



ISO Cylinder Series C85

ø8, ø10, ø12, ø16, ø20, ø25

Conforms to ISO 6432 and CETOP RP52P

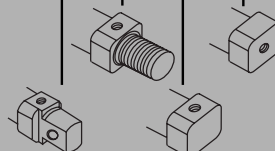


Variations

Series	Action	Rod style	Cushion	Headcoverstyle				Switchmount		Rotboot (ø20,25)	Bore (mm)	Page
				N	E	F	Y	Rail	Band			
Standard Series C85 	Double acting	Single	Rubber	●	●	●	●	●	●	●	ø8to25	3-2
			Air	●	●	●	●	●	●	●	ø10to25	
		Double	Rubber	●	●	●	●	●	●	●	ø8to25	
			Air	●	●	●	●	●	●	●	ø10to25	
Non-rotating rod 	Double acting	Single	Rubber	●	●	●	●	●	●	●	ø8 to25	3-2
			Air	●	●	●	●	●	●	●	ø10to25	
		Single (SR,SE)	Rubber	●	●	●	●	●	●	●	ø8 to25	
			Air	●	●	●	●	●	●	●	ø10to25	
Direct mount 	Double acting	Single	Rubber	●	●	●	●	●	●	●	ø8 to25	3-30
			Air	●	●	●	●	●	●	●	ø10to25	
		Single	Rubber	●	●	●	●	●	●	●	ø8 to25	
			Air	●	●	●	●	●	●	●	ø10to25	

Mountingstyle

SR=Springreturn
SE=Springextend



ISO Cylinder/Standard, Non-rotating Rod: Double Acting

Series C85

ø8, ø10, ø12, ø16, ø20, ø25

How to Order

**Double acting
Single rod**

C D 85

**Double acting
Double rod**

C D 85 W

Magnet

—	None
D	Built-in magnet

Style

—	Standard
K	Non-rotating rod (only rubber bumper)

Head cover style

Symbol	Mounting
N	Basic integrated clevis
E**	Double end
F**	Boss cut
Y**	Boss cut - End port

* Double acting/Double rod:
Only double end style (E).
** Except for: air cushion,
single acting (T) style.

Bore size-Stroke

Bore size (mm)	Standard stroke (mm)**	Max. stroke***		
		Standard	Non-rotating	Double rod
ø8*	10, 25, 40, 50, 80, 100	200	100	100
ø10		400		
ø12	10, 25, 40, 50, 80, 100, 125, 160, 200		200	200
ø16				
ø20	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 300	1000	1000	500
ø25				

* Not available with air cushion.
** Other strokes available on request.
*** When exceeding the standard stroke range, it will be available as made to order (X2018)

Cushion

—	Rubber bumper (Standard)
C	Air cushion (only "N" execution, bores 10 to 25mm)

Auto switch mounting style

A	Rail
B	Band

Applicable auto switches and bands are shown on p.3-35 Please order auto switches and bands separately.

Other options

—	None
XA0~30 ¹⁾	Change of Rod end shape
XB6 ^{2) 3) 4)}	High Temperature
XB7 ^{2) 3) 5) 6)}	Low Temperature
XB9 ^{3) 5) 6) 7)}	Low Speed
XC4 ^{5) 6) 8)}	Heavy-duty Scraper
XC6A	Stainless steel piston rod and piston rod nut
XC6B	Stainless steel piston rod, piston rod nut and mounting nut

Note 1) ø8 to ø16: only possible XA0/1/10/11
ø20 to ø25 (except Non-rotating type): XA0 to XA30 possible
ø20 to ø25 (Non-rotating type): XA0/1/6/10/11/13/14/17/19/21
Note 2) Without magnets
Note 3) Contact SMC for Non-rotating type
Note 4) In Double rod and/or air cushion type, only available for ø20 and ø25
Note 5) Only rubber cushion
Note 6) Only ø20, ø25
Note 7) Only single rod
Note 8) Not applicable for Non-rotating type

Rod boot (only ø20, ø25)

—	Without rod boot
J	Nylon tarpaulin one side
K	Neoprene cloth one side
JJ*	Nylon tarpaulin both sides
KK*	Neoprene cloth both sides

* In case of double acting/double rod.

Mounting Bracket Part No.

Bracket	8	10	12	16	20	25
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			
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		

Note) Please order mounting brackets separately.

Replacement Parts

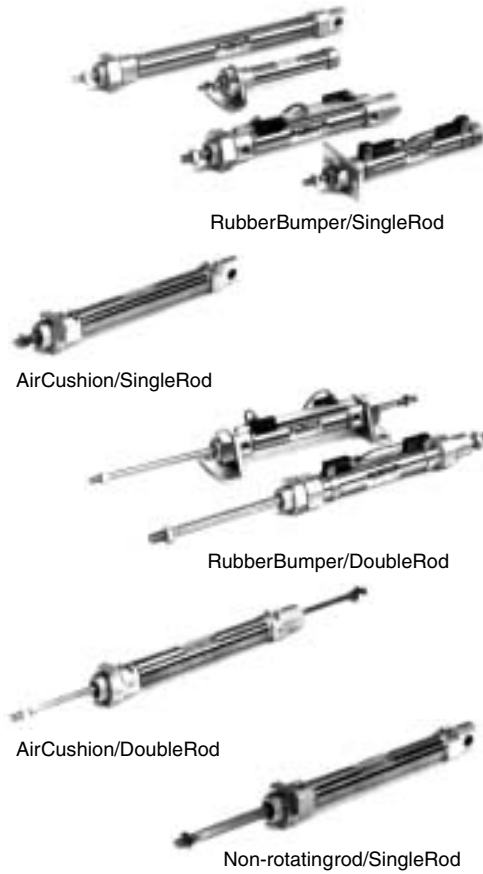
For Standard Cylinders

Bore (mm)	Kit No.	Note
20	C85-20PS	Every set includes: 1 rod seal
25	C85-25PS	1 packing retaining washer 1 retaining ring

For Non-rotating Cylinders ("K")

Bore (mm)	Kit No.	Note
20	C85K-20PS	Every set includes: 1 rod seal
25	C85K-25PS	1 packing retaining washer 1 retaining ring

ISO Cylinder/Standard, Non-rotating Rod: Double Acting **Series C85**



Specifications

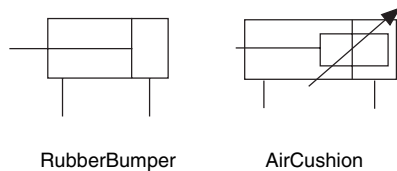
Bore size (mm)	8	10	12	16	20	25	
Piston rod dia. (mm)	4	4	6	6	8	10	
Piston rod thread	M4	M4	M6	M6	M8	M10X1.25	
Ports	M5	M5	M5	M5	G1/8	G1/8	
Action	Double acting/Single or Double rod						
Fluid	Air						
Proof pressure	1.5MPa						
Max operating pressure	1.0MPa						
Min operating pressure	0.1MPa	0.08MPa		0.05MPa			
Ambient and fluid temperature	-20 to 80°C (Built-in magnet: -10 to 60°C)						
Cushion	Rubber bumper, Air cushion (Except for ø8) (Non-rotating: only rubber bumper)						
Lubrication	Not required. If necessary turbine oil no. 1 ISO VG32 is recommended						
Rod boot	Nylon tarpaulin	—			Max ambient temperature 60°C		
	Neoprene cloth	—			Max ambient temperature 110°C *		
Piston speed		50 to 1500 mm/s					
Allowable kinetic energy	Rubber bumper	0.02J	0.03J	0.04J	0.09J	0.27J	0.4J
	Air cushion	—	0.17J	0.19J	0.4J	0.66J	0.97J
Non-rotating accuracy **		±1°30'	±1°30'	±1°	±1°	±0°42'	±0°42'
Stroke tolerance		0/+1				0/+1.4	

* Maximum ambient temperature of gaiters only.

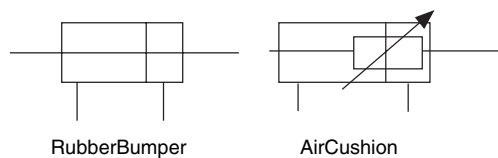
** Applicable to non-rotating model only.

Symbol

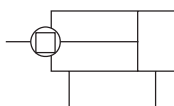
Double Acting/Single Rod



Double Acting/Double Rod



Non-rotating rod: Double Acting/Single Rod



Weight (Standard, Non-rotating rod)

(g)

Boresize(mm)			8	10	12	16	20	25
Doubleaction		Basicweight	45	49	96	109	183(203)	258(286)
Doublerod		Add'lweightforeach10mmofstroke	3	3.2	6.2	7.2	11.8	18.4
Mountingbracket			C85L□A	20		40		95
			C85L□B	55		105		210
			C85F□	12		25		90
			C85T□	20		50		75
			C85C□	20		40		85
Accessories	Singleknucklejoint	KJ□D	17		25		45	70
	Doubleknucklejoint	GKM□-□	10		20		50	100
	Floatingjoint	JA□-□-□	10		20		50	70

Calculation Example: C85N10-50, C85F10

(): In case of air cushion

Basic weight.....49(ø10)

Additional weight.....3.2/10mm of stroke

Cylinder stroke.....50mm

Mounting bracket.....12

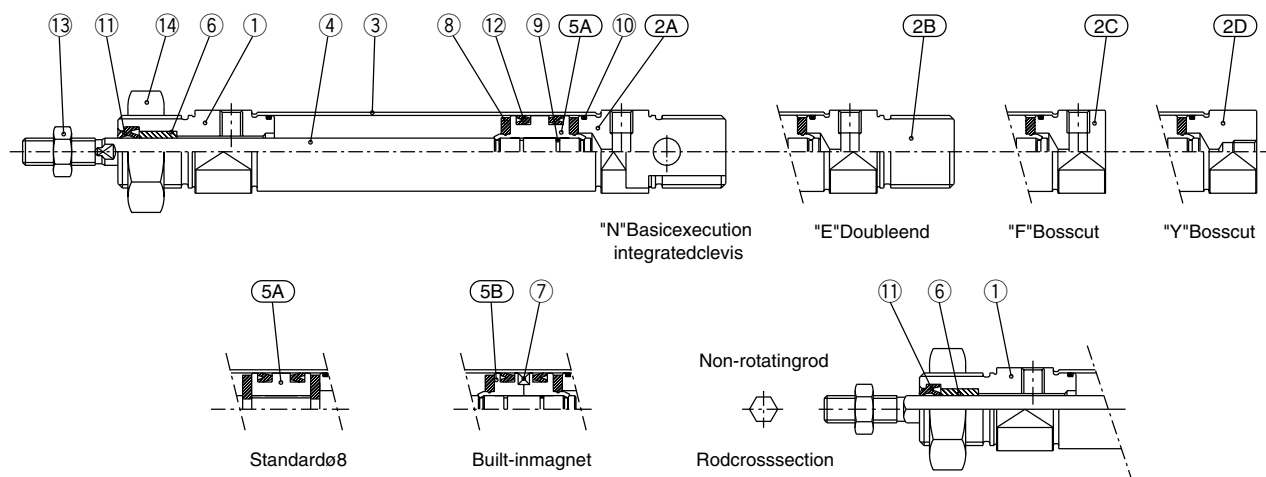
49+3.2X50/10=65 65+12=77

Series C85

Construction

Double acting: Single rod

C□85□8 to16 Rubber bumper (Disassembly is not possible)

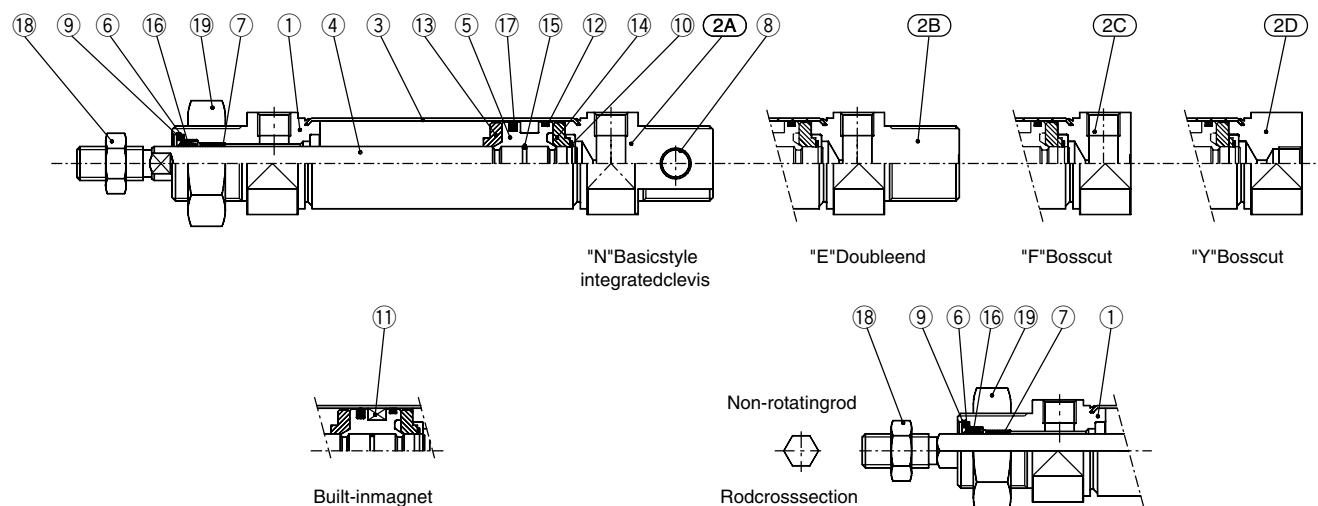


Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminum alloy	1	White anodized
②A	HeadcoverN	Aluminum alloy	1	White anodized
②B	HeadcoverE	Aluminum alloy	1	White anodized
②C	HeadcoverF	Aluminum alloy	1	White anodized
②D	HeadcoverY	Aluminum alloy	1	White anodized
③	Cylindertube	Stainless steel	1	
④	Pistonrod	Stainless steel	1	
⑤A	PistonA	Brass	1	
⑤B	PistonB	Brass	2	(Switch style piston)

No.	Description	Material	Quantity	Remarks
⑥	Bushing	Sintered bronze	1	
⑦	Magnet		1	(Switch style only)
⑧	Bumper	Urethane	2	
⑨	Pistongasket	NBR	1	(2 for switch style)
⑩	Tubegasket	NBR	2	
⑪	Rodseal	NBR	1	
⑫	Pistonseal	NBR	2	
⑬	Rodendnut	Carbon steel	1	Nickel plated
⑭	Mountingnut	Carbon steel	1	Nickel plated

C□85□20, 25 Rubber bumper



Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminum alloy	1	White anodized
②A	HeadcoverN	Aluminum alloy	1	White anodized
②B	HeadcoverE	Aluminum alloy	1	White anodized
②C	HeadcoverF	Aluminum alloy	1	White anodized
②D	HeadcoverY	Aluminum alloy	1	White anodized
③	Cylindertube	Stainless steel	1	
④	Pistonrod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminum alloy	1	Chromated
⑥	Plainwasher	Carbon steel	1	Nickel plated
⑦	Bushing	Sintered bronze	1	
⑧	Bushing	Sintered bronze	2	

No.	Description	Material	Quantity	Remarks
⑨	Retainingring	Carbon steel	1	Nickel plated
⑩	Retainingring	Carbon steel	2	
⑪	Magnet		1	(Switch style only)
⑫	Wearing	Phenolic resin	1	
⑬	BumperA	Urethane	1	
⑭	BumperB	Urethane	1	
⑮	Pistongasket	NBR	1	
⑯	Rodseal	NBR	1	
⑰	Pistonseal	NBR	1	
⑱	Rodendnut	Carbon steel	1	Nickel plated
⑲	Mountingnut	Carbon steel	1	Nickel plated

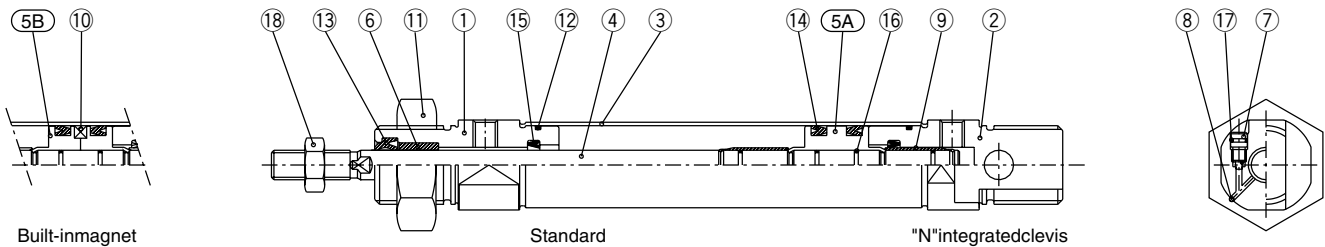
* Stainless steel (Non-rotating rod)

ISO Cylinder/Standard, Non-rotating Rod: Double Acting **Series C85**

Construction

Double acting: Single rod

C□85□10 to 16 Air cushion (Disassembly is not possible)

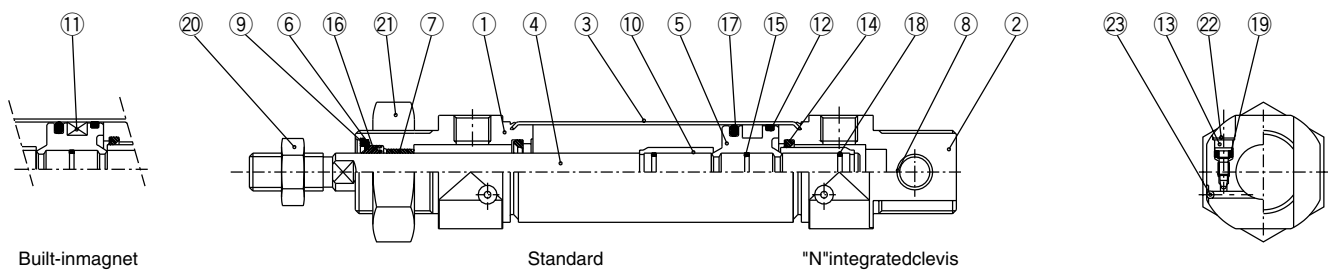


Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminum alloy	1	Whiteanodized
②	HeadcoverN	Aluminum alloy	1	Whiteanodized
③	Cylindertube	Stainlesssteel	1	
④	Pistonrod	Stainlesssteel	1	
⑤A	PistonA	Brass	1	
⑤B	PistonB	Brass	2	(Switchstylepiston)
⑥	Bush	Sinteredbronze	1	
⑦	Cushionneedle	Stainlesssteel	2	
⑧	Steelball	Bearingsteel	2	

