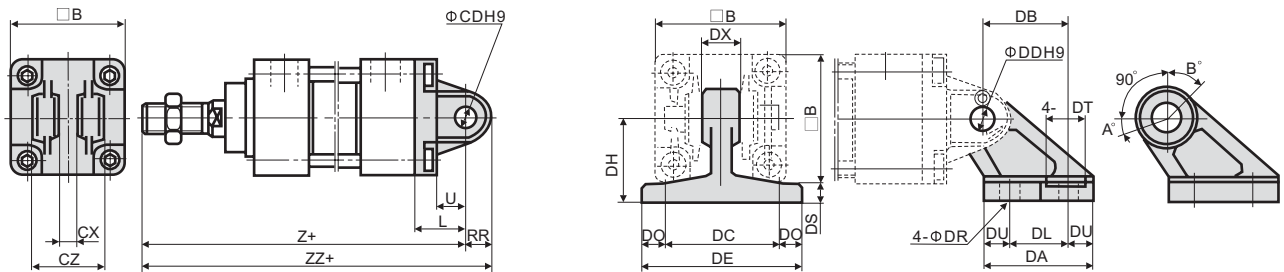
Single Clevis



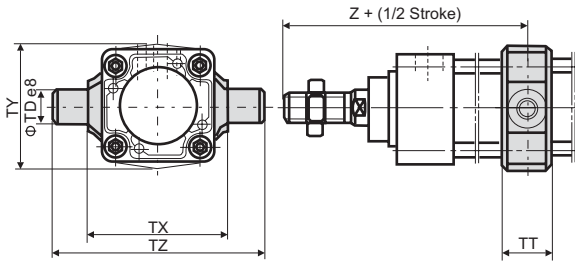
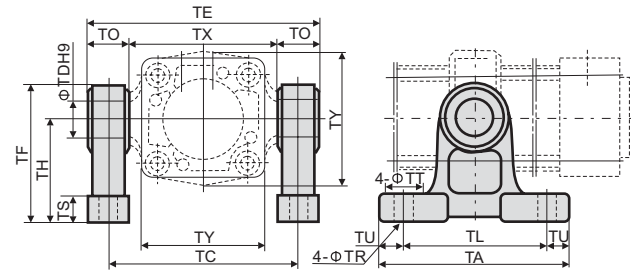
Bore size mm	Foot bracket									Front flange							Single clevis						
	Parts No.	LD	LH	LT	LX	LY	LZ	X	Y	Parts No.	B	FD	FE	FT	FX	FY	FZ	Parts No.	CD	CX	L	RR	U
32	MB-L03	7	30	3.2	32	53	50	22	9	C95-F03	50	7	3	10	64	32	79	MB-C03	10	14	23	10.5	13
40	MB-L04	9	33	3.2	38	59	55	24	11	C95-F04	55	9	3	10	72	36	90	MB-C04	10	14	23	11	13
50	MB-L05	9	40	3.2	46	72.5	70	27	11	C95-F05	70	9	2	12	90	45	110	MB-C05	14	20	30	15	17
63	MB-L06	12	45	3.6	56	82.5	80	27	14	C95-F06	80	9	2	12	100	50	120	MB-C06	14	20	30	15	17
80	MB-L08	12	55	4.5	72	102.5	100	30	14	C95-F08	100	12	4	16	126	63	153	MB-C08	22	30	42	23	26
100	MB-L10	14	65	4.5	89	122	120	32	16	C95-F10	120	14	4	16	150	75	178	MB-C10	22	30	42	23	26

Double Clevis

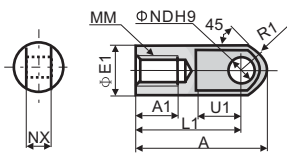
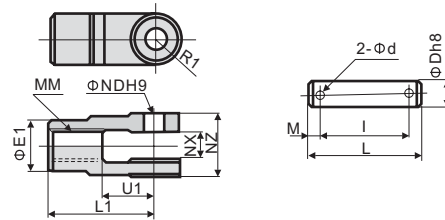
Double Clevis Bracket



Bore size mm	Double clevis										Double clevis bracket																
	Parts No.	□B	L	RR	U	CD	CX	CZ	Z	ZZ	Parts No.	□B	DA	DB	DC	DD	DE	DH	DL	DO	DR	DS	DT	DU	DX	A	B
32	MB-D03	46	23	10.5	13	10	14	28	154	164.5	MB-E03	46	42	32	44	10	62	33	22	9	6.6	7	15	10	14	25	45
40	MB-D04	52	23	11	13	10	14	28	158	169	MB-E04	52	42	32	44	10	62	33	22	9	6.6	7	15	10	14	25	45
50	MB-D05	65	30	15	17	14	20	40	182	197	MB-E05	65	53	43	60	14	81	45	30	10.5	9	8	18	11.5	20	40	60
63	MB-D06	75	30	15	17	14	20	40	182	197	MB-E06	75	53	43	60	14	81	45	30	10.5	9	8	18	11.5	20	40	60
80	MB-D08	95	42	23	26	22	30	60	228	251	MB-E08	95	73	64	86	22	111	65	45	25	11	10	22	14	30	30	55
100	MB-D10	114	42	23	26	22	30	60	228	251	MB-E10	114	73	64	86	22	111	65	45	25	11	10	22	14	30	30	55

Center Trunnion

Center Trunnion Bracket


Bore size mm	Center trunnion							Center trunnion bracket															
	Parts No.	TD	TT	TX	TY	TZ	Z	Parts No.	TA	TC	TE	TF	TH	TL	TO	TR	TS	TT	TU	TX	TY	Z	TD
32	MB-T03	12	17	50	49	74	89	MB-S03	62	62	74	47	35	45	12	7	10	13	8.5	50	49	89	12
40	MB-T04	16	22	63	58	95	93	MB-S04	80	79	95	60	45	60	17	9	12	17	10	63	58	93	16
50	MB-T05	16	22	75	71	107	105	MB-S05	80	91	107	60	45	60	17	9	12	17	10	75	71	105	16
63	MB-T06	20	28	90	87	130	105	MB-S06	100	110	130	78	60	70	20	11	14	22	15	90	87	105	20
80	MB-T08	20	34	110	110	152	129	MB-S08	100	130	150	78	60	70	20	11	14	22	15	110	110	129	20
100	MB-T10	25	40	132	136	182	129	MB-S10	120	155	180	100	75	90	25	13.5	17	24	15	132	136	129	25

I-Type Rod Clevis

Y-Type Rod Clevis with Pin


Bore size mm	I-type rod clevis										Y-type rod clevis with pin													
	Parts No.	A	A1	E1	L1	MM	ND	NX	R1	U1	Parts No.	D	d	E1	I	L1	L	MM	M	ND	NX	NZ	R1	U1
32	MB-I03	40	14	20	30	M10×1.25	10	14	12	16	MB-Y03	10	3	20	36	30	44	M10×1.25	4	10	14	28	10	16
40	MB-I04	50	19	22	40	M14×1.5	10	14	12.5	19	MB-Y04	10	3	22	36	40	44	M14×1.5	4	10	14	28	11	19
50	MB-I05	64	24	28	50	M18×1.5	14	20	16.5	24	MB-Y05	14	4	28	51	50	60	M18×1.5	4.5	14	20	40	14	24
63	MB-I06	64	24	28	50	M18×1.5	14	20	16.5	24	MB-Y06	14	4	28	51	50	60	M18×1.5	4.5	14	20	40	14	24
80	MB-I08	80	26	40	60	M22×1.5	22	30	23.5	34	MB-Y08	22	4	40	72	65	82	M22×1.5	5	22	30	60	20	34
100	MB-I10	80	26	40	60	M26×1.5	22	30	23.5	34	MB-Y10	22	4	40	72	65	82	M26×1.5	5	22	30	60	20	34

Weight Calculation

Bore size mm		QC95/QMB Series						QC95 Series		
		32	40	50	63	80	100	125	160	200
Basic weight	Basic type	0.50	0.69	1.19	1.47	2.73	3.70	7.3	17.2	20.1
	Foot bracket	0.74	0.88	1.41	1.81	3.4	6.08	9.3	19.4	23.8
	Flange	0.79	1.06	1.64	2.26	4.18	7.01	11.8	25.6	28.3
	Single clevis	0.75	0.92	1.53	2.1	3.84	6.87	9.0	20.3	30.0
	Double clevis	0.76	0.96	1.62	2.26	4.13	7.39	9.5	21.0	31.0
	Central trunnion	0.79	1.05	1.67	2.27	4.28	7.37	10.2	19.5	33.0
Adder per 50mm stroke		0.11	0.16	0.26	0.27	0.42	0.56	0.7	0.95	1.25
Accessories	I-type clevis	0.15	0.23	0.26	0.26	0.60	0.83	1.3	1.8	1.8
	Y-type clevis	0.22	0.37	0.43	0.43	0.87	1.27	1.5	4.0	4.0

 Example: QC95SB50 - 125(Basic type: bore size ϕ 50, stroke 125mm) Weight: $1.19 + 0.26 \times 125/50 = 1.84$ kg

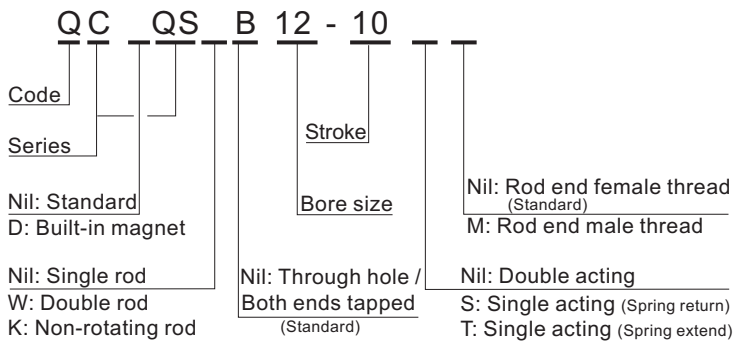
Compact Cylinder (New Japanese Type) QCQS Series (Φ12~Φ25)



Bore size mm	12	16	20	25
Fluid	Filtered compressed air			
Acting type	Double acting / Single acting: Spring return, Spring extend			
Max. Operating pressure	1.0MPa			
Ambient and fluid temperature	5~60°C			
Rod end thread	Female (standard)		male (option)	
Cushion	Without			
Stroke allowance mm	0~+1.0			
*Lubrication	Pro-lubrication in factory			
Mounting type	Through hole (standard), Both ends tapped (option)			
Port size	M5×0.8			

* If used, turbine oil #1 (ISO VG32) is recommended.

How to Order



Note:
Build-in magnet is applicable to double acting cylinder only.

Standard Stroke / Auto Switch

Bore size mm	Standard stroke		Auto switch
	Single acting	Double acting	
12	5 10	5 10 15	AL-07R (Groove mounted)
16		20 25 30	
20	5 10	5 10 15 20 25	
25		30 35 40 45 50	

Note: Refer to "Auto Switch" for dimensions and specifications.

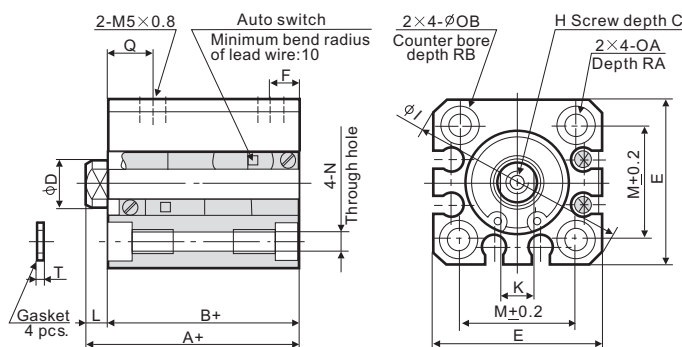
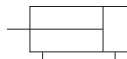
Order example:

- Bore size Φ16, stroke 10, double acting, rod end female thread through hole.
Model: QCQSB16-10
- Bore size 25, stroke 50, double acting, built-in magnet, rod end male thread through hole.
Model: QCDQSB25-50M

Dimensions (mm)

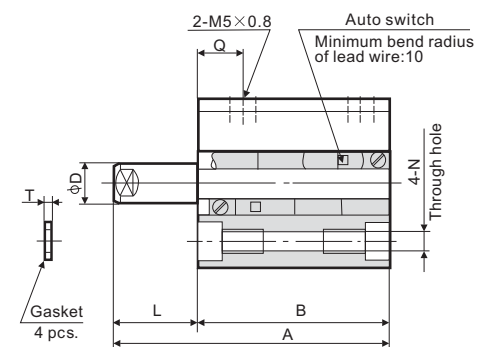
Double Acting

Symbol Double acting



Single Acting

Symbol (S:Spring return) (T:Spring extend)



Bore size mm	Basic type													
	C	D	E	H	I	K	M	N	OA	OB	RA	RB	T	
12	6	6	25	M3×0.5	32	5	15.5	3.5	M4×0.7	6.5	7	4	0.5	
16	8	8	29	M4×0.7	38	6	19.5	3.5	M4×0.7	6.5	7	4	0.5	
20	7	10	36	M5×0.8	47	8	25.5	5.4	M6×1.0	9	10	7	1	
25	12	12	40	M6×1.0	52	10	28	5.4	M6×1.0	9	10	7	1	

Double Acting

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

Single Acting (Spring Return)

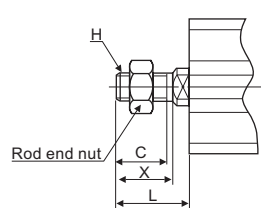
Applicable bore size mm	Stroke range mm	Basic type						Built-in magnet			
		A		B		F	L	A		B	
		5	10	5	10			5	10	5	10
12	5,10	25.5	30.5	22	27	5	3.5	30.5	35.5	27	32
16		25.5	30.5	22*	27	5	3.5	30.5	35.5	27	32
20		29	34	24.5	29.5	5.5	4.5	39	44	34.5	39.5
25		32.5	37.5	27.5	32.5	5.5	5	42.5	47.5	37.5	42.5

Single Acting (Spring Extend)

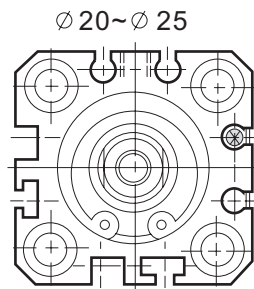
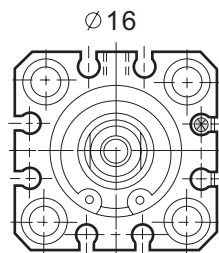
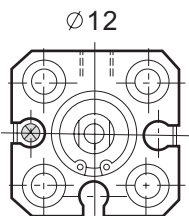
Applicable bore size mm	Stroke range mm	Basic type							Built-in magnet			
		A		B		L		Q	A		B	
		5	10	5	10	5	10		5	10	5	10
12	5,10	30.5	40.5	22	27	8.5	13.5	7.5	35.5	45.5	27	32
16		30.5	40.5	22*	27	8.5	13.5	7.5	35.5	45.5	27	32
20		34	39	24.5	29.5	9.5	14.5	9	44	49	34.5	39.5
25		37.5	42.5	27.5	32.5	10	15	11	47.5	47.5	37.5	42.5

Male Thread Rod End

(Double Acting / Single Acting: Spring Return)

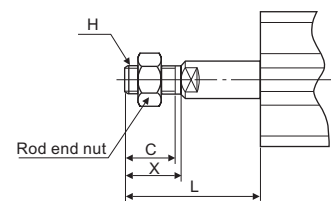


Applicable bore size mm	C	H	L	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5



Male Thread Rod End

(Single Acting: Spring Extend)



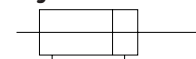
Applicable bore size mm	C	H	L		X
			5 st	10 st	
12	9	M5×0.8	19	24	10.5
16	10	M6×1.0	20.5	25.5	12
20	12	M8×1.25	23.5	28.5	14
25	15	M10×1.25	27.5	32.5	17.5

Characteristics

1. Easy mounting: Through hole and both ends tapped are offered simultaneously.
2. Space saving: Auto switch is mounted in the groove of cylinder tube.
3. Multi side mounting: Auto switch can be mounting on any side.

Special Cylinder

Symbol



Type

Double piston rod

Model

QC□QSWB bore size-stroke

Compact Cylinder (Japanese Type) QCQ2 Series (Φ12~Φ100)

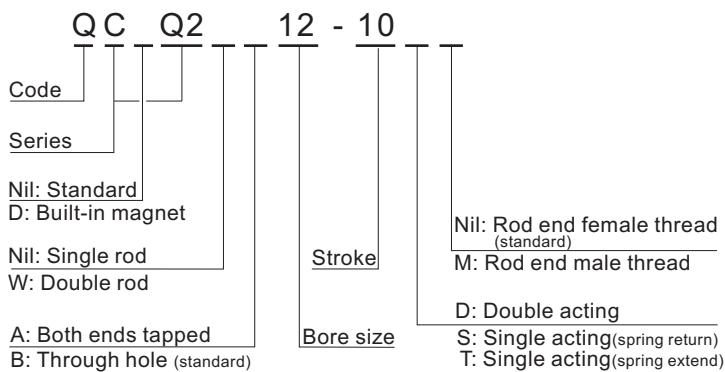


Bore size mm	12	16	20	25	32	40	50	63	80	100
Fluid	Filtered compressed air									
Acting type	Double acting / Single acting: Spring return, Spring extend									
Max. Operating pressure	1.0MPa									
Operating pressure MPa	Single acting	0.25	0.18	0.17	0.15	0.13	—			
	Double acting	0.07		0.05						
	Double rod	0.10		0.07						
Ambient and fluid temperature	5~60°C									
Rod end thread	Female (standard)					male (option)				
Cushion	Without									
Stroke allowance mm	0~+1.0									
*Lubrication	Pro-lubrication in factory									
Mounting type	Through hole (standard), Both ends tapped (option)									
Port size	M5×0.8		G1/8		G1/4		G3/8			

* If used, turbine oil #1 (ISO VG32) is recommended.

