



# ISO Cylinder

## Series C85

ø8, ø10, ø12, ø16, ø20, ø25

Conforming to ISO 6432 and CETOP RP52P.

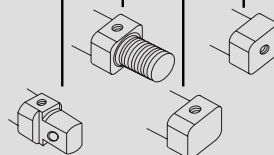


### Series Variations

Series	Action	Rod	Cushion	Head cover style				Switch mount		Rod boot (ø20, 25)	Bore size (mm)	Page
				N	E	F	Y	Rail	Band			
<b>Standard Series C85</b> 	Double acting	Single	Rubber	●	●	●	●	●	●	●	8 to 25	6-11-6
			Air	●	●	●	●	●	●	●	10 to 25	
		Double	Rubber	●	●	●	●	●	●	●	8 to 25	
			Air	●	●	●	●	●	●	●	10 to 25	
<b>Non-rotating rod Series C85K</b> 	Single acting	Single (SR, SE)	Rubber	●	●	●	●	●	●	●	8 to 25	6-11-23
				(Not for SE)				●	●	●	8 to 25	
				●	●	●	●	●	●	●	8 to 25	
				(Not for SE)				●	●	●	8 to 25	
<b>Direct mount Series C85R</b> 	Base	Double acting	Single	Rubber	●	●	●	●	●	●	8 to 25	6-11-38
					●	●	●	●	●	●	20, 25	
	Front	Double acting	Single	Rubber	●	●	●	●	●	●	8 to 25	
					●	●	●	●	●	●	20, 25	

Mounting style

SR = Spring Return  
SE = Spring Extended



CJ1  
CJP  
CJ2  
CM2  
CG1  
MB  
MB1  
CA2  
CS1  
C76  
**C85**  
C95  
CP95  
NCM  
NCA  
D-  
-X  
20-  
Data

# Series C85: $\varnothing 8$ , $\varnothing 10$ , $\varnothing 12$ ,

## Extended Service Life

Automated assembly guarantees 100% repeatable mounting accuracy.

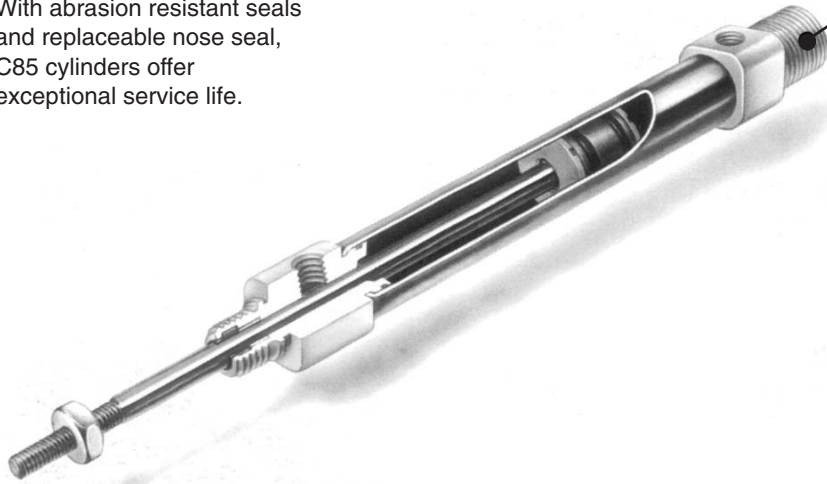
With abrasion resistant seals and replaceable nose seal, C85 cylinders offer exceptional service life.

## Corrosion Resistance

All parts are corrosion resistant. End covers and clevis are specially anodised while barrel is stainless steel. Piston rod is stainless steel up to  $\varnothing 16$ .  $\varnothing 20$  to  $\varnothing 40$  is C45 hard chromed.

## ISO Standard 6432

is compliant with auto switch type.



