

Miniature Body

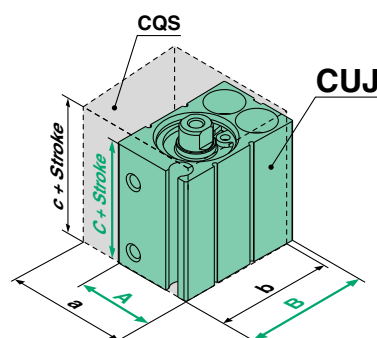
- Full length is shortened by up to approx. **20%**.
- Volume is reduced by up to approx. **45%**.

(Compared with the CQS series cylinders, double acting, with magnet)

Dimensions (With Magnet)

Bore size (mm)	A(a)	B(b)	C(c)
12	17 (25)	26.5 (25)	19.5 (22)
16	21 (29)	29.5 (29)	21 (22)
20	25 (36)	36 (36)	23.5 (29.5)

(): Dimensions of the CQS series cylinders



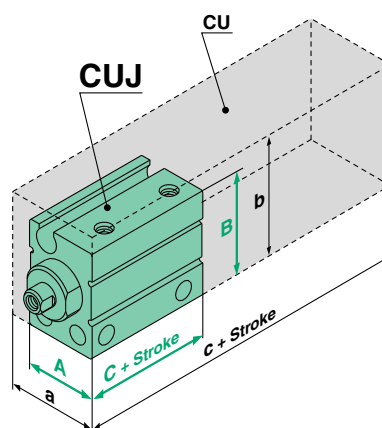
- Full length is shortened by up to approx. **64%**.
- Volume is reduced by up to approx. **70%**.

(Compared with the CU series cylinders, double acting, without magnet)

Dimensions (Without Magnet)

Bore size (mm)	A(a)	B(b)	C(c)
4	10 (—)	15 (—)	13 (—)
6	13 (13)	19 (22)	13 (33)
8	13 (—)	21 (—)	13 (—)
10	13.5 (15)	22 (24)	13 (36)
12	17 (—)	26.5 (—)	15.5 (—)
16	21 (20)	29.5 (32)	16.5 (30)
20	25 (26)	36 (40)	19.5 (36)

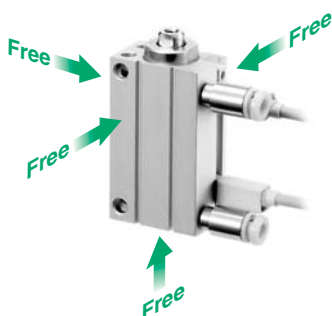
(): Dimensions of the CU series cylinders



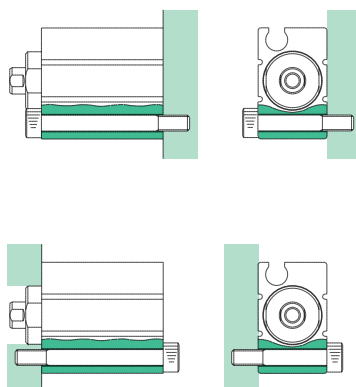
ø4, ø6, ø8, ø10

Concentrates wiring and piping on one side

Allows more efficient installation, since four directions can be used freely.



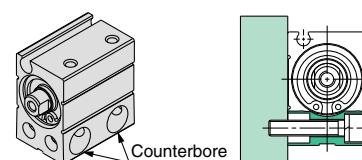
Allows installation from four directions.



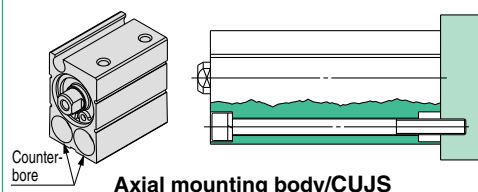
ø12, ø16, ø20

With counterbore for mounting

2 kinds of bodies are available. There is no protrusion for a mounting bolt.