3

How to Order



Note:

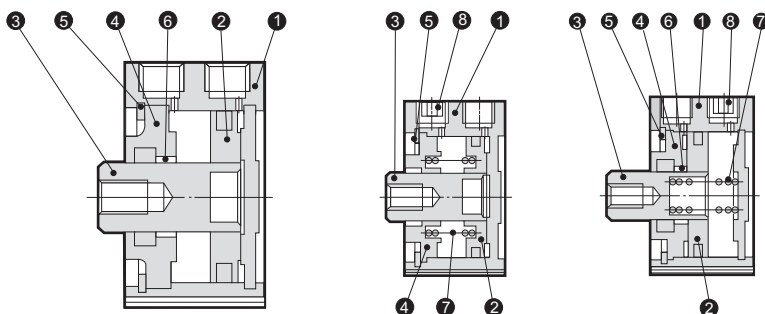
When a magnetic cylinder is mounted by through hole, the two screws should be put diagonally, or non-magnetic screws being used.

Standard Stroke / Auto Switch

Bore size mm	Standard stroke mm		Auto switch
	Single acting	Double acting	
12	5 10	5 10 15	AL-72R (Rail mounted)
16		20 25 30	
20		5 10 15 20	
25		25 30 35	
32	5 10 20	40 45 50	
40			
50	10 20	10 15	
63	Nil	20 25 30 35	
80		40 45 50	
100			

Notes: 1. Built-in magnet is applicable to double acting only.
2. Single acting cylinder without magnet cannot work with auto switch.

Construction



Parts List

No.	Description	Material
1	Tube	Alum. alloy
2	Piston	Alum. alloy
3	Piston rod	Carbon steel
4	Collar	Alum. alloy
5	Retainer	Steel
6	Bushing	F4
7	Spring	Steel
8	Plug	Brass

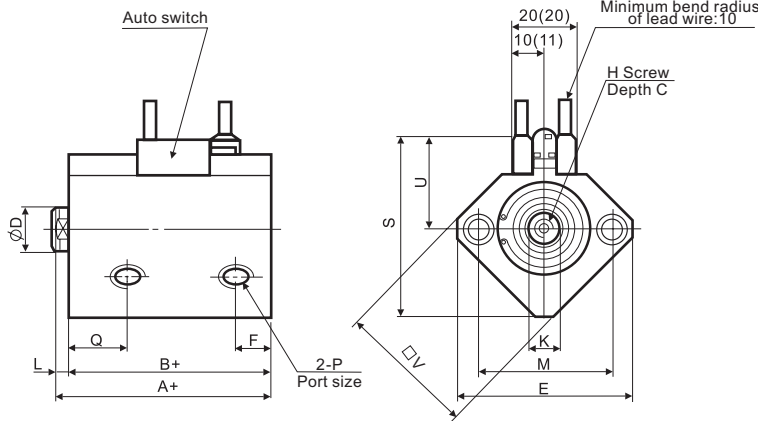
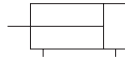
Dimensions (mm)

Double Acting

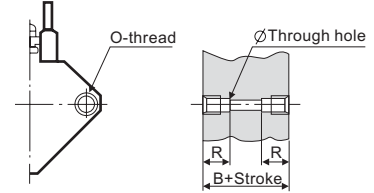
QCQ2B / QCDQ2B □-□

∅12 ~ ∅25

Symbol

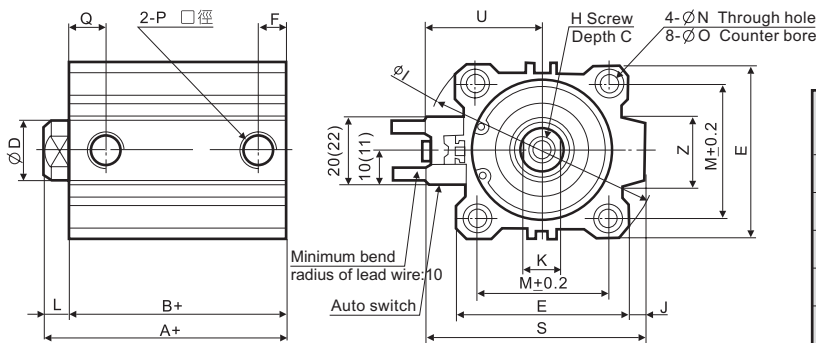


QCQ2A / QCDQ2A Both Ends Tapped

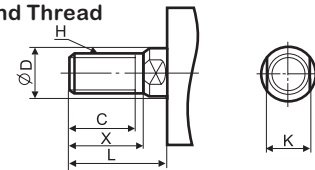


Bore size mm	O	R
12	M4×0.7	7
16	M4×0.7	7
20	M6×1.0	10
25	M6×1.0	10
32	M6×1.0	10
40	M6×1.0	10
50	M8×1.25	14
63	M10×1.5	18
80	M12×1.75	22
100	M12×1.75	22

∅32-∅100



Rod End Thread



Bore size mm	C	X	D	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

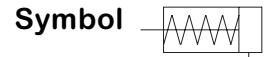
Notes:

- Standard stroke available at 5mm intervals.
- Unless specified dimensions of through hole and both ends tapped cylinders are identical.
- For 5mm stroke cylinder, only one auto switch may be mounted.

Bore size mm	Note) Stroke range mm	A	A*	B	B*	D	E	F	F*	H	C	I	J	K	L	M	N	O	P	Q	S	U	V	Z
12	5~30	20.5	31.5	17	28	6	32	5	6.5	M3×0.5	6	-	-	5	3.5	22	3.5	6.5深3.5	M5×0.8	7.5	35.5	19.5	25	-
16	5~30	22	34	18.5	30.5	8	38	5.5	5.5	M4×0.7	8	-	-	6	3.5	28	3.5	6.5深3.5	M5×0.8	8	41.5	22.5	29	-
20	5~50	24	36	19.5	31.5	10	46.8	5.5	5.5	M5×0.8	7	-	-	8	4.5	36	5.5	9深7	M5×0.8	9	48	24.5	36	-
25	5~50	27.5	37.5	22.5	32.5	12	52	5.5	5.5	M6×1.0	12	-	-	10	5	40	5.5	9深7	M5×0.8	11	53.5	27.5	40	-
32	5 10-50	30	40	23	33	16	45	5.5 7.5	7.5	M8×1.25	13	60	4.5	14	7	34	5.5	9深7	M5×0.8 G1/8	11.5 10.5	58.5	31.5	-	18
40	5~50	36.5	46.5	29.5	39.5	16	52	8	8	M8×1.25	13	69	5	14	7	40	5.5	9深7	G1/8	11	66	35	-	18
50	10~50	38.5	48.5	30.5	40.5	20	64	10.5	10.5	M10×1.5	15	86	7	17	8	50	6.6	11深8	G1/4	10.5	80	41	-	22
63	10~50	44	54	36	46	20	77	10.5	10.5	M10×1.5	15	103	7	17	8	60	9	14深10.5	G1/4	15	93	47.5	-	22
80	10~50	53.5	63.5	43.5	53.5	25	98	12.5	12.5	M16×2.0	21	132	6	22	10	77	11	17.5深13.5	G3/8	16	112.5	57.5	-	26
100	10~50	65	75	53	63	30	117	13	13	M20×2.5	27	156	6.5	27	12	94	11	17.5深13.5	G3/8	23	132.5	67.5	-	26

*Dimensions of magnetic cylinders

Single Acting-S(Spring Return)



QCQ2B□-□S

Bore size mm	A			B			D	E	F		H	C	I	J	K	L	M	N	O	P			Q	Z	
	5st	10st	20st	5st	10st	20st			5st	10st										5st	10st	20st			
12	25.5	30.5	-	22	27	-	6	32	5	5	M3×0.5	6	-	-	5	3.5	22	3.5	6.5	Depth3.5	M5×0.8	-	7.5	-	
16	27	32	-	23.5	28.5	-	8	38	5.5	5.5	M4×0.7	8	-	-	6	3.5	28	3.5	6.5	Depth3.5	M5×0.8	-	8	-	
20	29	34	-	24.5	29.5	-	10	46.8	5.5	5.5	M5×0.8	7	-	-	8	4.5	36	5.5	9	Depth7	M5×0.8	-	9	-	
25	32.5	37.5	-	27.5	32.5	-	12	52	5.5	5.5	M6×1.0	12	-	-	10	5	40	5.5	9	Depth7	M5×0.8	-	11	-	
32	35	40	-	28	33	-	16	45	5.5	7.5	M8×1.25	13	60	4.5	14	7	34	5.5	9	Depth7	M5×0.8	G1/8	-	10.5	18
40	41.5	46.5	56.5	34.5	39.5	49.5	16	52	8	8	M8×1.25	13	69	5	14	7	40	5.5	9	Depth7	G1/8	-	11	18	
50	-	48.5	58.5	-	40.5	50.5	20	64	10.5	10.5	M10×1.5	15	86	7	17	8	50	6.6	11	Depth8	-	G1/4	10.5	22	

Notes: 1) Single acting(spring return) cylinder dimensions as double acting cylinder.
2) Above A or B figures include stroke length.

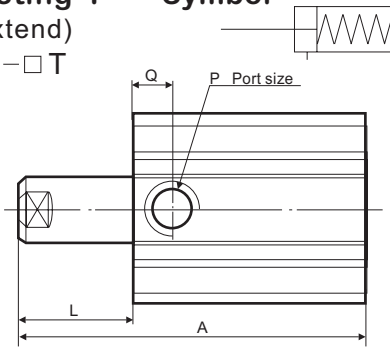
3

Single Acting-T

Symbol

(Spring Extend)

QCQ2B□-□T

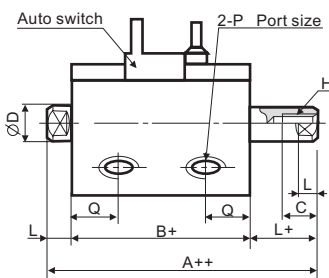


Bore size mm	A			L		
	5st	10st	20st	5st	10st	20st
12	30.5	40.5	-	8.5	13.5	-
16	32	42	-	8.5	13.5	-
20	34	44	-	9.5	14.5	-
25	37.5	47.5	-	10	15	-
32	40	50	-	12	17	-
40	46.5	56.5	66.5	12	17	27
50	-	58.5	78.5	-	18	28

Double Acting-W(Double Rod)

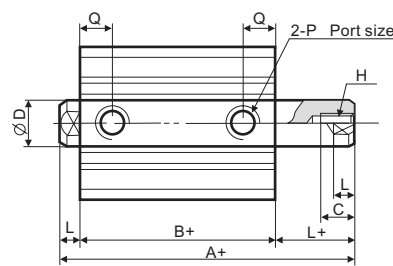
QCQ2WB/QCDQ2WB□-□

ø12 ~ ø25



ø32~ø100

Symbol



Approximate Cylinder Weight. (Double Acting, Single Rod)

Bore size mm	Stroke mm	A	A*	B	B*
12	5~30	32.2	39.4	25.5	32.4
16	5~30	33	43	26	36
20	5~50	35	47	26	38
25	5~50	39	49	29	39
32	5~50	44.5	54.5	30.5	40.5
40	5~50	54	64	40	50
50	10~50	56.5	66.5	40.5	50.5
63	10~50	58	68	42	52
80	10~50	71	81	51	61
100	10~50	84.5	94.5	60.5	70.5

Bore size mm	Base g	Increment per 5mm of stroke g	Increment for male thread rod end g
12	33	7	2
16	50	11	3
20	70	21	7
25	97	21	17
32	134	22.5	40
40	250	22.5	40
50	363	38	80
63	607	40	80
80	1352	91	160
100	2102	106	270

Note: Refer to QCQ2B/QCDQ2B magnetic cylinders for other dimensions.

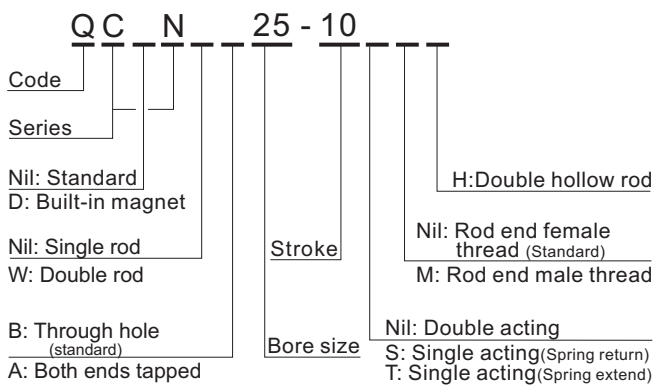
Compact Cylinder (European Type) QCN Series (Φ 16~Φ 100)



Bore size mm	16	20	25	32	40	50	63	80	100
Fluid	Filtered compressed air								
Acting type	Double acting / Single acting: Spring return, Spring extend								
Max. Operating pressure	1.0MPa								
Ambient and fluid temperature	5~60°C								
Rod end thread	Female (standard) male (option)								
Cushion	Without								
Stroke allowance mm	0~+1.0								
*Lubrication	Pro-lubrication in factory								
Mounting type	Through hole (standard), Both ends tapped (option)								
Port size	M5×0.8		G1/8		G1/4		G3/8		

*If used, turbine oil *1 (ISO VG32) is recommended.

How to Order



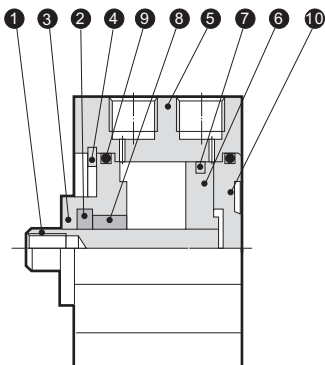
Note:
When a magnetic cylinder is mounted by through hole, the two screws should be put diagonally, or non-magnetic screws are used.

Standard Stroke / Auto Switch

Bore size mm	Standard stroke mm		Auto switch
	Single acting	Double acting	
16	5 10	5 10 15 20 25 30	QCK2400A (Groove mounted)
20		10 15 20 25 30 35 40 45 50	
25	5 10 20		
32		10 20	
40	10 15 20 25 30 35 40 45 50		
50		-	
63	-		
80		-	
100	-		

Notes: 1. Built-in magnet is applicable to double acting only.
2. Single acting cylinder without magnet cannot work with auto switch.

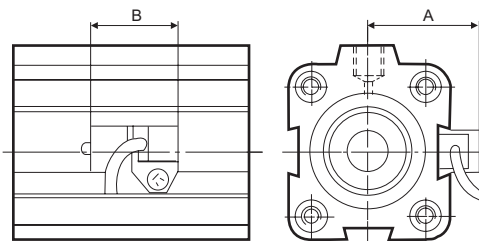
Construction



Parts List

No.	Description	Material
1	Rod	Carbon steel
2	Rod seal	NBR
3	Collar	Alum. Alloy
4	Retainer	Steel
5	Tube	Alum. Alloy
6	Piston	Alum. Alloy
7	Seal	NBR
8	Bushing	F4
9	O-ring	NBR
10	Rear	Alum. Alloy

Dimensions of Mounting Auto Switch



Bore size mm	A	B	Bore size mm	A	B
16	26.8	24	50	44	24
20	28.8	24	63	52	24
25	31.3	24	80	60.5	24
32	35.3	24	100	71	24
40	39.5	24			

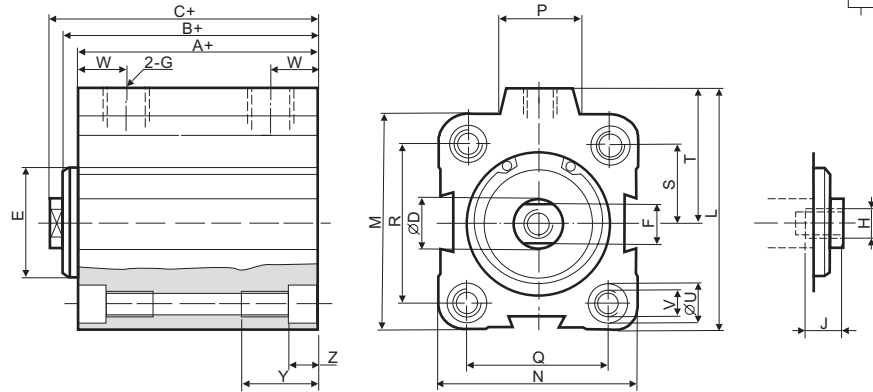
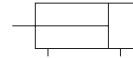
Dimensions (mm)

Double Acting

QCNB

∅16~ ∅100

Symbol



3

Bore size mm	A	B	C	A*	B*	C*	D	E	F	G	H	J	L	M	N	P	Q	R	S	T	U	V		W	Y	Z
																						Hole	Thread			
16	32	-	35.5	42	-	45.5	6	-	5	M5	M3	6.5	31	28	28	11	20	20	10	17	5.8	3.7	M4	6.5	9	3.4
20	35	-	42	45	-	52	10	-	8	M5	M5	10	35	32	32	11	22	22	11	19	7.5	4.6	M5	7	10	4.6
25	35	-	42	45	-	52	10	-	8	G1/8	M5	10	44.5	39	37	18	26	28	14	25	7.5	4.6	M5	7.5	10	4.6
32	37	42	49	47	52	59	12	23	10	G1/8	M6	12	54	48	45	18	32	36	18	30	8.5	5.55	M6	9	16	5.7
40	40	47	55	45	52	60	16	29	13	G1/8	M8	14	60	54.5	54.5	18	40	40	20	33	8.5	5.55	M6	9.5	16	5.7
50	40	46.5	55	45	51.5	60	16	35.5	13	G1/4	M8	14	72	64	64	22	50	50	25	40	10.5	7.4	M8	10	16	6.8
63	42	50.5	59	47	55.5	64	20	43	17	G1/4	M10	15	88	80	80	22	62	62	31	48	13.5	9.3	M10	10	20	9
80	52	60	71.5	57	65	76.5	25	50	22	G3/8	M12	20	110	100	100	26	82	82	41	60	13.5	9.3	M10	15	20	9
100	52	60	71.5	57	65	76.5	25	56	22	G3/8	M12	20	134	124	124	26	103	103	51.5	72	16.5	11.2	M12	15	25	11

