

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

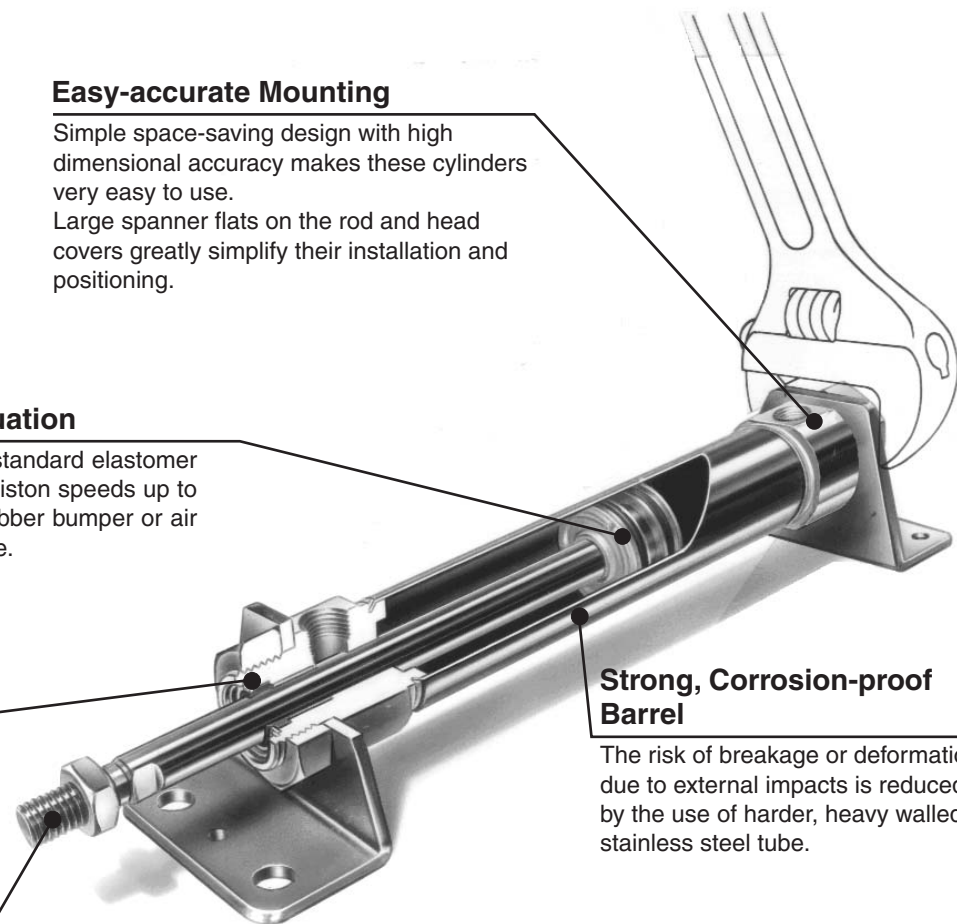
Rod seal can be quickly replaced, greatly extending the cylinder life.

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.

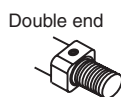
Minimized Side Clearance

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



Double end

Front nose

Front nose in line port

Rod boot

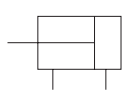
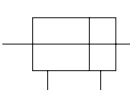
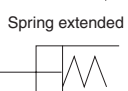
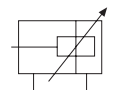
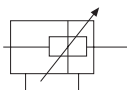
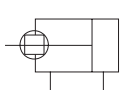
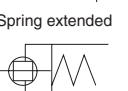
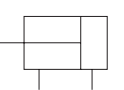
Series	Type	Action	Bore size (mm)						
			32	40					
C76	Standard	Double acting, Single rod	●	●	●	●	●	●	●
		Double acting, Double rod	●	●	●	●	●	●	●
		Single acting, Spring return	●	●	●	●	●	●	●
		Single acting, Spring extended	●	●	●	●	●	●	●
		Double acting, Single rod	●	●	●	●	●	●	●
		Single acting, Spring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

● 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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-X

20-

Data

Series C76

Stroke Selection

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

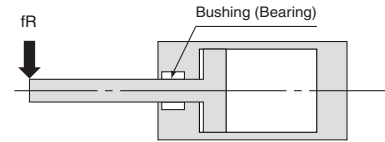
Assuming that the force that is generated by the cylinder itself acts as a buckling force on the piston rod or on the piston rod and the cylinder tube, the table below indicates in centimeters the maximum stroke that can be used, which was obtained through calculation. Therefore, it is possible to find 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.



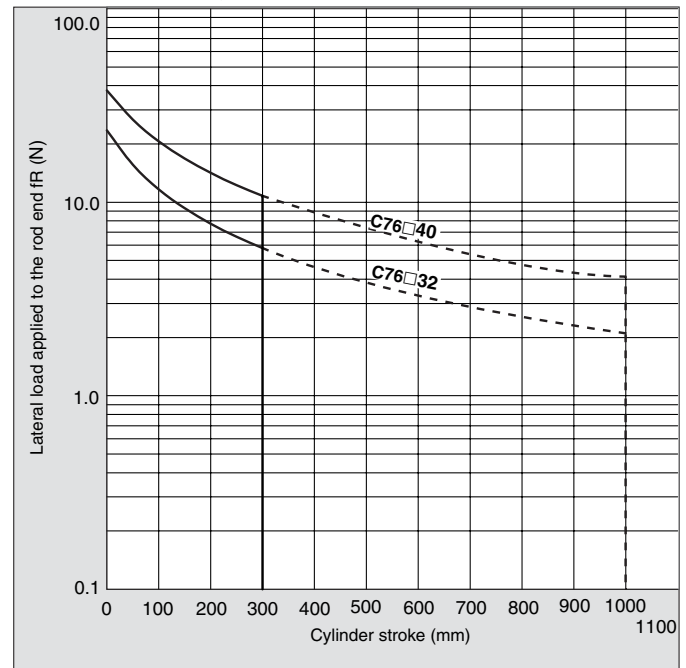
Reference: Even under a light load, if the piston rod has been stopped by an external stopper at the extending side of the cylinder, the maximum force generated by the cylinder will act upon the cylinder itself.

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.



Series C76: ø32, ø40



Mounting style			Nominal symbol	Operating pressure (MPa)	Maximum stroke that can be used according to buckling strength		
Mounting bracket diagram					C76		
					32	40	
Foot: L	Rod side flange: F	Head side flange: G		L F	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	—	—	
Head side trunnion: U	Center trunnion: O		U	0.3	(100)*	(100)*	
	Series CS1 only			0.5	85	92	
				0.7	71	77	
		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		

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

Series C76

ø32, ø40

How to Order

Double acting Single rod C D 76 K E 32 100 C J A R2

Double acting Double rod C D 76 W E 32 100 C JJ B

Built-in magnet

Nil	None
D	Built-in magnet

Type

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

Mounting style

Symbol	Mounting
E*	Double end
F**	Front nose
Y**	Front nose in line port

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

Auto switch mounting type

A	Rail mounting
B	Band mounting

Applicable auto switches and bands are shown on pages 6-10-45 to 6-10-46. Please order auto switches and bands separately.

Option

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

Note) Please refer to page 6-10-46 for additional options. Only one option can be selected.

Rod boot

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

* In the case of double acting/double rod.

Cushion

Nil	Rubber cushion (Standard)
C	Air cushion (Only "E" execution)

Bore size **Stroke**

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)
32	10, 25, 40, 50, 80, 100,	1000
40	125, 160, 200, 250, 300	

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 1 seal retaining washer 1 retaining ring
40	C76-40PS	C76K-40PS	

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

CJ1

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Data

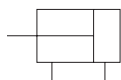
Series C76



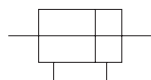
JIS Symbol

Standard: Double acting

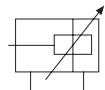
Rubber bumper
Single rod



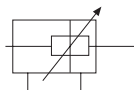
Rubber bumper
Double rod



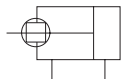
Air cushion
Single rod



Air cushion
Double rod



Non-rotating: Double acting, Single rod



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.

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
 $340 + 16.8 \times 50/10 = 424$ 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-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)

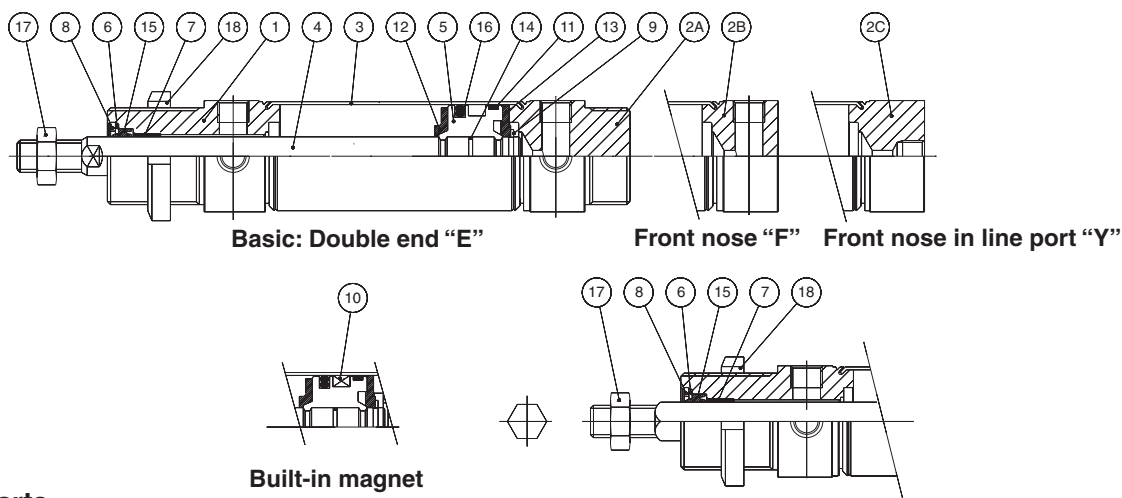
Auto switch model	No. of auto switches				1 pc.
	2 pcs.		n pcs.		
	Different sides	Same side	Different sides	Same side	
D-A7□/A80 D-A7□H/A80H D-A73C/A80C D-F7□/F7□V D-J79/J79C	—	10	—	$10 + 35(\frac{n-2}{2})$ (n = 2, 4...)	5
D-A79W, D-J79W D-F7□W, D-F7BAL D-F79F, F7□WV D-F7BAVL	—	15	—	$15 + 35(\frac{n-2}{2})$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

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

Construction

[First angle projection]

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

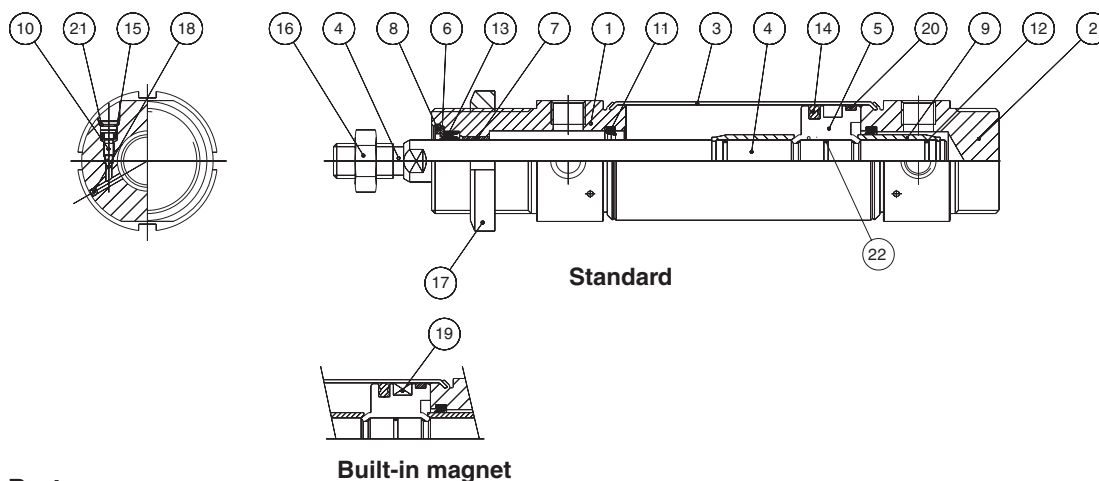


Component Parts

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	

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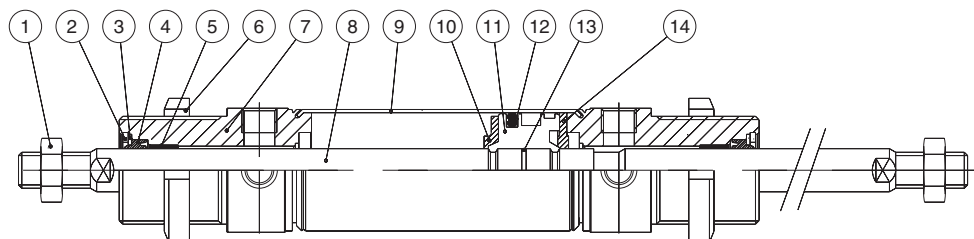
Series C76

Construction

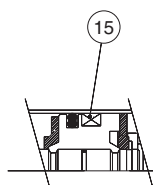
[First angle projection]

Double acting, Double Rod

C□76□32 to 40 Rubber bumper



Standard



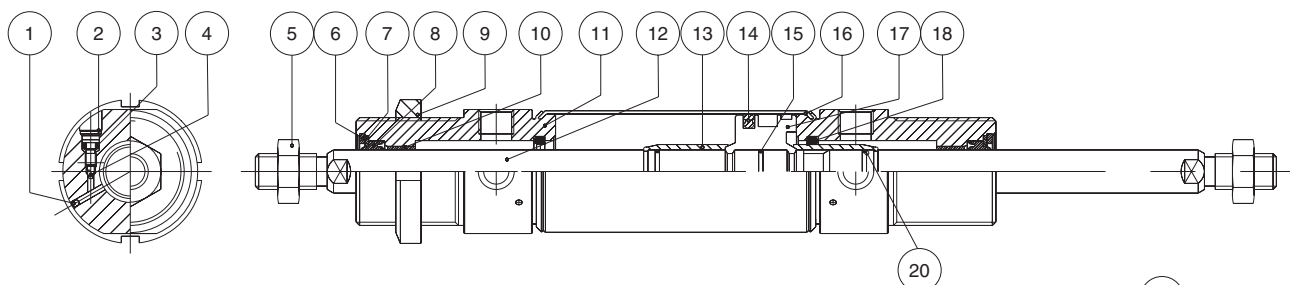
Built-in magnet

Component Parts

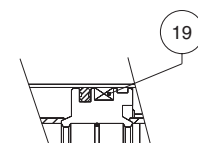
No.	Description	Material	Qty.	Note
①	Rod end nut	Carbon steel	1	Nickel plating
②	Retaining ring	Carbon steel	2	Nickel plating
③	Plain washer	Stainless steel	2	
④	Rod seal	NBR	2	
⑤	Bush	Sintered bronze	2	
⑥	Mounting nut	Carbon steel	1	Nickel plating
⑦	Rod cover	Aluminum alloy	2	White anodized
⑧	Piston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

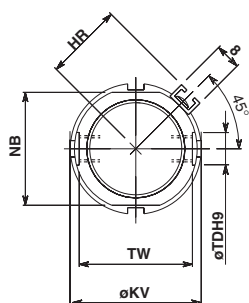
Dimensions

[First angle projection]

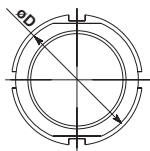
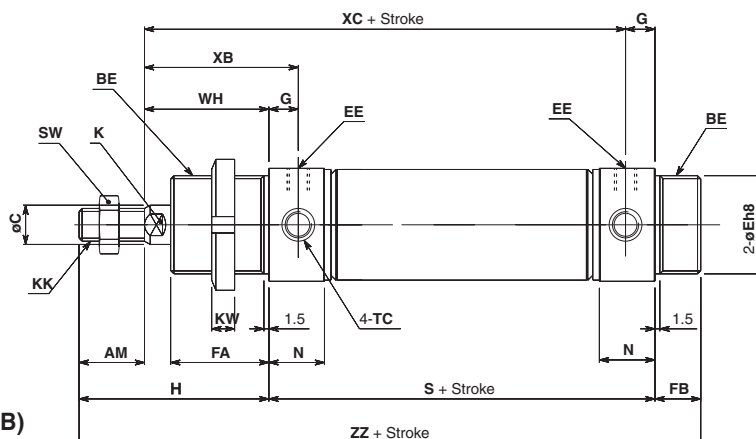
Double acting, Single rod