No.	Description	Material	Quantity	Remarks
⑨	Cushionring	Brass	2	
⑩	Magnet		1	
⑪	Mountingnut	Carbonsteel	1	Nickelplated
⑫	Tubegasket	NBR	2	
⑬	Rodseal	NBR	1	
⑭	Pistonseal	NBR	2	
⑮	Checkseal	NBR	2	
⑯	Pistongasket& cushionringgasket	NBR	3	
⑰	Needleseal	NBR	2	
⑱	Rodendnut	Carbonsteel	1	Nickelplated

C□85□20, 25 Air cushion



Component Parts

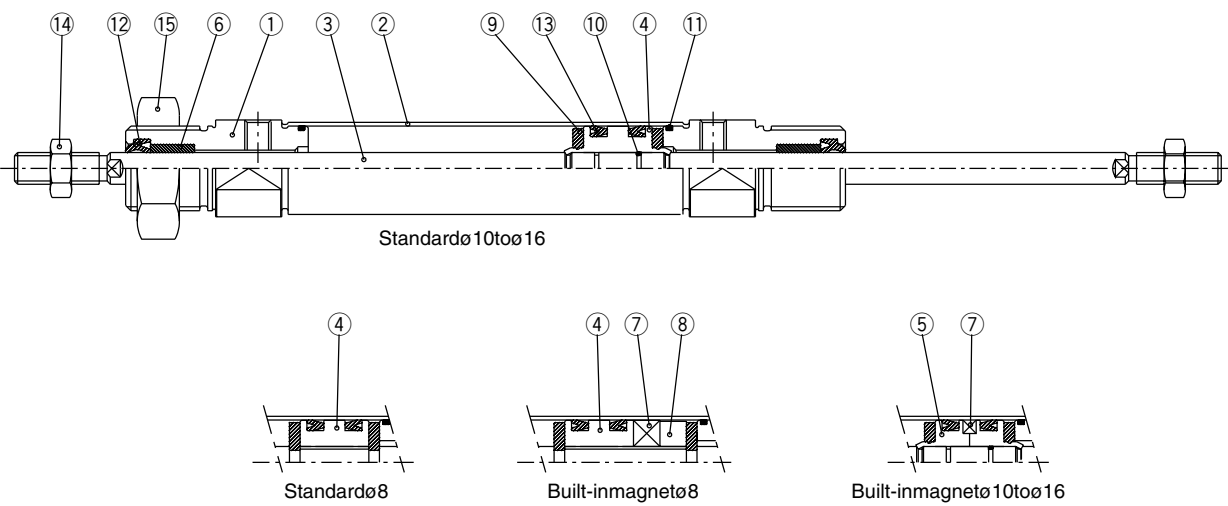
No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminum alloy	1	Whiteanodized
②	HeadcoverN	Aluminum alloy	1	Whiteanodized
③	Cylindertube	Stainlesssteel	1	
④	Pistonrod	Carbonsteel	1	Hardchromeplated
⑤	Piston	Aluminum alloy	1	Chromated
⑥	Plainwasher	Carbonsteel	1	Nickelplated
⑦	Bushing	Sinteredbronze	1	
⑧	Bushing	Sinteredbronze	1	
⑨	Retainingring	Carbonsteel	1	Nickelplated
⑩	Cushionring	Copperalloy	2	Hardchromeplated
⑪	Magnet		1	
⑫	Wearing	Phenolicresin	1	

No.	Description	Material	Quantity	Remarks
⑬	Cushionvalve	Carbonsteel	2	Nickelplated
⑭	Cushionseal	Urethane	2	
⑮	Pistongasket	NBR	1	
⑯	Rodseal	NBR	1	
⑰	Pistonseal	NBR	1	
⑱	Cushionringgasket	NBR	2	
⑲	Cushionvalvepacking	NBR	2	
⑳	Rodendnut	Carbonsteel	1	Nickelplated
㉑	Mountingnut	Carbonsteel	1	Nickelplated
㉒	Selflockingring	Stainlesssteel	2	
㉓	Steelball	Stainlesssteel	2	

Series C85

Construction

Double acting: Double rod
C□85WE 8 to 16 Rubber bumper (Disassembly is not possible)

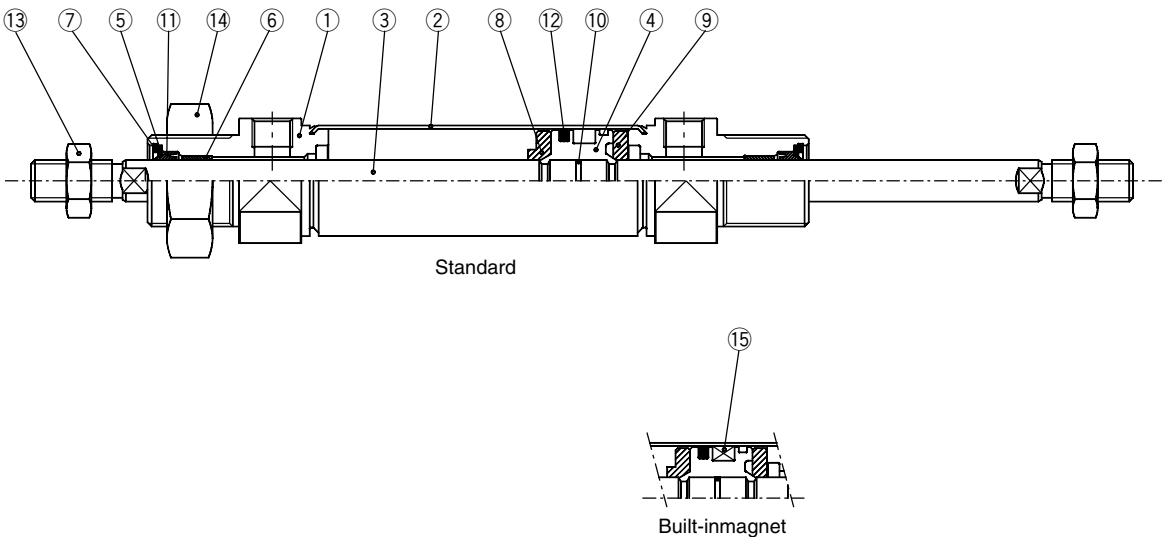


Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminumalloy	2	Whiteanodized
②	Cylindertube	Stainlesssteel	1	
③	Pistonrod	Stainlesssteel	1	2forø8
④	PistonA	Brass	1	
⑤	PistonB	Brass	2	(Switchstylepiston)
⑥	Bushing	Sinteredbronze	2	
⑦	Magnet		1	(Switchstyleonly)
⑧	Spacer	Brass	1	

No.	Description	Material	Quantity	Remarks
⑨	Bumper	Urethane	2	
⑩	Pistongasket	NBR	1	2forswitchstyle
⑪	Tubegasket	NBR	2	
⑫	Rodseal	NBR	2	
⑬	Pistonseal	NBR	2	
⑭	Rodendnut	Carbonsteel	2	Nickelplated
⑮	Mountingnut	Carbonsteel	1	Nickelplated

C□85WE 20, 25 Rubber bumper



Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminumalloy	2	Whiteanodized
②	Cylindertube	Stainlesssteel	1	
③	Pistonrod	Carbonsteel	1	Hardchromeplated
④	Piston	Aluminumalloy	1	Chromated
⑤	Plainwasher	Carbonsteel	2	Nickelplated
⑥	Bushing	Sinteredbronze	2	
⑦	Retainingring	Carbonsteel	2	Nickelplated
⑧	BumperA	Urethane	1	

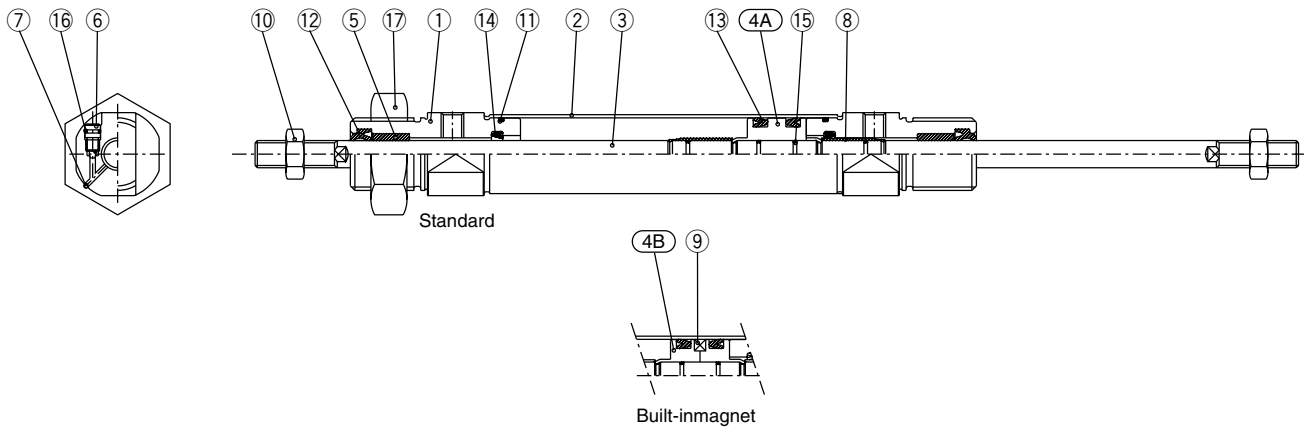
No.	Description	Material	Quantity	Remarks
⑨	BumperB	Urethane	1	
⑩	Pistongasket	NBR	1	
⑪	Rodseal	NBR	2	
⑫	Pistonseal	NBR	1	
⑬	Rodendnut	Carbonsteel	2	Nickelplated
⑭	Mountingnut	Carbonsteel	1	Nickelplated
⑮	Magnet		1	(Switchstyleonly)

ISO Cylinder/Standard, Non-rotating Rod: Double Acting **Series C85**

Construction

Double acting: Double rod

C□85WE 10 to 16 Air cushion (Disassembly is not possible)

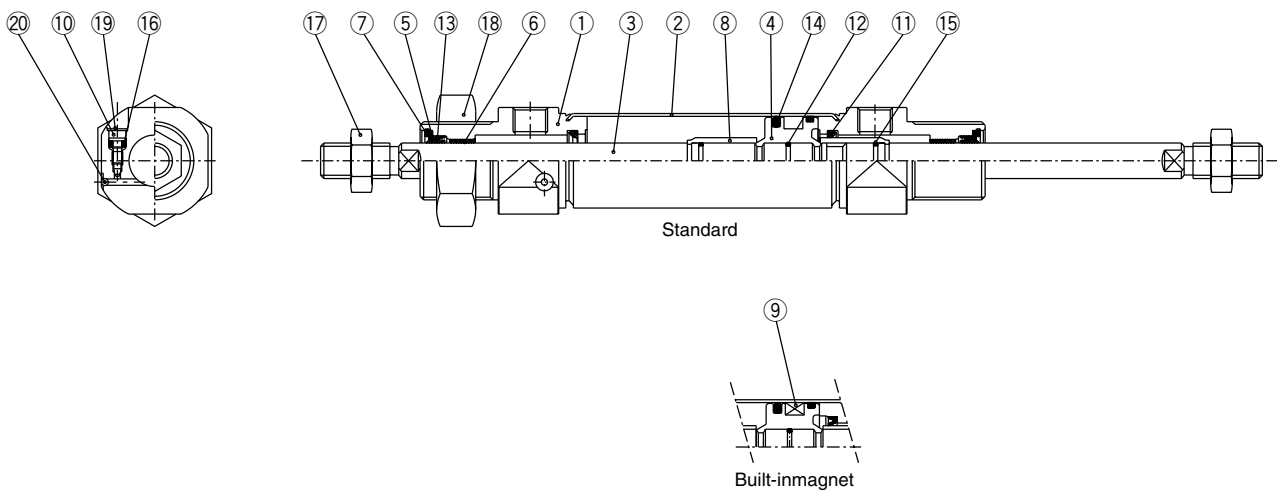


Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminumalloy	2	Whiteanodized
②	Cylindertube	Stainlesssteel	1	
③	Pistonrod	Stainlesssteel	1	
4A	PistonA	Brass	1	
4B	PistonB	Brass	2	(Switchstylepiston)
⑤	Bushing	Sinteredbronze	2	
⑥	Cushionneedle	Stainlesssteel	2	
⑦	Steelball	Bearingsteel	2	
⑧	Cushionring	Brass	2	

No.	Description	Material	Quantity	Remarks
⑨	Magnet		1	
⑩	Rodendnut	Carbonsteel	2	Nickelplated
⑪	Tubegasket	NBR	2	
⑫	Rodseal	NBR	2	
⑬	Pistonseal	NBR	2	
⑭	Checkseal	NBR	2	
⑮	Pistongasket& cushionringgasket	NBR	3	
⑯	Needleseal	NBR	2	
⑰	Mountingnut	Carbonsteel	1	Nickelplated

C□85WE 20, 25 Air cushion



Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminumalloy	2	Whiteanodized
②	Cylindertube	Stainlesssteel	1	
③	Pistonrod	Carbonsteel	1	Hardchromeplated
④	Piston	Aluminumalloy	1	Chromated
⑤	Plainwasher	Carbonsteel	2	Nickelplated
⑥	Bushing	Sinteredbronze	2	
⑦	Retainingring	Carbonsteel	2	Nickelplated
⑧	Cushionring	Copperalloy	2	Hardchromeplated
⑨	Magnet			
⑩	Cushionvalve	Carbonsteel	2	Nickelplated

No.	Description	Material	Quantity	Remarks
⑪	Cushionseal	Urethane	2	
⑫	Pistongasket	NBR	1	
⑬	Rodseal	NBR	2	
⑭	Pistonseal	NBR	1	
⑮	Cushionringgasket	NBR	2	
⑯	Cushionvalvepacking	NBR	2	
⑰	Rodendnut	Carbonsteel	2	Nickelplated
⑱	Mountingnut	Carbonsteel	1	Nickelplated
⑲	Selflockingring	Stainlesssteel	2	
⑳	Steelball	Stainlesssteel	2	

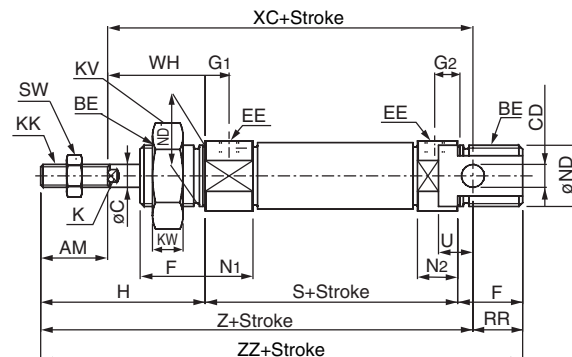
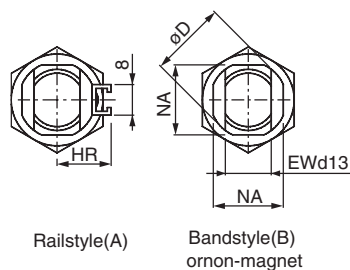
Series C85

Dimensions

Double acting: Single rod

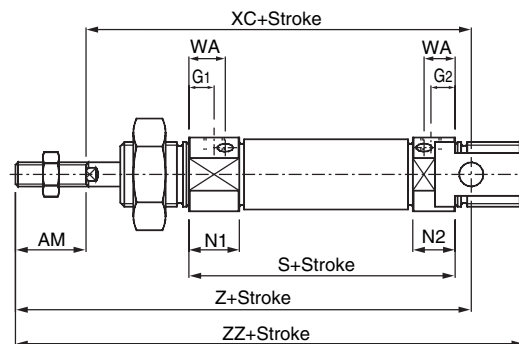
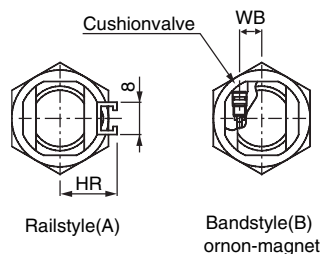
Rubber bumper/C□85N **Bore** — **Stroke**

Without magnet, Built-in magnet

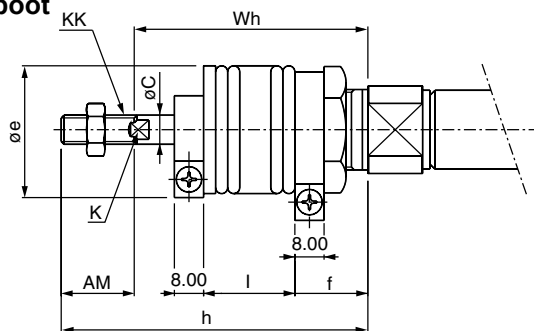


Air cushion/C□85N **Bore** — **Stroke** **C**

Without magnet, Built-in magnet

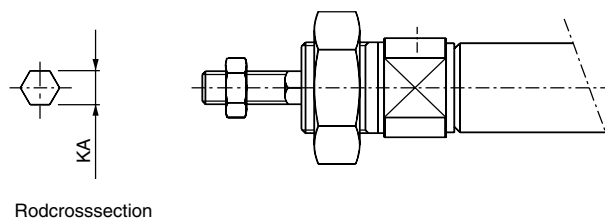


With rod boot



C□85KN

Non-rotating rod (Rubber bumper only)



Unit:(mm)

Bore	AM	BE	øC	CD	øD	EE	EW	F	G1	G2	WA	WB	H	HR	K	KA	KK	KV	KW	N1	N2	NA	øND(h8)	RR	S	SW	U	WH	XC	Z	ZZ
ø8	12	M12X1.25	4	4 ^{+0.030} ₀	16.7	M5	8	12	7	5	—	—	28	10	—	4.2	M4	19	6	11.5	9.5	15	12	10	46	7	6	16	64	76	86
ø10	12	M12X1.25	4	4 ^{+0.030} ₀	16.7	M5	8	12	7 ^(5.5)	5 ^(5.5)	10.5	4.5	28	10.5	—	4.2	M4	19	6	11.5 ^(13.5)	9.5 ^(13.5)	15	12	10	46 ⁽⁵³⁾	7	6	16	64 ⁽⁷¹⁾	76 ⁽⁸³⁾	86 ⁽⁹³⁾
ø12	16	M16X1.5	6	6 ^{+0.030} ₀	19.7	M5	12	17	8 ^(5.5)	5 ^(5.5)	9.5	5.5	38	14	5	6.2	M6	24	8	12.5 ^(12.5)	10.5 ^(12.5)	18	16	14	50 ⁽⁵⁴⁾	10	9	22	75 ⁽⁷⁹⁾	91 ⁽⁹⁵⁾	105 ⁽¹⁰⁹⁾
ø16	16	M16X1.5	6	6 ^{+0.030} ₀	19.7	M5	12	17	8 ^(5.5)	5 ^(5.5)	9.5	5.5	38	14	5	6.2	M6	24	8	12.5 ^(12.5)	10.5 ^(12.5)	18	16	13	56 ⁽⁵⁶⁾	10	9	22	82 ⁽⁸²⁾	98 ⁽⁹⁸⁾	111 ⁽¹¹¹⁾
ø20	20	M22X1.5	8	8 ^{+0.036} _{-0.006}	28	G1/8	16	20	8	8	13	8.5	44	17	6	8.2	M8	32	10	15 ⁽¹⁷⁾	15 ⁽¹⁷⁾	24	22	11	62	13	12	24	95	115	126
ø25	22	M22X1.5	10	8 ^{+0.036} _{-0.006}	33.5	G1/8	16	22	8	8	13	10.5	50	20	8	10.2	M10X1.25	32	10	15 ⁽¹⁷⁾	15 ⁽¹⁷⁾	30	22	11	65	17	12	28	104	126	137

():Incase of air cushion.