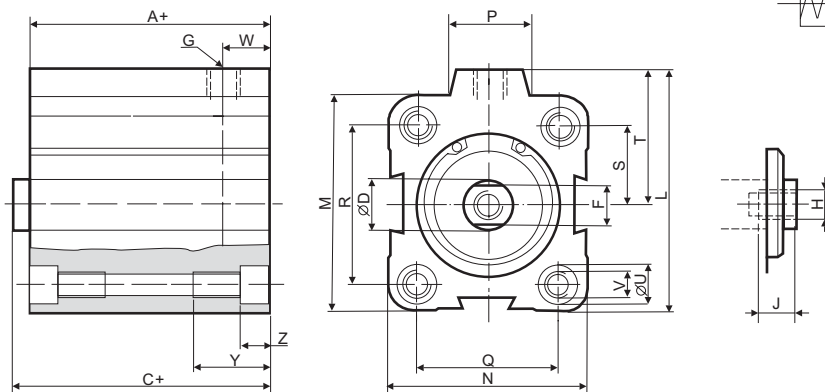
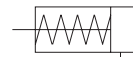
*Dimensions of magnetic cylinder

Single Acting-S(Spring Return)

QCNB

∅16~ ∅50

Symbol



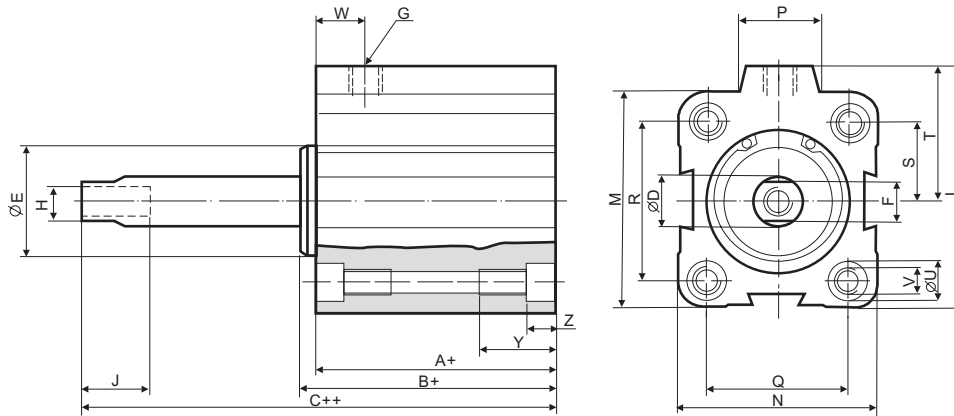
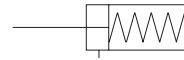
Bore size mm	A	C	D	E	F	G	H	J	L	M	N	P	Q	R	S	T	U	V		W	Y	Z
																		Hole	Thread			
16	22	23	6	-	5	M5	M3	6.5	31	28	28	11	20	20	10	17	5.8	3.7	M4	6.5	9	3.4
20	25	26	10	-	8	M5	M5	10	35	32	32	11	22	22	11	19	7.5	4.6	M5	7	10	4.6
25	25	26	10	-	8	G1/8	M5	10	44.5	39	37	18	26	28	14	25	7.5	4.6	M5	7.5	10	4.6
32	32	33	12	23	10	G1/8	M6	12	54	48	45	18	32	36	18	30	8.5	5.55	M6	9	16	5.7
40	35	36	16	29.5	13	G1/8	M8	14	60	54.5	54.5	18	40	40	20	33	8.5	5.55	M6	9.5	16	5.7
50	35	36	16	35.5	13	G1/4	M8	14	72	64	64	22	50	50	25	40	10.5	7.4	M8	10	16	6.8

Single Acting-T(Spring Extend)

QCNB

∅16~∅50

Symbol



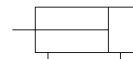
Bore size mm	A	B	C	D	E	F	G	H	J	L	M	N	P	Q	R	S	T	U	V		W	Y	Z
	Hole		Thread		W		Y		Z														
16	27	-	30.5	6	-	5	M5	M3	6.5	31	28	28	11	20	20	10	17	5.8	3.7	M4	6.5	9	3.4
20	30	-	37	10	-	8	M5	M5	10	35	32	32	11	22	22	11	19	7.5	4.6	M5	7	10	4.6
25	30	-	37	10	-	8	G1/8	M5	10	44.5	39	37	18	26	28	14	25	7.5	4.6	M5	7.5	10	4.6
32	32	37	44	12	23	10	G1/8	M6	12	54	48	45	18	32	36	18	30	8.5	5.55	M6	9	16	5.7
40	35	42	50	16	29.5	13	G1/8	M8	14	60	54.5	54.5	18	40	40	20	33	8.5	5.55	M6	9.5	16	5.7
50	35	41.5	50	16	35.5	13	G1/4	M8	14	72	64	64	22	50	50	25	40	10.5	7.4	M8	10	16	6.8

Double Acting - M(Male Thread)

QCNB□-□□M

∅16~∅100

Symbol

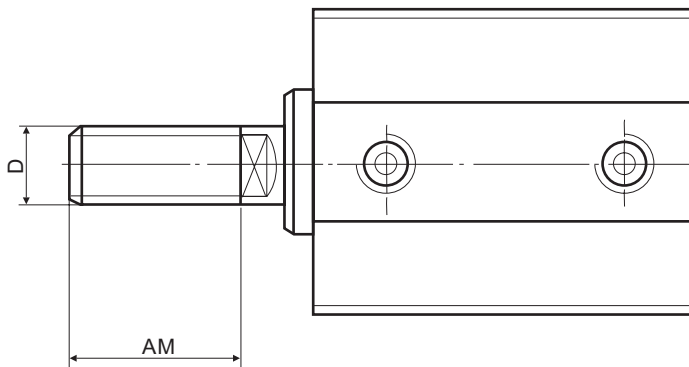
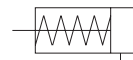


Single Acting - M(Male Thread)

QCNB□-□□□M

∅16~∅50

Symbol

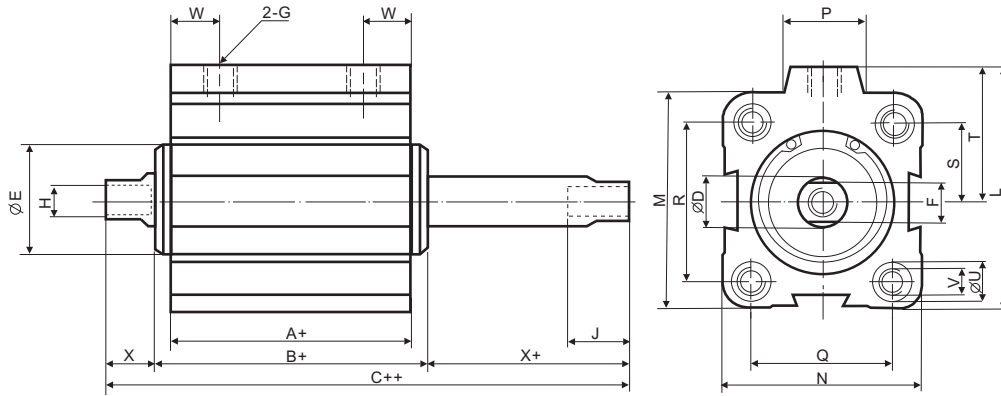
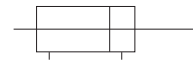


Bore size mm	D	AM	
16	M6×1.0	16	
20	M8×1.5	20	
25	M8×1.25	20	
32	M10×1.25	22	
40	M12×1.25	24	
50	M16×1.5	32	
63	Single acting: Nil	M16×1.5	32
80		M20×1.5	40
100		M20×1.5	40

Double Piston Rod Cylinder

QCNWB
 Ø16~Ø100

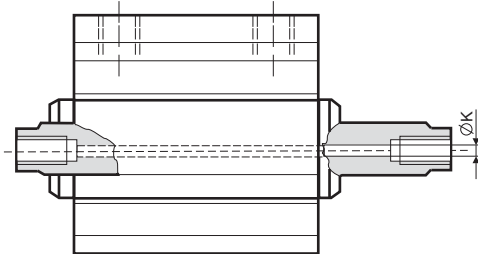
Symbol



3

Double Hollow Piston Rod Cylinder (Dimensions are the same of the above)

QCNWB□-□□□H
 Ø 20~Ø 100



Bore size mm	16	20	25	32	40	50	63	80	100
K	-	2.5	2.5	3	4	4	6	6	6

Bore size mm	A	B	C	A*	B*	C*	D	E	F	G	H	J	L	M	N	P	Q	R	S	T	U	V		W	X	Y	Z
																						Hole	Thread				
16	37	-	44	47	-	54	6	-	5	M5	M3	6.5	31	28	28	11	20	20	10	17	5.8	3.7	M4	6.5	3.5	9	3.4
20	40	-	54	50	-	64	10	-	8	M5	M5	10	35	32	32	11	22	22	11	19	7.5	4.6	M5	7	7	10	4.6
25	40	-	54	50	-	64	10	-	8	G1/8	M5	10	44.5	39	37	18	26	28	14	25	7.5	4.6	M5	7.5	7	10	4.6
32	42	52	66	52	62	76	12	23	10	G1/8	M6	12	54	48	45	18	32	36	18	30	8.5	5.55	M6	9	7	16	5.7
40	45	59	75	50	64	80	16	29.5	13	G1/8	M8	14	60	54.5	54.5	18	40	40	20	33	8.5	5.55	M6	9.5	8	16	5.7
50	45	58	75	50	63	80	16	35.5	13	G1/4	M8	14	72	64	64	22	50	50	25	40	10.5	7.4	M8	10	8.5	16	6.8
63	47	64	81	52	69	86	20	43	17	G1/4	M10	15	88	80	80	22	62	62	31	48	13.5	9.3	M10	10	8.5	20	9
80	52	68	91	57	73	96	25	50	22	G3/8	M12	20	110	100	100	26	82	82	41	60	13.5	9.3	M10	15	11.5	20	9
100	52	68	91	57	73	96	25	56	22	G3/8	M12	20	134	124	124	26	103	103	51.5	72	16.5	11.2	M12	15	11.5	25	11

*Dimensions of magnetic cylinders

Compact Type Short Stroke Cylinder

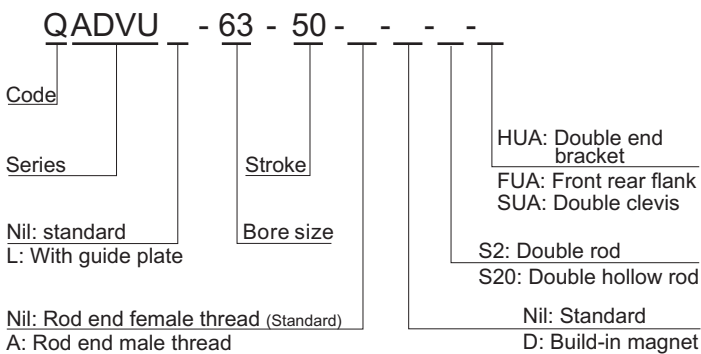
QADVU Series ($\phi 16 \sim \phi 100$)



Bore size mm	16	20	25	32	40	50	63	80	100
Fluid	Filtered compressed air								
Acting type	Double acting								
Max. Operating pressure	1.0MPa								
Min. Operating pressure MPa	Double acting	0.12	0.10	0.08			0.06		
	Double rod	0.13	0.12	0.10			0.08		
Cushion	Rubber cushion								
Ambient temperature	5~60°C								
Piston speed	50~500mm/s								
Stroke allowance mm	0~250 ^{+1.0} ₀				251~400 ^{+1.5} ₀				
*Lubrication	Pro-lubrication in factory								
Port size	M5			G1/8				G1/4	

*If used, turbine oil #1 (ISO VG32) is recommended.

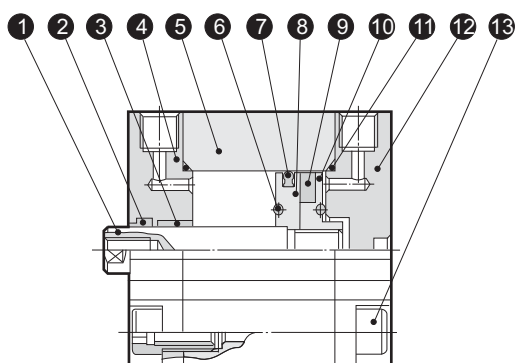
How to Order



Auto Switch

Bore size mm	Auto switch
16	AL-30R (Groove mounted)
20	
25	
32	
40	
50	
63	
80	
100	

Construction



Standard Stroke

Bore size mm	Standard stroke (mm)
16	5 10 15 20 25 30 40
20	5 10 15 20 25 30 40 50
25	
32	
40	10 15 20 25 30 40 50 60 80
50	
63	
80	
100	

Parts List

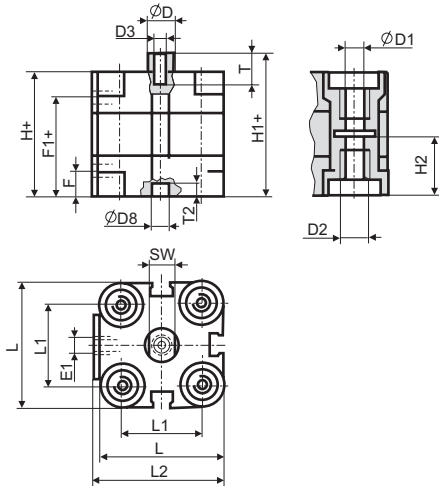
No.	Description	Material
1	Rod	Carbon steel
2	Rod seal	PU
3	Bushing	F4
4	Front cover	6063Aluminium
5	Tube	6063Aluminium
6	O-ring	NBR
7	8-ring	NBR

No.	Description	Material
8	Front Piston	Aluminium alloy
9	Magnet	Magnetic plastics
10	Rear Piston	Aluminium alloy
11	O-ring	NBR
12	Rear cover	6063 Aluminium
13	Nut	HPb59-1

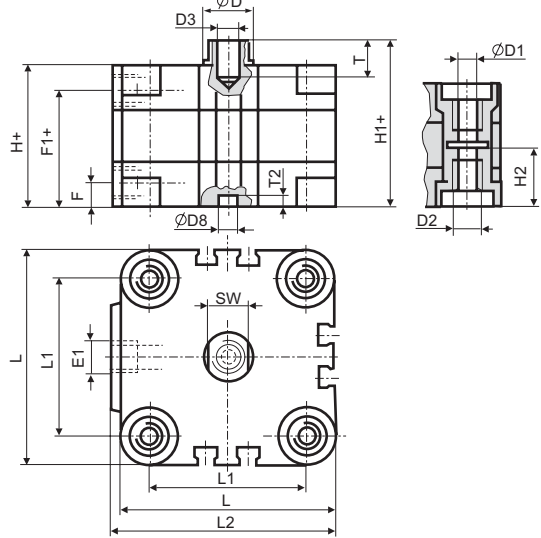
Dimensions (mm)