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

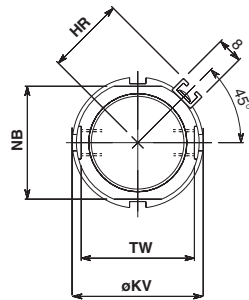
Without magnet, Built-in magnet



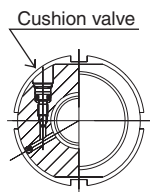
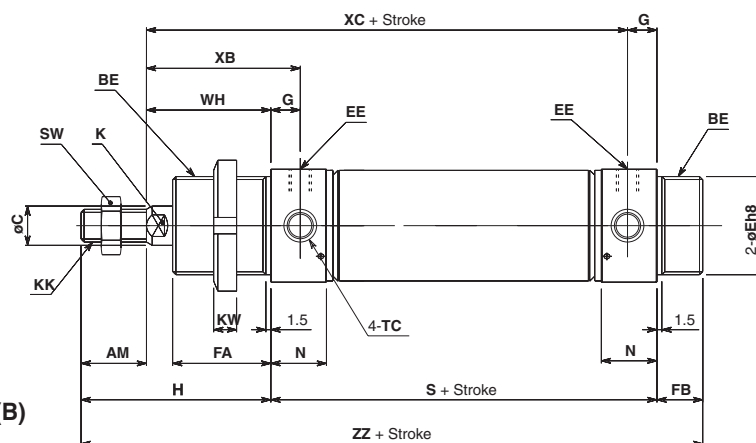
Rail mounting type (A)

Band mounting type (B)
or non-magnetAir cushion: C□76E **Bore**—**Stroke** C—□

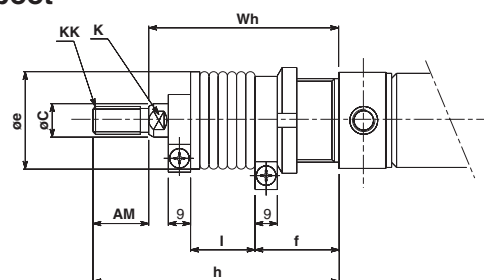
Without magnet, Built-in magnet



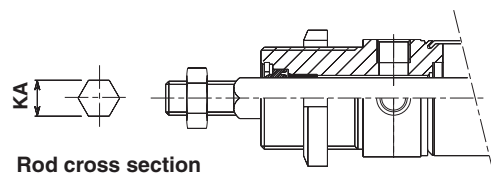
Rail mounting type (A)

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	Stroke	Item	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	Stroke	Item	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-

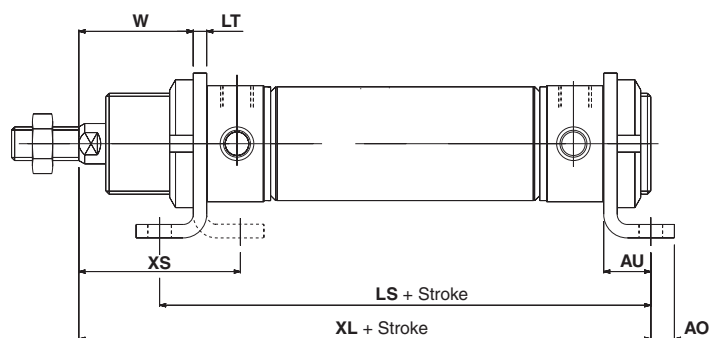
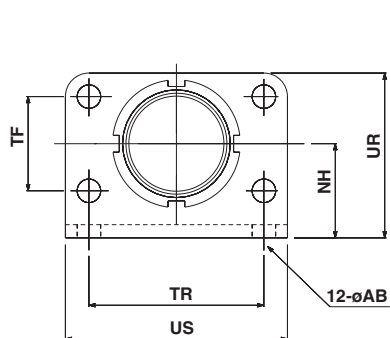
Data

Series C76

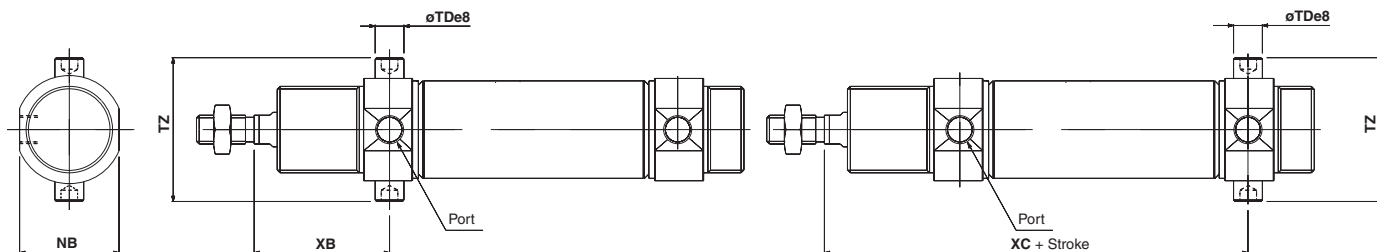
Dimensions with Mounting Bracket

[First angle projection]

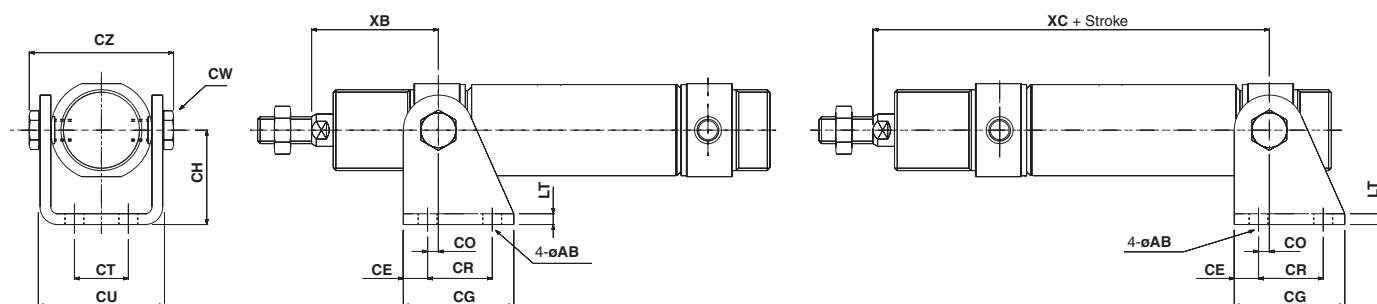
Double acting: Single rod

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

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

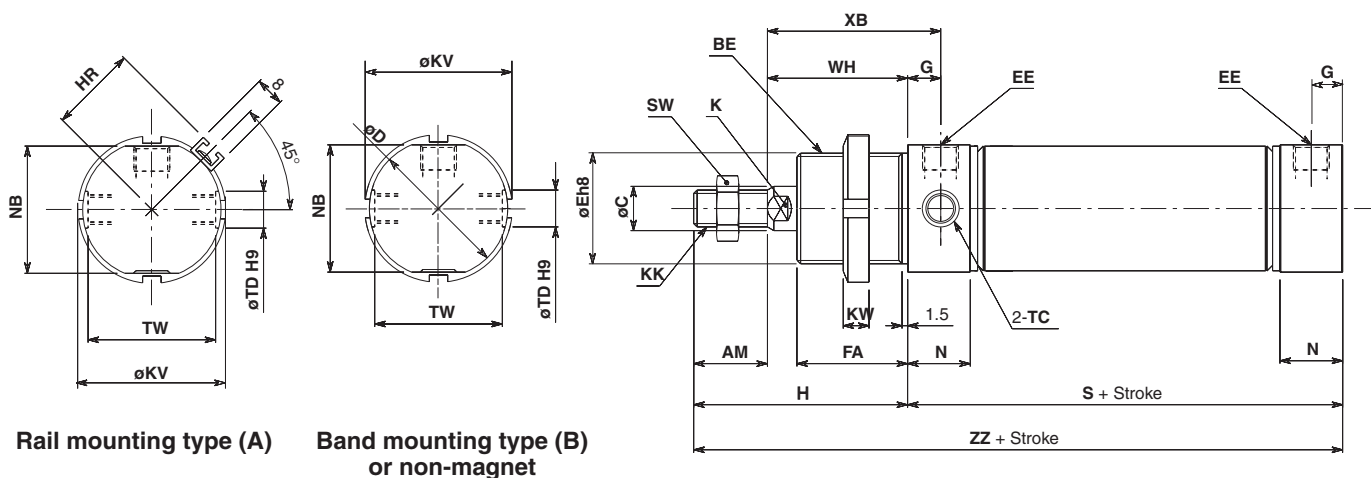
Dimensions

[First angle projection]

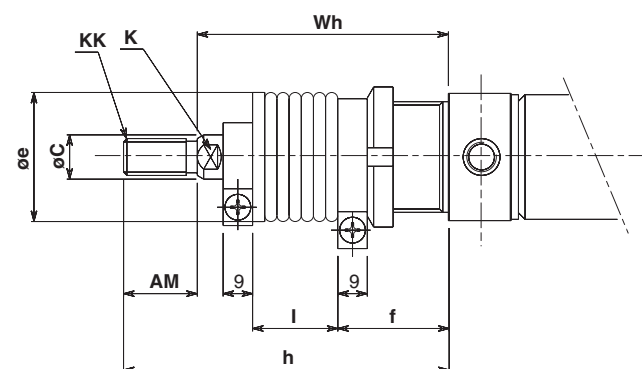
Double acting, Single rod

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

Without magnet, Built-in magnet

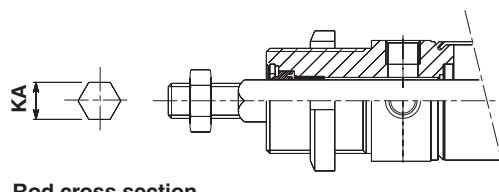


With rod boot



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 +0.036}	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 +0.043}	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

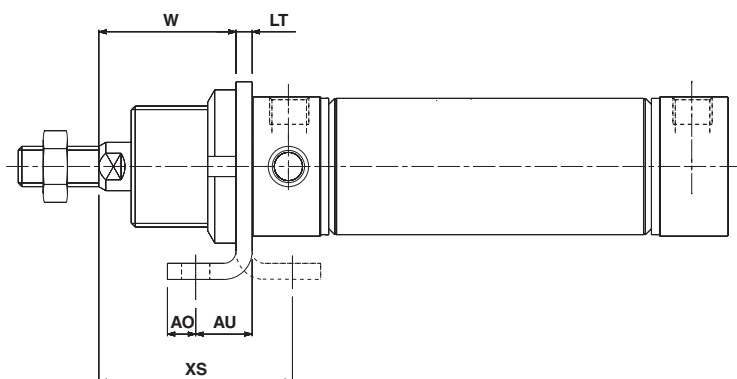
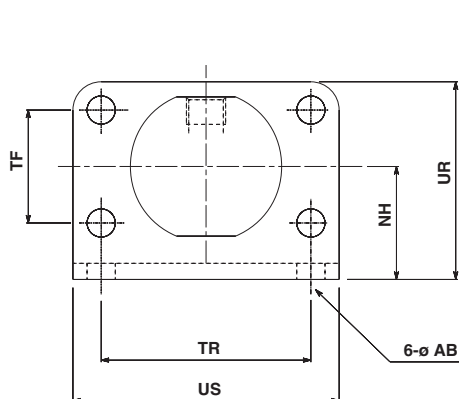
Series C76

Dimensions with Mounting Bracket

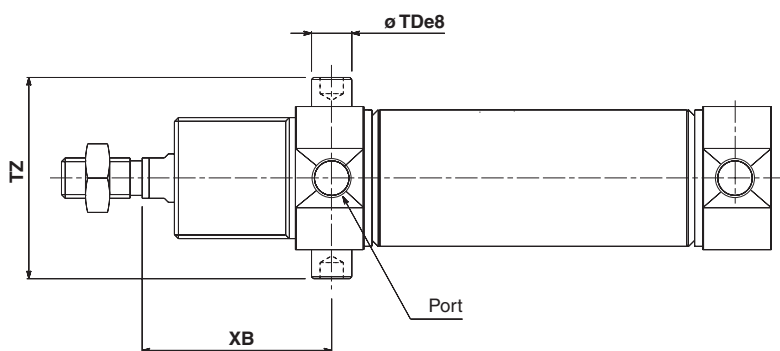
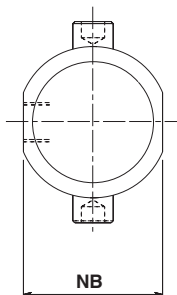
[First angle projection]

Double acting, Single rod

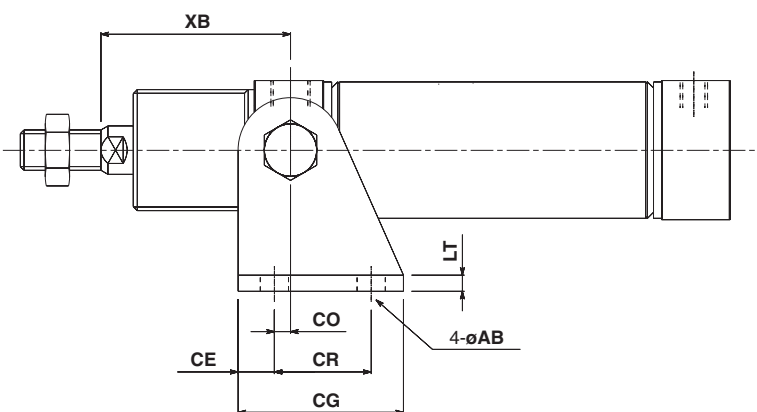
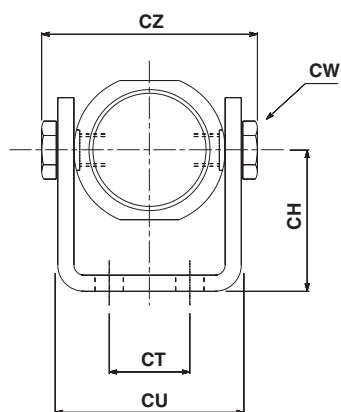
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



(mm)																											
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

(mm)

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

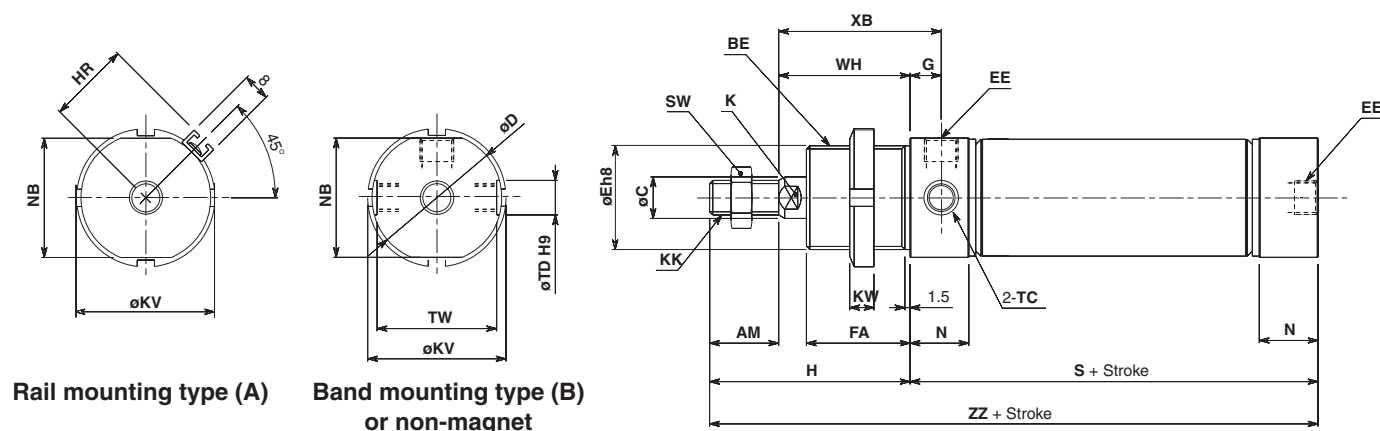
Dimensions

[First angle projection]

Double acting, Single rod

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

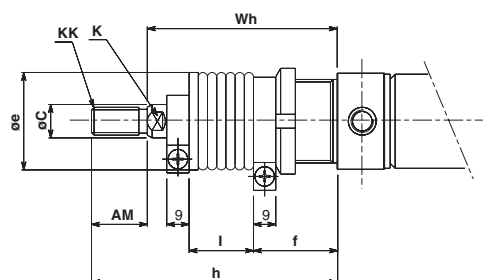
Without magnet, Built-in magnet



Rail mounting type (A)

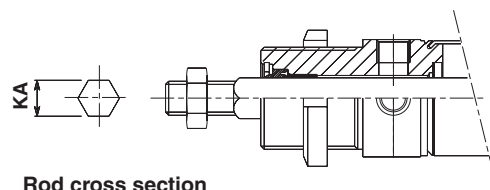
Band mounting type (B)
or non-magnet

With rod boot



C□76KY

Non-rotating, Piston rod (Rubber cushion only)



Rod cross section

(mm)