Lateral mounting body/CUJB



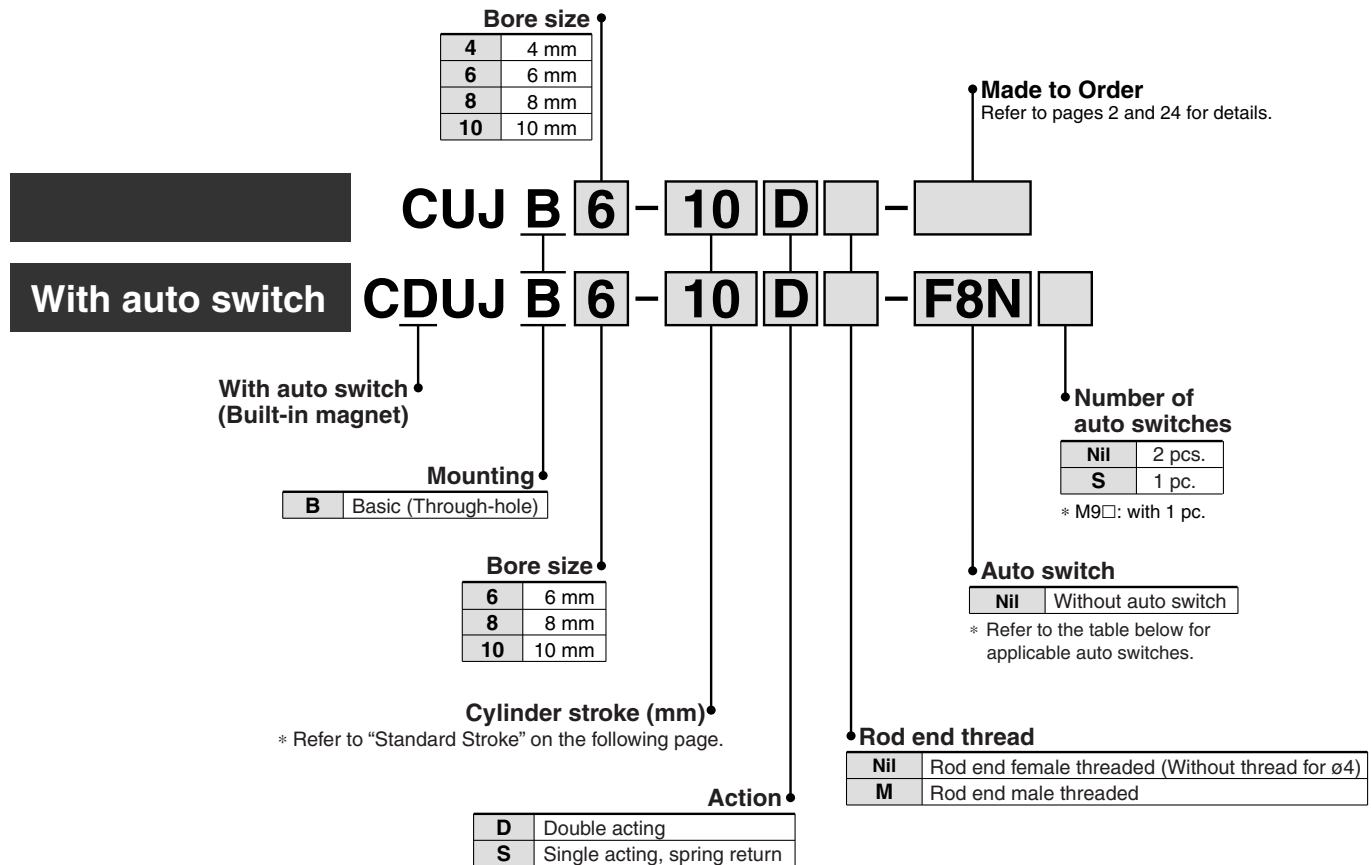
Axial mounting body/CUJS

Mini Free Mount Cylinder

Series CUJ

ø4, ø6, ø8, ø10

How to Order



Built-in Magnet Cylinder Model

In the case of built-in magnet without auto switch, the symbol for auto switch is "Nil".
(Example) CDUJB8-15DM

