Compact Cylinders

RoHS 10

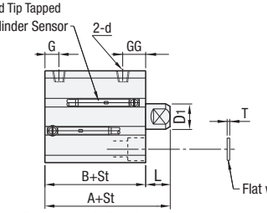
Operating Temperature Range: 5–60°C

Stroke	Rod Tip	Type	Features
Standard	Tapped	MSCCN	Standard Stroke: stroke selectable from fixed intervals. (Cylinder Sensor, No Bracket)
	Threaded	MSCCA	
Configurable	Shape Selectable	MSCCS	Stroke configurable by 1mm increments. Tip shape is selectable. Bracket available.

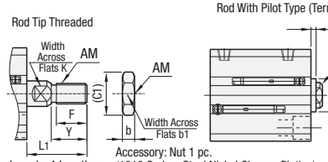
! For Cylinder Brackets for the Standard Stroke Type, refer to **P.3588–3589**

Cylinder Body End Standard Type (Terminal A)

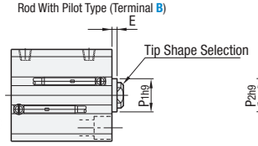
Rod Tip Tapped



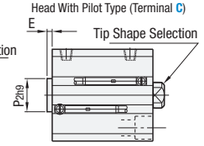
Rod Tip Threaded



Rod With Pilot Type (Terminal B)

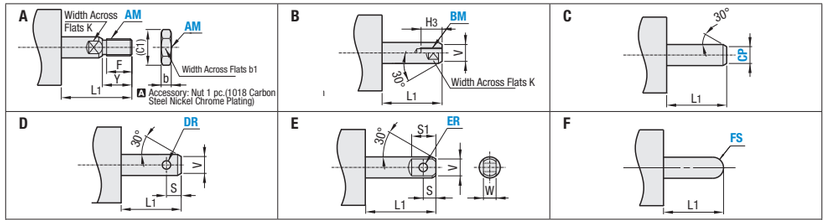


Head With Pilot Type (Terminal C)



! For material and surface treatment, refer to the "Compact Cylinders Overview" on **P.3585**
Accessory: Flat Washer 4 pcs. (Low Carbon Steel Nickel Plating)

Table 1 Compact Cylinder, Piston Rod Tip Shape



Tube Inner Dia. (mm)	F	H_3	K	*L_1	S	S_1	V	W	Y
12	9	6	5	14 (24)	4	8	5	4	10.5
16	10	8	6	15.5 (25.5)	6	12	7	5	12
20	12	7	8	18.5 (28.5)	8	16	8	6	14
25	15	12	10	22.5 (32.5)	10	20	10	8	17.5
32	20.5	13	14	28.5 (38.5)	12	24	14	10	23.5
40	20.5	13	14	28.5 (38.5)	12	24	14	10	23.5
50	26	15	17	33.5 (43.5)	14	28	18	12	28.5

* When foot and rod flanged type are selected, dimension will be indicated in ( ).

AM	b	b_1	(C_1)
M3 x 0.5	2.4	5.5	6.4
M4 x 0.7	3.2	7	8.1
M5 x 0.8	4	8	9.2
M6 x 1.0	5	10	11.5
M8 x 1.25	5	13	15
M10 x 1.25	6	17	19.6
M12 x 1.5	7	19	21.9
M14 x 1.5	8	22	25.4
M16 x 1.5	10	24	27.7
M18 x 1.5	11	27	31.2

Nominal Thread Dia.	Threaded	Tapped
M3	M3 x 0.5	M3 x 0.5
M4	M4 x 0.7	M4 x 0.7
M5	M5 x 0.8	M5 x 0.8
M6	M6 x 1.0	M6 x 1.0
M8	M8 x 1.25	M8 x 1.25
M10	M10 x 1.25	M10 x 1.5
M12	M12 x 1.5	—
M14	M14 x 1.5	—
M16	M16 x 1.5	—
M18	M18 x 1.5	—