Basic Type

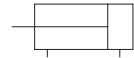
QADVU-16~25-□-□
QADVU-16~25-□-□-D



QADVU-32~100-□-□
QADVU-32~100-□-□-D

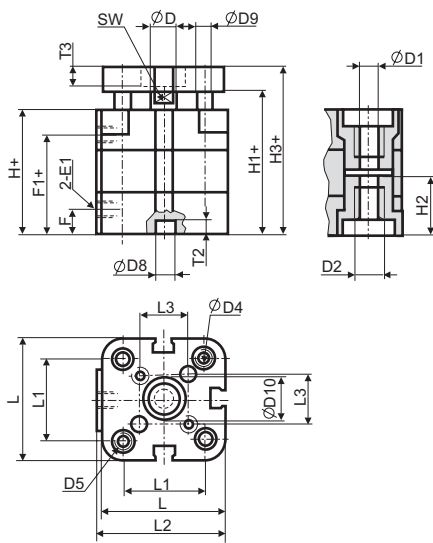


Symbol

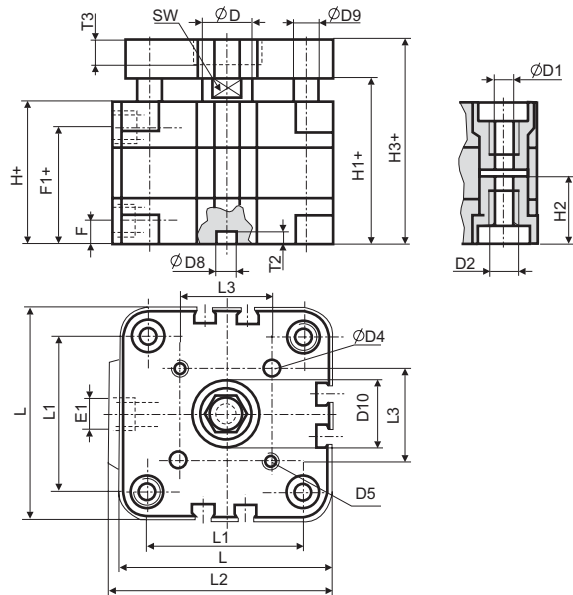


3

QADVUL-16~25-□-□
QADVUL-16~25-□-□-D



QADVUL-32~100-□-□
QADVUL-32~100-□-□-D

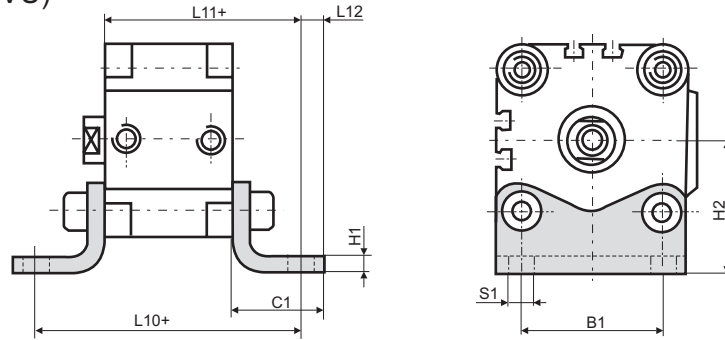


Bore size mm	D	D ₁	D ₂	D ₃	D ₄	D ₅	D ₈	H ₉	D ₁₀	H ₃	E ₁	F	F ₁	H	H ₁	H ₂	H ₃	L	L ₁	L ₂	L ₃	SW	T	T ₂	T ₃
16	8	3.2	M4	M4	3	M3	6	4	8	M5	8	30	38	38	42.5	18.5	48.5	29	21	30	9.9	7	8	4	4.2
20	10	4.2	M5	M5	4	M4	6	5	10	M5	8	30	38	38	42.5	18.5	50.5	36	24	37.5	12	8	10	4	5.7
25	10	4.2	M5	M5	5	M5	6	5	14	M5	8	31.5	39.5	45	18.5	53	40	29	29	41.5	15.6	8	10	4	4.8
32	12	5.2	M6	M6	5	M5	6	6	17	G1/8	8	36.5	44.5	50.5	21.5	60.5	50	36	36	52	19.8	10	12	4	6.1
40	12	5.2	M6	M6	5	M5	6	6	17	G1/8	8	37.5	45.5	52	21.5	62	60	42	42	62.5	23.3	10	12	4	6.1
50	16	6.2	M8	M8	6	M6	6	8	22	G1/8	8	37.5	45.5	53	22	65	68	50	50	71	29.7	13	12	4	7.6
63	16	8.5	M10	M8	6	M6	8	10	22	G1/8	8	42	50	57.5	24.5	69.5	87	62	62	91	35.4	13	12	4	7.6
80	20	8.5	M10	M10	8	M8	8	12	28	G1/8	8.5	47.5	56	64	27.5	78	107	82	82	111	46	17	14	4	8.7
100	25	8.5	M10	M12	10	M10	8	12	30	G1/4	10.5	56	66.5	76.5	32.5	90.5	128	103	103	133	56.6	22	16	4	10.3

Accessories (QADVU)

HUA Foot Bracket

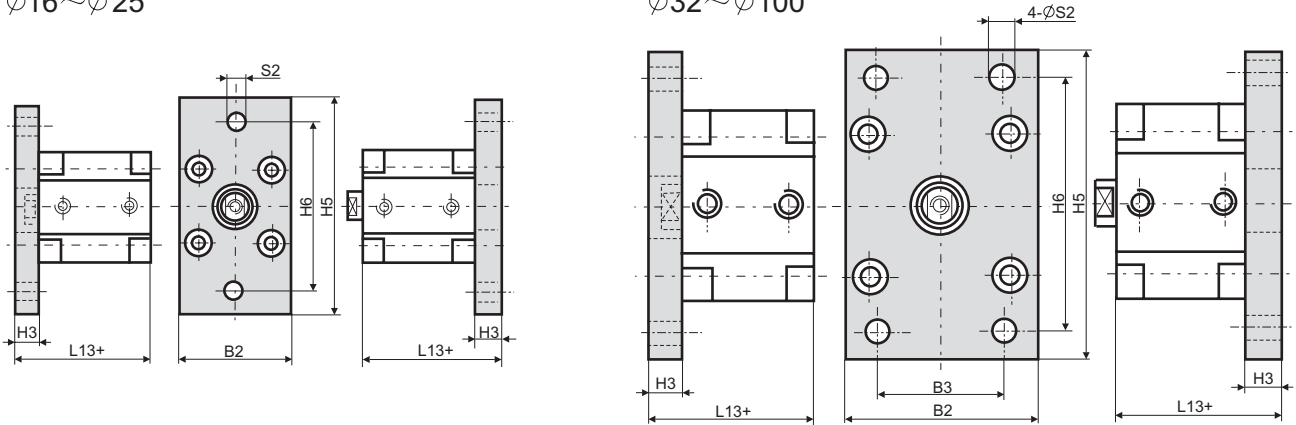
∅16~∅100



FUA Front, Rear Flange

∅16~∅25

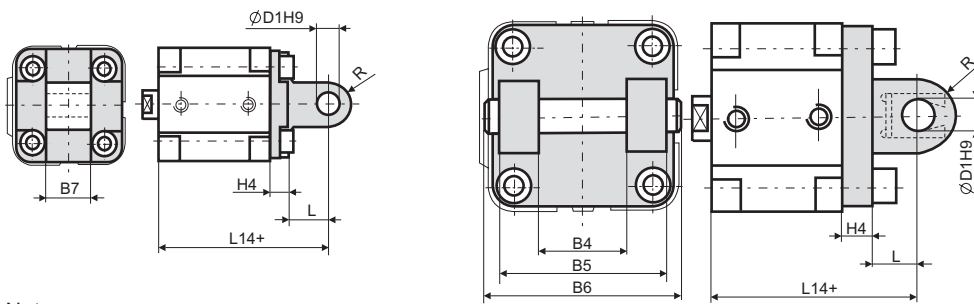
∅32~∅100



SUA Double Clevis

∅16~∅25

∅32~∅100



Bore size Mm	Max. Stroke (SUA Double clevis)
16	50mm
20	50mm
25	50mm
32	100mm
40	100mm
50	100mm
63	100mm
80	150mm
100	150mm

Note:
When SUA double clevis is used, Max. stroke should not be exceeded.

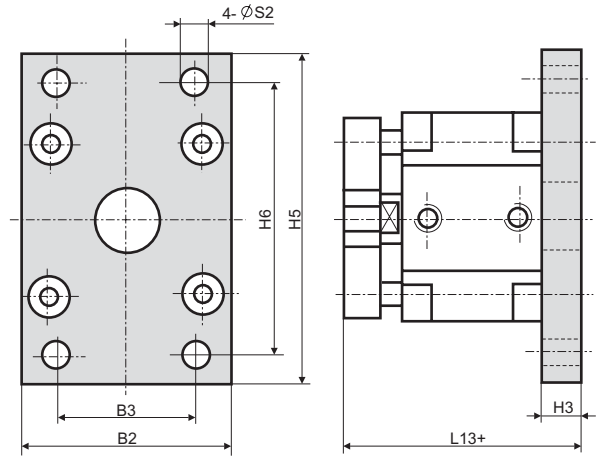
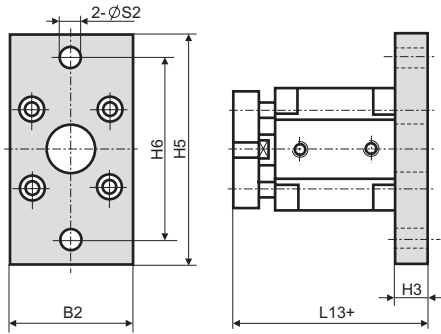
Bore size mm	B ₁	B ₂	B ₃	B ₄	B ₅	B ₆	B ₇	C ₁	D ₁	H ₁	H ₂	H ₃	H ₄	H ₅	H ₆	L	L ₁₀	L ₁₁	L ₁₂	L ₁₃	L ₁₄	R	S ₁	S ₂
16	21	29	-	-	-	-	12	17.75	6	3	22	10	6	55	43	10	64	51	4.75	48	54	6	5.5	5.5
20	24	36	-	-	-	-	16	22.25	8	4	27	10	6	70	55	14	70	54	6.25	48	58	8	6.6	6.6
25	29	40	-	-	-	-	16	22.25	8	4	29	10	6	76	60	14	71.5	55.5	6.25	49.5	59.5	8	6.6	6.6
32	36	50	32	26	45	54	-	26.25	10	5	34	10	9	80	65	13	80.5	62.5	8.25	54.5	66.5	11	6.6	7
40	42	60	36	28	52	62	-	28.25	12	5	40.5	10	9	102	82	16	85.5	65.5	8.25	55.5	70.5	13	9	9
50	50	68	45	32	60	70	-	32.25	12	6	47	12	11	110	90	16	93.5	69.5	8.25	57.5	72.5	13	9	9
63	62	87	50	40	70	82	-	38.75	16	6	56.5	15	11	130	110	21	104	77	11.75	65	82	17	11	9
80	82	107	63	50	90	102	-	41.75	16	8	68.5	15	13	160	135	23	116	86	11.75	71	92	17	11	12
100	103	128	75	60	110	126	-	44.75	20	8	81	15	15	190	163	26	132.5	99.5	11.75	81.5	107.5	21	13.5	14

Accessories (QADVUL)

FUA Flange

∅16~∅25

∅32~∅100

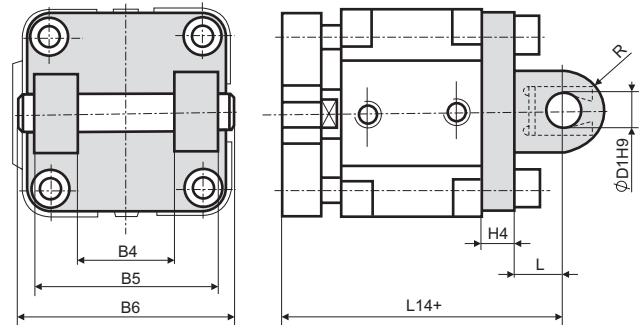
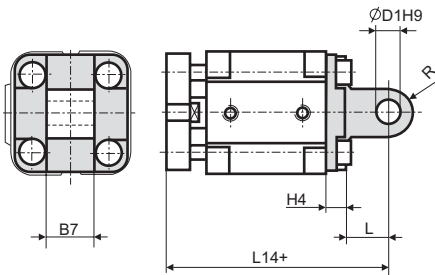


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SUA Double Clevis

∅16~∅25

∅32~∅100



Bore size mm	B ₂	B ₃	B ₄	B ₅	B ₆	B ₇	D ₁	H ₃	H ₄	H ₅	H ₆	L	L ₁₃	L ₁₄	R	S ₂
16	29	-	-	-	-	12	6	10	6	55	43	10	58.5	64.5	6	5.5
20	36	-	-	-	-	16	8	10	6	70	55	14	60.5	69	8	6.6
25	40	-	-	-	-	16	8	10	6	76	60	14	63	73	8	6.6
32	50	32	26	45	54	-	10	10	9	80	65	13	70.5	82.5	11	7
40	60	36	28	52	62	-	12	10	9	102	82	16	72	87	13	9
50	68	45	32	60	70	-	12	12	11	110	90	16	77	92	13	9
63	87	50	40	70	82	-	16	15	11	130	110	21	84.5	102.5	17	9
80	107	63	50	90	102	-	16	15	13	160	135	23	93	114	17	12
100	128	75	60	110	126	-	20	15	15	190	163	26	105.5	131.5	21	14

Special Design

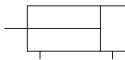
QADVU-...-A-□

QADVU-...-□-S2

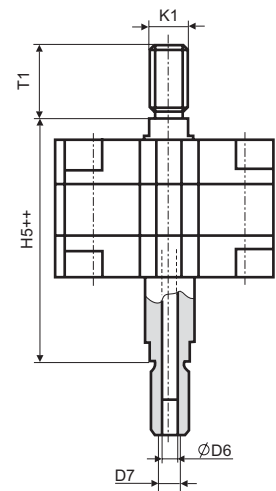
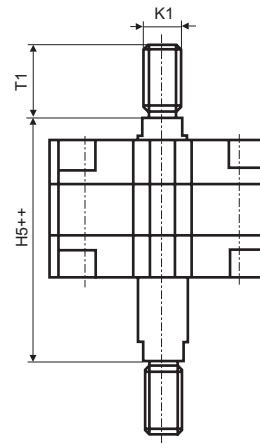
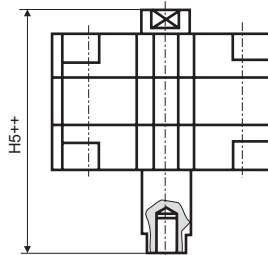
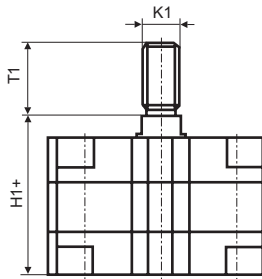
QADVU-...-A-□-S2

QADVU-...-A-□-S20

Symbol



Symbol



Bore size mm	D ₆	D ₇	H ₁	H ₅	K ₁	T ₁
16	3.2	-	42.5	47	M8	20
20	3.8	-	42.5	47	M10×1.25	22
25	3.8	-	45	50.5	M10×1.25	22
32	4.5	-	50.5	56.5	M10×1.25	22
40	4.5	-	52	58.5	M10×1.25	22
50	6	-	53	60.5	M12×1.25	24
63	6	-	57.5	65	M12×1.25	24
80	8.0	G1/8	64	72	M16×1.5	32
100	11.7	G1/4	76.5	86.5	M20×1.5	40

Small Square Cylinder

XQGA_{XO} Series (Φ20~Φ25)

Single piston rod

Double acting

Material of tube and end covers is aluminum

Square cover

Threaded cover

Cushion pad

Various mountings



Specifications

Fluid	Filtered compressed air
Max. Operating pressure	0.8MPa
Min. Operating pressure	0.06MPa
Fluid temperature	-10~+60°C
Ambient temperature	5~60°C
Piston speed	50~500mm/s
Stroke allowance	0~250±0.5 251~320±1.5(mm)

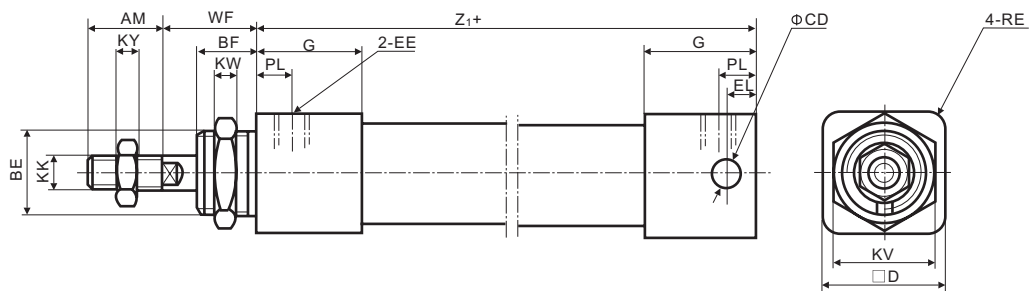
Standard Stroke

Bore size mm	Standard stroke mm	Max. Stroke mm
20	20,50,80,100,125	320
25	160,200,250,320	

Dimensions(mm)

XQGA_{XO} Cylinder

Symbol



Bore size mm	AM	BE	BF	CD	D	EE	EL	G	KK	KV	KY	KW	PL	RE	WF	Z ₁
20	20	M20×1.5	16	8	29	G1/8	7.5	27	M8	32	6	8	8	5	22	59
25	24	M24×2	18	8	36	G1/8	9.5	33	M10×1.25	32	8	8	11.5	6	24	71

Light Cylinder

XQGAY(By) Series ($\Phi 40 \sim \Phi 63$)

- Round body
- Threaded covers
- Light and nice appearance



Specifications

Acting type	Double acting	Single acting
Fluid	Filtered compressed air	
Max. Operating pressure	1.0MPa	
Min. Operating pressure	0.1MPa	0.25MPa
Fluid temperature	-10~+60°C	
Ambient temperature	5~60°C	
Piston speed	50~500mm/s	
Stroke allowance	0~250+1.0	251~600+1.5(mm)

3

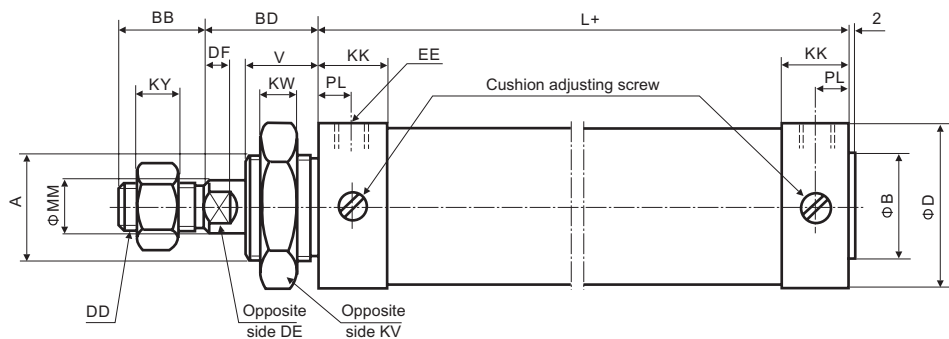
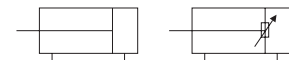
Double Acting Cylinder Standard Stroke

Bore size mm	Standard stroke mm	Max. Stroke mm	Cushion stroke mm
40	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500, 600	500	15
50		600	20
63			

Dimensions(mm)

SD Basic (XQGAy、XQGBy Cylinder)

Symbol



Bore size mm	A	B	BB	BD	D	DD	DE	DF	EE	KK	KV	KY	KW	L	MM	PL	V
40	M30×2	30	24	32	50	M12×1.25	12	7	Rc1/8	20	46	12.8	10	94	14	10	22
50	M36×2	36	32	36	60	M16×1.5	18	8	Rc3/8	24	55	15.8	12	108	20	12	25
63	M36×2	36	32	36	71	M16×1.5	18	8	Rc3/8	24	55	15.8	12	109	20	12	25

