

Air Cylinders
Series C76
Ø 32, Ø 40



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

Series C76


EMC-C76-01A-UK

Series C76: Ø 32, Ø 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

Double end

Front nose

Front nose
in line port

Rod
boot

Bore size
(mm)
32 40

Series

Type

Action

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 return	●	●
		Single acting, Spring extended	●	●
		Double acting, Single rod	●	●
		Single acting, Spring return	●	●
	Direct mount	Double acting, Single rod	●	●
		Single rod	●	●
	Mounting bracket	Rod foot /Rod flange (Single)	●	●
		Rod and head foot (Double)	●	●
		Rod trunnion	●	●
		Head trunnion	●	●
		Rod clevis	●	●
		Head clevis	●	●

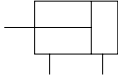
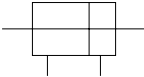
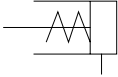
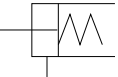

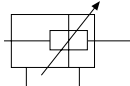
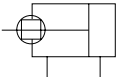
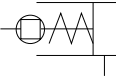
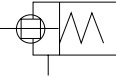
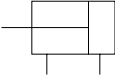
(Note 2)

(Note 1)

(Note 1)

● Reco
Note 1)
Note 2)

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
			<div>Spring return</div>  <div>Spring extended</div> 				<div>Spring return</div>  <div>Spring extended</div> 	
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

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.

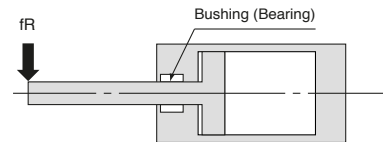
Reference: Even under a light load, if the piston rod has been stopped by an external stopper at the extending side of the cylinder, the maximum force generated by the cylinder will act upon the cylinder itself.

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	0.3	54	58
						F	0.5	40	44
						G	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	0.3	—	—
						D	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	0.5	(100)*				(100)*
			G	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	0.3	(100)*	(100)*
						F	0.5	(100)*	(100)*
						G	0.7	(100)*	(100)*
						G	0.3	(100)*	(100)*
	0.5	86				92			
	0.7	71				77			

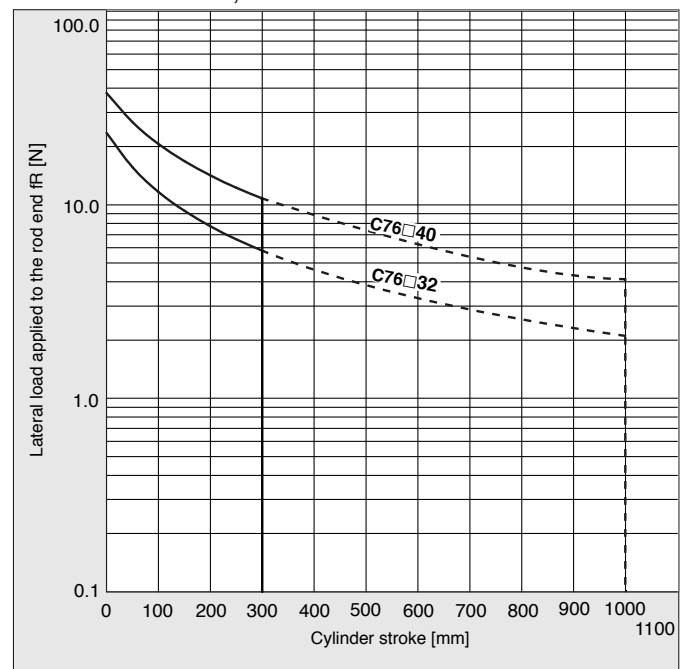
* The data in () are limited by max. stroke length

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: Ø 32, Ø 40



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

Series C76

Ø 32, Ø 40

How to Order

**Double acting
Single rod**

**Double acting
Double rod**

C D 76 **K E 32-100 C** **J A**

C D 76 W **E 32-100 C** **JJ B**

Built-in magnet

—	None
D	Built-in magnet

Type

—	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 42 to 44. Please order auto switches and bands separately.

Made to Order
Refer to page 5 for details.

Rod boot

—	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

—	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

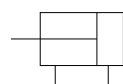
Series C76



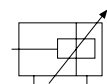
JIS Symbol

Standard: Double acting

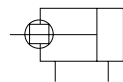
Rubber bumper
Single rod



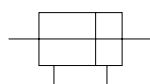
Air cushion
Single rod



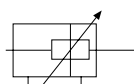
Non-rotating: Double acting, Single rod



Rubber bumper
Double rod



Air cushion
Double rod



Made to Order Common Specifications
(For details ⇨ p. 7-1 to 7-6)

Symbol	Specifications
-XA□	Change of rod end shape
-XB6	Heat resistant cylinder (-10 to 150 °C)
-XB7	Cold resistant cylinder (-40 to 70 °C)
-XB9	Low-speed cylinder (10 to 50 mm/s)
-XC6B	Stainless steel piston rod, piston rod nut and mounting nut *
-XC6A	Stainless steel piston rod and piston rod nut *

* For details refer to www.smc.eu

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		G1/8	G1/4
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 (Ø 32) 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				
	2 pcs.		n pcs.		1 pc.
	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 D-H7□ D-H7□W D-H7BAL D-H7NF	15	65	$15 + 50(\frac{n-2}{2})$ (n = 2, 4...)	65 + 50(n - 2)	10
	15	60	$15 + 45(\frac{n-2}{2})$ (n = 2, 4...)	60 + 45(n - 2)	10

Rail Mounting Type

[mm]

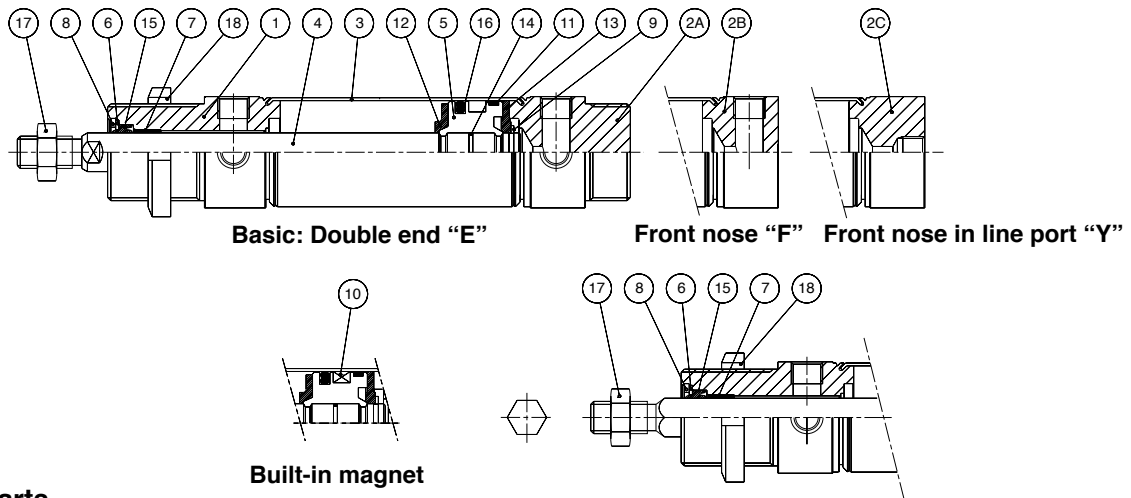
Auto switch model	No. of auto switches				
	2 pcs.		n pcs.		1 pc.
	Different sides	Same side	Different sides	Same side	
D-A7□/A80 D-A7□H/A80H D-A73C/A80C D-F7□/F7□V D-J79/J79C	—	10	—	$10 + 35(\frac{n-2}{2})$ (n = 2, 4...)	5
D-A79W, D-J79W D-F7□W, D-F7BAL D-F79F, F7□WV D-F7BAVL	—	15	—	$15 + 35(\frac{n-2}{2})$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

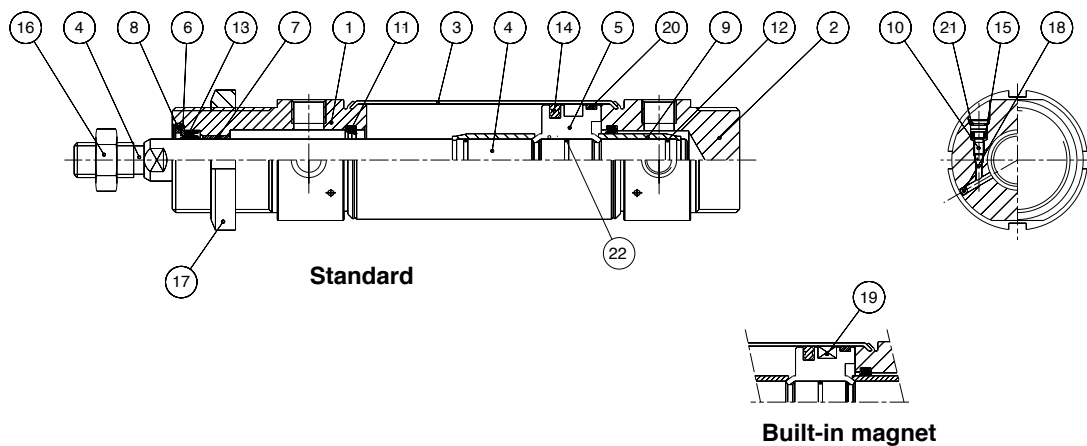


Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminium alloy	1	White Anodised
②A	Head cover E	Aluminium alloy	1	White Anodised
②B	Head cover F	Aluminium alloy	1	White Anodised
②C	Head cover Y	Aluminium alloy	1	White Anodised
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminium 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	Aluminium alloy	1	White Anodised
②	Head cover E	Aluminium alloy	1	White Anodised
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminium 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	

