

Air Cylinders

Series C76

ø32, ø40



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

Standard Type, Non-rotating Rod Type, Direct Mount Type

Series C76: $\varnothing 32$, $\varnothing 40$

Easy-accurate Mounting

Simple space-saving design with high dimensional accuracy makes these cylinders very easy to use.
Large spanner flats on the rod and head covers greatly simplify their installation and positioning.

High Speed Actuation

Low friction and the standard elastomer cushion seals allow piston speeds up to 1500 mm/s. Either rubber bumper or air cushions are available.

Replaceable Rod Seal

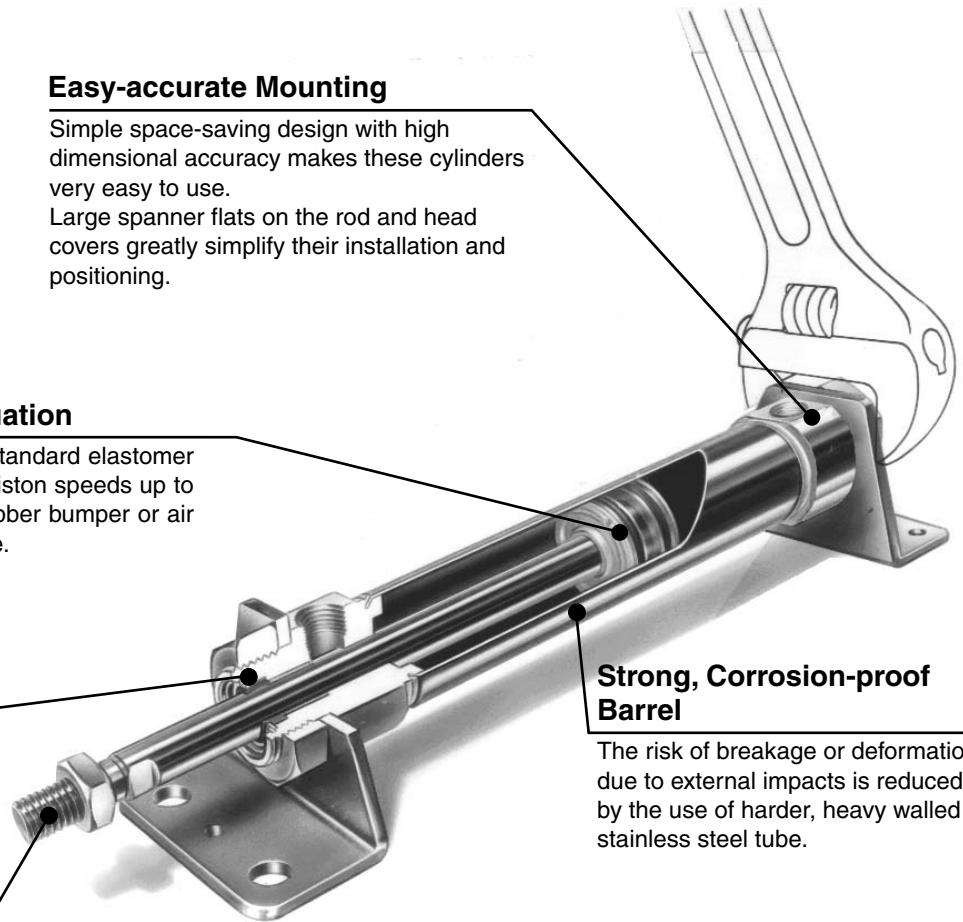
Rod seal can be quickly replaced, greatly extending the cylinder life.

Strong, Corrosion-proof Barrel

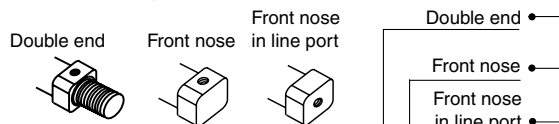
The risk of breakage or deformation due to external impacts is reduced by the use of harder, heavy walled stainless steel tube.

Minimized Side Clearance

The close tolerance of the piston rod in the front end bush allows greater side loading.



(Head cover)
Three different head covers offer space saving convenience



Series	Type	Action	Bore size (mm)		Rod boot	
			32	40		
C76	Standard	Double acting, Single rod	●	●	●	
		Double acting, Double rod	●	●		
		Single acting, Spring return	●	●		
		Single acting, Spring extended	●	●		
		Double acting, Single rod	●	●		
	Non-rotating rod	Single acting, Spring return	●	●		
		Single acting, Spring extended	●	●		
		Double acting, Single rod	●	●		
	Direct mount	Double acting, Single rod	●	●		
	Mounting bracket	Rod foot /Rod flange (Single)		●		●
		Rod and head foot (Double)		●		●
Rod trunnion		(Note 1)	●	●		
Head trunnion		(Note 1)	●	●		
Rod clevis		(Note 1)	●	●		
Head clevis		(Note 1)	●	●		

● Recommendable combination
Note 1) No double acting, double rod
Note 2) Except with air cushion

Series Variations

	Standard (Rubber bumper)			Standard (Air cushion)		Non-rotating rod		Direct mount
	Double acting, Single rod	Double acting, Double rod	Single acting, Spring return/ Spring extended	Double acting, Single rod	Double acting, Double rod	Double acting, Single rod	Single acting, Spring return/ Spring extended	Double acting, Single rod
			 Spring return Spring extended				 Spring return Spring extended	
Bore size (mm)	32, 40			32, 40		32, 40	32, 40	32, 40
Type	Non-lube							
Mounting (Head cover)	Double end Front nose Front nose in line port	Double end	Spring return Double end Front nose Front nose in line port Spring extended Double end Front nose	Double end	Double end	Double end Front nose Front nose in line port	Spring return Double end Front nose Front nose in line port Spring extended Double end Front nose	Boss-cut
Built-in magnet	Band mounting type, Rail mounting type							Band mounting type
Mounting bracket	Rod foot Rod and head foot Rod flange Rod trunnion Head trunnion Rod clevis Head clevis	Rod and head foot Flange Trunnion	Rod foot Rod and head foot Rod flange Rod trunnion Head trunnion Rod clevis Head clevis	Rod foot Rod and head foot Rod flange Rod trunnion Head trunnion Rod clevis Head clevis	Rod and head foot Flange Trunnion	Rod foot Rod and head foot Rod flange Rod trunnion Head trunnion Rod clevis Head clevis		Bottom side mounting Front side mounting
Accessory	Standard Mounting nut Rod end nut Option Single knuckle joint Double knuckle joint (With pin) Floating joint		Standard Mounting nut Rod end nut Option Single knuckle joint Double knuckle joint (With pin) Floating joint	Standard Mounting nut Rod end nut Option Single knuckle joint Double knuckle joint (With pin) Floating joint		Standard Mounting nut Rod end nut Option Single knuckle joint Double knuckle joint (With pin) Floating joint		Standard Rod end nut Option Single knuckle joint Double knuckle joint (With pin) Floating joint
Page	6-10-5		6-10-19	6-10-5		6-10-5	6-10-19	6-10-37

CJ1

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Series C76

Stroke Selection

The relation between the cylinder size and the maximum stroke depending on the mounting style

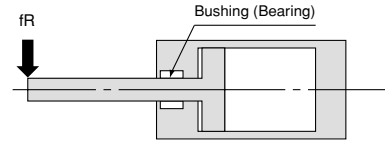
Assuming that the force that is generated by the cylinder itself acts as a buckling force on the piston rod or on the piston rod and the cylinder tube, the table below indicates in centimeters the maximum stroke that can be used, which was obtained through calculation. Therefore, it is possible to find the maximum stroke that can be used with each cylinder size according to the relationship between the level of the operating pressure and the type of cylinder mounting, regardless of the load factor.



Reference: Even under a light load, if the piston rod has been stopped by an external stopper at the extending side of the cylinder, the maximum force generated by the cylinder will act upon the cylinder itself.

The maximum stroke at which the cylinder can be operated under a lateral load

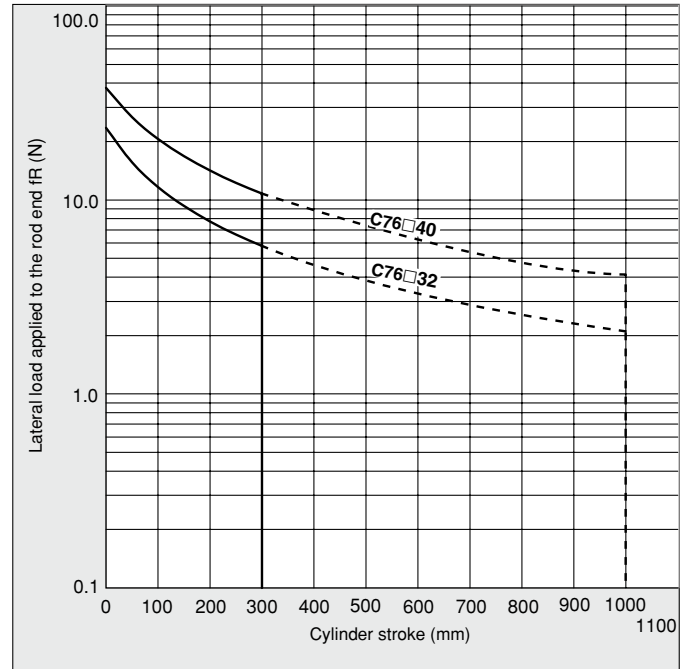
The region that does not exceed the bold solid line represents the allowable lateral load in relation to the cylinder of a given stroke length. In the graph, the range of the broken line shows that the long stroke limit has been exceeded. In this region, as a rule, operate the cylinder by providing a guide along the direction of movement.



Mounting style			Nominal symbol	Operating pressure (MPa)	Maximum stroke that can be used according to buckling strength				
Mounting bracket diagram					C76				
Foot: L	Rod side flange: F	Head side flange: G			32	40			
			L	0.3	54	58			
				0.5	40	44			
				0.7	33	36			
			G	0.3	23	24			
				0.5	16	17			
				0.7	13	13			
Clevis: C, D 	Rod side trunnion: U 		C, D	0.3	—	—			
				0.5	—	—			
				0.7	—	—			
			U	0.3	(100)*	(100)*			
				0.5	85	92			
				0.7	71	77			
Head side trunnion: U 	Center trunnion: O 	Series CS1 only 	T	0.3	53	57			
				0.5	40	43			
				0.7	33	35			
			Foot: L 	Rod side flange: F 	Head side flange: G 	L, F	0.3	(100)*	(100)*
							0.5	(100)*	(100)*
							0.7	(100)*	(100)*
G	0.3	77				83			
	0.5	58				63			
	0.7	48				52			
Foot: L 	Rod side flange: F 	Head side flange: G 	L, F	0.3	(100)*	(100)*			
				0.5	(100)*	(100)*			
				0.7	(100)*	(100)*			
			G	0.3	(100)*	(100)*			
				0.5	86	92			
				0.7	71	77			

* The data in () are limited by max. stroke length

Series C76: ø32, ø40

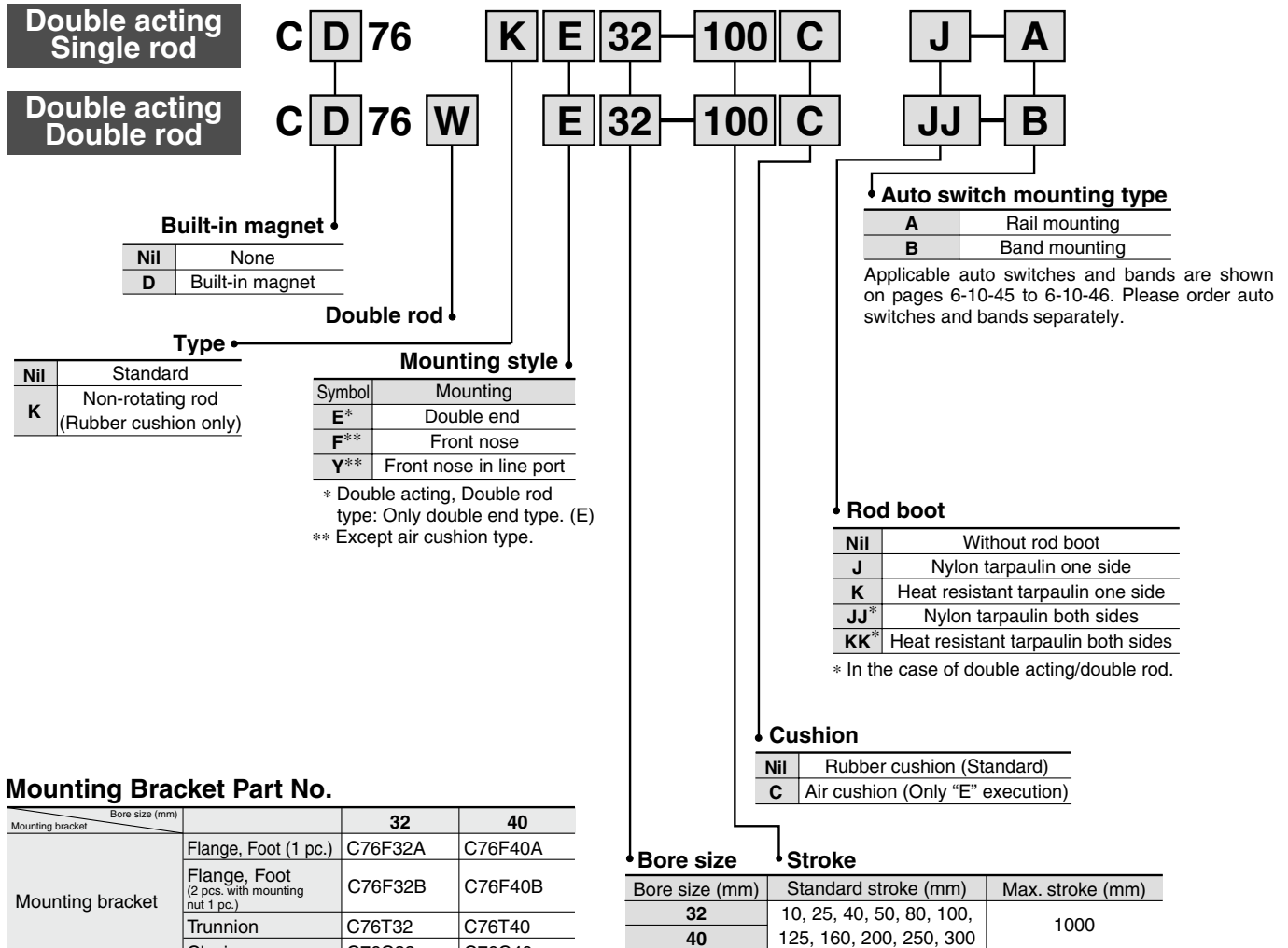


Air Cylinder: Standard/Non-rotating Type Double Acting, Single/Double Rod

Series C76

ø32, ø40

How to Order



Mounting Bracket Part No.

Bore size (mm)		32	40
Mounting bracket	Flange, Foot (1 pc.)	C76F32A	C76F40A
	Flange, Foot (2 pcs. with mounting nut 1 pc.)	C76F32B	C76F40B
	Trunnion	C76T32	C76T40
	Clevis	C76C32	C76C40
Accessory	Single knuckle joint	KJ10DA	KJ12DA
	Double knuckle joint	GKM10-20A	GKM12-24A
	Floating joint	JA25-10-150	JA40-12-175

Replacement Parts

Bore size (mm)	Part no.		Note
	Standard	Non-rotating	
32	C76-32PS	C76K-32PS	Every set includes: 1 rod seal
40	C76-40PS	C76K-40PS	1 seal retaining washer 1 retaining ring

Suitable also C76 series

Example of How to Order

- Cylinder without auto switch, Bore size: 32, Stroke: 100, Double acting/Single rod and Double end type.
C76E32-100 1 pc. Cylinder
- Cylinder without auto switch, Bore size: 32, Stroke: 50, Double acting/Double rod type and Rod and head foot mounting.
C76WE32-50 1 pc. Cylinder
C76F32B 2 pcs. Foot bracket
- Cylinder with auto switch (Band mounted type, 2 pcs.), Bore size: 40, Stroke: 100, Double acting/Single rod, Front nose in line port type and Flange mounting.
CD76Y40-100-B 1 pc. Cylinder
C76F40A 1 pc. Flange mounting
D-C73L 2 pcs. Auto switch
BM2-040 2 pcs. For auto switch mounting band
- Cylinder with auto switch (Rail mounted type, 2 pcs.), Bore size: 40, Stroke: 50, Single acting/Spring return, Front nose type and Trunnion mounting.
CD76F40-50S-A 1 pc. Cylinder
C76T40 1 pc. Trunnion mounting
D-A73L 2 pcs. Auto switch
- Non-rotating: Cylinder without auto switch, Bore size: 32, Stroke: 100, Double acting/Single rod and Double end type.
C76KE32-100 1 pc. Cylinder

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Data

Series C76



Specifications

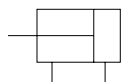
Bore size (mm)		32	40
Piston rod dia. (mm)		12	14
Piston rod thread		M10 x 1.5	M12 x 1.75
Port size		G 1/8	G 1/4
Action		Double acting, Single/Double rod	
Fluid		Air	
Proof pressure		1.5 MPa	
Max. operating pressure		1.0 MPa	
Min. operating pressure		0.05 MPa	
Ambient and fluid temperature		-20 to 80°C (Built-in magnet type: -10 to 60°C)	
Cushion		Rubber cushion, Air cushion	
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	0.65J	1.2J
	Air cushion	1.07J	2.35J
Non-rotating accuracy		±0.5°	±0.5°
Stroke tolerance (mm)		0/+1.4	

* Maximum ambient temperature of rod boots only.

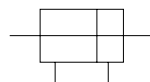
JIS Symbol

Standard: Double acting

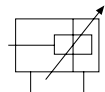
Rubber bumper
Single rod



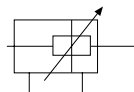
Rubber bumper
Double rod



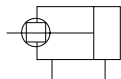
Air cushion
Single rod



Air cushion
Double rod



Non-rotating: Double acting, Single rod



Weight (Standard, Non-rotating)

(g)

Bore size (mm)		32	40	
Basic weight	Single rod	340 (375)	655 (725)	
	Double rod	420	810	
Additional weight for each 10 mm of stroke	Single rod	16.8	26.6	
	Double rod	25.6	96.5	
Mounting bracket	C75F□A	110	200	
	C75F□B	240	455	
	C75T□	15	25	
	C85C□	165	305	
Accessory	Single knuckle joint	KJ□D	70	105
	Double knuckle joint	GKM□-□	100	165
	Floating joint	JA□-□-□	70	160

Calculation: (Example) C76E32-50, C76F32A
 Basic weight 340 (ø32) g
 Additional weight 16.8/10 mm of stroke
 Cylinder stroke 50 mm
 Mounting bracket 110 g
 340 + 16.8 x 50/10 = 424 g 424 + 110 = 534 g

() : In the case of air cushion

Auto Switch Mounting, Minimum Possible Cylinder Stroke

Band Mounting Type

(mm)

Auto switch model	No. of auto switches				1 pc.
	2 pcs.		n pcs.		
	Different sides	Same side	Different sides	Same side	
D-A9□ D-M9□ D-M9□W	15	45	15 + 45($\frac{n-2}{2}$) (n = 2, 4, 6)	45 + 45(n-2)	10
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 + 50($\frac{n-2}{2}$) (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 + 45(n-2)	10

Rail Mounting Type

(mm)

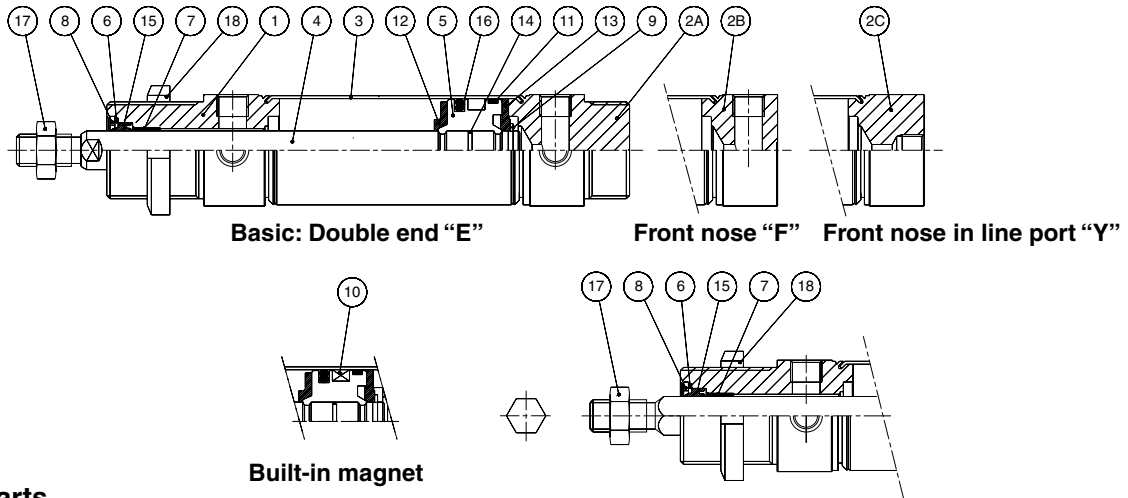
Auto switch model	No. of auto switches				1 pc.
	2 pcs.		n pcs.		
	Different sides	Same side	Different sides	Same side	
D-A7□/A80 D-A7□H/A80H D-A73C/A80C D-F7□/F7□V D-J79/J79C	—	10	—	10 + 35($\frac{n-2}{2}$) (n = 2, 4...)	5
D-A79W, D-J79W D-F7□W, D-F7BAL D-F79F, F7□WV D-F7BAVL	—	15	—	15 + 35($\frac{n-2}{2}$)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

Cylinder: Standard/Non-rotating Type Double Acting, Single/Double Rod **Series C76**

Construction

[First angle projection]

Double acting, Single rod C□76□32 to 40 Rubber cushion

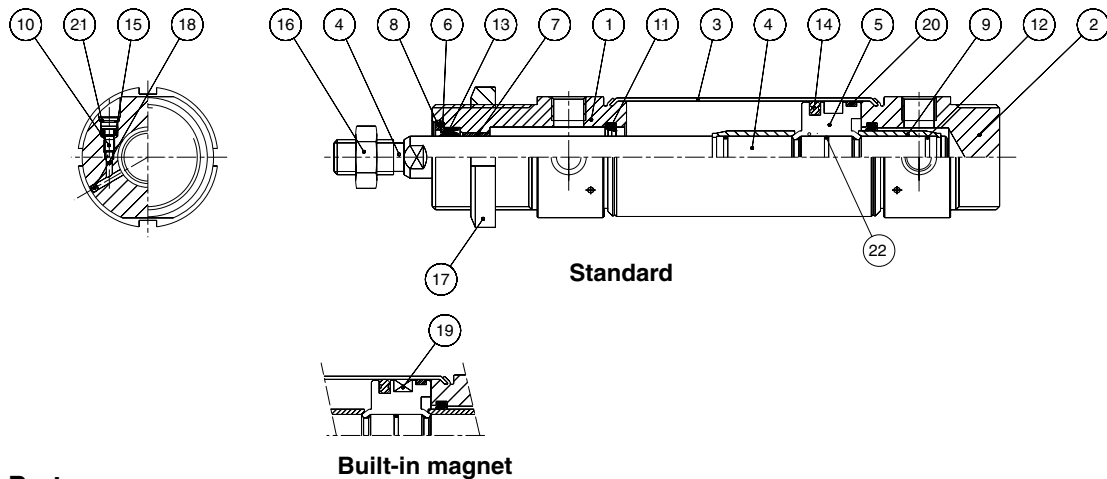


Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminum alloy	1	White anodized
②A	Head cover E	Aluminum alloy	1	White anodized
②B	Head cover F	Aluminum alloy	1	White anodized
②C	Head cover Y	Aluminum alloy	1	White anodized
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminum alloy	1	Chromate
⑥	Plain washer	Stainless steel	1	
⑦	Bush	Sintered bronze	1	
⑧	Retaining ring	Carbon steel	1	Nickel plating

