



# Stopper Cylinder: Fixed Mounting Height

## Series RSQ

ø12, ø16, ø20, ø32, ø40, ø50

### How to Order

**Without auto switch**

RSQ **B** **20** **15** **D**

**With auto switch**

RSDQ **B** **20** **15** **D** **J79W**

**Built-in magnet**

**Mounting style**

<b>B</b>	Through-hole (Standard)
<b>A</b>	Both ends tapped style

Note 1) Since ø12 uses a common tube for both A and B, only B is used for part no. denotation.

**Bore size**

<b>12</b>	12 mm
<b>16</b>	16 mm
<b>20</b>	20 mm
<b>32</b>	32 mm
<b>40</b>	40 mm
<b>50</b>	50 mm

**Piping**

<b>Nil</b>	Screw-in piping
<b>F</b>	Built-in One-touch fittings (2)

Note 2) Bore sizes available w/ One-touch fittings are ø20 to ø50.

**Cylinder stroke (mm)**

<b>12</b>	10
<b>16</b>	10, 15
<b>20</b>	10, 15, 20
<b>32</b>	10, 15, 20
<b>40, 50</b>	20, 25, 30

**Auto switch**

<b>Nil</b>	Without auto switch
------------	---------------------

\* For the applicable auto switch model, refer to the table below.  
\* Auto switches are shipped together, (but not assembled).

**Number of auto switches**

<b>Nil</b>	2 pcs.
<b>S</b>	1 pc.

**Rod end configuration**

Symbol	Configuration	Application
<b>Nil</b>	Round bar type	—
<b>K</b>	Chamfered type	—
<b>R</b>	Roller type	—
<b>L</b>	Lever type (Non-adjustable) (3)	Basic style
<b>B</b>	Lever type (3) (Energy absorbing Adjustable deformation)	—
<b>C</b>		With cancel cap
<b>D</b>		With lock mechanism
<b>E</b>		With lock & cancel

Note 3) The lever types are applicable only to bore sizes ø32, ø40 and ø50.

**Action**

<b>D</b>	Double acting
<b>B</b>	Double acting with spring loaded
<b>T</b>	Single acting (Spring extend)

### Applicable Auto Switch/Refer to page 10-20-1 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Rail mounting		Direct mounting		Lead wire length (m)*				Pre-wire connector	Applicable load			
					DC	AC	ø16 to ø50	ø12, ø32 to ø50	0.5 (Nil)	3 (L)	5 (Z)	None (N)	IC circuit	Relay, PLC					
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	<b>A76H</b>	<b>A96V</b>	<b>A96</b>	●	●	—	—	—	IC circuit	—		
				2-wire	—	—	200 V	<b>A72</b>	<b>A72H</b>	—	—	●	●	—	—	—	—	Relay, PLC	
		Connector		24 V	12 V	100 V	<b>A73</b>	<b>A73H</b>	—	—	●	●	●	—	—	—			—
				12 V	—	—	<b>A73C</b>	—	—	—	—	●	●	●	●	—	—	—	
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	<b>F7NV</b>	<b>F79</b>	<b>M9NV</b>	<b>M9N</b>	●	●	○	—	○	IC circuit		—
				3-wire (PNP)				<b>F7PV</b>	<b>F7P</b>	<b>M9PV</b>	<b>M9P</b>	●	●	○	—	○			
		Connector		2-wire	24 V	5 V, 12 V	—	<b>F7BV</b>	<b>J79</b>	<b>M9BV</b>	<b>M9B</b>	●	●	○	—	○	—	—	
				3-wire (NPN)				<b>F7NWV</b>	<b>F79W</b>	<b>F9NWV</b>	<b>F9NW</b>	●	●	○	—	○			
		Grommet		3-wire (PNP)	24 V	5 V, 12 V	—	—	<b>F7PW</b>	<b>F9PWV</b>	<b>F9PW</b>	●	●	○	—	○	IC circuit	Relay, PLC	
				2-wire				<b>F7BWV</b>	<b>J79W</b>	<b>F9BWV</b>	<b>F9BW</b>	●	●	○	—	○			
				—				<b>F7BAV</b>	—	—	—	—	●	●	○	—			○
				4-wire (NPN)				—	<b>F79F</b>	—	—	—	●	●	○	—			○

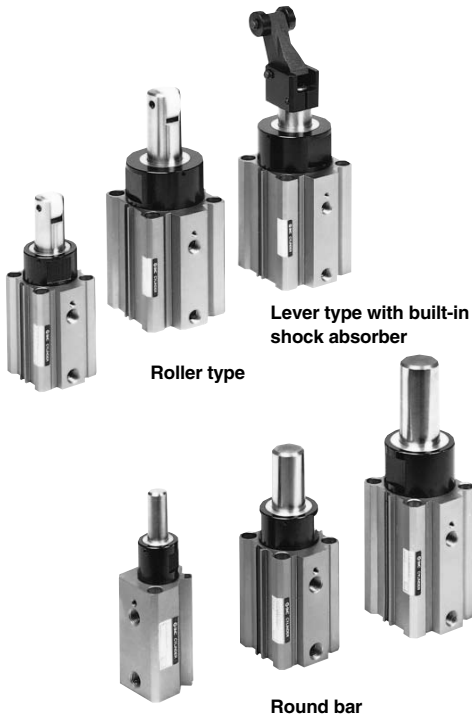
\* Lead wire length symbols: 0.5 m..... Nil (Example) A73C  
3 m..... L (Example) A73CZ  
5 m..... Z (Example) A73CL  
None..... Z (Example) A73CN

\* Solid state switches marked with "○" are produced upon receipt of order.

- Since there are other applicable auto switches than listed, refer to page 10-8-14 for details.
- For details about auto switches with pre-wire connector, refer to page 10-20-66.

- RE<sup>A</sup><sub>B</sub>
- REC
- C□X
- C□Y
- MQ<sup>Q</sup><sub>M</sub>
- RHC
- MK(2)
- RS<sup>Q</sup><sub>G</sub>
- RS<sup>H</sup><sub>A</sub>
- RZQ
- MI<sup>W</sup><sub>S</sub>
- CEP1
- CE1
- CE2
- ML2B
- C<sup>1</sup><sub>5-S</sub>
- CV
- MVGQ
- CC
- RB
- J
- D-
- X
- 20-
- Data

# Series RSQ



## Model

Bore size (mm)		12	16	20	32	40	50
Mounting	Through-hole	●*	●	●	●	●	●
	Both ends tapped style	●	●	●	●	●	●
Built-in magnet		●	●	●	●	●	●
Piping	Screw-in type	M5 x 0.8		Rc 1/8			
	Built-in One-touch fittings	—		ø6/4		ø8/6	
Action		Double acting, Single acting (Spring extend), Double acting with spring loaded					
Rod end configuration	Round bar	●		●			
	Chamfered	●		●			
	Roller type	●		●			
	Lever type	—		●			

\* ø12 tubes can have both through-hole and tap mountings in the same tube.

