


Cartridge cylinder single acting/push

# CAT Series

● Bore size:  $\phi 6/\phi 10/\phi 15$

JIS symbol ● Single acting cylinder 



## Specifications

Descriptions	CAT		
Bore size mm	$\phi 6$	$\phi 10$	$\phi 15$
Actuation	Single acting push (spring return method)		
Working fluid	Compressed air		
Max. working pressure MPa	0.7 ( $\approx 100$ psi, 7 bar)		
Min. working pressure MPa	0.2 ( $\approx 29$ psi, 2 bar)	0.15 ( $\approx 22$ psi, 1.5 bar)	
Proof pressure MPa	1.05 ( $\approx 150$ psi, 10.5 bar)		
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)		
Port size	M5		
Stroke tolerance mm	+1.0		
	0		
Working piston speed mm/s	50 to 500		
Cushion	None		
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)		
Allowable absorbed energy J	This product cannot absorb the energy generated by an external load mounted on the cylinder.		
	When using the product with no load, separately provide a shock absorber on the outside.		

\*1: Do not leave the single acting cylinder pressurized for a long time. If it is left pressurized for long periods, the piston rod may not return due to spring load when the pressure is released.

## Stroke length

Bore size (mm)	Standard stroke length (mm)
$\phi 6$	5/10/15
$\phi 10$	
$\phi 15$	

Note: Products with stroke length other than standard stroke length are not available.

## Cylinder weight

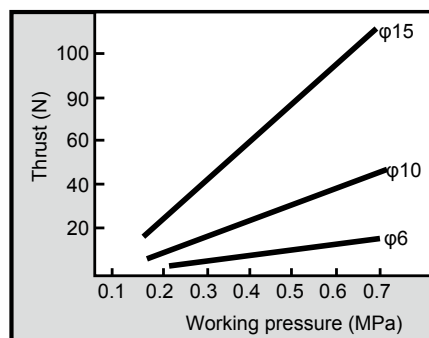
(Unit: g)

Stroke length (mm)	5	10	15
<b>Bore size (mm)</b>			
$\phi 6$	18.0	21.0	23.0
$\phi 10$	43.5	50.0	56.0
$\phi 15$	100.0	114.5	128.0

## Spring load (load when pulling) (Unit: N)

Bore size (mm)	Stroke length (mm)	When stroke length = 0	At full stroke
$\phi 6$	5	1.92	3.85
	10	1.37	3.33
	15	1.17	3.66
$\phi 10$	5	3.92	6.8
	10	3.43	7.4
	15	2.94	9.04
$\phi 15$	5	5.88	8.82
	10	4.41	8.82
	15	3.92	9.8

## Theoretical thrust (push)



## How to order

Without switch

**CAT - N - 6 - 5 - M**

**A** Mounting

**B** Bore size

**C** Stroke length

**D** Piston rod end

Code	Content
<b>A Mounting</b>	
N	Panel mount
O	Inset
<b>B Bore size (mm)</b>	
6	φ6
10	φ10
15	φ15
<b>C Stroke length (mm)</b>	
5	5
10	10
15	15
<b>D Piston rod end</b>	
M	Male thread
F	No thread

[Example of model No.]

**CAT-N-6-5-M**

Model: Cartridge cylinder, single acting/push

- A** Mounting : Panel mount
- B** Bore size : φ6 mm
- C** Stroke length : 5 mm
- D** Piston rod end : Male thread