No.	Description	Material	Qty.	Note
⑨	Retaining ring	Stainless steel	1	
⑩	Magnet	Magnet	1	(Switch type only)
⑪	Wear ring	Resin	1	
⑫	Bumper A	Urethane	1	
⑬	Bumper B	Urethane	1	
⑭	Piston gasket	NBR	1	
⑮	Rod seal	NBR	1	
⑯	Piston seal	NBR	1	
⑰	Rod end nut	Carbon steel	1	Nickel plating
⑱	Mounting nut	Carbon steel	1	Nickel plating

C□76□32 to 40 Air cushion



Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminum alloy	1	White anodized
②	Head cover E	Aluminum alloy	1	White anodized
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminum alloy	1	Chromate
⑥	Plain washer	Stainless steel	1	
⑦	Bush	Sintered bronze	1	
⑧	Retaining ring	Carbon steel	1	Nickel plating
⑨	Cushion ring	Brass	2	
⑩	Cushion needle	Alloy steel	2	Electroless nickel plating
⑪	Cushion seal	Urethane	2	

No.	Description	Material	Qty.	Note
⑫	Cushion ring gasket	NBR	2	
⑬	Rod seal	NBR	1	
⑭	Piston seal	NBR	1	
⑮	Cushion needle seal	NBR	1	
⑯	Rod end nut	Carbon steel	1	Nickel plating
⑰	Mounting nut	Carbon steel	1	Nickel plating
⑱	Steel ball	Stainless steel	2	
⑲	Magnet	Magnet	1	(Switch type only)
⑳	Wear ring	Resin	1	
㉑	Self locking ring	Stainless steel	2	
㉒	Piston gasket	NBR	1	

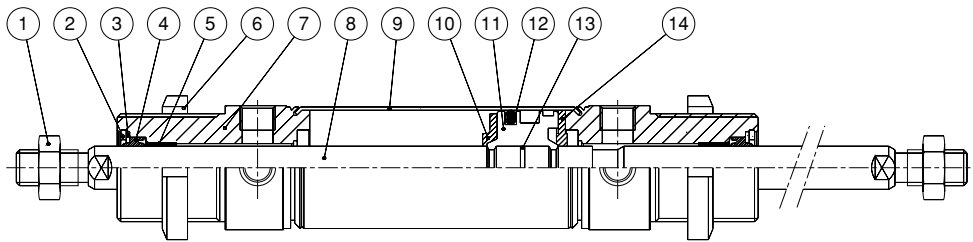
- CJ1
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Series C76

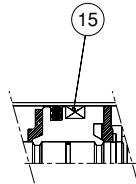
Construction

[First angle projection]

Double acting, Double Rod C□76□32 to 40 Rubber bumper



Standard



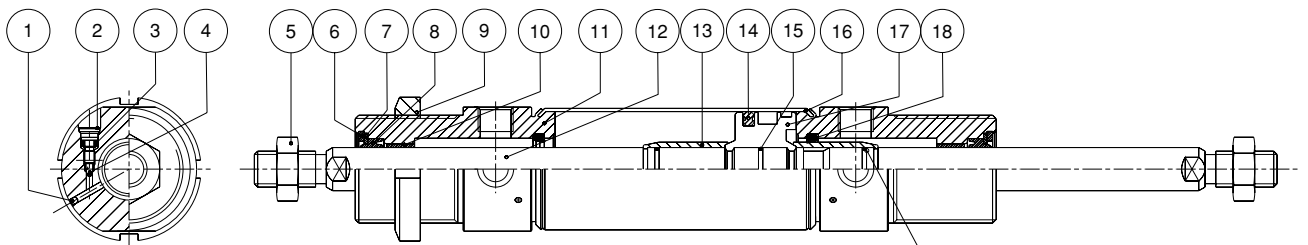
Built-in magnet

Component Parts

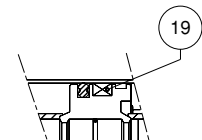
No.	Description	Material	Qty.	Note
①	Rod end nut	Carbon steel	1	Nickel plating
②	Retaining ring	Carbon steel	2	Nickel plating
③	Plain washer	Stainless steel	2	
④	Rod seal	NBR	2	
⑤	Bush	Sintered bronze	2	
⑥	Mounting nut	Carbon steel	1	Nickel plating
⑦	Rod cover	Aluminum alloy	2	White anodized
⑧	Piston rod	Carbon steel	1	Hard chrome plated

No.	Description	Material	Qty.	Note
⑨	Cylinder tube	Stainless steel	1	
⑩	Bumper A	Urethane	1	
⑪	Piston	Aluminum alloy	1	Chromate
⑫	Piston seal	NBR	1	
⑬	Piston gasket	NBR	1	
⑭	Bumper B	Urethane	1	
⑮	Magnet	Magnet	1	(Switch type only)

C□76□32 to 40 Air cushion



Standard



Built-in magnet

Component Parts

No.	Description	Material	Qty.	Note
①	Steel ball	Stainless steel	2	
②	Self locking ring	Stainless steel	2	
③	Cushion needle seal	NBR	2	
④	Cushion needle	Alloy steel	2	Electroless nickel plated
⑤	Rod end nut	Carbon steel	2	Nickel plating
⑥	Retaining ring	Carbon steel	2	Nickel plating
⑦	Plain washer	Stainless steel	2	
⑧	Rod seal	NBR	2	
⑨	Mounting nut	Carbon steel	1	Nickel plating
⑩	Bush	Sintered bronze	2	

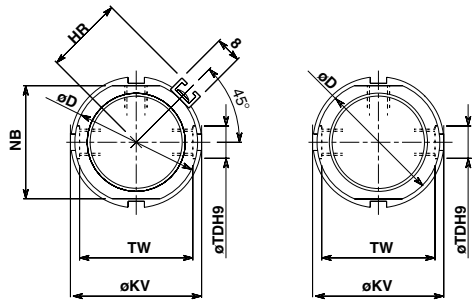
No.	Description	Material	Qty.	Note
⑪	Rod cover	Aluminum alloy	2	White anodized
⑫	Piston rod	Carbon steel	1	Hard chrome plated
⑬	Cushion ring	Brass	2	
⑭	Piston seal	NBR	1	
⑮	Piston gasket	NBR	1	
⑯	Cylinder tube	Stainless steel	1	
⑰	Piston	Aluminum alloy	1	Chromate
⑱	Cushion seal	Urethane	2	
⑲	Magnet	Magnet	1	(Switch type only)
⑳	Cushion ring gasket	NBR	2	

Cylinder: Standard/Non-rotating Type Double Acting, Single/Double Rod **Series C76**

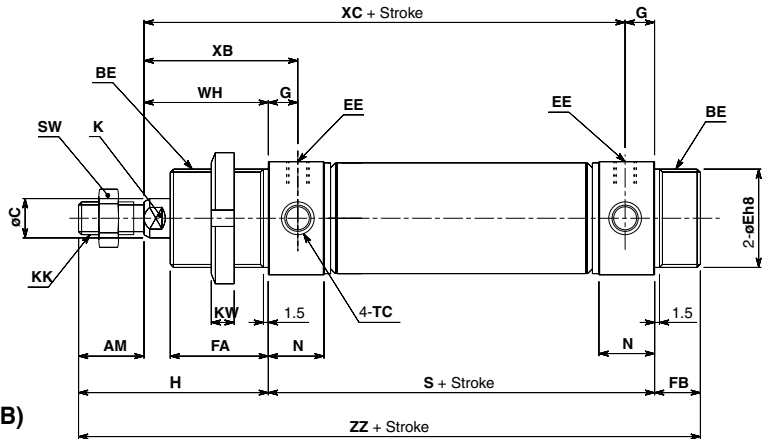
Dimensions

[First angle projection]

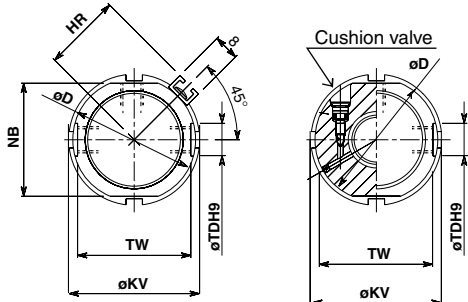
Double acting, Single rod
Rubber cushion: C□76E Bore—Stroke □
Without magnet, Built-in magnet



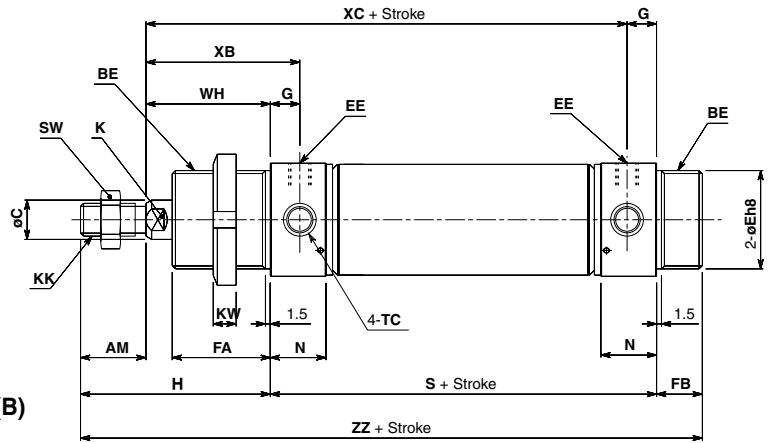
Rail mounting type (A) **Band mounting type (B)**
 or non-magnet



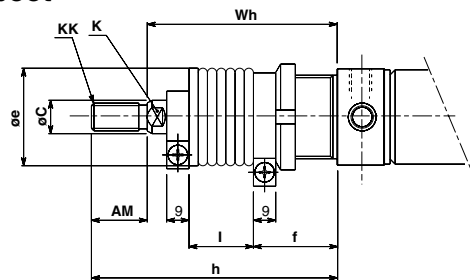
Air cushion: C□76E Bore—Stroke C—□
Without magnet, Built-in magnet



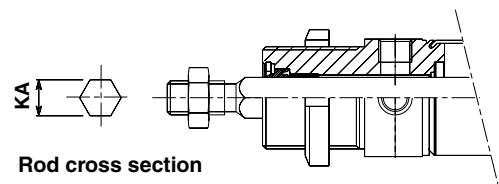
Rail mounting type (A) **Band mounting type (B)**
 or non-magnet



With rod boot



C□76KE Bore—Stroke C—□
Non-rotating, Piston rod (Rubber cushion only)



Rod cross section

Bore	AM	BE	øC	øD	øEH8	EE	FA	FB	G	H	HR	K	KA	KK	øKV	KW	N	NB	S	SW	TC	øTDH9	TW	WH	XB	XC	ZZ
32	20	M30 x 1.5	12	37.5	30 ⁰ _{-0.033}	G 1/8	30	14	9	58	23.8	10	12.2	M10 x 1.5	38	7	17(19)	34.5	68	17	M8 x 1	10 ^{+0.036} ₀	34.5	38	47	97	140
40	24	M38 x 1.5	14	46.5	38 ⁰ _{-0.039}	G 1/4	35	16	12	69	28.3	12	14.2	M12 x 1.75	50	8	22(25)	42.5	89	19	M10 x 1	12 ^{+0.043} ₀	42.5	45	57	122	174

() : In the case of air cushion

With Rod Boot

Bore	Item Stroke	AM	øC	øe	f	K	KK	h						
								1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
32		20	12	35	30	10	M10 x 1.5	77	90	102	115	140	165	190
40		24	14	46	35	12	M12 x 1.75	88	101	113	126	151	176	201

Bore	Item Stroke	l							Wh						
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
32		12.5	25	37.5	50	75	100	125	57	70	82	95	120	145	170
40		12.5	25	37.5	50	75	100	125	64	77	89	102	127	152	177

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

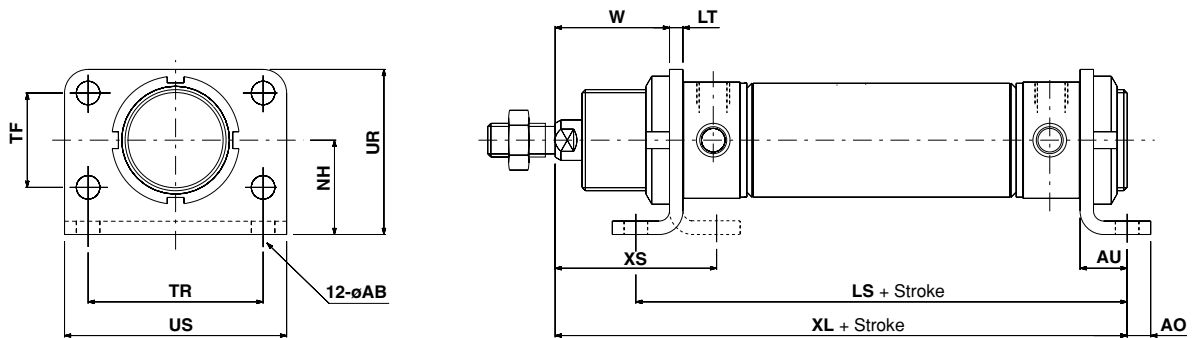
Series C76

Dimensions with Mounting Bracket

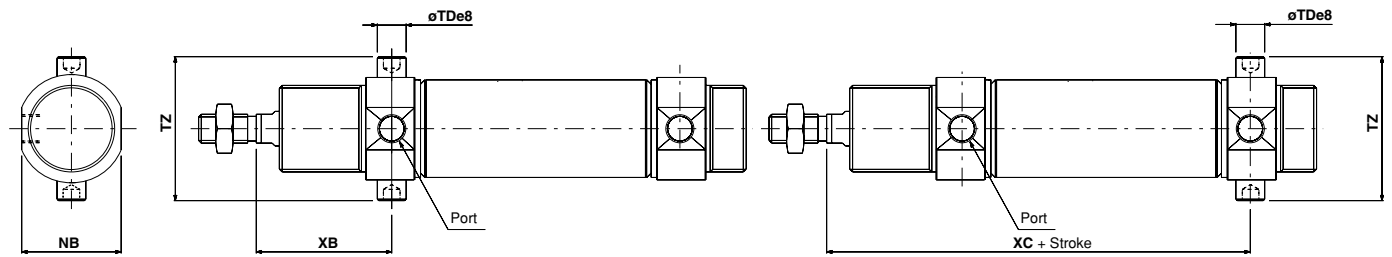
[First angle projection]

Double acting: Single rod

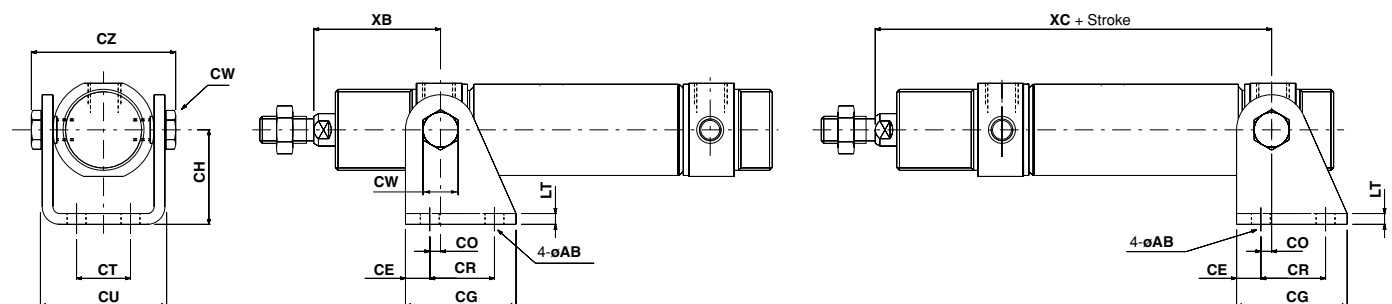
Rod foot (Flange), Rod and head foot: C76F32^A, C76F40^A



Rod trunnion, Head trunnion: C76T32, C76T40



Rod clevis, Head clevis: C76C32, C75C40



(mm)

Bore	Rod foot (Flange)											Rod/Head trunnion					Rod clevis, Head clevis														
	øAB	AO	AU	LS	LT	NH	TF	TR	UR	US	W	XL	XS	NB	øTDe8	TZ	XB	XC	øAB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB	XC
32	7	7	14	96	4	28	28	52	49	66	34	120	48	34.5	10 ^{-0.025} _{-0.047}	47.9	47	97	7	9	41	35	4	24	20	46.8	13	57.9	4	47	97
40	9	10	20	129	5	33	30	60	58	80	40	154	60	42.5	12 ^{-0.032} _{-0.059}	59.3	57	122	9	12	52	40	3	30	28	58.2	17	72.3	5	57	122

Cylinder: Standard/Non-rotating Type Double Acting, Single/Double Rod **Series C76**

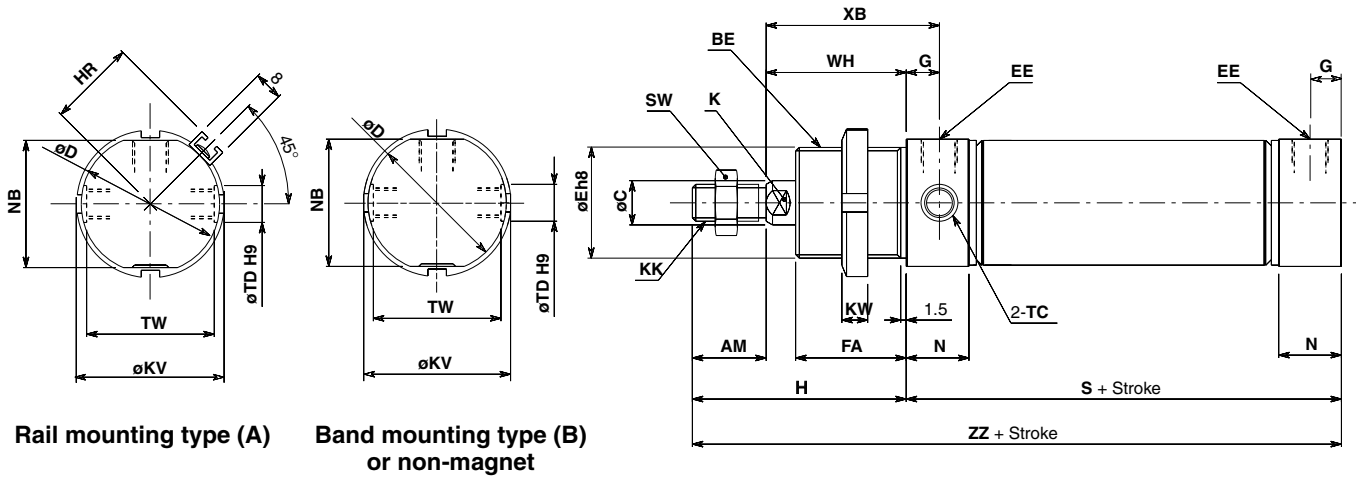
Dimensions

[First angle projection]

Double acting, Single rod

Rubber cushion: C□76F **Bore** **Stroke** □

Without magnet, Built-in magnet



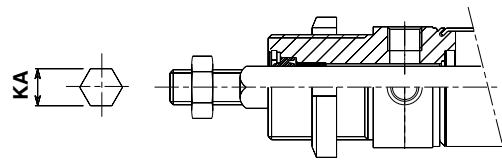
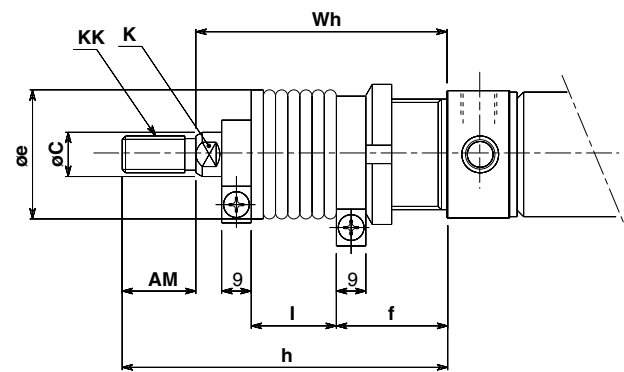
Rail mounting type (A)

Band mounting type (B)
or non-magnet

With rod boot

C□76KF

Non-rotating, Piston rod (Rubber cushion only)



Rod cross section

Bore	AM	BE	øC	øD	øEh8	EE	FA	G	H	HR	K	KA	KK	øKV	KW	N	NB	S	SW	TC	øTDH9	TW	WH	XB	ZZ
32	20	M30 x 1.5	12	37.5	30 ⁰ _{-0.033}	G 1/8	30	9	58	23.8	10	12.2	M10 x 1.5	38	7	17	34.5	68	17	M8 x 1	10 ^{+0.036} ₀	34.5	38	47	126
40	24	M38 x 1.5	14	46.5	38 ⁰ _{-0.039}	G 1/4	35	12	69	28.3	12	14.2	M12 x 1.75	50	8	22	42.5	89	19	M10 x 1	12 ^{+0.043} ₀	42.5	45	57	158

With Rod Boot

Bore	Item Stroke	AM	øC	øe	f	K	KK	h						
								1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
32		20	12	35	30	10	M10 x 1.5	77	90	102	115	140	165	190
40		24	14	46	35	12	M12 x 1.75	88	101	113	126	151	176	201

Bore	Item Stroke	I							Wh						
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
32		12.5	25	37.5	50	75	100	125	57	70	82	95	120	145	170
40		12.5	25	37.5	50	75	100	125	64	77	89	102	127	152	177

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

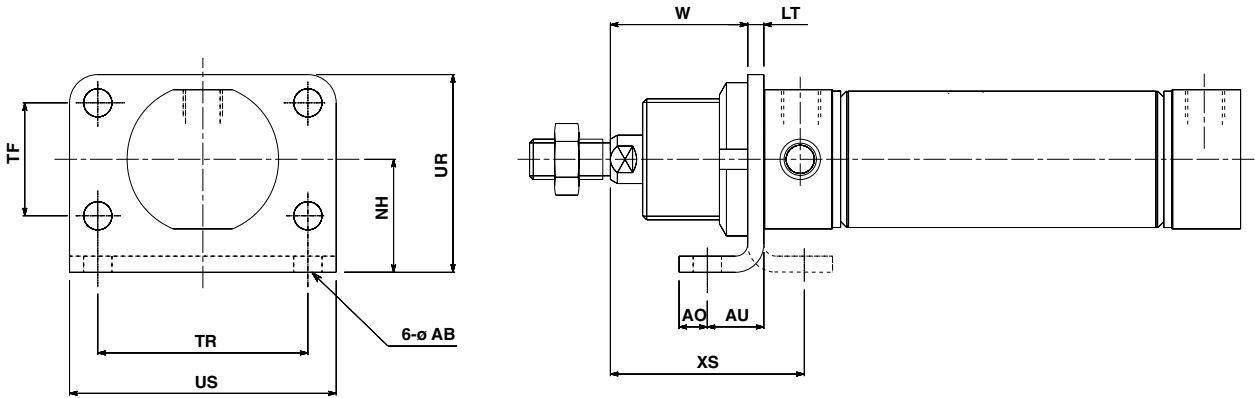
Series C76

Dimensions with Mounting Bracket

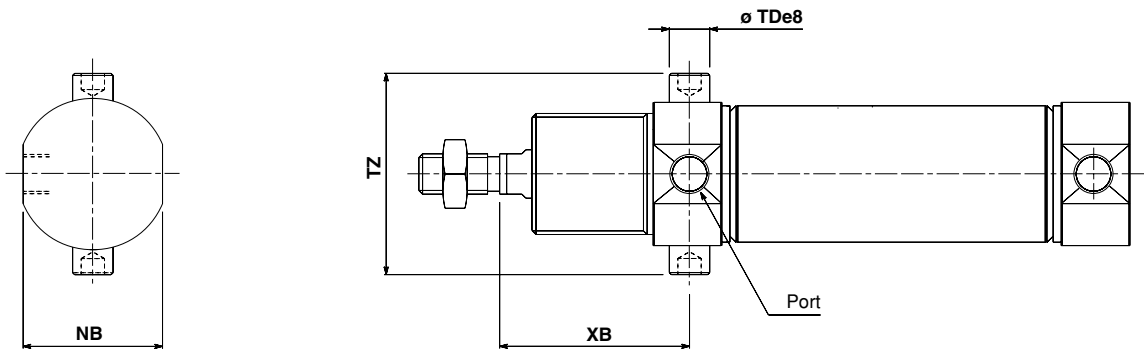
[First angle projection]