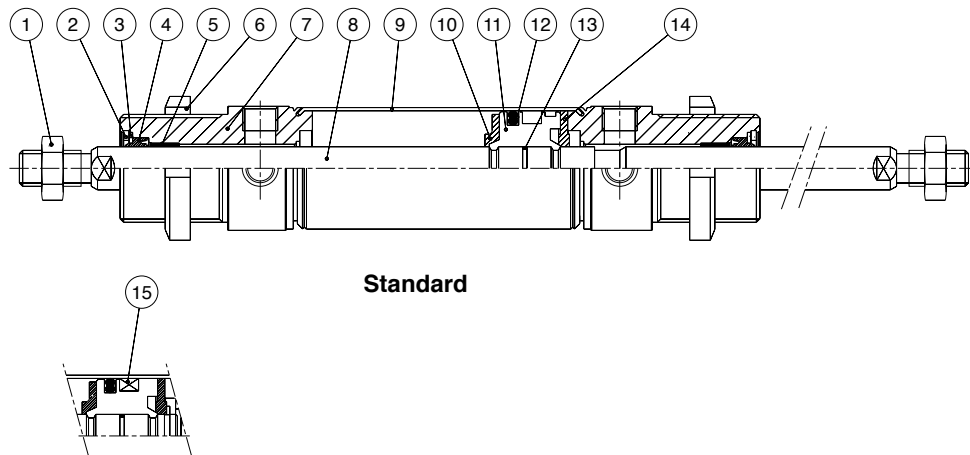
No.	Description	Material	Qty.	Note
⑫	Cushion ring gasket	NBR	2	
⑬	Rod seal	NBR	1	
⑭	Piston seal	NBR	1	
⑮	Cushion needle seal	NBR	1	
⑯	Rod end nut	Carbon steel	1	Nickel plating
⑰	Mounting nut	Carbon steel	1	Nickel plating
⑱	Steel ball	Stainless steel	2	
⑲	Magnet	Magnet	1	(Switch type only)
⑳	Wear ring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

Series C76

Construction

[First angle projection]

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



Standard

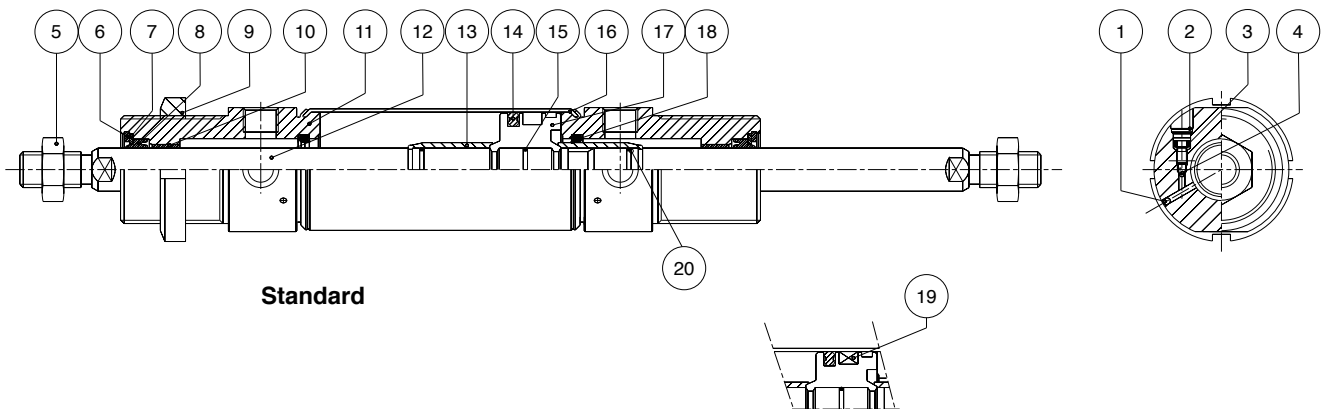
Built-in magnet

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	Aluminium alloy	2	White anodised
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	Aluminium 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	Aluminium alloy	2	White anodised
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	Aluminium 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**

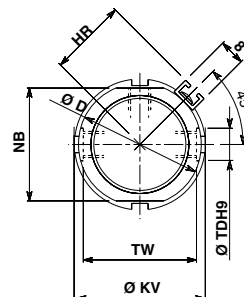
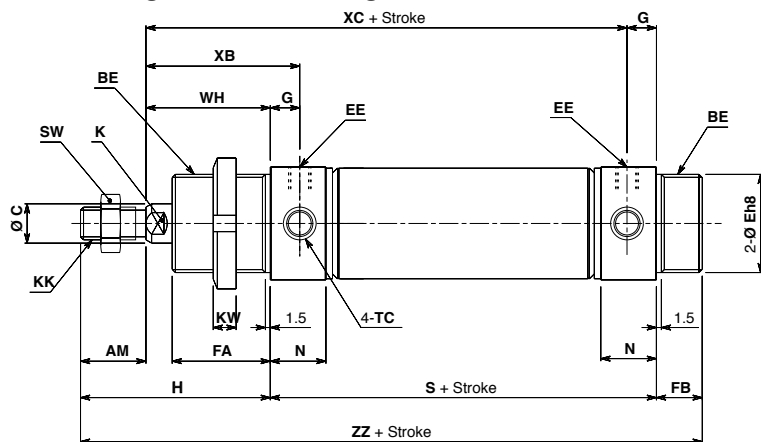
Dimensions

[First angle projection]

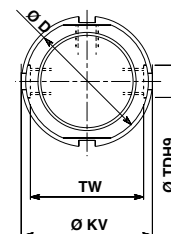
Double acting, Single rod

Rubber cushion: C□76E Bore—Stroke—□

Without magnet, Built-in magnet



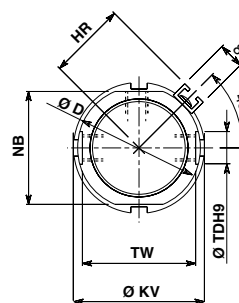
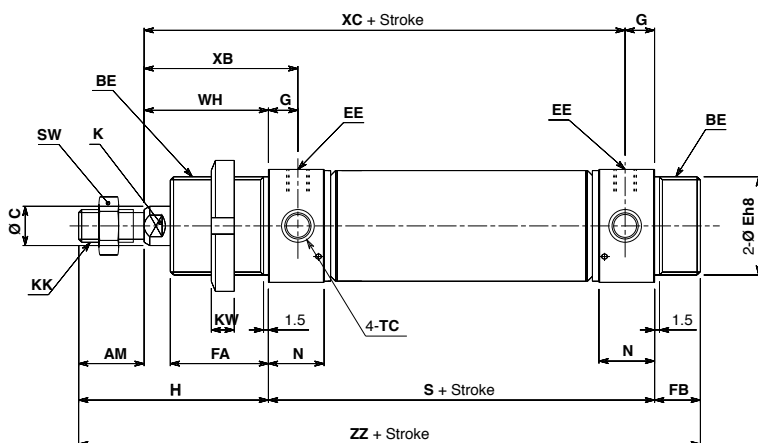
Rail mounting type (A)



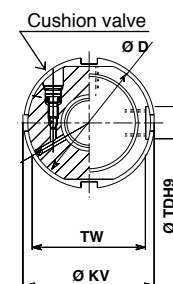
Band mounting type (B)
or non-magnet

Air cushion: C□76E Bore—Stroke C—□

Without magnet, Built-in magnet

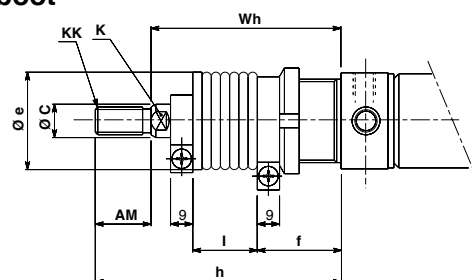


Rail mounting type (A)



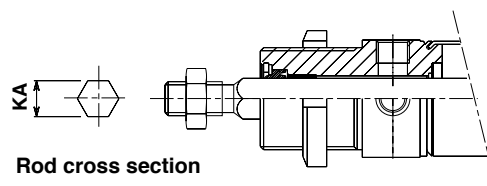
Band mounting type (B)
or non-magnet

With rod boot



C□76KE Bore—Stroke C—□

Non-rotating, Piston rod (Rubber cushion only)