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

(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

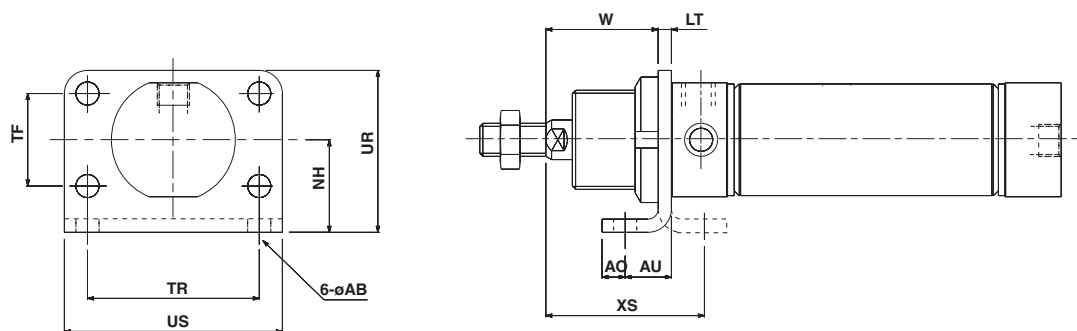
Series C76

Dimensions with Mounting Bracket

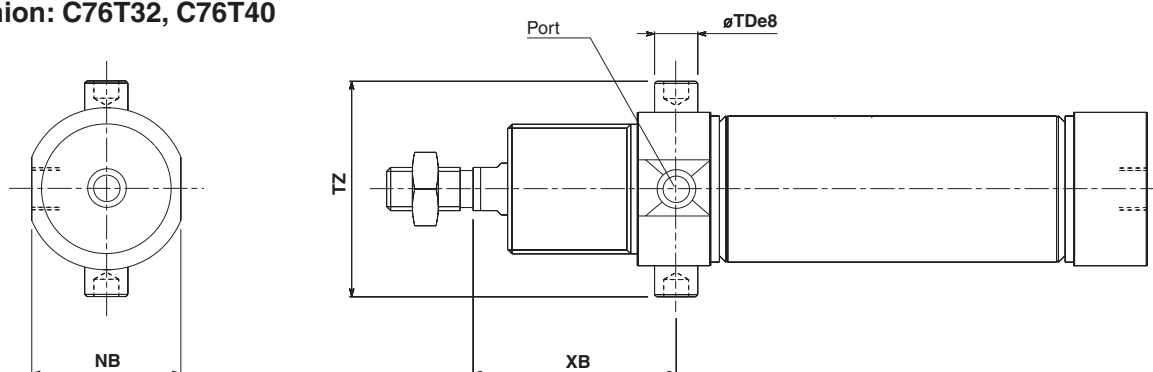
[First angle projection]

Double acting, Single rod

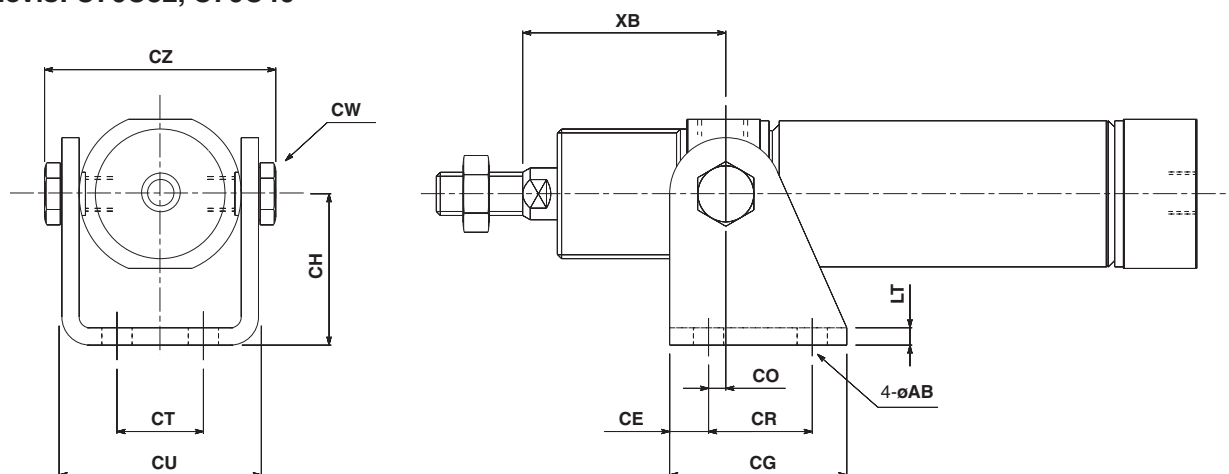
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



(mm)

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**

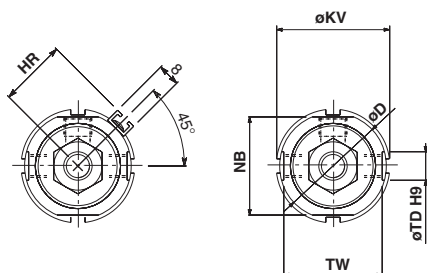
Dimensions

[First angle projection]

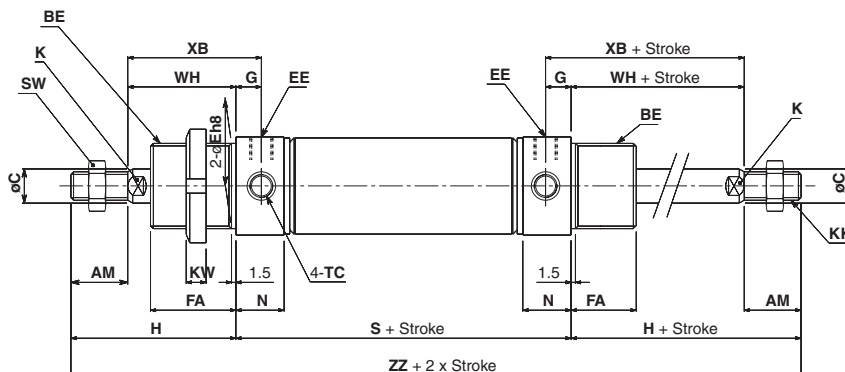
Double acting, Double rod

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

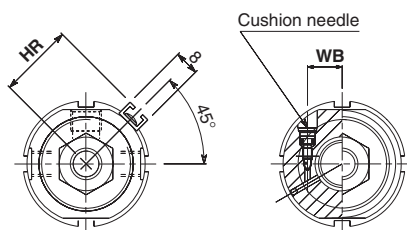
Without magnet, Built-in magnet



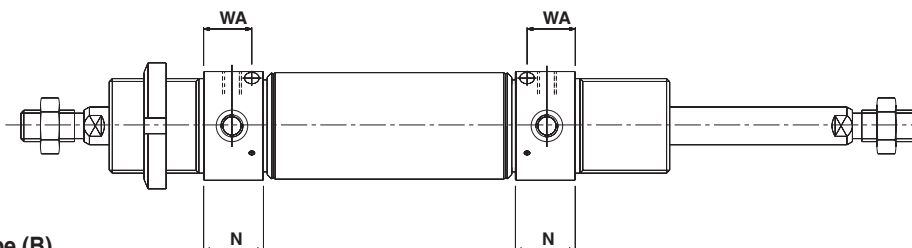
Rail mounting style (A) Band mounting style (B)
or non-magnet



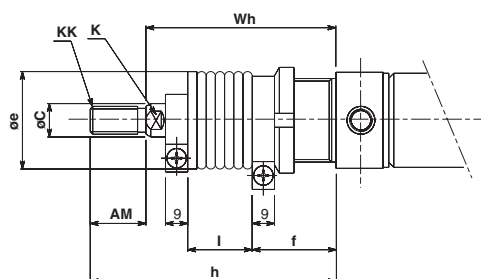
Air cushion: C□76WE **Bore** **Stroke** C-□
Built-in magnet



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

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-

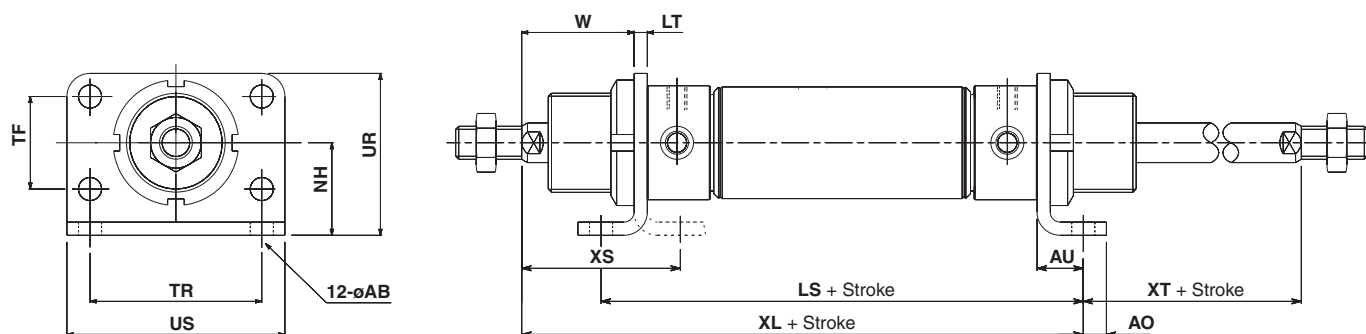
Data

Series C76

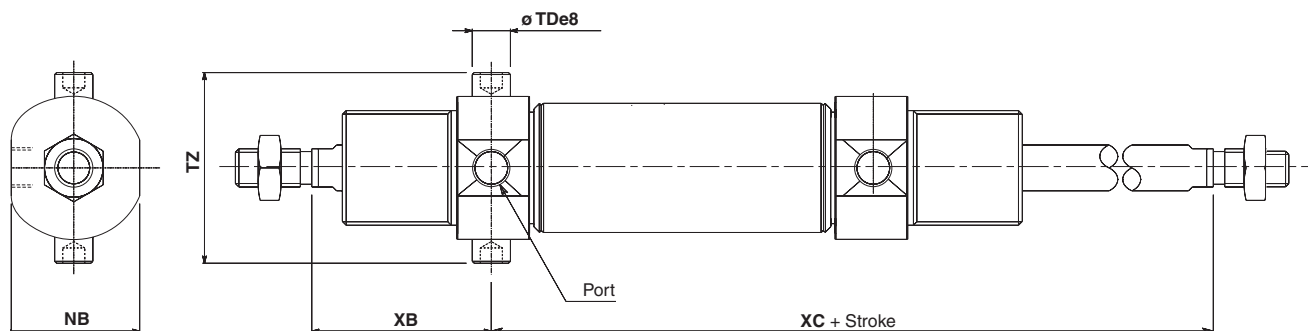
Dimensions with Mounting Bracket

[First angle projection]

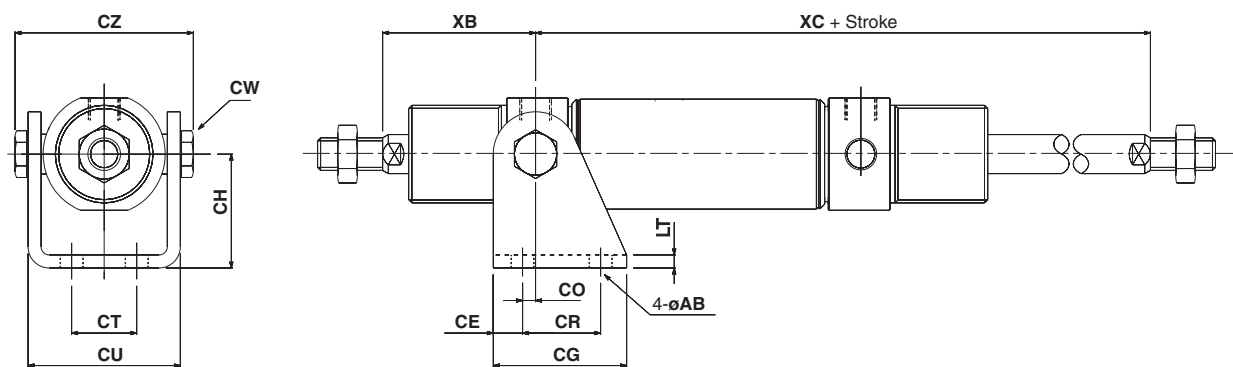
Double acting: Double rod

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

Rod trunnion, Head trunnion: C76T32, C76T40



Clevis: C76C32, C75C40



(mm)

Bore	Rod foot (Flange)														Rod/Head trunnion					Clevis													
	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	XC	
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} _{-0.059}	59.3	57	122	9	12	52	40	3	30	28	58.2	17	72.3	5	57	122	

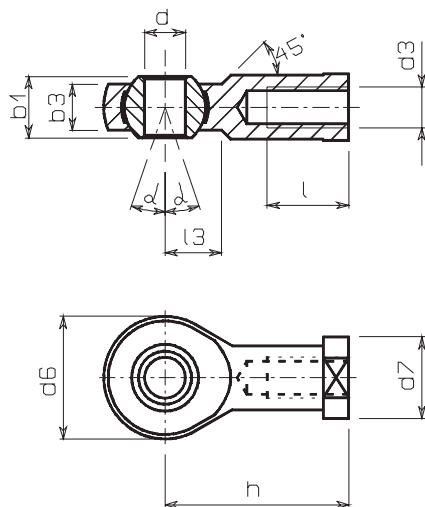
Cylinder: Standard/Non-rotating Type

Double Acting, Single/Double Rod **Series C76**

Accessory Dimensions

[First angle projection]

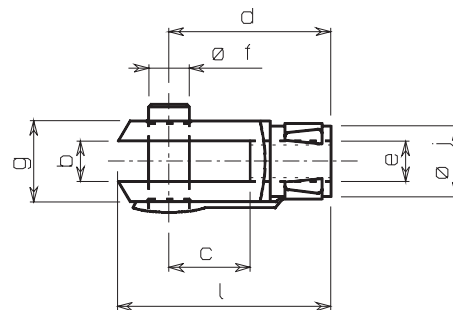
Single Knuckle Joint/DIN648



(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

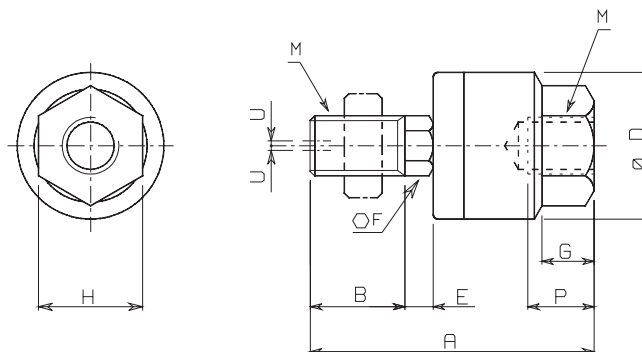
Double Knuckle Joint/DIN71751



(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-

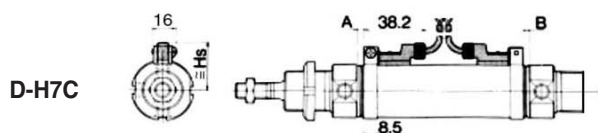
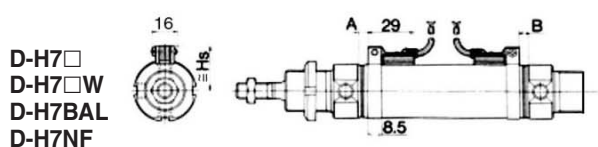
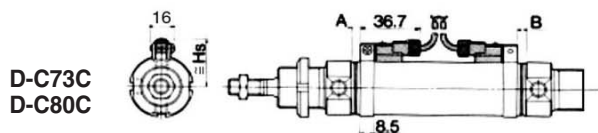
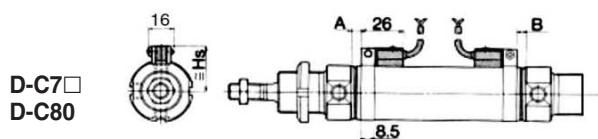
Data

Series C76

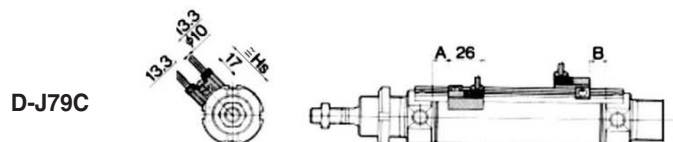
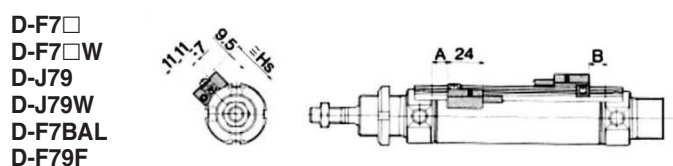
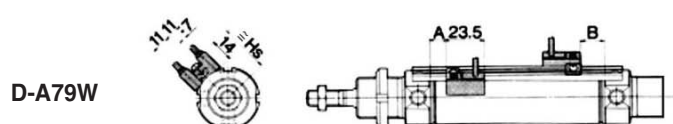
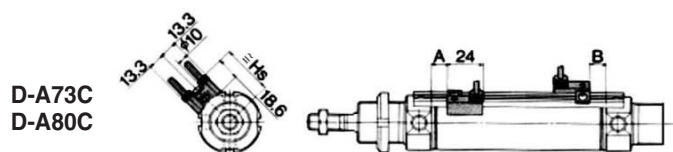
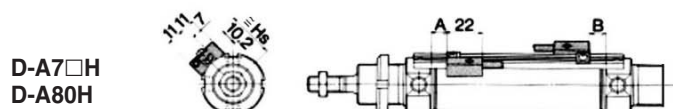
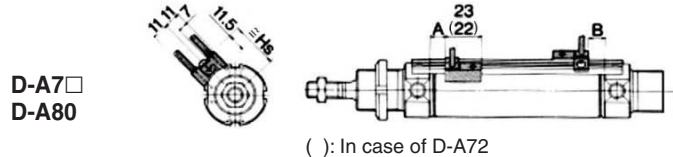
Auto Switch Mounting Position and Mounting Height