Double acting, Single rod

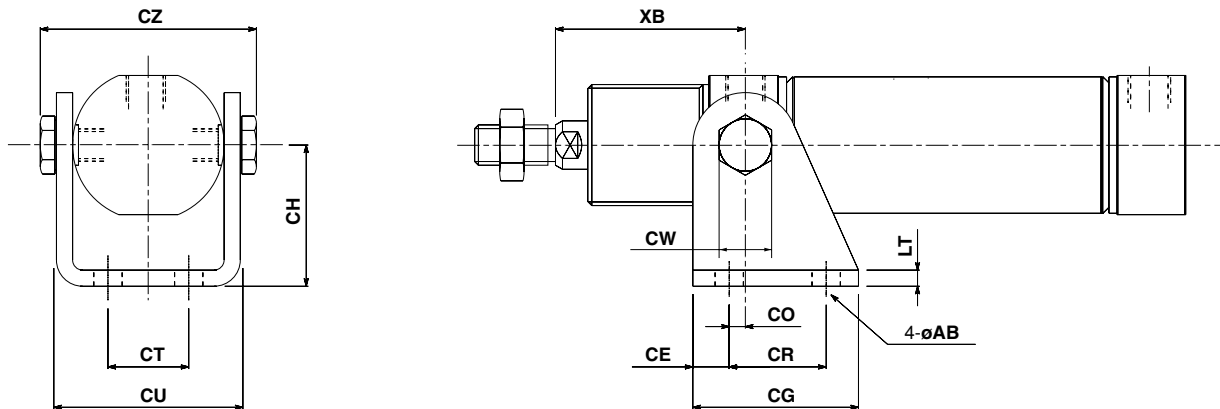
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



Bore	Rod foot (Flange)												Rod trunnion				Rod clevis										
	øAB	AO	AU	LT	NH	TF	TR	UR	US	W	XS	NB	øTDe8	TZ	XB	øAB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB
32	7	7	14	4	28	28	52	49	66	34	48	34.5	10 ^{-0.025} _{-0.047}	47.9	47	7	9	41	35	4	24	20	46.8	13	57.9	4	47
40	9	10	20	5	33	30	60	58	80	40	60	42.5	12 ^{-0.032} _{-0.059}	59.3	57	9	12	52	40	3	30	28	58.2	17	72.3	5	57

Cylinder: Standard/Non-rotating Type Double Acting, Single/Double Rod **Series C76**

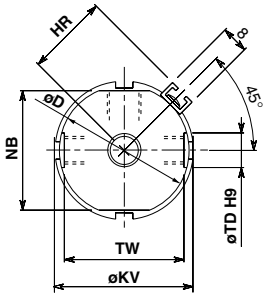
Dimensions

[First angle projection]

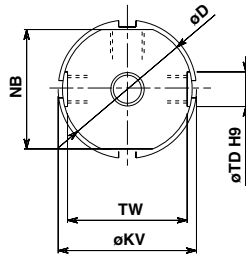
Double acting, Single rod

Rubber cushion: C□76Y **Bore** — **Stroke** □

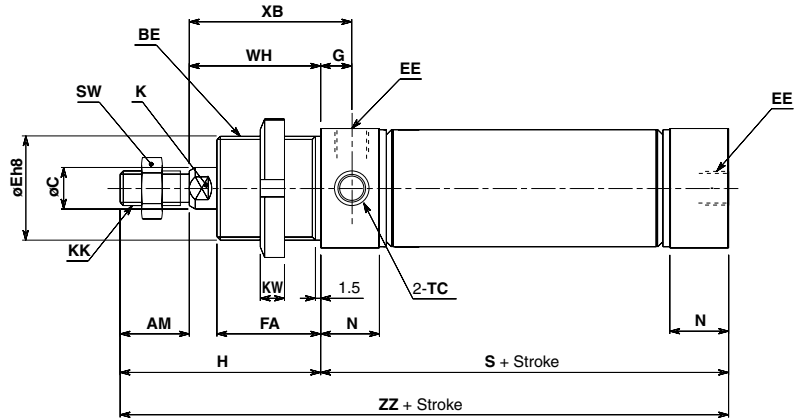
Without magnet, Built-in magnet



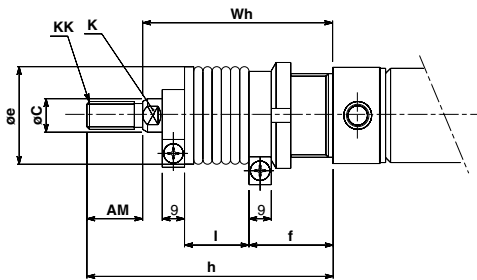
Rail mounting type (A)



Band mounting type (B)
or non-magnet

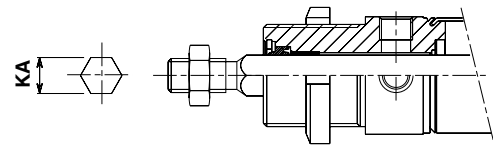


With rod boot



C□76KY

Non-rotating, Piston rod (Rubber cushion only)



Rod cross section

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

Bore	AM	BE	øC	øD	øEh8	EE	FA	G	H	HR	K	KA	KK	øKV	KW	N	NB	S	SW	TC	øTDH9	TW	WH	XB	ZZ
32	20	M30 x 1.5	12	37.5	30 ⁰ _{-0.033}	G 1/8	30	9	58	23.8	10	12.2	M10 x 1.5	38	7	17	34.5	68	17	M8 x 1	10 ^{+0.036} ₀	34.5	38	47	126
40	24	M38 x 1.5	14	46.5	38 ⁰ _{-0.039}	G 1/4	35	12	69	28.3	12	14.2	M12 x 1.75	50	8	22	42.5	89	19	M10 x 1	12 ^{+0.043} ₀	42.5	45	57	158

With Rod Boot

Bore	Item Stroke	AM	øC	øe	f	K	KK	h						
								1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
32		20	12	35	30	10	M10 x 1.5	77	90	102	115	140	165	190
40		24	14	46	35	12	M12 x 1.75	88	101	113	126	151	176	201

Bore	Item Stroke	I							Wh						
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
32		12.5	25	37.5	50	75	100	125	57	70	82	95	120	145	170
40		12.5	25	37.5	50	75	100	125	64	77	89	102	127	152	177

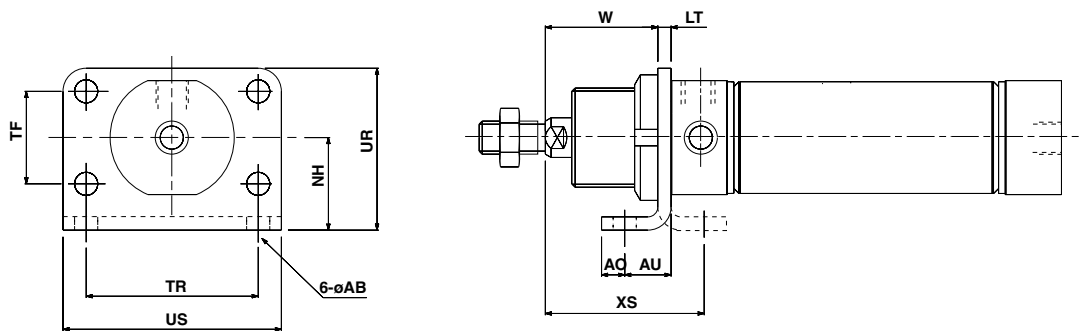
Series C76

Dimensions with Mounting Bracket

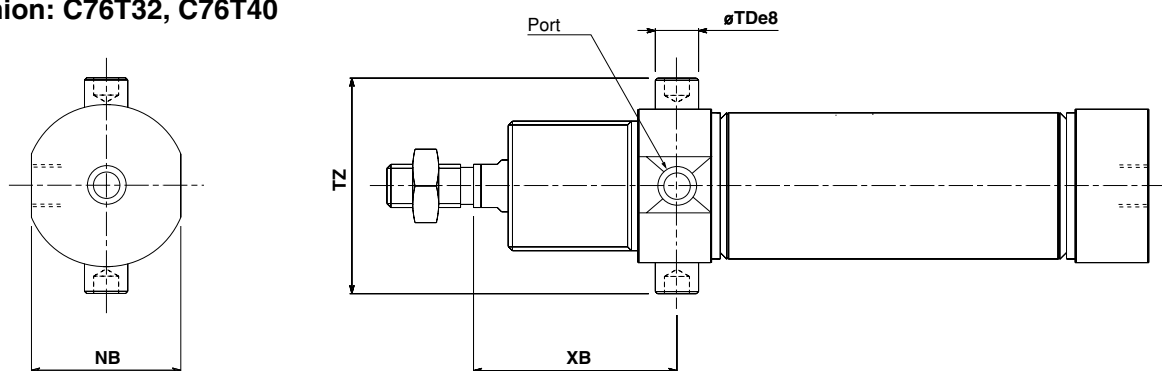
[First angle projection]

Double acting, Single rod

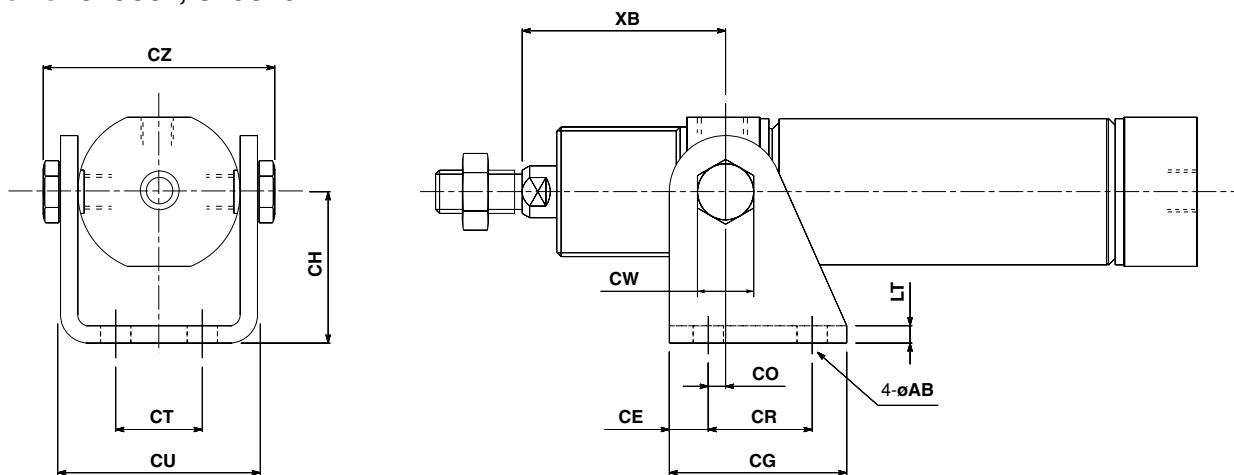
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



Bore	Rod foot (Flange)												Rod trunnion				Rod clevis										(mm)
	φAB	AO	AU	LT	NH	TF	TR	UR	US	W	XS	NB	φTDe8	TZ	XB	φAB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	
32	7	7	14	4	28	28	52	49	66	34	48	34.5	10 ^{-0.025} -0.047	47.9	47	7	9	41	35	4	24	20	46.8	13	57.9	4	47
40	9	10	20	5	33	30	60	58	80	40	60	42.5	12 ^{-0.032} -0.059	59.3	57	9	12	52	40	3	30	28	58.2	17	72.3	5	57

Cylinder: Standard/Non-rotating Type Double Acting, Single/Double Rod **Series C76**

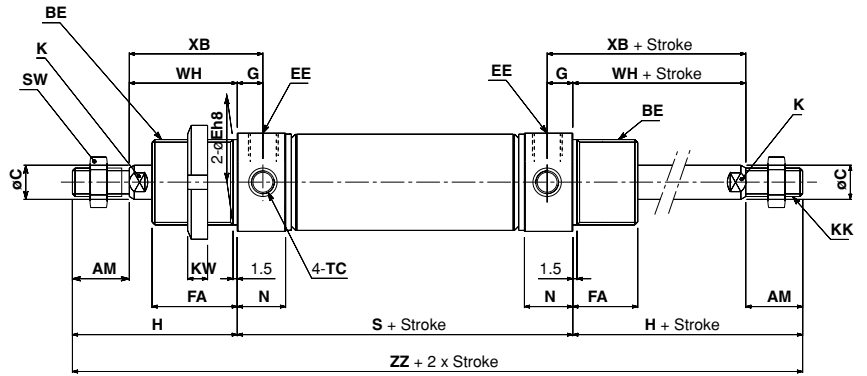
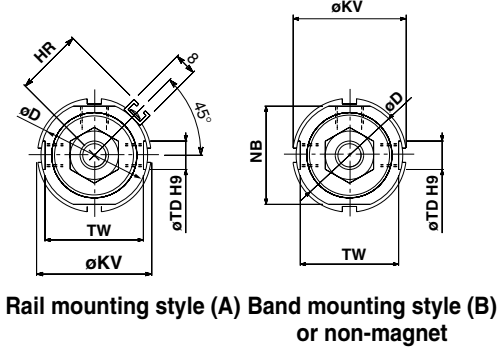
Dimensions

[First angle projection]

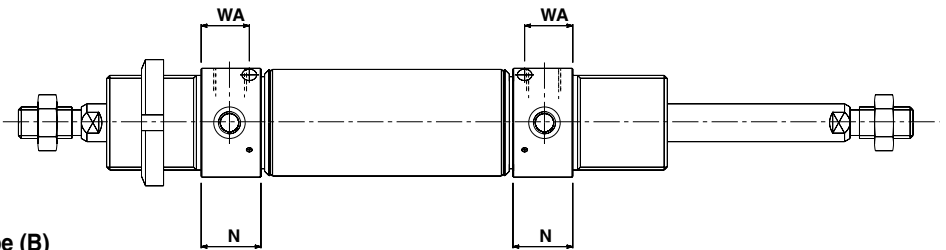
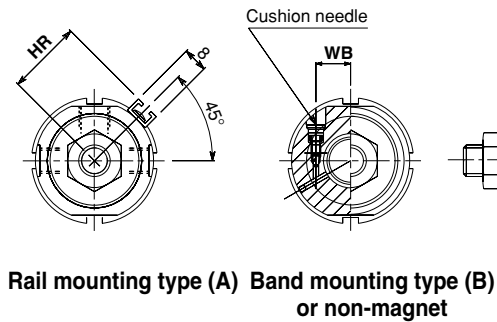
Double acting, Double rod

Rubber cushion: C□76WE Bore—Stroke □

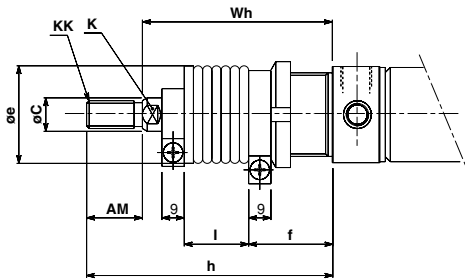
Without magnet, Built-in magnet



Air cushion: C□76WE Bore—Stroke C—□
Built-in magnet



With rod boot



(mm)

Bore	AM	BE	øC	øD	øEh8	EE	FA	G	H	HR	K	KK	øKV	WB	KW	N	NB	S	SW	TC	øTDH9	TW	WH	XB	ZZ	WA
32	20	M30 x 1.5	12	37.5	30 ⁰ _{-0.033}	G 1/8	30	9	58	23.8	10	M10 x 1.5	38	11	7	17(19)	34.5	68	17	M8 x 1	10 ^{+0.036} ₀	34.5	38	47	184	15.3
40	24	M38 x 1.5	14	46.5	38 ⁰ _{-0.039}	G 1/4	35	12	69	28.3	12	M12 x 1.75	50	13	8	22(25)	42.5	89	19	M10 x 1	12 ^{+0.043} ₀	42.5	45	57	227	20

() : In the case of air cushion

With rod boot

(mm)

Bore	Item Stroke	AM	øC	øe	f	K	KK	h						
								1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
32		20	12	35	30	10	M10 x 1.5	77	90	102	115	140	165	190
40		24	14	46	35	12	M12 x 1.75	88	101	113	126	151	176	201

Bore	Item Stroke	I							Wh						
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
32		12.5	25	37.5	50	75	100	125	57	70	82	95	120	145	170
40		12.5	25	37.5	50	75	100	125	64	77	89	102	127	152	177

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

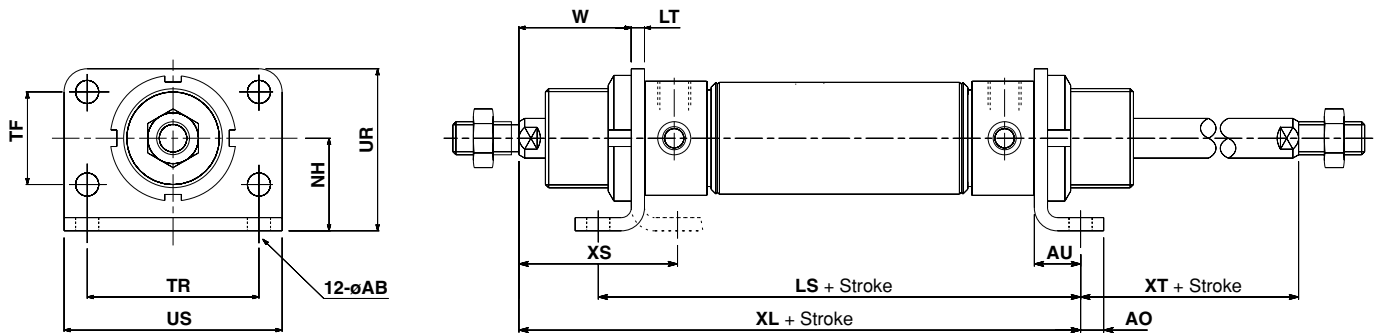
Series C76

Dimensions with Mounting Bracket

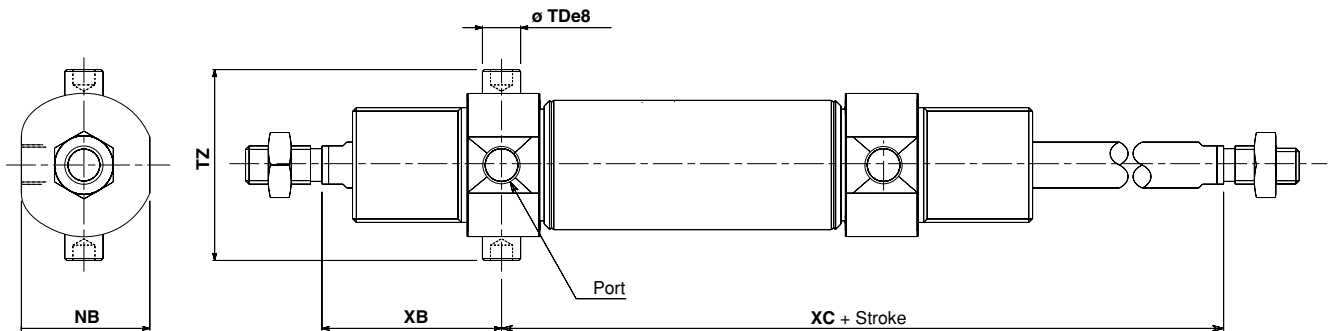
[First angle projection]

Double acting: Double rod

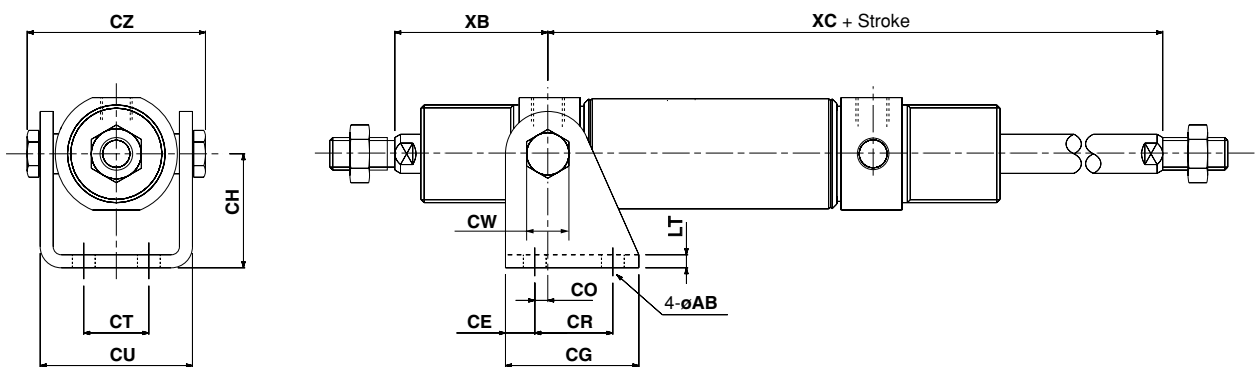
Rod foot (Flange), Rod and head foot: C76F32^A, C76F40^A



Rod trunnion, Head trunnion: C76T32, C76T40



Clevis: C76C32, C75C40



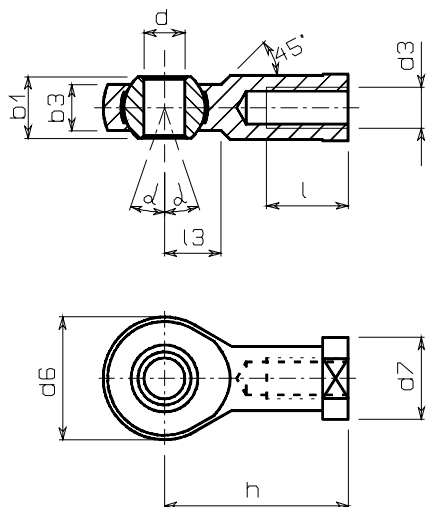
Bore	Rod foot (Flange)										Rod/Head trunnion					Clevis										(mm)						
	øAB	AO	AU	LS	LT	NH	TF	TR	UR	US	W	XL	XS	XT	NB	øTDe8	TZ	XB	XC	øAB	CE	CG	CH	CO	CR		CT	CU	CW	CZ	LT	XB
32	7	7	14	96	4	28	28	52	49	66	34	120	48	24	34.5	10 ^{-0.025} -0.047	47.9	47	97	7	9	41	35	4	24	20	46.8	13	57.9	4	47	97
40	9	10	20	129	5	33	30	60	58	80	40	154	60	25	42.5	12 ^{-0.032} -0.058	59.3	57	122	9	12	52	40	3	30	28	58.2	17	72.3	5	57	122

Cylinder: Standard/Non-rotating Type Double Acting, Single/Double Rod **Series C76**

Accessory Dimensions

[First angle projection]

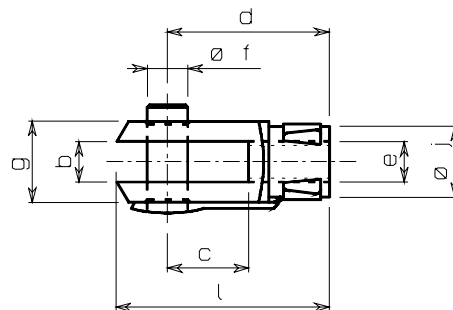
Single Knuckle Joint/DIN648



(mm)

Bore	Model	Thread d3	dH71	h	d6	b3	b1	l	d7	α°	l3
32	KJ10DA	M10 x 1.5	10	43	20	10.5	14	20	19	13	14
40	KJ12DA	M12 x 1.75	12	50	30	12	16	22	22	13	16