Rod cross section

Bore	AM	BE	Ø C	Ø D	Ø Eh8	EE	FA	FB	G	H	HR	K	KA	KK	Ø KV	KW	N	NB	S	SW	TC	Ø TDH9	TW	WH	XB	XC	ZZ
32	20	M30 x 1.5	12	37.5	30 ^{+0.036} _{-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} _{-0.043}	34.5	38	47	97	140
40	24	M38 x 1.5	14	46.5	38 ^{+0.043} _{-0.038}	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} _{-0.040}	42.5	45	57	122	174

() : In the case of air cushion

With Rod Boot

Item Bore Stroke	AM	Ø C	Ø e	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

Item Bore 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

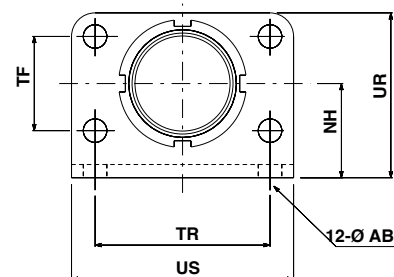
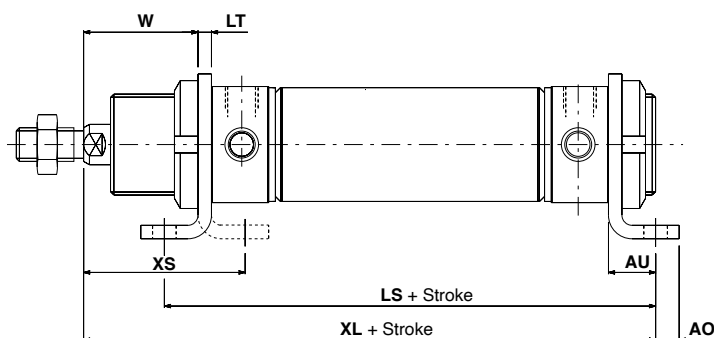
Series C76

Dimensions with Mounting Bracket

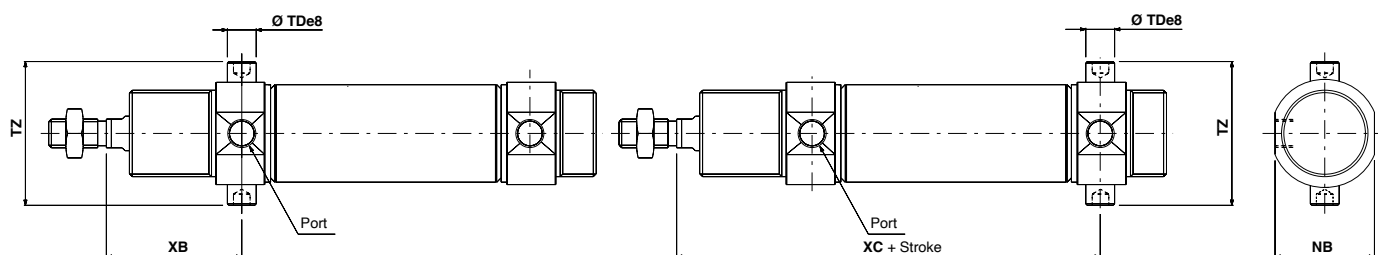
[First angle projection]

Double acting: Single rod

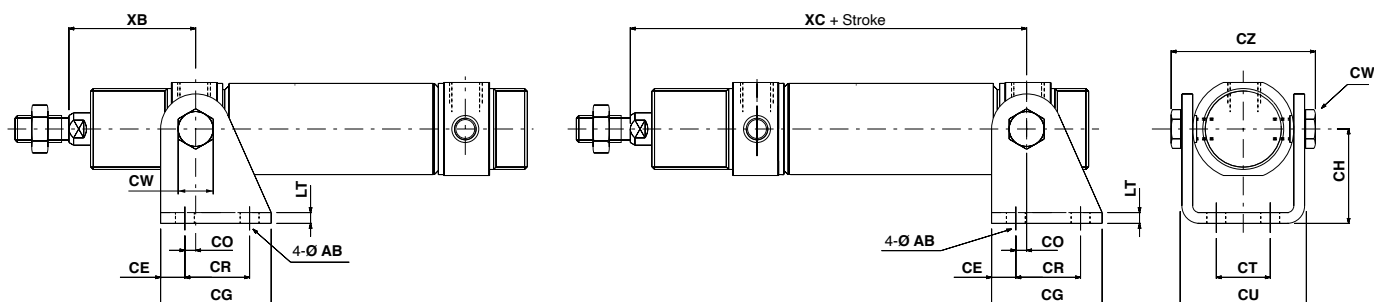
Rod foot (Flange), Rod and head foot: C76F32^{AB}, C76F40^{AB}



Rod trunnion, Head trunnion: C76T32, C76T40



Rod clevis, Head clevis: C76C32



																														[mm]	
Bore	Rod foot (Flange)													Rod/Head trunnion					Rod clevis, Head clevis												
	Ø AB	AO	AU	LS	LT	NH	TF	TR	UR	US	W	XL	XS	NB	Ø TDe8	TZ	XB	XC	Ø AB	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

[mm]

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

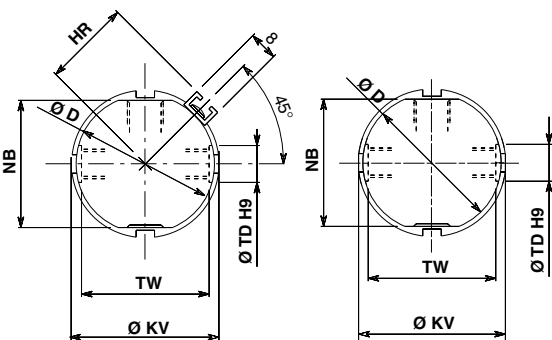
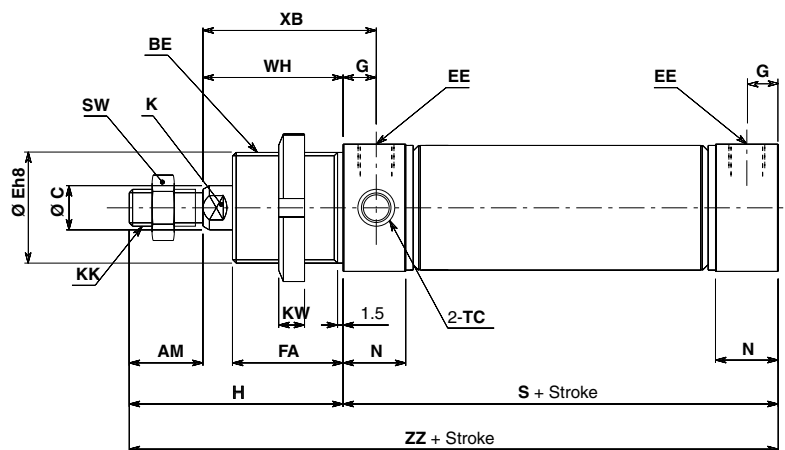
Dimensions

[First angle projection]

Double acting, Single rod

Rubber cushion: C□76F Bore—Stroke—□

Without magnet, Built-in magnet

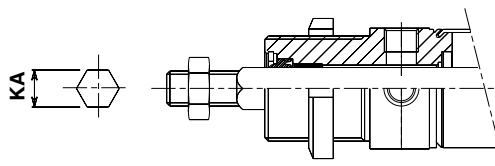
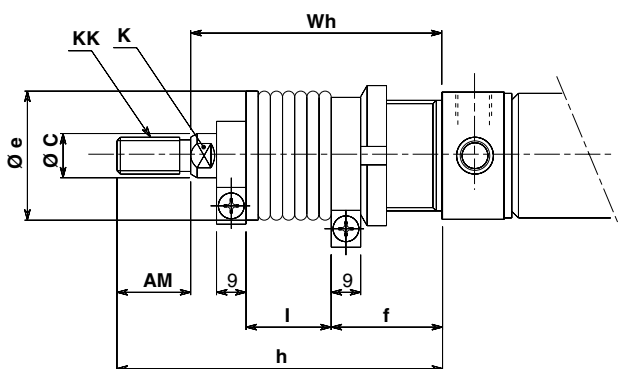


Rail mounting type (A) Band mounting type (B)
or non-magnet

With rod boot

C□76KF

Non-rotating, Piston rod (Rubber cushion only)



Rod cross section

																								[mm]	
Bore	AM	BE	Ø C	Ø D	Ø Eh8	EE	FA	G	H	HR	K	KA	KK	Ø KV	KW	N	NB	S	SW	TC	Ø TDH9	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	Ø C	Ø e	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	I							Wh						
	Stroke	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