## Specifications

Action	Double acting, Double acting with spring loaded, Single acting (Spring extend)
Fluid	Air
Proof pressure	1.5 MPa
Maximum operating pressure	1.0 MPa
Ambient and fluid temperature	Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)
Lubrication	Not required (Non-lube)
Cushion	Rubber bumper
Stroke length tolerance	+1.4 0
Mounting	Through-hole/Both ends tapped common
Auto switch	Mountable



## Made to Order Specifications (For details, refer to page 10-21-1.)

Symbol	Specifications
-XA□	Change of rod end shape
-XC3	Special port location
-XC18	NPT finish piping port

## Bore Size/Standard Stroke

Bore size (mm)	Rod end configuration		
	Round bar, Chamfered type	Roller type	Lever type with shock absorber
12	10	10	—
16	10, 15	10, 15	—
20	10, 15, 20	10, 15, 20	—
32			10, 15, 20
40	20, 25, 30	20, 25, 30	20, 25, 30
50			20, 25, 30

## Spring Force (Single acting)

Bore size (mm)	(N)	
	Extended	Compressed
12	3.9	9.6
16	4.9	14.9
20	3.4	14.9
32	8.8	18.6
40, 50	13.7	27.5

\* Applicable only to round bar type, chamfered type and rollertype end configurations.

## Auto Switch Mounting Bracket Part No.

Bore size (mm)	Mounting bracket part no.	Note	Applicable auto switch
16 20	BQ-1	• Switch mounting screw (M3 x 0.5 x 8) • Square nut	D-A7/A8 D-A7□H D-A73C/A80C D-F7□ D-F7□V, D-F7NT□
32 40 50	BQ-2	• Switch mounting nut • Switch mounting screw (M3 x 0.5 x 10) • Switch spacer	D-F7□W/J79W D-F7□WV D-F79F D-J79/J79C D-F7BAL/F7BAVL

[Mounting screws set made of stainless steel]

The following stainless steel mounting screw kit (including nuts) is available and may be used depending on the operating environment.

(Auto switch spacer is not included. Please contact SMC.)

BBA2: For D-A7/A8/F7/J7

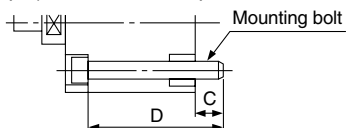
"D-F7BAL/F7BAVL" switch is set on the cylinder with the stainless steel screws above when shipped. When a switch is shipped independently, "BBA2" screws are attached.

## Mounting Bolt for RSQB

Mounting method: Mounting bolt for through-hole mounting style of RSQB is available as an option.

Ordering: Add the word "Bolt" in front of the bolts to be used.

Example) Bolt M5 x 65/ 4 pcs.



Model	C	D	Mounting bolt
RSQB12-10□ (Note)	5	40	M3 x 45ℓ
RSQB16-10□	5	48	M3 x 55ℓ
-15□		53	M3 x 60ℓ
RSQB20-10□		55	M5 x 55ℓ
-15□	7	60	M5 x 60ℓ
-20□		65	M5 x 65ℓ
RSQB32-10□		60	M5 x 60ℓ
-15□	9	65	M5 x 65ℓ
-20□		70	M5 x 70ℓ
RSQB40-20□		75	M5 x 75ℓ
-25□	9.5	80	M5 x 80ℓ
-30□		85	M5 x 85ℓ
RSQB50-20□		75	M6 x 75ℓ
-25□	9	80	M6 x 80ℓ
-30□		85	M6 x 85ℓ

## Weight

Action	Bore size (mm)	Rod end configuration	Cylinder stroke (mm)				
			10	15	20	25	30
Double acting	12	Round bar, Chamfered, Roller	0.07	—	—	—	—
	16	Round bar, Chamfered, Roller	0.14	0.15	—	—	—
Single acting, Spring extend	20	Round bar, Chamfered, Roller	0.23	0.24	0.25	—	—
		Lever with built-in shock absorber	0.42	0.44	0.46	—	—
Double acting with spring loaded	32	Round bar, Chamfered, Roller	0.51	0.53	0.55	—	—
		Lever with built-in shock absorber	—	—	—	—	—
	40	Round bar, Chamfered, Roller	—	—	0.74	0.80	0.86
		Lever with built-in shock absorber	—	—	0.97	1.01	1.05
50	Round bar, Chamfered, Roller	—	—	1.03	1.07	1.11	
	Lever with built-in shock absorber	—	—	1.26	1.30	1.34	

Note) When using the through-hole mounting for a size ø12 cylinder, be sure to use the flat washer which is attached.

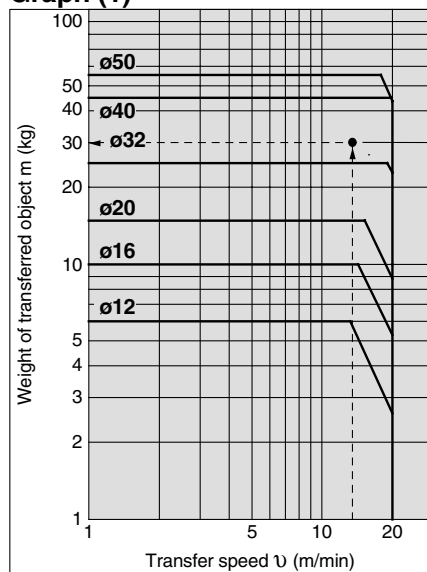
## Operating Ranges by Rod End Configuration

(Example) For roller type with transfer speed of 15 m/min. and the weight of transferred object of 30 kg.

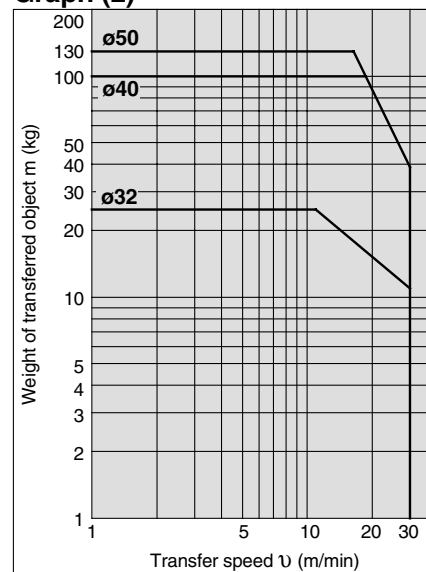
<How to read the graphs>

To select a cylinder based on the above specifications, find the intersection of the speed of 15 m/min. on the horizontal axis, and the weight of 30 kg on the vertical axis of Graph (1) to the right, and choose the model RSQ□40 within whose operating range the intersection point falls.

Roller Type/Round Bar Type/Chamfered Type Graph (1)



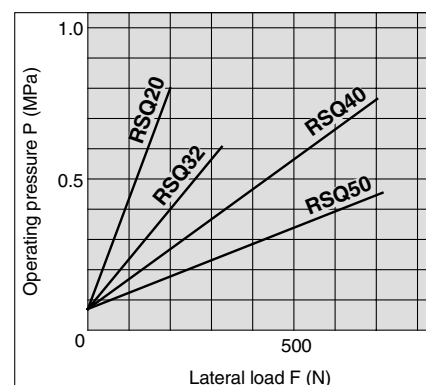
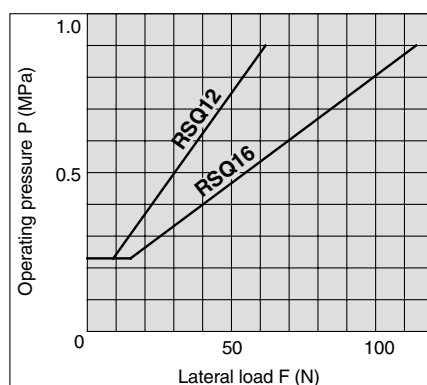
Lever Type (With shock absorber) Graph (2)



## Lateral Load and Operating Pressure

The larger the lateral load, the higher the operating pressure required for the stopper cylinder. Set the operating pressure using the graphs as a guide.