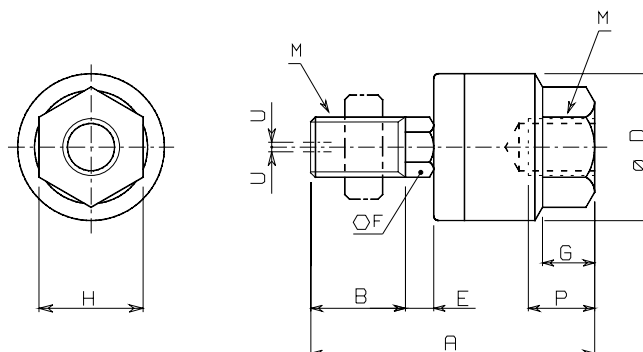
Double Knuckle Joint/DIN71751



(mm)

Bore	Model	Thread e	b	d	f	g	c	j	a
32	GKM10-20A	M10 x 1.5	10	40	10	18	20	12	20
40	GKM12-24A	M12 x 1.75	12	48	12	23	24	15	24

Floating joint/Series JA JA25/40



(mm)

Bore	Model	M		A	B	D	E	F	G	H	Maximum screwed depth P	Allowable eccentricity U	Max. operating tension and compression power (kN)
		Nominal thread dia.	Pitch										
32	JA25-10-150	10	1.5	49.5	19.5	24	5	8	8	17	9	0.5	2.5
40	JA40-12-175	12	1.75	60	20	31	6	11	11	22	13	0.75	4.4

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

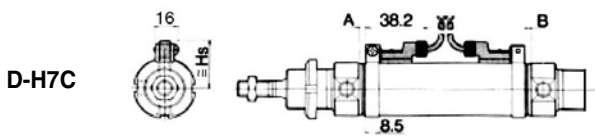
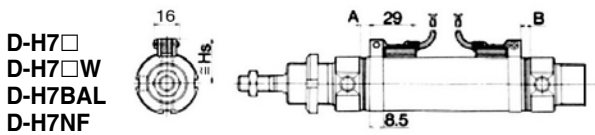
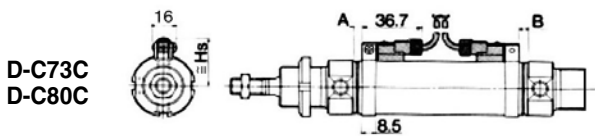
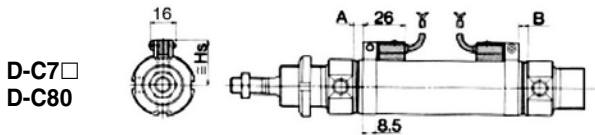
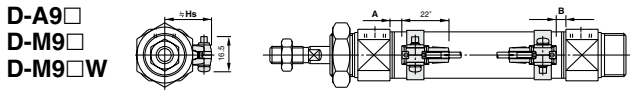
Data

Series C76

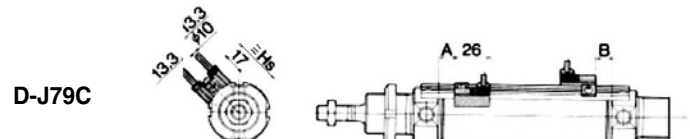
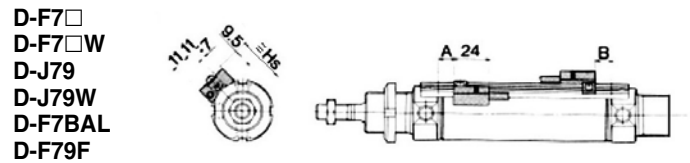
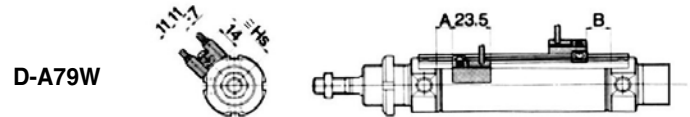
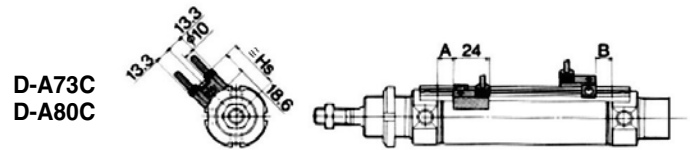
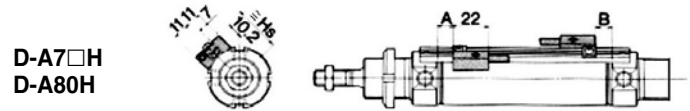
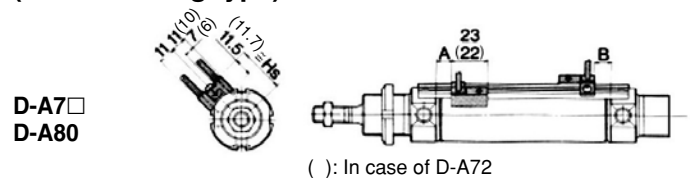
Auto Switch Mounting Position and Mounting Height

[First angle projection]

(Band mounting type)



(Rail Mounting type)



Auto Switch Mounting Position

(mm)

Bore	D-M9□, D-M9□W		D-A9□		D-C7□ D-C80 D-C73C D-C80C		D-A73 D-A80		D-A7□H/A80H/A72 D-A73C/A80C D-F7□/J79 D-F7□W/J79W D-J79C/F7BAL D-F79F		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF		D-A79W	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
32	11.5	10.5	7.5	6.5	8 (6)	7 (5)	8.5 (6.5)	7.5 (5.5)	9 (7)	8 (6)	7 (5)	6 (4)	6 (4)	5 (3)
40	16.5	15.5	12.5	11.5	13 (10)	12 (9)	13.5 (10.5)	12.5 (9.5)	14 (11)	13 (10)	12 (9)	11 (8)	11 (8)	10 (7)

Note 1) () For air cushion type

Note 2) Figures are used as a reference when mounting the auto switches for stroke end detection.

In the case of actually setting the auto switches, adjust them after confirming their operation.

Note 3) The dimensions A and B indicate the distance from the cover to the end face of the auto switch.

Auto Switch Mounting Height

(mm)

Bore	D-A9□ D-M9□ D-M9□W	D-C7□/C80 D-H7□ D-H7□W D-H7BAL D-H7NF	D-C73C D-C80C	D-A7□ D-A80	D-A7□H D-A80H	D-F7□/J79 D-F7□W D-J79W D-F7BAL D-F79F	D-A73C D-A80C	D-H7C	D-A79W	D-J79C
	Hs	Hs	Hs	Hs	Hs	Hs	Hs	Hs	Hs	Hs
32	28	28.5	31	30	30.5	30	36	31.5	31.5	34.5
40	32	32.5	35	34.5	35	34.5	40.5	35.5	36	39

• Aim at this number

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

Series C76

ø32, ø40

How to Order

Single acting,
Spring return/
Spring extended

C D 76 K E 32 100 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
E	Double end
F	Front nose
Y	Front nose in line port

Auto switch mounting type

A	Rail mounting
B	Band mounting

Applicable auto switches and bands are shown on pages 6-10-43 to 6-10-44. Please order auto switches and bands separately

Action

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

Bore size Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)
32	10, 25, 40, 50, 80, 100,	200
40	125, 160, 200, 250*	250

* Except Bore 32

Mounting Bracket Part No.

Mounting bracket	Bore size (mm)	
	32	40
Mounting bracket	Flange, Foot (1 pc.)	C76F32A C76F40A
	Flange, Foot (2 pcs. with mounting nut 1 pc.)	C76F32B C76F40B
	Trunnion	C76T32 C76T40
	Clevis	C76C32 C76C40
Accessory	Single knuckle joint	KJ10DA KJ12DA
	Double knuckle joint	GKM10-20A GKM12-24A
	Floating joint	JA25-10-150 JA40-12-175

Replacement Parts

Bore (mm)	Part no.		Note
	Standard	Non-rotating	
32	C76-32PS	C76K-32PS	Every set includes: 1 rod seal
40	C76-40PS	C76K-40PS	1 seal retaining washer 1 retaining ring

Suitable also C76 series

Example of How to Order

- Cylinder without auto switch, Bore size: 32, Stroke: 100, Single acting/Spring return and Double end type.
C76E32-100S 1 pc. Cylinder
- Cylinder with auto switch (Band mounted type, 2 pcs.), Bore size: 40, Stroke: 100, Single acting/Spring return, Front nose in line port type and Flange mounting.
CD76Y40-100S-B 1 pc. Cylinder
C76F40A 1 pc. Flange mounting
D-C73L 2 pcs. Auto switch
BM2-040 2 pcs. For auto switch mounting band
- Cylinder with auto switch (Rail mounted type, 2 pcs.), Bore size: 40, Stroke: 50, Single acting/Spring return, Front nose type and Trunnion mounting.
CD76F40-50S-A 1 pc. Cylinder
C76T40 1 pc. Trunnion mounting
D-A73L 2 pcs. Auto switch
- Non-rotating: Cylinder without auto switch, Bore size: 32, Stroke: 100, Single acting/Spring return and Double end type.
C76KE32-100S 1 pc. Cylinder

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data

Series C76

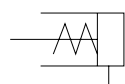


Specifications

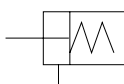
Bore size (mm)	32	40
Piston rod dia. (mm)	12	14
Piston rod thread	M10 x 1.5	M12 x 1.75
Port size	G 1/8	G 1/4
Action	Single acting, Single rod, Spring return/extend	
Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	Spring return: 0.18 MPa, Spring extended: 0.23 MPa	
Ambient and fluid temperature	-20 to 80°C (Built-in magnet type: -10 to 60°C)	
Lubrication	Not required. Use turbine oil Class 1 ISO VG32, if lubricated.	
Piston speed	50 to 750 mm/s	
Allowable kinetic energy	0.65 J	1.2 J
Non-rotating accuracy	±0.5°	±0.5°
Stroke tolerance (mm)	0/+1.4	

JIS Symbol

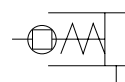
Standard
Spring return



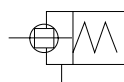
Spring extended



Non-rotating
Spring return



Spring extended



Spring Force (Standard, Non-rotating)

Spring Return

(N)

Bore size (mm)	Standard stroke	Spring force															
		10		25		50		100		150		200		250			
		Extended	Retract	Extended	Retract	Extended	Retract	Extended	Retract	Extended	Retract	Extended	Retract	Extended	Retract		
32	10, 25																
	50, 100	53.9	48.8	53.9	41.2	53.9	28.4	66.7	19.6	66.7	18.1	66.7	19.6	—	—		
	150, 200																
40	10, 25																
	50, 100	78.5	72.6	78.5	63.7	78.5	49.0	76.5	23.5	76.5	23.5	76.5	23.5	76.5	23.5		
	150, 200																
	250																

Spring Extended

(N)

Bore size (mm)	Standard stroke	Spring force															
		10		25		50		100		150		200		250			
		Extended	Retract	Extended	Retract	Extended	Retract	Extended	Retract	Extended	Retract	Extended	Retract	Extended	Retract		
32	10, 25																
	50, 100	66.7	56.3	66.7	40.7	66.7	14.7	66.7	19.6	66.7	18.1	66.7	19.6	—	—		
	150, 200																
40	10, 25																
	50, 100	76.5	65.9	76.5	50.0	76.5	23.5	76.5	23.5	76.5	23.5	76.5	23.5	76.5	23.5		
	150, 200																
	250																

Air Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended **Series C76**

Weight

Spring Return

(g)

Bore size (mm)			32	40	
Basic weight	10 stroke		365	700	
	25 stroke		390	735	
	50 stroke		430	805	
	100 stroke		685	1185	
	150 stroke		860	1450	
	200 stroke		1025	1705	
	250 stroke		—	1960	
Mounting bracket	C76F□A		110	200	
	C76F□B		240	455	
	C76T□		15	25	
	C76C□		165	305	
Accessory	Single knuckle joint		KJ□D	70	105
	Double knuckle joint		GKM□-□A	100	165
	Floating joint		JA□-□-□	70	160

Calculation: (Example) C76E32-50S, C76T32
 Base weight 430 (ø32) g
 Mounting bracket 15 g
 430 + 15 = 445 g

Spring Extended

(g)

Bore size (mm)			32	40	
Basic weight	10 stroke		430	795	
	25 stroke		455	835	
	50 stroke		495	900	
	100 stroke		640	1125	
	150 stroke		795	1360	
	200 stroke		940	1585	
	250 stroke		—	1720	
Mounting bracket	C76F□A		110	200	
	C76F□B		240	455	
	C76T□		15	25	
	C76C□		165	305	
Accessory	Single knuckle joint		KJ□DA	70	105
	Double knuckle joint		GKM□-□A	100	165
	Floating joint		JA□-□-□	70	160

Calculation: (Example) C76F40-100T, C76C40, KJ12DA
 Base weight 11250 (ø40) g
 Mounting bracket 305 g
 Single knuckle joint 105 g
 1125 + 305 + 105 = 1535 g

Auto Switch Mounting, Minimum Possible Cylinder Stroke

Band Mounting Type

(mm)

Auto switch model	No. of auto switches				1 pc.
	2 pcs.		n pcs.		
	Different sides	Same side	Different sides	Same side	
D-A9□ D-M9□ D-M9□W	15	45	$15 + 45\left(\frac{n-2}{2}\right)$ (n = 2, 4...)	$45 + 45(n-2)$	10
D-C7□ D-C80	15	50	$15 + 45\left(\frac{n-2}{2}\right)$ (n = 2, 4...)	$50 + 45(n-2)$	10
D-C73C D-C80C D-H7C	15	65	$15 + 50\left(\frac{n-2}{2}\right)$ (n = 2, 4...)	$65 + 50(n-2)$	10
D-H7□ D-H7□W D-H7BAL D-H7NF	15	60	$15 + 45\left(\frac{n-2}{2}\right)$ (n = 2, 4...)	$60 + 45(n-2)$	10

Rail Mounting Type

(mm)

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

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

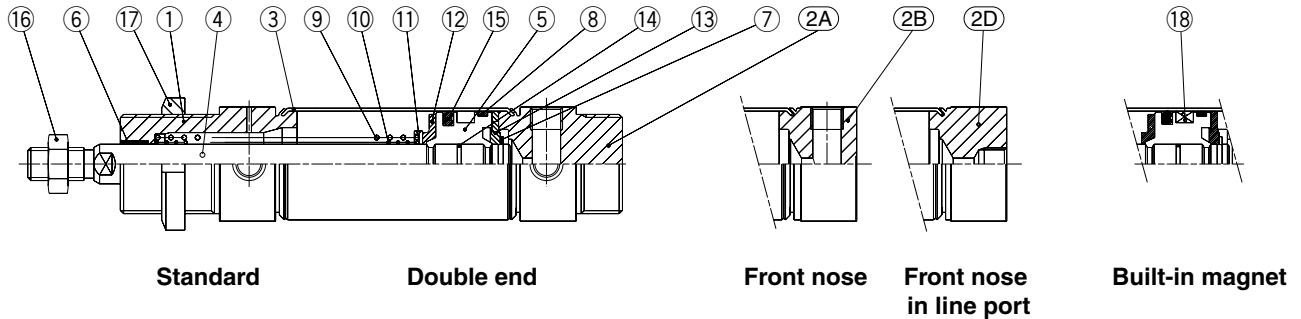
Data

Series C76

Construction

[First angle projection]

Single acting, Single rod
 C□76□32/40-50S Spring return
 50 mm stroke or less

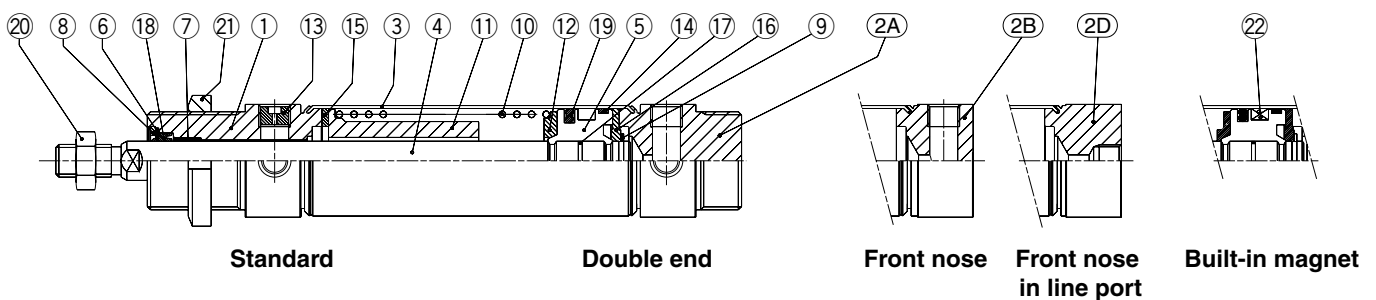


Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminum alloy	1	White anodized
②A	Head cover E	Aluminum alloy	1	White anodized
②B	Head cover F	Aluminum alloy	1	White anodized
②D	Head cover Y	Aluminum alloy	1	Clear anodized
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminum alloy	1	Chromate
⑥	Bush	Sintered bronze	1	
⑦	Retaining ring	Stainless steel	1	
⑧	Wear ring	Resin	2	

No.	Description	Material	Qty.	Note
⑨	Return spring A	Steel wire	1	Zinc chromate
⑩	Return spring B	Steel wire	1	Zinc chromate
⑪	Spring holder	Carbon steel	1	Zinc chromate
⑫	Bumper A	Urethane	1	
⑬	Bumper B	Urethane	1	
⑭	Piston gasket	NBR	1	
⑮	Piston seal	NBR	1	
⑯	Rod end nut	Carbon steel	1	Nickel plating
⑰	Mounting nut	Carbon steel	1	Nickel plating
⑱	Magnet	Magnet	1	(Switch type only)

C□76□32/40-S Spring return
 Over 50 mm stroke



Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminum alloy	1	White anodized
②A	Head cover E	Aluminum alloy	1	White anodized
②B	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	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminum alloy	1	Chromate
⑥	Plain washer	Stainless steel	1	
⑦	Bush	Sintered bronze	1	
⑧	Retaining ring	Carbon steel	1	Nickel plating
⑨	Retaining ring	Stainless steel	1	
⑩	Return spring	Steel wire	1	Zinc chromate
⑪	Spring guide	Aluminum alloy	1	Chromate
⑫	Spring holder	Aluminum alloy	1	Chromate

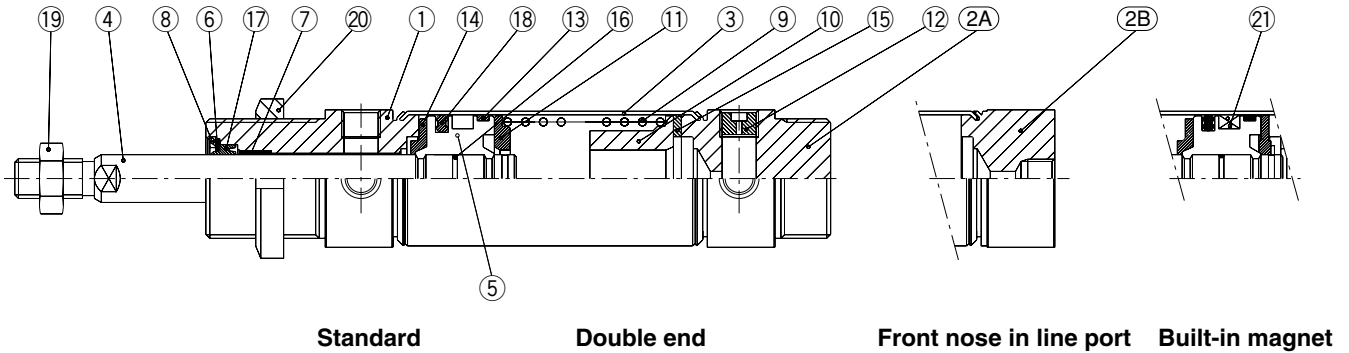
No.	Description	Material	Qty.	Note
⑬	Plug with needle	Carbon steel	1	
⑭	Wear ring	Resin	1	
⑮	Bumper A	Urethane	1	
⑯	Bumper B	Urethane	1	
⑰	Piston gasket	NBR	1	
⑱	Rod seal	NBR	1	
⑲	Piston seal	NBR	1	
⑳	Rod end nut	Carbon steel	1	Nickel plating
㉑	Mounting nut	Carbon steel	1	Nickel plating
㉒	Magnet	Magnet	1	(Switch type only)

Air Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended **Series C76**

Construction

[First angle projection]

Single acting, Single rod
C□76□32/40-T Spring extended



Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminum alloy	1	White anodized
②A	Head cover E	Aluminum alloy	1	White anodized
②B	Head cover F	Aluminum alloy	1	White anodized
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminum alloy	1	Chromate
⑥	Plain washer	Stainless steel	1	
⑦	Bush	Sintered bronze	1	
⑧	Retaining ring	Carbon steel	1	Nickel plating
⑨	Return spring	Steel wire	1	Zinc chromate
⑩	Spring guide	Aluminum alloy	1	Chromate
⑪	Spring holder	Aluminum alloy	1	Chromate
⑫	Plug with needle	Carbon steel	1	

No.	Description	Material	Qty.	Note
⑬	Wear ring	Resin	1	
⑭	Bumper A	Urethane	1	
⑮	Bumper B	Urethane	1	
⑯	Piston gasket	NBR	1	
⑰	Rod seal	NBR	1	
⑱	Piston seal	NBR	1	
⑲	Rod end nut	Carbon steel	1	Nickel plating
⑳	Mounting nut	Carbon steel	1	Nickel plating
㉑	Magnet	Magnet	1	(Switch type only)

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

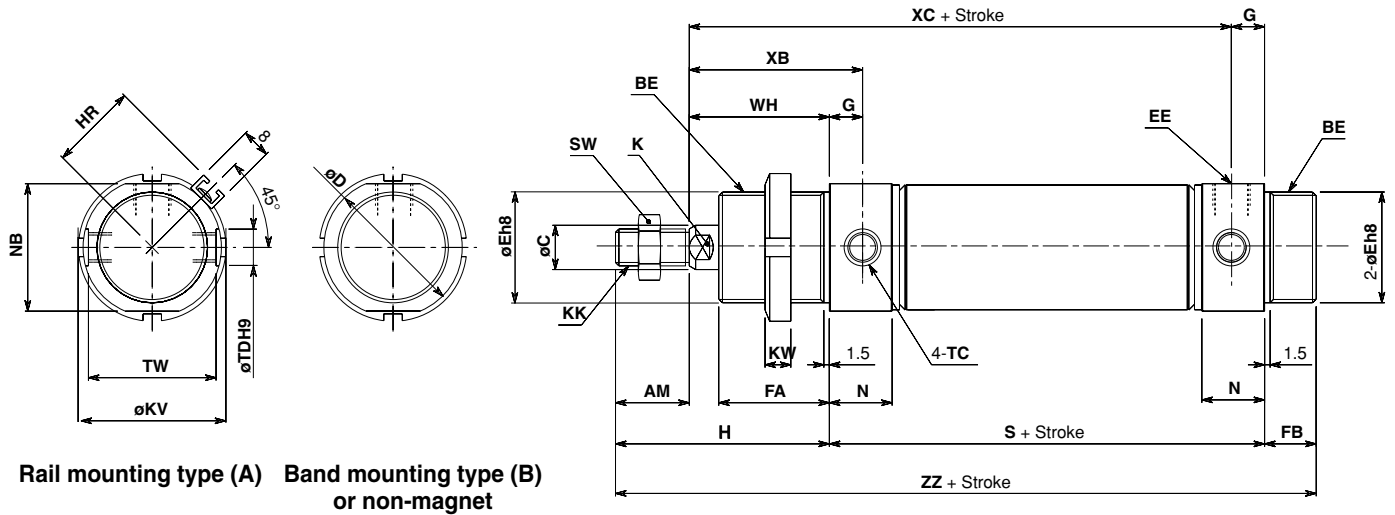
Data

Series C76

Dimensions

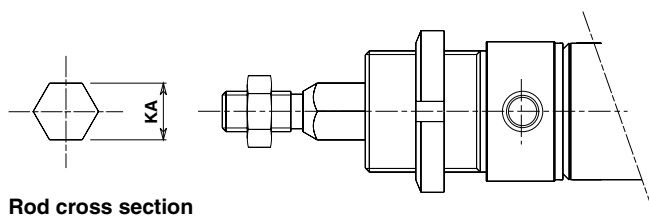
[First angle projection]