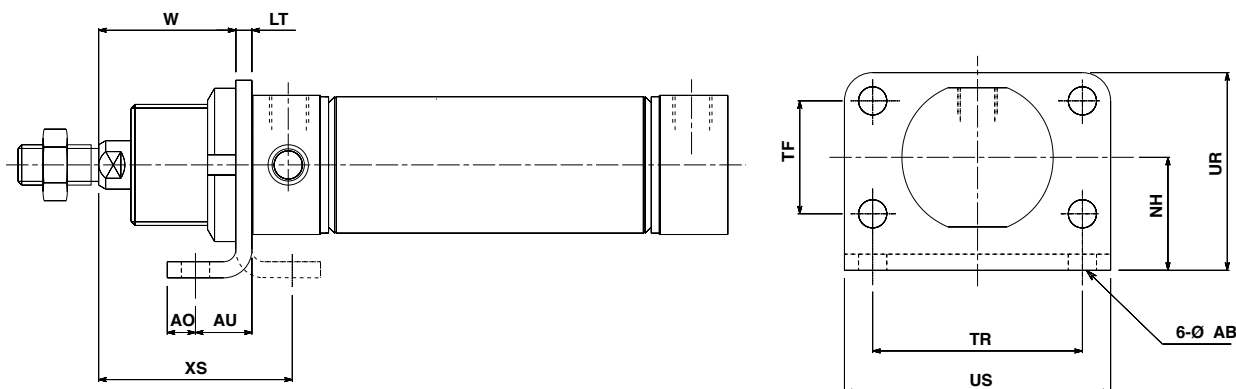
Series C76

Dimensions with Mounting Bracket

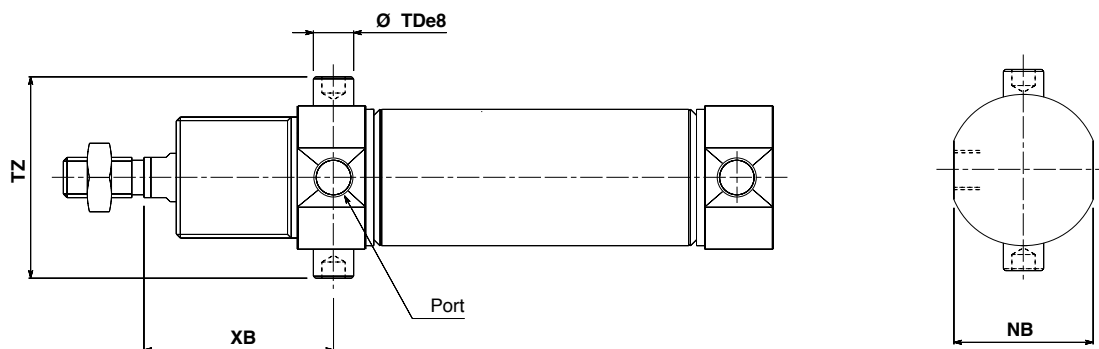
[First angle projection]

Double acting, Single rod

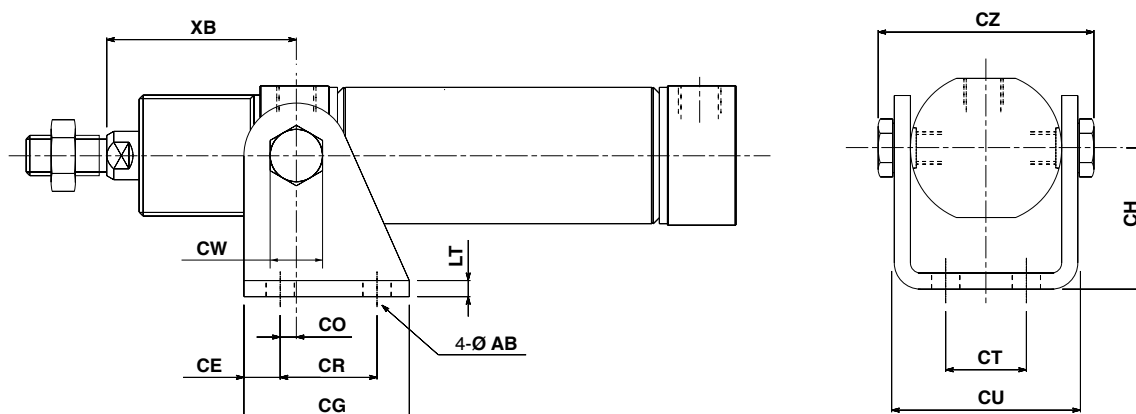
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



[mm]																											
Bore	Rod foot (Flange)											Rod trunnion				Rod clevis											
	Ø AB	AO	AU	LT	NH	TF	TR	UR	US	W	XS	NB	Ø TDe8	TZ	XB	Ø 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	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**

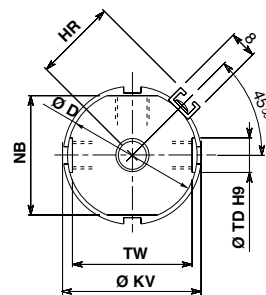
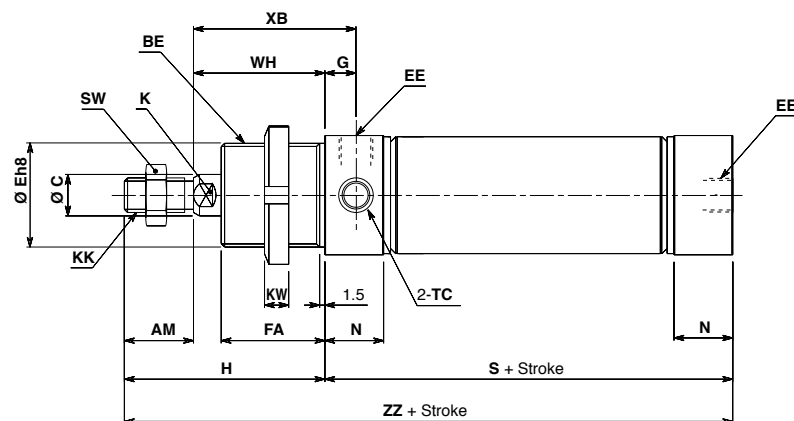
Dimensions

[First angle projection]

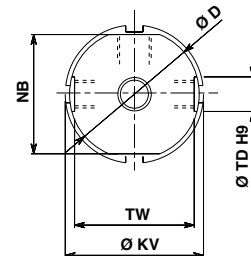
Double acting, Single rod

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

Without magnet, Built-in magnet

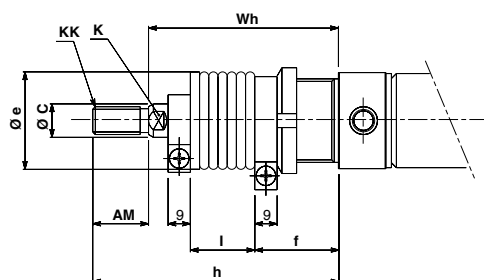


Rail mounting type (A)



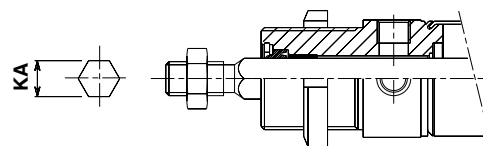
Band mounting type (B)
or non-magnet

With rod boot



C□76KY

Non-rotating, Piston rod (Rubber cushion only)



Rod cross section

																									[mm]
Bore	AM	BE	Ø C	Ø D	Ø Eh8	EE	FA	G	H	HR	K	KA	KK	Ø KV	KW	N	NB	S	SW	TC	Ø TDH9	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	Ø C	Ø e	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

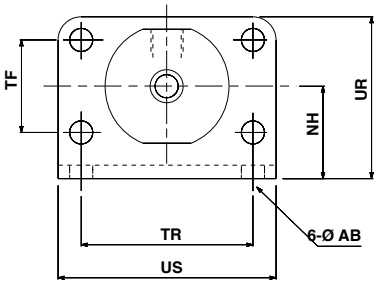
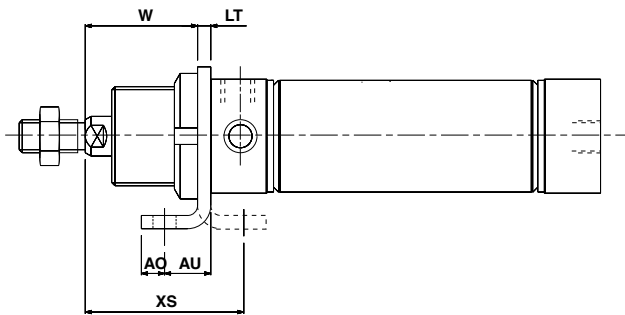
Bore	Item Stroke	I							Wh						
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
32		12.5	25	37.5	50	75	100	125	57	70	82	95	120	145	170
40		12.5	25	37.5	50	75	100	125	64	77	89	102	127	152	177

Series C76

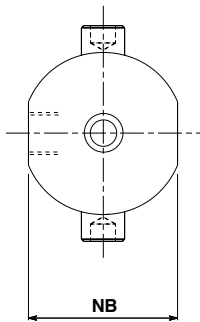
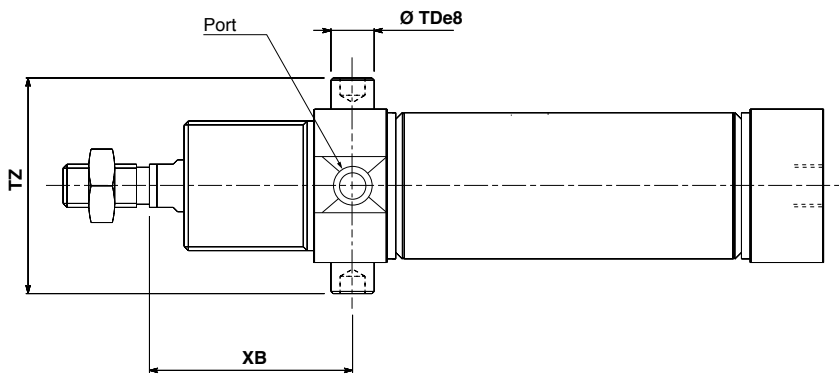
Dimensions with Mounting Bracket

