

# Air Cylinder: Standard Single Acting, Spring Return/Extend

## C75 Series

ø32, ø40

RoHS

### How to Order

**Single acting, Spring return/extend** **C D 75 E 32 - 100 S L V - B - M9BW**

**Built-in magnet**

Nil	None
D	Built-in magnet

**Head cover type**

E	Double end boss-cut
F	Boss-cut/Basic
Y	Head cover axial port

**Applicable head cover**

Action	Head cover type		
	E	F	Y
Single acting, Spring return	●	●	●
Single acting, Spring extend	●	●	—

**Bore size**

32	32 mm
40	40 mm

**Cylinder stroke [mm]**

Refer to the next page for standard strokes.

**Action**

S	Single acting, Spring return
T	Single acting, Spring extend

**Auto switch mounting type\*1**

A	Rail mounting
B	Band mounting

\*1 The symbol is "Nil" for no magnet.

**Accessory\*1**

Nil	None
V	Rod end

\*1 Refer to Mounting Brackets/Accessories on page 76 for details of accessories.  
\* Accessory is shipped together with the product.

**Number of auto switches**

Nil	2
S	1
n	n

**Auto switch**

Nil	Without auto switch
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\* For applicable auto switches, refer to the table below.  
\* Auto switches are shipped together with the product.

**Mounting bracket\*1**

Nil	None
L	Single foot
M	Double foot
G	Flange
U	Trunnion
N	Clevis

\*1 Refer to Mounting Brackets/Accessories on page 76 for details of mounting brackets.  
\* Mounting bracket is shipped together with the product.

**Applicable mounting bracket**

Action	Head cover type	Mounting bracket				
		L	M	G	U	N
Single acting, Spring return	E	●	●	●	●	●
	F	●	—	●	●	●
	Y	●	—	●	●	●
Single acting, Spring extend	E	●	●	●	●	●
	F	●	—	●	●	●

**Made to order**  
For details, refer to page 75.

### Applicable Auto Switches/Refer to the Web Catalog or Best Pneumatics for further information on auto switches.

Type	Special function	Electrical entry	Indicator/light	Wiring (Output)	Load voltage		Auto switch model				Lead wire length [m]					Pre-wired connector	Applicable load		
					DC	AC	Band mounting		Rail mounting		0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)				
							Perpendicular	In-line	Perpendicular	In-line									
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	F7NV	F79	●	●	●	○	—	○	IC circuit	Relay, PLC	
		3-wire (PNP)		M9PV			M9P	F7PV	F7P	●	●	●	○	—	○				
	Connector	2-wire		12 V	M9BV		M9B	F7BV	J79	●	●	●	○	—	○	—			
	Diagnostic indication (2-color indicator)	Grommet		3-wire (NPN)	24 V		5 V, 12 V	M9NWV	M9NW	F7NWV	F79W	●	●	●	○	—	○		IC circuit
				3-wire (PNP)				M9PWV	M9PW	—	F7PW	●	●	●	○	—	○		—
				2-wire				M9BWV	M9BW	F7BWV	J79W	●	●	●	○	—	○		—
				3-wire (NPN)				M9NAV*1	M9NA*1	—	—	○	○	●	○	—	○		IC circuit
	Water-resistant (2-color indicator)	Grommet		3-wire (PNP)	5 V, 12 V		M9PAV*1	M9PA*1	—	—	○	○	●	○	—	○	—		
				2-wire	12 V		M9BAV*1	M9BA*1	F7BAV*1	F7BA*1	○	○	●	○	—	○	—		
	With diagnostic output (2-color indicator)	Grommet		4-wire (NPN)	5 V, 12 V		—	H7NF	—	F79F	●	—	●	○	—	○	IC circuit		
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	—	A76H	●	—	●	—	—	IC circuit	—	
						—	200 V	—	—	A72	A72H	●	—	●	—	—	—		
						24 V	12 V	100 V	A93V*2	A93	A73*2	A73H*2	●	●	●	●	—		—
								100 V or less	A90V	A90	A80	A80H	●	—	●	—	—		—
	Diagnostic indication (2-color indicator)	Grommet	Yes	2-wire	24 V	12 V	—	—	C73C	A73C	—	—	●	—	●	●	—	—	
							—	—	C80C	A80C	—	—	●	—	●	●	—	—	IC circuit
							24 V or less	—	—	A79W	—	—	—	—	—	—	—	—	—

\*1 Water-resistant type auto switches can be mounted on the above models, but SMC cannot guarantee water resistance.

Please contact SMC regarding water-resistant types with the above model numbers.

\*2 1 m lead wire is only applicable to the D-A93.