Single Acting/Spring return, Single rod
 Rubber cushion: C□76E Bore Stroke S □
 Without magnet, Built-in magnet



Rail mounting type (A) Band mounting type (B) or non-magnet

C□76KE Non-rotating, Piston rod



Rod cross section

Bore	AM	BE	øC	øD	øEh8	EE	FA	FB	G	H	HR	K	KA	KK	øKV	KW	N	NB	SW	TC	øTDH9	TW	WH	XB
32	20	M30 x 1.5	12	37.5	30 ₀ ^{-0.033}	G1/8	30	14	9	58	23.8	10	12.2	M10 x 1.5	38	7	17	34.5	17	M8 x 1	10 ₀ ^{+0.036}	34.5	38	47
40	24	M38 x 1.5	14	46.5	38 ₀ ^{-0.039}	G1/8	35	16	12	69	28.3	12	14.2	M12 x 1.75	50	8	22	42.5	19	M10 x 1	12 ₀ ^{+0.043}	42.5	45	57

Bore	Item Stroke	S					XC					ZZ				
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250
32		68 (93)	118	143	168	—	97 (122)	147	172	197	—	140 (165)	190	215	240	—
40		89 (114)	139	164	189	214	122 (147)	172	197	222	247	174 (199)	224	249	274	299

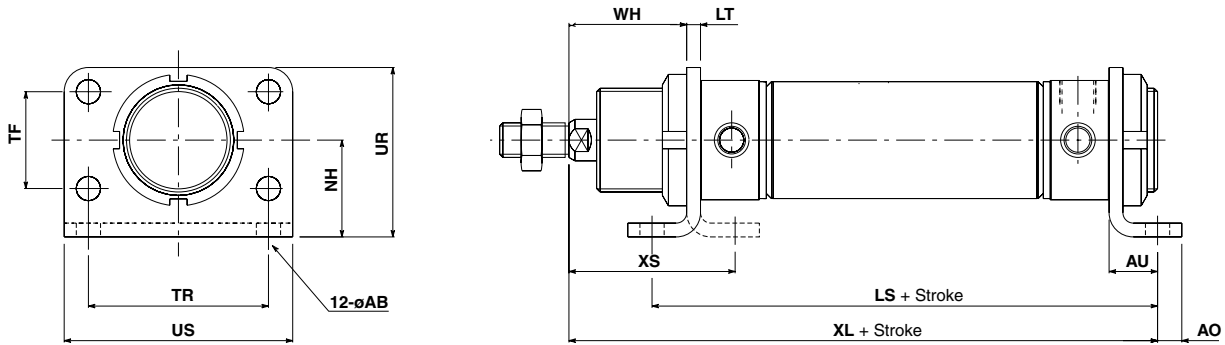
() : In the case of non-rotating

Air Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended **Series C76**

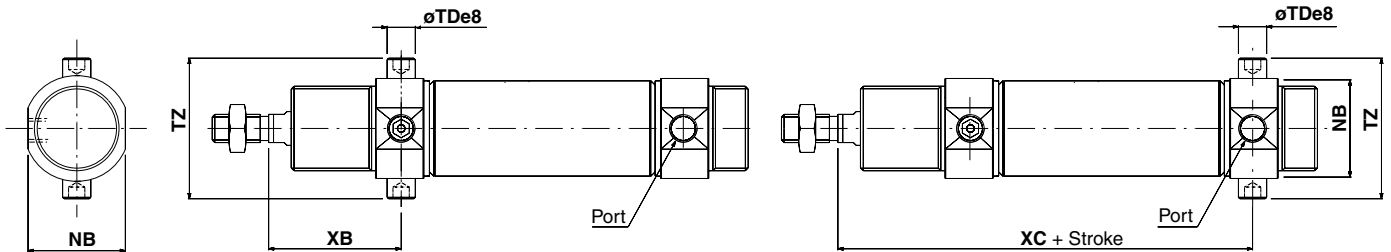
Dimensions with Mounting Bracket

[First angle projection]

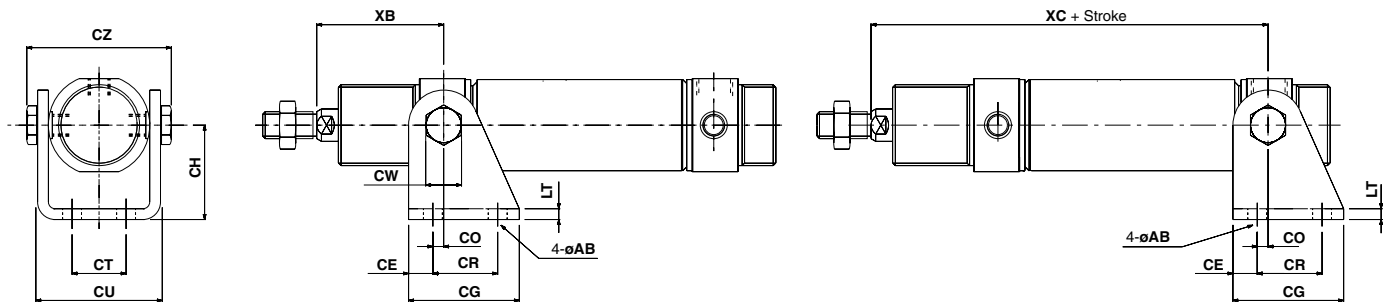
Single acting/Spring return, Single rod
Rod foot (Flange), Rod and head foot: C76F32^A, C76F40^A



Rod trunnion, Head trunnion: C76T32, C76T40



Rod clevis, Head clevis: C76C32, C75C40



Bore	Rod foot (Flange)										Rod trunnion				Rod clevis												
	øAB	AO	AU	LT	NH	TF	TR	UR	US	W	XS	NB	øTDe8	TZ	XB	øAB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB
32	7	7	14	4	28	28	52	49	66	34	48	34.5	10 ^{-0.025} -0.047	49.9	47	7	9	41	35	4	24	20	46.8	13	57.9	4	47
40	9	10	20	5	33	30	60	58	80	40	60	42.5	12 ^{-0.032} -0.058	62.3	57	9	12	52	40	3	30	28	58.2	17	72.3	5	57

Bore	Item Stroke	Rod foot (Flange), Rod and head foot										Head side trunnion					Head clevis									
		LS					XL					XC					XC									
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250					
32		96	146	171	196	—	120	170	195	220	—	97	147	172	197	—	97	147	172	197	—	97	147	172	197	—
40		129	179	204	229	254	154	204	229	254	279	122	172	197	222	247	122	172	197	222	247	122	172	197	222	247

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

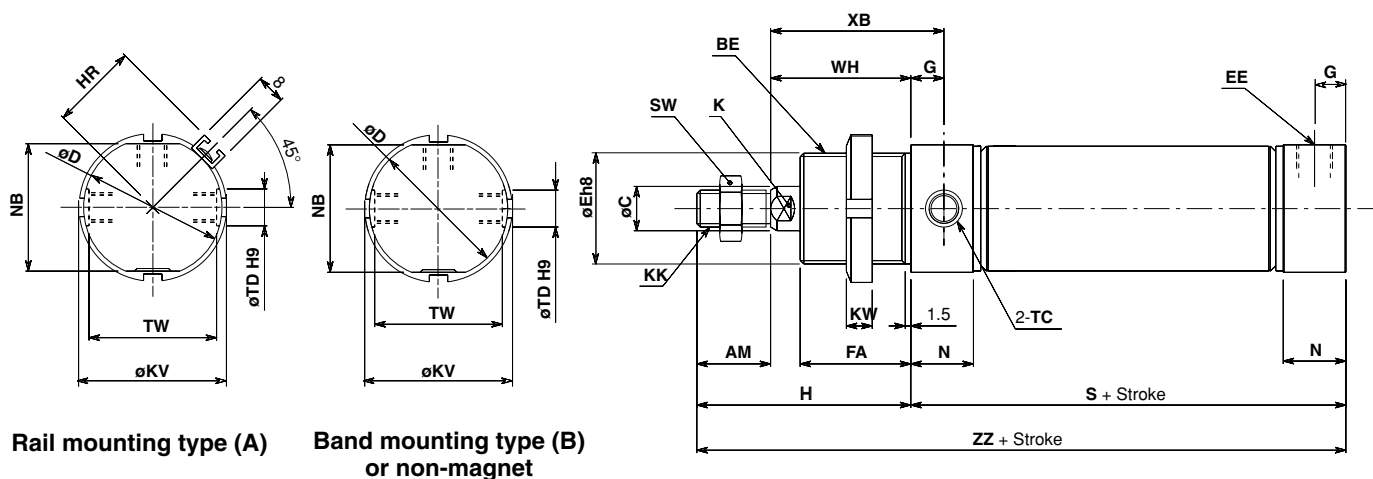
Data

Series C76

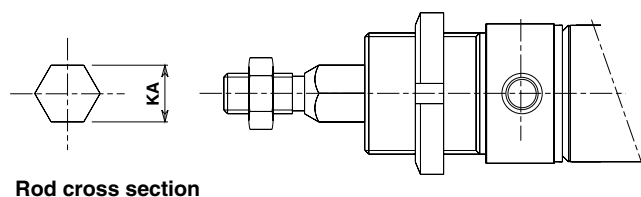
Dimensions

[First angle projection]

Single acting/Spring return, Single rod
 Rubber cushion: C□76F Bore Stroke S-□
 Without Magnet, Built-in Magnet



C□76KF
 Non-rotating, Piston rod



Bore	AM	BE	øC	øD	øEh8	EE	FA	G	H	K	KA	KK	øKV	KW	HR	N	NB	SW	TC	øTDH9	TW	WH	XB
32	20	M30 x 1.5	12	37.5	30 ⁰ _{-0.033}	G 1/8	30	9	58	10	12.2	M10 x 1.5	38	7	23.8	17	34.5	17	M8 x 1	10 ^{+0.036} ₀	34.5	38	47
40	24	M38 x 1.5	14	46.5	38 ⁰ _{-0.039}	G 1/4	35	12	69	12	14.2	M12 x 1.75	50	8	28.3	22	42.5	19	M10 x 1	12 ^{+0.043} ₀	42.5	45	57

Bore	Item Stroke	S					ZZ				
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250
32		68 (93)	118	143	168	—	126 (151)	176	201	226	—
40		89 (114)	139	164	189	214	158 (183)	208	233	258	283

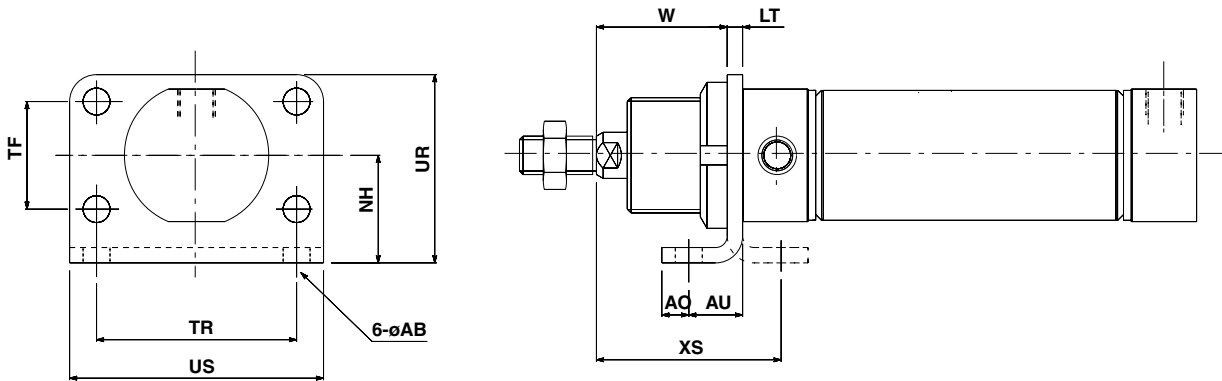
(): In the case of non-rotating

Air Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended **Series C76**

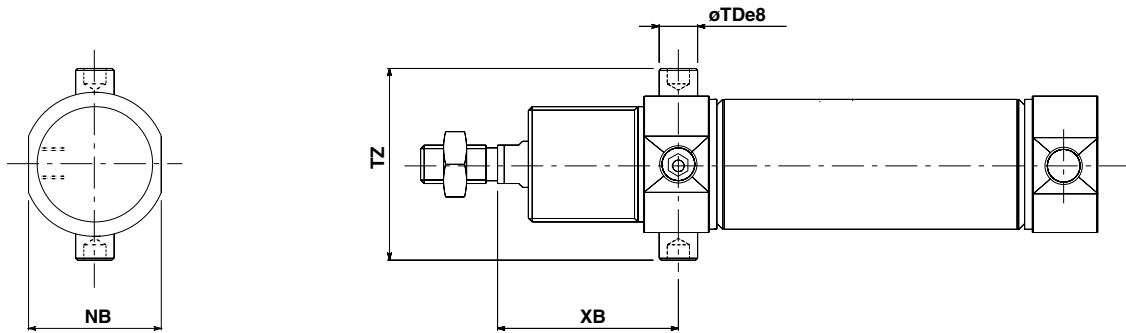
Dimensions with Mounting Bracket

[First angle projection]

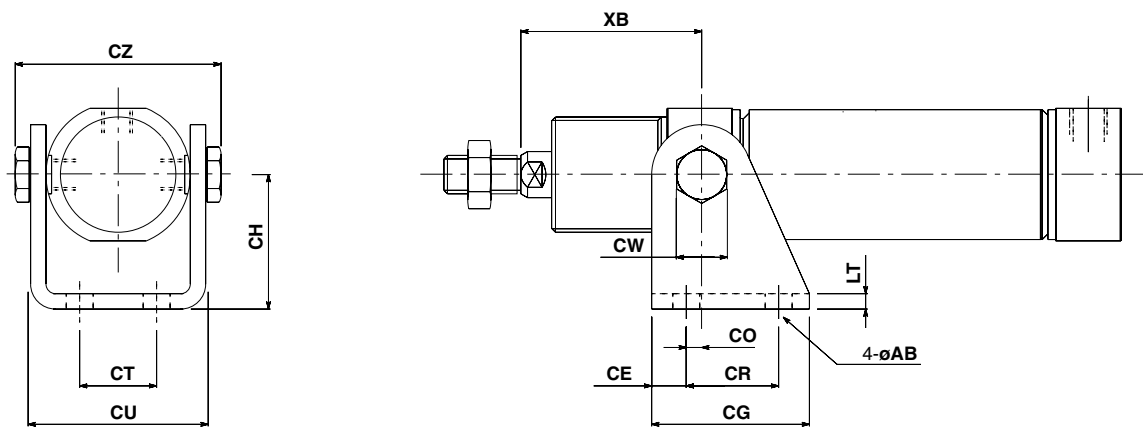
Single acting/Spring return, Single rod
Rod foot (Flange), Rod and head foot: C76F32^A, C76F40^A



Rod trunnion, Head trunnion: C76T32, C76T40



Rod clevis, Head clevis: C76C32, C75C40



Bore	Rod foot (Flange)												Rod trunnion				Rod clevis										
	øAB	AO	AU	LT	NH	TF	TR	UR	US	W	XS	NB	øTDe8	TZ	XB	øAB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB
32	7	7	14	4	28	28	52	49	66	34	48	34.5	10 ^{-0.025} _{-0.047}	49.9	47	7	9	41	35	4	24	20	46.8	13	57.9	4	47
40	9	10	20	5	33	30	60	58	80	40	60	42.5	12 ^{-0.032} _{-0.059}	62.3	57	9	12	52	40	3	30	28	58.2	17	72.3	5	57

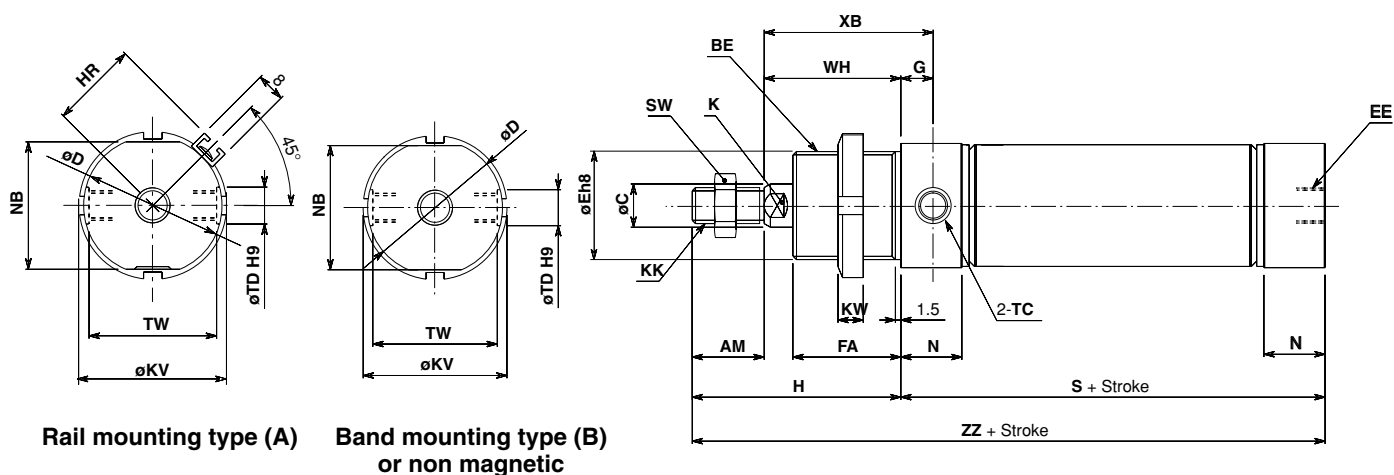
- CJ1
- CJP
- CJ2
- CM2
- CG1
- MB
- MB1
- CA2
- CS1
- C76**
- C85
- C95
- CP95
- NCM
- NCA
- D-
- X
- 20-
- Data

Series C76

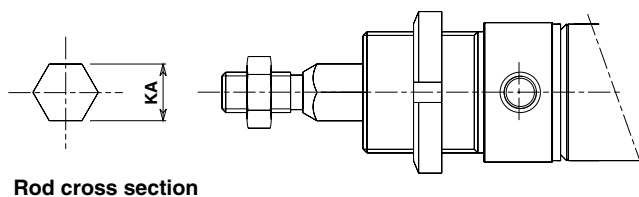
Dimensions

[First angle projection]

Single acting/Spring return, Single rod
 Rubber cushion: C□76Y Bore—Stroke S—□
 Without magnet, Built-in magnet



C□76KY
 Non-rotating, Piston rod



																					(mm)		
Bore	AM	BE	ϕC	ϕD	$\phi Eh8$	EE	FA	G	H	K	KA	KK	ϕKV	KW	HR	N	NB	SW	TC	$\phi TDH9$	TW	WH	XB
32	20	M30 x 1.5	12	37.5	$30_{-0.033}^0$	G 1/8	30	9	58	10	12.2	M10 x 1.5	38	7	23.8	17	34.5	17	M8 x 1	$10_{+0.036}^0$	34.5	38	47
40	24	M38 x 1.5	14	46.5	$38_{-0.039}^0$	G 1/4	35	12	69	12	14.2	M12 x 1.75	50	8	28.3	22	42.5	19	M10 x 1	$12_{+0.043}^0$	42.5	45	57

Bore	Item Stroke	S					ZZ				
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250
32		68 (93)	118	143	168	—	126 (151)	176	201	226	—
40		89 (114)	139	164	189	214	158 (183)	208	233	258	283

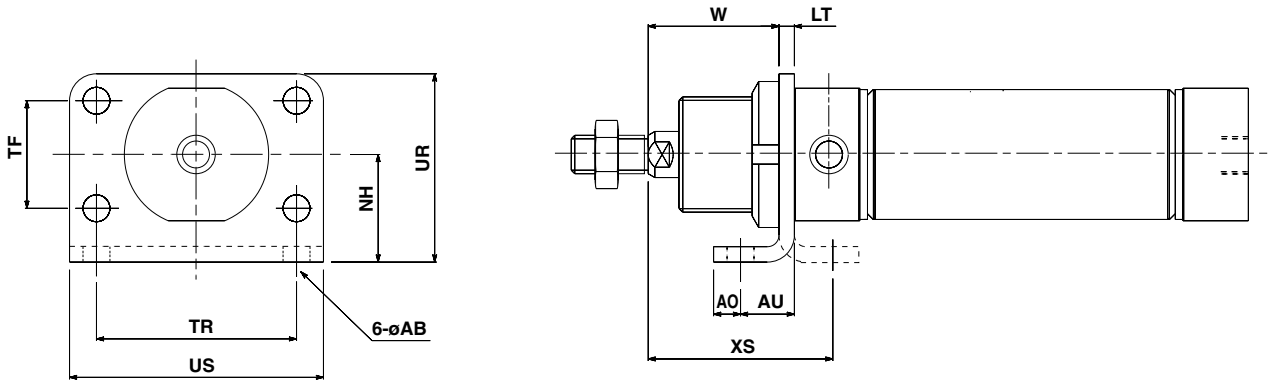
(): In the case of non-rotating

Air Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended **Series C76**

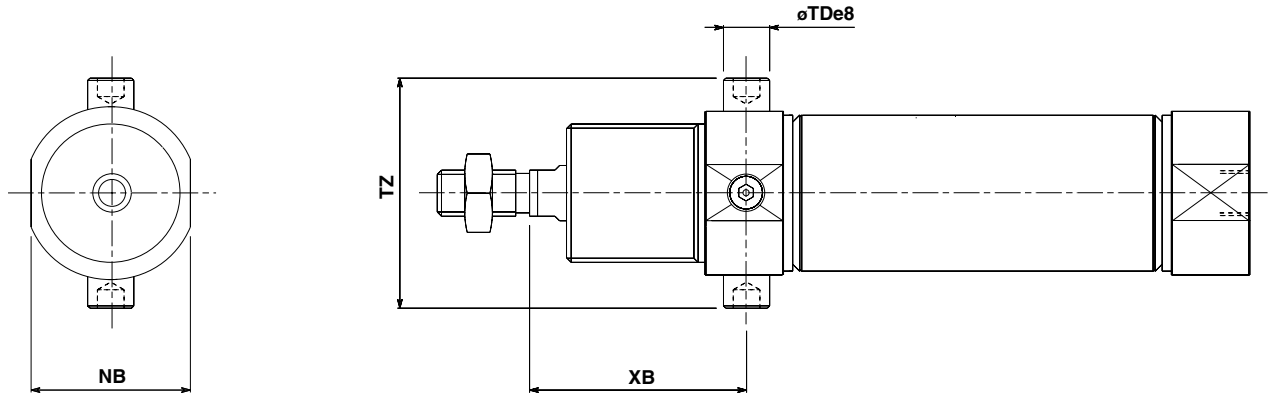
Dimensions with Mounting Bracket

[First angle projection]