[First angle projection]

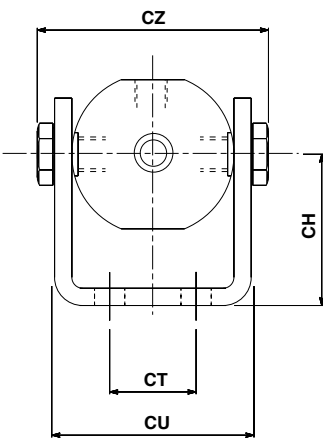
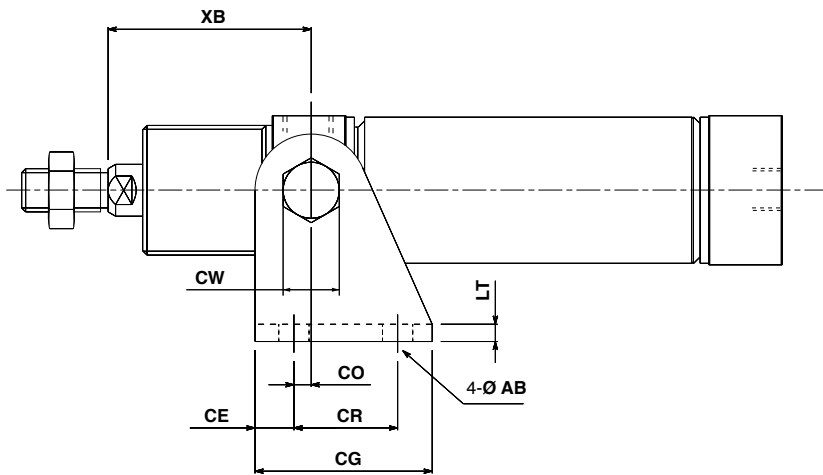
Double acting, Single rod
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



																												[mm]
Bore	Rod foot (Flange)												Rod trunnion				Rod clevis											
	Ø AB	AO	AU	LT	NH	TF	TR	UR	US	W	XS	NB	Ø TDe8	TZ	XB	Ø 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}	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**

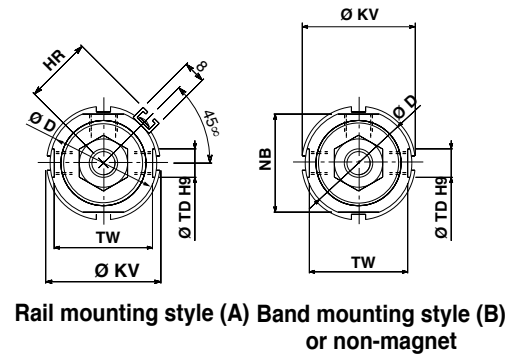
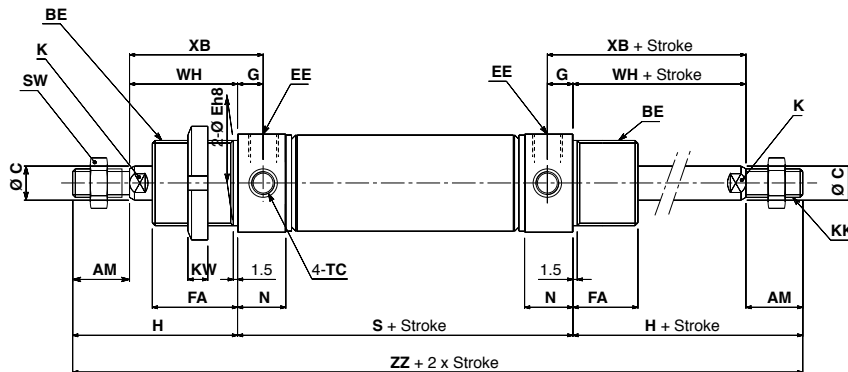
Dimensions

[First angle projection]

Double acting, Double rod

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

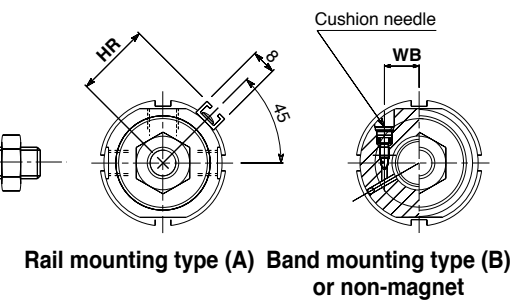
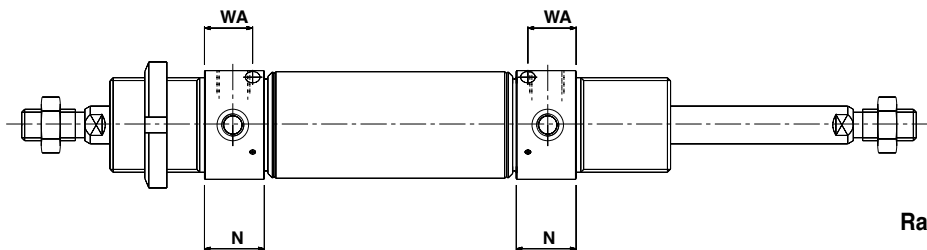
Without magnet, Built-in magnet



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

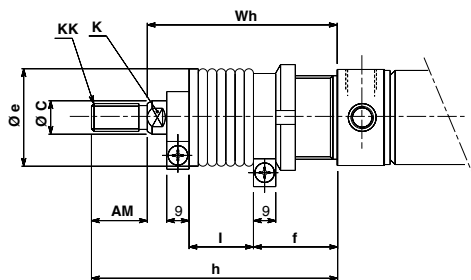
Air cushion: C□76WE **Bore** **Stroke** C□

Built-in magnet



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

With rod boot



[mm]

Bore	AM	BE	Ø C	Ø D	Ø Eh8	EE	FA	G	H	HR	K	KK	Ø KV	WB	KW	N	NB	S	SW	TC	Ø TDH9	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	Stroke	AM	Ø C	Ø e	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

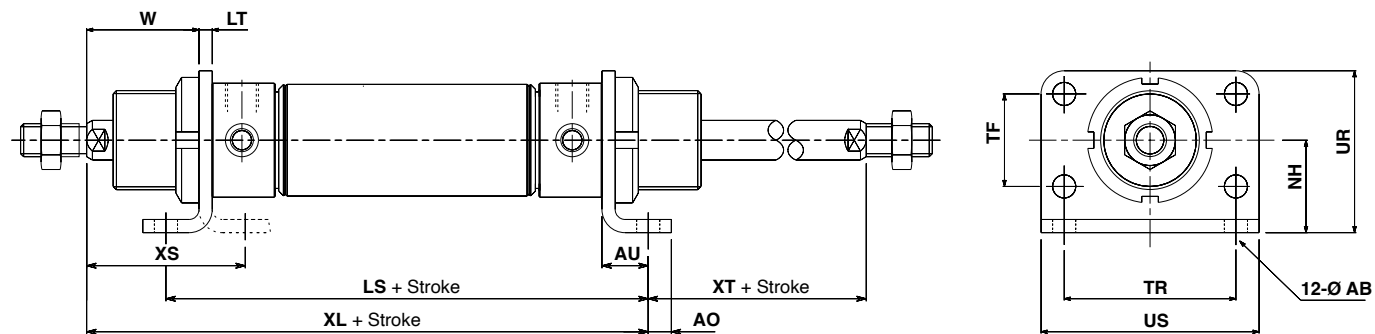
Bore	Stroke	l							Wh						
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
32		12.5	25	37.5	50	75	100	125	57	70	82	95	120	145	170
40		12.5	25	37.5	50	75	100	125	64	77	89	102	127	152	177

Series C76

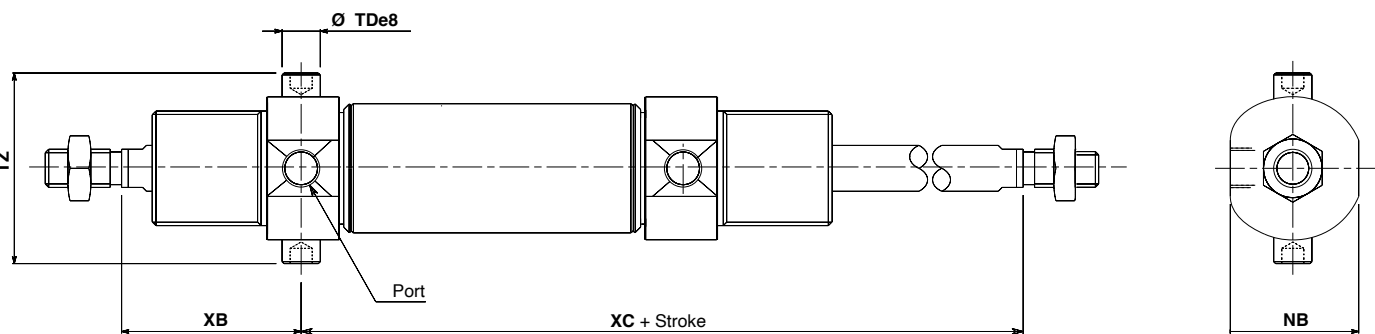
Dimensions with Mounting Bracket

[First angle projection]