With rod boot

Item Bore — Stroke	AM	øC	øe	f	K	KK	h						
							1to50	51to100	101to150	151to200	201to300	301to400	401to500
20	20	8	35	20	6	M8	71	84	96	109	134	159	—
25	22	10	35	20	8	M10X1.25	74	87	99	112	137	162	187

Item Bore — Stroke	l							Wh						
	1to50	51to100	101to150	151to200	201to300	301to400	401to500	1to50	51to100	101to150	151to200	201to300	301to400	401to500
20	12.5	25	37.5	50	75	100	—	51	64	76	89	114	139	—
25	12.5	25	37.5	50	75	100	125	52	65	77	90	115	140	165

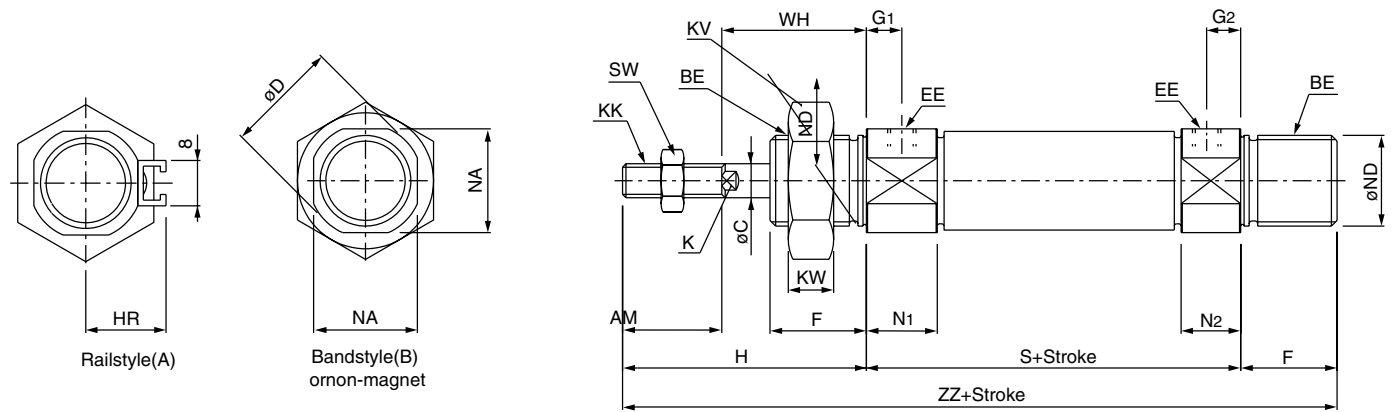
ISO Cylinder/Standard, Non-rotating Rod: Double Acting **Series C85**

Dimensions

Double acting: Single rod

Rubber bumper/C□85E **Bore** **Stroke**

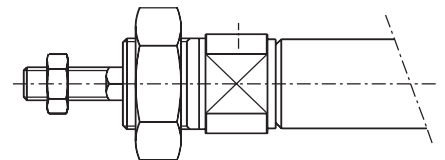
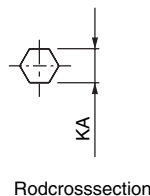
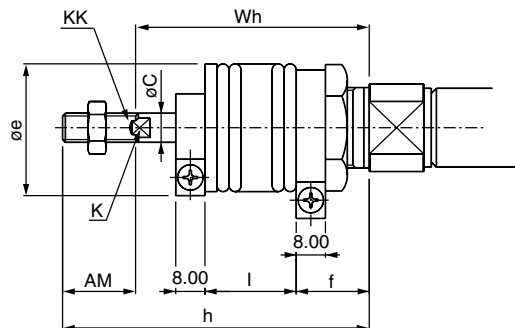
Without magnet, Built-in magnet



With rod boot

C□85KE

Non-rotating rod (Rubber bumper only)



Unit:(mm)																				
Bore	AM	BE	øC	øD	EE	F	G1	G2	H	HR	K	KA	KK	KV	KW	N1	N2	NA	øND(h8)	S
ø8	12	M12X1.25	4	16.7	M5	12	7	5	28	10	—	4.2	M4	19	6	11.5	9.5	15	12	46
ø10	12	M12X1.25	4	16.7	M5	12	7	5	28	10.5	—	4.2	M4	19	6	11.5	9.5	15	12	46
ø12	16	M16X1.5	6	19.7	M5	17	8	6	38	14	5	6.2	M6	24	8	12.5	10.5	18	16	50
ø16	16	M16X1.5	6	19.7	M5	17	8	6	38	14	5	6.2	M6	24	8	12.5	10.5	18	16	56
ø20	20	M22X1.5	8	27.9	G1/8	20	8	8	44	17	6	8.2	M8	32	10	15	15	24	22	62
ø25	22	M22X1.5	10	33.4	G1/8	22	8	8	50	20	8	10.2	M10X1.25	32	10	15	15	30	22	65

With rod boot

Bore\Item Stroke	AM	øC	øe	f	K	KK	h						
							1to50	51to100	101to150	151to200	201to300	301to400	401to500
20	20	8	35	20	6	M8	71	84	96	109	134	159	—
25	22	10	35	20	8	M10X1.25	74	87	99	112	137	162	187

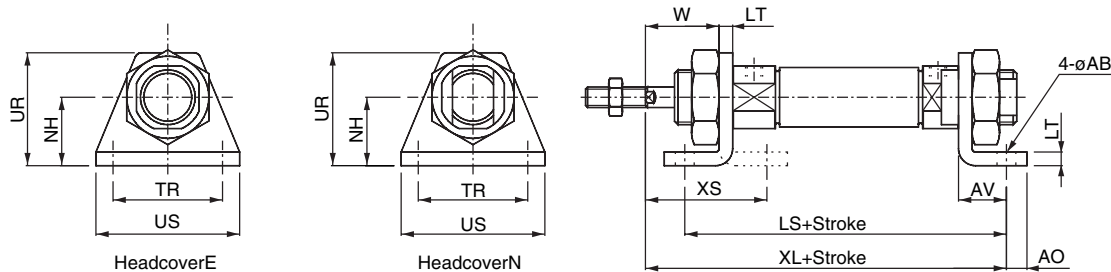
Bore	Item Stroke	I						Wh							
		1to50	51to100	101to150	151to200	201to300	301to400	401to500	1to50	51to100	101to150	151to200	201to300	301to400	401to500
20		12.5	25	37.5	50	75	100	—	51	64	76	89	114	139	—
25		12.5	25	37.5	50	75	100	125	52	65	77	90	115	140	165

Series C85

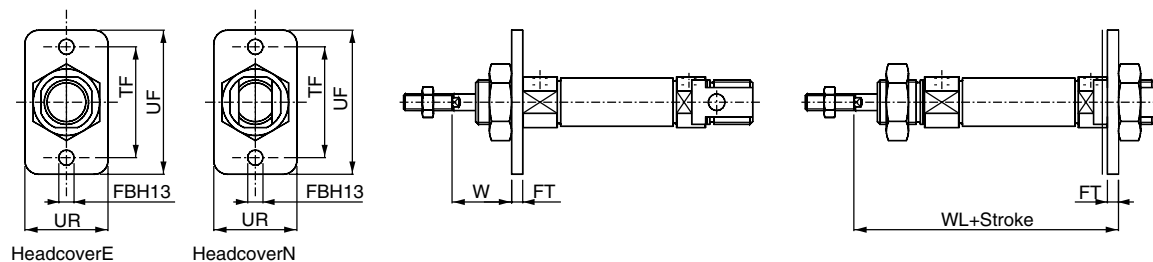
Dimensions with Mounting Brackets

Double acting: Single rod

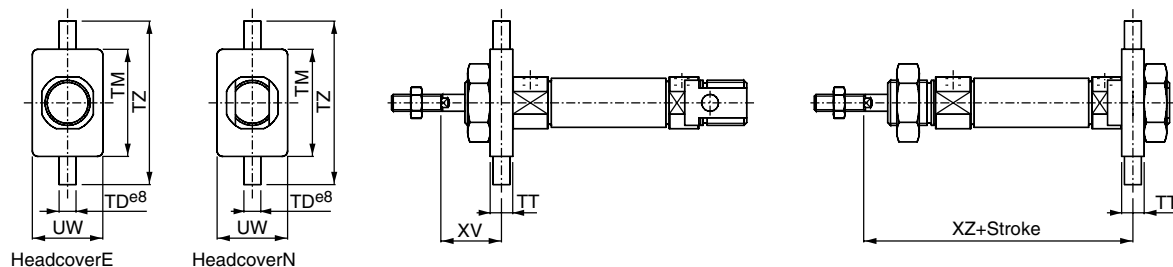
Front foot, Front and rear foot: C85L10^A_B, C85L16^A_B, C85L25^A_B



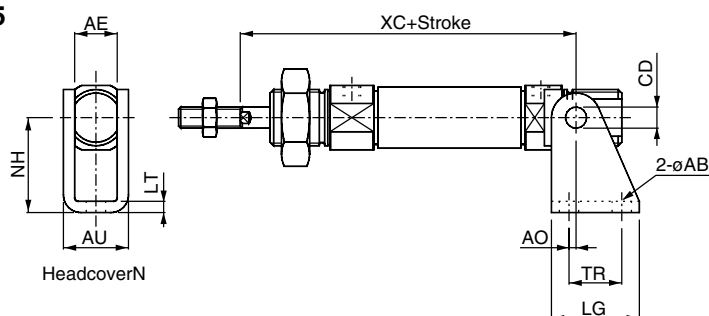
Front flange, Rear flange: C85F10, C85F16, C85F25



Front trunnion, Rear trunnion: C85T10, C85T16, C85T25



Clevis: C85C10, C85C16, C85C25



Unit:(mm)

Bore	Frontfoot,Frontandrearfoot												Frontflange,Rearflange						
	AO	US	øAB	LT	NH	LS	XL	TRJS14	XS	AV	UR	W	UR	FBH13	FT	TF	UF	W	WL
ø8	5	35	4.5	3.2	16	68	73	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	65.2
ø10	5	35	4.5	3.2	16	68(75)	73(80)	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	65.2(72.2)
ø12	6	42	5.5	4	20	78(82)	86(90)	32	32	14	33	18	30	5.5	4	40	52	18	76(80)
ø16	6	42	5.5	4	20	84(84)	92(92)	32	32	14	33	18	30	5.5	4	40	52	18	82(82)
ø20	8	54	6.6	5	25	96	103	40	36	17	42	19	40	6.6	5	50	66	19	91
ø25	8	54	6.6	5	25	99	110	40	40	17	42	23	40	6.6	5	50	66	23	98

Bore	Fronttrunnion,Reartrunnion							Clevis									
	TT	UW	TDe8	TM	TZ	XV	XZ	CD	AE	øAB	AO	AU	TR	LG	NH	LT	XC
ø8	6	20	4	26	38	13	65	4 ^{+0.030} ₀	8.1	4.5	1.5	13.1	12.5	20	24	2.5	64
ø10	6	20	4	26	38	13	65(72)	4 ^{+0.030} ₀	8.1	4.5	1.5	13.1	12.5	20	24	2.5	64(71)
ø12	8	25	6	38	58	18	76(80)	6 ^{+0.030} ₀	12.1	5.5	2	18.5	15	25	27	3.2	75(79)
ø16	8	25	6	38	58	18	82(82)	6 ^{+0.030} ₀	12.1	5.5	2	18.5	15	25	27	3.2	82(82)
ø20	8	32	6	46	66	20	90	8 ^{+0.036} ₀	16.1	6.6	4	24.1	20	32	30	4	95
ø25	8	32	6	46	66	24	97	8 ^{+0.036} ₀	16.1	6.6	4	24.1	20	32	30	4	104

():Incaseofaircushion.

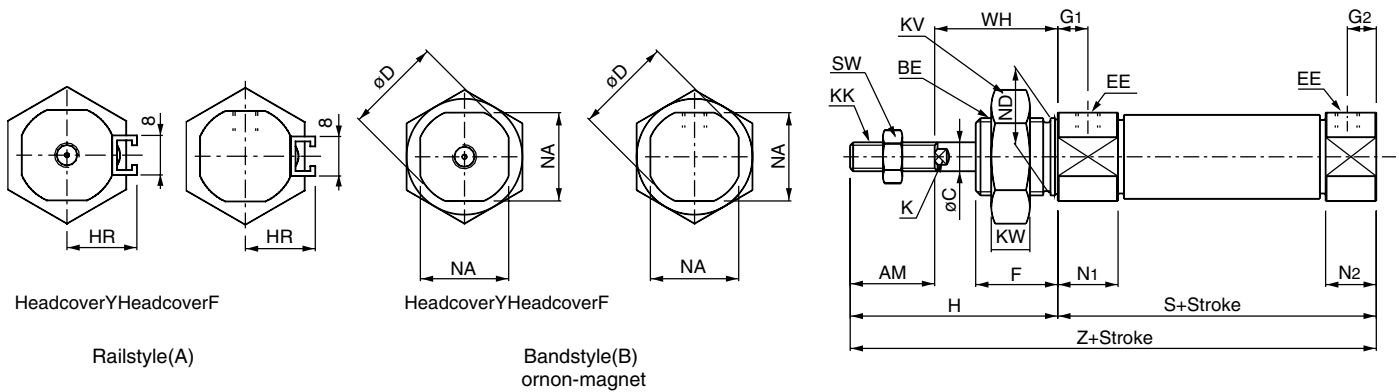
ISO Cylinder/Standard, Non-rotating Rod: Double Acting **Series C85**

Dimensions

Double acting: Single rod

Rubber bumper/C□85F, Y

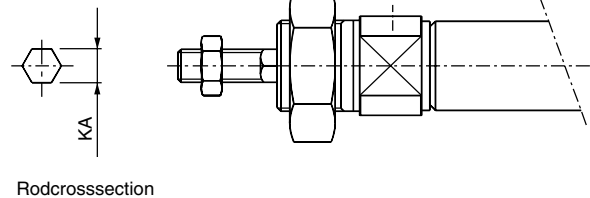
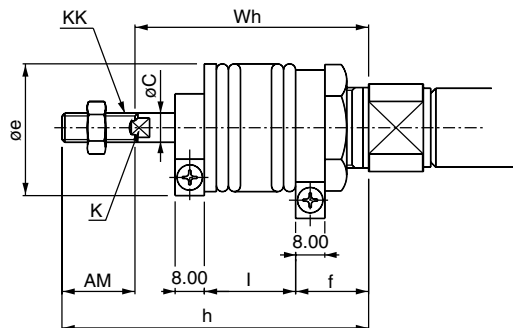
Without magnet, Built-in magnet



With rod boot

C□85KF, Y

Non-rotating rod (Rubber bumper only)



Unit:(mm)

Bore	AM	BE	øC	øD	EE	F	G1	G2	H	HR	K	KA	KK	KV	KW	N1	N2	NA	øND(h8)	S	SW	WH	Z
ø8	12	M12X1.25	4	16.7	M5	12	7	5	28	10	—	4.2	M4	19	6	11.5	9.5	15	12	46	7	16	74
ø10	12	M12X1.25	4	16.7	M5	12	7	5	28	10.5	—	4.2	M4	19	6	11.5	9.5	15	12	46	7	16	74
ø12	16	M16X1.5	6	19.7	M5	17	8	6	38	14	5	6.2	M6	24	8	12.5	10.5	18	16	50	10	22	88
ø16	16	M16X1.5	6	19.7	M5	17	8	6	38	14	5	6.2	M6	24	8	12.5	10.5	18	16	50	10	22	88
ø20	20	M22X1.5	8	27.9	G1/8	20	8	8	44	17	6	8.2	M8	32	10	15	15	24	22	62	13	24	106
ø25	22	M22X1.5	10	33.4	G1/8	22	8	8	50	20	8	10.2	M10X1.25	32	10	15	15	30	22	65	17	28	115

With rod boot

Bore\Item Stroke	AM	øC	øe	f	K	KK	h						
							1to50	51to100	101to150	151to200	201to300	301to400	401to500
20	20	8	35	20	6	M8	71	84	96	109	134	159	—
25	22	10	35	20	8	M10X1.25	74	87	99	112	137	162	187

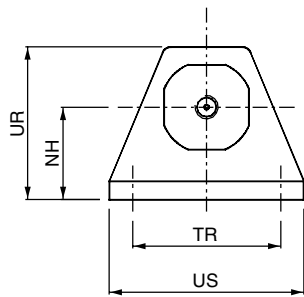
Bore	Item Stroke	I							Wh						
		1to50	51to100	101to150	151to200	201to300	301to400	401to500	1to50	51to100	101to150	151to200	201to300	301to400	401to500
20		12.5	25	37.5	50	75	100	—	51	64	76	89	114	139	—
25		12.5	25	37.5	50	75	100	125	52	65	77	90	115	140	165