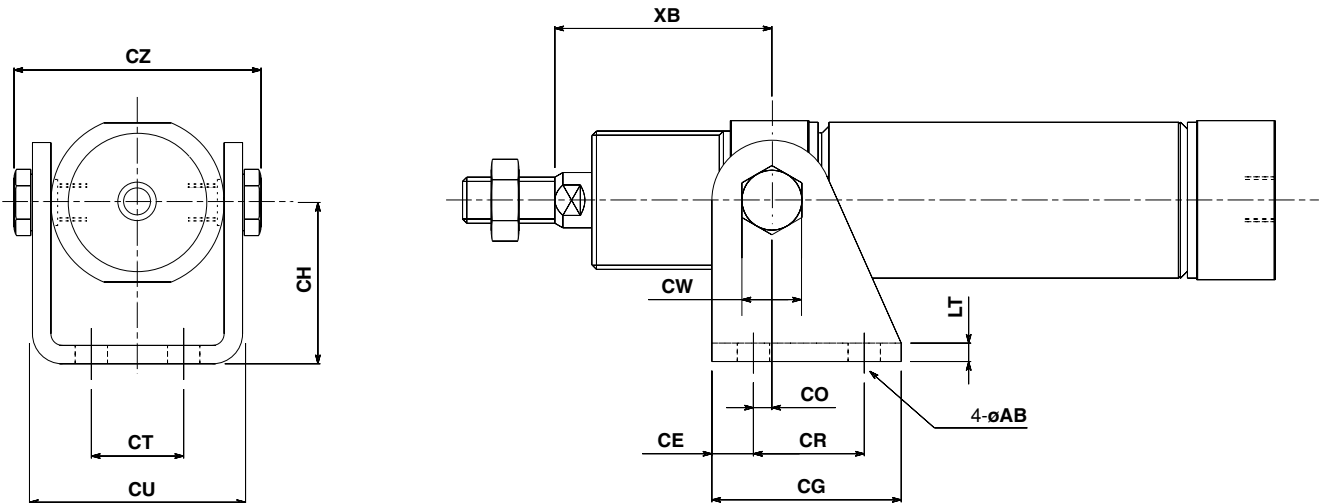
Single acting/Spring return, Single rod
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



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

Bore	Rod foot (Flange)										Rod trunnion				Rod clevis												
	ϕ AB	AO	AU	LT	NH	TF	TR	UR	US	W	XS	NB	ϕ TDes	TZ	XB	ϕ AB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB
32	7	7	14	4	28	28	52	49	66	34	48	34.5	10 ^{-0.025} _{-0.047}	49.9	47	7	9	41	35	4	24	20	46.8	13	57.9	4	47
40	9	10	20	5	33	30	60	58	80	40	60	42.5	12 ^{-0.032} _{-0.059}	62.3	57	9	12	52	40	3	30	28	58.2	17	72.3	5	57

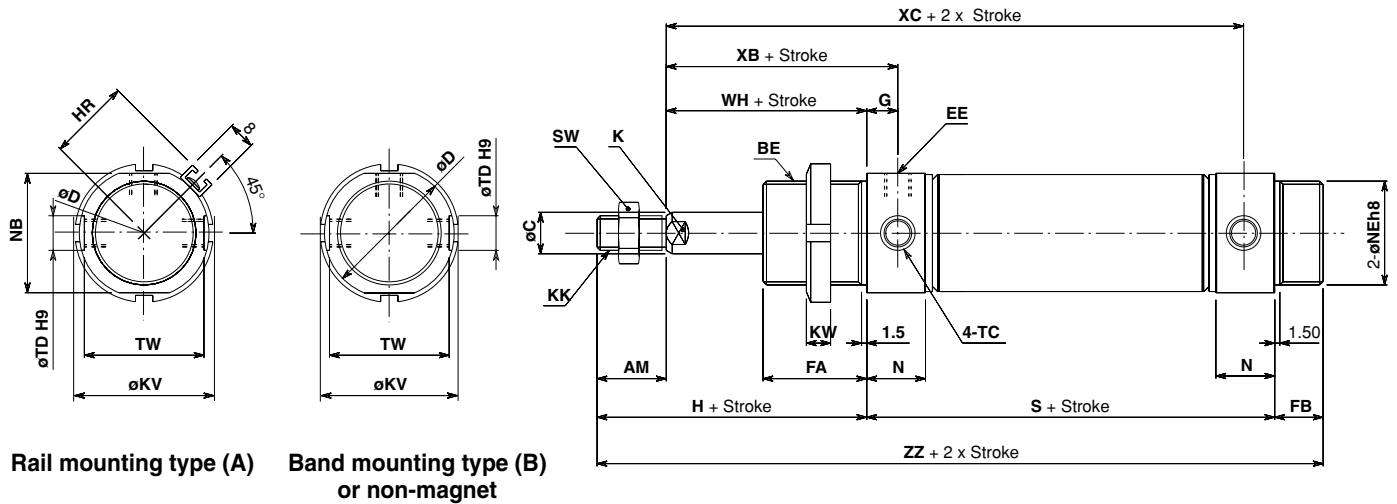
(mm)

Series C76

Dimensions

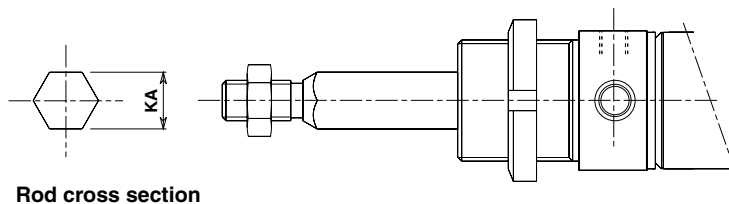
[First angle projection]

Single acting/Spring extended, Single rod
 Rubber cushion: C□76E Bore Stroke T □
 Without magnet, Built-in magnet



Rail mounting type (A) Band mounting type (B) or non-magnet

C□76KE Non-rotating, Piston rod



Rod cross section

(mm)

Bore	AM	BE	ϕC	ϕD	ϕEh8	EE	FA	FB	G	H	K	KA	KK	ϕKV	KW	HR	N	NB	SW	TC	ϕTDH9	TW	WH	XB
32	20	M30 x 1.5	12	37.5	$30_{-0.033}^0$	G 1/8	30	14	9	58	10	12.2	M10 x 1.5	38	7	23.8	17	34.5	17	M8 x 1	$10_{+0.036}^0$	34.5	38	47
40	24	M38 x 1.5	14	46.5	$38_{-0.039}^0$	G 1/4	35	16	12	69	12	14.2	M12 x 1.75	50	8	28.3	22	42.5	19	M10 x 1	$12_{+0.043}^0$	42.5	45	57

Bore	Item Stroke	S					XC					ZZ				
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250
32		93	118	143	168	—	122	147	172	197	—	165	190	215	240	—
40		114	139	164	189	214	147	172	197	222	247	199	224	249	274	299

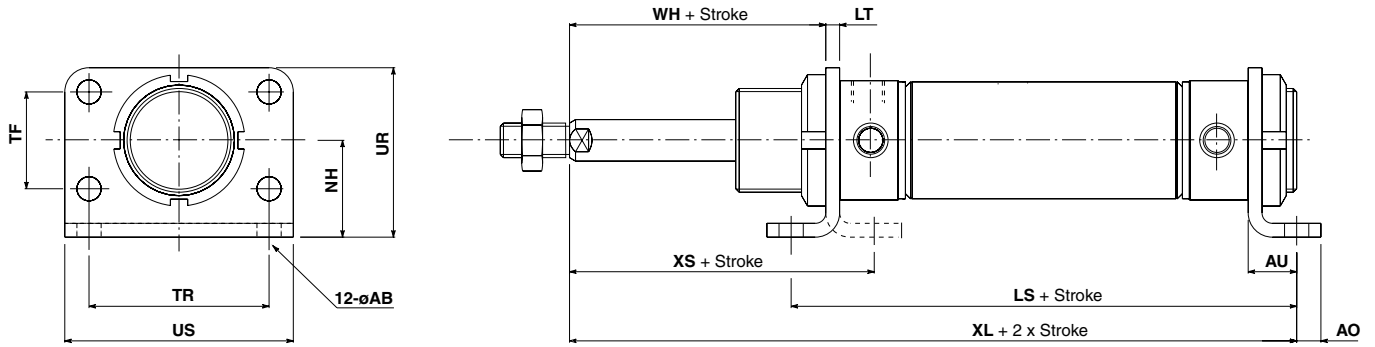
(): In the case of non-rotating

Air Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended **Series C76**

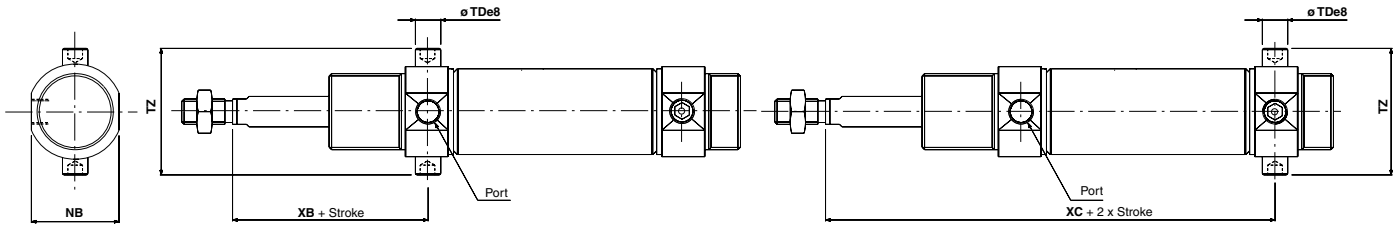
Dimensions with Mounting Bracket

[First angle projection]

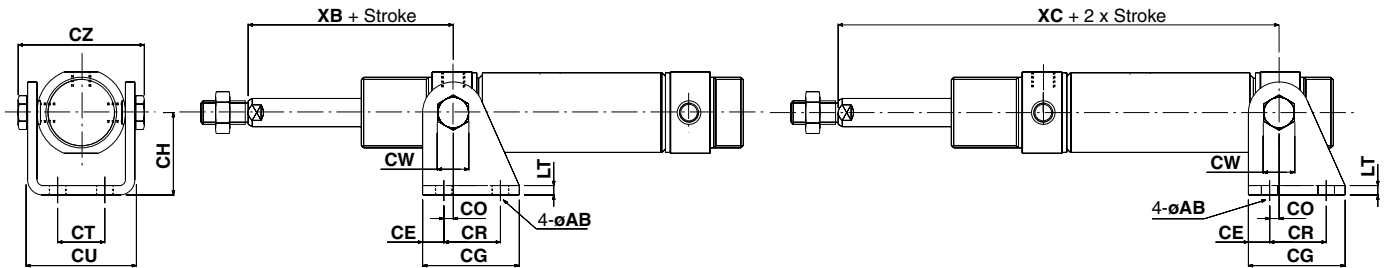
Single acting/Spring extended, Single rod
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion, Head trunnion: C76T32, C76T40



Rod clevis, Head clevis: C76C32, C76C40



(mm)

Bore	Rod foot (Flange), Rod and head foot										Rod trunnion				Rod clevis												
	ϕAB	AO	AU	LT	NH	TF	TR	UR	US	WH	XS	NB	$\phi TDe8$	TZ	XB	ϕAB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB
32	7	7	14	4	28	28	52	49	66	34	48	34.5	10 ^{-0.025} _{-0.047}	49.9	47	7	9	41	35	4	24	20	46.8	13	57.9	4	47
40	9	10	20	5	33	30	60	58	80	40	60	42.5	12 ^{-0.032} _{-0.059}	62.3	57	9	12	52	40	3	30	28	58.2	17	72.3	5	57

Bore	Item	Rod foot (Flange), Rod and head foot										Head trunnion				
		LS					XL					XC				
		Stroke	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200
32		121	146	171	196	—	145	170	195	220	—	122	147	172	197	—
40		154	179	204	229	254	179	204	229	254	279	147	172	197	222	247

Bore	Item	Head clevis				
		XC				
		Stroke	1 to 50	51 to 100	101 to 150	151 to 200
32		122	147	172	197	—
40		147	172	197	222	247

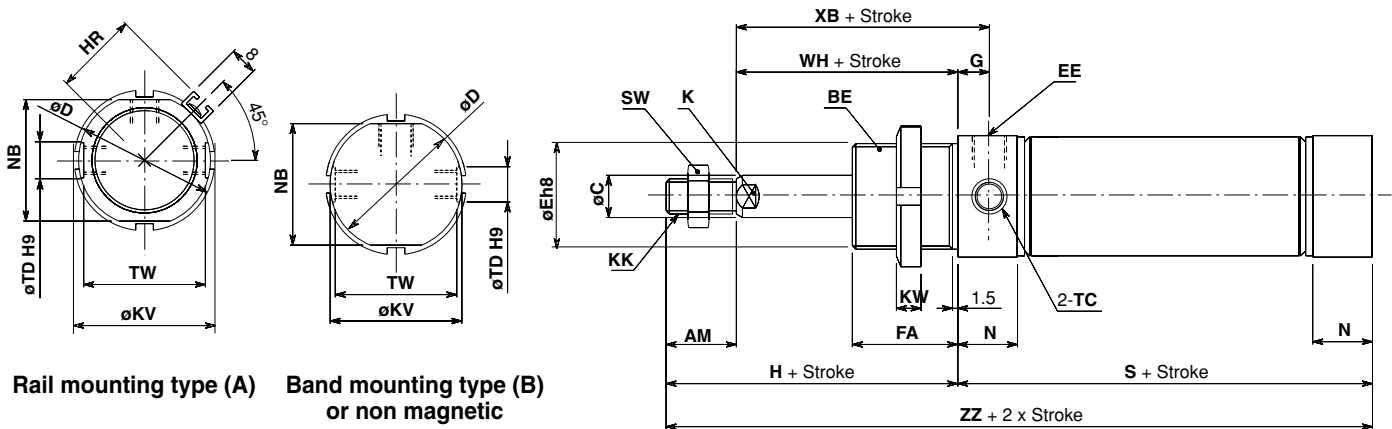
- CJ1
- CJP
- CJ2
- CM2
- CG1
- MB
- MB1
- CA2
- CS1
- C76**
- C85
- C95
- CP95
- NCM
- NCA
- D-
- X
- 20-
- Data

Series C76

Dimensions

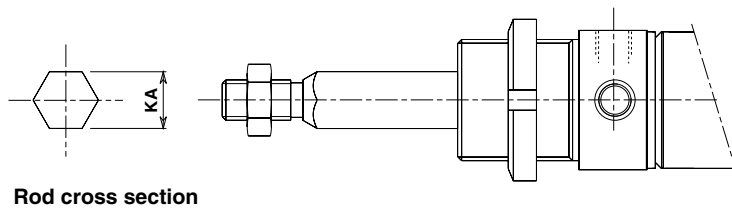
[First angle projection]

Single acting/Spring extended, Single rod
 Rubber cushion: C□76F Bore—Stroke T—□
 Without magnet, Built-in magnet



Rail mounting type (A) Band mounting type (B)
 or non magnetic

C□76KF Non-rotating, Piston rod



Rod cross section

(mm)

Bore	AM	BE	øC	øD	øEh8	EE	FA	G	H	K	KA	KK	øKV	KW	HR	N	NB	SW	TC	øTDH9	TW	WH	XB
32	20	M30 x 1.5	12	37.5	30 _{-0.033}	G 1/8	30	9	58	10	12.2	M10 x 1.5	38	7	23.8	17	34.5	17	M8 x 1	10 ^{+0.036} ₀	34.5	38	47
40	24	M38 x 1.5	14	46.5	38 _{-0.039}	G 1/4	35	12	69	12	14.2	M12 x 1.75	50	8	28.3	22	42.5	19	M10 x 1	12 ^{+0.043} ₀	42.5	45	57

Bore	Item Stroke	S					ZZ				
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250
32		93	118	143	168	—	151	176	201	226	—
40		114	139	164	189	214	183	208	233	258	283

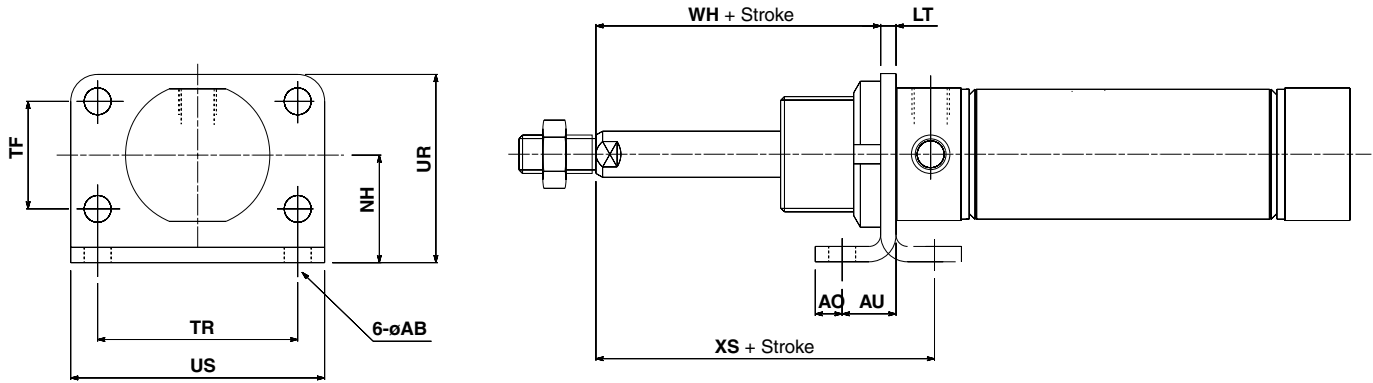
() : In the case of non-rotating

Air Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended **Series C76**

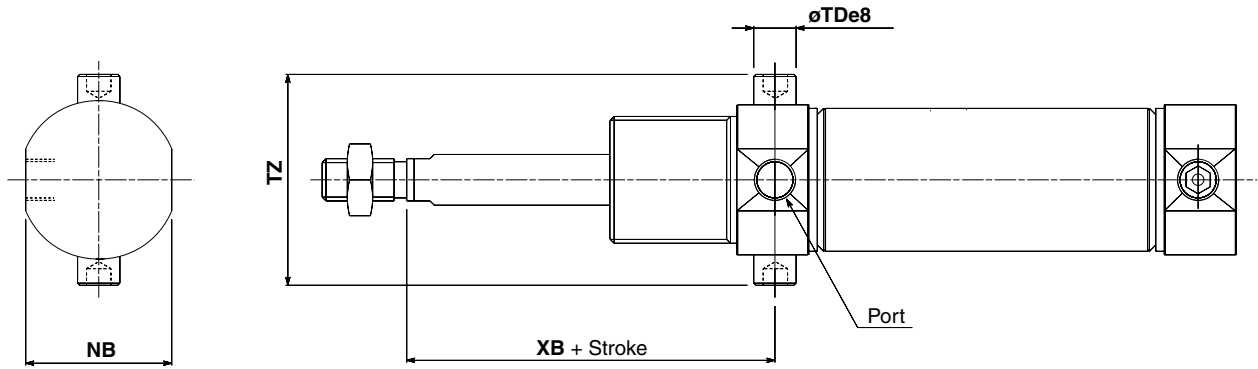
Dimensions with Mounting Bracket

[First angle projection]

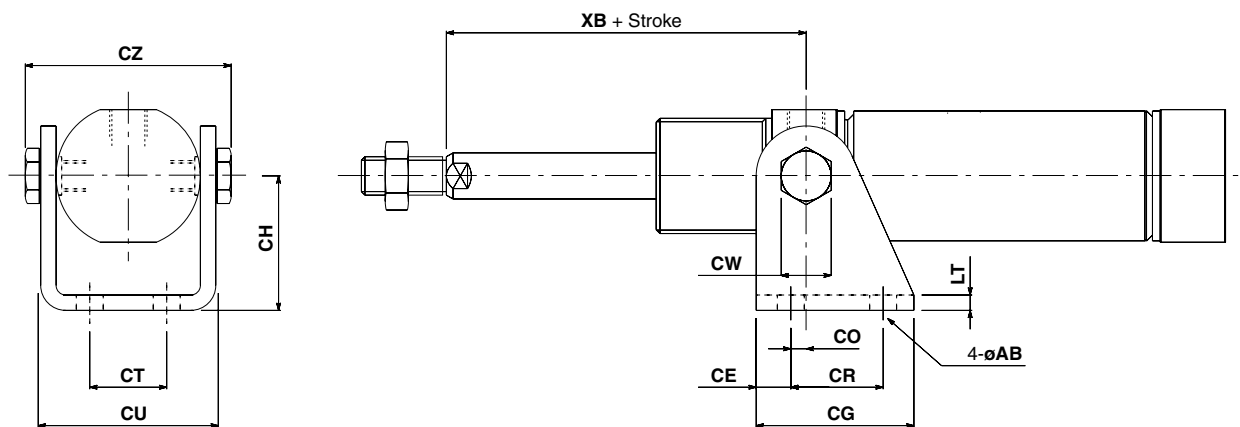
Single acting/Spring extended, Single rod
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



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

Bore	Rod foot (Flange), Rod and head foot												Rod trunnion				Rod clevis										
	øAB	AO	AU	LT	NH	TF	TR	UR	US	WH	XS	NB	øTDes	TZ	XB	øAB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB
32	7	7	14	4	28	28	52	49	66	34	48	34.5	10 ^{-0.025} _{-0.047}	49.9	47	7	9	41	35	4	24	20	46.8	13	57.9	4	47
40	9	10	20	5	33	30	60	58	80	40	60	42.5	12 ^{-0.032} _{-0.059}	62.3	57	9	12	52	40	3	30	28	58.2	17	72.3	5	57

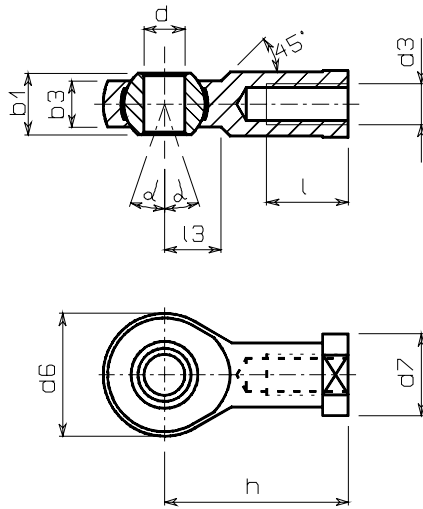
(mm)

Series C76

Accessory Dimensions

[First angle projection]

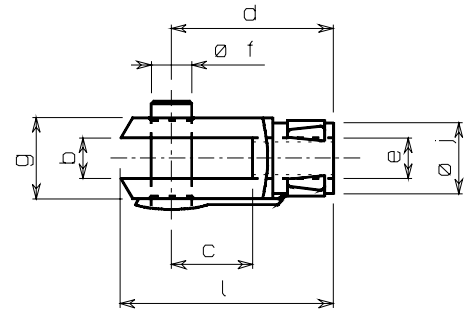
Single Knuckle Joint/DIN648-DIN 24335



(mm)

Bore	Model	Thread d3	dH71	h	d6	b3	b1	l	d7	α°	l3
32	KJ10DA	M10 x 1.5	10	43	20	10.5	14	20	19	13	14
40	KJ12DA	M12 x 1.75	12	50	30	12	16	22	22	13	16

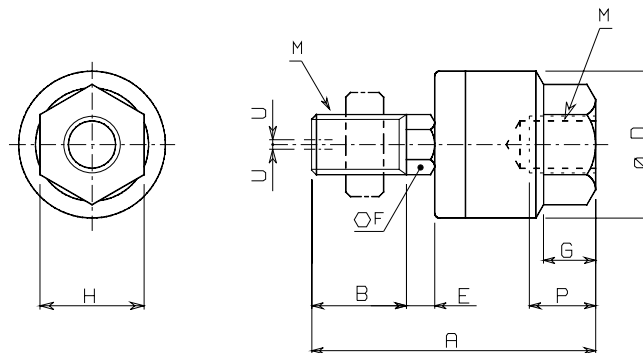
Double Knuckle Joint/ISO8140-DIN71752



(mm)

Bore	Model	Thread e	b	d	f	g	c	j	a
32	GKM10-20A	M10 x 1.5	10	40	10	18	20	12	20
40	GKM12-24A	M12 x 1.75	12	48	12	23	24	15	24

Floating joint/Series JA JA25/40



(mm)