Applicable Auto Switches/Refer to pages 21 through to 23 for additional 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	Electrical entry		0.5 (Nil)	1 (M)	3 (L)	5 (Z)				
							Perpendicular	In-line								
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	—	M9N	●	—	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)				—	F8N	●	—	●	○	○		
				2-wire				—	M9P	●	—	●	○	○		
				3-wire (NPN)	24 V	12 V	—	M9B	●	—	●	○	○	—		
				3-wire (PNP)			—	F8B	●	—	●	○	○			
				2-wire			—	F8B	●	—	●	○	○			
	Diagnostic indication (2-color indication)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	—	M9NW	●	●	●	○	○	IC circuit	
				3-wire (PNP)				—	M9PW	●	●	●	○	○		
				2-wire				—	M9BW	●	●	●	○	○		
				2-wire				—	M9BW	●	●	●	○	○		

* Lead wire length symbols: 0.5 m Nil (Example) M9NW
1 m M (Example) M9NWM
3 m L (Example) M9NWL
5 m Z (Example) M9NWZ

* Auto switches marked with "○" are produced upon receipt of order.

Note 1) For 2-color indication type, use caution on hysteresis. Refer to page 19, "Auto Switch Hysteresis" prior to use.

Note 2) Refer to pages 21 through to 23 for detailed auto switch specifications.

* Refer to "Best Pneumatics" catalog for further information on auto switches with pre-wired connector.

* Auto switches are included, (but not assembled).

Specifications

Bore size (mm)		4	6	8	10
Action		Double acting; Single acting, spring return			
Fluid		Air			
Proof pressure		1.05 MPa			
Minimum operating pressure	Double acting	0.15 MPa			0.1 MPa
	Single acting, spring return	0.35 MPa	0.3 MPa		0.2 MPa
Maximum operating pressure		0.7 MPa			
Ambient and fluid temperature		Without auto switch: −10 to 70°C (No freezing) With auto switch: −10 to 60°C (No freezing)			
Cushion		None			
Lubrication		Non-lube			
Piston speed		50 to 500 mm/s			
Stroke length tolerance		+0.5 0			
Mounting		Through-hole			

Theoretical Output: Double Acting



Unit: N

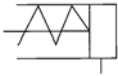
Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm ²)	Operating pressure (MPa)		
				0.3	0.5	0.7
4	2	OUT	12.6	3.76	6.28	8.79
		IN	9.4	2.82	4.71	6.59
6	4	OUT	28.3	8.48	14.13	19.79
		IN	15.7	4.71	7.85	10.99
8	5	OUT	50.3	15.07	25.13	35.18
		IN	30.6	9.18	15.31	21.44
10	6	OUT	78.5	23.56	39.26	54.97
		IN	50.3	15.07	25.13	35.18

JIS Symbol

Double acting, single rod

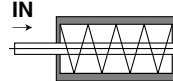


Single acting, spring return



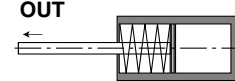
Spring Reaction Force: Single Acting, Spring Return

Spring in pre-loaded condition



When the spring is set in the cylinder.

Spring in loaded condition



When the spring is contracted by applying air.

