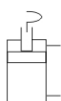




Symbol



Theoretical clamping force

Bore size (mm)	16		20		25		32	
Rod size(mm)	8		12		12		16	
Acting type	IN (Clamp)	OUT (Release)	IN (Clamp)	OUT (Release)	IN (Clamp)	OUT (Release)	IN (Clamp)	OUT (Release)
Operating pressure (MPa)	0.1	15.1	20.1	31.4	37.8	49.1	60.3	80.4
	0.2	30.2	40.2	62.8	75.6	98.2	120.6	160.8
	0.3	45.2	60.3	94.2	113.3	147.3	181.0	241.3
	0.4	60.3	80.4	125.7	151.1	196.3	241.3	321.7
	0.5	75.4	100.5	157.1	188.9	245.4	301.6	402.1
	0.6	90.5	120.6	188.5	226.7	294.5	361.9	482.5
	0.7	105.6	140.7	219.9	264.4	343.6	422.2	563.0
	0.8	120.6	160.8	251.3	302.2	392.7	482.5	643.4

Bore size (mm)	40		50		63	
Rod size(mm)	16		20		20	
Acting type	IN (Clamp)	OUT (Release)	IN (Clamp)	OUT (Release)	IN (Clamp)	OUT (Release)
Operating pressure (MPa)	0.1	105.6	125.7	164.9	196.3	280.3
	0.2	211.1	251.3	329.9	392.7	560.6
	0.3	316.7	377.0	494.8	589.0	840.9
	0.4	422.2	502.7	659.7	785.4	1121.2
	0.5	527.8	628.3	824.7	981.7	1404.5
	0.6	633.3	754.0	989.6	1178.1	1681.9
	0.7	738.9	879.6	1154.5	1374.4	1962.2
	0.8	844.5	1005.3	1319.5	1570.8	2242.5

Product feature

- 1、It can be used on welding fixture, the QPQ surface treatment prevent piston rod hurt by welding slag;
- 2、The front cover with stainless dust scraping ring, can keep the dust and welding slag out, protect cylinder inside parts
- 3、 $\phi 40 \sim \phi 63$ bore size have special type can be used in high magnetic fields;
- 4、The mounting dimension of body is the same as ACQ series, can use ACQ series' accessories

Ordering code

QCK - L - 32 X 20 - S - FB - P									
Rotation direction				Mounting type					
L: Push and turn left				Blank: non bracket					
R: Push and turn right				FB: FB type				②	
Model		Bore size		Magnet		①			
QCK: Rotary clamp cylinder				S: With normal magnet					
				HS: With strong magnet				③	
Clamping stroke								Thread type	
Bore size		Clamp stroke						P: PT	
φ 16~ φ 25		10、20、30						T: NPT	
φ 32~ φ 63		10、20、30、50						G: G	

Note: ① Only $\phi 40$, $\phi 50$, $\phi 63$ bore size cylinder have the strong magnet type.
 ② Back flange is same as ACQ series.
 ③ When the thread is M5 type, the code is blank.

Specification

Bore size(mm)	16	20	25	32	40	50	63
Acting type	Double acting type						
Fluid	Air(to be filtered by 40 μ m filter element)						
Operating pressure	0.15 ~ 1.0MPa (23 ~ 145psi) (1.5 ~ 10bar)						
Proof pressure	1.5MPa (215psi) (15bar)						
Temperature	-20 ~ 80℃						
Speed range	30 ~ 300mm/s						
Rotation angle	90 ° ± 10°						
Rotation direction	Turn left or turn right						
Rotation stroke (mm)	7.5	9.5		15		19	
Clamping stroke (mm)	10、20、30			10、20、30、50			
Stroke tolerance (mm)	+1.0 0						
Cushion type	Bumper						
Port size ①	M5X0.8			1/8"		1/4"	

Note①: PT thread, NPT thread and G thread are available.

The definition of rotation direction and angle

QCKL
Clamping turn left

QCKR
Clamping turn right

Retracted stroke end(Clamp)

Levorotary(QCKL):
When the piston of cylinder moves downward, the swivel arms moves anticlockwise, this is called levorotary.