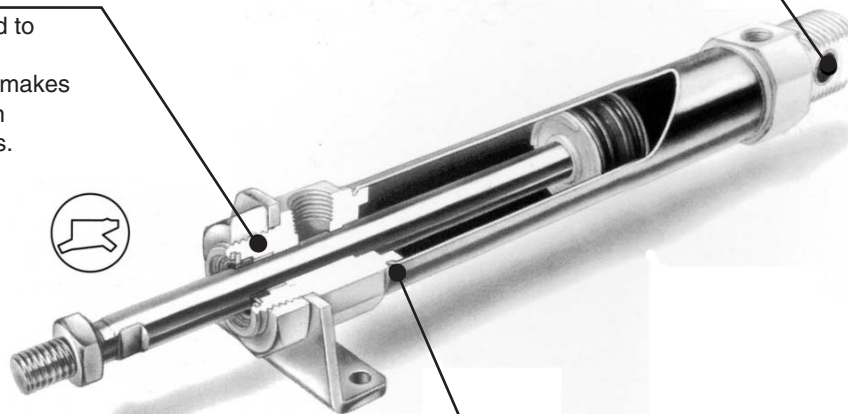
**C85:  $\varnothing 8$ ,  $\varnothing 10$ ,  $\varnothing 12$ ,  $\varnothing 16$**

## Bronze Bush Bearing

High quality bronze bush in clevis bearing extends the life of cylinder.

## High Dust Resistance

A unique rod seal is employed to prevent entry of dust. The effectiveness of the seal makes the cylinder suitable for use in extremely dusty environments.



**C85:  $\varnothing 20$ ,  $\varnothing 25$**

## Leak Proof Assembly

Double swaging of the end covers of the barrel provides an absolutely air tight union.

# ISO Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended

## Series C85

ø8, ø10, ø12, ø16, ø20, ø25

### How to Order

Single acting,  
Spring return/  
Spring extended

C D 85 K N 16 40 S 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

\* Except single acting spring extended type.

Auto switch  
mounting style

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

Bore size

Stroke

Bore size (mm)	Standard stroke (mm)*	Max. stroke
8*	10, 25, 40, 50	50
10		
12		
16	10, 25, 40, 50, 80, 100, 125, 150	150
20		
25		

\* Other strokes available on request.

Action

S	Single acting, Spring return
T	Single acting, Spring extended

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data

### Mounting Bracket Part No.

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 packing n°1 packing 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 packing n°1 packing retaining washer n°1 retaining ring
25	C85K-25PS	

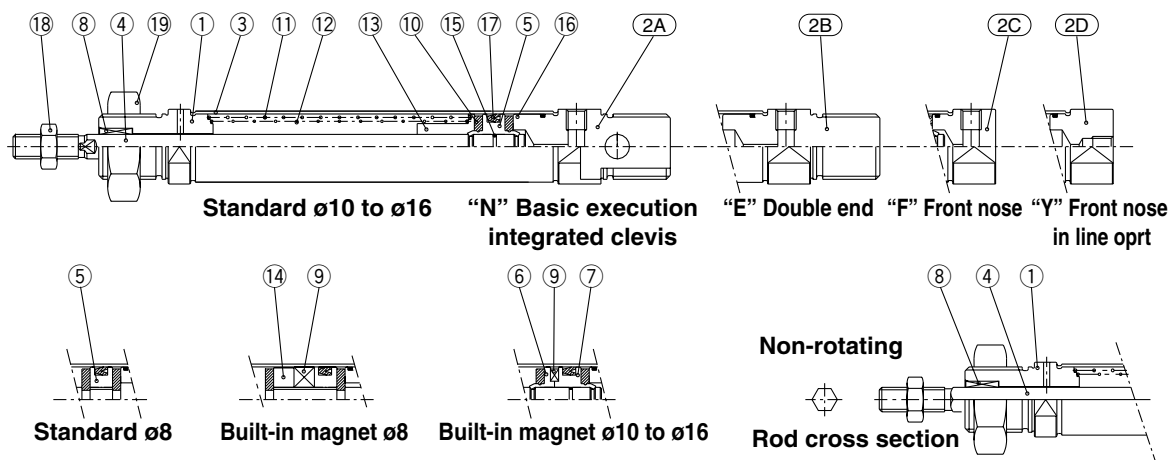
# Series C85

## Construction

[First angle projection]

Single acting, Single rod

Spring return: C□85□8 to 16-□S (Disassembly is not possible.)