Unit: N

Standard Stroke

Action	Bore size (mm)	Standard stroke (mm)
Double acting	4	4, 6, 8, 10, 15, 20
	6	4, 6, 8, 10, 15, 20
	8, 10	25, 30
Single acting, spring return	4	4, 6
	6	4, 6, 8
	8, 10	4, 6, 8, 10

Bore size (mm)	Spring condition	Stroke (mm)			
		4	6	8	10
4	Pre-loaded	1.70	1.27	—	—
	Loaded	2.55	2.55	—	—
6	Pre-loaded	2.45	2.01	1.57	—
	Loaded	3.33	3.33	3.33	—
8	Pre-loaded	4.67	3.76	2.86	1.96
	Loaded	6.47	6.47	6.47	6.47
10	Pre-loaded	5.04	4.18	3.31	2.45
	Loaded	6.77	6.77	6.77	6.77



Made to Order
(Refer to page 24 for details.)

Symbol	Contents
-XB6	Heat resistant cylinder (-10 to 150°C)

Note) Except models with auto switch and single-acting, spring return type
Except bore size 4

Mass: Double Acting

Unit: g

Bore size (mm)	Standard stroke (mm)								Additional mass	
	4	6	8	10	15	20	25	30	Built-in magnet	Rod end male threaded
CUJB4	7.2	7.9	8.6	9.3	11.1	12.8	—	—	—	0.4
CUJB6	12.4	13.6	14.8	16.0	18.9	21.8	24.7	27.6	2.7	0.8
CUJB8	15.6	17.0	18.4	19.7	23.0	26.4	29.9	33.4	3.0	1.5
CUJB10	17.9	19.4	20.8	22.3	25.9	29.5	33.1	36.7	3.2	2.6

Mass: Single Acting, Spring Return

Unit: g

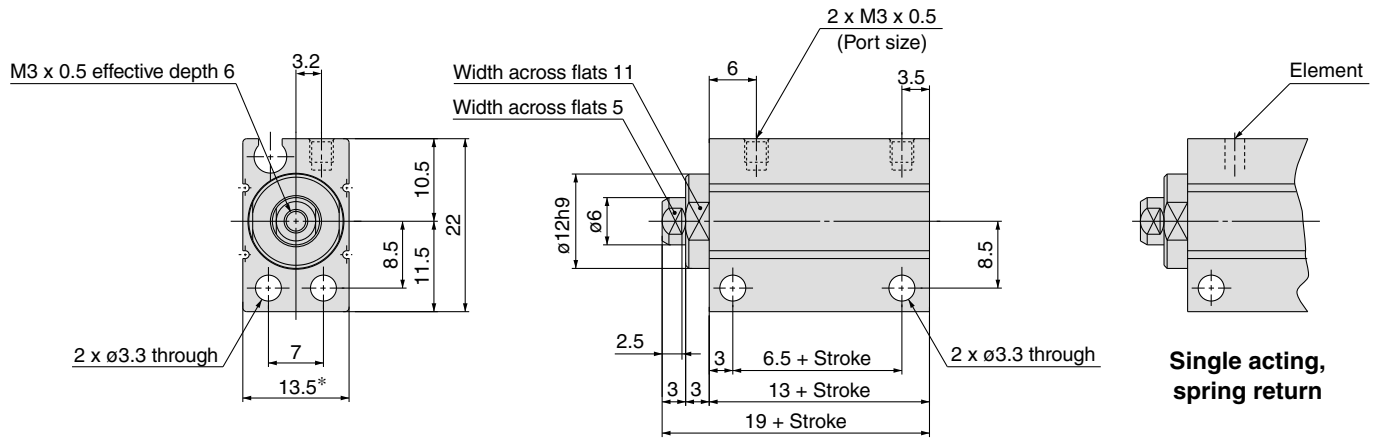
Bore size (mm)	Standard stroke (mm)				Additional mass	
	4	6	8	10	Built-in magnet	Rod end male threaded
CUJB4	7.2	7.9	—	—	—	0.4
CUJB6	12.8	14.0	15.2	—	2.4	0.8
CUJB8	15.8	17.2	18.6	19.9	2.5	1.5
CUJB10	17.9	19.4	20.8	22.3	2.4	2.6