Series C85

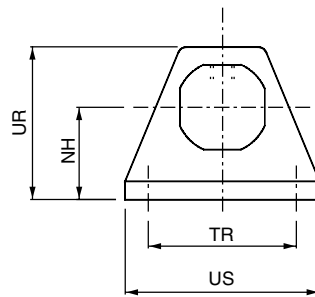
Dimensions with Mounting Brackets

Double acting: Single rod

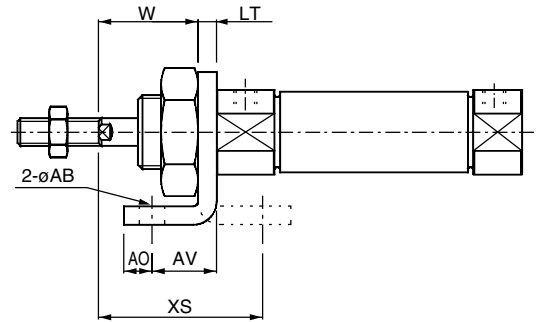
Front foot: C85L10A, C85L16A, C85L25A



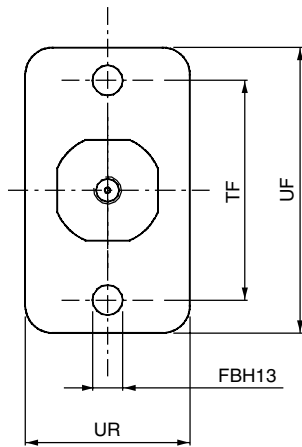
HeadcoverY



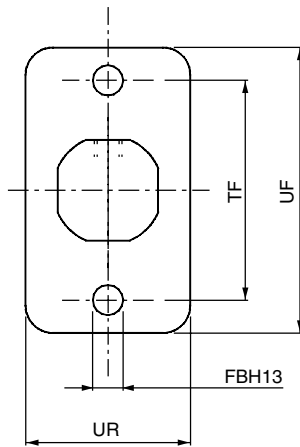
HeadcoverF



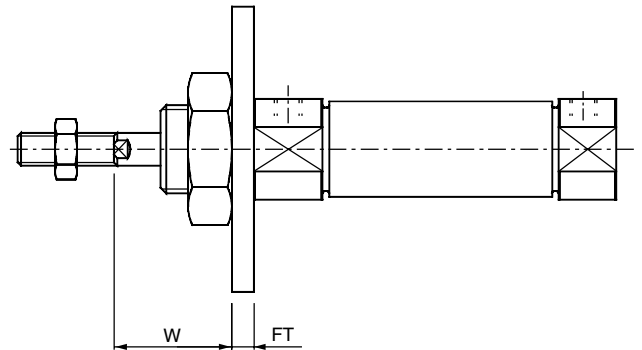
Front flange: C85F10, C85F16, C85F25



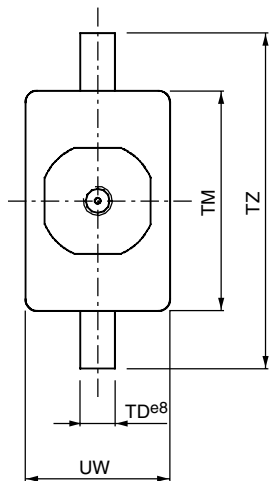
HeadcoverY



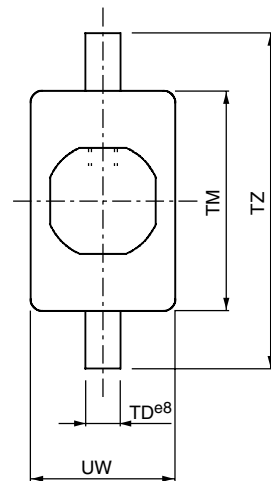
HeadcoverF



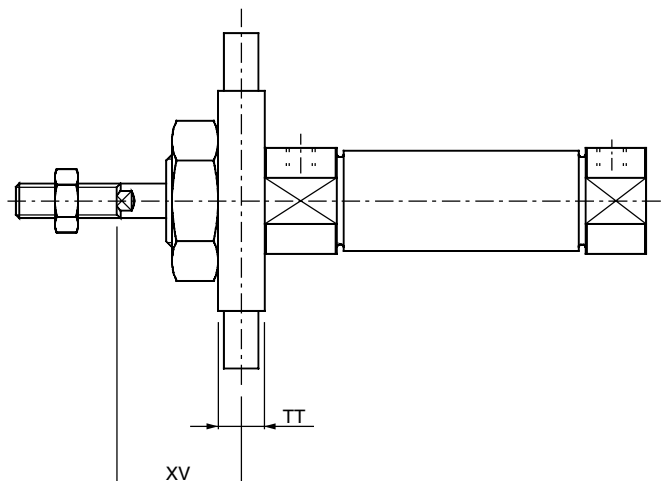
Front trunnion: C85T10, C85T16, C85T25



HeadcoverY



HeadcoverF



Unit:(mm)

Bore	Frontfoot										Frontflange						Fronttrunnion						Unit (mm)
	AO	US	øAB	LT	NH	TRJS14	XS	AV	UR	W	UR	FBH13	FT	TF	UF	W	TT	UW	TDe8	TM	TZ	XV	
ø8	5	35	4.5	3.2	16	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	6	20	4	26	38	13	
ø10	5	35	4.5	3.2	16	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	6	20	4	26	38	13	
ø12	6	42	5.5	4	20	32	32	14	33	18	30	5.5	4	40	52	18	8	25	6	38	58	18	
ø16	6	42	5.5	4	20	32	32	14	33	18	30	5.5	4	40	52	18	8	25	6	38	58	18	
ø20	8	54	6.6	5	25	40	36	17	42	19	40	6.6	5	50	66	19	8	32	6	46	66	20	
ø25	8	54	6.6	5	25	40	40	17	42	23	40	6.6	5	50	66	23	8	32	6	46	66	24	

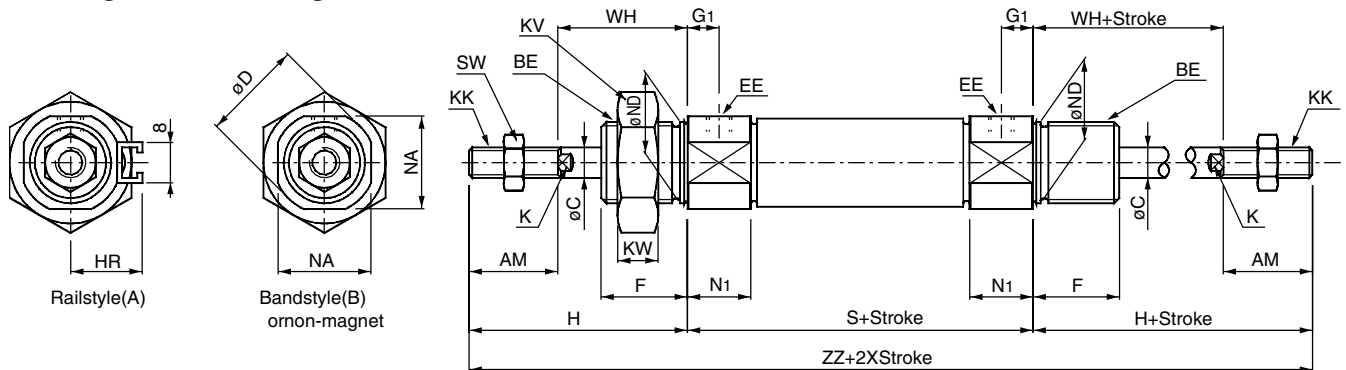
ISO Cylinder/Standard, Non-rotating Rod: Double Acting **Series C85**

Dimensions

Double acting: Double rod

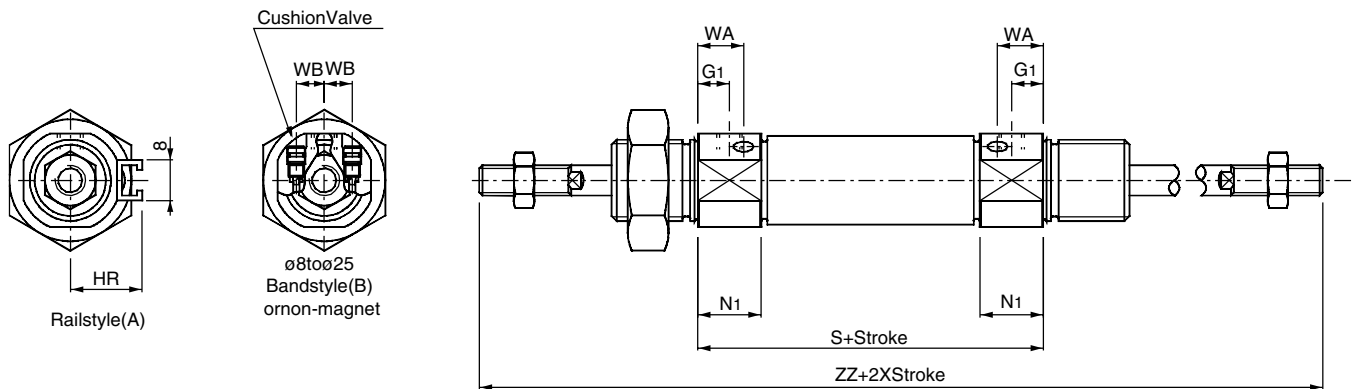
Rubber bumper/C□85WE **Bore** **Stroke**

Without magnet, Built-in magnet

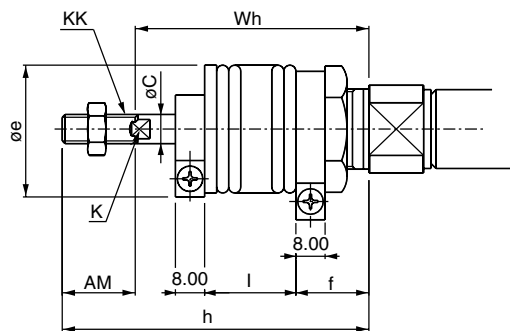


Air cushion/C□85WE **Bore** **Stroke** C

Without magnet, Built-in magnet



With rod boot



Unit:(mm)

Bore	AM	BE	øC	øD	EE	F	G1	WA	WB	H	HR	K	KK	KV	KW	N1	NA	øND(h8)	S	SW	WH	ZZ
ø8	12	M12X1.25	4	16.7	M5	12	7	—	—	28	10	—	M4	19	6	11.5	15	12	48{54}	7	16	104{110}
ø10	12	M12X1.25	4	16.7	M5	12	7(5.5)	10.5	4.5	28	10.5	—	M4	19	6	11.5(13.5)	15	12	48(53)	7	16	104(109)
ø12	16	M16X1.5	6	19.7	M5	17	8(5.5)	9.5	5.5	38	14	5	M6	24	8	12.5(12.5)	18	16	52(54)	10	22	128(130)
ø16	16	M16X1.5	6	19.7	M5	17	8(5.5)	9.5	5.5	38	14	5	M6	24	8	12.5(12.5)	18	16	52(54)	10	22	128(143)
ø20	20	M22X1.5	8	28	G1/8	20	8	13	8.5	44	17	6	M8	32	11	15(17)	24	22	62	13	24	150
ø25	20	M22X1.5	10	33.5	G1/8	22	8	13	10.5	50	20	8	M10X1.25	32	11	15(17)	30	22	65	17	28	165

():Incaseofaircushion.{}:Incaseofbuiltinmagnet

With rod boot

Bore \ Item Stroke	AM	øC	øe	f	K	KK	h						
							1to50	51to100	101to150	151to200	201to300	301to400	401to500
20	20	8	35	20	6	M8	71	84	96	109	134	159	—
25	22	10	35	20	8	M10X1.25	74	87	99	112	137	162	187

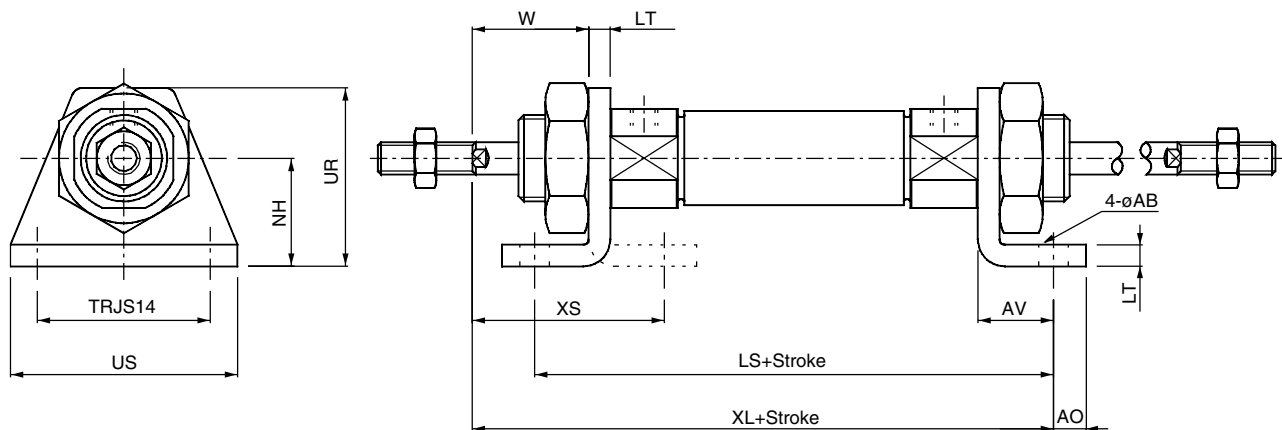
Bore	Item Stroke	l							Wh						
		1to50	50to100	101to150	151to200	201to300	301to400	401to500	1to50	51to100	101to150	151to200	201to300	301to400	401 to500
20		12.5	25	37.5	50	75	100	—	51	64	76	89	114	139	—
25		12.5	25	37.5	50	75	100	125	52	65	77	90	115	140	165

Series C85

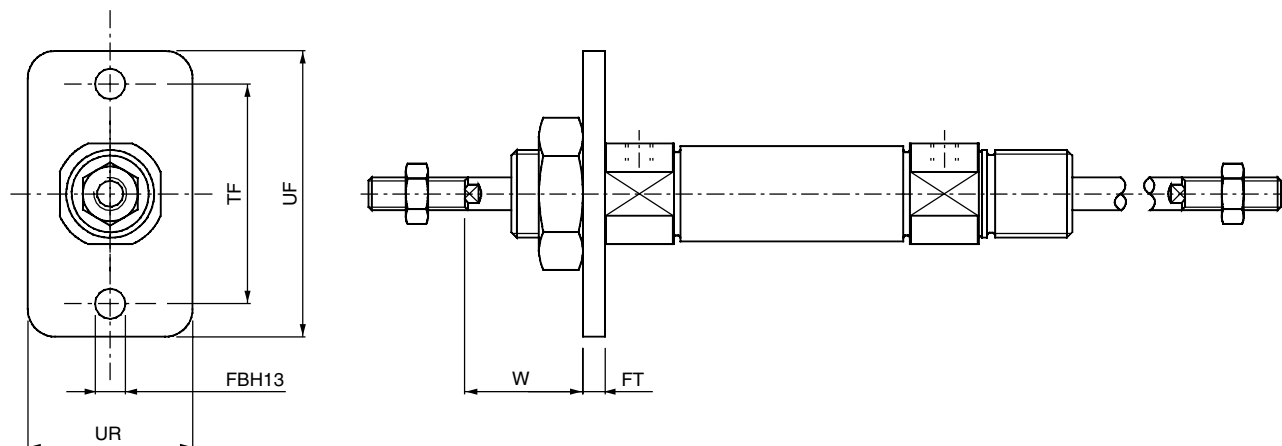
Dimensions with Mounting Brackets

Double acting: Double rod

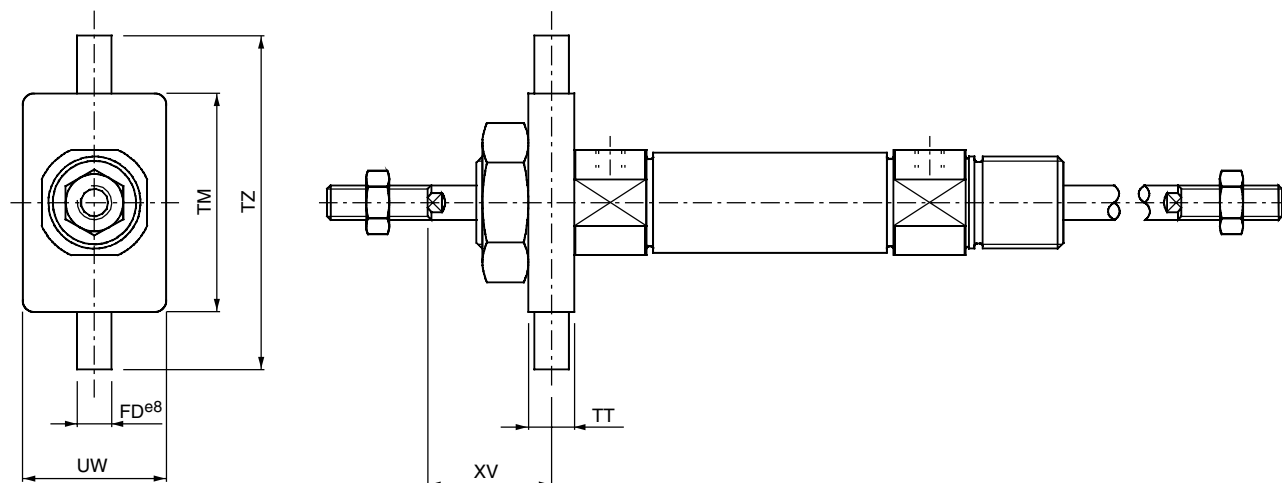
Front foot, Front and rear foot: C85L10^A_B, C85L16^A_B, C85L25^A_B



Flange: C85F10, C85F16, C85F25



Trunnion: C85T10, C85T16, C85T25



Unit:(mm)

Bore	Frontfoot,Frontandrearfoot												Flange						Trunnion						Unit.(mm)
	AO	US	øAB	LT	NH	LS	XL	TRJS14	XS	AV	UR	W	UR	FBH13	FT	TF	UF	W	TT	UW	TDeø	TM	TZ	XV	
ø8	5	35	4.5	3.2	16	70{76}	75{81}	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	6	20	4	26	38	13	
ø10	5	35	4.5	3.2	16	70{75}	75{80}	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	6	20	4	26	38	13	
ø12	6	42	5.5	4	20	80{82}	88{90}	32	32	14	33	18	30	5.5	4	40	52	18	8	25	6	38	58	18	
ø16	6	42	5.5	4	20	80{82}	88{90}	32	32	14	33	18	30	5.5	4	40	52	18	8	25	6	38	58	18	
ø20	8	54	6.6	5	25	96	103	40	36	17	42	19	40	6.6	5	50	66	19	8	32	6	46	66	20	
ø25	8	54	6.6	5	25	99	110	40	40	17	42	23	40	6.6	5	50	66	23	8	32	6	46	66	24	

():Incaseofaircushion.{}:Incaseofautoswitch.

ISO Cylinder/Standard, Non-rotating Rod: Single Acting Spring Return/Extend

Series C85

ø8, ø10, ø12, ø16, ø20, ø25

How to Order

Single acting
Spring return/extend

C D 85 K N 16 50 S B

Magnet

—	None
D	Built-in magnet

Style

—	Standard
K	Non-rotating rod (only rubber bumper)

Mounting

Symbol	Mounting
N	Basic integrated clevis
E	Double end
F	Boss cut
Y*	Boss cut - End port

* Except for: air cushion,
single acting (T) style.

Bore size-Stroke

Bore size (mm)	Standard stroke (mm)*	Max. stroke (mm)
ø8	10, 25, 50	50
ø10		
ø12		
ø16	10, 25, 50, 100, 150	150
ø20		
ø25		

* Other strokes available on request.

Auto switch
mounting

A	Rail style
B	Band style

Auto switches and
bands are shown on
p.3-35 Please order
auto switches and bands
separately.