(Applicable for round bar, roller and chamfered type rod end configurations.)

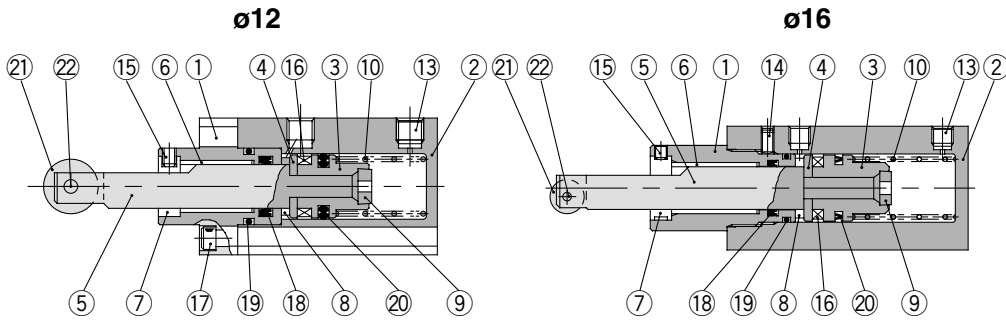


- RE<sup>A</sup><sub>B</sub>
- REC
- C□X
- C□Y
- MQ<sup>Q</sup><sub>M</sub>
- RHC
- MK(2)
- RS<sup>Q</sup><sub>G</sub>
- RS<sup>H</sup><sub>A</sub>
- RZQ
- MI<sup>W</sup><sub>S</sub>
- CEP1
- CE1
- CE2
- ML2B
- C<sup>1</sup>/<sub>5</sub>-S
- CV
- MVGQ
- CC
- RB
- J
- D-
- X
- 20-
- Data

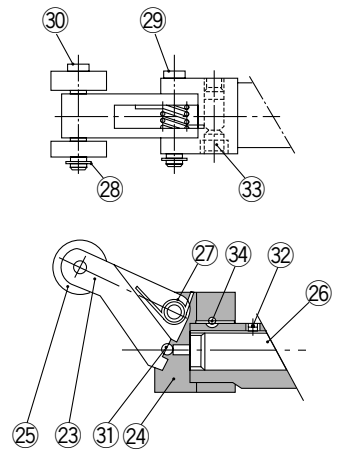
# Series RSQ

## Construction

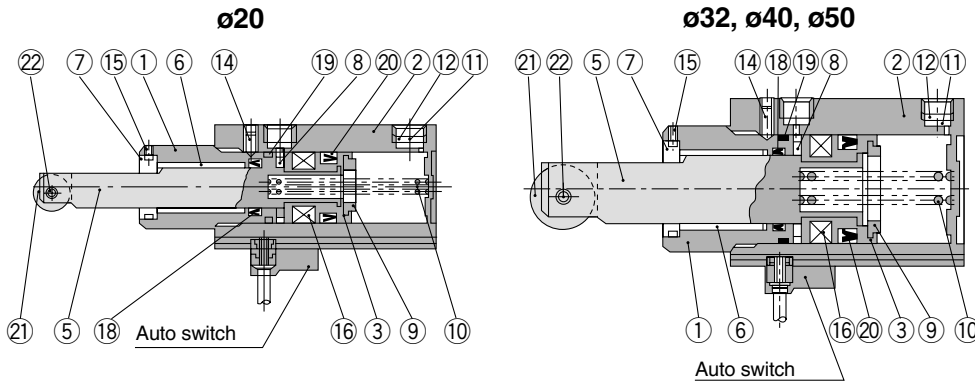
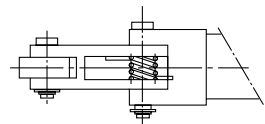
### Single acting, Roller rod end



### Built-in shock absorber Lever rod end type (ø32, ø40, ø50 only)



Only one roller is provided for ø32.



### Component Parts (For single acting)

No.	Description	Material	Note
①	Rod cover	Aluminum alloy	Anodized*
②	Cylinder tube	Aluminum alloy	Hard anodized
③	Piston	Aluminum alloy	Chromated
④	Spacer for switch	Aluminum alloy	ø12, ø16
⑤	Piston rod	ø12, ø16, ø20 Stainless steel ø32, ø40, ø50 Carbon steel	Hard chrome plated
⑥	Bushing	Lead-bronze casted	
⑦	Non-rotating guide	Rolled steel	Non-rotating type only
⑧	Bumper A	Urethane	
⑨	Bumper B	Urethane	
⑩	Return spring	Steel wire	Zinc chromated
⑪	Element	Sintered metallic BC	ø32 to ø50
⑫	Snap ring	Carbon tool steel	ø32 to ø50
⑬	Plug with fixed orifice	Alloy steel	ø12, ø16
⑭	Hexagon socket head set screw	Chromium molybdenum steel	Except ø12
⑮	Hexagon socket head set screw	Chromium molybdenum steel	
⑯	Magnet	Synthetic rubber	
⑰	Hexagon socket head cap screw	Alloy steel	Only ø12
⑱	Rod seal	NBR	
⑲	Gasket	NBR	
⑳	Piston seal	NBR	

\* For bore size 20, 32, 40 and 50, the surface treatment of rod cover has been changed to "Anodized (natural color)" from Black anodized.

### In the case of roller type

⑳	Roller A	Resin	
㉑	Spring pin	Carbon tool steel	

### Component Parts (For single acting)

No.	Description	Material	Note
㉒	Lever	Cast iron	
㉓	Lever holder	Rolled steel	
㉔	Roller B	Resin	
㉕	Shock absorber	—	ø32—RB1007-X225 ø40, 50—RB1407-X552
㉖	Lever spring	Stainless steel wire	
㉗	Type C snap ring for axis	Carbon tool steel	
㉘	Lever pin	Carbon steel	
㉙	Roller pin	Carbon steel	
㉚	Steel balls	High carbon chrome bearing steel	
㉛	Hexagon socket head set screw	Chromium molybdenum steel	
㉜	Hexagon socket head set screw	Chromium molybdenum steel	
㉝	One-side tapered pin	Carbon steel	

### Replacement Parts: Seal Kit

Bore size (mm)	Kit no.			Contents
	Double acting	Double acting with spring loaded	Single acting	
12	RSQ12D-PS	RSQ12T-PS		Set of above nos. ⑱, ⑲, ⑳
16	RSQ16B-PS	RSQ16D-PS	RSQ16T-PS	
20	RSQ20D-PS	RSQ20B-PS	RSQ20T-PS	
32	RSQ32D-PS	RSQ32B-PS	RSQ32T-PS	
40	RSQ40D-PS	RSQ40B-PS	RSQ40T-PS	
50	RSQ50D-PS	RSQ50B-PS	RSQ50T-PS	

\* Seal kit includes ⑱, ⑲, ⑳. Order the seal kit, based on each bore size.

### Replacement Parts: Shock Absorber

Bore size (mm)	Kit no.
32	RB1007-X225
40, 50	RB1407-X552

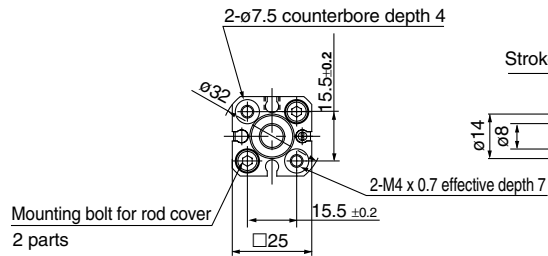
# Stopper Cylinder: Fixed Mounting Height Series RSQ

## Rod End Configuration: Round Bar Type

Basic style: Through-hole mounting, Screw mounting

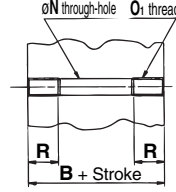
These 5 figures show the piston rod extended.