Light Single Acting Cylinder

XQGA_yD(D₁) Series (Φ40~Φ63)

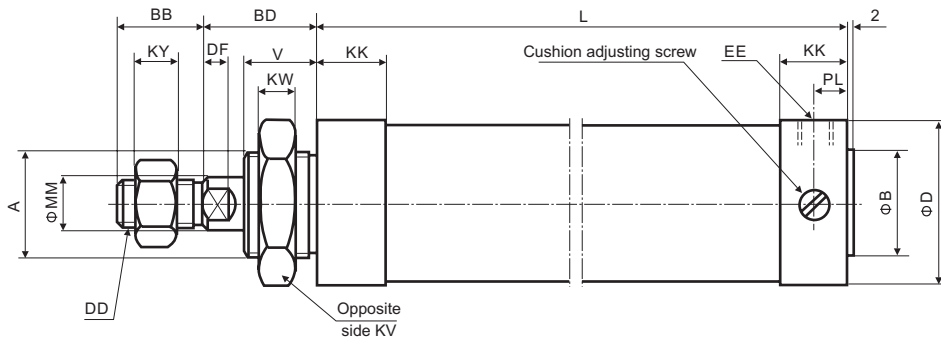
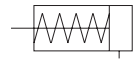
Single Acting Cylinder Standard Stroke

Bore size mm	Standard stroke mm	Max. Stroke mm
40	25、40、50、80	80
50		
63		

Dimensions(mm)

SD Basic (XQGA_yD Spring Return Single Acting Cylinder)

Symbol

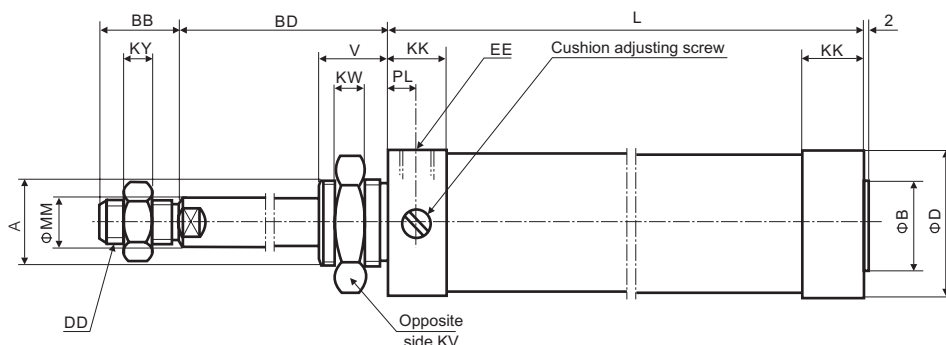


Bore size mm	A	B	BB	BD	D	DD	EE	KK	KV	KY	KW	MM	PL	V
40	M30×2	30	24	32	50	M12×1.25	Rc1/8	20	46	12.8	10	14	10	22
50	M36×2	36	32	36	60	M16×1.5	Rc3/8	24	55	15.8	12	20	12	25
63	M36×2	36	32	36	71	M16×1.5	Rc3/8	24	55	15.8	12	20	12	25

Stroke mm	25		40		50		80	
Bore size mm	L	F ₁ (N)	L	F ₁ (N)	L	F ₁ (N)	L	F ₁ (N)
40	150.5	402	179.5	402	202.5	402	274.5	402
50	171	628	211	628	235.5	628	326	628
63	178.5	998	224.5	998	248	998	352.5	998

SD Basic (XQGA_yD₁ Spring Extend Single Acting Cylinder)

Symbol



Bore size mm	A	B	BB	D	DD	EE	KK	KV	KY	KW	MM	PL	V
40	M30×2	30	24	50	M12×1.25	Rc1/8	20	46	12.8	10	14	10	22
50	M36×2	36	32	60	M16×1.5	Rc3/8	24	55	15.8	12	20	12	25
63	M36×2	36	32	71	M16×1.5	Rc3/8	24	55	15.8	12	20	12	25

Stroke mm	25			40			50			80		
Bore size mm	BD	L	F ₂ (N)	BD	L	F ₂ (N)	BD	L	F ₂ (N)	BD	L	F ₂ (N)
40	57	150.5	338	72	179.5	338	82	202.5	338	112	274.5	338
50	61	171	528	76	211	528	86	235.5	528	116	326	528
63	61	178.5	897	76	224.5	897	86	248	897	116	352.5	897

Note: Thrust F₁ and Pull F₂ are theoretical forces at operating pressure 0.5MPa.

Light Double Piston Rod Cylinder

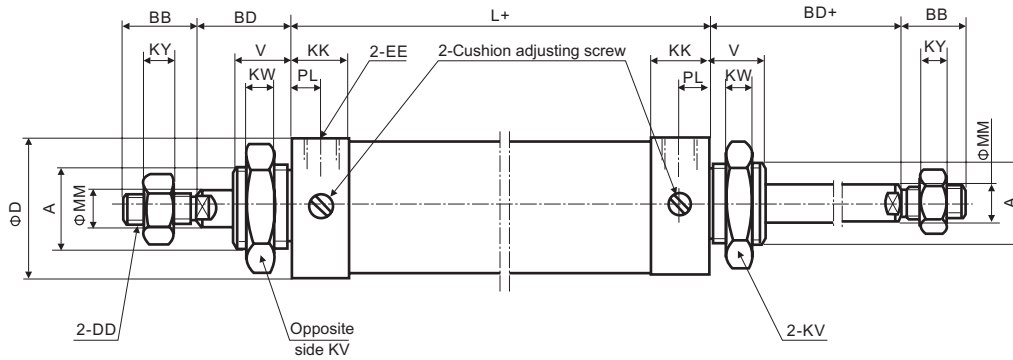
XQGA_{y2}(B_{y2}) Series (Φ40~Φ63)

Identical thrust, pull, moving direction, piston speed and stroke at the two sides.

Dimensions(mm)

SD Basic (XQGA_{y2} XQGB_{y2} Cylinder)

Symbol



Bore size mm	A	BB	BD	D	DD	EE	KK	KV	KY	KW	L	MM	PL	V
40	M30×2	24	32	50	M12×1.25	Rc1/8	20	46	12.8	10	94	14	10	22
50	M36×2	32	36	60	M16×1.5	Rc3/8	24	55	15.8	12	108	20	12	25
63	M36×2	32	36	71	M16×1.5	Rc3/8	24	55	15.8	12	109	20	12	25

Twin-rod Cylinder QTN Series (Φ10~Φ32)

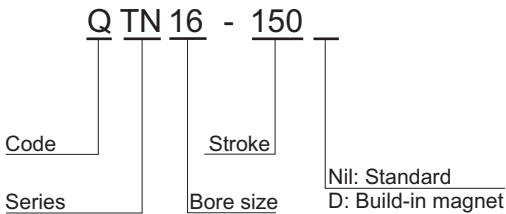


Bore size mm	10	16	20	25	32
Fluid	Filtered compressed air				
Acting type	Double acting				
Max. Operating pressure	0.8MPa				
Min. Operating pressure	0.1MPa				
Cushion	Rubber cushion				
Ambient temperature	5~60°C				
Fluid temperature	-10~+60°C				
Piston speed	100~500mm/s				
Non-rotating accuracy	±0.15°				
*Lubrication	Pro-lubrication in factory				
Port size	M5×0.8				

*If used, turbine oil *1 (ISO VG32) is recommended.

3

How to Order

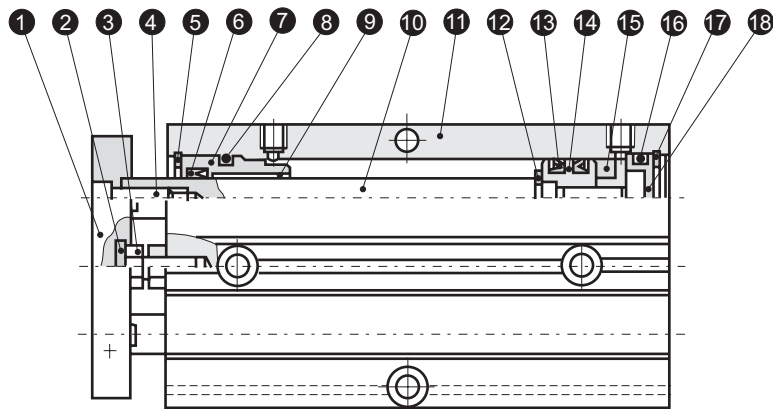


Standard Stroke / Auto Switch

Bore size mm	Standard stroke mm	Max. Stroke mm	Auto switch
10	10,20,30,40,50,60,70	70	AL-30R (Groove mounted)
16	10,20,30,40,50,60,70,	150	
20			
25	80,90,100,125,150		
32			

Note: Other strokes made to order

Construction

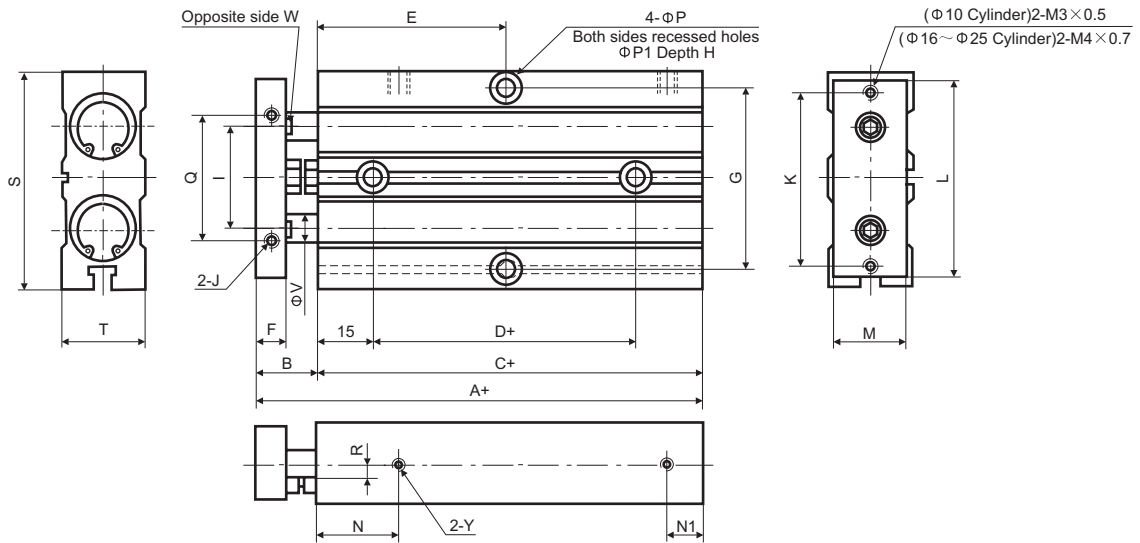


Symbol



Parts List

No.	Description	Material	No.	Description	Material
1	Plate	Aluminium alloy	10	Rod	Carbon steel
2	Rubber cushion	NBR	11	Housing	Aluminium alloy
3	Adjusting screw	Carbon steel	12	Rubber cushion	NBR
4	Hex. Socket head screw	Carbon steel	13	Y-ring	NBR
5	Retaining ring	Steel	14	Piston	Aluminium alloy
6	Rod seal	NBR	15	Magnet	Magnetic plastics
7	Front cover	Aluminium alloy	16	O-ring	NBR
8	O-ring	NBR	17	Retaining ring	Steel
9	Bushing	F4	18	Rear cover	Aluminium alloy

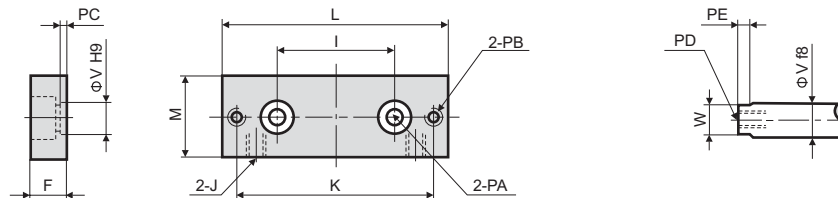
Dimensions (mm)
Basic Type
QTN


Bore size mm	A	B	C	D	E											F	G	
					10	20	30	40	50	60	70	80	90	100	125			150
10	58	12	46	10	30	30	35	40	45	50	55	-	-	-	-	-	6.5	34
16	68	15	53	20	30	35	40	45	50	55	60	65	70	75	87.5	100	8	47
20	78	20	58	20	35	35	40	45	50	55	60	65	70	75	87.5	100	10	55
25	81	19	62	30	40	40	45	50	55	60	65	70	75	80	92.5	105	10	66
32	108	30	78	35	45	50	55	60	65	70	75	80	85	90	102.5	115	17	83

Bore size mm	H	I	J	K	L	M	N	N1	P	P1	Q	R	S	T	V	W	Y
10	3.5	18	M3×0.5 Depth 5	34	41	16	15	10	3.4	6	26	3.5	42	17	6	5	M5
16	6	24	M4×0.7 Depth 5	47	53	20	20	10	4.5	7.5	34	4	54	21	8	7	M5
20	6	28	M4×0.7 Depth 5	55	61	24	25	12	4.5	7.5	44	5.5	62	25	10	8.5	M5
25	7	34	M5×0.8 Depth 6	66	72	29	30	12	4.5	7.5	56	6	73	30	12	10	M5
32	10	42	M8×1.25 Depth 10	83	94	38	40,*35	14	5.5	9	72	8	96	40	16	14	G1/8

* When S=10: N=35

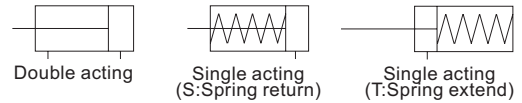
When in the exhaust position, the valve may be padlock secured.

Dimensions (Plate and Rod End)


Bore size mm	I	J	K	L	M	PA	PB	F	PC	PD	PE	V	W
10	18	M3×0.5 Depth 5	34	41	16	Φ4.2 Recessed hole, Φ7.5 Depth 4.5	M3×0.5	6.5	1	M4×0.7 Depth 7	3	6	5
16	24	M4×0.7 Depth 5	47	53	20	Φ4.3 Recessed hole, Φ7.5 Depth 4.5	M4×0.7	8	1	M4×0.7 Depth 10	3	8	6
20	28	M4×0.7 Depth 5	55	61	24	Φ6.3 Recessed hole, Φ10.5 Depth 6.5	M4×0.7	10	1	M6×1 Depth 12	3	10	8
25	34	M5×0.8 Depth 6	66	72	29	Φ6.5 Recessed hole, Φ10.5 Depth 6.5	M4×0.7	10	1	M6×1 Depth 12	3	12	10
32	42	M8×1.25 Depth 10	83	94	38	Φ8.5 Recessed hole, Φ14 Depth 10	M6×1	17	2	M8×1.25 Depth 15	3	16	14

Stopper Cylinder QRSQ Series (Φ20~Φ50)

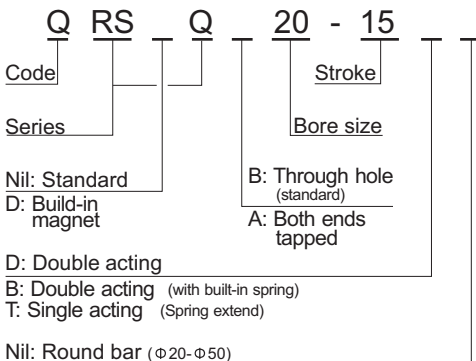
Symbol



Bore size mm	20	32	40	50
Acting type	Double acting, Double acting(built-in spring) / Single acting(Spring extend)			
Rod end configuration	Round bar, chamfered, roller	Round bar, chamfered, roller, lever type (with built-in shock absorber)		
Fluid	Filtered compressed air			
Max. Operating pressure	1.0MPa			
Ambient and fluid temperature	5~60°C			
Cushion	Both sides rubber cushion			
Stroke allowance	+1.5(mm)			
*Lubrication	Pro-lubrication in factory			
Mounting	Through hole, Both ends tapped			
Port size	G1/8			

*If used, turbine oil #1 (ISO VG32) is recommended.