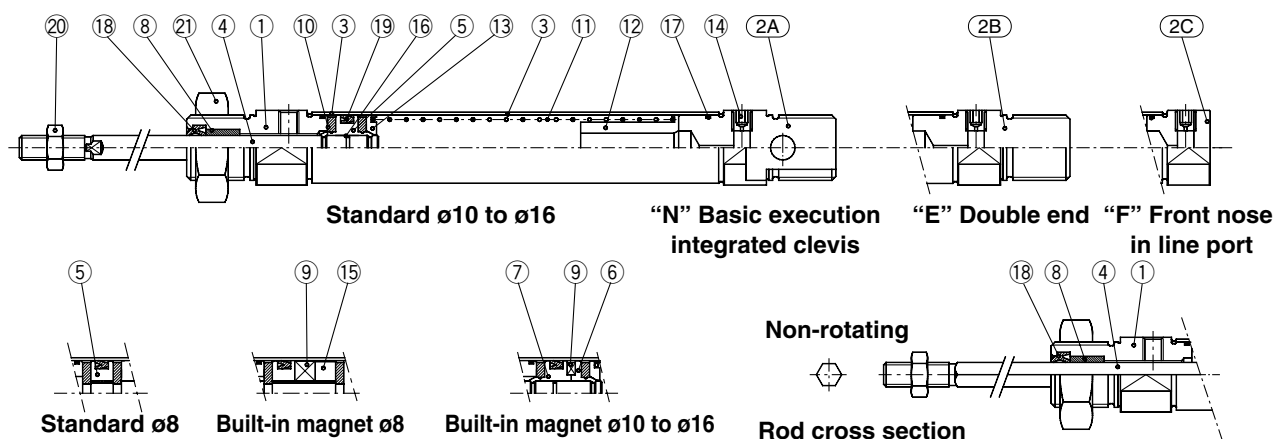


## Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminum alloy	1	White anodized
②A	Head cover N	Aluminum alloy	1	White anodized
②B	Head cover E	Aluminum alloy	1	White anodized
②C	Head cover F	Aluminum alloy	1	White anodized
②D	Head cover Y	Aluminum alloy	1	White anodized
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Stainless steel	1	
⑤	Piston	Brass	1	
⑥	Piston A	Brass	1	(Switch type only)
⑦	Piston B	Brass	1	(Switch type only)
⑧	Bush	Sintered bronze	1	

No.	Description	Material	Qty.	Note
⑨	Magnet	Magnet	1	(Switch type only)
⑩	Bumper	Urethane	2	
⑪	Return spring A	Piano wire	1	
⑫	Return spring B	Piano wire	1	
⑬	Spring guide	Brass	1	
⑭	Spacer	Brass	1	
⑮	Piston gasket	NBR	1	(2 for switch type)
⑯	Tube gasket	NBR	1	
⑰	Piston seal	NBR	1	
⑱	Rod end nut	Carbon steel	1	Nickel plating
⑲	Mounting nut	Carbon steel	1	Nickel plating

Spring Extended: C□85□8 to 16-□T (Disassembly is not possible.)



## Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminum alloy	1	White anodized
②A	Head cover N	Aluminum alloy	1	White anodized
②B	Head cover E	Aluminum alloy	1	White anodized
②C	Head cover F	Aluminum alloy	1	White anodized
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Stainless steel	1	
⑤	Piston	Brass	1	
⑥	Piston A	Brass	1	(Switch type only)
⑦	Piston B	Brass	1	(Switch type only)
⑧	Bush	Sintered bronze	1	
⑨	Magnet	Magnet	1	(Switch type only)

No.	Description	Material	Qty.	Note
⑩	Bumper	Urethane	2	
⑪	Return spring C	Piano wire	1	
⑫	Spring guide	Brass	1	
⑬	Spring seat	Brass	1	
⑭	Plug	Steel	1	
⑮	Spacer	Brass	1	
⑯	Piston gasket	NBR	1	(2 for switch type)
⑰	Tube gasket	NBR	1	
⑱	Rod seal	NBR	1	
⑲	Piston seal	NBR	1	
⑳	Rod end nut	Carbon steel	1	Nickel plating
㉑	Mounting nut	Carbon steel	1	Nickel plating



## 1 High Temperature XB6

### C85 Mounting Bore size – Stroke – XB6

N, E, F, Y 8, 10, 12, 16, 20, 25 mm

Standard cylinder seals are replaced with special ones and other modifications are made in order to enable the cylinder to operate at a high ambient temperature (–10 to 150°C).