\* Lead wire length symbols: 0.5 m..... Nil (Example) M9NW 5 m..... Z (Example) M9NWZ  
1 m..... M (Example) M9NWM None..... N (Example) H7CN  
3 m..... L (Example) M9NWL

\* Since there are other applicable auto switches than listed above, refer to page 115 for details.

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

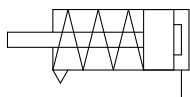
\* D-A9□/M9□/A7□/A80□/F7□/J7□ auto switches are shipped together, but not assembled. (For band mounting, only the auto switch mounting brackets are assembled before shipment.)

# C75 Series

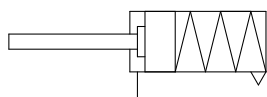


## Symbol

Single acting: Spring return, Rubber bumper



Single acting: Spring extend, Rubber bumper



Refer to pages 105 to 115 for cylinders with auto switches.

- Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- Minimum Stroke for Auto Switch Mounting
- Operating Range
- Auto Switch Mounting Brackets/Part No.



**Made to Order**  
(For details, refer to pages 119 to 124.)

Symbol	Specifications
-XA	Change of rod end shape
-XC6	Made of stainless steel

## ⚠ Precautions

Be sure to read this before handling the products. Refer to page 219 for safety instructions. For actuator and auto switch precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: <http://www.smcworld.com>

## Specifications

Bore size [mm]	32	40
Type	Pneumatic	
Action	Single acting, Single rod	
Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	Spring return: 0.18 MPa Spring extend: 0.23 MPa	
Ambient and fluid temperature	Without auto switch: -20°C to 80°C (No freezing) With auto switch: -10°C to 60°C (No freezing)	
Lubricant	Not required (Non-lube)	
Stroke length tolerance	$^{+1.4}_0$ mm	
Piston speed	50 to 750 mm/s	
Cushion	Rubber bumper	
Allowable kinetic energy	0.65 J	1.2 J

## Standard Strokes

Bore size [mm]	Standard stroke [mm]*2	Max. stroke [mm]
32	10, 25, 50, 100, 150, 200, 250*1	200
40		250

\*1 Not available for ø32.

\*2 Other strokes are available on request. (Request based production)

## Spring Retracting Force

### Spring Return

[N]

Bore size [mm]	Standard stroke [mm]	Spring force													
		10		25		50		100		150		200		250	
		Rod extended	Rod retracted	Rod extended	Rod retracted	Rod extended	Rod retracted	Rod extended	Rod retracted	Rod extended	Rod retracted	Rod extended	Rod retracted	Rod extended	Rod retracted
32	10, 25, 50, 100, 150, 200	53.9	48.8	53.9	41.2	53.9	28.4	66.7	19.6	66.7	18.1	66.7	19.6	—	—
40	10, 25, 50, 100, 150, 200, 250	78.5	72.6	78.5	63.7	78.5	49.0	76.5	23.5	76.5	23.5	76.5	23.5	76.5	23.5

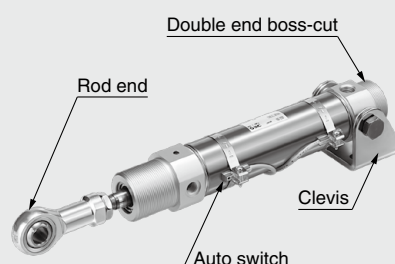
### Spring Extend

[N]

Bore size [mm]	Standard stroke [mm]	Spring force													
		10		25		50		100		150		200		250	
		Rod retracted	Rod extended	Rod retracted	Rod extended	Rod retracted	Rod extended	Rod retracted	Rod extended	Rod retracted	Rod extended	Rod retracted	Rod extended	Rod retracted	Rod extended
32	10, 25, 50, 100, 150, 200	66.7	56.3	66.7	40.7	66.7	14.7	66.7	19.6	66.7	18.1	66.7	19.6	—	—
40	10, 25, 50, 100, 150, 200, 250	76.5	65.9	76.5	50.0	76.5	23.5	76.5	23.5	76.5	23.5	76.5	23.5	76.5	23.5