[First angle projection]

(Band mounting type)



(Rail Mounting type)



Auto Switch Mounting Position

(mm)

Bore	D-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
32	8 (6)	7 (5)	8.5 (6.5)	14.5 (11.5)	9 (7)	8 (6)	7 (5)	6 (4)	6 (5)	12 (9)
40	10 (11)	12 (9)	7.5 (5.5)	12.5 (9.5)	15 (12)	13 (10)	13 (10)	11 (8)	5 (3)	11 (7)

- () For air cushion type
- Aim at this number

Auto Switch Mounting Height

(mm)

Bore	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
32	28.5	31	30.5	28	30	36	31.5	31.5	34.5
40	32.5	35	35	5	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 R2

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

Option

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

Bore size Stroke

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

* Except Bore 32

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

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 (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

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data

Series C76

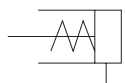


Specifications

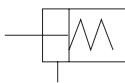
Bore size (mm)	32	40
Piston rod dia. (mm)	12	14
Piston rod thread	M10 x 1.5	M12 x 1.75
Port size	G 1/8	G 1/4
Action	Single acting, Single rod, Spring return/extend	
Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	Spring return: 0.18 MPa, Spring extended: 0.23 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

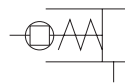
Standard
Spring return



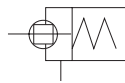
Spring extended



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	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	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	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				
	2 pcs.		n pcs.		1 pc.
	Different sides	Same side	Different sides	Same side	
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				
	2 pcs.		n pcs.		1 pc.
	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

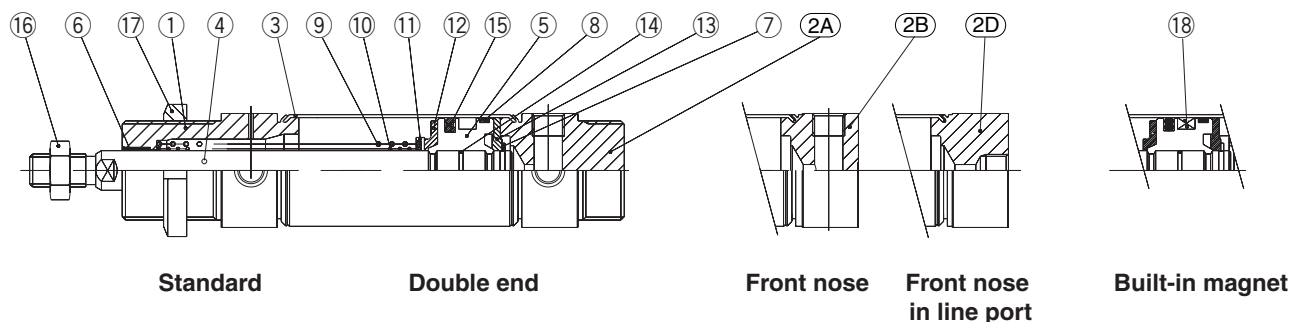
Construction

[First angle projection]

Single acting, Single rod

C□76□32/40-50S Spring return

50 mm stroke or less

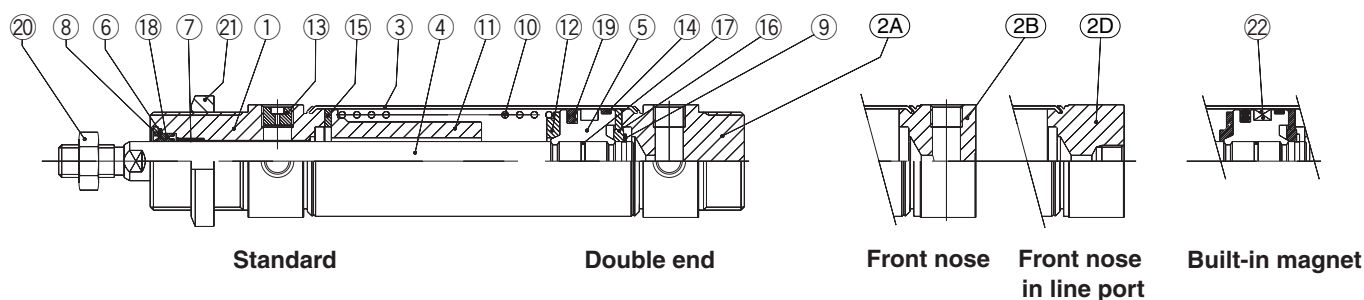


Component Parts

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)

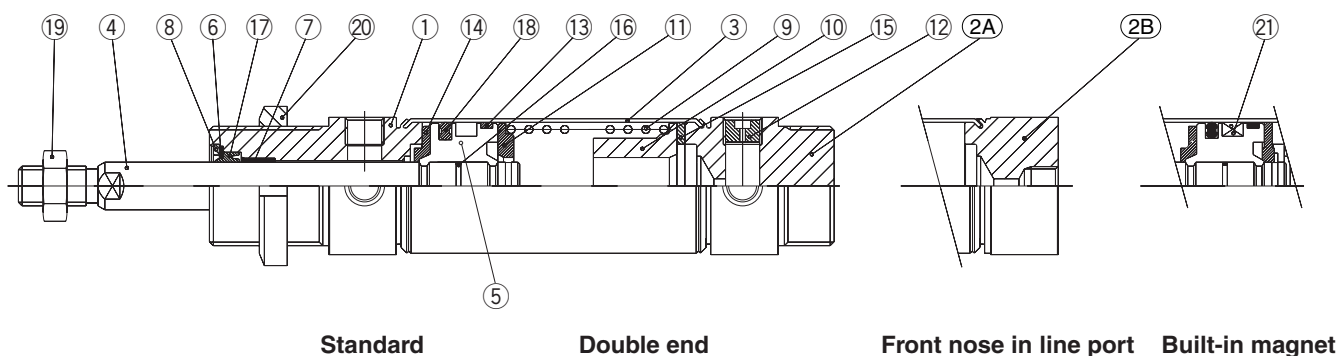
Air Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended **Series C76**

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-

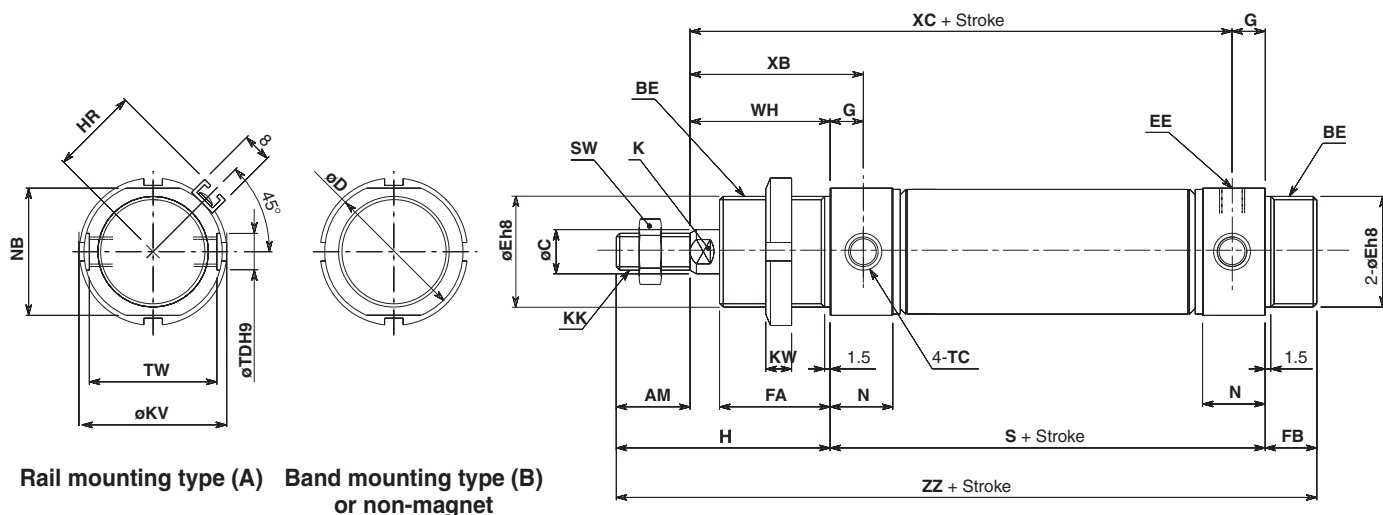
Data

Series C76

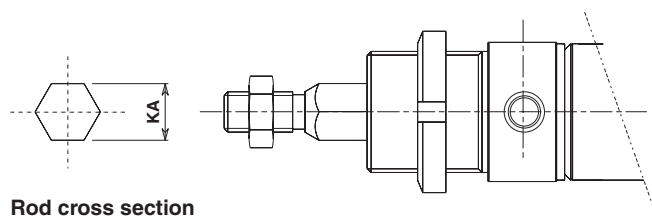
Dimensions

[First angle projection]

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



C□76KE Non-rotating, Piston rod



Rod cross section

(mm)

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 ^{+0.033} _{-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 ^{+0.036} ₀	34.5	38	47
40	24	M38 x 1.5	14	46.5	38 ^{+0.039} _{-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 ^{+0.043} ₀	42.5	45	57

Item		S					XC					ZZ				
Bore	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	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

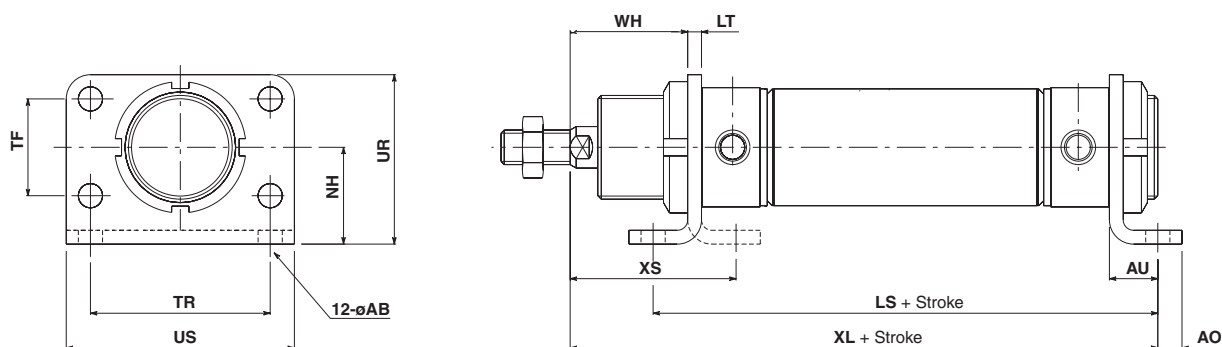
() : In the case of non-rotating

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

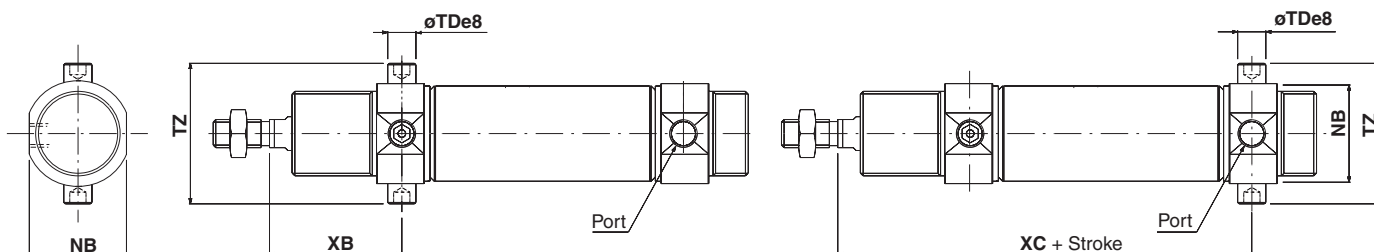
Dimensions with Mounting Bracket

[First angle projection]

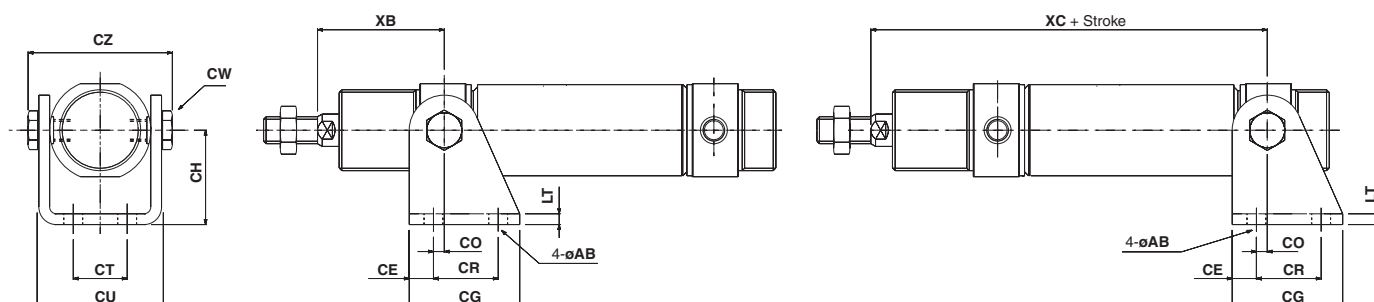
Single acting/Spring return, Single rod

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

Rod trunnion, Head trunnion: C76T32, C76T40



Rod clevis, Head clevis: C76C32, C75C40



(mm)

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	

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	—
40		129	179	204	229	254	154	204	229	254	279	122	172	197	222	247	122	172	197	222	247

Series C76

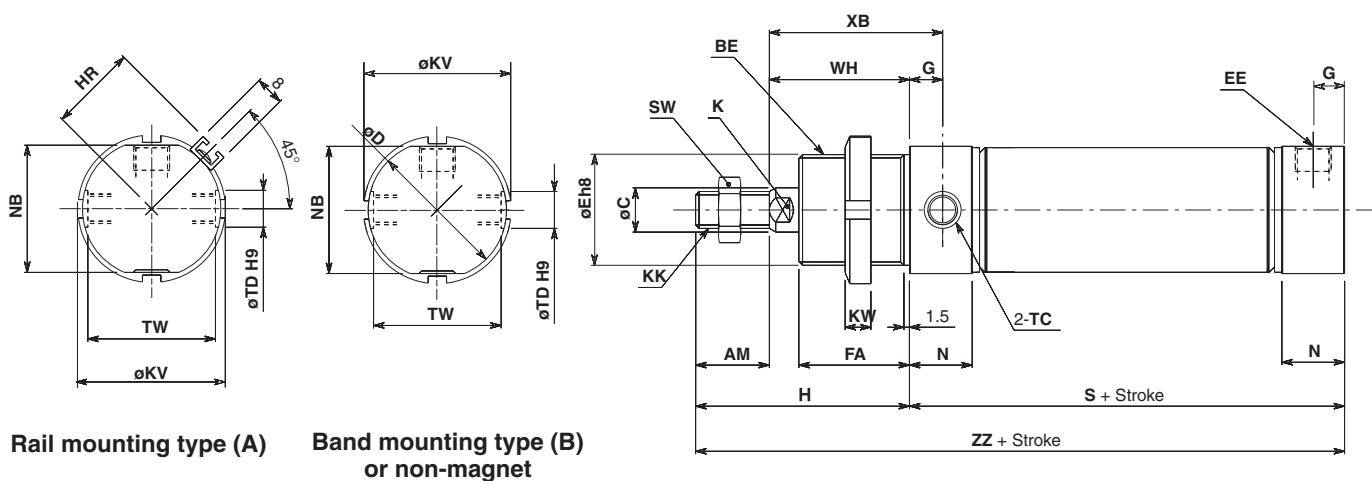
Dimensions

[First angle projection]

Single acting/Spring return, Single rod

Rubber cushion: C□76F Bore—Stroke S—□

Without Magnet, Built-in Magnet

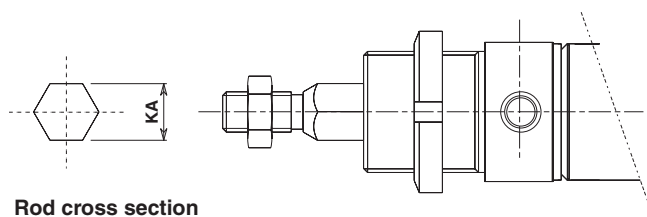


Rail mounting type (A)