Table 2 Bracket Selection List

(refer to the part numbers on **P.3588**)

Cylinder Brackets (Foot Type)	
Type	Applicable Part Number
KFB	CFKPB
KFM	CFKPM

Cylinder Brackets (Crevice Type)	
Type	Applicable Part Number
TKB	CTKB
TKM	CTKM

! For material, surface treatment and dimensions, refer to **P.3588**

External Dimensions for Compact Air Cylinders

Tube Inner Dia. (mm)	A	B	C	D_1	DD	d	d_1	d_2	H_1	H_2	dM	E	H_3	G	GG	J	JJ	K	L	P_1	P_2	Q	T	Z	b	b_1	C_1	F	L_1	Y
12	25.5	22	25	6	32	M5 x 0.8	6.5	3.5	4	7	M4 x 0.7	1.5	6	5	7.5	—	—	5	3.5	15	6	15.5	0.5	—	4	8	9.2	9	14	10.5
16			29	8	38								8					6		20	10	20			5	10	11.5	10	15.5	12
20	34	29.5	36	10	47		9	5.5	7	10	M6 x 1.0	2	7	5.5	9			8	4.5	13	13	25.5	1		5	13	15	12	18.5	14
25	37.5	32.5	40	12	52								12		11			10	5	15	15	28			6	17	19.6	15	22.5	17.5
32	40	33	45	16	60	Rc1/8							13	7.5	10.5	49.5	4.5	14	7	21	21	34	1	14	8	22	25.4	20.5	28.5	23.5
40	46.5	39.5	52		70									8	11	57	5			28	28	40								
50	48.5	40.5	64	20	86	Rc1/4	11	6.6	8	14	M8 x 1.25		15	10.5	10.5	71	7	17	8	35	35	50		19	11	27	31.2	26	33.5	28.5
63	54	46	77		103		14	9	10.5	18	M10 x 1.5	—			15	84				—	—	60								

Standard Stroke Type

Part Number Type	Part Number Tube I.D. (mm)	St Stroke (mm) Selection (Refer to the Price List)	L	Cylinder Body End Shape	Rod Tip MSCCN (Tapped) FM	Rod Tip MSCCA (Threaded) AM	Gasket	Available Types MSCCN St Stroke (mm) 5	10	15	20	25	30	35	40	45	50	75	100	MSCCA St Stroke (mm) 10	20	30	50	75	100
Rod Tip Tapped MSCCN	12	5–30	3.5	A (Standard)	M3x0.5	M5x0.8	NB (Nitrile Rubber)	•	•	•	•	•	•	—	—	—	—	—	—	•	•	•	—	—	—
	16				M4x0.7	M6x1.0		•	•	•	•	•	•	—	—	—	—	—	—	•	•	•	—	—	—
	20	5–50	4.5		M5x0.8	M8x1.25		•	•	•	•	•	•	•	•	•	•	—	—	•	—	•	•	—	—
	25		5		M6x1.0	M10x1.25		•	•	•	•	•	•	•	•	•	•	—	—	•	—	•	•	—	—
Rod Tip Threaded MSCCA	32		7		M8x1.25	M14x1.5		•	•	•	•	•	•	•	•	•	•	—	—	•	—	•	•	—	—
	40	5–100						•	•	•	•	•	•	•	•	•	•	•	•	•	—	•	•	—	•
	50	10–100	8		M10x1.5	M18x1.5		—	•	•	•	•	•	•	•	•	•	•	•	—	—	•	•	•	•
	63	30–100						—	—	—	—	—	•	—	—	—	•	•	•	—	—	•	•	•	•

