ISO Cylinder: Standard/Non-rotating Type
Double Acting, Single/Double Rod
Series C85
ø8, ø10, ø12, ø16, ø20, ø25

How to Order

Double acting Single rod

C D 85 — K N 16 — 40 C J — A — R2

Double acting Double rod

C D 85 W — E 16 — 40 C JJ — B

Built-in magnet

Nil	None
D	Built-in magnet

Type

Nil	Standard
K	Non-rotating rod (Rubber cushion only)

Mounting style

Symbol	Mounting
N	Basic integrated clevis
E*, **	Double end
F**	Front nose
Y**	Front nose in line port

* Double acting, Double rod: Only double end style (E).
** Except air cushion type.

Auto switch mounting type

A	Rail mounting
B	Band mounting

Applicable auto switches and bands are shown on page 6-11-44. Please order auto switches and bands separately.

Option

R	Stainless steel piston rod, rod end nut and mounting nut
R2	Stainless steel piston rod and rod end nut

Note) Please refer to page 6-11-47 for additional options. Only one option can be selected.

Bore size / **Stroke**

Bore size (mm)	Standard stroke (mm)**	Max. stroke (mm)		
		Standard	Non-rotating	Double rod
8*	10, 25, 40, 50, 80, 100	400	100	100
10				
12	10, 25, 40, 50, 80, 100, 125, 160, 200		200	200
16				
20	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 300	1000	1000	500
25				

* Not available with air cushion.
** Other strokes available on request.

Cushion

Nil	Rubber cushion (Standard)
C	Air cushion (Only "N" execution, bores 10 to 25 mm)

Rod boot (Only ø20, ø25)

Nil	Without rod boot
J	Nylon tarpaulin one side
K	Heat resistant tarpaulin one side
JJ*	Nylon tarpaulin both sides
KK*	Heat resistant tarpaulin both sides

* In the case of double acting/double rod.

Mounting Bracket Part No.

Mounting bracket \ Bore size (mm)		8	10	12	16	20	25
Mounting bracket	Foot (1 pc.)	C85L10A		C85L16A		C85L25A	
	Foot (2 pcs. with mounting nut 1 pc.)	C85L10B		C85L16B		C85L25B	
	Flange	C85F10		C85F16		C85F25	
	Trunnion	C85T10		C85T16		C85T25	
	Clevis	C85C10		C85C16		C85C25	
Accessory	Single knuckle joint	KJ4D		KJ6D		KJ8D	KJ10D
	Double knuckle joint	GKM4-8		GKM6-10		GKM8-16	GKM10-20
	Floating joint	JA10-4-070		JA15-6-100		JA20 -8-125	JA30 -10-125

Replacement Parts

For Standard Cylinders

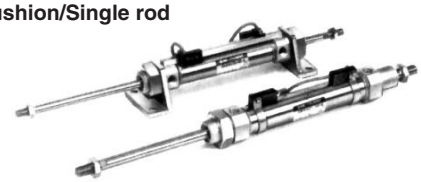
Bore size (mm)	Part no.	Note
20	C85-20PS	Every set includes: n°1 rod seal, n°1 seal retaining washer, n°1 retaining ring
25	C85-25PS	

For Non-rotating Cylinders ("K")

Bore size (mm)	Part no.	Note
20	C85K-20PS	Every set includes: n°1 rod seal, n°1 seal retaining washer, n°1 retaining ring
25	C85K-25PS	

Rubber cushion/Single rod

Air cushion/Single rod



Rubber cushion/Double rod

Air cushion/Double rod

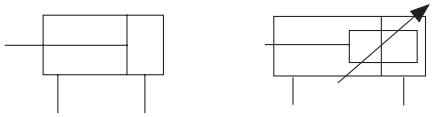
Non-rotating

Specifications

Bore size (mm)		8	10	12	16	20	25
Piston rod dia. (mm)		4	4	6	6	8	10
Piston rod thread		M4 x 0.7	M4 x 0.7	M6 x 1	M6 x 1	M8 x 1.25	M10 x 1.25
Port size		M5 x 0.8	M5 x 0.8	M5 x 0.8	M5 x 0.8	G 1/8	G 1/8
Action		Double acting, Single/Double rod					
Fluid		Air					
Proof pressure		1.5 MPa					
Max. operating pressure		1.0 MPa					
Min. operating pressure	Spring return	0.1 MPa	0.08 MPa		0.05 MPa	0.05 MPa	
	Spring extended					0.08 MPa	
Ambient and fluid temperature		–20 to 80°C (Built-in magnet: –10 to 60°C)					
Cushion		Rubber cushion, Air cushion (Except ø8) (Non-rotating: Rubber bumper only)					
Lubrication		Not required. Use turbine oil Class 1 ISO VG32, if lubricated.					
Rod boot	Nylon tarpaulin	—				Max. ambient temperature 60°C	
	Heat resistant tarpaulin	—				Max. ambient temperature 110°C*	
Piston speed		50 to 1500 mm/s					
Allowable kinetic energy	Rubber cushion	0.02 J	0.03 J	0.04 J	0.09 J	0.27J	0.4 J
	Air cushion	—	0.17 J	0.19 J	0.4 J	0.66 J	0.97 J
Non-rotating accuracy		±1° 30'	±1° 30'	± 1°	±1°	±0° 42'	±0° 42'
Stroke tolerance (mm)		0/+1				0/+1.4	