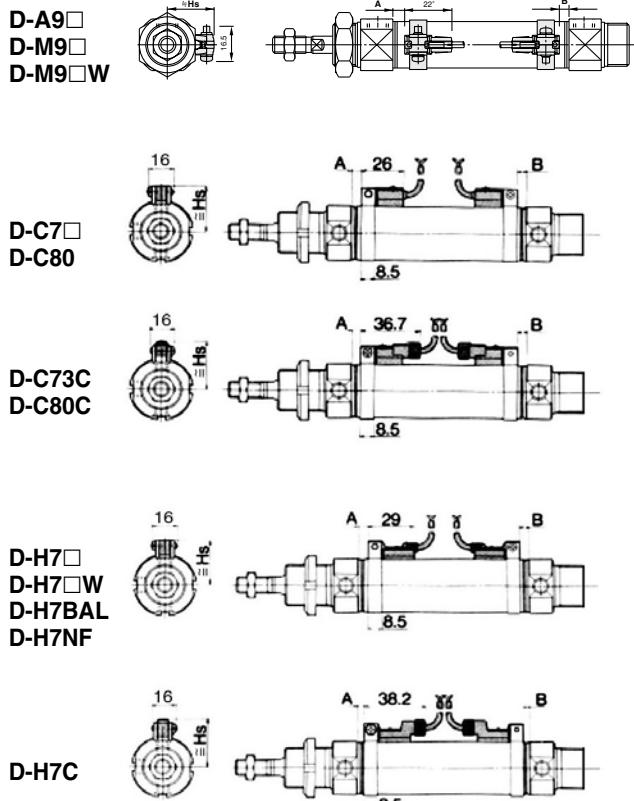
Bore	Model	M		A	B	D	E	F	G	H	Maximum screwed depth P	Allowable eccentricity U	Max. operating tension and compression power (kN)
		Nominal thread dia.	Pitch										
32	JA25-10-150	10	1.5	49.5	19.5	24	5	8	8	17	9	0.5	2.5
40	JA40-12-175	12	1.75	60	20	31	6	11	11	22	13	0.75	4.4

Air Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended **Series C76**

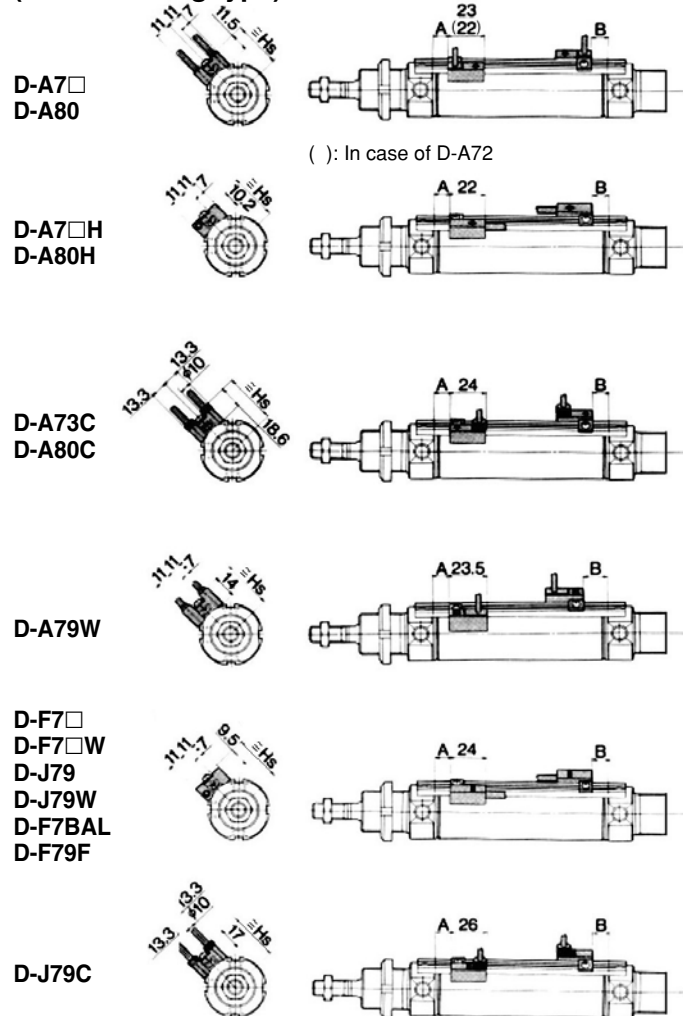
Auto Switch Mounting Position and Mounting Height

[First angle projection]

(Band mounting type)



(Rail Mounting type)



Auto Switch Mounting Position (mm)

Auto switch model	Bore	Single acting/Spring return					B
		A					
		1 to 50 st	51 to 100 st	101 to 150 st	151 to 200 st	151 to 200 st	
D-M9□ D-M9□W	32 40	11.5 (36.5) 16.5 (41.5)	61.5 66.5	86.5 91.5	111.5 116.5	136.5 141.5	10.5 15.5
D-A9□	32 40	7.5 (32.5) 12.5 (37.5)	57.5 62.5	82.5 87.5	107.5 112.5	132.5 137.5	6.5 11.5
D-C7□/C80 D-C73C/C80C	32 40	8 (33) 13 (38)	58 63	83 88	108 113	— 138	7 12
D-A73 D-A80	32 40	8.5 (33.5) 13.5 (38.5)	58.5 63.5	83.5 88.5	108.5 113.5	— 138.5	7.5 12.5
D-A72/A7□H/A80H D-A73C/A80C D-F7□/F7□W D-J79/J79W D-F7□WV D-J79C D-F7BAL, D-F79F	32 40	9 (34) 14 (39)	59 64	84 89	109 114	— 139	8 13
D-A79WL	32 40	6 (31) 11 (36)	56 61	81 86	106 111	— 136	5 10
D-H7□/H7C /H7□W D-H7BAL, D-H7NF	32 40	7 (32) 12 (37)	57 62	82 87	107 112	— 137	6 11

Note 1) () For air cushion type

Note 2) Figures are used a reference when mounting the auto switches for stroke end detection.

In the case of actually setting the auto switches, adjust them after confirming their operation.

Note 3) The dimensions A and B indicate the distance from the cover to the end face of the auto switch.

Auto Switch Mounting Height

(mm)

Bore	D-A9□ D-M9□ D-M9□W	D-C7□/C80 D-H7□ D-H7□W D-H7BAL D-H7NF	D-C73C D-C80C	D-A7□ D-A80	D-A7□H D-A80H	D-F7□/J79 D-F7□W D-J79W D-F7BAL D-F79F	D-A73C D-A80C	D-H7C	D-A79W	D-J79C
	Hs	Hs	Hs	Hs	Hs	Hs	Hs	Hs	Hs	Hs
32	28	28.5	31	30	30.5	30	36	31.5	31.5	34.5
40	32	32.5	35	34.5	35	34.5	40.5	35.5	36	39

• Aim at this number

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

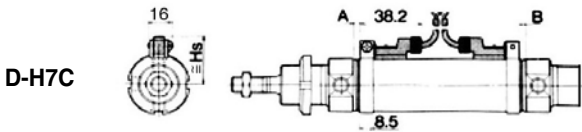
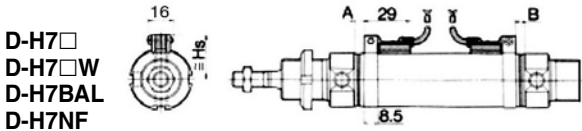
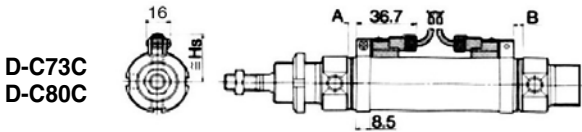
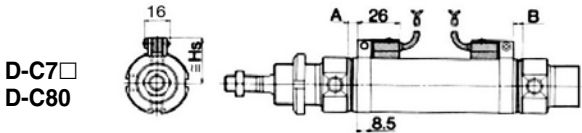
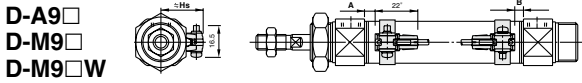
Data

Series C76

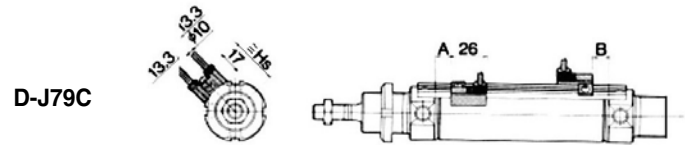
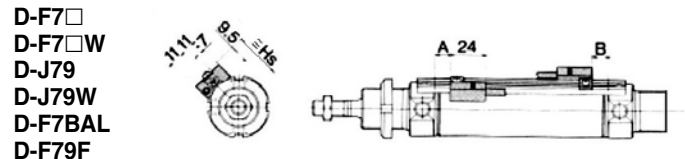
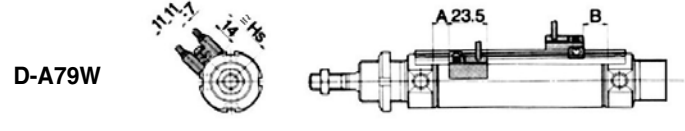
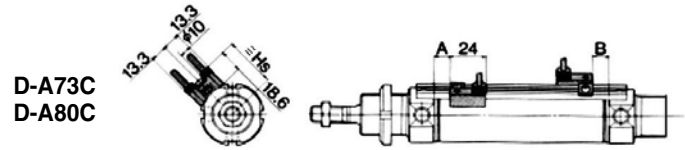
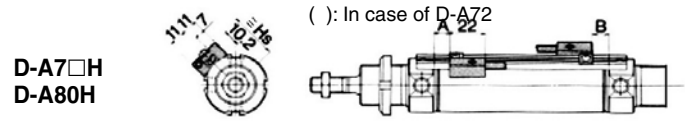
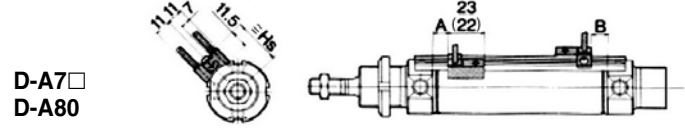
Auto Switch Mounting Position and Mounting Height

[First angle projection]

(Band mounting type)



(Rail Mounting type)



Auto Switch Mounting Position (mm)

Auto switch model	Bore	Single acting/Spring extended					
		A	B				151 to 200 st
			1 to 50 st	51 to 100 st	101 to 150 st	151 to 200 st	
D-M9□ D-M9□W	32	11.5	35.5	60.5	85.5	110.5	—
	40	16.5	40.5	65.5	90.5	115.5	140.5
D-A9□	32	7.5	31.5	56.5	81.5	106.5	—
	40	12.5	36.5	61.5	86.5	111.5	136.5
D-C7□/C80 D-C73C/C80C	32	8	32	57	82	107	—
	40	13	37	62	87	112	137
D-A73 D-A80	32	8.5	32.5	57.5	82.5	107.5	—
	40	13.5	37.5	62.5	87.5	112.5	137.5
D-A72/A7□H/A80H D-A73C/A80C D-F7□/F7□W D-J79/J79W D-F7□WV D-J79C D-F7BAL, D-F79F	32	9	33	58	83	108	—
	40	14	38	63	88	113	138
D-A79WL	32	6	30	55	80	105	—
	40	11	35	60	85	110	135
D-H7□/H7C /H7□W D-H7BAL, D-H7NF	32	7	31	56	81	106	—
	40	12	36	61	86	111	136

Note 1) () For air cushion type

Note 2) Figures are used as a reference when mounting the auto switches for stroke end detection.

In the case of actually setting the auto switches, adjust them after confirming their operation.

Note 3) The dimensions A and B indicate the distance from the cover to the end face of the auto switch.

Auto Switch Mounting Height

(mm)

Bore	D-A9□ D-M9□ D-M9□W	D-C7□/C80 D-H7□ D-H7□W D-H7BAL D-H7NF	D-C73C D-C80C	D-A7□ D-A80	D-A7□H D-A80H	D-F7□/J79 D-F7□W D-J79W D-F7BAL D-F79F	D-A73C D-A80C	D-H7C	D-A79W	D-J79C
	Hs	Hs	Hs	Hs	Hs	Hs	Hs	Hs	Hs	Hs
32	28	28.5	31	30	30.5	30	36	31.5	31.5	34.5
40	32	32.5	35	34.5	35	34.5	40.5	35.5	36	39

• Aim at this number

Air Cylinder: Direct Mount Type

Double Acting, Single Rod

Series C76R

ø32, ø40

How to Order

Double acting
Single rod

C D 76R A F 32 100 B

Built-in magnet

Nil	None
D	Built-in magnet

Type

A	Bottom side mounting
B	Front side mounting

Mounting style

Symbol	Mounting
F	Front nose
Y	Front nose in line port

Bore size

Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)
32	10, 25, 40, 50, 80, 100,	200
40	125, 160, 200	200

Auto switch mounting type

B Band mounting

Applicable auto switches and bands are shown on pages 6-10-42 to 6-10-44. Please order auto switches and bands separately.

Mounting Bracket Part No.

Bore size (mm)		32	40
Accessory	Single knuckle joint	KJ10DA	KJ12DA
	Double knuckle joint	GKM10-20A	GKM12-24A
	Floating joint	JA25-10-150	JA40-12-175

Replacement Parts

Bore (mm)	Part no.	Note
32	C76-32PS	Every set includes: 1 rod seal
40	C76-40PS	1 seal retaining washer 1 retaining ring

Example of How to Order

- Cylinder without auto switch, Bore size: 32, Stroke: 100, Double acting/Single rod, Bottom side mounting and Boss-cut type.
C76RAF32-100 1 pc. Cylinder
- Cylinder with auto switch (Band mounted type, 2 pcs.), Bore size: 40, Stroke: 100, Double acting/Single rod, Front side mounting and Front nose type.
CD76RBF40-100-B 1 pc. Cylinder
C-D73L 2 pcs. Auto switch
BM2-040 2 pcs. Switch mounting band

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data

Series C76R

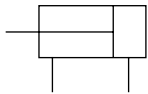


Specifications

Bore size (mm)	32	40
Piston rod dia. (mm)	12	14
Piston rod thread	M10 x 1.5	M12 x 1.75
Port size	G 1/8	G 1/4
Action	Double acting, Single Rod	
Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	0.05 MPa	
Ambient and fluid temperature	-20 to 80°C (Built-in magnet type: -10 to 60°C)	
Cushion	Rubber cushion	
Lubrication	None (Non-lube)	
Piston speed	50 to 1500 mm/s	
Allowable kinetic energy	0.65 J	1.2 J

JIS Symbol

Double acting, Single rod



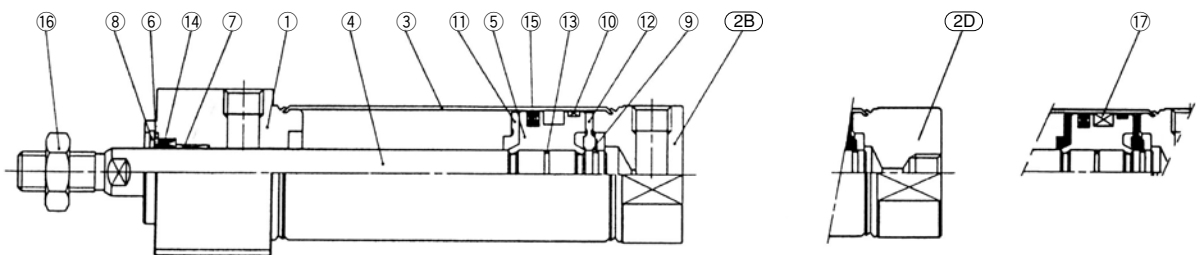
Auto Switch Mounting, Minimum Possible Cylinder Stroke

Band Mounting Type (mm)

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

Construction

C□76R_A32 to 40



Standard: Front nose

Front nose in line port Built-in magnet

Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminum alloy	1	White anodized
②B	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	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminum alloy	1	Chromate
⑥	Plain washer	Stainless steel	1	
⑦	Bush	Sintered bronze	1	
⑧	Retaining ring	Carbon steel	1	Nickel plating
⑨	Retaining ring	Stainless steel	1	
⑩	Wear ring	Resin	1	

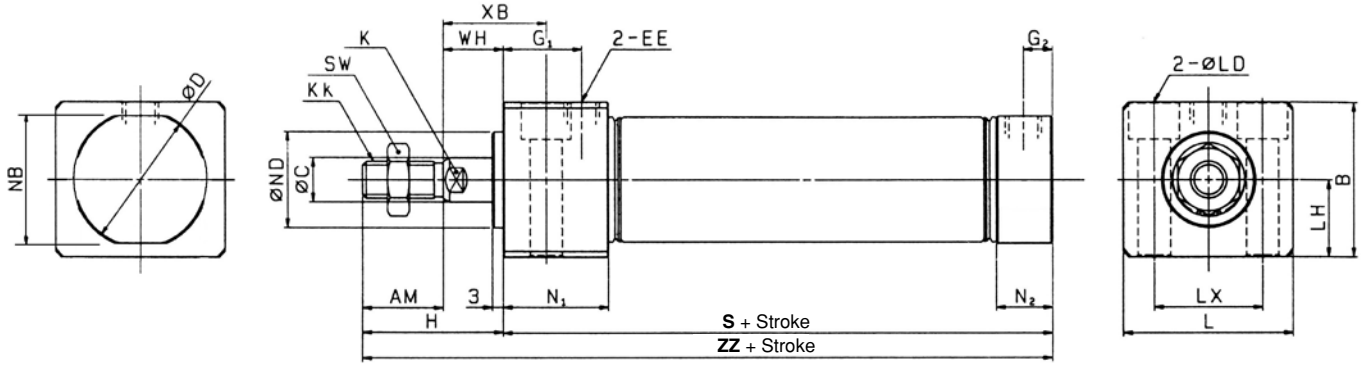
No.	Description	Material	Qty.	Note
⑪	Bumper A	Urethane	1	
⑫	Bumper B	Urethane	1	
⑬	Piston gasket	NBR	1	
⑭	Rod seal	NBR	1	
⑮	Piston seal	NBR	1	
⑯	Rod end nut	Carbon steel	1	Nickel plating
⑰	Magnet	Magnet	1	(Switch type only)

Air Cylinder: Direct Mount Type Double Acting, Single Rod **Series C76R**

Dimensions

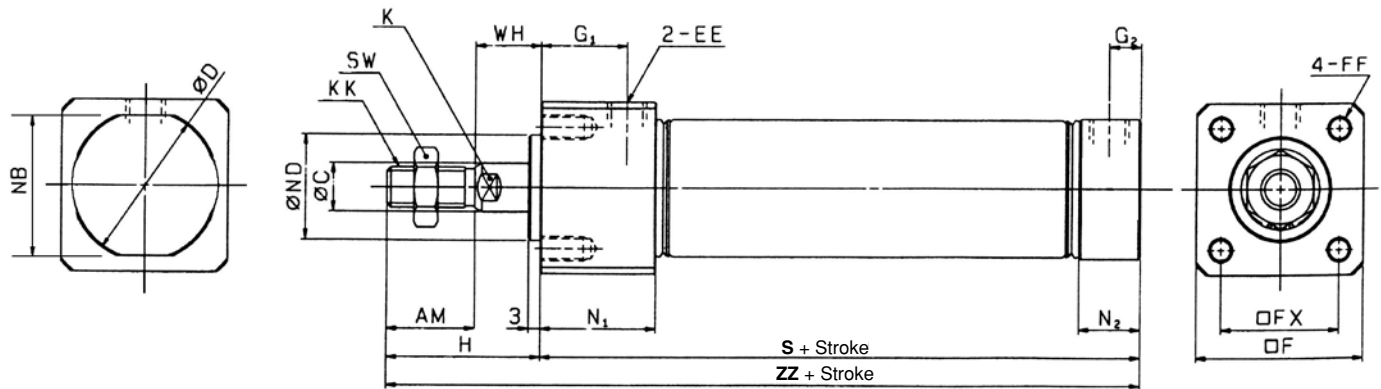
[First angle projection]

Double acting, Single rod
 Rubber cushion: C□76RAF **Bore**—**Stroke**—**B**
 Without magnet, Built-in magnet



Bore	AM	B	ϕC	ϕD	EE	G1	G2	H	K	KK	L	ϕLD	LH	LX	N1	N2	NB	ϕND_{h8}	S	SW	WH	XB	ZZ
32	20	42.3	12	37.5	G 1/8	22	9	36	10	M10 x 1.5	47	$\phi 9, \phi 14$ depth of counterbore 10	21	30	29	17	34.5	$26_{-0.033}^0$	80	17	16	28	116
40	24	52.3	14	46.5	G 1/4	27	12	40	12	M12 x 1.75	58.5	$\phi 11, \phi 17.5$ depth of counterbore 12.5	26	38	38	22	42.5	$32_{-0.039}^0$	105	19	16	31	145

Rubber cushion: C□76RBF **Bore**—**Stroke**—**B**
 Without magnet, Built-in magnet



Bore	AM	ϕC	ϕD	EE	F	FF	FX	G1	G2	H	K	KK	N1	N2	NB	ϕND_{h8}	S	SW	WH	ZZ
32	20	12	37.5	G 1/8	42.4	M6 x 1 depth 11	30	22	9	36	10	M10 x 1.5	29	17	34.5	$26_{-0.033}^0$	80	17	16	116
40	24	14	46.5	G 1/4	52.4	M8 x 1.25 depth 14	36	27	12	40	12	M12 x 1.75	38	22	42.5	$32_{-0.039}^0$	105	19	16	145

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

Series C76R

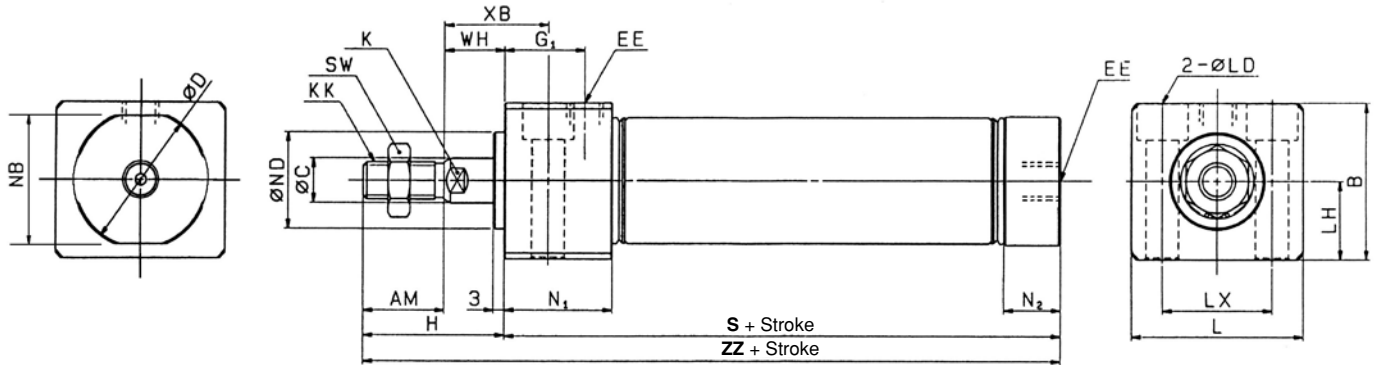
Dimensions

[First angle projection]