Other options

—	None
XA0~30 ¹⁾	Change of Rod end shape
XC6A	Stainless steel piston rod and piston rod nut
XC6B	Stainless steel piston rod, piston rod nut and mounting nut

Note 1) ø8 to ø16: only possible XA0/1/10/11
ø20 to ø25 (except Non-rotating type): XA0
to XA30 possible
ø20 to ø25 (Non-rotating type):
XA0/1/6/10/11/13/14/17/19/21

Single acting function

S	Spring return
T	Spring extend

Mounting Bracket Parts No.

Bore (mm)	8	10	12	16	20	25
Bracket						
Foot (1 pc.)	C85L10A		C85L6A		C85L25A	
Foot (2 pcs. with mounting nut 1 pc.)	C85L10B		C85L16B		C85L25B	
Flange	C85F10		C85F16		C85F25	
Trunnion	C85T10		C85T16		C85T25	
Clevis	C85C10		C85C16		C85C25	
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

Note) Please order mounting brackets separately.

Replacement Parts

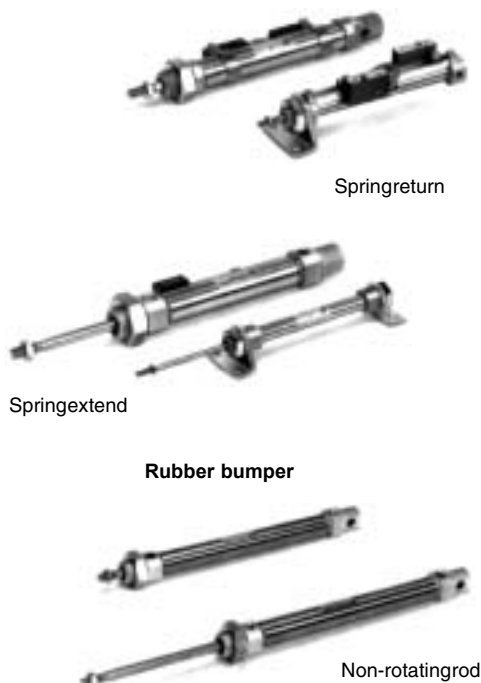
For Standard Cylinders

Bore (mm)	Kit No.	Note
20	C85-20PS	Every set includes: 1 rod seal 1 packing retaining washer 1 retaining ring
25	C85-25PS	

For Non-rotating Cylinders ("K")

Bore (mm)	Kit No.	Note
20	C85K-20PS	Every set includes: 1 rod seal 1 packing retaining washer 1 retaining ring
25	C85K-25PS	

ISO Cylinder/Standard, Non-rotating Rod: Single Acting Spring Return/Extend **Series C85**



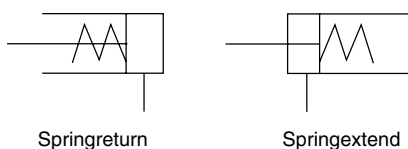
Specifications

Bore size (mm)		8	10	12	16	20	25
Piston rod dia. (mm)		4	4	6	6	8	10
Piston rod thread		M4	M4	M6	M6	M8	M10X1.25
Ports		M5	M5	M5	M5	G1/8	G1/8
Action		Single acting / Single rod, Spring return, Spring extend					
Fluid		Air					
Proof pressure		1.5MPa					
Max. operating pressure		1.0MPa					
Min. operating pressure	Spring return	0.22MPa	0.18MPa	0.13MPa	0.18MPa		
	Spring extended				0.23MPa		
Ambient and fluid temperature		-20 to 80°C (Built-in magnet style: -10 to 60°C)					
Cushion		Rubber bumper (Standard)					
Lubrication		Not required. If necessary, turbine oil No. 1 ISO VG32 is recommended					
Piston speed		50 to 1500 mm/s					
Allowable kinetic energy		0.02J	0.03J	0.04J	0.09J	0.27J	0.4J
Non-rotating accuracy *		±1°30'	±1°30'	±1°	±1°	±0°42'	±0°42'
Stroke tolerance		0/+1				0/+1.4	

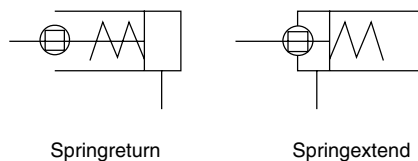
* Applicable to non-rotating model only.

Symbol

Standard



Non-rotating rod



Spring Retracting Force (Standard, Non-rotating rod)

Spring Return

Unit: N

Bore (mm)	Standard stroke (mm)	Spring force									
		10		25		50		100		150	
		Retracted	Extended	Retracted	Extended	Retracted	Extended	Retracted	Extended	Retracted	Extended
8	10, 25, 50	4.41	4.02	4.41	3.43	4.41	2.45	—	—	—	—
10		6.28	5.69	6.28	4.90	6.28	3.53	—	—	—	—
12		7.16	6.57	7.16	5.79	7.16	4.41	—	—	—	—
16	10, 25, 50, 100, 150	13.2	12.1	13.2	10.3	13.2	7.45	13.2	7.45	13.2	7.45
20		21.6	18.6	21.6	16.7	21.6	11.8	39.2	9.81	39.2	9.81
25		27.5	25.3	27.5	22.1	27.5	16.7	47.1	13.7	47.1	15.7

Spring Extend

Unit: N

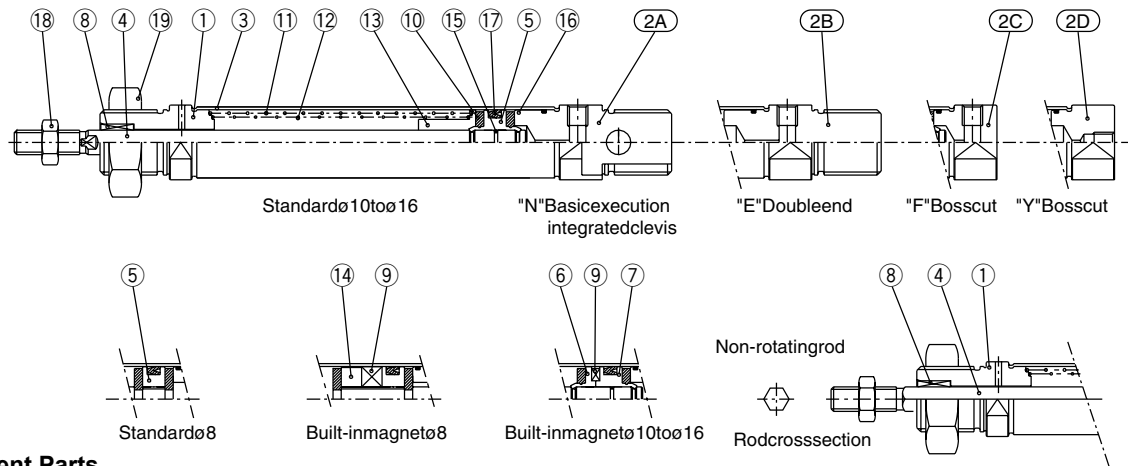
Bore (mm)	Standard stroke (mm)	Spring force									
		10		25		50		100		150	
		Retracted	Extended	Retracted	Extended	Retracted	Extended	Retracted	Extended	Retracted	Extended
8	10, 25, 50	5.30	3.92	5.30	3.14	5.30	2.65	—	—	—	—
10		5.98	4.81	5.98	4.02	5.98	3.53	—	—	—	—
12		6.57	5.59	6.57	4.90	6.57	4.51	—	—	—	—
16	10, 25, 50, 100, 150	14.7	11.3	14.7	9.22	14.7	7.85	14.7	7.85	14.7	7.85
20		39.2	33.0	39.2	23.5	39.2	9.81	39.2	9.81	39.2	9.81
25		47.1	40.4	47.1	30.4	47.1	13.7	47.1	13.7	47.1	15.7

Series C85

Construction

Single acting: Single rod

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

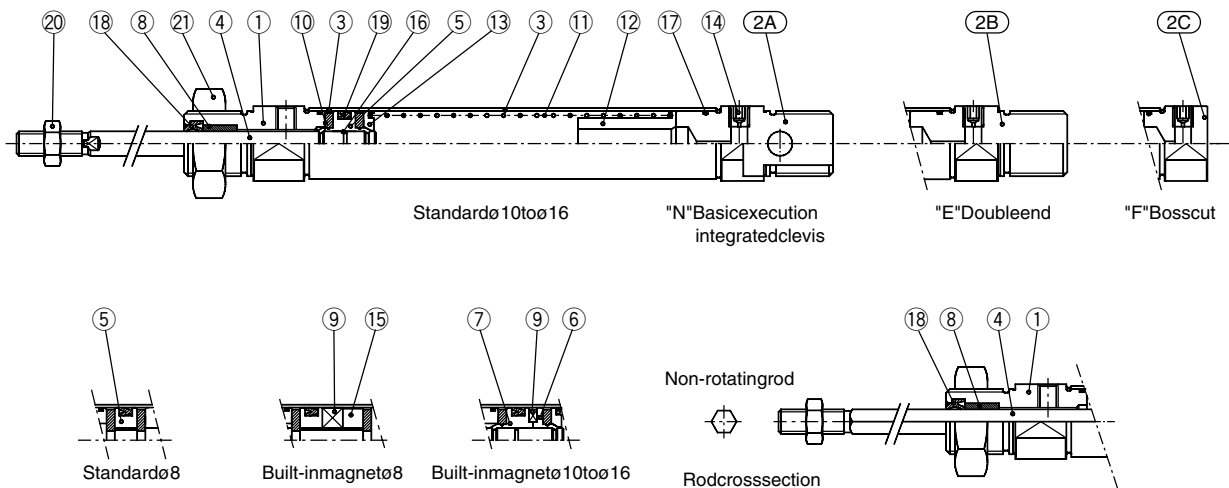


Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminumalloy	1	Whiteanodized
②A	HeadcoverN	Aluminumalloy	1	Whiteanodized
②B	HeadcoverE	Aluminumalloy	1	Whiteanodized
②C	HeadcoverF	Aluminumalloy	1	Whiteanodized
②D	HeadcoverY	Aluminumalloy	1	Whiteanodized
③	Cylindertube	Stainlesssteel	1	
④	Pistonrod	Stainlesssteel	1	
⑤	Piston	Brass	1	
⑥	PistonA	Brass	1	(Switchstyleonly)
⑦	PistonB	Brass	1	(Switchstyleonly)
⑧	Bushing	Sinteredbronze	1	

No.	Description	Material	Quantity	Remarks
⑨	Magnet		1	(Switchstyleonly)
⑩	Bumper	Urethane	2	
⑪	ReturnspringA	Pianowire	1	
⑫	ReturnspringB	Pianowire	1	
⑬	Springguide	Brass	1	
⑭	Spacer	Brass	1	
⑮	Pistongasket	NBR	1	
⑯	Tubegasket	NBR	1	
⑰	Pistonseal	NBR	1	
⑱	Rodendnut	Carbonsteel	1	Nickelplated
⑲	Mountingnut	Carbonsteel	1	Nickelplated

Spring extend/C□85□8 to 16-□T (Disassembly is not possible)



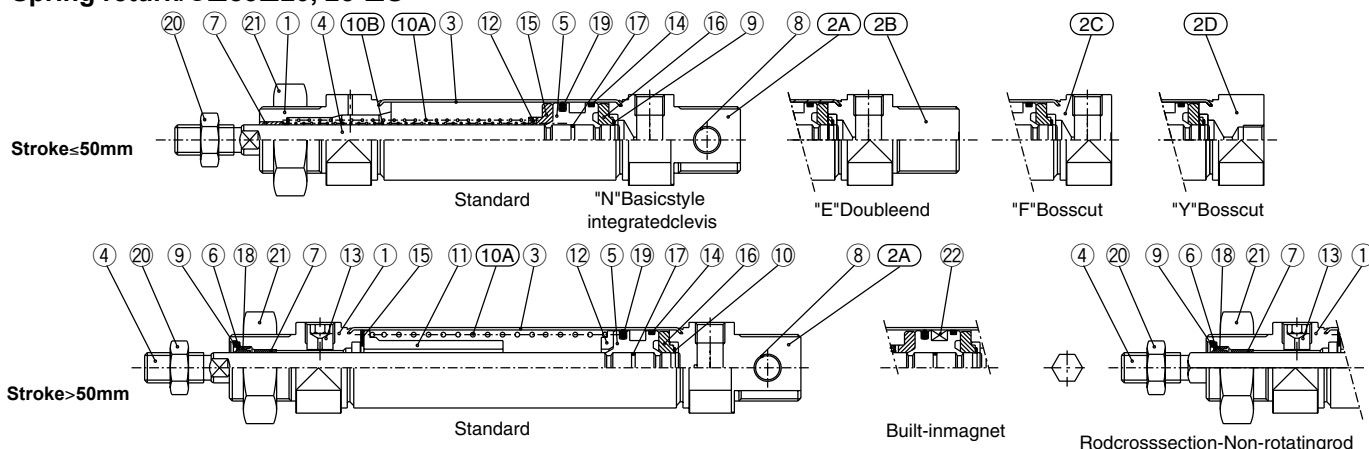
Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminumalloy	1	Whiteanodized
②A	HeadcoverN	Aluminumalloy	1	Whiteanodized
②B	HeadcoverE	Aluminumalloy	1	Whiteanodized
②C	HeadcoverF	Aluminumalloy	1	Whiteanodized
③	Cylindertube	Stainlesssteel	1	
④	Pistonrod	Stainlesssteel	1	
⑤	Piston	Brass	1	
⑥	PistonA	Brass	1	(Switchstyleonly)
⑦	PistonB	Brass	1	(Switchstyleonly)
⑧	Bushing	Sinteredbronze	1	
⑨	Magnet		1	(Switchstyleonly)

No.	Description	Material	Quantity	Remarks
⑩	Bumper	Urethane	2	
⑪	ReturnspringC	Pianowire	1	
⑫	Springguide	Brass	1	
⑬	Springseat	Brass	1	
⑭	Plug	Steel	1	
⑮	Spacer	Brass	1	
⑯	Pistongasket	NBR	1	2forswitchstyle
⑰	Tubegasket	NBR	1	
⑱	Rodseal	NBR	1	
⑲	Pistonseal	NBR	1	
⑳	Rodendnut	Carbonsteel	1	Nickelplated
㉑	Mountingnut	Carbonsteel	1	Nickelplated

Construction

Single acting: Single rod Spring return/C□85□20, 25-□S



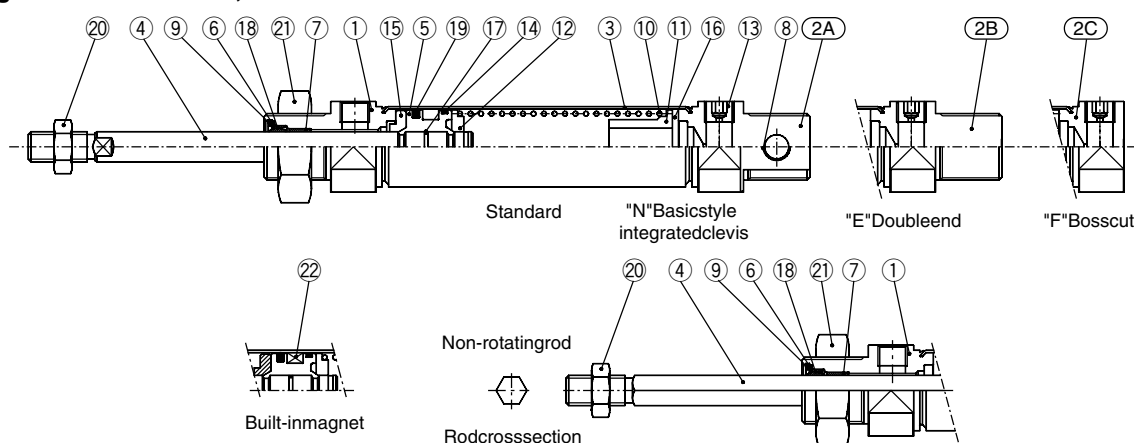
Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminum alloy	1	White anodized
(2A)	Headcover N	Aluminum alloy	1	White anodized
(2B)	Headcover E	Aluminum alloy	1	White anodized
(2C)	Headcover F	Aluminum alloy	1	White anodized
(2D)	Headcover Y	Aluminum alloy	1	White anodized
③	Cylindertube	Stainless steel	1	
④	Pistonrod	Carbon steel *	1	Hard chrome plated
⑤	Piston	Aluminum alloy	1	Chromated
⑥	Plainwasher	Carbon steel	1	Nickel plated
⑦	Bushing	Sintered bronze	1	
⑧	Bushing	Sintered bronze	1	
⑨	Retainingring	Carbon steel	1	Nickel plated
(10A)	Returnspring A	Piano wire	1	Zinc chromated

* Stainless steel (Non-rotating rod)

No.	Description	Material	Quantity	Remarks
(10B)	Returnspring B	Piano wire	1	Zinc chromated
⑪	Springguide	Aluminum alloy	1	
⑫	Springholder	Aluminum alloy	1	
⑬	Set screw	Carbon steel	1	
⑭	Wearing	Phenolic resin	1	
⑮	Bumper A	Urethane	1	
⑯	Bumper B	Urethane	1	
⑰	Pistongasket	NBR	1	
⑱	Rodseal	NBR	1	
⑲	Pistonseal	NBR	1	
⑳	Rodendnut	Carbon steel	1	Nickel plated
㉑	Mountingnut	Carbon steel	1	Nickel plated
㉒	Magnet		1	(Switch style only)

Spring extend/C□85□20, 25-□T



Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminum alloy	1	White anodized
(2A)	Headcover N	Aluminum alloy	1	White anodized
(2B)	Headcover E	Aluminum alloy	1	White anodized
(2C)	Headcover F	Aluminum alloy	1	White anodized
③	Cylindertube	Stainless steel	1	
④	Pistonrod	Carbon steel *	1	Hard chrome plated
⑤	Piston	Aluminum alloy	1	Chromated
⑥	Plainwasher	Carbon steel	1	Nickel plated
⑦	Bushing	Sintered bronze	1	
⑧	Bushing	Sintered bronze	1	
⑨	Retainingring	Carbon steel	1	Nickel plated
⑩	Returnspring	Piano wire	1	Zinc chromated

* Stainless steel (Non-rotating rod)

No.	Description	Material	Quantity	Remarks
⑪	Springguide	Aluminum alloy	1	
⑫	Springguide	Aluminum alloy	1	
⑬	Set screw	Carbon steel	1	
⑭	Wearing	Phenolic resin	1	
⑮	Bumper A	Urethane	1	
⑯	Bumper B	Urethane	1	
⑰	Pistongasket	NBR	1	
⑱	Rodseal	NBR	1	
⑲	Pistonseal	NBR	1	
⑳	Rodendnut	Carbon steel	1	Nickel plated
㉑	Mountingnut	Carbon steel	1	Nickel plated
㉒	Magnet		1	(Switch style only)