#### Possible applications:

- Bore size 8 to 20 mm
- Rubber bumper
- Without magnets (Auto switches cannot be used at high temperature.)
- Single rod — Double acting
- Double rod — Double acting (W)

#### Dimensions unchanged

#### Specifications

Type	Air cylinder
Applicable size	ø8, ø10, ø16, ø20, ø25 mm
Action	Double acting
Ambient temperature range	–10 to 150°C
Piston speed	50 to 500 mm/s
Cushion	Rubber bumper
Material	Seal: Fluorocarbon rubber Wear ring: Fluorocarbon resin
Grease	Fluorinated grease

Note) Contact SMC for non-rotating type.

## 3 Low Speed XB9

### C85 Mounting Bore size – Stroke – XB9

N, E, F, Y 20, 25 mm

The cylinder does not generate any stick-slip phenomenon even at the rated low speed of 10 to 50 mm/s.

All strokes drive at a constant speed smoothly.

#### Possible applications:

- Bore size 20 and 25 mm
- Rubber bumper type only
- With or without magnets
- Single rod — Double acting

#### Dimensions unchanged

#### Specifications

Type	Air cylinder
Applicable size	ø20, ø25 mm
Action	Double acting
Piston speed	10 to 50 mm/s
Cushion	Rubber bumper

Note) Contact SMC for non-rotating type.

## 2 Low Temperature XB7

### C85 Mounting Bore size – Stroke – XB7

N, E, F, Y 20, 25 mm

Standard cylinder packing are replaced with special ones and other modifications are made in order to enable the cylinder to operate at a low ambient temperature (–55 to 70°C).

#### Possible applications:

- Bore size 20 and 25 mm
- Rubber bumper
- Without magnets (Auto switches cannot be used at low temperature.)
- Single rod — Double acting
- Double rod — Double acting (W)

#### Dimensions unchanged

#### Specifications

Type	Air cylinder
Applicable size	ø20, ø25 mm
Action	Double acting
Ambient temperature range	–55 to 70°C
Cushion	Rubber bumper
Material	Seal: Low nitrile rubber Wear ring: Fluorocarbon resin
Grease	Fluorinated grease

Note) Contact SMC for non-rotating type.

## 4 Heavy-duty Scraper XC4

### C85 Mounting Bore size – Stroke – XC4

N, E, F, Y 20, 25 mm

A heavy-duty scraper is used as wiper ring. Ideal for severe applications where the cylinder is exposed to dust, earth and sand. Applicable to casting machines, construction machines, industrial vehicles, etc.

#### Possible applications:

- Bore size 20 and 25 mm
- Rubber bumper type only
- With or without magnets
- Single rod — Double acting
- Double rod — Double acting (W)

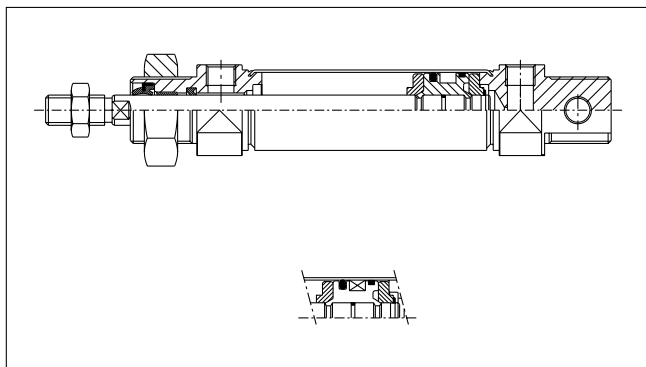
#### Dimensions unchanged

#### Specifications

Type	Air cylinder
Applicable size	ø20, ø25 mm
Max. operating pressure	1 MPa (10 bar)
Min. operating pressure	0.08 MPa (0.8 bar)
Cushion	Rubber bumper
Wiper ring	NBR (SCB)

Note) Not applicable for non-rotating type.

#### Construction



CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data