How to Order



- Nil: Round bar (Φ20-Φ50)
- K: Non-rotating (Φ20-Φ50)
- R: Roller (Φ20-Φ50)
- L: Lever (with built-in shock absorber, non-adjustable.) (Φ32-Φ50)
- B: Lever (with built-in adjustable shock absorber.) (Φ32-Φ50)
- C: Lever (with built-in adjustable shock absorber, with cancel cap) (Φ32-Φ50)
- D: Lever (with built-in adjustable shock absorber, with locking mechanism) (Φ32-Φ50)
- E: Lever (with built-in adjustable shock absorber, with cancel cap and locking mechanism) (Φ32-Φ50)

Standard Stroke / Auto Switch

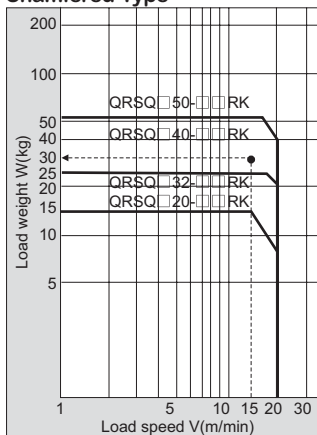
Bore size mm	Standard stroke mm	Auto switch
20	10 15 20	AL-72R (Groove mounted)
32		
40	20 25 30	
50		

Order example:

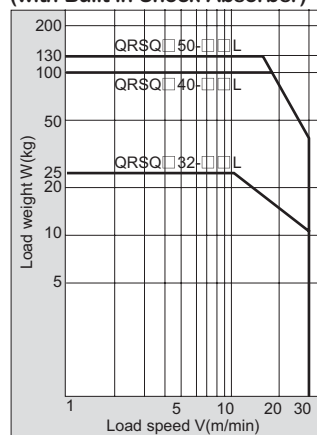
1. A cylinder with: bore size 20, stroke 15, through hole, double acting (with built-in spring), non-rotating.
Model: QRSQB20-15BK
2. A cylinder with: bore size 40, stroke 30, built-in magnet, both ends tapped, single acting (spring extend), lever (with built-in shock adjustable absorber, with cancel cap).
Model: QRSDQA40-30TC

Operating Range for Each Rod End Configuration

Roller Type / Round Bar Type / Chamfered Type

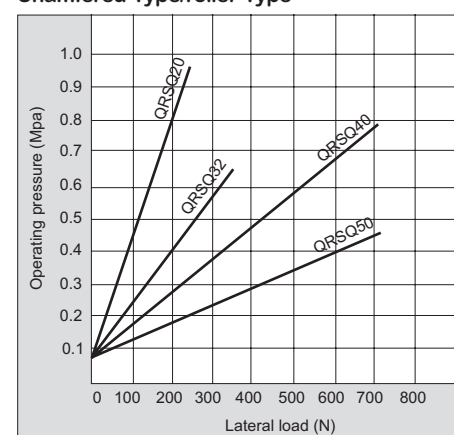


Lever Type (with Built-in Shock Absorber)



Lateral Load and Operating Pressure

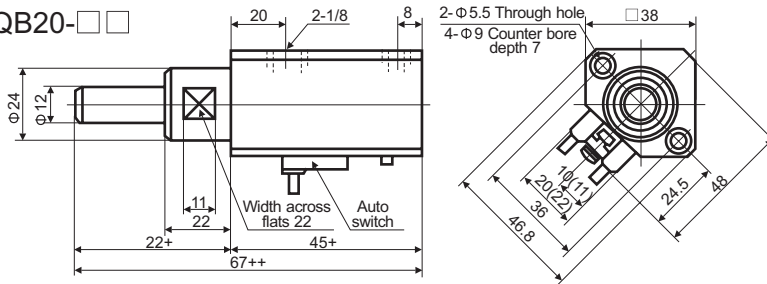
Round Bar Type / Chamfered Type/roller Type



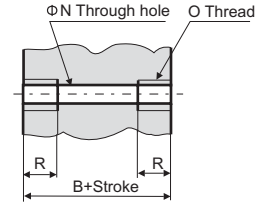
Dimensions (mm)

Round Bar Type

QRS□QB20-□□
Φ 20

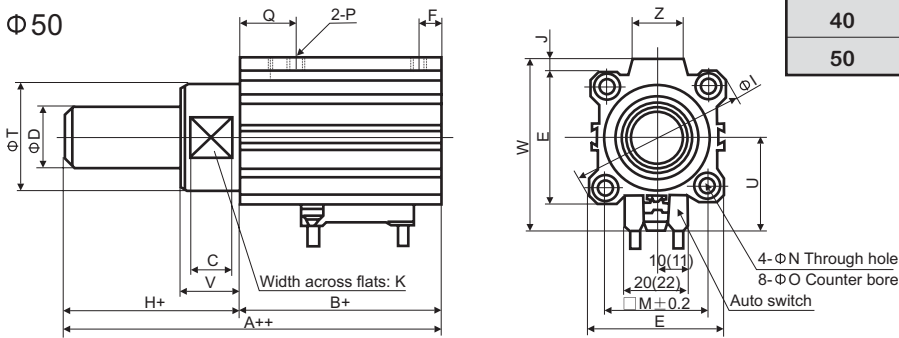


Both Ends Tapped: QRS□QA



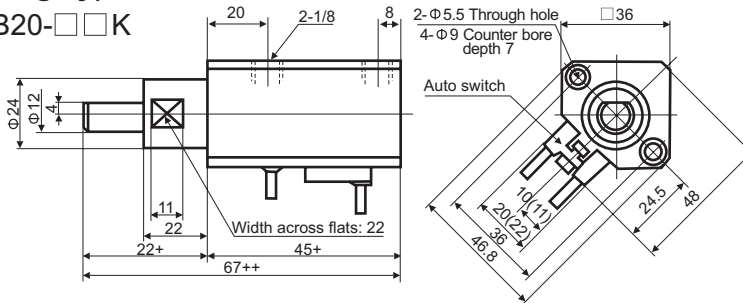
Bore size mm	B	N	O	R
20	45	5.5	M6×1	10
32	48	5.5	M6×1	10
40	52.5	5.5	M6×1	10
50	54	6.6	M8×1.25	14

QRS□QB□-□□□
Φ 32~Φ 50

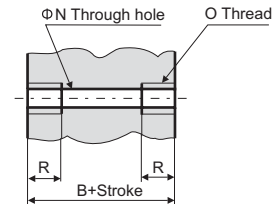


Non-rotating Type

QRS□QB20-□□□K
Φ 20

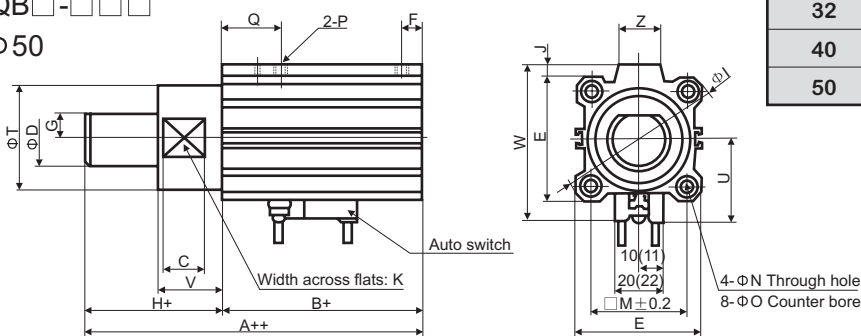


Both Ends Tapped: QRS□QA



Bore size mm	B	N	O	R
20	45	5.5	M6×1	10
32	48	5.5	M6×1	10
40	52.5	5.5	M6×1	10
50	54	6.6	M8×1.25	14

QRS□QB□-□□□□
Φ 32~Φ 50

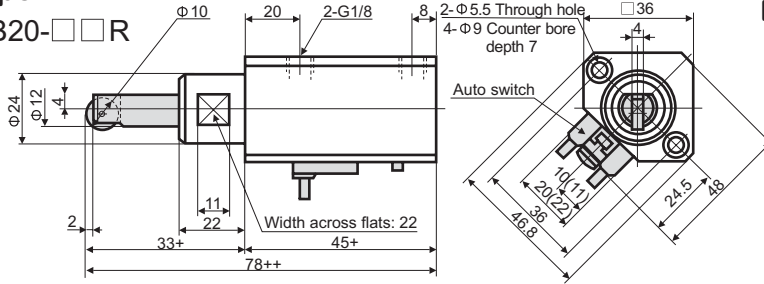


Bore size mm	A	B	C	D	E	F	G	H	I	J	K	M	N	O	P(G)	Q	R	T	U	V	W	Z
32	68	48	15	20	45	7.5	8	20	60	4.5	32	34	5.5	9 Depth 7	1/8	20	10	36	31.5	20	58.5	18
40	80.5	52.5	18	25	52	8	10	28	69	5	41	40	5.5	9 Depth 7	1/8	24.5	10	44	35	28	66	18
50	82	54	21	25	64	8	10	28	86	7	50	50	6.6	11 Depth 8	1/8	24.5	14	56	41	28	80	22

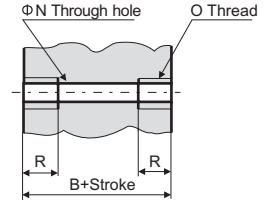
- Notes: 1. Dimensions for models without a auto switch are the same as the above.
 2. The figures show the dimensions of auto switch AL-72R.
 3. Parenthesized numbers indicate the dimensions of AL-72R.
 4. The figures show an extended piston rod.

Roller Type

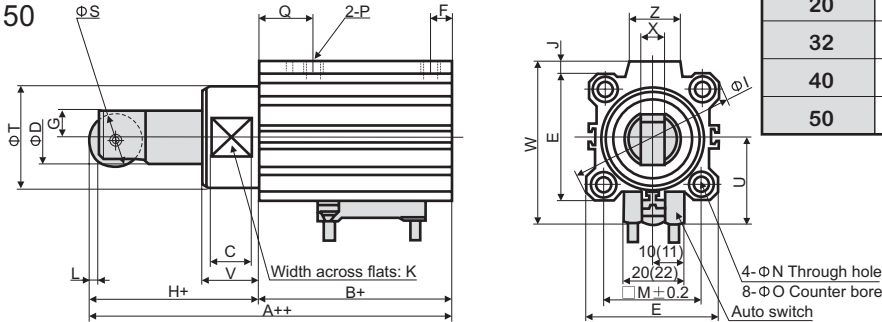
QRS□QB20-□□R
Φ20



Both Ends Tapped: QRS□QA



QRS□QB□-□□R
Φ32~Φ50

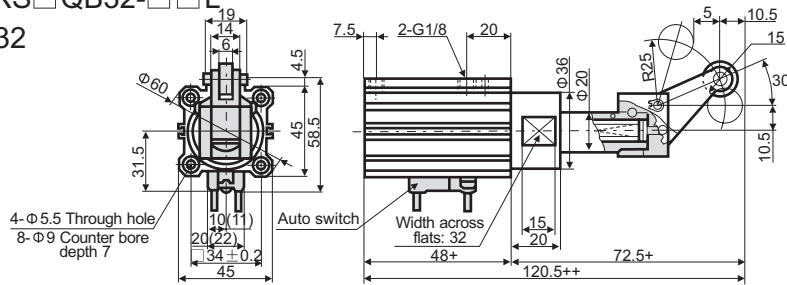


Bore size mm	B	N	O	R
20	45	5.5	M6×1	10
32	48	5.5	M6×1	10
40	52.5	5.5	M6×1	10
50	54	6.6	M8×1.25	14

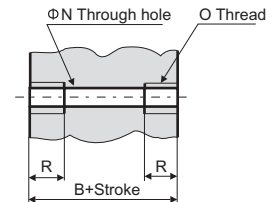
Bore size mm	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P (G)	Q	R	S	T	U	V	W	X	Z
32	87	48	15	20	45	7.5	8	39	60	4.5	32	3	34	5.5	9 Depth 7	1/8	20	10	18	36	31.5	20	58.5	8	18
40	105.5	52.5	18	25	52	8	10	53	69	5	41	4	40	5.5	9 Depth 7	1/8	24.5	10	24	44	35	28	66	9	18
50	107	54	21	25	64	8	10	53	86	7	50	4	50	6.6	11 Depth 8	1/8	24.5	14	24	56	41	28	80	9	22

Lever Type (with built-in shock absorber, non-adjustable.)

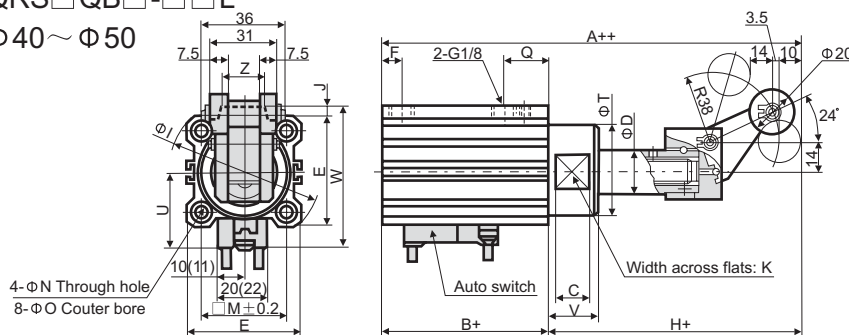
QRS□QB32-□□L
Φ32



Both Ends Tapped: QRS□QA



QRS□QB□-□□L
Φ40~Φ50



Bore size (mm)	B	N	O	R
32	48	5.5	M6×1	10
40	52.5	5.5	M6×1	10
50	54	6.6	M8×1.25	14

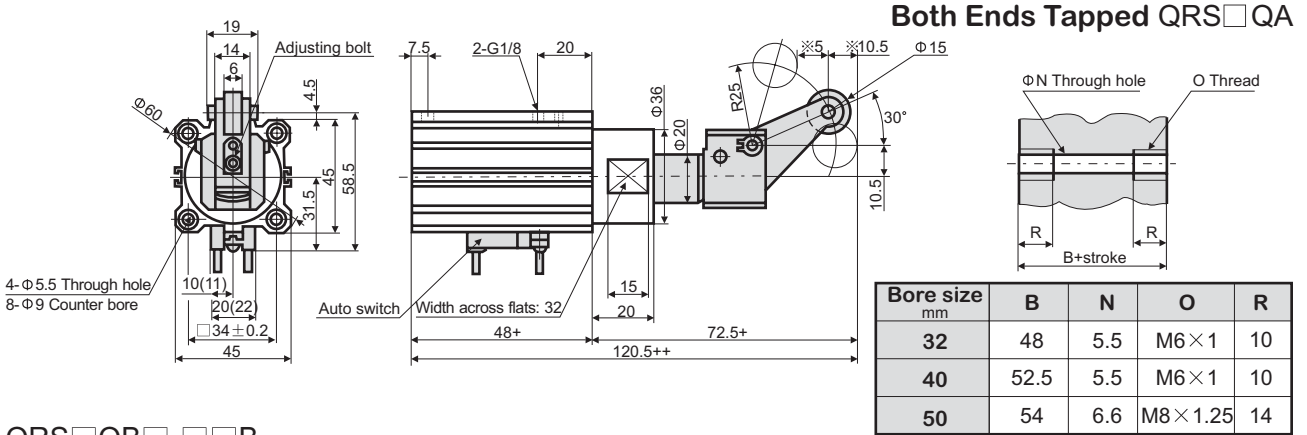
Bore size mm	A	B	C	D	E	F	H	I	J	K	M	N	O	Q	R	T	U	V	W	Z
40	152.5	52.5	18	25	52	8	100	69	5	41	40	5.5	9 Depth 7	24.5	10	44	35	28	66	18
50	154	54	21	25	64	8	100	86	7	50	50	6.5	11 Depth 8	24.5	14	56	41	28	80	22

- Notes: 1. Dimensions for models without a auto switch are the same as the above.
- 2. The figures show the dimensions of auto switch AL-72R.
- 3. Parenthesized numbers indicate the dimensions of AL-72R.
- 4. The figures show an extended piston rod.

Lever Type (with built-in adjustable shock absorber)

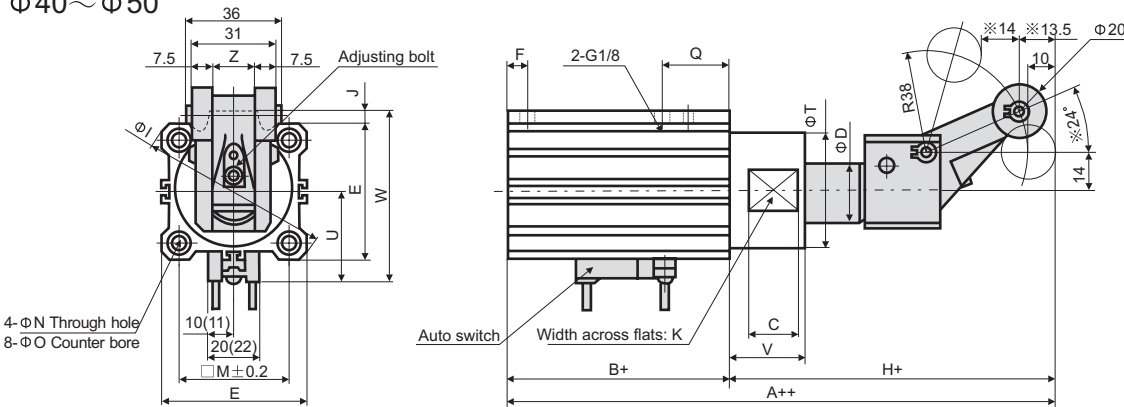
QRS□QB32-□□B

Φ32



QRS□QB□-□□B

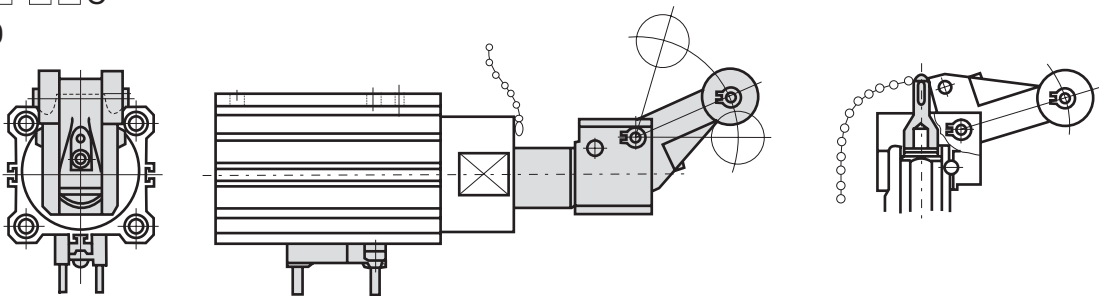
Φ40~Φ50



Lever Type (with built-in adjustable shock absorber, with cancel cap)

QRS□QB□-□□C

Φ32~Φ50



*Dimensions of models with cancel cap are the same as the above.

Bore size mm	A	B	C	D	E	F	H	I	J	K	M	N	O	Q	R	T	U	V	W	Z
40	152.5	52.5	18	25	52	8	100	69	5	41	40	5.5	9 Depth 7	24.5	10	44	35	28	66	18
50	154	54	21	25	64	8	100	86	7	50	50	6.5	11 Depth 8	24.5	14	56	41	28	80	22

Notes: 1. Dimensions for models without a auto switch are the same as the above.