Series CUJ

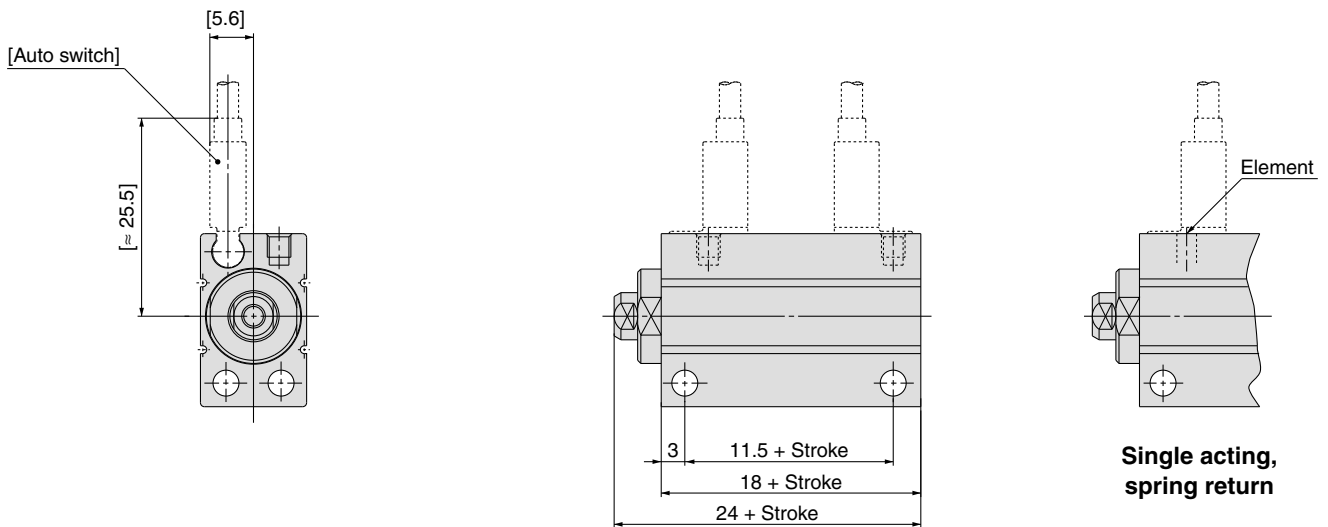
Dimensions: ø10 Double Acting; Single Acting, Spring Return

Without Magnet: CUJB10

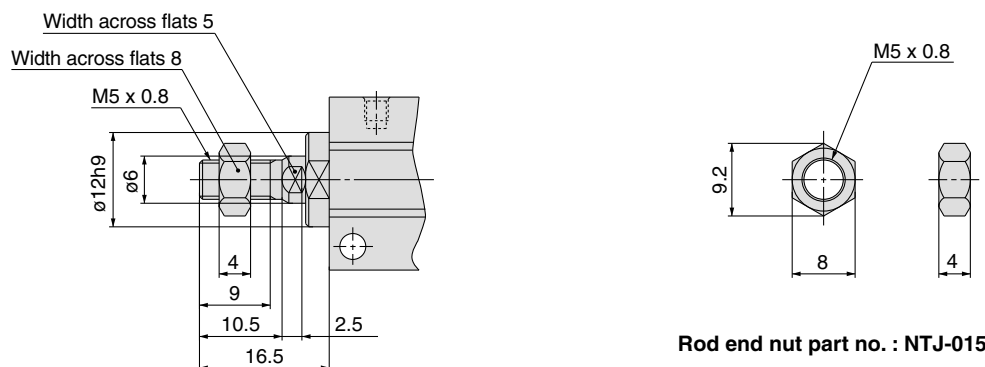
Note) The position of the width across flats may not be parallel to the cylinder tube.



Built-in Magnet: CDUJB10



Rod end male threaded



* Use caution especially when multiple cylinders are used in parallel such as stacking because the body width dimensions have plus tolerances.
Contact SMC for a product with body width dimensions having different tolerances.