Double acting, Single rod

Rubber cushion: C□76RAY **Bore** - **Stroke** - **B**

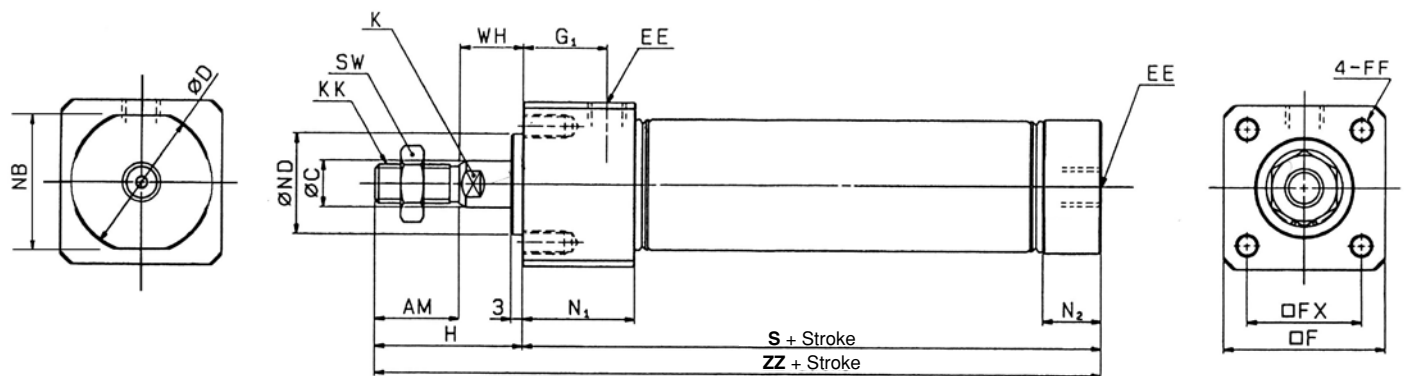
Without magnet, Built-in magnet



Bore	AM	B	ϕC	ϕD	EE	G1	H	K	KK	L	ϕLD	LH	LX	N1	N2	NB	ϕND_{h8}	S	SW	WH	XB	ZZ
32	20	42.3	12	37.5	G1/8	22	36	10	M10 x 1.5	47	$\phi 9, \phi 14$ depth of counter bore 10	21	30	29	17	34.5	$26_{-0.033}^0$	80	17	16	28	116
40	24	52.3	14	46.5	G1/4	27	40	12	M12 x 1.75	58.5	$\phi 11, \phi 17.5$ depth of counter bore 12.5	26	38	38	22	42.5	$32_{-0.039}^0$	105	19	16	31	145

Rubber cushion: C□76RBY **Bore** - **Stroke** - **B**

Without magnet, Built-in magnet



Bore	AM	ϕC	ϕD	EE	F	FF	FX	G1	H	K	KK	N1	N2	NB	ϕND_{h8}	S	SW	WH	ZZ
32	20	12	37.5	G 1/8	42.4	M6 x 1 depth 11	30	22	36	10	M10 x 1.5	29	17	34.5	$26_{-0.033}^0$	80	17	16	116
40	24	14	46.5	G 1/4	52.4	M8 x 1.25 depth 14	36	27	40	12	M12 x 1.75	38	22	42.5	$32_{-0.039}^0$	105	19	16	145

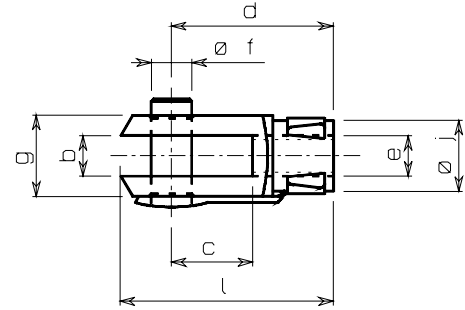
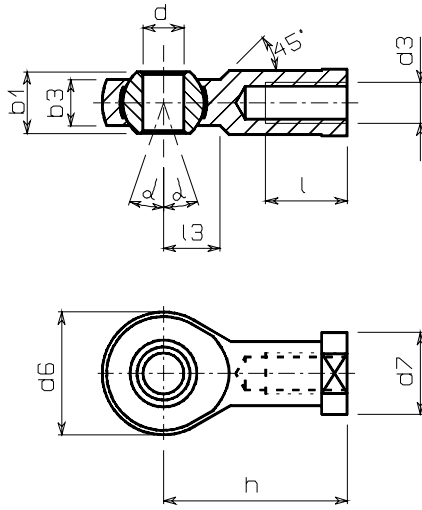
Air Cylinder: Direct Mount Type Double Acting, Single Rod **Series C76R**

Accessory Dimensions

[First angle projection]

Single Knuckle Joint/DIN648

Double Knuckle Joint/DIN71751



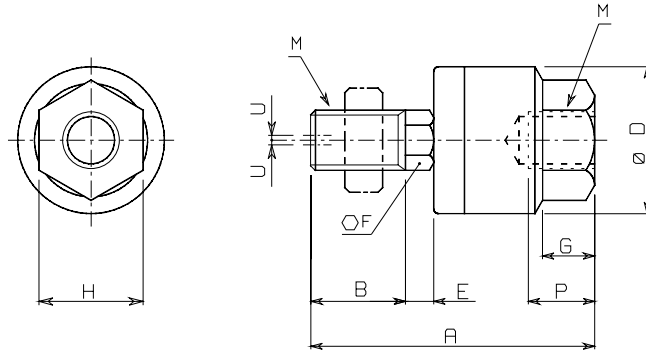
(mm)

Bore	Model	Thread d3	dH71	h	d6	b3	b1	l	d7	α°	I3
32	KJ10DA	M10 x 1.5	10	43	20	10.5	14	20	19	13	14
40	KJ12DA	M12 x 1.75	12	50	30	12	16	22	22	13	16

(mm)

Bore	Model	Thread e	b	d	f	g	c	j	a
32	GKM10-20A	M10 x 1.5	10	40	10	18	20	12	20
40	GKM12-24A	M12 x 1.75	12	48	12	23	24	15	24

Floating joint/Series JA JA25/40



(mm)

Bore	Model	M		A	B	D	E	F	G	H	Maximum screwed depth P	Allowable eccentricity U	Max. operating tension and compression power (kN)
		Nominal thread dia.	Pitch										
32	JA25-10-150	10	1.5	49.5	19.5	24	5	8	8	17	9	0.5	2.5
40	JA40-12-175	12	1.75	60	20	31	6	11	11	22	13	0.75	4.4

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data

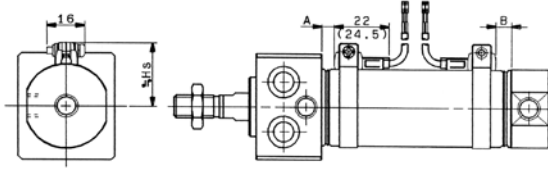
Series C76R

Auto Switch Mounting, Position and Mounting Height

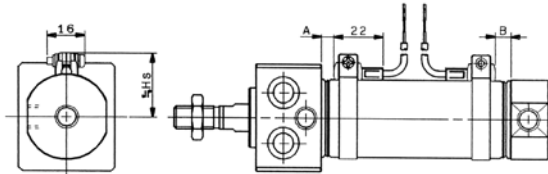
Reed Switch Setting Position (Stroke end)

(Band mounting type)

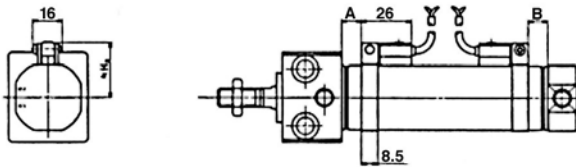
D-A9□



D-M9□
D-M9□W



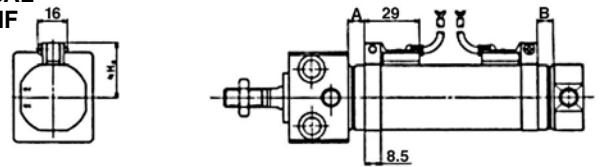
D-C7□
D-C80



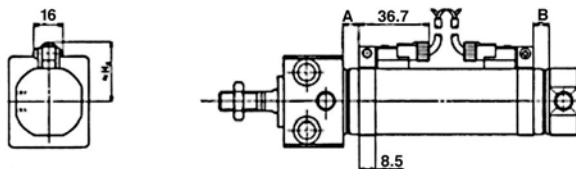
Solid State Switch Setting Position (Stroke end)

(Band mounting type)

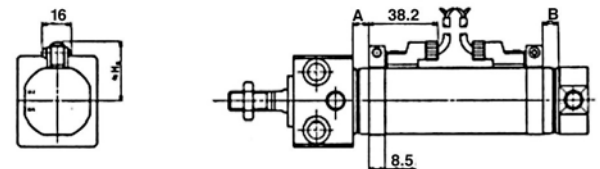
D-H7□
D-H7□W
D-H7BAL
D-H7NF



D-C73C
D-C80C



D-H7C



Auto Switch Mounting Position

(mm)

Bore	D-M9□ D-M9□W		D-A9□		D-C7□ D-C80 D-C73C D-C80C		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF	
	A	B	A	B	A	B	A	B
32	11.5	10.5	7.5	6.5	8	7	7	6
40	16.5	15.5	12.5	11.5	14	12	13	11

Note 1) () For air cushion type

Note 2) Figures are used as a reference when mounting the auto switches for stroke end detection.

In the case of actually setting the auto switches, adjust them after confirming their operation.

Note 3) The dimensions A and B indicate the distance from the cover to the end face of the auto switch.

Auto Switch Mounting Height

(mm)

Bore	D-A9□ D-M9□ D-M9□W	D-C7□ D-C80 D-H7□ D-H7□W D-H7BAL D-H7NF	D-C73C D-C80C	D-H7C
	Hs	Hs	Hs	Hs
32	28	28.5	31	31.5
40	32	32.5	35	35.5

• Aim at this number.

Applicable Auto Switch / Refer to page 6-16-1 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model			Lead wire length* (mm)				Pre-wire connector	Applicable load				
					DC	AC	Band mounting	Rail mounting		0.5 (—)	3 (L)	5 (Z)	None (N)						
								Perpendicular	In-line										
Reed switch	—	Grommet	Yes	3-wire (NPN)	—	5 V	—	A96	—	A76H	●	●	—	—	—	IC circuit	—		
				2-wire	24 V	12 V	—	200 V	—	A72	A72H	●	●	—	—	—	—	—	—
							—	100 V	—	A73	A73H	●	●	●	—	—	—	—	
							—	≤ 100 V	A90	A80	A80H	●	●	—	—	—	—	IC circuit	—
							—	≤ 24 V	C73C	A73C	—	●	●	●	●	—	—	—	—
	Diagnostic indication (2-color)	Grommet	Yes	—	—	—	A79W	—	—	●	●	—	—	—	—	—			
Solid state switch	—	Grommet	No	3-wire (NPN)	24 V	5 V, 12 V	—	M9N	F7NV	F79	●	●	○	—	○	IC circuit	Relay, PLC		
				3-wire (PNP)				M9P	F7PV	F7P	●	●	○	—	○	—			
				2-wire				M9B	F7BV	J79	●	●	○	—	○	—			
				2-wire				H7C	J79C	—	●	●	●	●	—	—			
	Diagnostic indication (2-color)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NW	F7NWX	F79W	●	●	○	—	○	IC circuit	Relay, PLC		
				3-wire (PNP)				M9PW	—	F7PW	●	●	○	—	○	—			
	Water resistant (2-color)	Grommet	No	2-wire	24 V	12 V	—	M9BW	F7BWX	J79W	●	●	○	—	○	—	—		
				2-wire				H7BA	F7BAV	F7BA	—	●	○	—	○	—			
	With diagnostic output (2-color)	Grommet	No	4-wire (NPN)	24 V	5 V, 12 V	—	H7NF	—	F79F	●	●	○	—	○	IC circuit	—		

* Lead wire length symbols: 0.5 m Nil (Example) M9N
 5 m Z (Example) M9NZ
 3 m L (Example) M9NL
 None N (Example) H7CN

* Since there are other applicable auto switches than listed, refer to below.
 * For details about auto switches with pre-wire connector, refer to 6-16-60.
 * D-A9□, M9□, M9□WV and D-F9BA switches can not be mounted.

* Solid state switches marked with "○" are manufactured upon receipt of order.
 * D-A□, M9□, M9□W, A7□□, A80□, F7□□, J7□□ types are shipped together, (but not assembled).
 * D-C7□□/C80□ and D-H7□□ switches are set on the cylinder when shipped.
 * D-A79W and D-A9□ switches can not be mounted on bore size ø8, ø10, ø12 cylinder.

Other than the applicable auto switches listed in "How to Order", the following auto switches can be mounted. For detailed specifications, refer to page 6-16-1

Type	Model	Electrical entry	Features
Reed switch	D-C73, C76	Grommet (In-line)	—
	D-C80		Without indicator light
Solid state switch	D-H7A1, H7A2, H7B	Grommet (In-line)	—
	D-H7NW, H7PW, H7BW		Diagnostic indication (2-color)

* With pre-wire connector is available for solid state auto switch, too. Refer to page 6-16-1 for details.
 * Normally closed solid state switch (D-F9G, F9H type) is also available.

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data

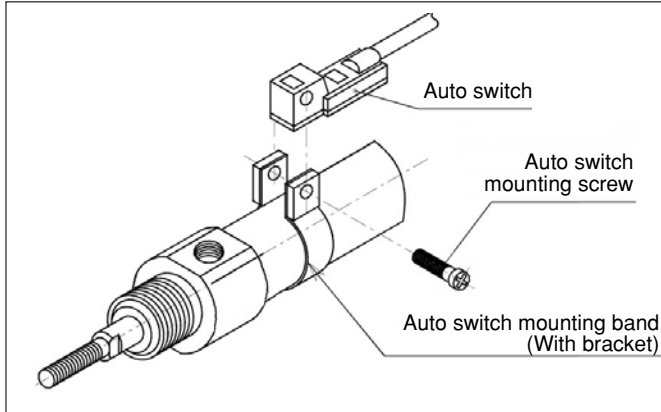
Series C76

Mounting Bracket Band mounting type

<Applicable auto switch>

D-C7□/C80, D-C73C/C80C, D-H7□, D-H7C,
D-H7□W, D-H7BAL, D-H7NF

Mounting and Moving Method of Auto Switch



1. Put a mounting band on the cylinder tube and position the auto switch.
2. Put the mounting part of auto switch in the middle of the stationary fitting, aligning the mounting hole with the hole of the stationary fitting.
3. Screw in the auto switch mounting screw through the mounting hole into the threaded part of the band fitting.
4. Set the whole body to the detecting position by sliding, then tighten the mounting screw to fix the auto switch (the tightening torque of M3 screw should be about 80 to 100 N/cm).
5. Modification of the detecting position should be made following step #3.

Auto Switch Mounting Band Part No.

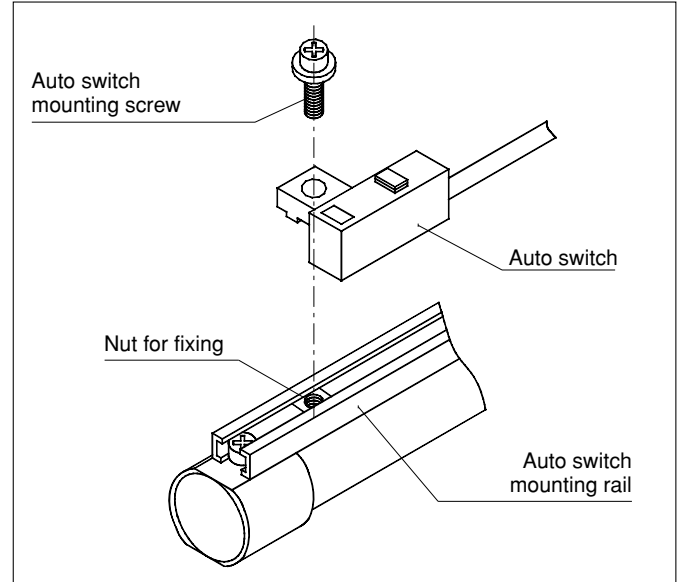
Series	Bore size (mm)	
	32	40
C76	BM2-032	BM2-040

Mounting Bracket Rail mounting type

<Applicable auto switch>

D-A7□/A80, D-A73C/A80C, D-F7□/J7□, D-J79C,
D-F7□W, D-J79W, D-F7BAL, D-F7□WV, D-F7BAVL,
D-F79F

Mounting and Moving Method of Auto Switch



1. Slide the nut located inside the mounting rail and set it at the auto switch mounting position.
2. Fit the convex part of the auto switch mounting arm into the slot of the rail and slide it to the nut position.
3. Allow the auto switch mounting screw to match gently in the nut for attachment, and screw it in.
4. Check the detecting position again and tighten the mounting screw to fix the auto switch definitely (the tightening torque of M3 screw should be about 50 to 70 N/cm).
5. Modification of the detecting position should be made following step #3.

Mounting and Moving Auto Switches

Mounting the Auto Switch

1. Attach the switch bracket to the switch holder.
(Fit the switch bracket over the switch holder.)
2. Mount the auto switch mounting band to the cylinder tube.
3. Set the switch holder between the reinforcing plates of the band which is already attached to the cylinder.
4. Insert the switch mounting screw in the hole of the reinforcing plate through the switch holder, and thread it into the other plate. Tighten the screw temporarily.
5. Remove the set screw attached to the auto switch.
6. Attach the switch spacer to the auto switch.
7. Insert the auto switch with the switch spacer from the back of the switch holder.
(Insert the auto switch with an angle of approximately 10 to 15°. See figure 1.)
8. To secure the auto switch, tighten the switch mounting screw with the specified torque (0.8 N•m to 1.0 N•m).

Adjusting the Switch Position

1. Unloosen the switch mounting screw 3 turns to adjust the switch set position.
2. Tighten the screw as described above (8) after adjustment.

Dismounting Auto Switch

1. Remove the switch mounting screw from the switch holder.
2. Move the switch back towards the position where it stops at the lead wire side.
3. Hold up the lead wire side of the switch at the angle of around 45°.
4. Maintain the angle, and pull back the switch obliquely at the same angle.

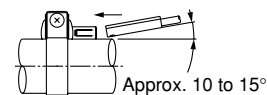
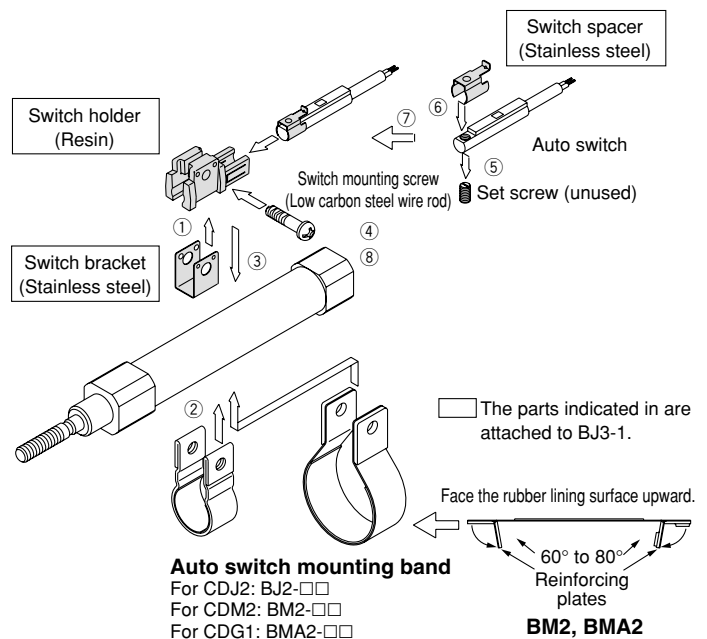
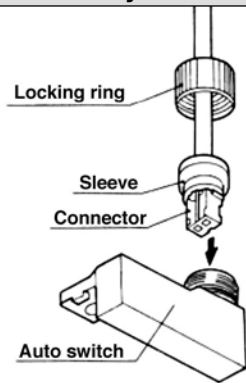


Figure 1. Switch insert angle



Plug-in Connector Assembly

D-C73C/C80C
D-H7C
D-A73C/A80C
D-J79C



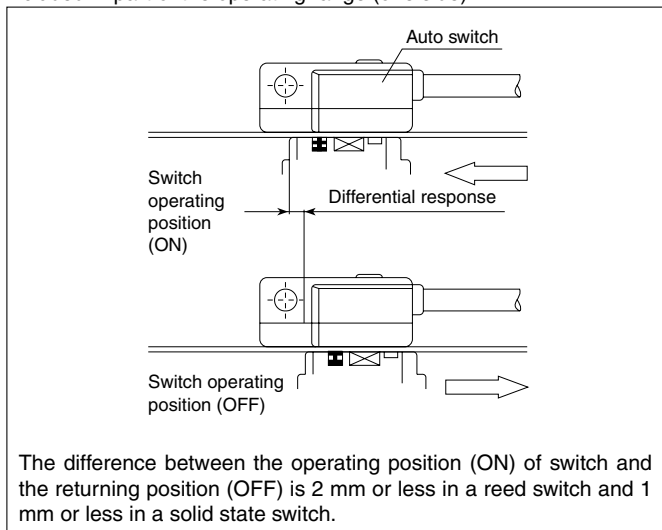
With the convex port of the connector highest, insert the connector into the auto switch up to the sleeve. Screw the locking ring into the switch (do not tighten with pliers, hand tighten only).

Lead Wire with Connector

Part no.	Length
D-LC05	0.5 m
D-LC30	3 m
D-LC50	5 m
D-LC□□-61	Flexible cable

Differential Response of Auto Switch

The distance from the operating position of auto switch to the returning position is called the differential response. This response is included in part of the operating range (one side).



The difference between the operating position (ON) of switch and the returning position (OFF) is 2 mm or less in a reed switch and 1 mm or less in a solid state switch.

Operating Range of Auto Switch (mm)

Mounting	Model	Bore	
		32	40
Band	D-A9□	6	6
	D-M9□	2.5	2.5
	D-M9□W	4	3.5
	D-C7□/C80/C73C/C80C	8	8
	D-H7□/H7□W/H7BAL	4.5	5
	D-H7C	9	10
Rail	D-A7□/A80/A7□H/A80	8	8
	D-A73C/A80C	13	14
	D-A79W	13	14
	D-F7□/J79/F7□W/J79W	6	6.5
	D-F7□V/F7□WV/F79F	6	6.5
	D-J79C/F7BA□	6	6.5

Note) The operating range is a guide including hysteresis, but is not guaranteed. There may be varied substantially depending on the surrounding environment (assuming approximately 30% dispersion).

Contact Protective Box/CD-P11, CD-P12

The auto switch of D-A7/A8 type, D-A7□H/A80H type, D-A73C/A80C type, D-C7/C8 type, D-C73C/C80C type are not incorporated with a contact protective circuit.

1. Operating load is inductive.
2. The wiring length to load is 5 m or less.
3. The load voltages are 100 or 200 VAC. Either voltage should be used with the contact protective box.

Contact Protective Box of Specifications

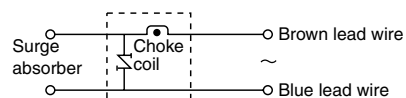
Part no.	CD-P11		CD-P12
Load voltage	100 VAC	200 VAC	24 VDC
Max. load current	25 mA	12.5 mA	50 mA

Lead wire length Switch connecting side 0.5 m
Load connecting side 0.5 m

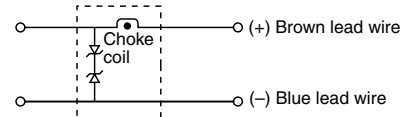


Contact Protective Box/Internal Circuit

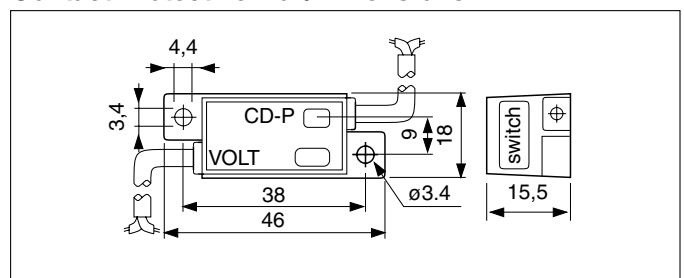
CD-P11



CD-P12



Contact Protective Box/Dimensions



Contact Protective Box/Dimensions

For connection of the switch body and the contact protective box, connect the load in the side indicated and switch on the contact protective box to the lead from the switch body. The length of lead between the switch body and the contact protective box should be within 1 m and they should be set as close together as possible.

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data