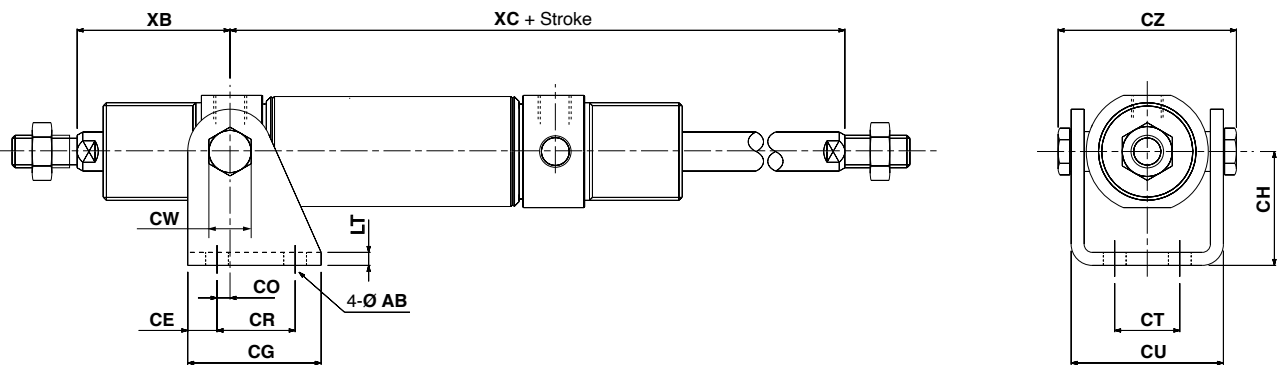
Double acting: Double rod
Rod foot (Flange), Rod and head foot: C76F32^{AB}, C76F40^{AB}



Rod trunnion, Head trunnion: C76T32, C76T40



Clevis: C76C32



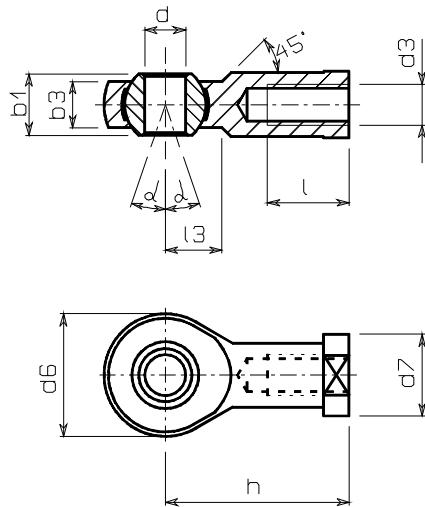
[mm]																																
Bore	Rod foot (Flange)														Rod/Head trunnion				Clevis													
	Ø AB	AO	AU	LS	LT	NH	TF	TR	UR	US	W	XL	XS	XT	NB	Ø TDe8	TZ	XB	XC	Ø AB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB	XC
	32	7	7	14	96	4	28	28	52	49	66	34	120	48	24	34.5	10 ^{-0.025} -0.047	47.9	47	97	7	9	41	35	4	24	20	46.8	13	57.9	4	47
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]

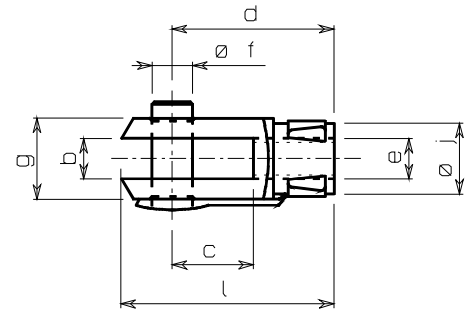
Single Knuckle Joint/DIN648



[mm]

Bore	Model	Thread d3	dH7	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

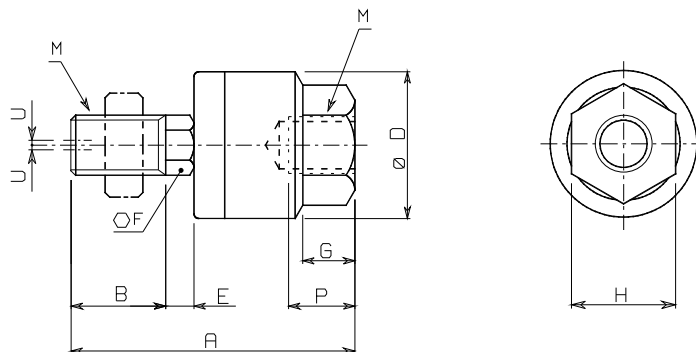
Double Knuckle Joint/DIN71751



[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 (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

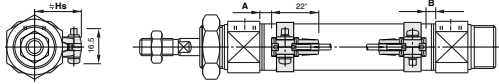
Series C76

Auto Switch Mounting Position and Mounting Height

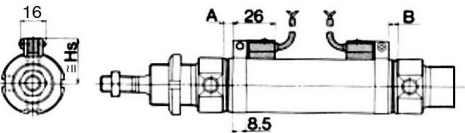
[First angle projection]

(Band mounting type)

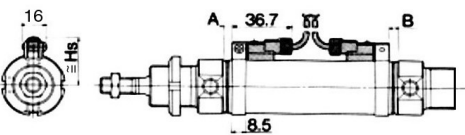
D-A9□
D-M9□
D-M9□W



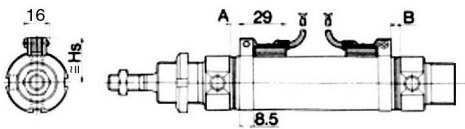
D-C7□
D-C80



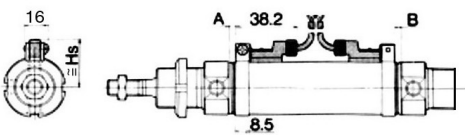
D-C73C
D-C80C



D-H7□
D-H7□W
D-H7BAL
D-H7NF

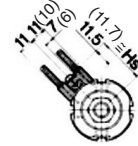


D-H7C



(Rail Mounting type)

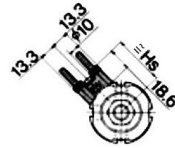
D-A7□
D-A80



D-A7□H
D-A80H



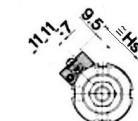
D-A73C
D-A80C



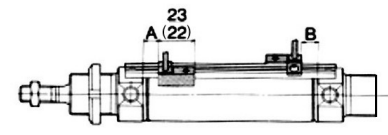
D-A79W



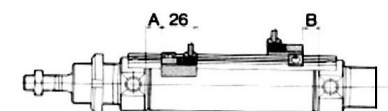
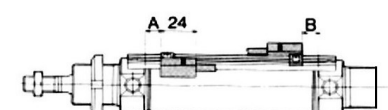
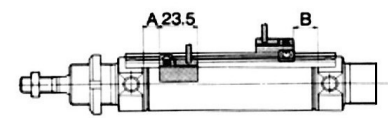
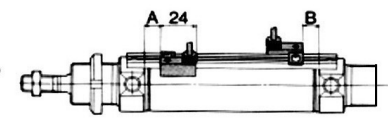
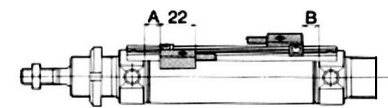
D-F7□
D-F7□W
D-J79
D-J79W
D-F7BAL
D-F79F



D-J79C



() : In case of D-A72



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

Ø 32, Ø 40

How to Order

Single acting,
Spring return/
Spring extended

C D 76 K E 32 100 S B

Built-in magnet

—	None
D	Built-in magnet

Type

—	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 42 to 44. Please order auto switches and bands separately

Action

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

Mounting Bracket Part No.