## Option: Ordering Example of Cylinder Assembly

Cylinder model: CD75E40-50SNV-B-M9BW



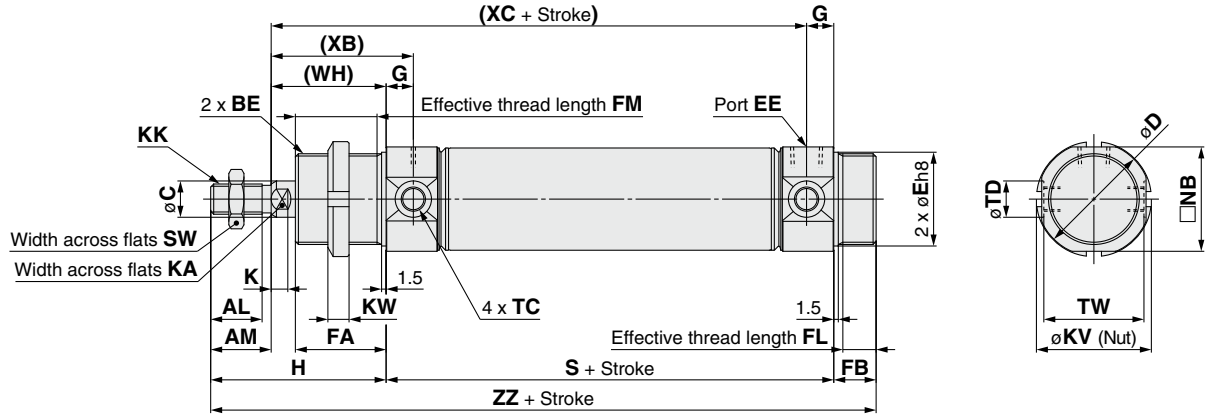
Head cover E: Double end boss-cut  
Mounting bracket N: Clevis  
Rod end bracket V: Rod end  
Auto switch D-M9BW: Band mounting, 2 pcs.

\* Mounting bracket, rod end, and auto switch are shipped together with the product.

## Dimensions: Single Acting, Spring Return

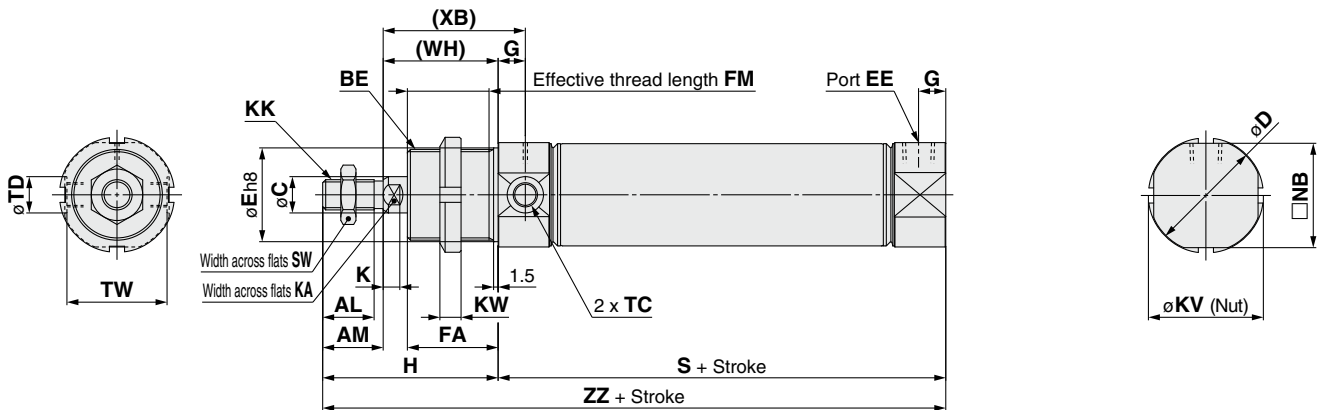
### Double end boss-cut

C□75E Bore size – Stroke S – □



### Boss-cut/Basic

C□75F Bore size – Stroke S – □



### Dimensions

Bore size	AL	AM	BE	C	D	E	EE	FA	FB	FM	FL	G	H	K	KA	KK	KV	KW
32	17	20	M30 x 1.5	12	37.5	30	G1/8	30	14	27	11	9	58	5.5	10	M10 x 1.5	38	7
40	21	24	M38 x 1.5	14	46.5	38	G1/4	35	16	32	13	12	69	7	12	M12 x 1.75	50	8

Bore size	NB	SW	TC	TD	TW	(WH)	(XB)
32	34.5	17	M8 x 1	12 <sup>+0.08</sup> <sub>0</sub>	33.1	38	47
40	42.5	19	M10 x 1	14 <sup>+0.08</sup> <sub>0</sub>	39.5	45	57

### Double End Boss-cut

Bore size	Item	S					(XC)					ZZ				
	Stroke	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250
32		68	118	143	168	—	97	147	172	197	—	140	190	215	240	—
40		89	139	164	189	214	122	172	197	222	247	174	224	249	274	299

### Boss-cut/Basic

Item		S					ZZ				
Bore size	Stroke	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250
32		68	118	143	168	—	126	176	201	226	—
40		89	139	164	189	214	158	208	233	258	283

Refer to page 67 of Standard Type Single Rod for details of accessories (rod end, floating joint).

C85  
C85W  
C85-ST  
C85K  
C85K-ST  
C85R  
C75  
C75W  
C75-ST  
C75K  
C75K-ST  
C75R  
CP96  
CP96K  
C96  
C96K  
C96Y  
C55  
Auto Switch  
Made to Order  
Related Products