Bore size:  $\phi 12$  RS□QB12-10□



Screw mounting style: Both ends tapped style (mm)

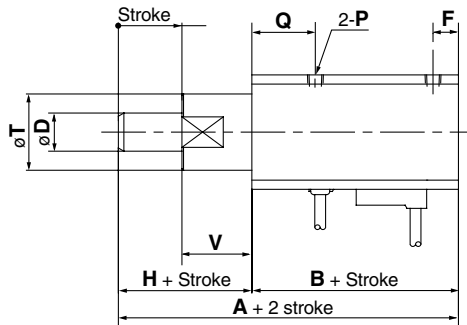
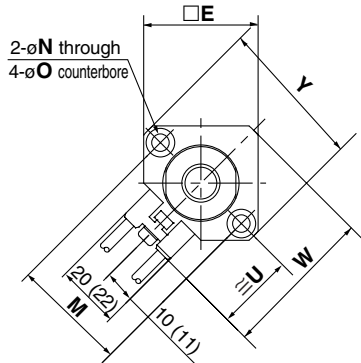
RS□QA



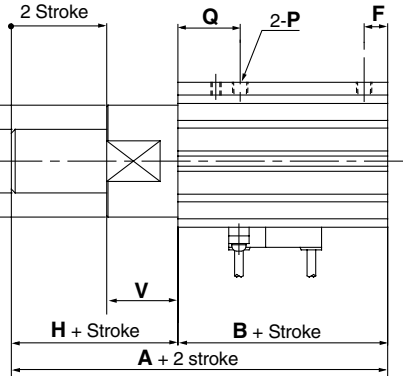
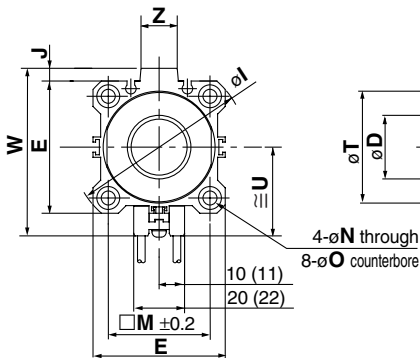
Model	B	N	O <sub>1</sub>	R
RS□QA16	41.5	3.5	M4 x 0.7	7
RS□QA20	45	5.5	M6 x 1	10
RS□QA32	48	5.5	M6 x 1	10
RS□QA40	52.5	5.5	M6 x 1	10
RS□QA50	54	6.6	M8 x 1.25	14

\*Dimensions other than above are the same as those of the basic style (on the left).

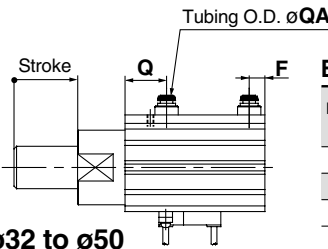
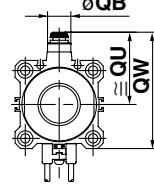
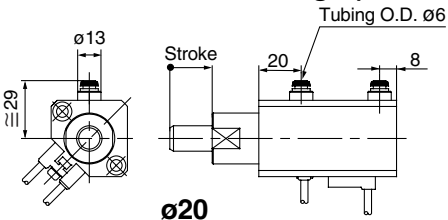
Bore size:  $\phi 16, \phi 20$  RS□QB<sup>16</sup>/<sub>20</sub>-□□



Bore size:  $\phi 32, \phi 40, \phi 50$  RS□QB<sup>32</sup>/<sub>40</sub>/<sub>50</sub>-□□



### Built-in One-touch fittings ( $\phi 20$ to $\phi 50$ )



### Built-in One-touch Fittings

Bore size (mm)	Applicable tubing O.D. QA	F	Q	QB	QU	QW
32	6	7.5	20	13	38	60.5
40	6	8	24.5	13	42	68
50	8	9.5	26	16	50	82

Bore size (mm)	A	B	D	E	F	H	I	J	M	N	O counterbore	P	Q	T	U	V	W	Y	Z
16	59.5	41.5	10	29	6	18	—	—	28	3.5	6.5 depth 4	M5 x 0.8	17	20	22.5	18	41.5	38	—
20	67	45	12	36	8	22	—	—	36	5.5	9 depth 7	Rc 1/8	20	24	24.5	22	48	47	—
32	68	48	20	45	7.5	20	60	4.5	34	5.5	9 depth 7	Rc 1/8	20	36	31.5	20	58.5	—	14
40	80.5	52.5	25	52	8	28	69	5	40	5.5	9 depth 7	Rc 1/8	24.5	44	35	28	66	—	14
50	82	54	25	64	8	28	86	7	50	6.6	11 depth 8	Rc 1/8	24.5	56	41	28	80	—	19

Note 1) Dimensions without auto switch are the same as drawing above.  
 Note 2) These figures show the dimensions when equipped with D-A73 or D-A80 auto switches.

Note 3) For the auto switch mounting position and its mounting height, refer to page 10-8-13.

Note 4) These figures show the piston rod extended.

Note 5) In the case of single acting type, a One-touch fitting is on the rod side only.

RE<sub>B</sub><sup>A</sup>

REC

C□X

C□Y

MQ<sub>M</sub><sup>Q</sup>

RHC

MK(2)

RS<sub>G</sub><sup>Q</sup>

RS<sub>A</sub><sup>H</sup>

RZQ

MI<sub>S</sub><sup>W</sup>

CEP1

CE1

CE2

ML2B

C<sub>G</sub>5-S

CV

MVGQ

CC

RB

J

D-

-X

20-

Data



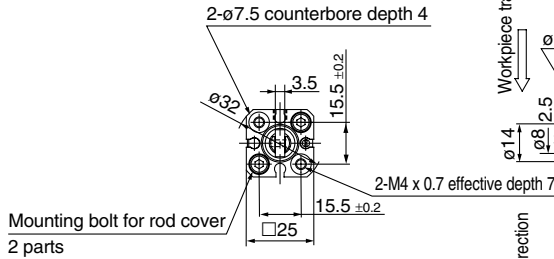
# Stopper Cylinder: Fixed Mounting Height Series RSQ

## Rod End Configuration: Roller Type

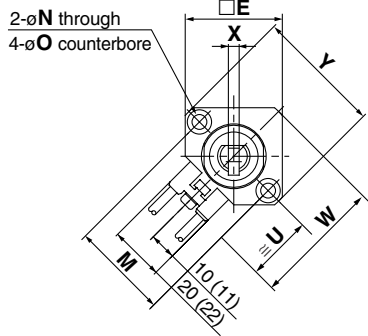
Basic style: Through-hole mounting, Screw mounting

These 5 figures show the piston rod extended.