Rotary 90°

Clamp

The order code is L

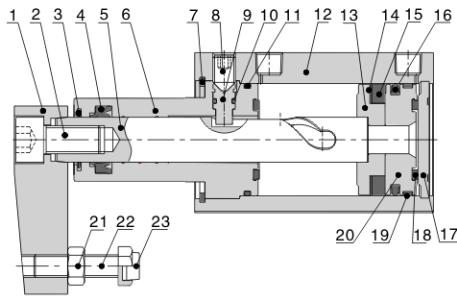
Dextrorotary(QCKR):
When the piston of cylinder moves downward, the swivel arms moves clockwise, this is called dextrorotary.

Rotary 90°

Clamp

The order code is R

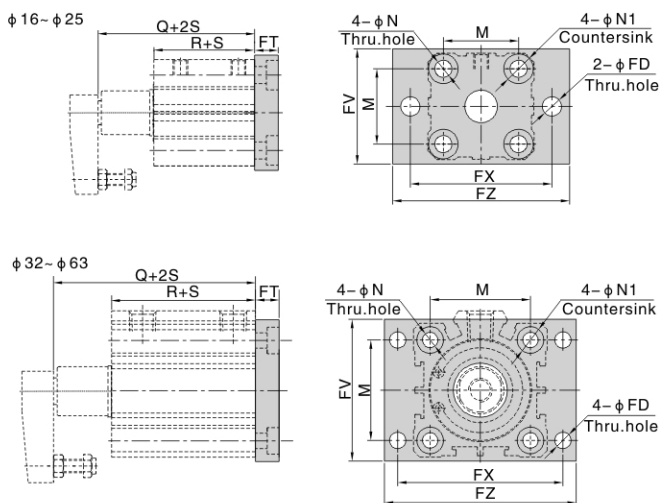
Inner structure



No.	Item	Material	No.	Item	Material
1	Rocker	Free cutting steel	13	Magnet holder	Brass (φ 16) Aluminum alloy (Other)
2	Screw	Carbon steel	14	Magnet washer	NBR
3	Dust scraping ring	Stainless steel (φ 16 series don't have)	15	Magnet	Sintered metal (Neodymium-iron-boron) (φ 16-25) Plastic (Other)
4	Front cover packing	NBR	16	Piston O-ring	NBR
5	Piston rod (left/right)	SCr440	17	Back cover	Aluminum alloy
6	Front cover	Aluminum alloy	18	Bumper	TPU (φ 16-25) NBR (Other)
7	C-clip	Spring steel	19	Wear ring	PA66+Ceramic fiber (φ 16-32 series don't have)
8	Screw	Carbon steel	20	Piston	Brass (φ 16) Aluminum alloy (Other)
9	Operating screw	SCr440	21	Screw	Carbon steel
10	O-ring	NBR	22	Fixing screw	Free cutting steel
11	O-ring	NBR	23	Bumper	PTFE (φ 16-40) POM (Other)
12	Body	Aluminum alloy			