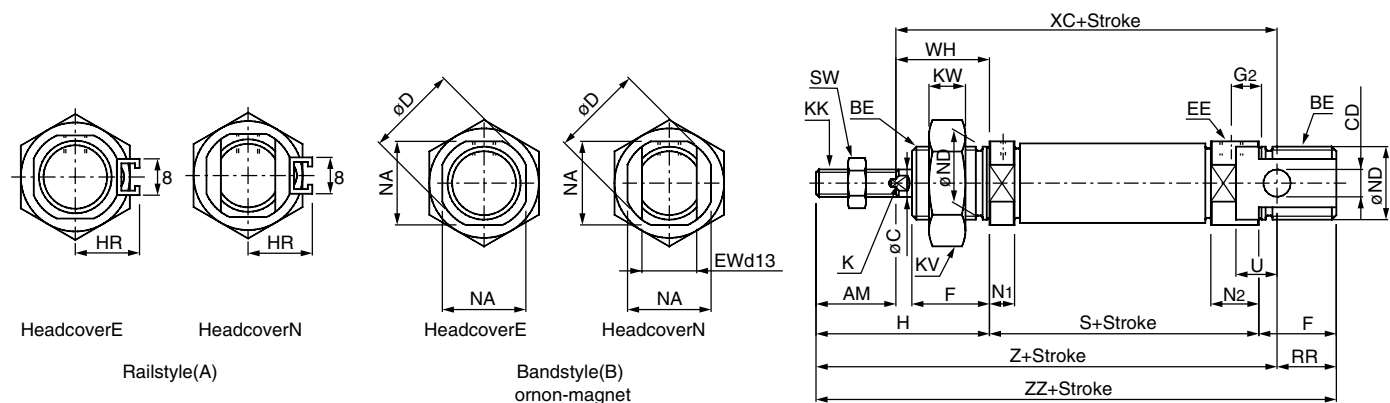
Series C85

Dimensions

Single acting: Spring return

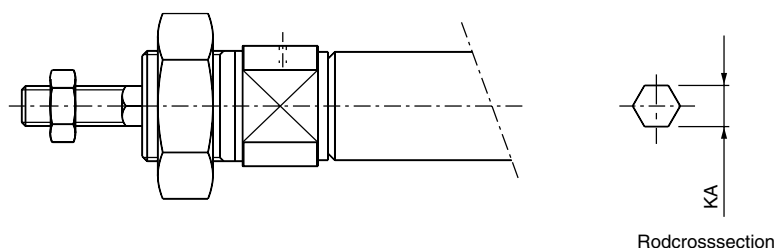
C□85^N_E Bore — Stroke S —

Without magnet, Built-in magnet



C□85KN, C□85KE

Non-rotating rod



Unit: (mm)

Bore	AM	BE	øC	CD	øD	EE	EW	F	G2	H	HR	K	KA	KK	KV	KW	N1	N2	NA	øND(h8)	RR	SW	U	WH
ø8	12	M12X1.25	4	4 ^{+0.030} ₀	16.7	M5	8	12	5	28	10	—	4.2	M4	19	6	5.5	9.5	15	12	10	7	6	16
ø10	12	M12X1.25	4	4 ^{+0.030} ₀	16.7	M5	8	12	5	28	10.5	—	4.2	M4	19	6	5.5	9.5	15	12	10	7	6	16
ø12	16	M16X1.5	6	6 ^{+0.030} ₀	19.7	M5	12	17	6	38	14	5	6.2	M6	24	8	5.5	10.5	18	16	14	10	9	22
ø16	16	M16X1.5	6	6 ^{+0.030} ₀	19.7	M5	12	17	6	38	14	5	6.2	M6	24	8	5.5	10.5	18	16	13	10	9	22
ø20	20	M22X1.5	8	8 ^{+0.036} _{-0.006}	27.9	G1/8	16	20	8	44	17	6	8.2	M8	32	11	15	15	24	22	11	13	12	24
ø25	22	M22X1.5	10	8 ^{+0.036} _{-0.006}	33.4	G1/8	16	22	8	50	20	8	10.2	M10X1.25	32	11	15	15	30	22	11	17	12	28

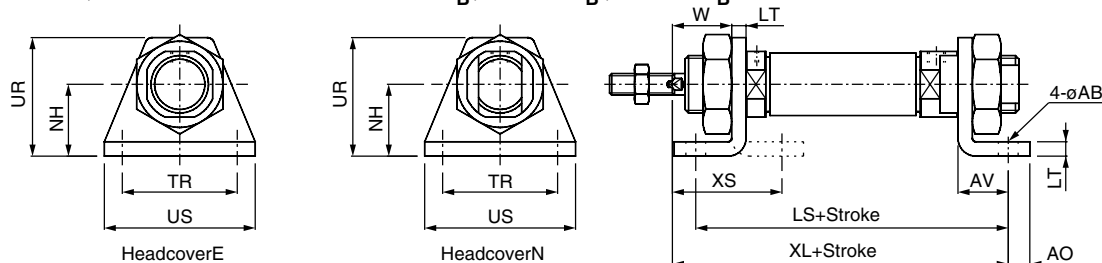
Bore	S			XC			Z			ZZ		
	1to50	51to100	101to150	1to50	51to100	101to150	1to50	51to100	101to150	1to50	51to100	1to50
ø8	46(52){56(62)}	—	—	64(70){74(80)}	—	—	76(82){86(92)}	—	—	86(92){96(102)}	—	—
ø10	46(50){56(60)}	—	—	64(68){74(78)}	—	—	76(80){86(90)}	—	—	86(90){96(100)}	—	—
ø12	50(53.5){60(63.5)}	—	—	75(78.5){85(88.5)}	—	—	91(94.5){101(104.5)}	—	—	105(108.5){115(118.5)}	—	—
ø16	56(59.5){66(69.5)}	71.5(75){92(95.5)}	87(90.5){118(121.5)}	82(85.5){92(95.5)}	97.5(101){118(121.5)}	113(116.5){144(147.5)}	98(101.5){108(111.5)}	113.5(117){134(137.5)}	129(132.5){160(163.5)}	111(114.5){121(124.5)}	126.5(130){147(150.5)}	142(145.5){173(176.5)}
ø20	62{87}	112	137	95{120}	145	170	115{140}	165	190	126{151}	176	201
ø25	65{88.5}	113.5	138.5	104{127.5}	152.5	177.5	126{149.5}	174.5	199.5	137{160.5}	185.5	210.5

():Incaseofautoswitchstyle.{}:Incaseofnon-rotatingrod.

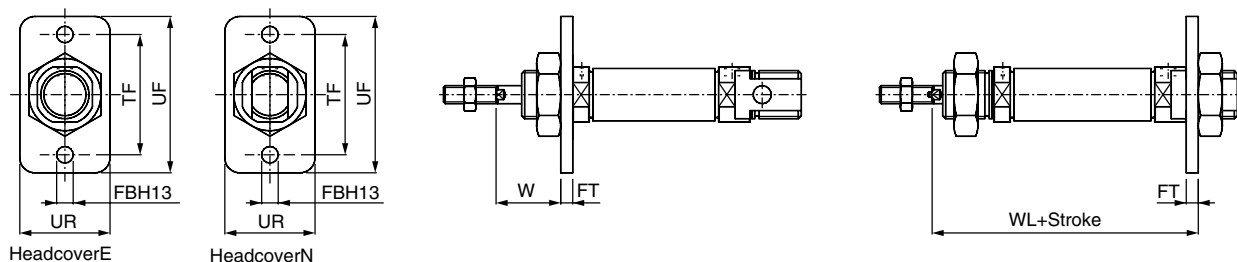
Dimensions with Mounting Brackets

Single acting: Spring return

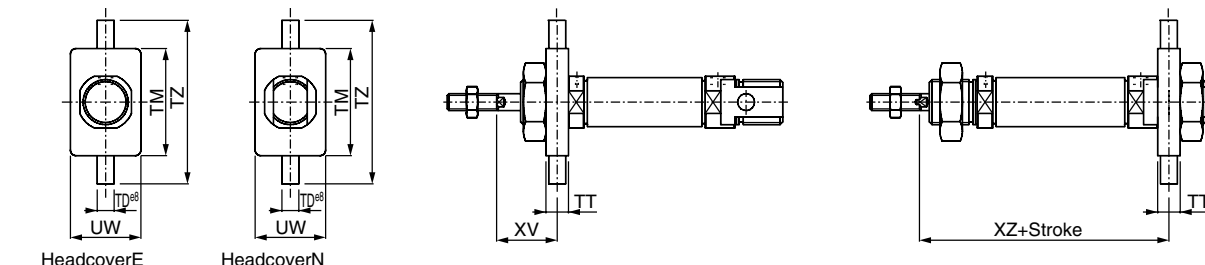
Front foot, Front and rear foot: C85L10^A_B, C85L16^A_B, C85L25^A_B



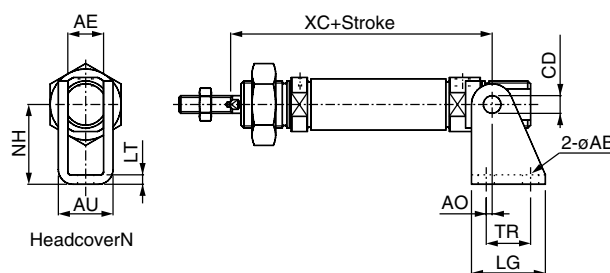
Front flange, Rear flange: C85F10, C85F16, C85F25



Front trunnion, Rear trunnion: C85T10, C85T16, C85T25



Clevis: C85C10, C85C16, C85C25



Unit:(mm)

Bore	Frontfoot,Frontandrearfoot															Frontflange,Rearflange									
	AO	US	øAB	LT	NH	LS			XL			TRJS14	XS	AV	UR	W	UR	FBH13	FT	TF	UF	W	WL		
						1to50	51to100	101to150	1to50	51to100	101to150												1to50	51to100	101to150
ø8	5	35	4.5	3.2	16	68(74) (78(84))	—	—	73(79) (83(89))	—	—	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	65.2(71.2) (75.2(81.2))	—	—
ø10	5	35	4.5	3.2	16	68(72) (78(82))	—	—	73(77) (83(87))	—	—	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	65.2(69.2) (75.2(79.2))	—	—
ø12	6	42	5.5	4	20	78(81.5) (88(91.5))	—	—	86(89.5) (96(99.5))	—	—	32	32	14	33	18	30	5.5	4	40	52	18	76(79.5) (86(89.5))	—	—
ø16	6	42	5.5	4	20	84(87.5) (94(97.5))	99.5(103) (120(123.5))	115(118.5) (146(149.5))	92(95.5) (102(105.5))	107.5(111) (128(131.5))	123(126.5) (154(157.5))	32	32	14	33	18	30	5.5	4	40	52	18	82(85.5) (92(95.5))	97.5(101) (118(121.5))	113(116.5) (144(147.5))
ø20	8	54	6.6	5	25	96(121)	146	171	103(128)	153	178	40	36	17	42	19	40	6.6	5	50	66	19	91(116)	141	166
ø25	8	54	6.6	5	25	96(122.5)	147.5	172.5	110(133.5)	158.5	183.5	40	40	17	42	23	40	6.6	5	50	66	23	98(121.5)	146.5	171.5

Bore	Fronttrunnion,Reartrunion									Clevis											
	TT	UW	TDe8	TM	TZ	XV	ZX			CD	AE	øAB	AO	AU	TR	LG	NH	LT	XC		
							1to50	51to100	101to150										1to50	51to100	101to150
ø8	6	20	4	26	38	13	65(71) (75(81))	—	—	4 ^{+0.030} ₀	8.1	4.5	1.5	13.1	12.5	20	24	2.5	64(70) (74(80))	—	—
ø10	6	20	4	26	38	13	65(69) (75(79))	—	—	4 ^{+0.030} ₀	8.1	4.5	1.5	13.1	12.5	20	24	2.5	64(68) (74(78))	—	—
ø12	8	25	6	38	58	18	76(79.5) (86(89.5))	—	—	6 ^{+0.030} ₀	12.1	5.5	2	18.5	15	25	27	3.2	75(78.5) (85(88.5))	—	—
ø16	8	25	6	38	58	18	82(85.5) (92(95.5))	97.5(101) (118(121.5))	113(116.5) (144(147.5))	6 ^{+0.030} ₀	12.1	5.5	2	18.5	15	25	27	3.2	82(88.5) (92(95.5))	97.5(101) (118(121.5))	113(116.5) (144(147.5))
ø20	8	32	6	46	66	20	90(115)	140	165	8 ^{+0.036} ₀	16.1	6.6	4	24.1	20	32	30	4	95(120)	145	170
ø25	8	32	6	46	66	24	97(120.5)	145.5	170.5	8 ^{+0.036} ₀	16.1	6.6	4	24.1	20	32	30	4	104(127.5)	152.5	177.5

():Incaseofauto switchstyle.{}:Incaseofnon-rotatingrod.

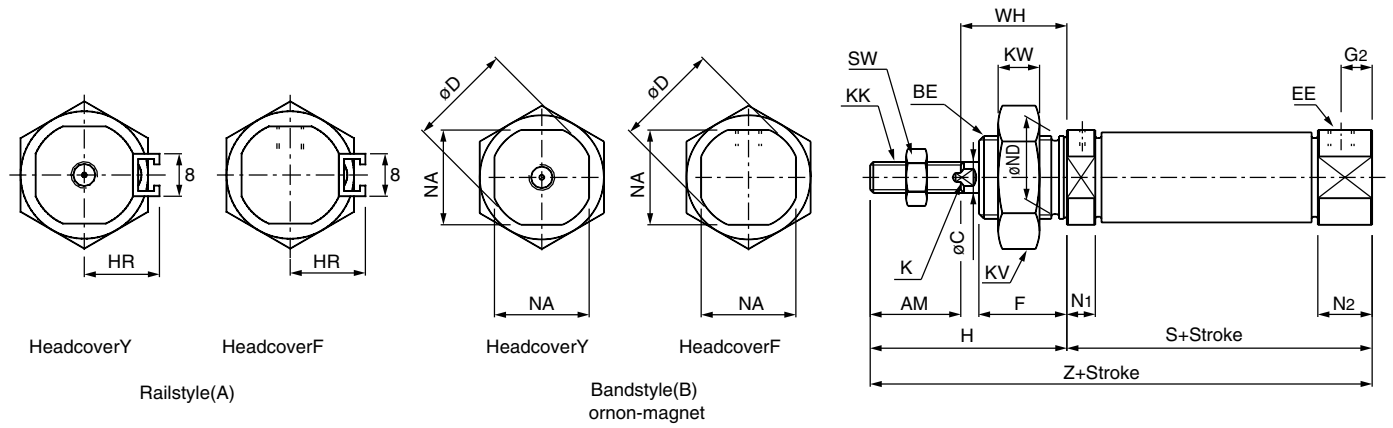
Series C85

Dimensions

Single acting: Spring return

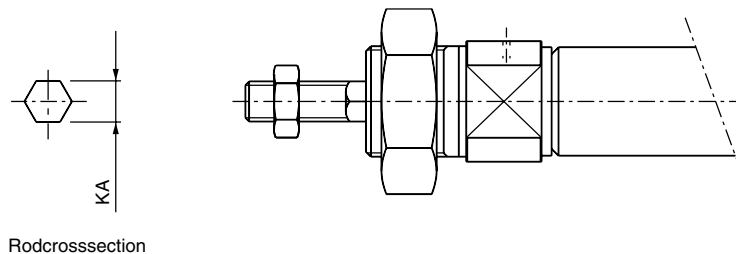
C□85^F Bore — Stroke S —

Without magnet, Built-in magnet



C□85KF, C□85KY

Non-rotating rod



Rodcrosssection

Unit:(mm)

Bore	AM	BE	øC	øD	EE	F	G2	H	HR	K	KA	KK	KV	KW	N1	N2	NA	øND(h8)	SW	WH
ø8	12	M12X1.25	4	16.7	M5	12	5	28	10	—	4.2	M4	19	6	5.5	9.5	15	12	7	16
ø10	12	M12X1.25	4	16.7	M5	12	5	28	10.5	—	4.2	M4	19	6	5.5	9.5	15	12	7	16
ø12	16	M16X1.5	6	19.7	M5	17	6	38	14	5	6.2	M6	24	8	5.5	10.5	18	16	10	22
ø16	16	M16X1.5	6	19.7	M5	17	6	38	14	5	6.2	M6	24	8	5.5	10.5	18	16	10	22
ø20	20	M22X1.5	8	27.9	G1/8	20	8	44	17	6	8.2	M8	32	10	15	15	24	22	13	24
ø25	22	M22X1.5	10	33.4	G1/8	22	8	50	20	8	10.2	M10X1.25	32	10	15	15	30	22	17	28

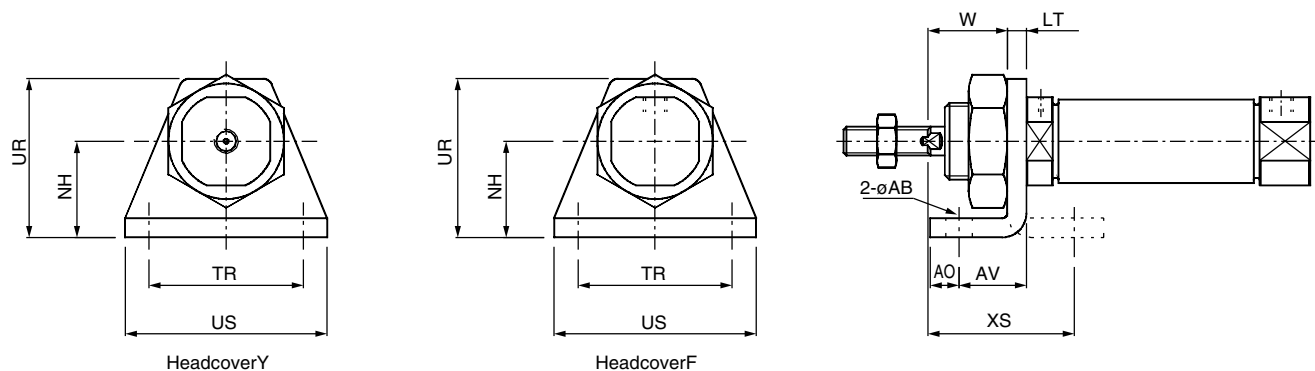
Bore	S			Z		
	1to50	51to100	101to150	1to50	51to100	101to150
ø8	46(52){56(62)}	—	—	74(80){84(90)}	—	—
ø10	46(50){56(60)}	—	—	74(78){84(88)}	—	—
ø12	50(53.5){60(63.5)}	—	—	88(91.5){98(101.5)}	—	—
ø16	50(53.5){60(63.5)}	65.5(69){86(89.5)}	81(84.5){112(115.5)}	88(91.5){98(101.5)}	103.5(107){124(127.5)}	119(122.5){150(153.5)}
ø20	62{87}	112	137	106{131}	156	181
ø25	65{88.5}	113.5	138.5	115{138.5}	163.5	188.5

():Incaseofautoswitchstyle.{}:Incaseofnon-rotatingrod.