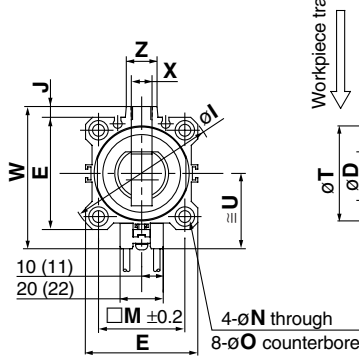
Bore size:  $\phi 12$  RS□QB12-10□R



Bore size:  $\phi 16, \phi 20$  RS□QB<sup>16</sup>/<sub>20</sub>-□□R

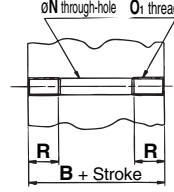


Bore size:  $\phi 32, \phi 40, \phi 50$  RS□QB<sup>32</sup>/<sub>40</sub>/<sub>50</sub>-□□R



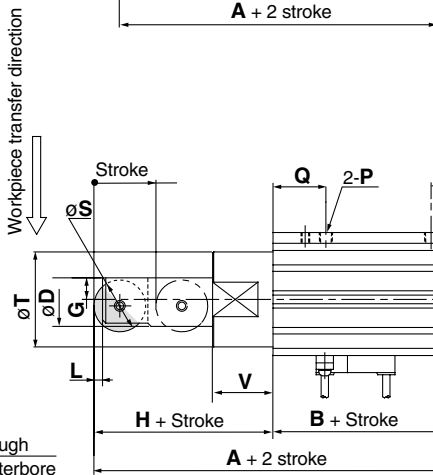
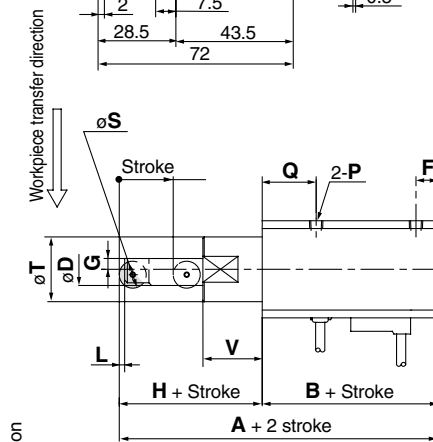
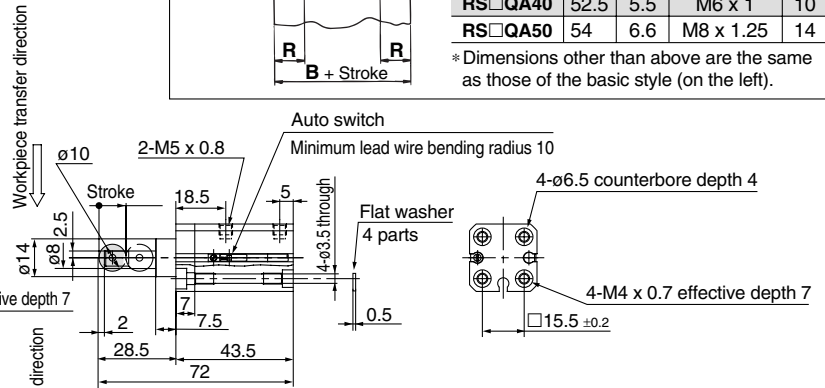
Screw mounting style: Both ends tapped style (mm)

RS□QA

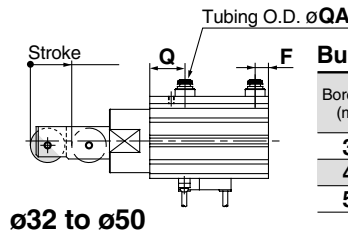
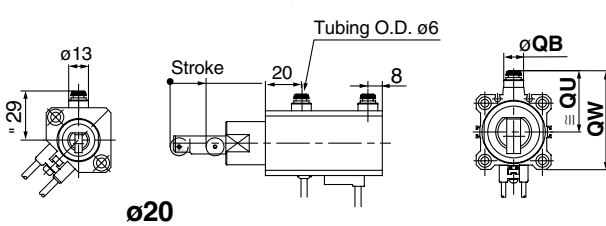


Model	B	N	O <sub>1</sub>	R
RS□QA16	41.5	3.5	M4 x 0.7	7
RS□QA20	45	5.5	M6 x 1	10
RS□QA32	48	5.5	M6 x 1	10
RS□QA40	52.5	5.5	M6 x 1	10
RS□QA50	54	6.6	M8 x 1.25	14

\*Dimensions other than above are the same as those of the basic style (on the left).



## Built-in One-touch fittings ( $\phi 20$ to $\phi 50$ )



### Built-in One-touch Fittings

Bore size (mm)	Applicable tubing O.D. QA	F	Q	QB	QU	QW
32	6	7.5	20	13	38	60.5
40	6	8	24.5	13	42	68
50	8	9.5	26	16	50	82

Bore size (mm)	A	B	D	E	F	G	H	I	J	L	M	N	O counterbore	P	Q	S	T	U	V	W	X	Y	Z
16	68	41.5	10	29	6	3	26.5	—	—	2	28	3.5	6.5 depth 4	M5 x 0.8	17	8	20	22.5	18	41.5	3.5	38	—
20	78	45	12	36	8	4	33	—	—	2	36	5.5	9 depth 7	Rc 1/8	20	10	24	24.5	22	48	4	47	—
32	87	48	20	45	7.5	8	39	60	4.5	3	34	5.5	9 depth 7	Rc 1/8	20	18	36	31.5	20	58.5	8	—	14
40	105.5	52.5	25	52	8	10	53	69	5	4	40	5.5	9 depth 7	Rc 1/8	24.5	24	44	35	28	66	9	—	14
50	107	54	25	64	8	10	53	86	7	4	50	6.6	11 depth 8	Rc 1/8	24.5	24	56	41	28	80	9	—	19

Note 1) Dimensions without auto switch are the same as drawing above.

Note 2) These figures show the dimensions when equipped with D-A73 or D-A80 auto switches.

Note 3) For the auto switch mounting position and its mounting height, refer to page 10-8-13.

Note 4) These figures show the piston rod extended.

Note 5) In the case of single acting type, a One-touch fitting is on the rod side only.

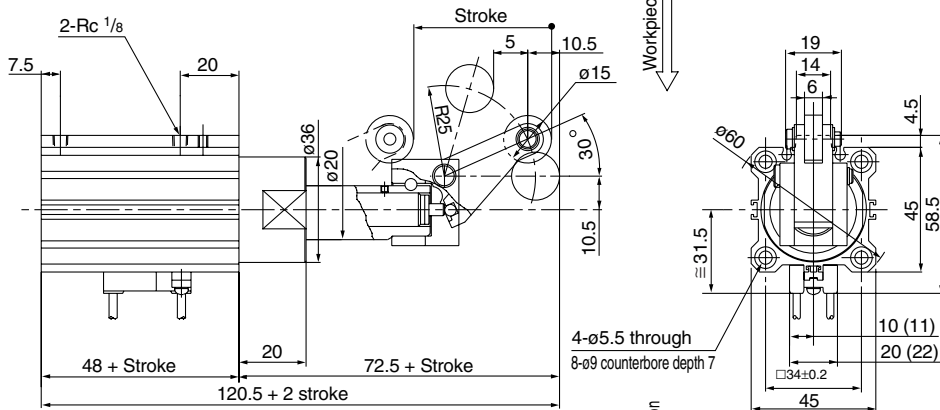
# Series R5Q

## Rod End Configuration: Lever Type with Shock Absorber

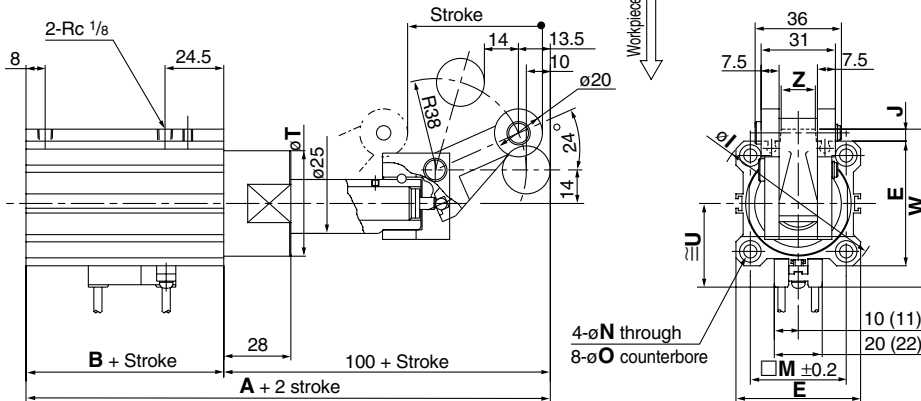
Basic style: Through-hole mounting, Screw mounting

These 3 figures show the piston rod extended.