Band mounting type (B)
or non-magnet

C□76KF

Non-rotating, Piston rod



Rod cross section

(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	$10_{-0}^{+0.036}$	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	$12_{-0}^{+0.043}$	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

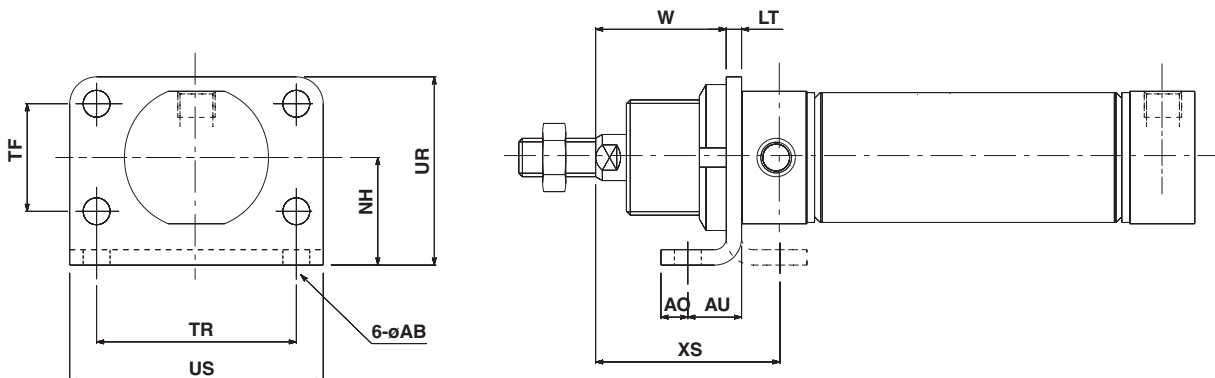
(): In the case of non-rotating

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

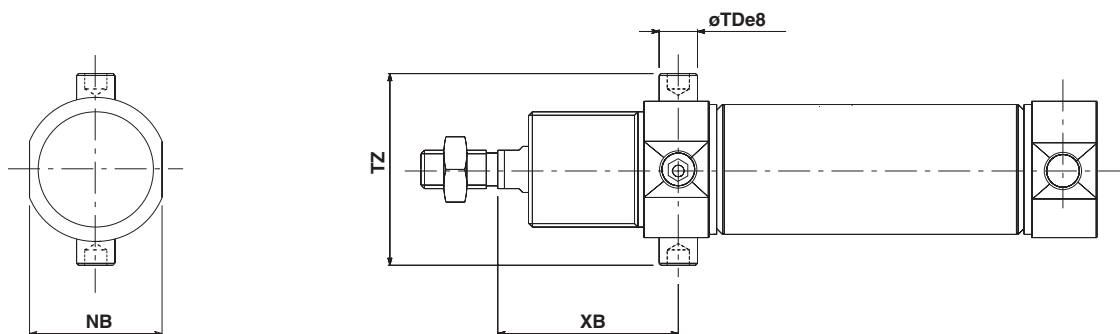
Dimensions with Mounting Bracket

[First angle projection]

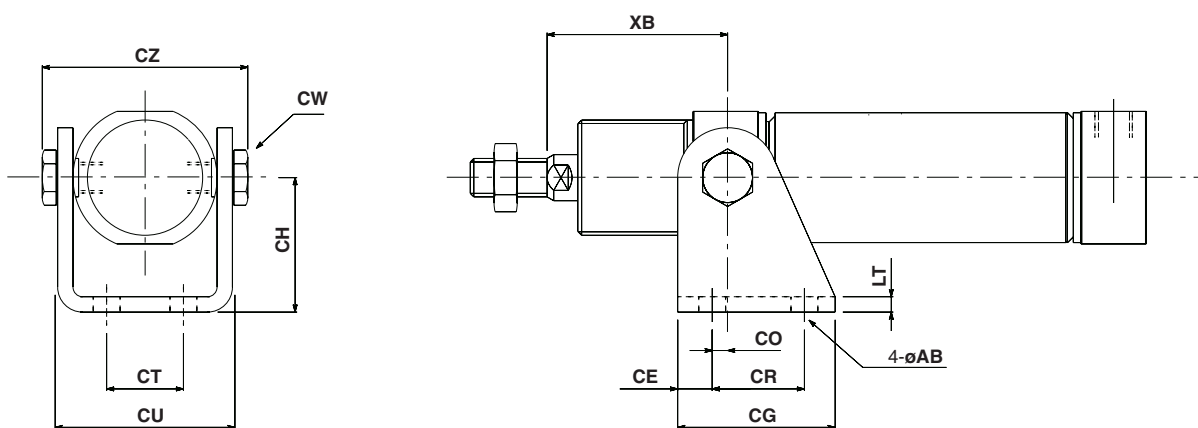
Single acting/Spring return, Single rod

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

Rod trunnion, Head trunnion: C76T32, C76T40



Rod clevis, Head clevis: C76C32, C75C40



(mm)																											
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

(mm)

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data

Series C76

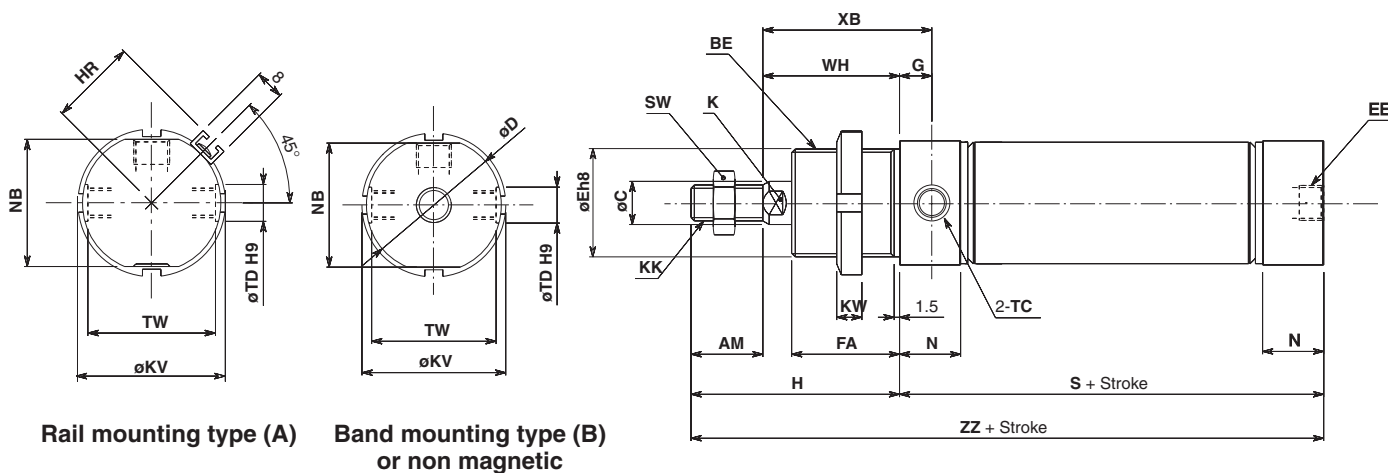
Dimensions

[First angle projection]

Single acting/Spring return, Single rod

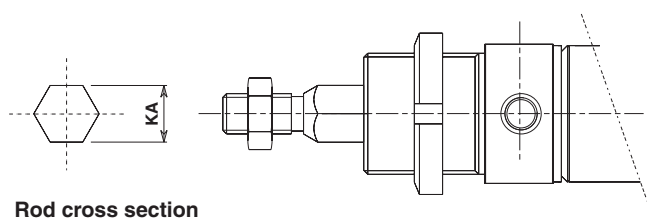
Rubber cushion: C□76Y Bore—Stroke S—□

Without magnet, Built-in magnet



C□76KY

Non-rotating, Piston rod



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 _{-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		S					ZZ				
	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
32			68 (93)	118	143	168	—	126 (151)	176	201	226	—
40			89 (114)	139	164	189	214	158 (183)	208	233	258	283

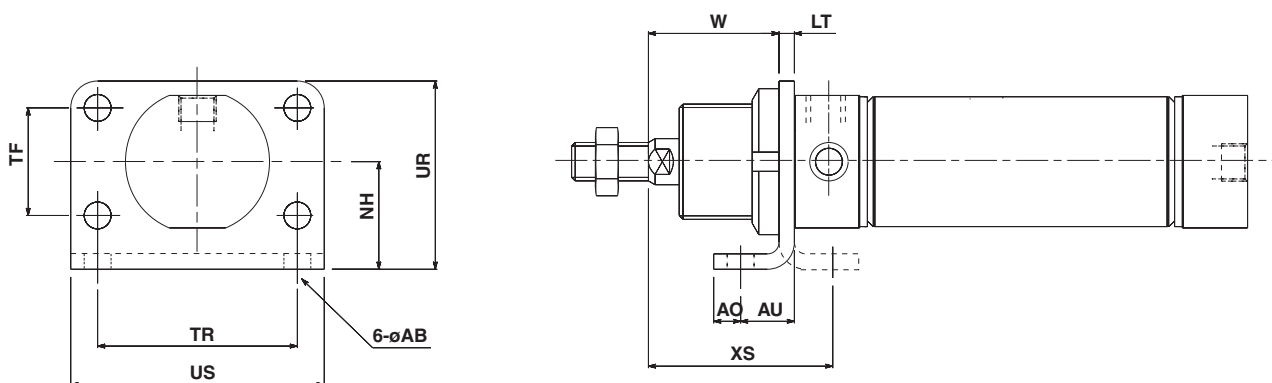
(): In the case of non-rotating

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

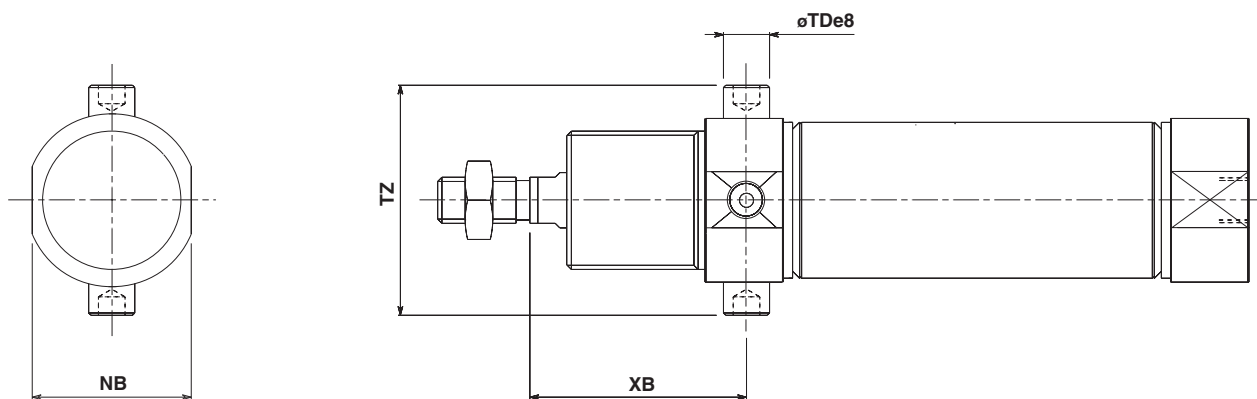
Dimensions with Mounting Bracket

[First angle projection]

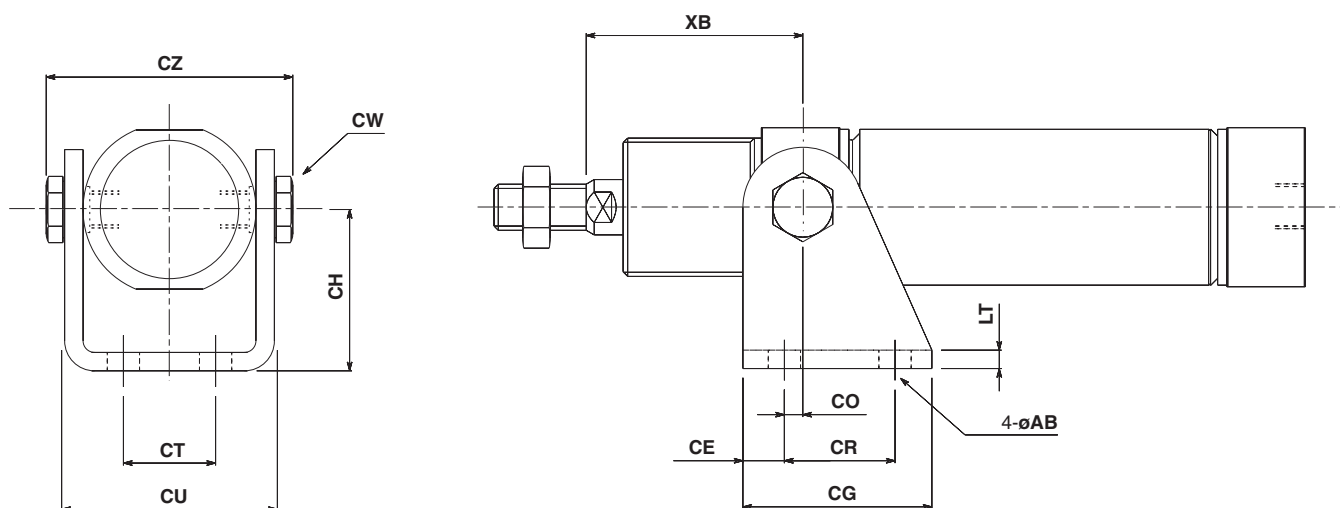
Single acting/Spring return, Single rod
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



(mm)																											
Bore	Rod foot (Flange)												Rod trunnion				Rod clevis										
	øAB	AO	AU	LT	NH	TF	TR	UR	US	W	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} -0.058	62.3	57	9	12	52	40	3	30	28	58.2	17	72.3	5	57

(mm)

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

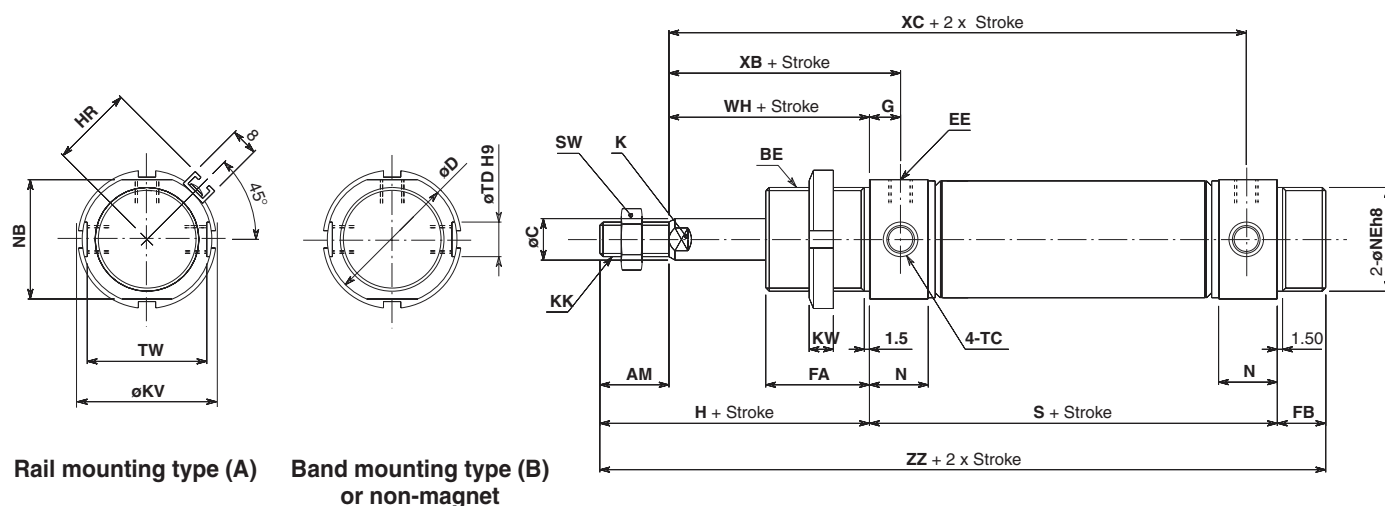
Data

Series C76

Dimensions

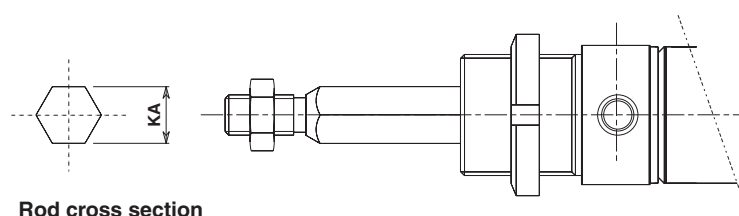
[First angle projection]

Single acting/Spring extended, Single rod
 Rubber cushion: C□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	øC	øD	øEh8	EE	FA	FB	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	$30_{-0.033}^0$	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

Item		S					XC					ZZ				
Bore	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	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