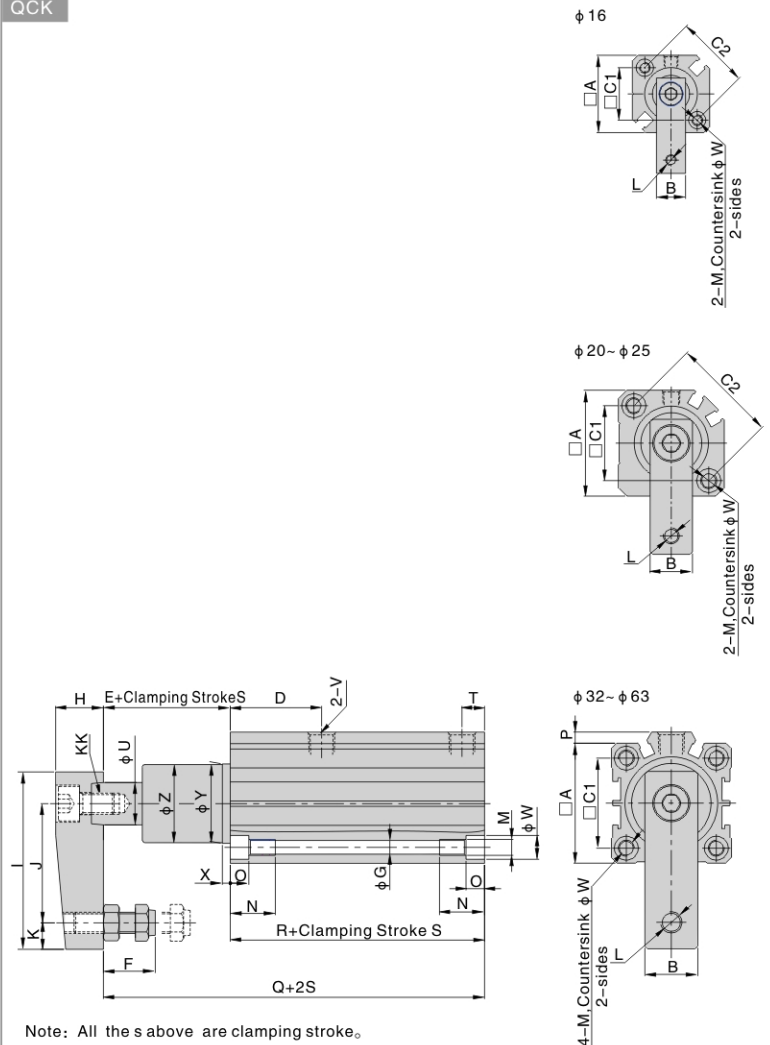
Dimensions

QCK-FB



Item Bore size	R	Q	M	N	N1	FD	FT	FV	FX	FZ
16	35.5	46	20	4.5	7.5	4.5	5.5	30	45	55
20	62	70	25.5	6.5	10.5	6.5	8	39	48	60
25	63	71	28	6.5	10.5	6.5	8	42	52	64
32	71.5	89	34	6.5	10.5	5.5	8	48	56	65
40	65	90	40	6.5	10.5	5.5	8	54	62	72
50	76.5	107.5	50	8.5	13.5	6.5	9	67	76	89
63	80	110.5	60	10.5	16.5	9	9	80	92	108

QCK



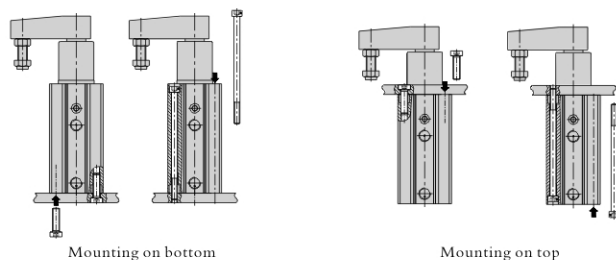
Note: All the s above are clamping stroke.

Item Bore size	A	B	C1	C2	D	E	F	G	H	I	J	K	KK	L
16	29	11	20	28	15	10.5	7 ~ 13	3.4	13	36	25	5	M5 X0.8	M4X0.7
20	36	16	25.5	36	30	8	9.5 ~ 20.5	5.2	16	51	35	7	M8 X1.25	M6X1.0
25	40	16	28	40	30	8	9.5 ~ 20.5	5.2	16	51	35	7	M8X1.25	M6X1.0
32	45	19	34	\	34.5	17.5	13.5 ~ 25.5	5.2	19	67	45	10	M10X1.5	M8X1.25
40	53	19	40	\	26.5	25	13.5 ~ 25.5	5.2	19	67	45	10	M10X1.5	M8X1.25
50	64	25.4	50	\	34	31	14.5 ~ 30	6.5	25.4	88	65	10	M12X1.75	M10X1.5
63	77	25.4	60	\	34.5	30.5	14.5 ~ 30	8.7	25.4	88	65	10	M12X1.75	M10X1.5

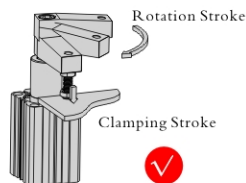
Item Bore size	M	N	O	P	Q	R	T	U	V	W	X	Y	Z
16	M4X0.7	11	3.5	\	46	35.5	5.5	8	M5X0.8	6.5	3	14	13.8
20	M6X1.0	17	7	\	70	62	6	12	M5X0.8	9	3	18	17.8
25	M6X1.0	17	7	\	71	63	7	12	M5X0.8	9	6	23	22.5
32	M6X1.0	17	7	4.5	89	71.5	8.5	16	1/8"	9	7	30	29.5
40	M6X1.0	17	7	4	90	65	9	16	1/8"	9	3	30	29.5
50	M8X1.25	22	8	7	107.5	76.5	11.5	20	1/4"	11	3.5	37	36.5
63	M10X1.5	28.5	10.5	7	110.5	80	11.5	20	1/4"	14	3.5	48	47.5