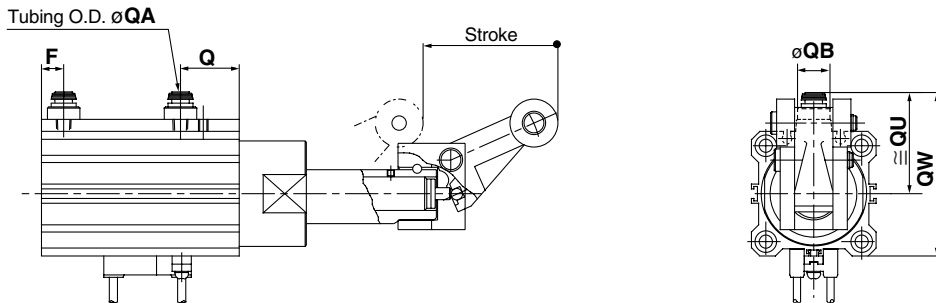
Bore size:  $\phi 32$  RS□QB32-□□L



Bore size:  $\phi 40, \phi 50$  RS□QB<sup>40</sup>/<sub>50</sub>-□□L



### Built-in One-touch fittings



### Built-in One-touch Fittings

Bore size (mm)	Applicable tubing O.D. QA	F	Q	QB	QU	QW
32	6	7.5	20	13	38	60.5
40	6	8	24.5	13	42	68
50	8	9.5	26	16	50	82

Bore size (mm)	A	B	E	I	J	M	N	O counterbore	T	U	W	Z
40	152.5	52.5	52	69	5	40	5.5	9 depth 7	44	35	66	14
50	154	54	64	86	7	50	6.6	11 depth 8	56	41	80	19

Note 1) Dimensions without auto switch are the same as drawing above.  
 Note 2) These figures show the dimensions when equipped with D-A73 or D-A80 auto switches.  
 Note 3) For the auto switch mounting position and its mounting height, refer to page 10-8-13.

Note 4) These figures show the piston rod extended.  
 Note 5) In the case of single acting type, a One-touch fitting is on the rod side only.

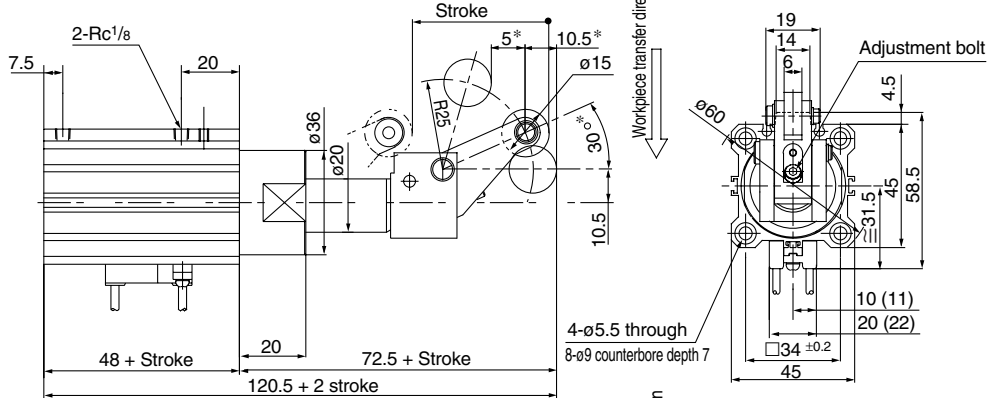


## Rod End Configuration: Lever Type with Shock Absorber

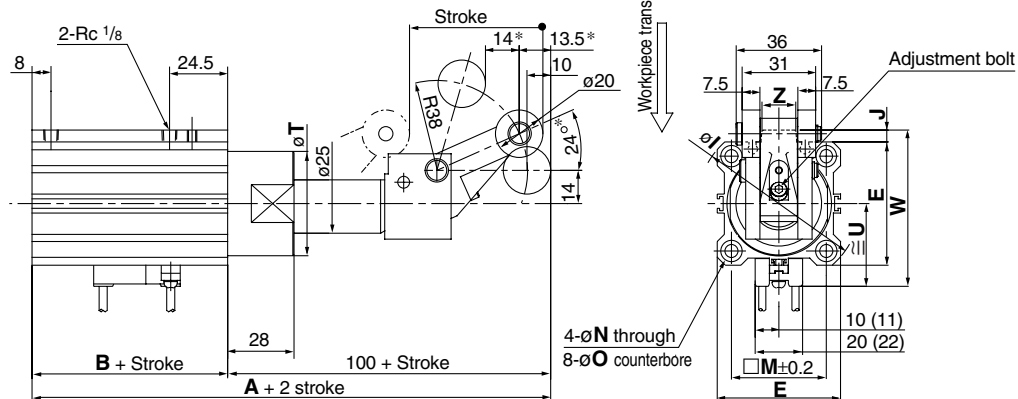
Variable energy absorbing type/Through-hole mounting,  
Screw mounting style Adjustable shock absorber stroke

These 3 figures show the piston rod extended.

Bore size:  $\phi 32$  RS□QB32-□□B

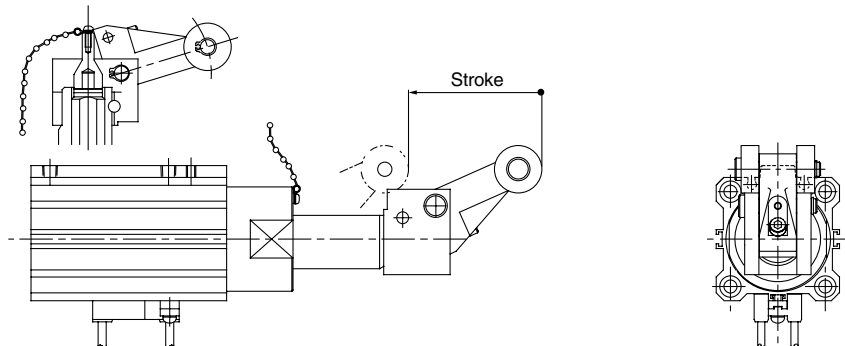


Bore size:  $\phi 40, \phi 50$  RS□QB<sup>40</sup>/<sub>50</sub>-□□B



With cancel cap RS□QB□-□□C

\* Dimensions when equipped with cancel cap are the same as the drawing above.

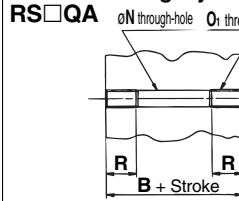


\* These figures show dimensions when set for maximum energy absorbing capacity.