Bore size [mm]		32	40
Mounting bracket			
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

Bore size Stroke

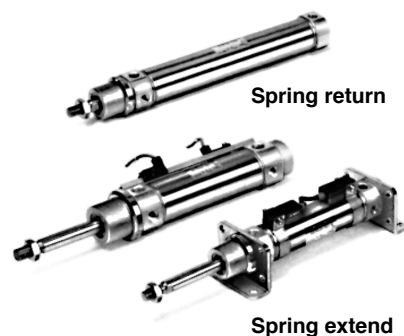
Bore size [mm]	Standard stroke [mm]	Max. stroke [mm]
32	10, 25, 40, 50, 80, 100, 125, 160, 200, 250*	200
40		250

* 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

Series C76

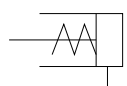


Specifications

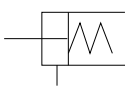
Bore size [mm]	32	40
Piston rod dia. [mm]	12	14
Piston rod thread	M10 x 1.5	M12 x 1.75
Port size	G1/8	G1/4
Action	Single acting, Single rod, Spring return/extend	
Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	Spring return: 0.18 MPa, Spring extended: 0.23 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

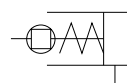
Standard
Spring return



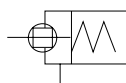
Spring extended



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	50.0	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 (Ø 32) 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 (Ø 40) 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-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]

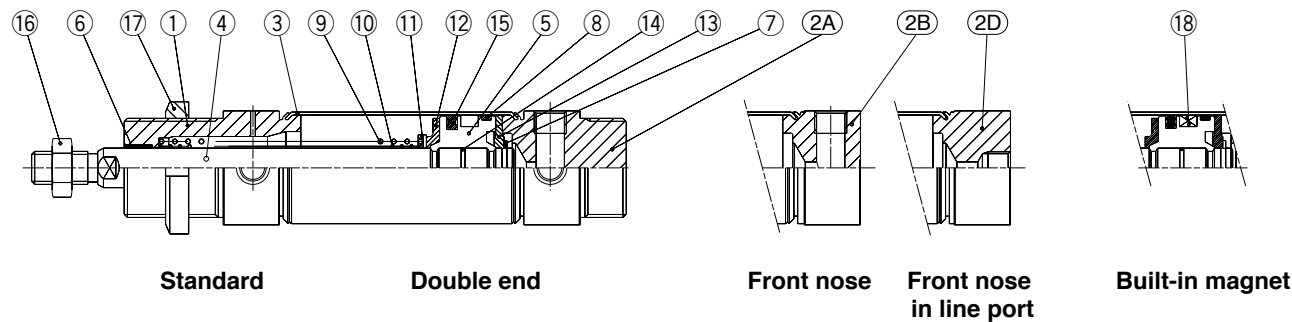
Auto switch model	No. of auto switches				
	2 pcs.		n pcs.		1 pc.
	Different sides	Same side	Different sides	Same side	
D-A7□/A80 D-A7□H/A80H D-A73C/A80C D-F7□/F7□V D-J79/J79C	—	10	—	$10 + 35\left(\frac{n-2}{2}\right)$ (n = 2, 4...)	5
D-A79W, D-J79W D-F7□W, D-F7BAL D-F79F, F7□WV D-F7BAVL	—	15	—	$15 +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

Series C76

Construction

[First angle projection]

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

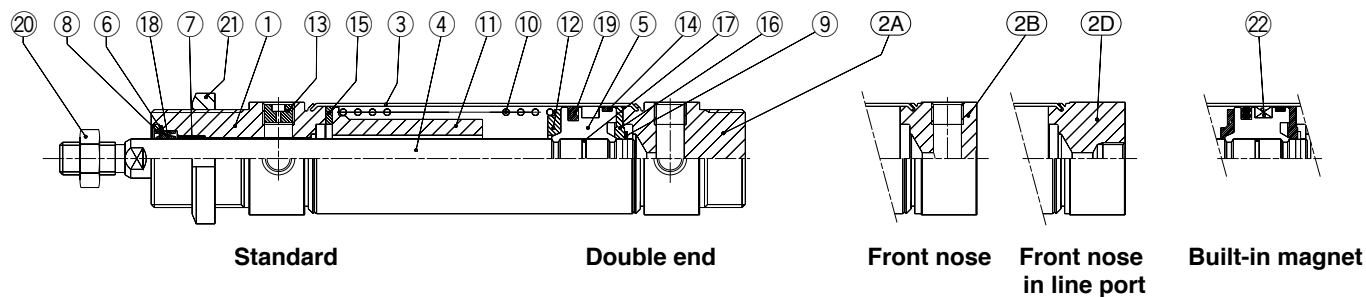


Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminium alloy	1	White anodised
②A	Head cover E	Aluminium alloy	1	White anodised
②B	Head cover F	Aluminium alloy	1	White anodised
②D	Head cover Y	Aluminium alloy	1	Clear anodised
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminium 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	Aluminium alloy	1	White anodised
②A	Head cover E	Aluminium alloy	1	White anodised
②B	Head cover F	Aluminium alloy	1	White anodised
②D	Head cover Y	Aluminium alloy	1	White anodised
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminium 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	Aluminium alloy	1	Chromate
⑫	Spring holder	Aluminium alloy	1	Chromate

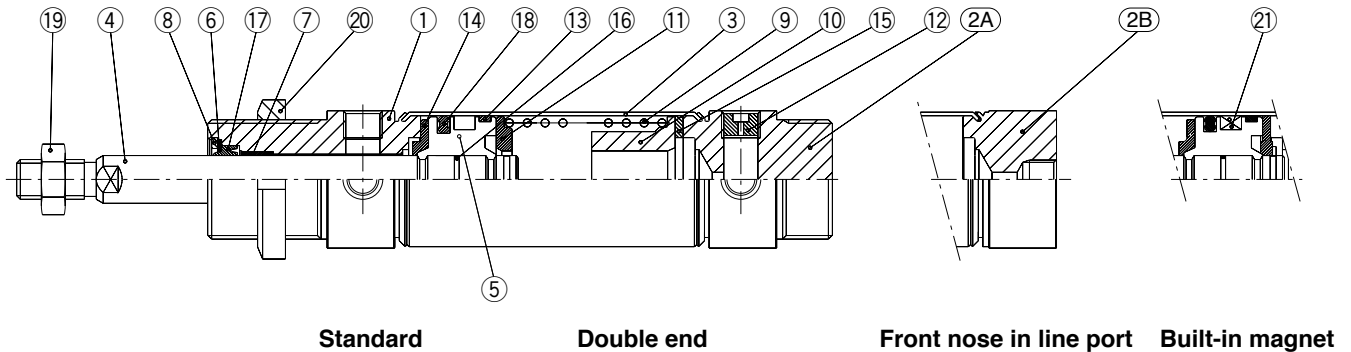
No.	Description	Material	Qty.	Note
⑬	Plug with needle	Carbon steel	1	
⑭	Wear ring	Resin	1	
⑮	Bumper A	Urethane	1	
⑯	Bumper B	Urethane	1	
⑰	Piston gasket	NBR	1	
⑱	Rod seal	NBR	1	
⑲	Piston seal	NBR	1	
⑳	Rod end nut	Carbon steel	1	Nickel plating
㉑	Mounting nut	Carbon steel	1	Nickel plating
㉒	Magnet	Magnet	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	Aluminium alloy	1	White anodised
②A	Head cover E	Aluminium alloy	1	White anodised
②B	Head cover F	Aluminium alloy	1	White anodised
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminium 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	Aluminium alloy	1	Chromate
⑪	Spring holder	Aluminium alloy	1	Chromate
⑫	Plug with needle	Carbon steel	1	

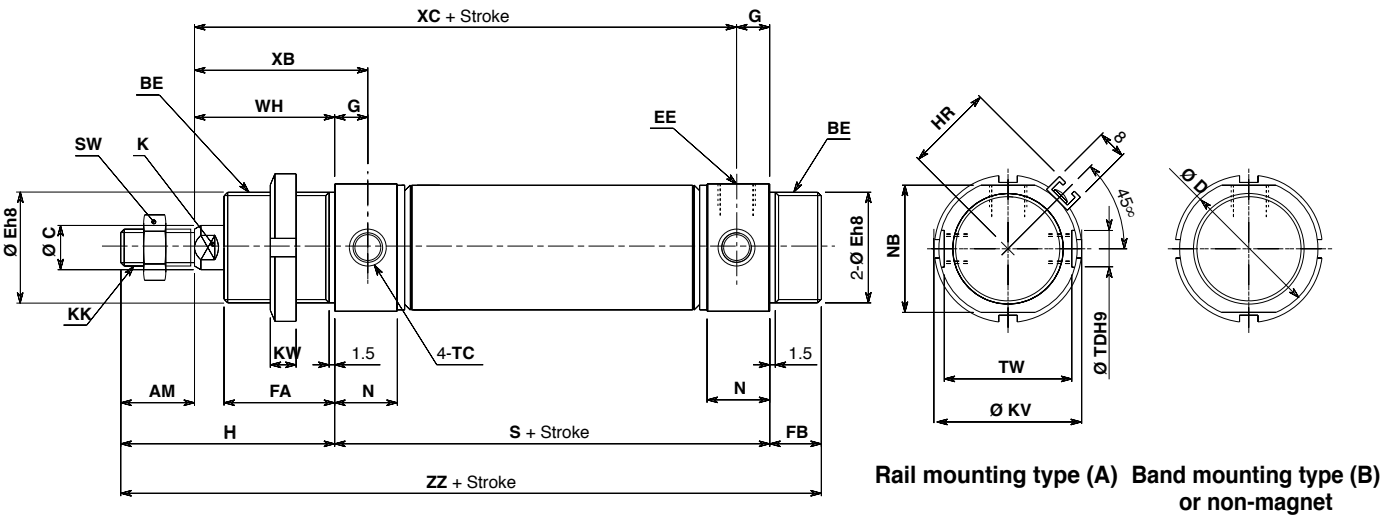
No.	Description	Material	Qty.	Note
⑬	Wear ring	Resin	1	
⑭	Bumper A	Urethane	1	
⑮	Bumper B	Urethane	1	
⑯	Piston gasket	NBR	1	
⑰	Rod seal	NBR	1	
⑱	Piston seal	NBR	1	
⑲	Rod end nut	Carbon steel	1	Nickel plating
⑳	Mounting nut	Carbon steel	1	Nickel plating
㉑	Magnet	Magnet	1	(Switch type only)