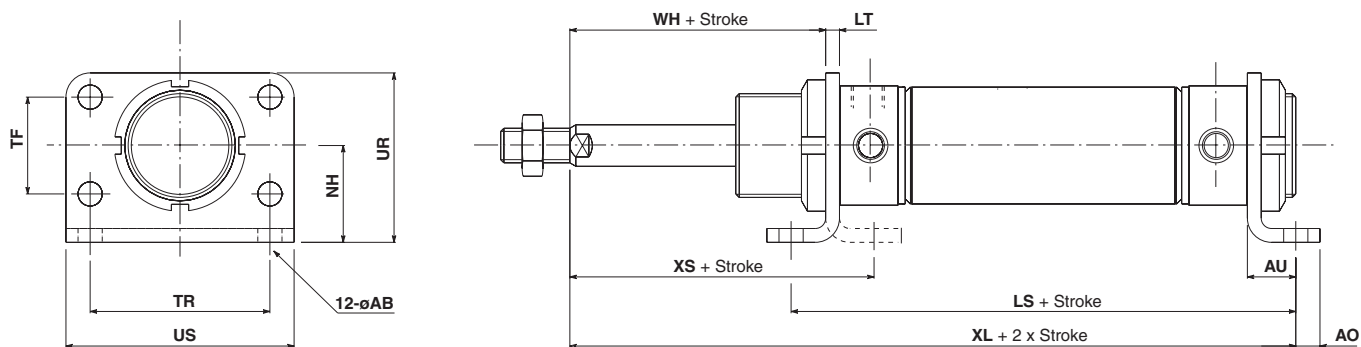
() : In the case of non-rotating

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

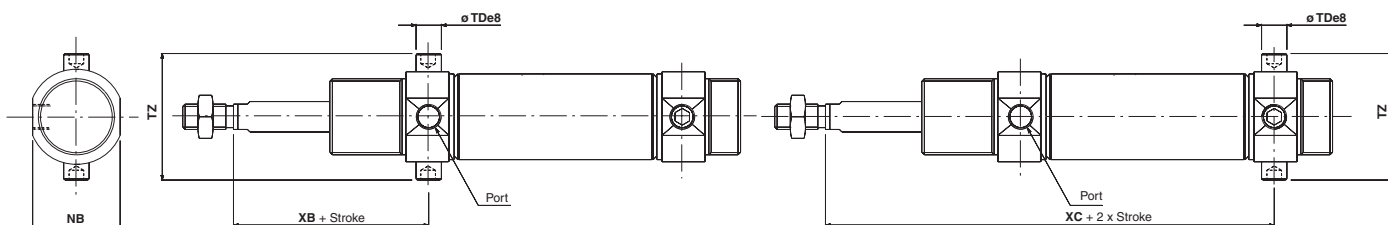
Dimensions with Mounting Bracket

[First angle projection]

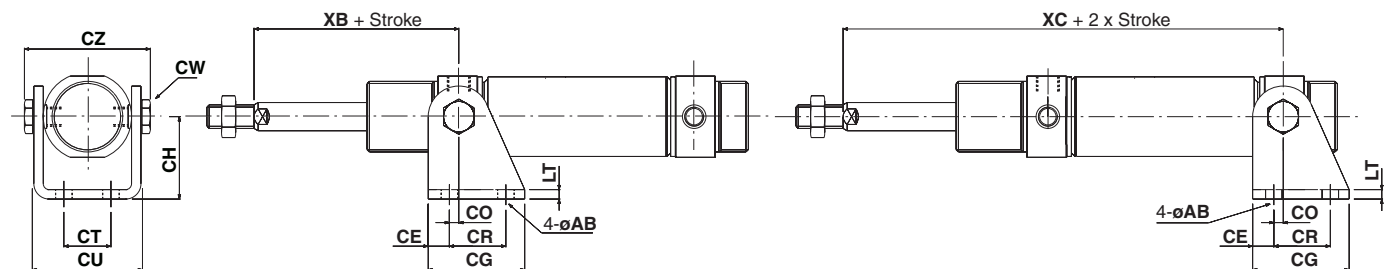
Single acting/Spring extended, Single rod
Rod foot (Flange): C76F32A, C76F40A



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										
	øAB	AO	AU	LT	NH	TF	TR	UR	US	WH	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

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	201 to 250
Bore	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

	Item	Head clevis				
		XC				
	Bore	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

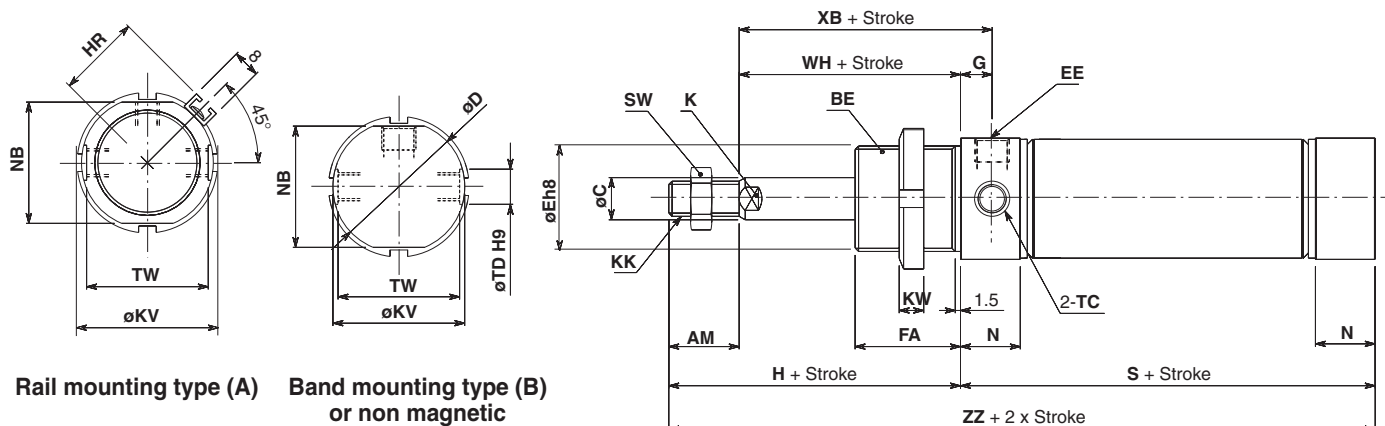
Dimensions

[First angle projection]

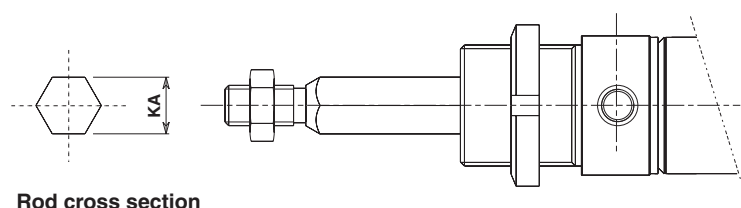
Single acting/Spring extended, Single rod

Rubber cushion: C□76F Bore—Stroke T—□

Without magnet, Built-in magnet



C□76KF 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	$10_{-0}^{+0.036}$	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	$12_{-0}^{+0.043}$	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

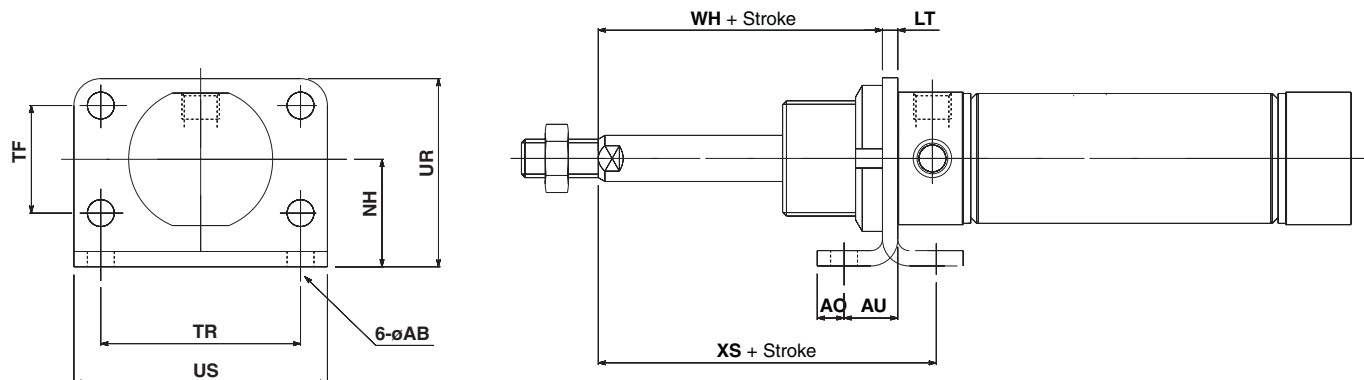
(): In the case of non-rotating

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

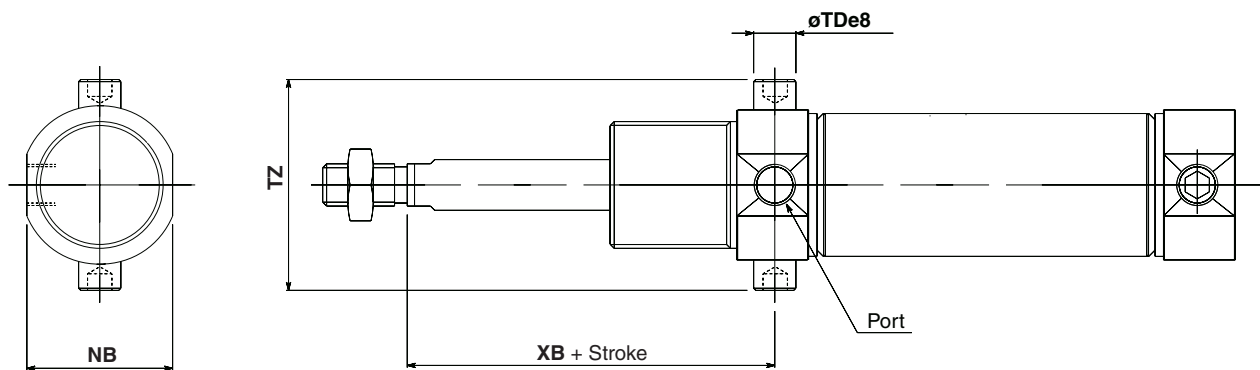
Dimensions with Mounting Bracket

[First angle projection]

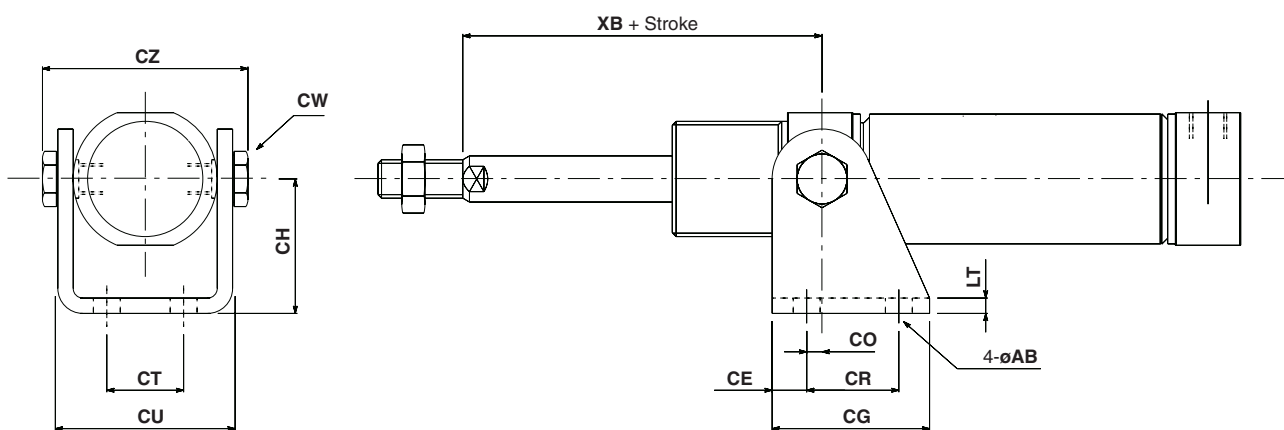
Single acting/Spring extended, Single rod
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



(mm)																											
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)

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

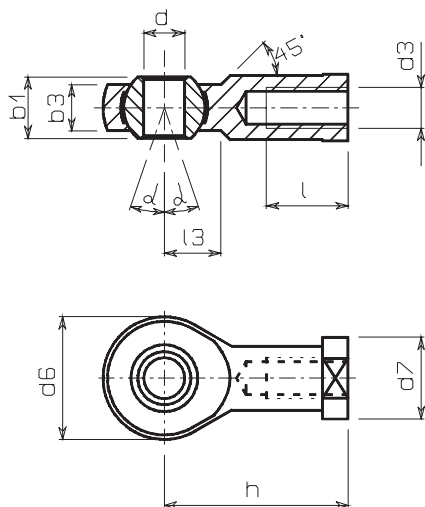
Data

Series C76

Accessory Dimensions

[First angle projection]

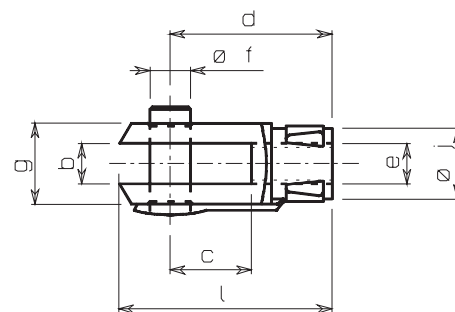
Single Knuckle Joint/DIN648-DIN 24335



(mm)

Bore	Model	Thread d3	dH71	h	d6	b3	b1	l	d7	α^0	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

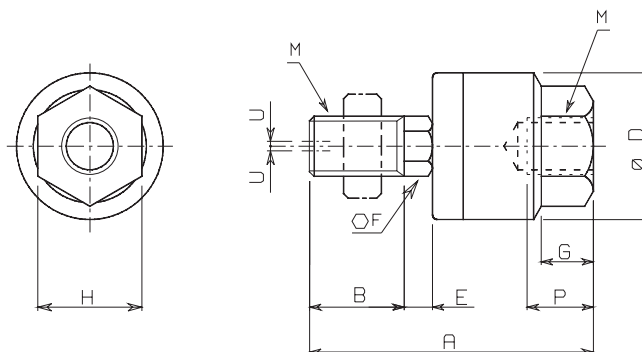
Double Knuckle Joint/ISO8140-DIN71752



(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)

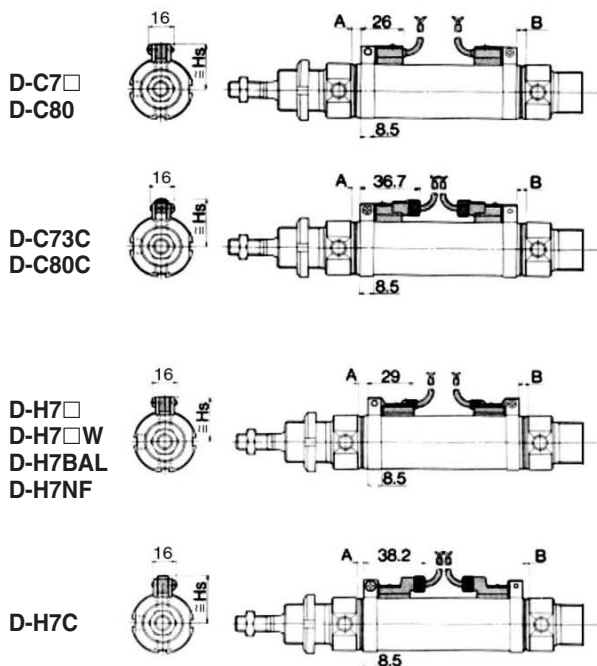
Bore	Model	M		A	B	D	E	F	G	H	Maximum screwed depth P	Allowable eccentricity U	Max. operating tension and compression power kgf (kN)
		Nominal thread dia.	Pitch										
32	JA25-10-150	10	1.5	49.5	19.5	24	5	8	8	17	9	0.5	250 (2.5)
40	JA40-12-175	12	1.75	60	20	31	6	11	11	22	13	0.75	440 (4.4)