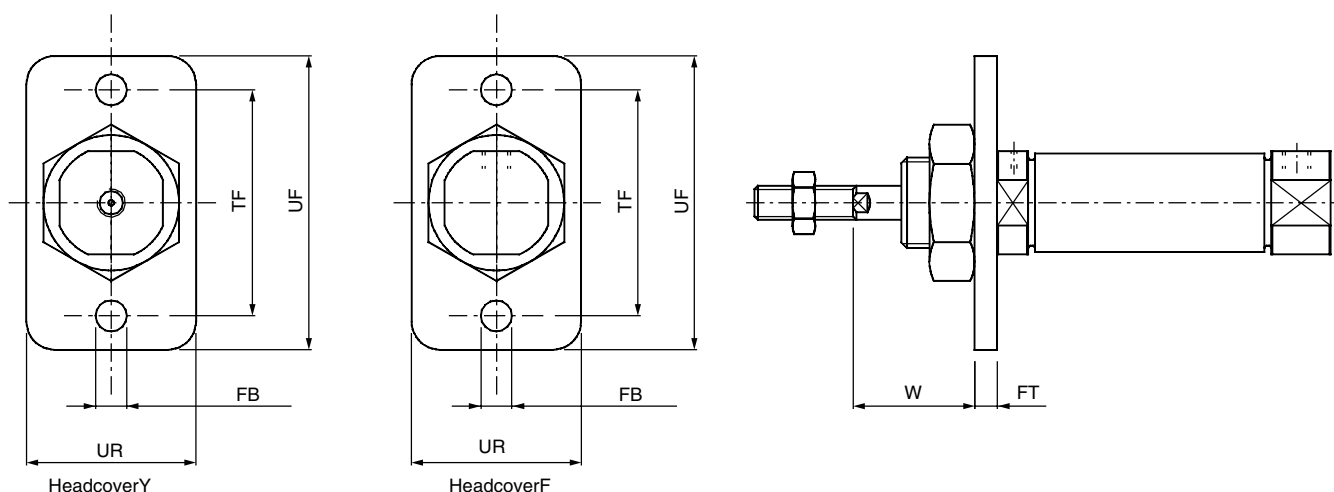
Dimensions with Mounting Brackets

Single acting: Spring return

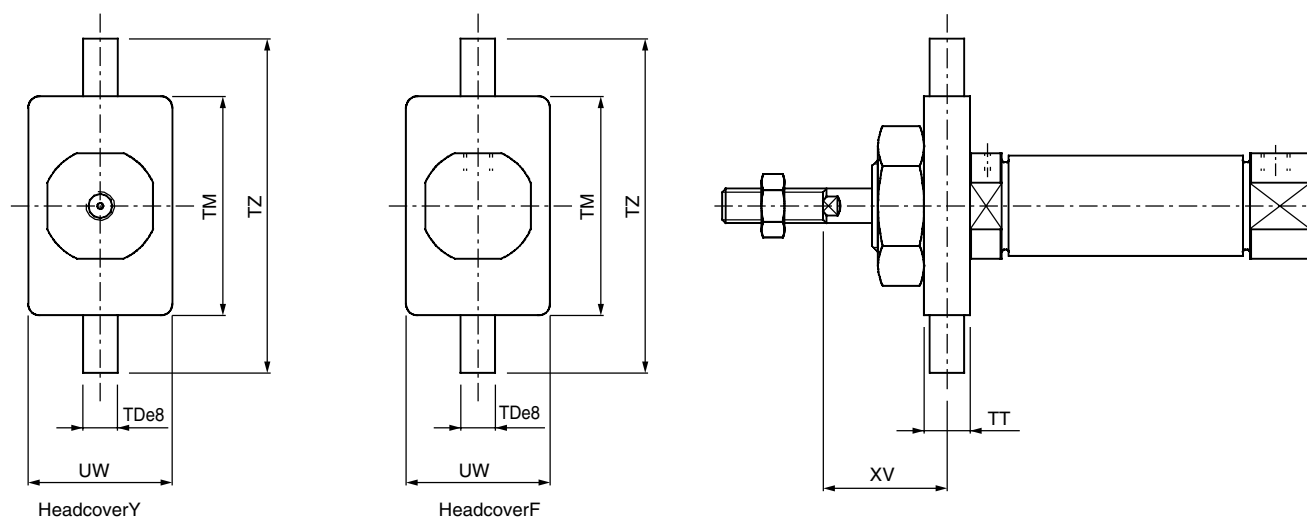
Front foot: C85L10A, C85L16A, C85L25A



Front flange: C85F10, C85F16, C85F25



Front trunnion: C85T10, C85T16, C85T25



Unit:(mm)

Bore	Frontfoot										Frontflange					Fronttrunnion						
	AO	US	øAB	LT	NH	TRJS14	XS	AV	UR	W	UR	FBH13	FT	TF	UF	W	TT	UW	TDe8	TM	TZ	XV
ø8	5	35	4.5	3.2	16	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	6	20	4	26	38	13
ø10	5	35	4.5	3.2	16	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	6	20	4	26	38	13
ø12	6	42	5.5	4	20	32	32	14	33	18	30	5.5	4	40	52	18	8	25	6	38	58	18
ø16	6	42	5.5	4	20	32	32	14	33	18	30	5.5	4	40	52	18	8	25	6	38	58	18
ø20	8	54	6.6	5	25	40	36	17	42	19	40	6.6	5	50	66	19	8	32	6	46	66	20
ø25	8	54	6.6	5	25	40	40	17	42	23	40	6.6	5	50	66	23	8	32	6	46	66	24

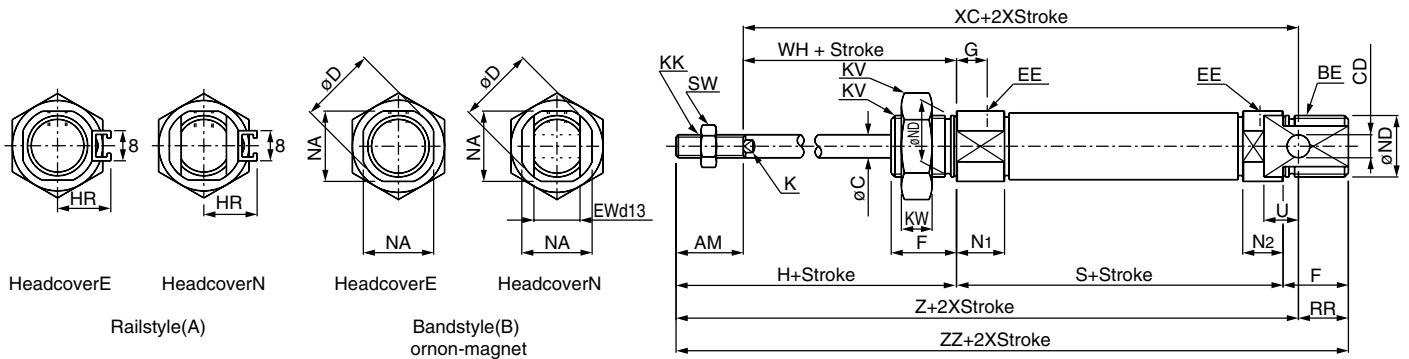
Series C85

Dimensions

Single acting: Spring extend

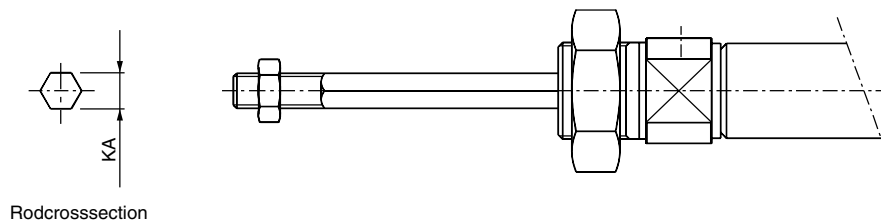
C□85^N_E Bore — Stroke T —

Without magnet, Built-in magnet



C□85KN, E

Non-rotating rod



Rodcrosssection

Unit:(mm)

Bore	AM	BE	øC	CD	øD	EE	EW	F	G	H	HR	K	KA	KK	KV	KW	N1	N2	NA	øND(h8)	RR	SW	U	WH
ø8	12	M12X1.25	4	4 ^{+0.030} ₀	16.7	M5	8	12	7	28	10	—	4.2	M4	19	6	11.5	9.5	15	12	10	7	6	16
ø10	12	M12X1.25	4	4 ^{+0.030} ₀	16.7	M5	8	12	7	28	10.5	—	4.2	M4	19	6	11.5	9.5	15	12	10	7	6	16
ø12	16	M16X1.5	6	6 ^{+0.030} ₀	19.7	M5	12	17	8	38	14	5	6.2	M6	24	8	12.5	10.5	18	16	14	10	9	22
ø16	16	M16X1.5	6	6 ^{+0.030} ₀	19.7	M5	12	17	8	38	14	5	6.2	M6	24	8	12.5	10.5	18	16	13	10	9	22
ø20	20	M22X1.5	8	8 ^{+0.036} ₀	27.9	G1/8	16	20	8	44	17	6	8.2	M8	32	10	15	15	24	22	11	13	12	24
ø25	22	M22X1.5	10	8 ^{+0.036} ₀	33.4	G1/8	16	22	8	50	20	8	10.2	M10X1.25	32	10	15	15	30	22	11	17	12	28

Bore	S			Z			XC			ZZ		
	1to50	51to100	101to150	1to50	51to100	101to150	1to50	51to100	101to150	1to50	51to100	101to150
ø8	64.5(70.5)	—	—	94.5(100.5)	—	—	82.5(88.5)	—	—	104.5(110.5)	—	—
ø10	64.5(68.5)	—	—	94.5(98.5)	—	—	82.5(86.5)	—	—	104.5(108.5)	—	—
ø12	70(73.5)	—	—	111(114.5)	—	—	95(98.5)	—	—	125(128.5)	—	—
ø16	75(78.5)	101(104.5)	127(130.5)	117(120.5)	143(146.5)	169(172.5)	101(104.5)	127(130.5)	153(156.5)	130(133.5)	156(159.5)	182(185.5)
ø20	87	112	137	140	165	190	120	145	170	151	176	201
ø25	88.5	113.5	138.5	149.5	174.5	199.5	127.5	152.5	177.5	160.5	185.5	210.5

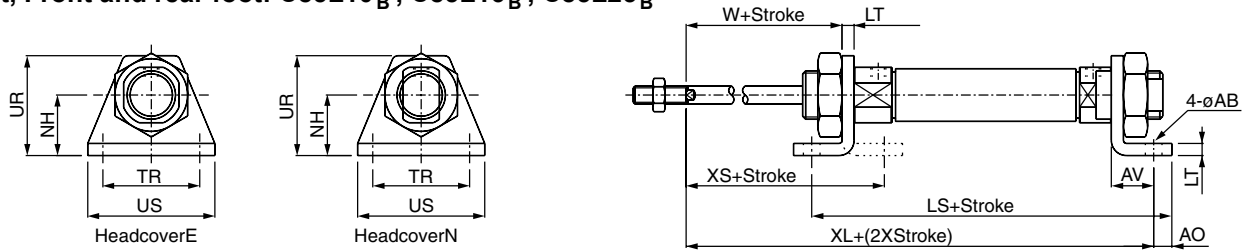
():Incaseofautoswitchstyle.

Dimensions with Mounting Brackets

Single acting: Spring extend

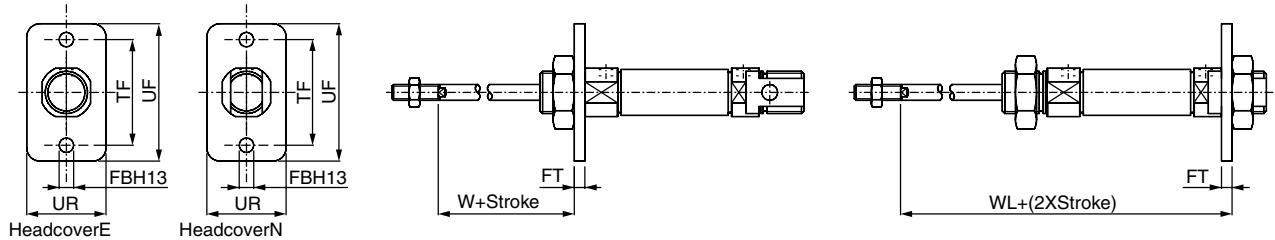
C□85N, C□85E

Front foot, Front and rear foot: C85L10^A_B, C85L16^A_B, C85L25^A_B



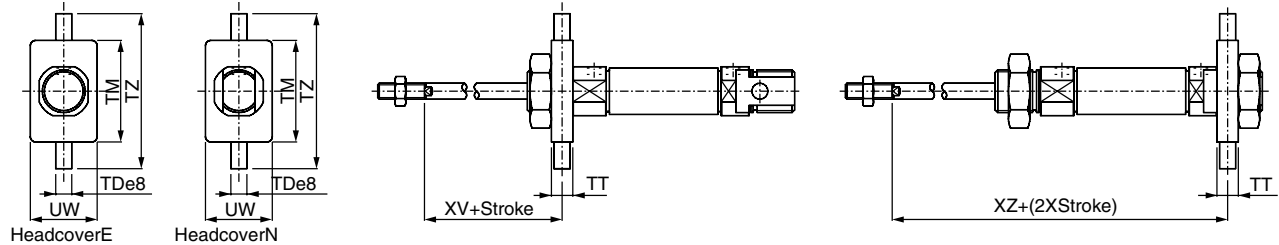
C□85N, C□85E

Front flange, Rear flange: C85F10, C85F16, C85F25



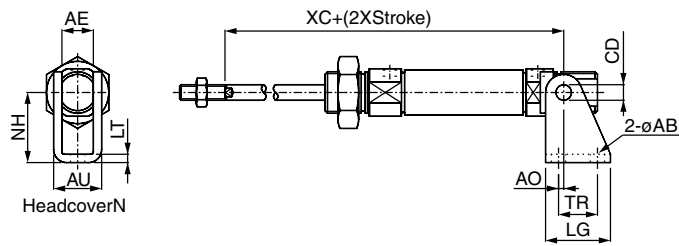
C□85N, C□85E

Front trunnion, Rear trunnion: C85T10, C85T16, C85T25



C□85N

Clevis: C85C10, C85C16, C85C25



Unit:(mm)

Bore	Frontfoot,Frontandrearfoot																Frontflange,Rearflange									
	AO	US	øAB	LT	NH	LS			XL			TRJS14	XS	AV	UR	W	UR	FBH13	FT	TF	UF	W	WL			
						1to50	51to100	101to150	1to50	51to100	101to150												1to50	51to100	101to150	
ø8	5	35	4.5	3.2	16	86.5(92.5)	—	—	91.5(97.5)	—	—	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	83.7(89.7)	—	—	
ø10	5	35	4.5	3.2	16	86.5(90.5)	—	—	91.5(95.5)	—	—	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	83.7(87.7)	—	—	
ø12	6	42	5.5	4	20	98(101.5)	—	—	106(109.5)	—	—	32	32	14	33	18	30	5.5	4	40	52	18	96(99.5)	—	—	
ø16	6	42	5.5	4	20	103(106.5)	129(132.5)	155(158.5)	111(114.5)	137(140.5)	163(166.5)	32	32	14	33	18	30	5.5	4	40	52	18	101(104.5)	127(130.5)	153(156.5)	
ø20	8	54	6.6	5	25	121	146	171	128	153	178	40	36	17	42	19	40	6.6	5	50	66	19	116	141	166	
ø25	8	54	6.6	5	25	122.5	147.5	172.5	133.5	158.5	183.5	40	40	17	42	23	40	6.6	5	50	66	23	121.5	146.5	171.5	

Bore	Fronttrunnion,Reartrunnion							Clevis													
	TT	UW	TDe8	TM	TZ	XV	ZX			CD	AE	øAB	AO	AU	TR	LG	NH	LT	XC		
							1to50	51to100	101to150										1to50	51to100	101to150
ø8	6	20	4	26	38	13	83.5(89.5)	—	—	4 ^{+0.030} ₀	8.1	4.5	1.5	13.1	12.5	20	24	2.5	82.5(88.5)	—	—
ø10	6	20	4	26	38	13	83.5(87.5)	—	—	4 ^{+0.030} ₀	8.1	4.5	1.5	13.1	12.5	20	24	2.5	82.5(86.5)	—	—
ø12	8	25	6	38	58	18	96(99.5)	—	—	6 ^{+0.030} ₀	12.1	5.5	2	18.5	15	25	27	3.2	95(98.5)	—	—
ø16	8	25	6	38	58	18	101(104.5)	127(130.5)	153(156.5)	6 ^{+0.030} ₀	12.1	5.5	2	18.5	15	25	27	3.2	101(104.5)	127(130.5)	153(156.5)
ø20	8	32	6	46	66	20	115	140	165	8 ^{+0.036} ₀	16.1	6.6	4	24.1	20	32	30	4	120	145	170
ø25	8	32	6	46	66	24	120.5	145.5	170.5	8 ^{+0.036} ₀	16.1	6.6	4	24.1	20	32	30	4	127.5	152.5	177.5

():Incaseofautoswitchstyle.