SCP\*3

CMK2

CMA2

SCM

SCG

SCA2

SCS2

CKV2

CAV2/  
COVP/N2

SSD2

SSG

SSD

**CAT**

MDC2

MVC

SMG

MSD/  
MSDG

FC\*

STK

SRL3

SRG3

SRM3

SRT3

MRL2

MRG2

SM-25

ShkAbs

FJ

FK

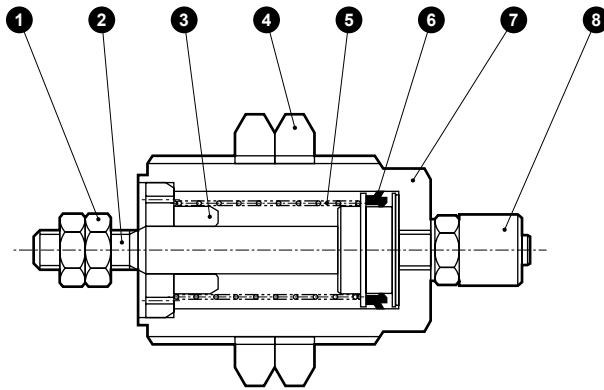
Spd  
Contr

Ending

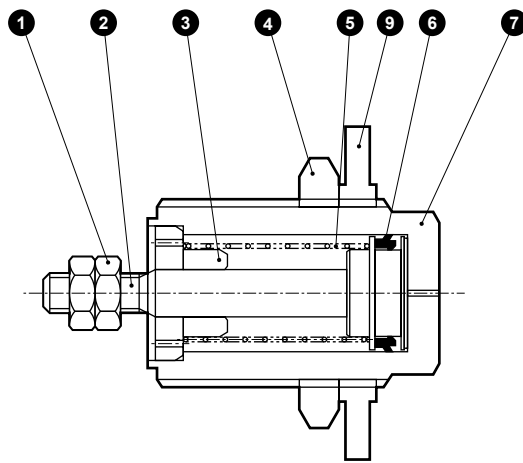
## Internal structure and parts list

- SCP\*3
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS2
- CKV2
- CAV2/  
COVPIN2
- SSD2
- SSG
- SSD
- CAT**
- MDC2
- MVC
- SMG
- MSD/  
MSDG
- FC\*
- STK
- SRL3
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- ShkAbs
- FJ
- FK
- Spd  
Contr
- Ending

● Panel mount (N)



● Inset (O)



**Cannot be disassembled**

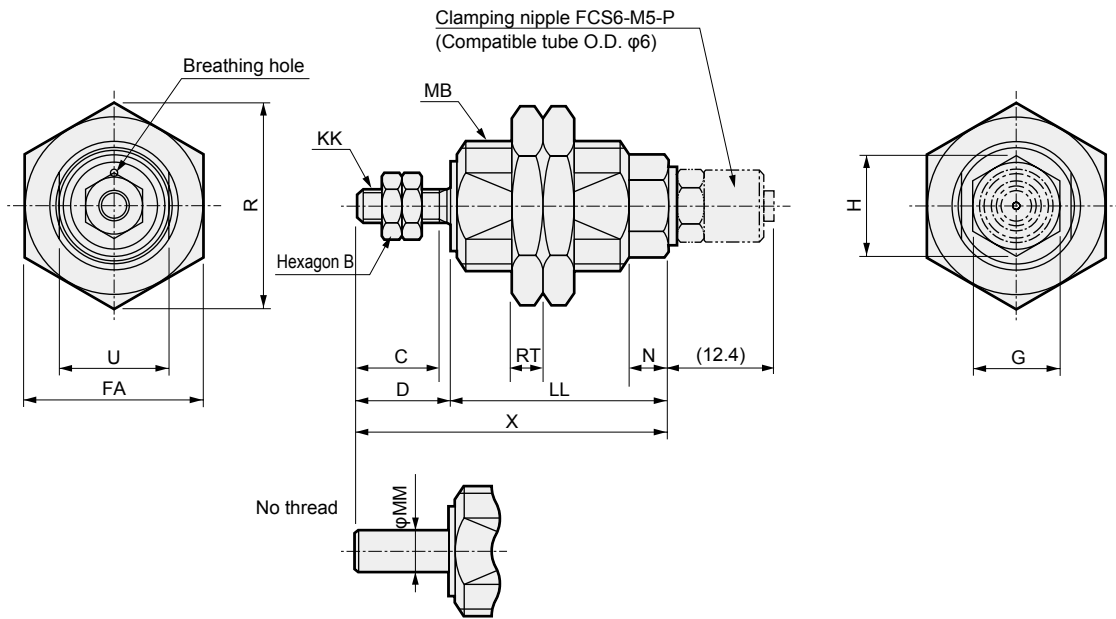
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Hexagon nut	Stainless steel		5	Coil spring	Steel	Electrodeposition
				6	Piston packing	Nitrile rubber	
2	Piston rod	Stainless steel		7	Body	Copper alloy	Nickeling
3	Rod cover	Phosphor bronze	Nickeling	8	Clamping nipple		
4	Nut	Copper alloy	Nickeling	9	Seal washer	Nitrile rubber, steel	

Note: This product cannot be disassembled.