Bore size (mm)	A	B	E	I	J	M	N	O counterbore	T	U	W	Z
40	152.5	52.5	52	69	5	40	5.5	9 depth 7	44	35	66	14
50	154	54	64	86	7	50	6.6	11 depth 8	56	41	80	19

- Note 1) Dimensions without auto switch are the same as drawing above.
- Note 2) These figures show the dimensions when equipped with D-A73 or D-A80 auto switches.
- Note 3) For the auto switch mounting position and its mounting height, refer to page 10-8-13.

Screw mounting style: Both ends tapped style (mm)



Model	B	N	O <sub>1</sub>	R
RS□QA32	48	5.5	M6 x 1	10
RS□QA40	52.5	5.5	M6 x 1	10
RS□QA50	54	6.6	M8 x 1.25	14

\* Dimensions other than above are the same as below drawings.

RE<sup>A</sup><sub>B</sub>

REC

C□X

C□Y

MQ<sup>Q</sup><sub>M</sub>

RHC

MK(2)

RS<sup>Q</sup><sub>G</sub>

RS<sup>H</sup><sub>A</sub>

RZQ

MI<sup>W</sup><sub>S</sub>

CEP1

CE1

CE2

ML2B

C<sup>1</sup>/<sub>5</sub>-S

CV

MVGQ

CC

RB

J

D-

-X

20-

Data

- Note 4) These figures show the piston rod extended.
- Note 5) In the case of single acting type, a One-touch fitting is on the rod side only.
- Note 6) The figures show the dimensions when the adjustment bolt is lowered (when energy absorption is at its maximum). However, these dimensions change within the ranges shown below as the adjustment bolt is raised (energy absorption is reduced).  
 $\phi 32 \dots 30^* \rightarrow 20^*, 10.5^* \rightarrow 9^*, 5^* \rightarrow 6^*$   
 $\phi 40, 50 \dots 24^* \rightarrow 16^*, 13.5^* \rightarrow 11.5^*, 14^* \rightarrow 16^*$

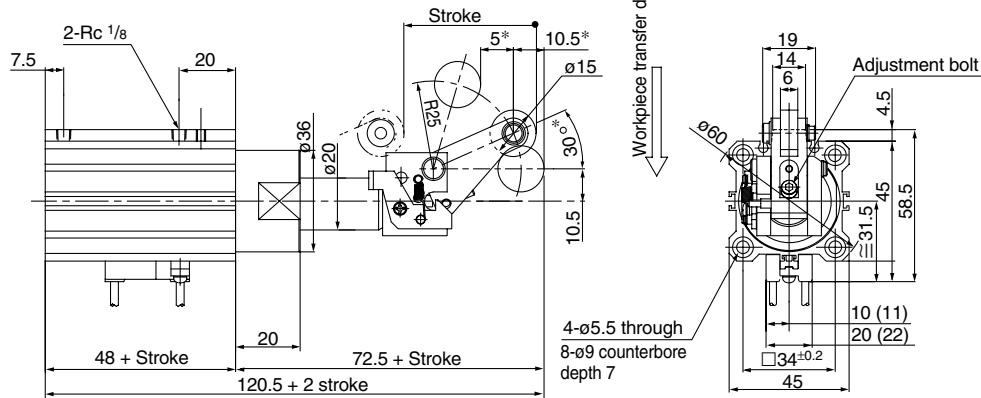
# Series RSQ

## Rod End Configuration: Lever Type with Shock Absorber

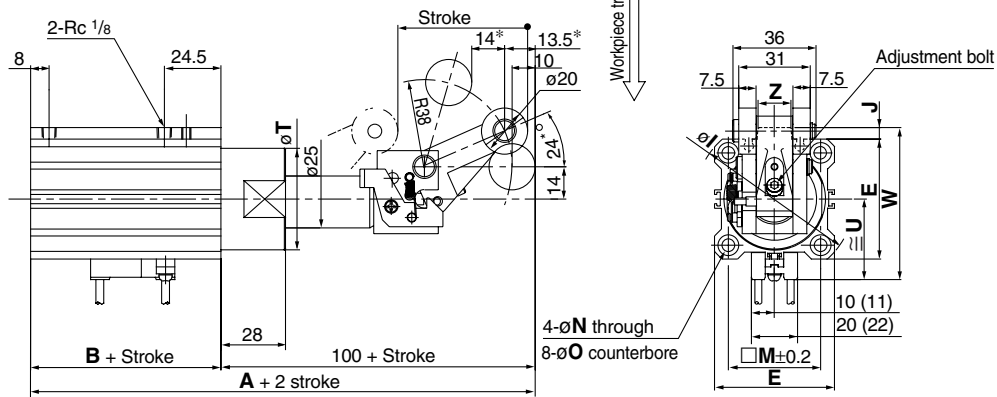
Variable energy absorbing type/Through-hole mounting,  
Screw mounting style  
With lock mechanism

These 3 figures show the piston rod extended.

Bore size:  $\phi 32$  RS□QB32-□□D

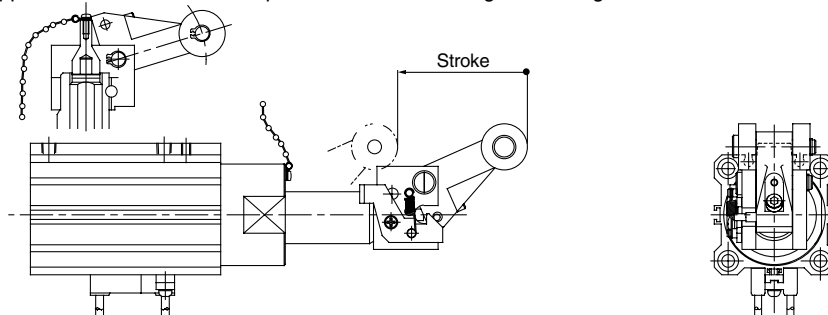


Bore size:  $\phi 40, \phi 50$  RS□QB<sup>40</sup>/<sub>50</sub>-□□D



With lock mechanism + Cancel cap RS□QB□□-□□E

\* Dimensions when equipped with lock and cancel cap are the same as the figure drawing.



\* These figures show dimensions when set for maximum energy absorbing capacity.

Bore size (mm)	A	B	E	I	J	M	N	O counterbore	T	U	W	Z
40	152.5	52.5	52	69	5	40	5.5	9 depth 7	44	35	66	14
50	154	54	64	86	7	50	6.6	11 depth 8	56	41	80	19

Note 1) Dimensions without auto switch are the same as drawing above.

Note 2) These figures show the dimensions when equipped with D-A73 or D-A80 auto switches.

Note 3) For the auto switch mounting position and its mounting height, refer to page 10-8-13.

Note 4) These figures show the piston rod extended.

Note 5) In the case of single acting type, a One-touch fitting is on the rod side only.

Note 6) The figures shows the dimensions when the adjustment bolt is lowered (when energy absorption is at its maximum).

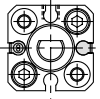
However, these dimensions change within the ranges shown below as the adjustment bolt is raised (energy absorption is reduced).