2. The figures show the dimensions of auto switch AL-72R.

3. Parenthesized numbers indicate the dimensions of AL-72R.

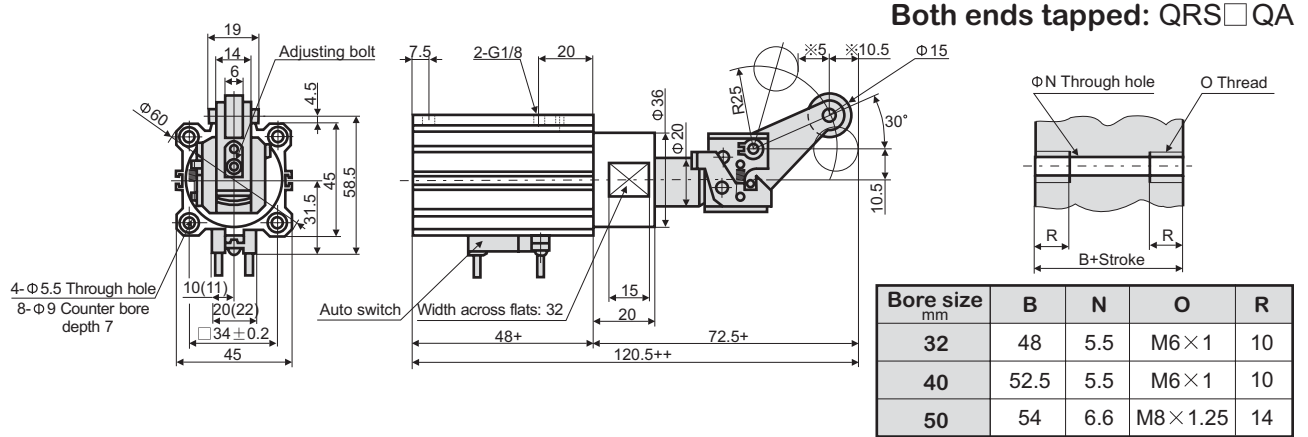
4. The figures show an extended piston rod.

5. The ※ section is subject to the adjusting bolt adjustment. The above figures show those when the absorbing effects are the best.

Lever Type (with built-in adjustable shock absorber, with locking mechanism.)

QRS□QB32-□□D

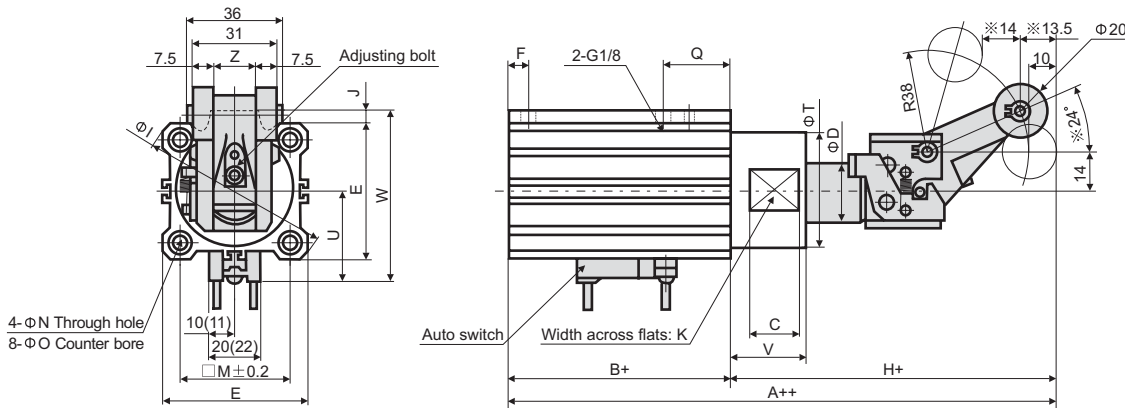
Φ 32



3

QRS□QB□-□□D

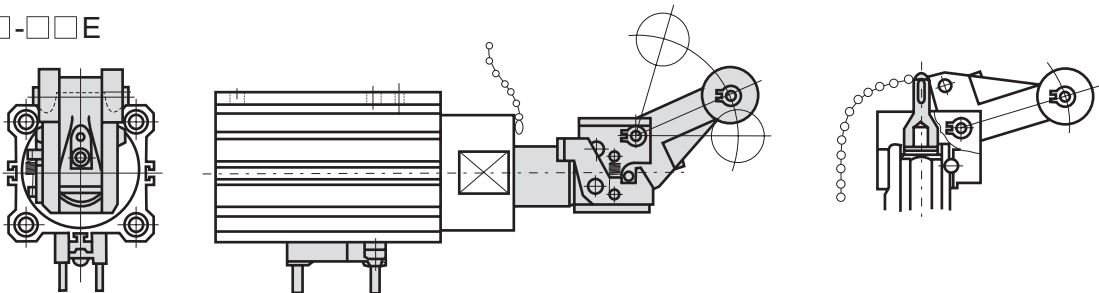
Φ 40~Φ 50



Lever Type (with built-in adjustable shock absorber, with cancel cap and locking mechanism.)

QRS□QB□-□□E

Φ 32~Φ 50



*Dimensions of models with cancel cap are the same as the above.

Bore size mm	A	B	C	D	E	F	H	I	J	K	M	N	O	Q	R	T	U	V	W	Z
40	152.5	52.5	18	25	52	8	100	69	5	41	40	5.5	9 Depth 7	24.5	10	44	35	28	66	18
50	154	54	21	25	64	8	100	86	7	50	50	6.5	11 Depth 8	24.5	14	56	41	28	80	22

Notes: 1. Dimensions for models without a auto switch are the same as the above.

2. The figures show the dimensions of auto switch AL-72R.

3. Parenthesized numbers indicate the dimensions of AL-72R.

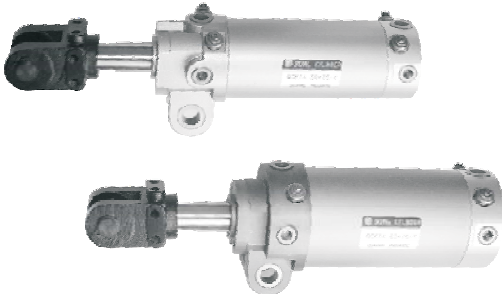
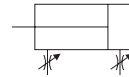
4. The figures show an extended piston rod.

5. The ※ section is subject to the adjusting bolt adjustment. The above figures show those when the absorbing effects are the best.

Clamp Cylinder

QCKA Series ($\Phi 40 \sim \Phi 63$)

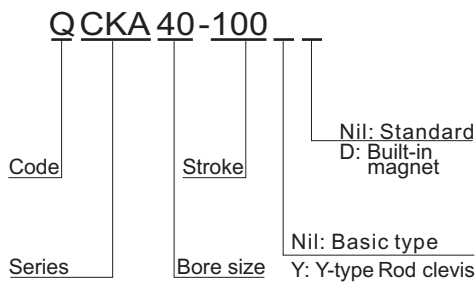
Symbol



Bore size mm	40	50	63
Fluid	Filtered compressed compressed air		
Acting type	Double acting		
Max. Operating pressure	1.0MPa		
Min. Operating pressure	100KPa		
Ambient and fluid temperature	5~60°C		
Piston speed	50~500mm/s		
Cushion	Air cushion		
Stroke allowance	Stroke $^{+1}_0$ (mm)		
Lubrication	Pro-lubrication in factory		
Mounting style	*Double clevis (Basic type only)		

* With pin and split pins.

How to Order



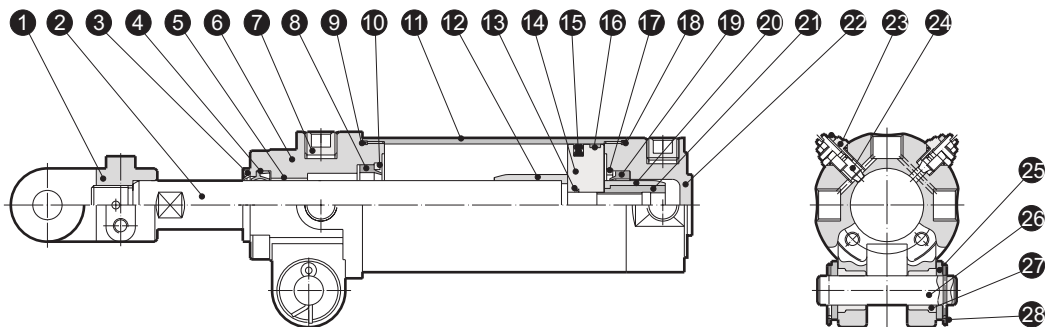
Standard Stroke / Cushion Stroke / Auto Switch

Bore size mm	Standard stroke mm	Cushion stroke mm		Magnetic switch	Mounting parts
		Front	Rear		
40	50 75 100 125 150	30	25	Consult factory	
50			25		
63			30		

Note:

1. Voltage and current should not be overloaded.
2. Auto switch should not be linked directly to power, should be linked in series a load.
3. Auto switch should not be close to strong magnetic bodies or magnetic shield is used.

Construction



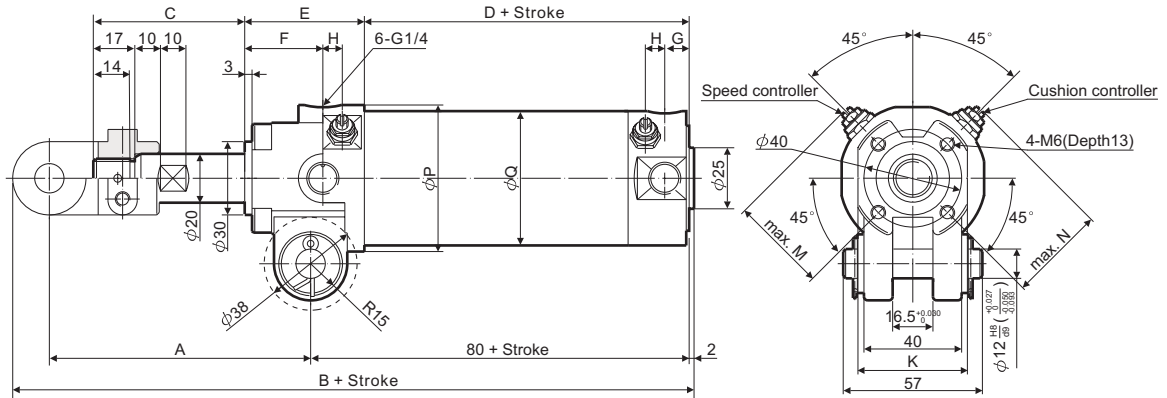
Parts List

No.	Description	Material
1	Y-type Rod clevis	Casting steel
2	Piston Rod	Carbon steel
3	Scraper ring	PTFE
4	Rod seal	FPM
5	Bushing	PTFE
6	Front cover	Die-casting aluminium
7	Plug	Brass
8	Cushion seal	NBR
9	O-ring	NBR
10	Back-up ring	Carbon steel
11	Tube	Aluminium alloy
12	Front cushion piston	POM
13	O-ring	NBR
14	Piston	Aluminium alloy

No.	Description	Material
15	8-ring	NBR
16	Wearing ring	F4
17	Back-up ring	Carbon steel
18	O-ring	NBR
19	Cushion seal	NBR
20	Rear cushion piston	POM
21	Piston nut	Carbon steel
22	Rear cover	Die-casting aluminium
23	Adjusting screw set	Brass
24	Adjusting screw	Brass
25	Washer	Carbon steel
26	Pin	Carbon steel
27	Bushing	Gunmetal
28	Split pins	Carbon steel

Dimensions (mm)

QCKA (∅40 ~ ∅63)



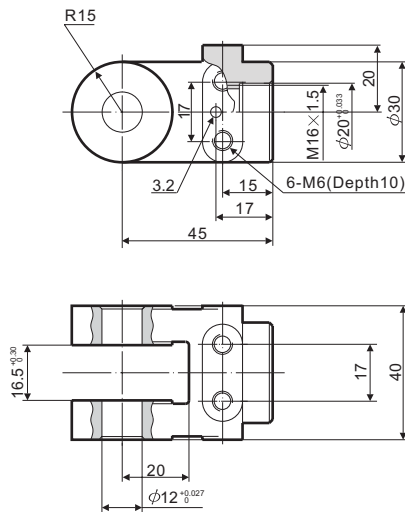
3

Bore size mm	A	B	C	D	E	F	G	H	K	M	N	P	Q
40	97	194	52	55	52	35	10	5	45	44	34	52	47
50	97	194	52	58	49	32	10	7	55	39	38	60	55
63	97	194	52	58	49	34	12	5.5	69	45	44	74	69

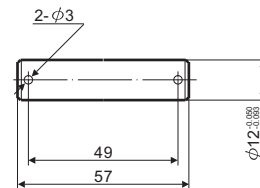
Standard Stroke / Dimensions (mm)

Code Stroke mm	A					B					C				
	50	75	100	125	150	50	75	100	125	150	50	75	100	125	150
40	97	107	115	128	128	194	204	212	225	225	52	62	70	83	83
50	97	107	115	128	128	194	204	212	225	225	52	62	70	83	83
63	97	107	115	128	128	194	204	212	225	225	52	62	70	83	83

Y-type Rod Clevis



Pin of Rod Clevis



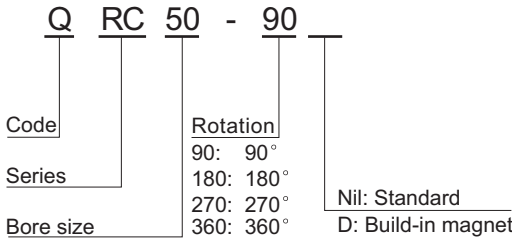
Rotary Cylinder QRC Series (Φ40~Φ125)

Symbol



Bore size mm	40	50	63	80	100	125
Fluid	Filtered compressed air					
Acting type	Double acting					
Max. Operating pressure	1.0MPa					
Min. Operating pressure	0.1MPa					
Ambient temperature	5~60°C					
Rotation	90° , 180° Made to order, any degree ≤360°					
Adjustable angle	±7°					
Increment of A per 90° of rotation	63 (mm)		75.5 (mm)		100.5 (mm)	
*Lubrication	Pro-lubrication in factory for cylinder tube / grease should be injected onto racks					
Port size	G1/4		G3/8		G1/2	

How to Order

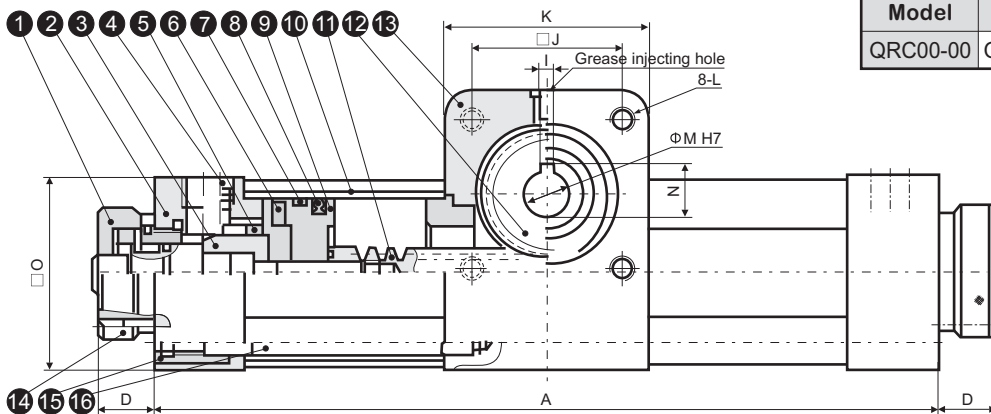


*If used, turbine oil #1 (ISO VG32) is recommended.

Theoretical Output Torque Table (Nm)

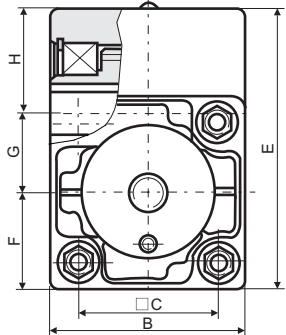
Bore size mm	0.1MPa	0.2MPa	0.3MPa	0.4MPa	0.5MPa	0.6MPa	0.7MPa	0.8MPa	0.9MPa	1.0MPa
40	2	4	6	8	10	12	14	16	18	20
50	3.1	6.2	9.3	12.4	15.5	18.6	21.7	24.8	27.9	31
63	5.9	11.8	17.7	23.6	29.5	35.4	41.3	47.2	53.1	59
80	9.6	19.2	28.8	38.4	48	57.6	67.2	76.8	86.4	96
100	20	40	60	80	100	120	140	160	180	200
125	31.3	62.6	93.9	125.2	156.5	187.8	219.1	250.4	281.7	313

Construction / Parts List / Dimensions (mm)



Auto Switch

Model	Auto Switch	Mounting parts
QRC00-00	QCK2400.QCK2422	BT-05



No.	Description	Material	No.	Description	Material
1	Adjusting knob	Carbon steel	9	Piston	Aluminium alloy
2	End cover	Die casting aluminium	10	Cylinder tube	Aluminium alloy
3	Cushion piston	Aluminium alloy	11	Rack	Carbon steel
4	Adjusting screw	Brass	12	Pinion shaft	Carbon steel
5	Cushion seal	NBR / steel	13	Housing	Aluminium alloy
6	Magnet	Magnetic plastics	14	Tie bolt	Carbon steel
7	Bushing ring	F4	15	Link rod nut	Carbon steel
8	8-ring	NBR	16	Link rod	Carbon steel

Bore size mm	A(90°)	A(180°)	B	C	D	E	F	G	H	I	J	K	L	M	N	O
40	252	315	56	38	19.3	89	28.5	26.5	34	5	50	68	M8	15	17.3	52
50	274	337	66	46.5	19	94	33.5	26.5	34	5	50	68	M8	15	17.3	65
63	314	389.5	80	56.5	20.5	111	40	31	40	6	60	80	M8	20	22.8	75
80	314	389.5	98	72	30	120	49	31	40	6	60	80	M10	20	22.8	95
100	400	482	118	89	30	153	59	41	53	8	80	102	M10	25	28.3	114
125	392.5	493	142	110	30	165	71	41	53	8	80	102	M12	25	28.3	140

Tandem Cylinder

XQGA(B)J Series ($\Phi 32 \sim \Phi 320$)

Two cylinders (XQGA or XQGB) with identical stroke and a common piston rod form a tandem cylinder.