## Dimensions



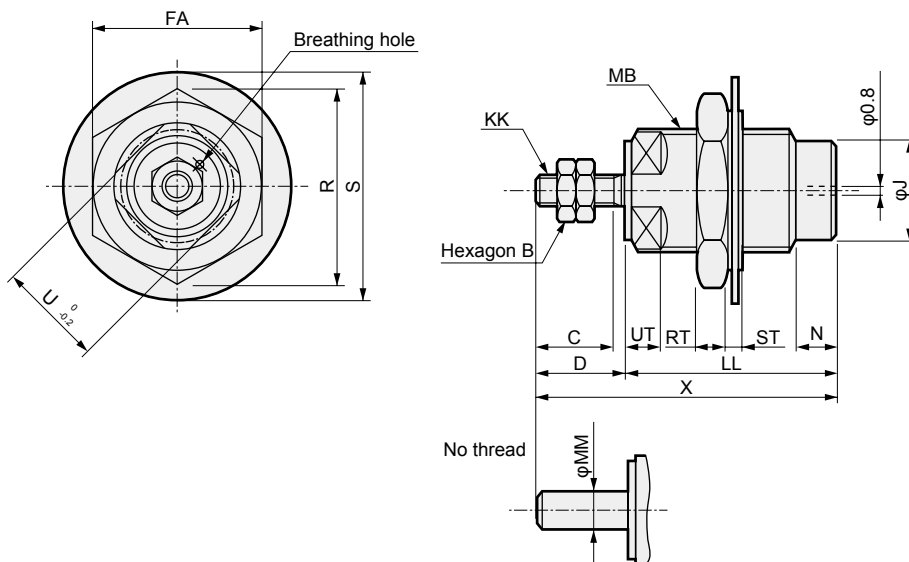
● Panel mount (N)



Note: For air piping, use the attached clamping nipple (orifice size φ0.8).

Code	B	C	D	FA	G	H	KK	LL			MB	MM	N	R	RT	U	X		
								Stroke length									Stroke length		
								5	10	15							5	10	15
φ6	5.5	7	8.5	14	7 <sup>0</sup> <sub>-0.2</sub>	8.1	M3	19	26	32	M10×1	3	5	16.2	3	8 <sup>0</sup> <sub>-0.2</sub>	27.5	34.5	40.5
φ10	7	10	11.5	22	11 <sup>0</sup> <sub>-0.25</sub>	12.7	M4	21	27	33.5	M16×1.5	5	5	25.4	4	13.5 <sup>0</sup> <sub>-0.25</sub>	32.5	38.5	45
φ15	8	12	13.5	30	18 <sup>0</sup> <sub>-0.25</sub>	20.8	M5	24	30	36	M24×1.5	6	6	34.6	5	22 <sup>0</sup> <sub>-0.35</sub>	37.5	43.5	49.5

● Inset (O)



Code	B	C	D	FA	J	KK	LL			MB	MM	N	R	RT	S	ST	U	UT	X		
							Stroke length												Stroke length		
							5	10	15										5	10	15
φ6	5.5	7	8.5	14	8.5	M3	19	26	32	M10×1	3	5	16.2	3	20.3	1.5	9	3.5	27.5	34.5	40.5
φ10	7	10	11.5	22	13	M4	21	27	33.5	M16×1.5	5	5	25.4	4	30.3	2	14	4.5	32.5	38.5	45
φ15	8	12	13.5	30	21	M5	24	30	36	M24×1.5	6	6	34.6	5	42.8	3	22	5.5	37.5	43.5	49.5

- SCP\*3
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS2
- CKV2
- CAV2/COVP/N2
- SSD2
- SSG
- SSD
- CAT
- MDC2
- MVC
- SMG
- MSD/MSDG
- FC\*
- STK
- SRL3
- SRG3
- SRM3
- SRT3
- MRL2
- MRG2
- SM-25
- ShkAbs
- FJ
- FK
- Spd Contr
- Ending