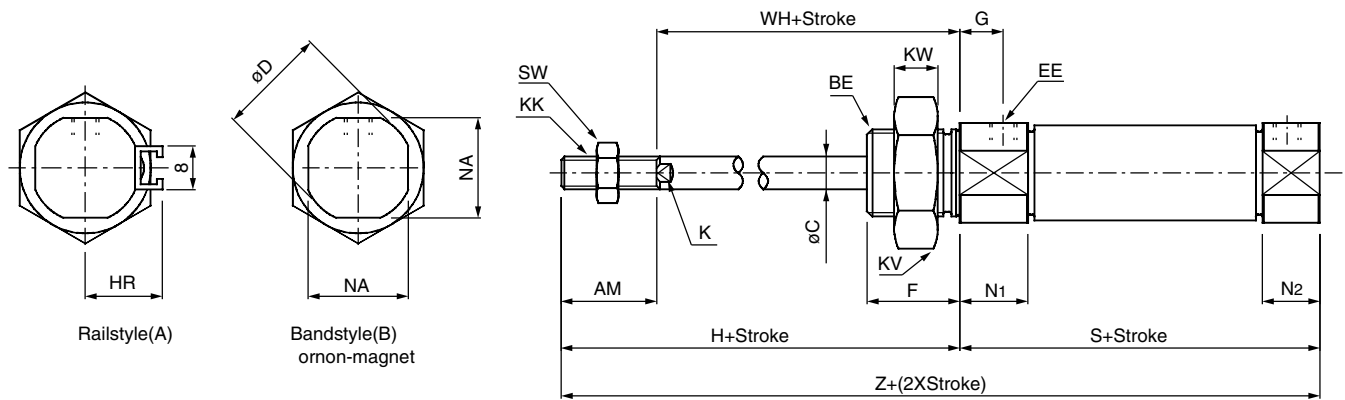
Series C85

Dimensions

Single acting: Spring extend

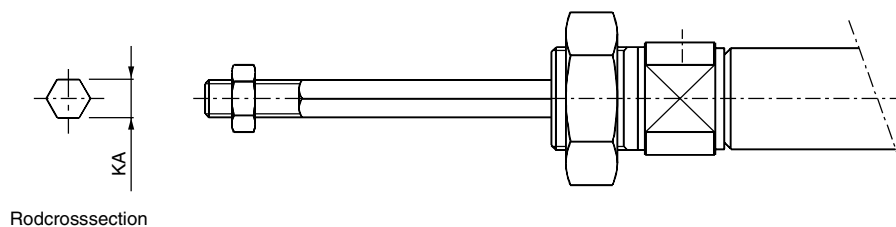
C□85F Bore Stroke T □

Without magnet, Built-in magnet



C85KF, CD85KF

Non-rotating rod



Unit:(mm)

Bore	AM	BE	øC	øD	EE	F	G	H	HR	K	KA	KK	KV	KW	N1	N2	NA	SW	WH
ø8	12	M12X1.25	4	16.7	M5	12	7	28	10	—	4.2	M4	19	6	11.5	9.5	15	7	16
ø10	12	M12X1.25	4	16.7	M5	12	7	28	10.5	—	4.2	M4	19	6	11.5	9.5	15	7	16
ø12	16	M16X1.5	6	19.7	M5	17	8	38	14	5	6.2	M6	24	8	12.5	10.5	18	10	22
ø16	16	M16X1.5	6	19.7	M5	17	8	38	14	5	6.2	M6	24	8	12.5	10.5	18	10	22
ø20	20	M22X1.5	8	27.9	G1/8	20	8	44	17	6	8.2	M8	32	10	15	15	24	13	24
ø25	20	M22X1.5	10	33.4	G1/8	22	8	50	20	8	10.2	M10X1.25	32	10	15	15	30	17	28

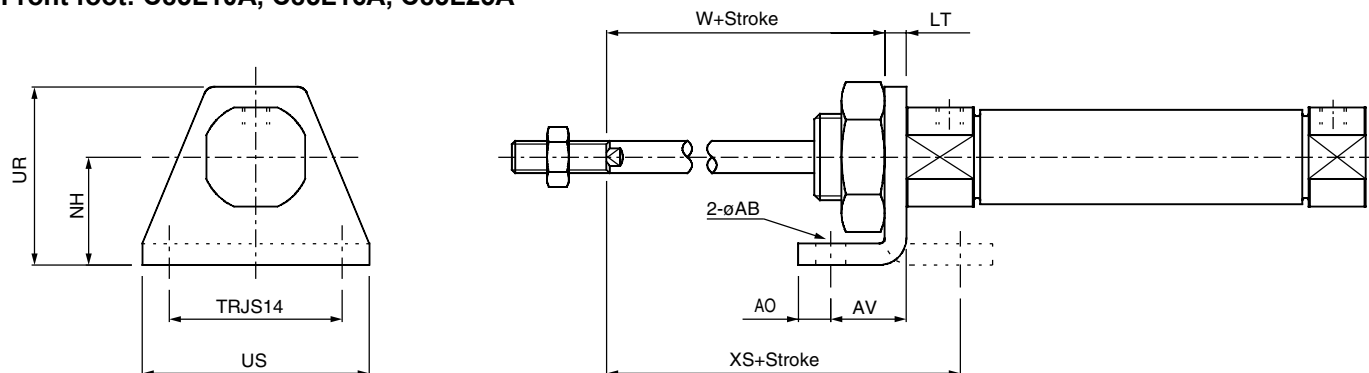
Bore	S			Z		
	1to50	51 to100	101to150	1to50	51to100	101to150
ø8	64.5(70.5)	—	—	92.5(98.5)	—	—
ø10	64.5(68.5)	—	—	92.5(96.5)	—	—
ø12	70(73.5)	—	—	108(111.5)	—	—
ø16	69(72.5)	95(98.5)	121(124.5)	107(110.5)	133(136.5)	159(162.5)
ø20	87	112	137	131	156	181
ø25	88.5	113.5	138.5	138.5	163.5	188.5

():Incaseofautoswitchstyle.

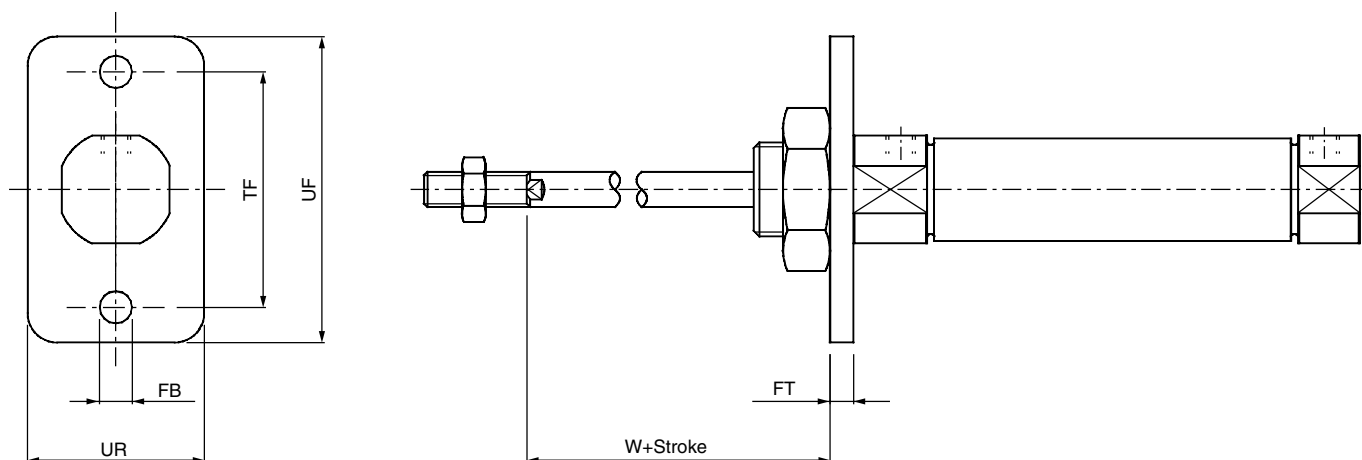
Dimensions with Mounting Brackets

Single acting: Spring extend

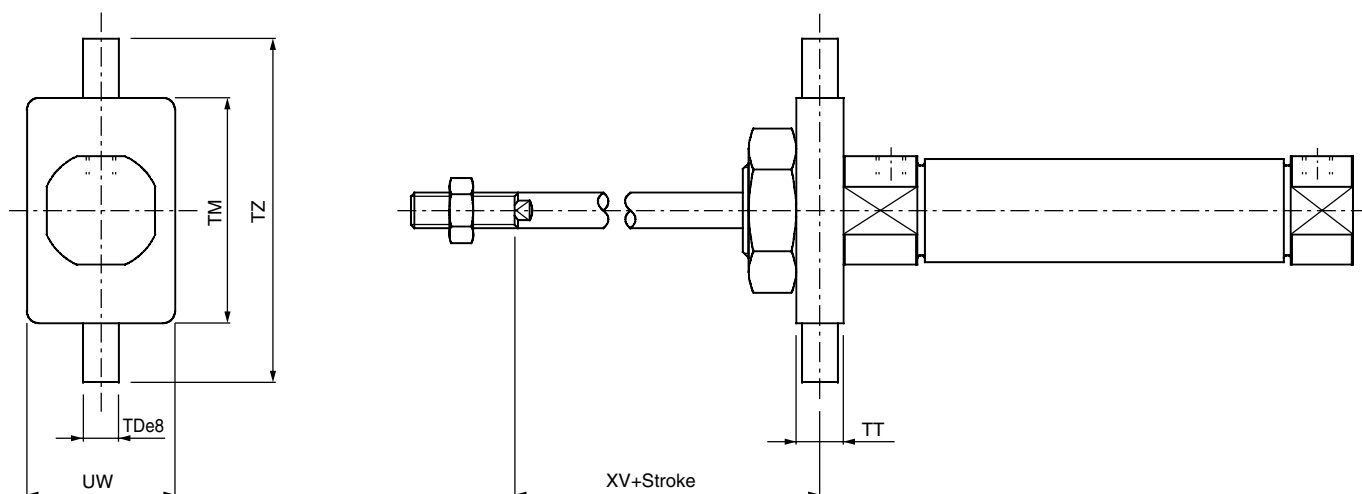
Front foot: C85L10A, C85L16A, C85L25A



Front flange: C85F10, C85F16, C85F25



Front trunnion: C85T10, C85T16, C85T25



Unit:(mm)

Bore	Frontfoot										Frontflange						Fronttrunnion					
	AO	US	øAB	LT	NH	TRJS14	XS	AV	UR	W	UR	FBH13	FT	TF	UF	W	TT	UW	TDe8	TM	TZ	XV
ø8	5	35	4.5	3.2	16	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	6	20	4	26	38	13
ø10	5	35	4.5	3.2	16	25	23.8	11	26	12.8	22	4.5	3.2	30	40	12.8	6	20	4	26	38	13
ø12	6	42	5.5	4	20	32	32	14	33	18	30	5.5	4	40	52	18	8	25	6	38	58	18
ø16	6	42	5.5	4	20	32	32	14	33	18	30	5.5	4	40	52	18	8	25	6	38	58	18
ø20	8	54	6.6	5	25	40	36	17	42	19	40	6.6	5	50	66	19	8	32	6	46	66	20
ø25	8	54	6.6	5	25	40	40	17	42	23	40	6.6	5	50	66	23	8	32	6	46	66	24

ISO Cylinder/Direct Mount: Double Acting

Series C85R

ø8, ø10, ø12, ø16, ø20, ø25

How to Order

Double acting
Single rod

C D 85 R A F 16 40 B

Magnet

—	None
D	Built-in magnet

Style

A	Bottom side mounting
B*	Front side mounting

* Only ø20, ø25

Mounting

Symbol	Mounting
F	Boss cut
Y	Boss cut-end port

Bore size-stroke

Bore size (mm)	Standard stroke (mm)*	Max. stroke (mm)
ø8	10, 25, 40, 50, 80, 100	100
ø10		
ø12		
ø16	125, 160	160
ø20	10, 25, 40, 50, 80, 100	160
ø25		

* Other strokes on request.

Other options

—	None
XA0~30 ¹⁾	Change of Rod end shape
XB6 ²⁾	High Temperature
XB7 ^{2) 3)}	Low Temperature
XB9 ³⁾	Low Speed
XC6A	Stainless steel piston rod and piston rod nut

Note 1) ø8 to ø16: only possible XA0/1/10/11
ø20 to ø25: XA0 to XA30 possible
ø20 to ø25 (Non-rotating type):
XA0/1/6/10/11/13/14/17/19/21

Note 2) Without magnets

Note 3) Only ø20, ø25

Auto switch mounting

B	Band style
---	------------

Auto switches and bands are shown on p.3-35

Mounting Brackets Parts No.

Bore (mm)	8	10	12	16	20	25
Bracket						
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

Bore (mm)	Kit No.	Note
20	C85-20PS	Every set includes: 1 rod seal 1 packing retaining washer 1 retaining ring
25	C85-25PS	

ISO Cylinder/Direct Mount: Double Acting **Series C85**

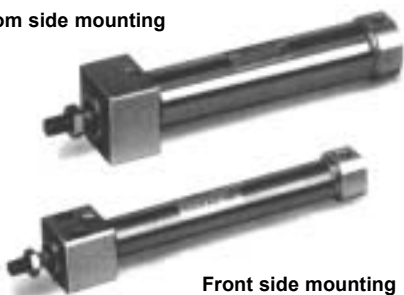
Square rod cover makes direct contact mounting possible

Spacesaving

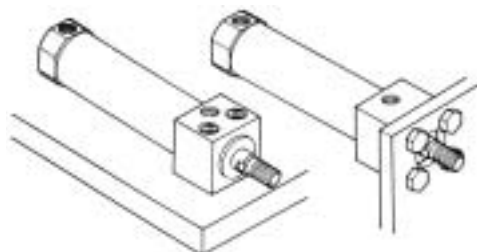
Mounting accuracy and rigidity made possible by means of faucet joint and direct mounting.

Front face mounting style and base mounting available to suit your applications.

Bottom side mounting



Front side mounting

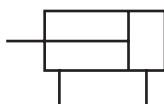


Bottom side mounting

Front side mounting

Symbol

Double Acting/Single Rod



Specifications

Bore size (mm)	8	10	12	16	20	25
Piston rod dia. (mm)	4	4	6	6	8	10
Piston rod thread	M4	M4	M6	M6	M8	M10X1.25
Ports	M5	M5	M5	M5	G1/8	G1/8
Action	Double acting/Single Rod					
Fluid	Air					
Proof pressure	1.5MPa					
Max operating pressure	1.0MPa					
Min operating pressure	0.1MPa	0.08MPa			0.05MPa	
Ambient and fluid temperature	-20 to 80°C (Built-in magnet style: -10 to 60°C)					
Cushion	Rubber bumper (Standard)					
Lubrication	Not required. If necessary, turbine oil No. 1 ISO VG 32 is recommended					
Piston speed	50 to 1500 mm/s					
Allowable kinetic energy	0.02J	0.03J	0.04J	0.09J	0.27J	0.4J
Stroke tolerance	0/+1				0/+1.4	

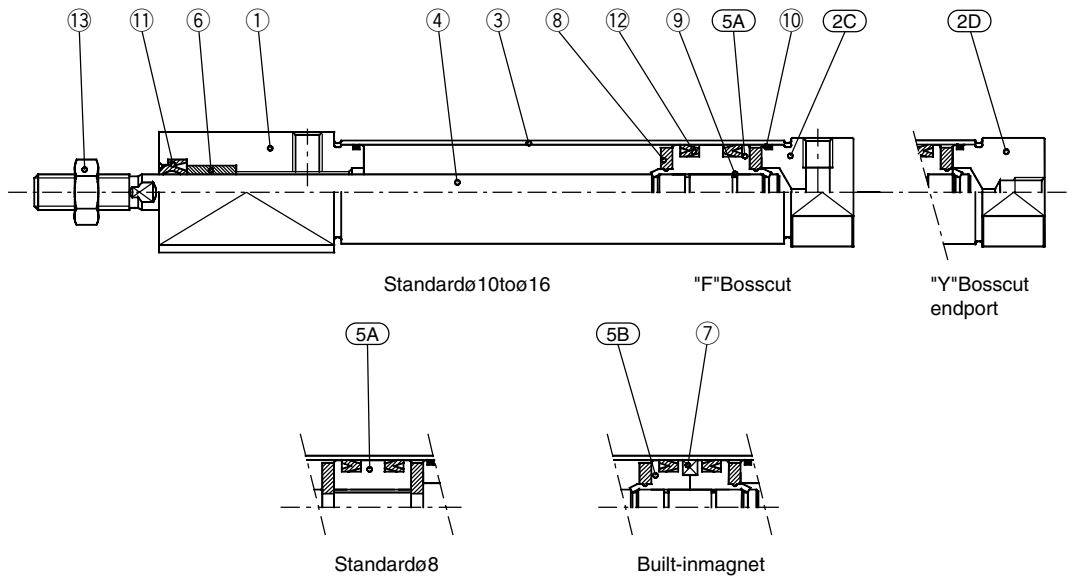
Weight

Bore size (mm)		8	10	12	16	20	25
Basic weight	Bottom side mounting	43	46	84	95	167	253
	Front side mounting	—	—	—	—	163	230
Additional weight for each 10 mm of stroke		2	2.2	4.1	5.1	7.8	12.2

Series C85

Construction

Double acting: Single rod
C□85RA8 to 16 (Disassembly is not possible)

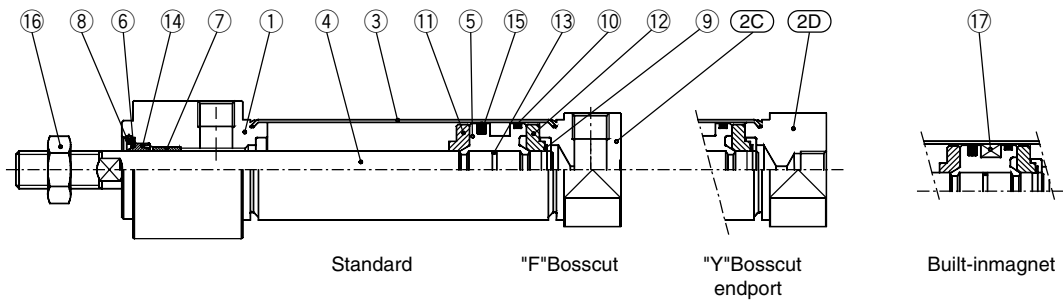


Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminum alloy	1	Whiteanodized
②C	HeadcoverF	Aluminum alloy	1	Whiteanodized
②D	HeadcoverY	Aluminum alloy	1	Whiteanodized
③	Cylindertube	Stainless steel	1	
④	Pistonrod	Stainless steel	1	
⑤A	Piston "A"	Brass	1	
⑤B	Piston "B"	Brass	2	(Switchstylepiston)

No.	Description	Material	Quantity	Remarks
⑥	Bushing	Sintered bronze	1	
⑦	Magnet		1	(Switchstyleonly)
⑧	Bumper	Urethane	2	
⑨	Pistongasket	NBR	1	(2forswitchstyle)
⑩	Tubegasket	NBR	2	
⑪	Rodseal	NBR	1	
⑫	Pistonseal	NBR	2	

C□85R^A_B20, 25



Component Parts

No.	Description	Material	Quantity	Remarks
①	Rodcover	Aluminum alloy	1	Whiteanodized
②C	HeadcoverF	Aluminum alloy	1	Whiteanodized
②D	HeadcoverY	Aluminum alloy	1	Whiteanodized
③	Cylindertube	Stainless steel	1	
④	Pistonrod	Carbon steel	1	Hardchromeplated
⑤	Piston	Aluminum alloy	1	Chromated
⑥	Plainwasher	Carbon steel	1	Nickelplated
⑦	Bushing	Sintered bronze	1	
⑧	Retainingring	Carbon steel	1	Nickelplated

No.	Description	Material	Quantity	Remarks
⑨	Retainingring	Carbon steel	1	
⑩	Wearing	Phenolicresin	1	
⑪	BumperA	Urethane	1	
⑫	BumperB	Urethane	1	
⑬	Pistongasket	NBR	1	
⑭	Rodseal	NBR	1	
⑮	Pistonseal	NBR	1	
⑯	Rodendnut	Carbon steel	1	Nickelplated
⑰	Magnet		1	(Switchstyleonly)