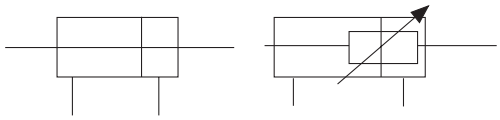
∗ Maximum ambient temperature of rod boots only.

JIS Symbol
Double acting, Single rod



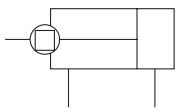
Rubber cushion Air cushion

Double acting, Double rod



Rubber cushion Air cushion

Non-rotating rod: Double acting, Single rod



Weight (Standard, Non-rotating rod)

(g)

Bore size (mm)			8	10	12	16	20	25
Double action	Basic weight		45	49	96	109	183(203)	258(286)
Double rod	Add'l weight for each 10 mm of stroke		3	3.2	6.2	7.2	11.8	18.4
Mounting bracket		C85L□A	20		40		95	
		C85L□B	55		105		210	
		C85F□	12		25		90	
		C85T□	20		50		75	
		C85C□	20		40		85	
Accessory	Single knuckle joint	KJID	17		25		45	70
	Double knuckle joint	GKM□-□	10		20		50	100
	Floating joint	JA□-□-□	10		20		50	70

( ): In the case of air cushion

Calculation: (Example) C85N10-50, C85F10
Basic weight————49 (ø10)g
Additional weight———3.2/10 mm of stroke
Cylinder stroke————50 mm
Mounting bracket———12g
49 + 3.2 x 50/10 = 65g 65 +12 = 77g

Auto Switch Mounting, Minimum Possible Cylinder Stroke

Band Mounting Style

Bore size: ø8, ø10, ø12, ø16 (mm)

Auto switch model	No. of auto switches				1 pc.
	3 pcs.		2 pcs.		
	Different sides	Same side	Different sides	Same side	
D-C7□ **D-C80**	55	90	15	50	10
D-C73C **D-C80C** **D-H7C**	65	105	15	65	10
D-H7□ **D-H7□W** **D-H7BAL** **D-H7NF**	60	105	15	60	10

Rail Mounting Style

Bore size: ø8, ø10, ø12, ø16 (mm)

Auto switch model	No. of auto switches		1 pc.
	3 pcs.	2 pcs.	
D-A7□/A80 **D-A73C/A80C**	35	10	5
D-A7□H **D-A80H**	45	10	5
D-A79W *	40	15	10
D-F7□ **D-J79**	45	5	5
D-F7□V **D-J79C**	30	5	5
D-F7□W **D-J79W** **D-F7BAL** **D-F79F**	55	15	10
D-F7□WV **D-F7BAVL**	40	15	10

* "D-A79W" can not be mounted on bore size ø8, ø10, ø12 cylinder.

Band Mounting Style

Bore size: ø20, ø25 (mm)

Auto switch model	No. of auto switches				1 pc.
	2 pcs.		n pcs.		
	Different sides	Same side	Different sides	Same side	
D-C7□ **D-C80**	15	50	$15 + 45(\frac{n-2}{2})$ (n = 2, 4...)	50 + 45(n – 2)	10
D-C73C **D-C80C** **D-H7C**	15	65	$15 + 45(\frac{n-2}{2})$ (n = 2, 4...)	65 + 50(n – 2)	10
D-H7□ **D-H7□W** **D-H7BAL** **D-H7NF**	15	60	$15 + 45(\frac{n-2}{2})$ (n = 2, 4...)	60 + 55(n – 2)	10

Rail Mounting Style

Bore size: ø20, ø25 (mm)

Auto switch model	No. of auto switches		1 pc.
	2 pcs.	n pcs.	
D-A7□/A80 **D-A7□H/A80H** **D-A73C/A80C** **D-F7□** **D-F7□V** **D-J79** **D-J79C**	10	$10 + 35(\frac{n-2}{2})$ (n = 2, 4...)	5
D-A79W **D-F7□W** **D-J79W** **D-F7BAL** **D-F79F** **D-F7□WV** **D-F7BAVL**	15	$15 + 35(\frac{n-2}{2})$ (n = 2, 4...)	10