$\phi 32 \dots 30^* \rightarrow 20^*, 10.5^* \rightarrow 9^*, 5^* \rightarrow 6^*$   
 $\phi 40, 50 \dots 24^* \rightarrow 16^*, 13.5^* \rightarrow 11.5^*, 14^* \rightarrow 16^*$

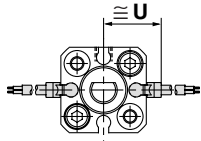
## Proper Auto Switch Mounting Position (Detection at stroke end) and Its Mounting Height

ø12

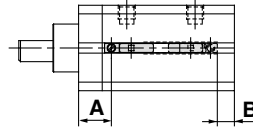
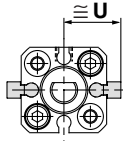
D-A9□  
D-M9□  
D-F9□W



D-A9□V  
D-M9□V  
D-F9□WV

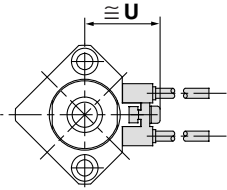


D-F9BAL

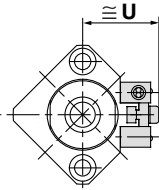


ø16, ø20

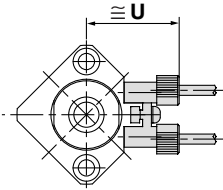
D-A7  
D-A8



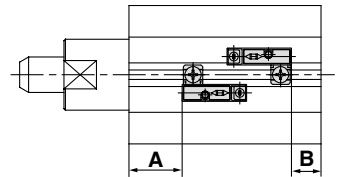
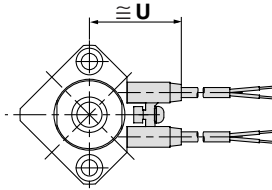
D-A7□H, D-A80H  
D-F7□, D-J79  
D-F7□W, D-J79W  
D-F79F, D-FNTL  
DF7BAL



D-A73C  
D-A80C  
D-J79C

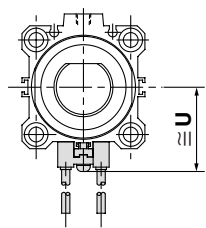


D-A79W  
D-F7□V  
D-F7BAVL

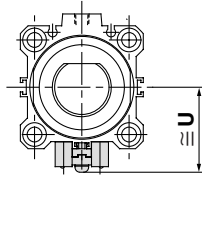


ø32 to ø50

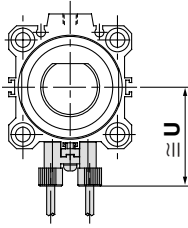
D-A7  
D-A8



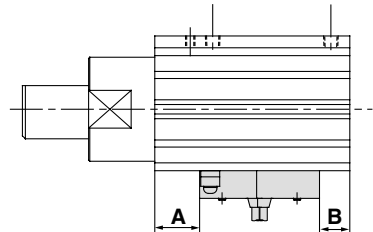
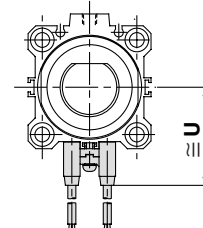
D-A7□H, D-A80H  
D-F7□, D-J79  
D-F7□W, D-J79W  
D-F79F, D-F7NTL  
D-F7BAL



D-A73C  
D-A80C  
D-J79C

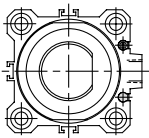


D-A79W  
D-F7□V  
D-F7BAVL

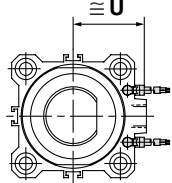


ø32 to ø50

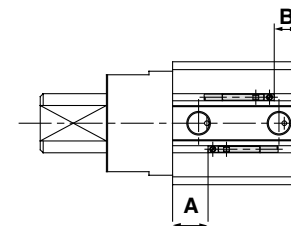
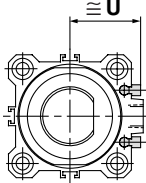
D-A9□  
D-M9□  
D-F9□W



D-A9□V  
D-M9□V  
D-F9□WV



D-F9BAL



### Proper Auto Switch Mounting Position

Bore size (mm)	D-A7□ D-A80		D-A7□H D-A80H D-A73C D-A80C D-F7□ D-J79 D-F7□V D-J79C D-F7BAVL D-F7BAL D-F7□W D-J79W D-F79F		D-A79W		D-A9□ D-A9□V		D-M9□ D-M9□V D-F9□WV D-F9□W		D-F9BAL	
	A	B	A	B	A	B	A	B	A	B	A	B
12	—	—	—	—	—	—	9	4	13	8	12	7
16	11.5	11.5	12	12	9	9	—	—	—	—	—	—
20	17.5	9.5	18	10	15	7	—	—	—	—	—	—
32	18	12	18.5	12.5	15.5	9.5	17	11	21	15	20	14
40	22.5	12	23	12.5	20	9.5	21.5	11	25.5	15	24.5	14
50	30.5	5.5	31	6	28	3	29.5	4.5	33.5	8.5	32.5	7.5

### Auto Switch Mounting Height

(mm)

D-A7□ D-A80	D-A7□H D-A80H D-F7□ D-J79 D-F7□W D-J79C D-F7BAVL D-F7BAL D-J79W D-F79F D-F7NTL	D-A73C D-A80C	D-F7□V D-F7□WV D-F7BAVL	D-J79C	D-A79W	D-A9□V	D-M9□V D-F9□WV	D-F9BAL
U	U	U	U	U	U	U	U	U
—	—	—	—	—	—	17	19.5	16.5
22.5	23.5	29.5	26	29	25	—	—	—
24.5	25.5	31.5	28	31	27	—	—	—
31.5	32.5	38.5	35	38	34	27	29	26.5
35	36	42	38.5	41.5	37.5	30.5	32.5	30
41	42	48	44.5	47.5	43.5	36.5	38.5	36

RE<sup>A</sup><sub>B</sub>

REC

C□X

C□Y

MQ<sup>Q</sup><sub>M</sub>

RHC

MK(2)

RS<sup>Q</sup><sub>G</sub>

RS<sup>H</sup><sub>A</sub>

RZQ

MI<sup>W</sup><sub>S</sub>

CEP1

CE1

CE2

ML2B

C<sub>6</sub>5-S

CV

MVGQ

CC

RB

J

D-

-X

20-

Data

# Series RSQ

## Operating Range

Auto switch model	Bore size (mm)					
	12	16	20	32	40	50
D-A7□/A80 D-A7H/A80H D-A73C/A80C	—	12	12	12	11	10
D-A79W	—	13	13	13	14	14
D-A9□/A9□V	6	—	—	9.5	9.5	9.5
D-F7□/J79 D-F7□V/J79C D-F7□W/J7□WV D-F7BAL/F7BAVL D-F79F	—	6	5.5	6	6	6
D-M9□/M9□V	—	—	—	3.5	3.5	3.5
D-F9□W/F9□WV D-F9BAL	3	—	—	5.5	5.5	5.5

\* Since this is a guideline including hysteresis, not meant to be guaranteed.  
(Assuming approximately ±30% dispersion) There may be the case to change substantially depending on an ambient environment.

Other than the applicable auto switches listed in "How to Order", following auto switches can be mounted.  
For detailed specifications, refer to page 10-20-1.

Type	Model	Electrical entry (Fetching direction)	Features	Applicable bore size (mm)
Reed switch	D-A80	Grommet (Perpendicular)	Without indicator light	16 to 50
	D-A80H	Grommet (In-line)		
	D-A80C	Connector (Perpendicular)		12, 32 to 50
	D-A90	Grommet (In-line)		
	D-A90V	Grommet (Perpendicular)		
Solid state switch	D-F7NTL	Grommet (In-line)	With timer	16 to 50

\* With pre-wire connector is available for D-F7NTL type, too. For details, refer to page 10-20-66.

\* Normally closed (NC = b contact), solid state switch (D-F9G/F9H type) are also available. For details, refer to page 10-20-40.