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

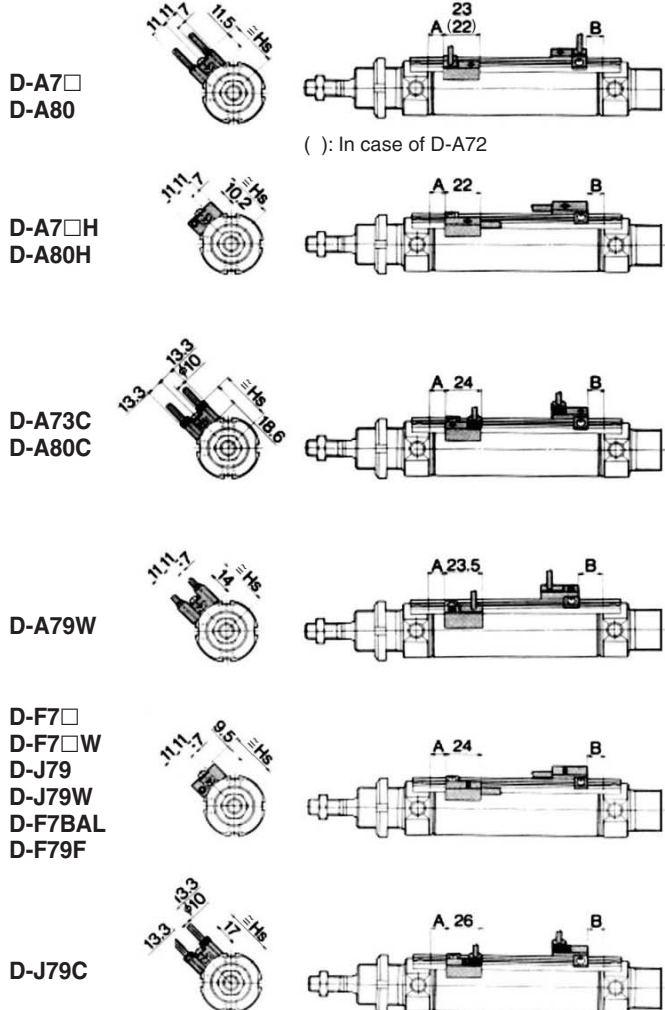
Auto Switch Mounting Position and Mounting Height

[First angle projection]

(Band mounting type)



(Rail Mounting type)



Auto Switch Mounting Position

(mm)

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

• () For air cushion type

• Aim at this number

Auto Switch Mounting Height

(mm)

Bore	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
32	28.5	31	30.5	28	30	36	31.5	31.5	34.5
40	32.5	35	35	5	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-

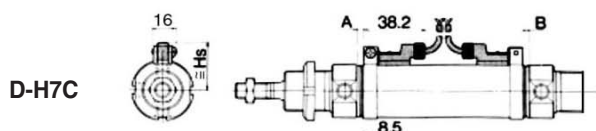
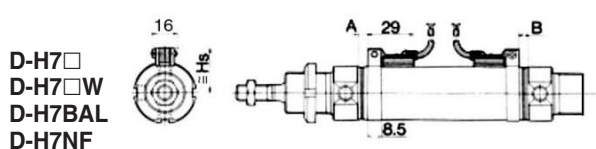
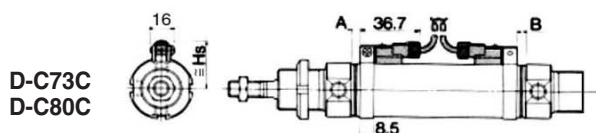
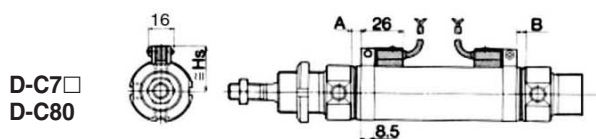
Data

Series C76

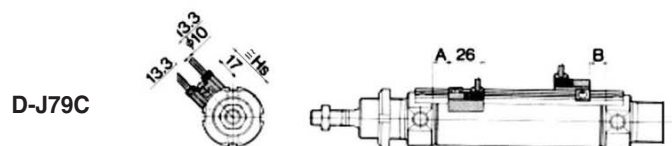
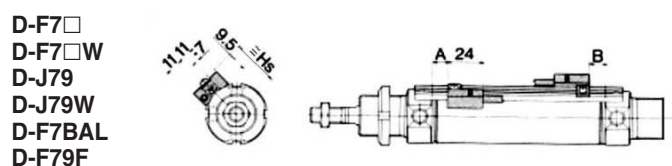
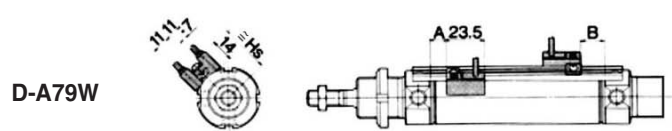
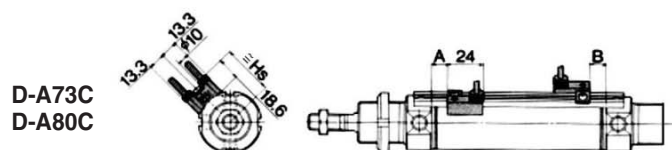
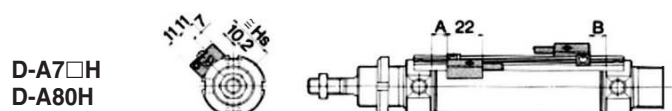
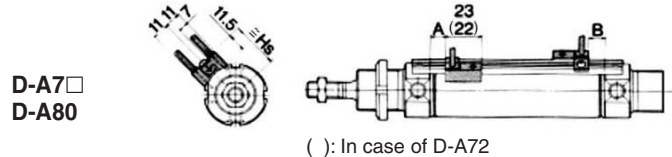
Auto Switch Mounting Position and Mounting Height

[First angle projection]

(Band mounting type)



(Rail Mounting type)



Auto Switch Mounting Position

(mm)

Auto switch model	Bore	Single acting/Spring extended					
		A	B				
			1 to 50 st	51 to 100 st	101 to 150 st	151 to 200 st	151 to 200 st
D-C7□/C80	32	8	32	57	82	107	—
D-C73C/C80C	40	13	37	62	87	112	137
D-A73	32	8.5	32.5	57.5	82.5	107.5	—
D-A80	40	13.5	37.5	62.5	87.5	112.5	137.5
D-A72/A7□H/A80H	32	9	33	58	83	108	—
D-A73C/A80C	32	9	33	58	83	108	—
D-F7□/F7□W	32	9	33	58	83	108	—
D-J79/J79W	32	9	33	58	83	108	—
D-F7□WV	32	9	33	58	83	108	—
D-J79C	32	9	33	58	83	108	—
D-F7BAL, D-F79F	32	9	33	58	83	108	—
D-A79WL	32	6	30	55	80	105	—
D-A79WL	40	11	35	60	85	110	135
D-H7□/H7C	32	7	31	56	81	106	—
D-H7□W	32	7	31	56	81	106	—
D-H7BAL, D-H7NF	40	12	36	61	86	111	136

• Aim at this number

Auto Switch Mounting Height

(mm)

Bore	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
32	28.5	31	30.5	28	30	36	31.5	31.5	34.5
40	32.5	35	35	5	34.5	40.5	35.5	36	39

• Aim at this number

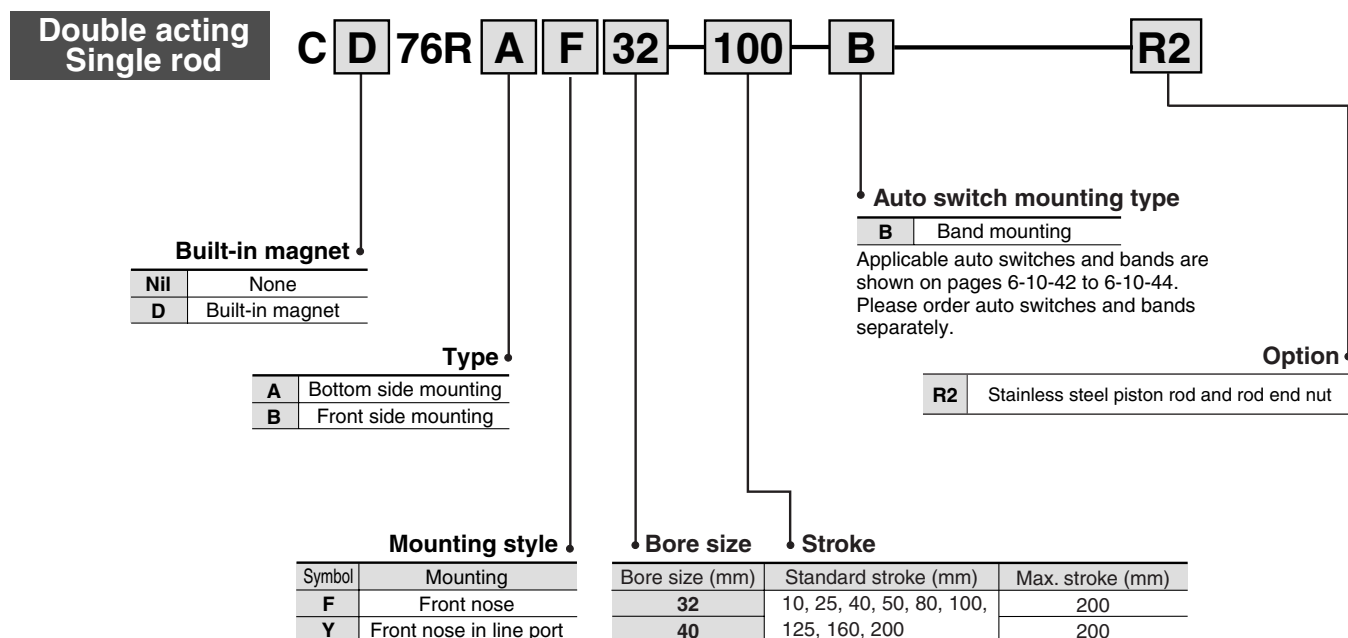
Air Cylinder: Direct Mount Type

Double Acting, Single Rod

Series C76R

ø32, ø40

How to Order



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 1 seal retaining washer 1 retaining ring
40	C76-40PS	

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-

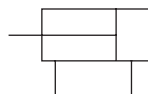
Data

Series C76R



JIS Symbol

Double acting, Single rod



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

Auto Switch Mounting, Minimum Possible Cylinder Stroke

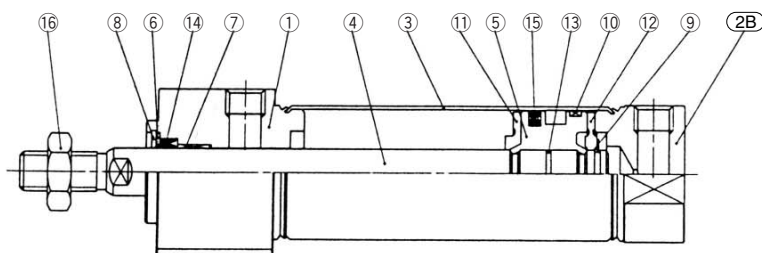
Band Mounting Type

(mm)

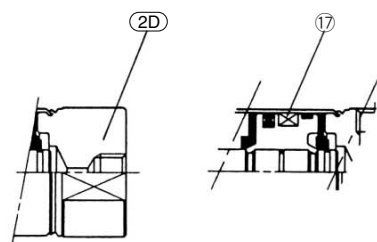
Auto switch model	No. of auto switches				1 pc.
	2 pcs.		n pcs.		
	Different sides	Same side	Different sides	Same side	
D-C7□ D-C80	15	50	$15 + 45(\frac{n-2}{2})$ (n = 2, 4...)	$50 + 45(n - 2)$	10
D-C73C D-C80C D-H7C	15	65	$15 + 45(\frac{n-2}{2})$ (n = 2, 4...)	$65 + 50(n - 2)$	10
D-H7□ D-H7□W D-H7BAL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

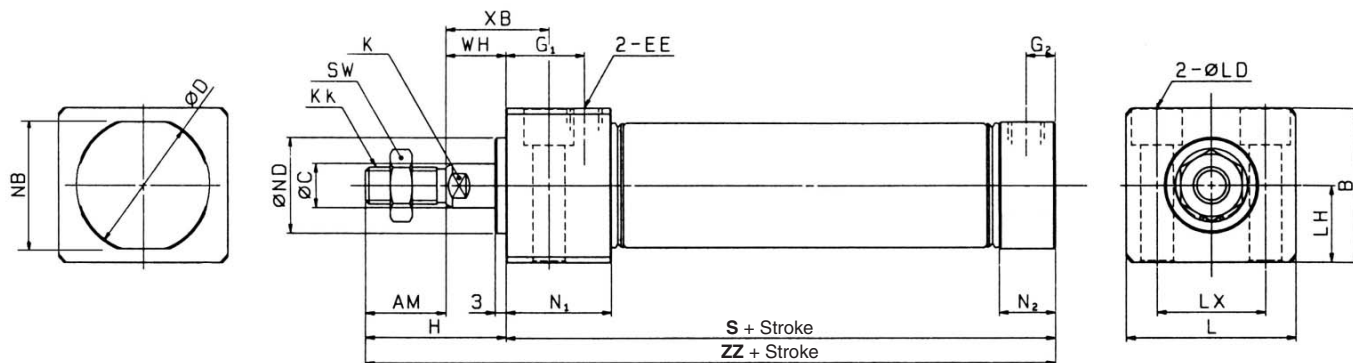
Dimensions

[First angle projection]

Double acting, Single rod

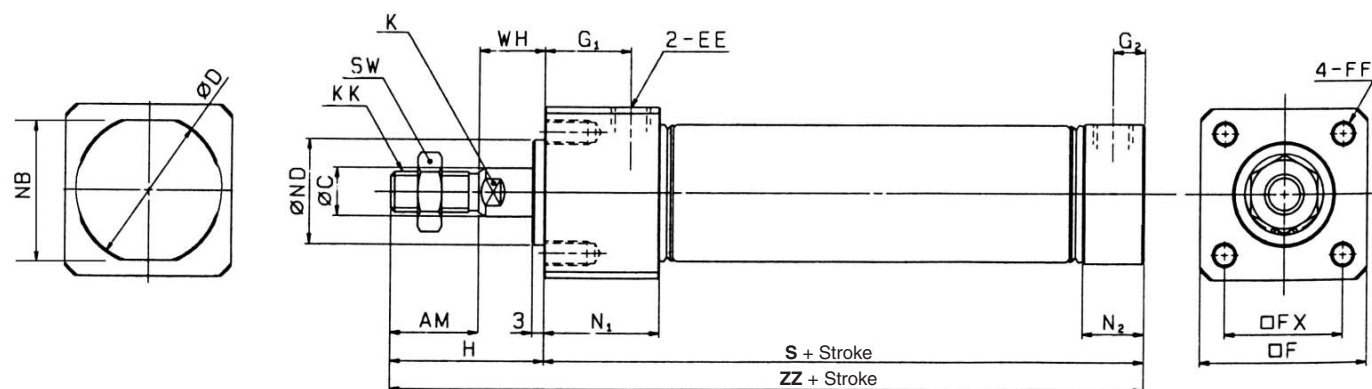
Rubber cushion: C□76RAF Bore—Stroke—B

Without magnet, Built-in magnet



Bore	AM	B	ϕC	ϕD	EE	G ₁	G ₂	H	K	KK	L	ϕLD	LH	LX	N ₁	N ₂	NB	$\phi NDh8$	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	G ₁	G ₂	H	K	KK	N ₁	N ₂	NB	$\phi NDh8$	S	SW	WH	ZZ
32	20	12	37.5	G 1/8	42.4	M6 x 1 dept 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 dept 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

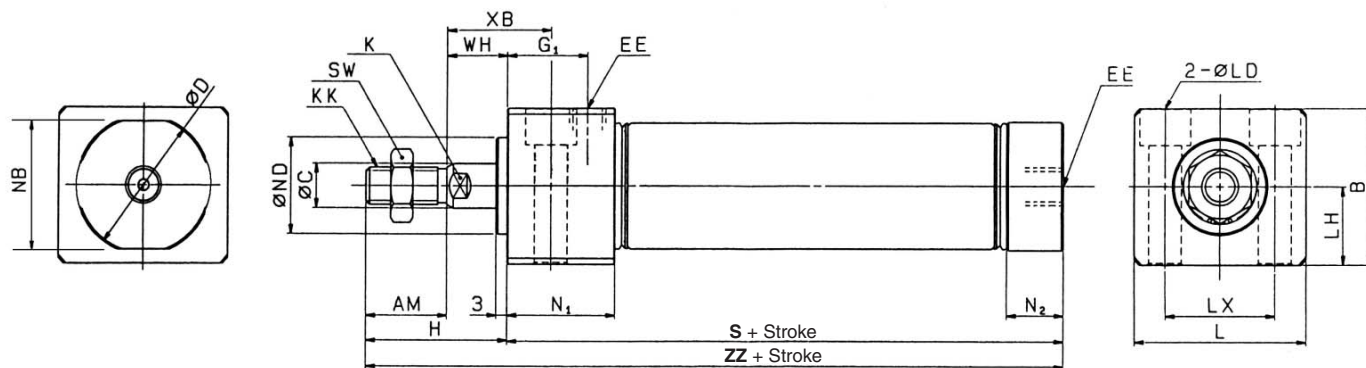
Dimensions

[First angle projection]