Installation and operation

1. The method of installation are mounted by flange on top or bottom;

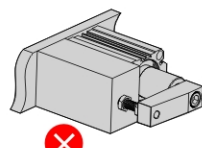


2. Before the cylinder is connected to pipeline sundries in the pipe must be cleared away, or may cause the cylinder inside injured;
3. Please clean the piston-rod and dust scraping ring to protect the cylinder;
4. The cylinder using normal magnet ring can use the same sensor as ACQ series; and the cylinder using strong magnet ring we suggest use AIRTAC's CS1-69AM sensor;
5. Because the rotary force is strong when the cylinder's acting, we suggest using flow control valve to control the speed to protect cylinder;
6. Please install the cylinder follow below diagram.

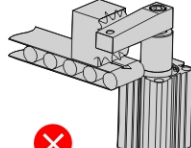


Only can clamping in clamping stroke.

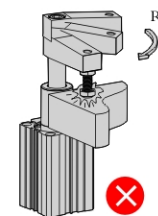
7. The installation method as below diagram are wrong, will injure the cylinder and shorten the cylinder life;



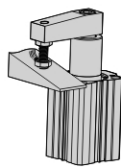
Don't installed horizontally



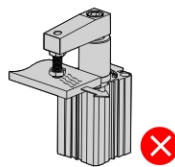
Don't exert horizontally load or force



Please don't clamp when rotating.



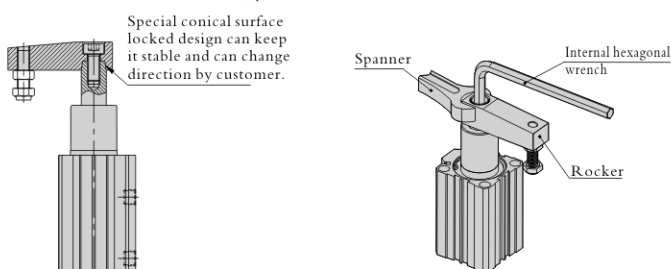
Please don't clamp on bevel



The workpiece can't move when clamped

8. Rocker

- 8.1. The design of rocker can keep it stable and can change direction by customer;
- 8.2. Please follow below diagram on right side to assemble/disassemble the rocker by spanner and internal hexagonal wrench; can't hold the body to assemble/disassemble rocker screw, or cause structure or inside parts hurt;
- 8.3. If need customize rocker, please contact us.



Accessory and sensor switch

Ordering code

Accessories Bore size	Mounting accessories		Sensor switch	
	FB	Material	With normal magnet	With strong magnet
16	F-ACQ16FA	Grey cast iron	CS1-G, CS1-GX, CS1-GN, CS1-GP	Without
20	F-ACQ20FA			
25	F-ACQ25FA			
32	F-ACQ32FA		CS1-J, CS1-JX, CS1-JN, CS1-JP, CS1-G, CS1-GX, CS1-GN, CS1-GP	CS1-69AM
40	F-ACQ40FA			

Noted: The accessory's ordering code is same as ACQ series', if need front flange please contact us.

Add: Accessory's dimension please refer to QCK-FB dimension.

Selection of sensor switch

1. There are 3 kinds of sensor switch can be selected; CS1-G, CS1-J, CS1-69AM;
2. The photoes and outside dimension and installation method refer to below diagram.

Sensor model	CS1-G	CS1-J	CS1-69AM
Photoes			
Outside dimension			
Installation method			<p>The sensor switch using in strong magnet field must use on the QCK-HS (strong magnet type) series, all the accessory for sensor switch are contained in the standard package, don't need extra order.</p> <p>Note: The strong magnet type are still in developing.</p>
Available cylinder model	QCK-□-16X□-S QCK-□-20X□-S QCK-□-25X□-S QCK-□-32X□-S QCK-□-40X□-S QCK-□-50X□-S QCK-□-63X□-S	QCK-□-32X□-S QCK-□-40X□-S QCK-□-50X□-S QCK-□-63X□-S	QCK-□-40X□-HS QCK-□-50X□-HS QCK-□-63X□-HS