The tandem cylinder has twice pull and its thrust is the sum of the thrust and pull of the original cylinder. Can be used as a general booster cylinder.



Specifications

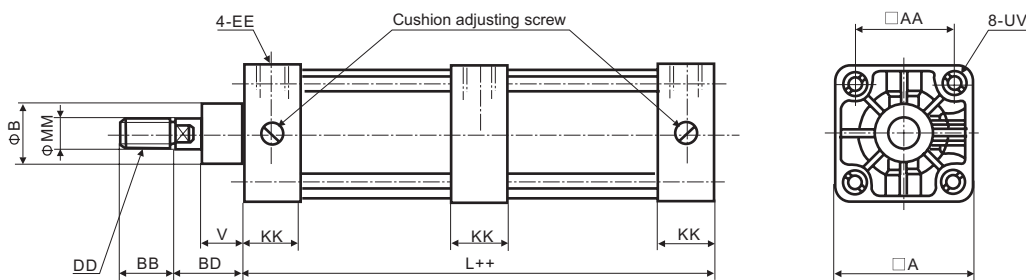
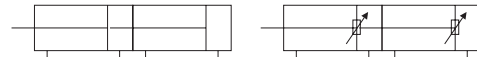
Fluid	Filtered compressed air
Max. Operating pressure	1.0MPa
Min. Operating pressure	0.1MPa
Fluid temperature	-10~+60°C
Ambient temperature	5~60°C
Piston speed	50~500mm/s
Stroke allowance	0~250+1.0 251~1000+1.5 1001~2000+2.0(mm)

3

Dimensions(mm)

SD Basic (XQGAJ, XQGBJ Cylinder)

Symbol



Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	168	12	M5	9
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	171	16	M6	12
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	175	20	M6	15
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	175	20	M8	15
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	208	25	M8	18
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	228	30	M10	20
125	140	110	60	54	65	M27×2	G1/2	46	274	32	M12	45
160	180	140	65	72	80	M36×2	G3/4	50	310	40	M16	58
200	220	175	75	72	95	M36×2	G3/4	50	310	40	M16	60
250	270	220	90	84	105	M42×2	G1	52	348	50	M20	67
320	340	270	110	96	120	M48×2	G1	58	382	60	M24	82

Multi-Position Cylinder XQGA(B)P Series (Φ32~Φ320)

Two double acting cylinders (XQGA or XQGB) with stroke S1 and S2 respectively end to end rigidly connected together form a multi-position cylinder.

When one piston rod is fixed the multi-position cylinder gives three or four positions.



Position 1: Both piston rods retract.

Position 2: One piston rod extends with stroke S1

Position 3: The other piston rod extends with stroke S2. (If S1=S2 Position 3 coincides with Position2)

Position 4: Both piston rods extend.

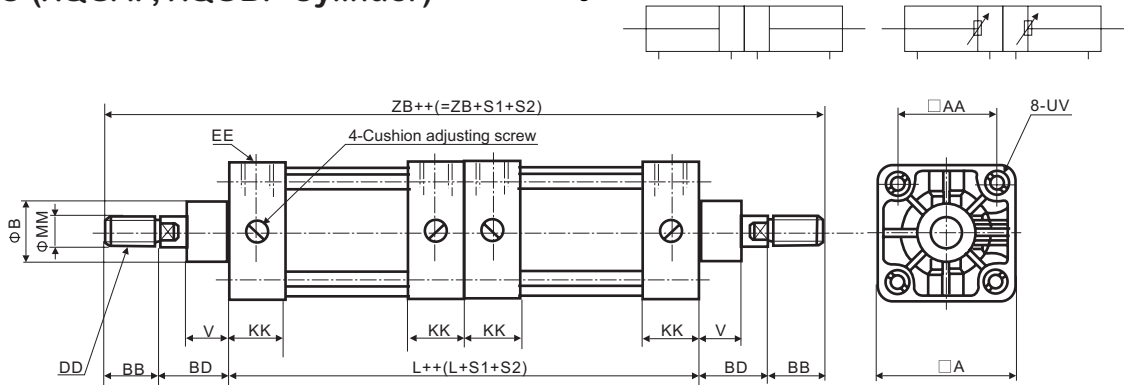
Specifications

Fluid	Filtered compressed air
Max. Operating pressure	1.0MPa
Min. Operating pressure	0.1MPa
Fluid temperature	-1~+60℃
Ambient temperature	5~60℃
Piston speed	50~500mm/s
Stroke allowance	0~250+1.0 251~1000+1.5 1001~2000+2.0(mm)

Dimensions(mm)

SD Basic (XQGAP, XQGBP Cylinder)

Symbol



Bore size mm	A	AA	B	BB	BD	DD	EE	KK	L	MM	UV	V	ZB
32	40	30	24.5	22	20	M10×1.25	Rc1/8	26	194	12	M5	9	278
40	53	38	35.5	30	33	M14×1.5	Rc1/4	27	198	16	M6	12	324
50	62	46	40.5	35	37	M18×1.5	Rc3/8	27	202	20	M6	15	346
63	78	57	40.5	35	37	M18×1.5	Rc3/8	27	202	20	M8	15	346
80	94	73	46.5	40	47	M22×1.5	Rc1/2	34	242	25	M8	18	416
100	114	89	51.5	45	64	M27×1.5	Rc1/2	36	264	30	M10	20	482
125	140	110	60	54	65	M27×2	G1/2	46	320	32	M12	45	558
160	180	140	65	72	80	M36×2	G3/4	50	360	40	M16	58	664
200	220	175	75	72	95	M36×2	G3/4	50	360	40	M16	60	684
250	270	220	90	84	105	M42×2	G1	52	400	50	M20	67	786
320	340	270	110	96	120	M48×2	G1	58	460	60	M24	82	872

Locking Cylinder

XQGBSJ(E、P、D) Series (Φ32~Φ320)

The locking cylinder is a general double acting cylinder equipped with a locking mechanism at its front part. Under various locking mechanisms, the piston rod are locked in any stroke position. There are spring locking (released by air), air locking and air-spring locking. The locking cylinder is suitable for horizontal or vertical load required safety controlling or position memory.



Model: Spring locking XQGBSJE;
 Air locking XQGBSJP;
 Air-spring locking XQGBSJD.

Specifications

Fluid	Filtered compressed air		
Max. Operating pressure	1.0MPa		
Min. Operating pressure	0.1MPa		
Fluid temperature	-10~+60℃		
Ambient temperature	5~60℃		
Piston speed	50~500mm/s		
Stroke allowance	0~250+1.0	251~1000+1.5	1001~2000+2.0(mm)

Locking Control Air Pressure

Locking type	Spring	Air-spring	Air
Locking pressure	—	≥0.3MPa	≥0.4MPa
Release pressure	≥0.4MPa		≥0.2MPa
Max. Operating pressure	1.0 MPa		
Locking direction	Double		

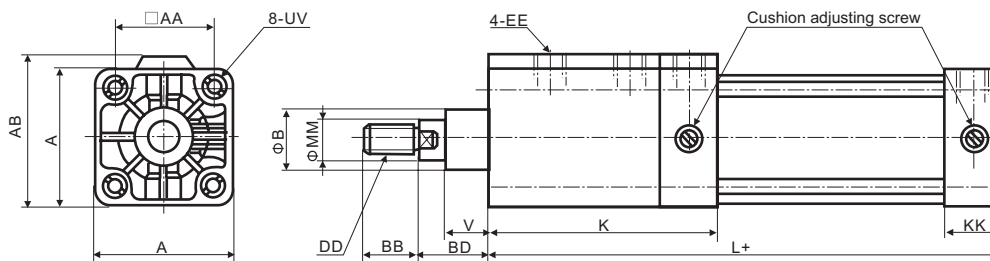
Standard Stroke

Bore size mm	Standard stroke mm	Long stroke mm
40	25~500	501~1000
50	25~600	601~1200
63		
80	25~700	701~1400
100		701~1500

Dimensions(mm)

SD Basic (XQGBSJE, XQGBSJP, XQGBSJD Cylinder)

Symbol



Bore size mm	A	AA	AB	B	BB	BD	DD	EE	K	KK	L	MM	UV	V
40	53	38	45	35.5	30	33	M14×1.5	Rc1/4	96.5	27	168.5	16	M6	12
50	62	46	53	40.5	35	37	M18×1.5	Rc3/8	111.5	27	185.5	20	M6	15
63	78	57	64	40.5	35	37	M18×1.5	Rc3/8	111.5	27	185.5	20	M8	15
80	94	73	82	46.5	40	47	M22×1.5	Rc1/2	128	34	215	25	M8	18
100	114	89	98	51.5	45	64	M27×1.5	Rc1/2	140	36	236	30	M10	20

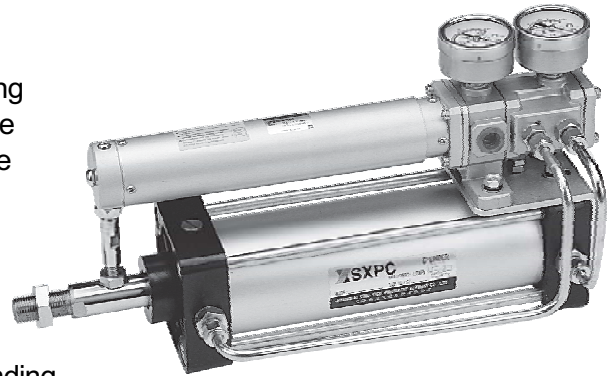
Servo Cylinder

XQGASF Series ($\Phi 63 \sim \Phi 80$)

The servo cylinder is the combination of a self-lubricating low friction double acting cylinder and an air servo valve as shown in the diagram. When the control air pressure (P_c) of a certain value is input, due to the amplifying function of the nozzle baffle a differential pressure occurs between the two sides of the valve element and it causes a displacement of the piston.

The forces of the piston rod and the feed back spring finally come to a balance and thus there is a corresponding relation between the value of the control air pressure (P_c) and the displacement of the piston rod(S). The aim of precision positioning is reached.

The XQGASF servo cylinder gives reliable operation and precision positioning and is suitable for the servo control or positioning mechanisms used in tobacco industry, textile industry, paper industry, chemical industry, petroleum refining industry, metallurgical industry, coal gas industry, power station, etc.



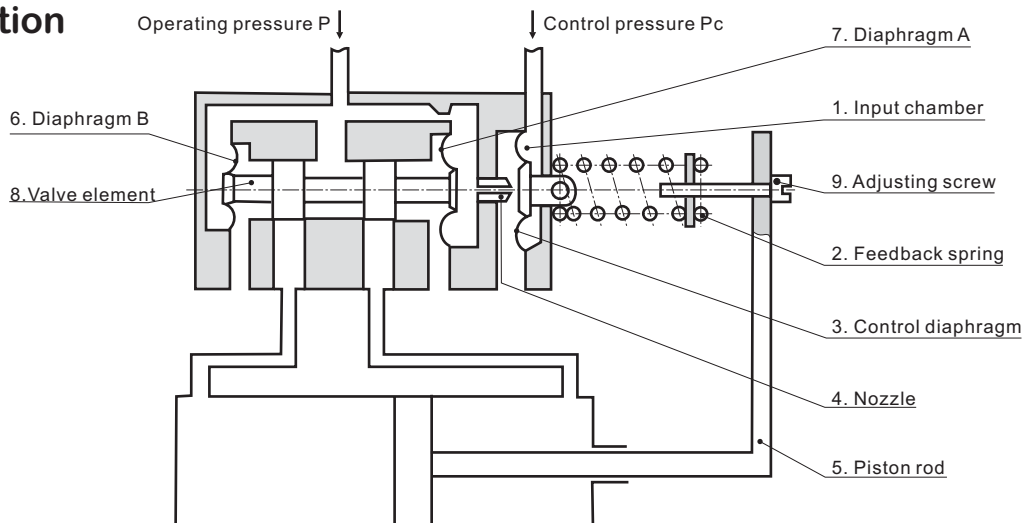
Specifications

Operating pressure	0.3~0.7MPa
Control pressure	0.02~0.1MPa
Fluid temperature	-10~+60°C
Ambient temperature	5~60°C
Sensitivity (within the whole stroke range)	$\leq 0.5\%$
Linearity (within the whole stroke range)	$\leq 0.2\%$
Hysteresis (within the whole stroke range)	$< 1\%$
Repeatability (within the whole stroke range)	$\leq 1\%$
Air consumption	$\leq 22\text{cm}^3/\text{min}$
Fluid	Filtered compressed air $< \mu\text{m}$
Port size	G1/4 (Gauge port G1/8)

Standard Stroke

Bore size mm	Standard stroke mm
63	50、100、150、200、250、300
80	

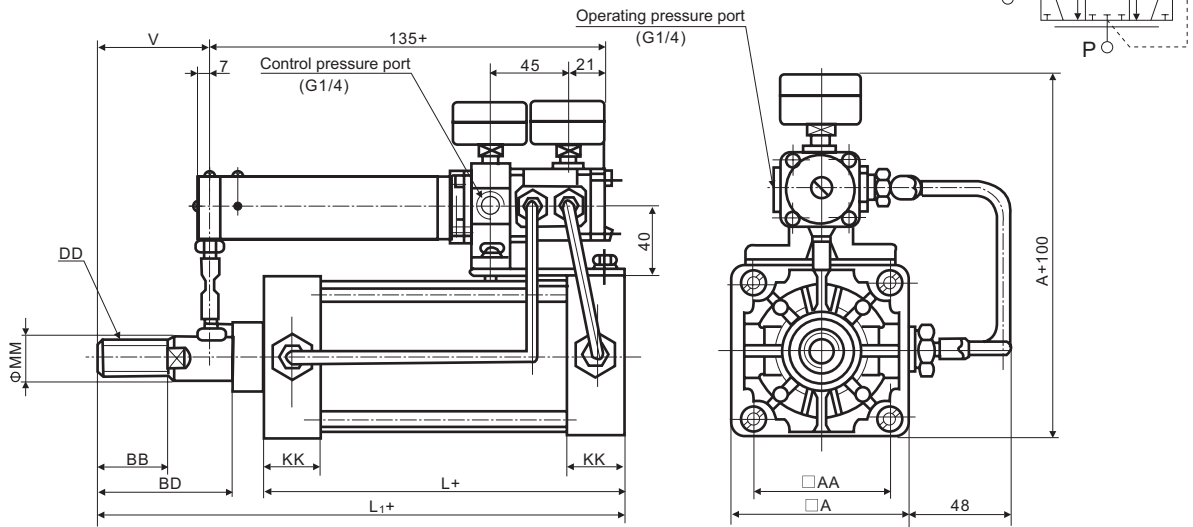
Construction



Dimensions(mm)

SD Basic (XQGASF Cylinder)

Symbol



Bore size mm	A	AA	B	BB	BD	DD	KK	L	L ₁	MM	V
63	78	57	40.5	32	70.5	M16×1.5	27	94	179.5	20	58
80	94	73	46.5	40	78	M20×1.5	33.5	112	208	25	65

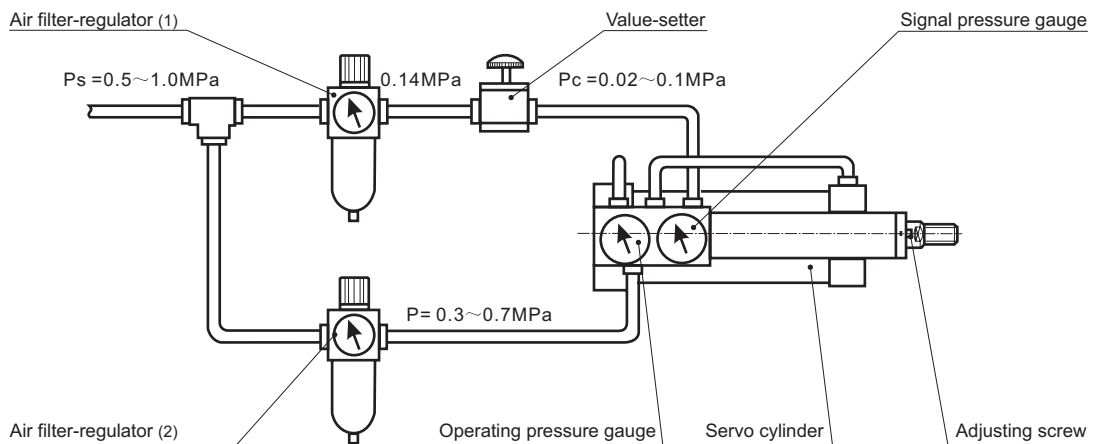
Installation and Connection:

Various mountings can be used based on different requirements. The circuit is shown as the diagram.

Operation:

Pressure regulation: Adjust the pressures at the value shown in the diagram.

Position regulation: According to the operating requirements, firstly set the adjusting screw to get the initial position of the piston rod; then adjust the control pressure value-setter to get different rod positions.



Precaution:

Before installation clean the piping system by compressed air and make sure that there are no impurities and oil contamination in it (servo cylinder does not need lubrication). Do not disassemble the servo cylinder arbitrarily to avoid damage and contamination.