Double acting, Single rod

Rubber cushion: C76RAY Bore – Stroke – B

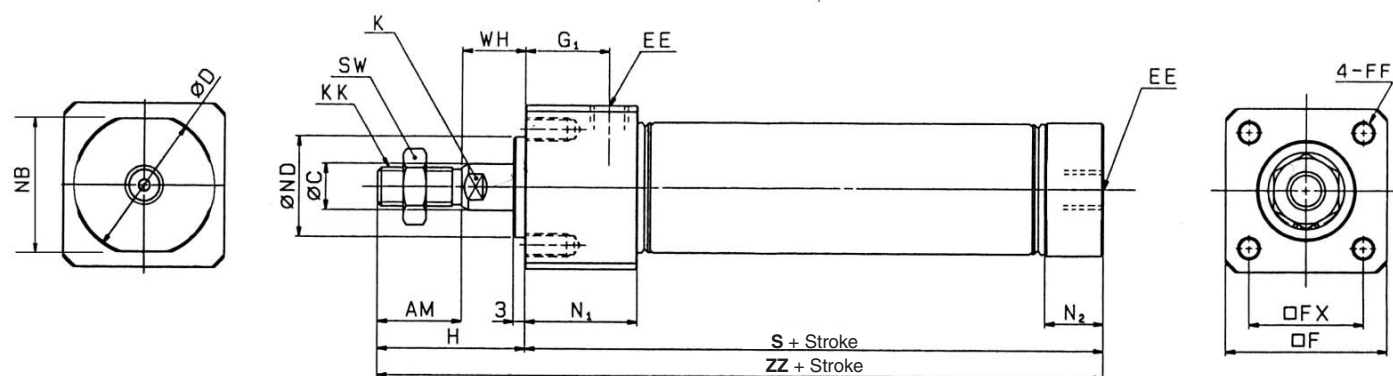
Without magnet, Built-in magnet



Bore	AM	B	øC	øD	EE	G1	H	K	KK	L	øLD	LH	LX	N1	N2	NB	øNDh8	S	SW	WH	XB	ZZ
32	20	42.3	12	37.5	G1 /8	22	36	10	M10 x 1.5	47	ø9, ø14 depth of counter bore 10	21	30	29	17	34.5	26 _{0,033}	80	17	16	28	116
40	24	52.3	14	46.5	G1 /4	27	40	12	M12 x 1.75	58.5	ø11, ø17.5 depth of counter bore 12.5	26	38	38	22	42.5	32 _{0,036}	105	19	16	31	145

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

Without magnet, Built-in magnet



Bore	AM	øC	øD	EE	F	FF	FX	G1	H	K	KK	N1	N2	NB	øNDh8	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 _{-0.033}	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 _{-0.039}	105	19	16	145

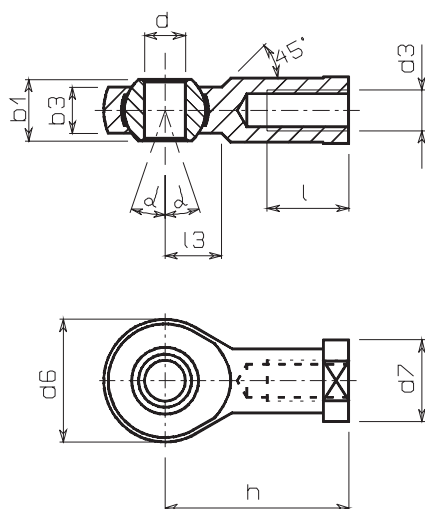
Air Cylinder: Direct Mount Type

Double Acting, Single Rod **Series C76R**

Accessory Dimensions

[First angle projection]

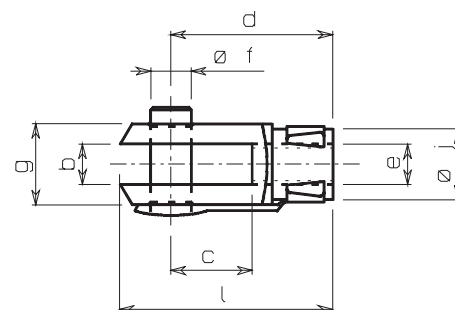
Single Knuckle Joint/DIN648



(mm)

Bore	Model	Thread d3	dH71	h	d6	b3	b1	l	d7	α^0	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

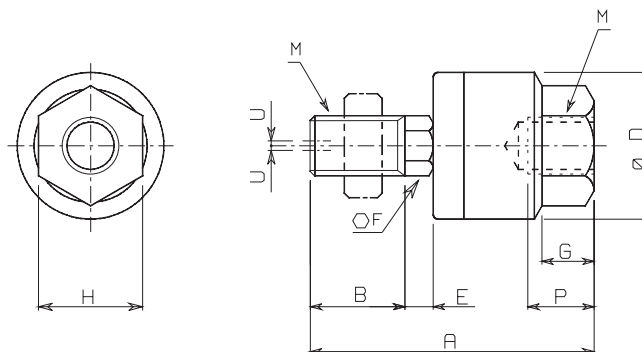
Double Knuckle Joint/DIN71751



(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 kgf (kN)
		Nominal thread dia.	Pitch										
32	JA25-10-150	10	1.5	49.5	19.5	24	5	8	8	17	9	0.5	250 (2.5)
40	JA40-12-175	12	1.75	60	20	31	6	11	11	22	13	0.75	440 (4.4)

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data

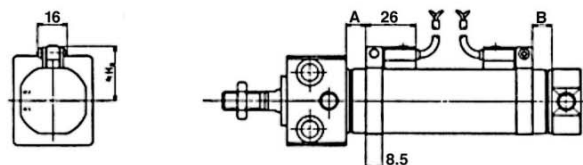
Series C76R

Auto Switch Mounting, Position and Mounting Height

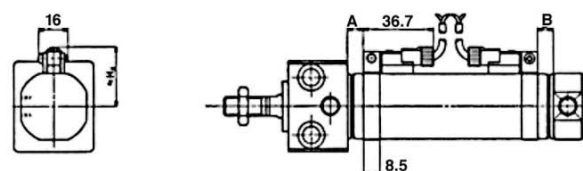
Reed Switch Setting Position (Stroke end)

(Band mounting type)

D-C7□
D-C80



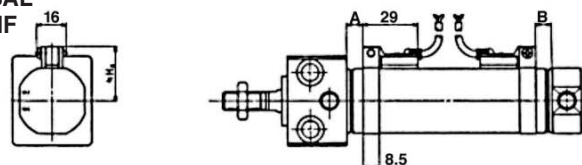
D-C73C
D-C80C



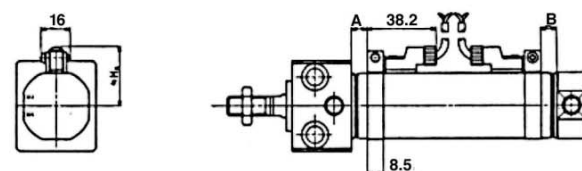
Solid State Switch Setting Position (Stroke end)

(Band mounting type)

D-H7□
D-H7□W
D-H7BAL
D-H7NF



D-H7C



Auto Switch Mounting Position (mm)

Bore	D-C7□ D-C80 D-C73C D-C80C		D-H7□ D-H7C D-H7□W D-H7BAL D-H7NF	
	A	B	A	B
32	8	7	7	6
40	14	12	13	11

• Aim at this number.

Auto Switch Mounting Height (mm)

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

• Aim at this number.

Applicable Auto Switch

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage			Auto switch model**			Lead wire length* (mm)				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	—	C76	—	A76H	●	●	—	—	IC circuit	Relay, PLC	
				2-wire	—	—	200 V	—	A72	A72H	●	●	—	—	—		
			Connector		No	12 V	100 V	C73	A73	A73H	●	●	●	—	—		
		5 V, 12 V				≤ 100 V	C80	A80	A80H	●	●	—	—	IC circuit			
		Yes			12 V	—	C73C	A73C	—	●	●	●	●	—			
	No				5 V, 12 V	≤ 24 V	C80C	A80C	—	●	●	●	●	IC circuit			
	Diagnostic indication (2-color)	Grommet	Yes		—	—	—	A79W	—	●	●	—	—	—			
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	H7A1	F7NV	F79	●	●	○	—	IC circuit	Relay, PLC	
				3-wire (PNP)				H7A2	F7PV	F7P	●	●	○	—	—		
		Connector		2-wire		12 V		H7B	F7BV	J79	●	●	○	—	—		
	H7C							J79C	—	●	●	●	●	—			
	Diagnostic indication (2-color)	Grommet		3-wire (NPN)		5 V, 12 V		H7NW	F7NWX	F79W	●	●	○	—	IC circuit		
				3-wire (PNP)				H7PW	—	F7PW	●	●	○	—	—		
				2-wire				12 V	H7BW	F7BWV	J79W	—	●	○	—		—
									H7BA	F7BAV	F7BA	—	●	○	—		—
				With timer				3-wire (NPN)	5 V, 12 V	—	—	F7NT	●	●	○		—
	With diagnostic output (2-color)	4-wire (NPN)		H7NF		—		F79F		●	●	○	—				

* Lead wire length symbols: 0.5 m Nil (Example) C73C
 5 m Z (Example) C73CZ
 3 m L (Example) C73CL
 None N (Example) C73CN

* Solid state switches marked with "○" are manufactured upon receipt of order.

CJ1

CJP

CJ2

CM2

CG1

MB

MB1

CA2

CS1

C76

C85

C95

CP95

NCM

NCA

D-

-X

20-

Data

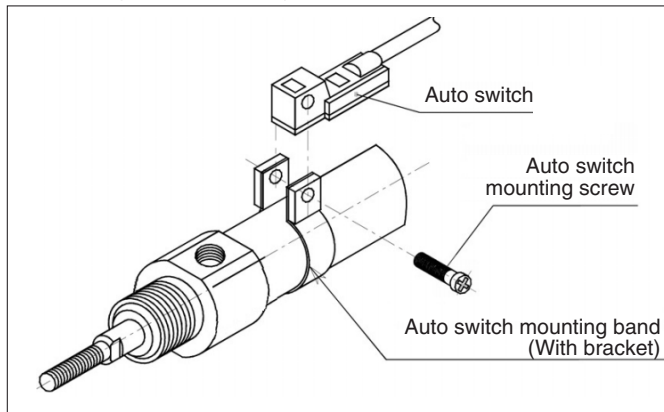
Series C76

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.

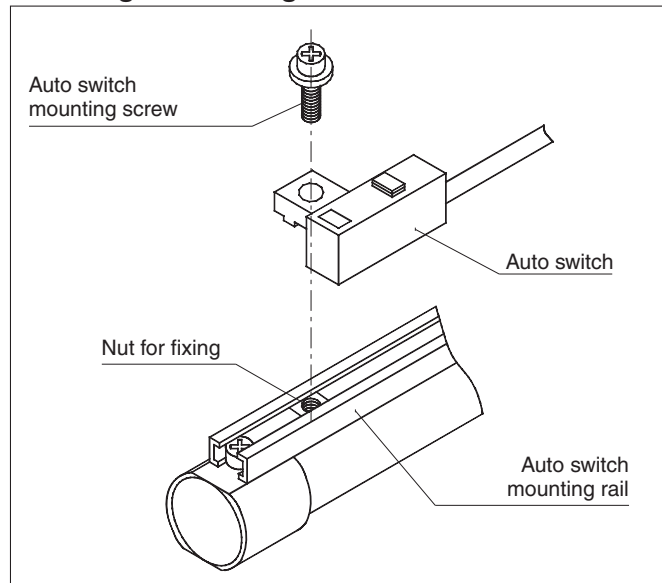
Series	Bore size (mm)	
	32	40
C76	BM2-032	BM2-040

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

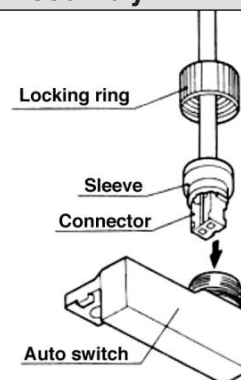
Mounting and Moving Method of Auto Switch



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.

Plug-in Connector Assembly

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



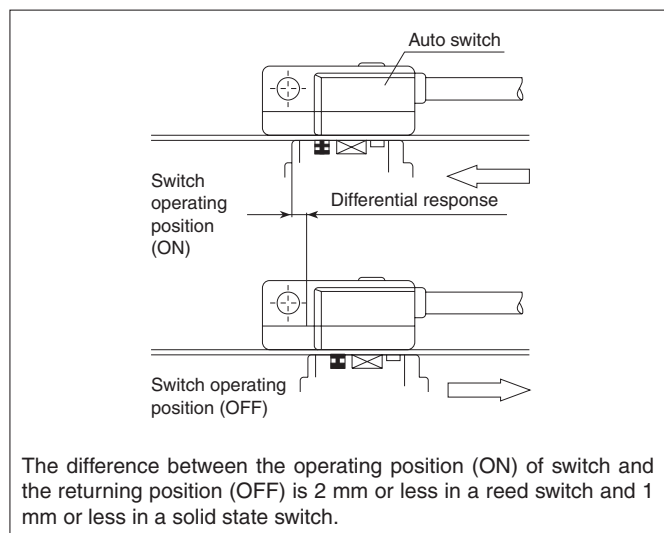
With the convex port of the connector highest, insert the connector into the auto switch up to the sleeve. Screw the locking ring into the switch (do not tighten with pliers, hand tighten only).

Lead Wire with Connector

Part no.	Length
D-LC05	0.5 m
D-LC30	3 m
D-LC50	5 m

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).

**Contact Protective Box/CD-P11, CD-P12**

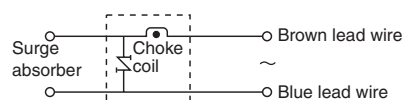
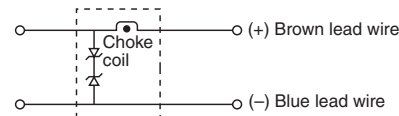
The auto switch of D-A7/A8 type, D-A7□H/A80H type, D-A73C/A80C type, D-C7/C8 type, D-C73C/C80C type are not incorporated with a contact protective circuit.

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

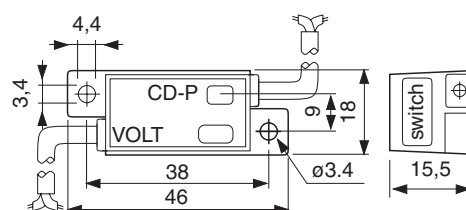
Part no.	CD-P11		CD-P12
Load voltage	100 VAC	200 VAC	24 VDC
Max. load current	25 mA	12.5 mA	50 mA

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

**Contact Protective Box/Internal Circuit****CD-P11****CD-P12****Operating Range of Auto Switch**

(mm)

Mounting	Model	Bore	
		32	40
Band	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		
	D-A79W	13	14
	D-F7□/J79/F7□W/J79W		
	D-F7□V/F7□WV/F79F	6	6.5
	D-J79C/F7BA□		

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

Series C76

1 High Temperature XB6

C76 Mounting Bore size – Stroke – XB6

E, F, Y 32, 40 mm

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

Possible applications:

- Bore size 32 and 40 mm
- Rubber bumper
- Without magnets (Auto switches cannot be used at high temperature.)
- Single rod — Double acting
- Double rod — Double acting (W)

Dimensions unchanged

Specifications

Type	Air cylinder
Applicable size	ø32, ø40 mm
Action	Double acting
Ambient temperature range	–10 to 150°C
Piston speed	50 to 500 mm/s
Cushion	Rubber bumper
Material	Seal: Fluorocarbon rubber Wear ring: Fluorocarbon resin
Grease	Fluorinated grease

Note) Contact SMC for non-rotating type.

3 Low Speed XB9

C76 Mounting Bore size – Stroke – XB9

E, F, Y 32, 40 mm

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

All strokes drive at a constant speed smoothly.

Possible applications:

- Bore size 32 and 40 mm
- Rubber bumper type only
- With or without magnets
- Single rod — Double acting

Dimensions unchanged

Specifications

Type	Air cylinder
Applicable size	ø32, ø40 mm
Action	Double acting
Piston speed	10 to 50 mm/s
Cushion	Rubber bumper

Note) Contact SMC for non-rotating type.

2 Low Temperature XB7

C76 Mounting Bore size – Stroke – XB7

E, F, Y 32, 40 mm

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

Possible applications:

- Bore size 32 and 40 mm
- Rubber bumper
- Without magnets (Auto switches cannot be used at low temperature.)
- Single rod — Double acting
- Double rod — Double acting (W)

Dimensions unchanged

Specifications

Type	Air cylinder
Applicable size	ø32, ø40 mm
Action	Double acting
Ambient temperature range	–55 to 70°C
Cushion	Rubber bumper
Material	Seal: Low nitrile rubber Wear ring: Fluorocarbon resin
Grease	Fluorinated grease

Note) Contact SMC for non-rotating type.

4 Heavy-duty Scraper XC4

C76 Mounting Bore size – Stroke – XC4

E, F, Y 32, 40 mm

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

Possible applications:

- Bore size 32 and 40 mm
- Rubber bumper type only
- With or without magnets
- Single rod — Double acting
- Double rod — Double acting (W)

Dimensions unchanged

Specifications

Type	Air cylinder
Applicable size	ø32, ø40 mm
Max. operating pressure	1 MPa (10 bar)
Min. operating pressure	0.08 MPa (0.8 bar)
Cushion	Rubber bumper
Wiper ring	NBR (SCB)

Note) Not applicable for non-rotating type.

Construction