continued

Configurable Stroke Type

Part Number Type	Part Number Tube I.D. (mm)	St Stroke (mm) 1 mm Increment	Cylinder Body End Shape	Piston Rod Tip Shape: Table 1 Shape A AM (Thread Dia.)	Shape B BM (Thread Dia.)	Shape C CP 1mm Increment	Shape D DR	Shape E ER	Shape F FS (Arc Tip)	Gasket	Bracket for Cylinder (Table 2) Type	Qty
MSCCS	12	5–30	A Standard Type	3 4 5	3	3–5	2 3	2 3	3	NB Nitrile Rubber	No Bracket	
	16			4 5 6	3 4	3–7	2 3 4	2 3 4	4		TK	0
	20	5–50		5 6 8	3 4 5	4–8	3 4 5	3 4 5	5		Foot Type	When TK bracket, specify 0
	25			5 6 8 10	4 5 6	4–10	4 5 6	4 5 6	6		KFB	1
	32			6 8 10 12 14	5 6 8	5–14	5 6 8	5 6 8	8		KFM	
	40	5–100	B Rod Side Piloted	6 8 10 12 14	5 6 8	5–14	5 6 8	5 6 8	8	VT Fluorine Rubber	Crevice	
	50	10–100	C Head Side Piloted	8 10 12 14 16 18	6 8 10	8–18	6 8 10	6 8 10	10		TKB	2
											TKM	

! Cylinder brackets cannot be installed on the pilot side for the types with cylinder end Shapes B and C.
! Please purchase sensors separately (See below).

Part Number Example

Part Number												Cylinder Bracket	
Type	Tube Diameter	-	St Stroke	-	Cylinder Body End Shape	-	Piston Rod Tip Shape	-	Gasket	-		Type	Quantity
MSCCN	20	-	35										
MSCCS	20	-	38	-	B	-	BM4	-	VT	-	KFB	1	

Part Number Alterations

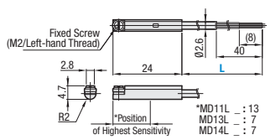
Part Number												Cylinder Bracket		
Type	Tube Diameter	-	St Stroke	-	Cylinder Body End Shape	-	Piston Rod Tip Shape	-	Gasket	-		Type	Quantity	(TC / TH)
MSCCS	20	-	50	-	B	-	DR5	-	NB	-	TK	0	-	TH

Alterations	Cold Weather Resistance Specification	Heat Resistance Specification
Code	TC	TH
Spec.	Usable in the ambient temperature range from -40–60°C. Changes to low temp. resistant grease, low nitrile rubber gasket, and low temp. resistance cylinder sensors are not available.	Usable in the ambient temperature range from 5–120°C. Changes to heat resistant grease, fluororubber gaskets, and cylinder sensors are not available.

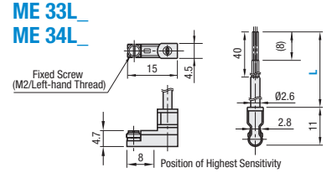
! Applicable to Configurable Stroke Type only.
! When specifying TC or TH alterations, select NB (Nitrile Rubber) for gaskets.

Cylinder Sensor

MD 11L_
MD 13L_
MD 14L_



ME 33L_
ME 34L_



Operating Temperature Range: 0–60°C

! For detailed specifications of the Sensors, see **P.3585**

Part Number Type	Part Number L	Load Voltage	Load Current	Indicator Light	Sensor Type	Line	Wire Exit
MD11	L1 (1m) L3 (3m)	DC24V AC110V	DC24V 5–40 mA AC110V 5–20 mA	LED (Lights when ON)	Contact	2-Line	Rear
MD13	L1 (1m) L3 (3m)	28VDC or Less	0.1–40 mA		No Contact	3-Line	
MD14	L1 (1m) L3 (3m)	DC10–28V	5–20 mA		No Contact	2-Line	
ME33	L1 (1m) L3 (3m)	28VDC or Less	0.1–40 mA		No Contact	3-Line	Top
ME34	L1 (1m) L3 (3m)	DC10–28V	5–20 mA		No Contact	2-Line	

Part Number Example

Part Number
MD14L1