Series C76

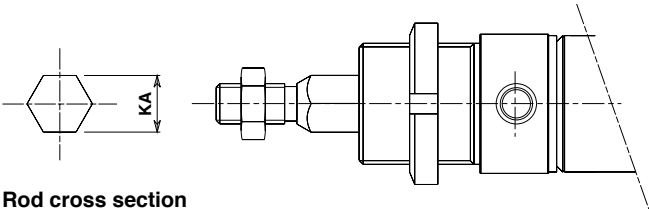
Dimensions

[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



[mm]

Bore	AM	BE	Ø C	Ø D	Ø Eh8	EE	FA	FB	G	H	HR	K	KA	KK	Ø KV	KW	N	NB	SW	TC	Ø TDH9	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 ^{+0.036} ₀	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 ^{+0.043} ₀	42.5	45	57

Item	S						XC						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	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		

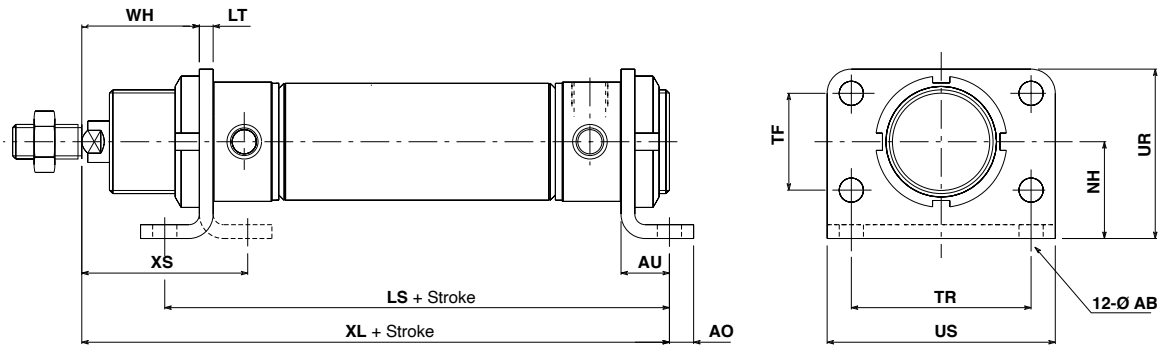
() : In the case of non-rotating

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

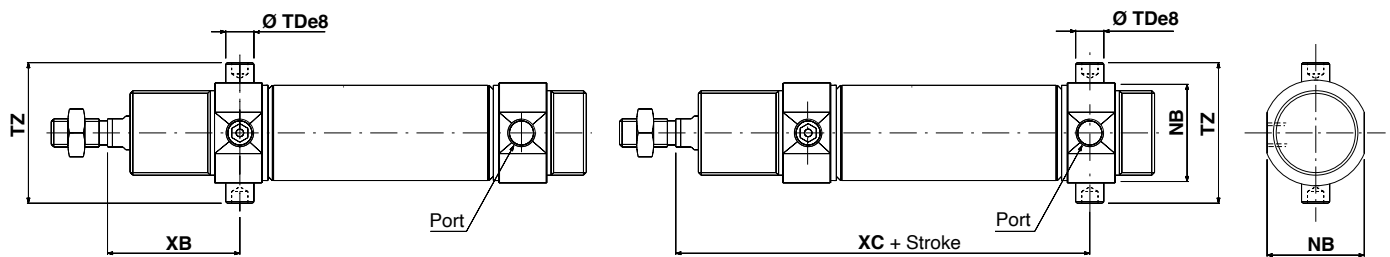
Dimensions with Mounting Bracket

[First angle projection]

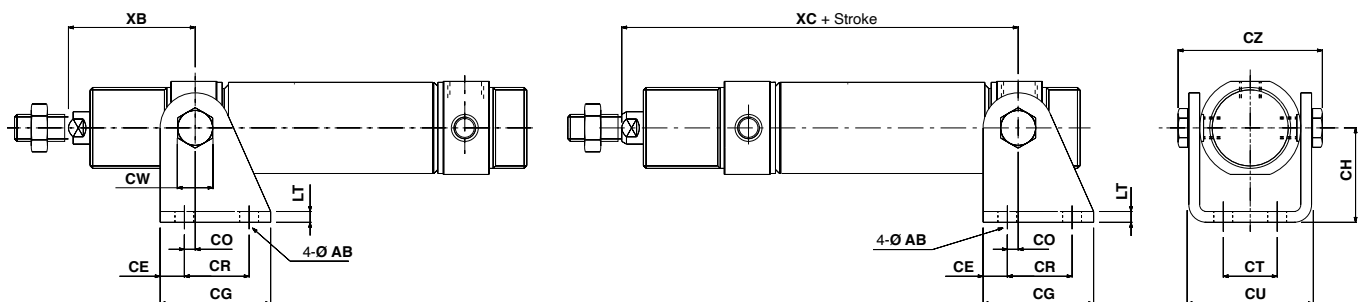
Single acting/Spring return, Single rod
Rod foot (Flange), Rod and head foot: C76F32^{AB}, C76F40^{AB}



Rod trunnion, Head trunnion: C76T32, C76T40



Rod clevis, Head clevis: C76C32



[mm]

Bore	Rod foot (Flange)												Rod trunnion				Rod clevis											
	Ø AB	AO	AU	LT	NH	TF	TR	UR	US	W	XS	NB	Ø TDe8	TZ	XB	Ø 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	

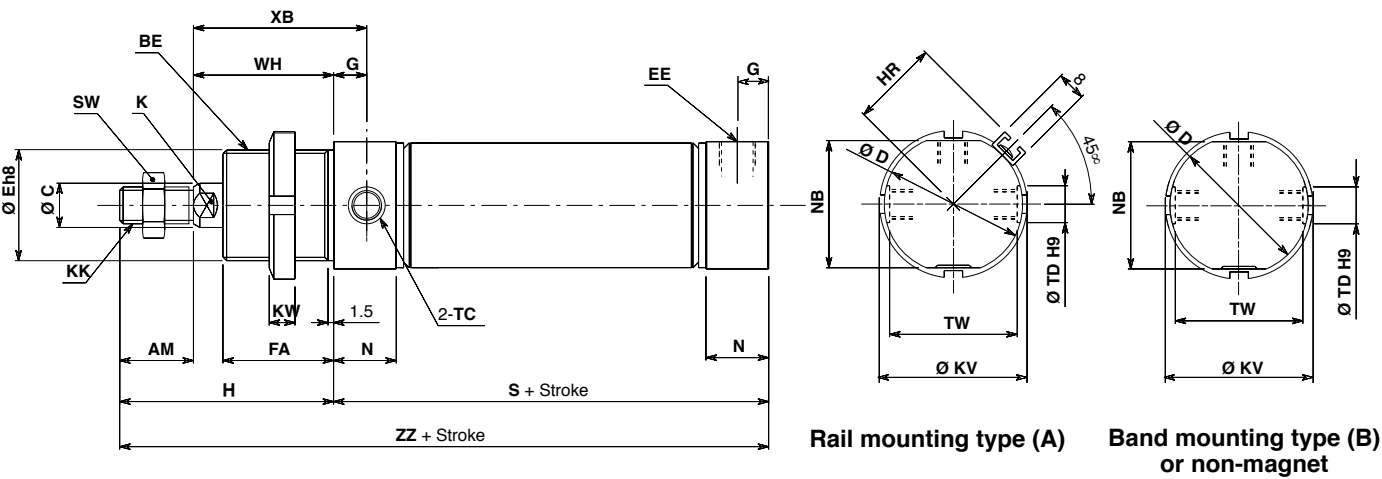
Bore	Item Stroke	Rod foot (Flange), Rod and head foot										Head side trunnion					Head clevis				
		LS					XL					XC					XC				
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 100	101 to 150	151 to 200	201 to 250	1 to 50	51 to 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

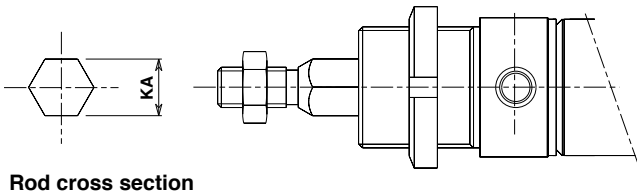
Dimensions

[First angle projection]

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



C□76KF
Non-rotating, Piston rod



[mm]																							
Bore	AM	BE	Ø C	Ø D	Ø Eh8	EE	FA	G	H	K	KA	KK	Ø KV	KW	HR	N	NB	SW	TC	Ø TDH9	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

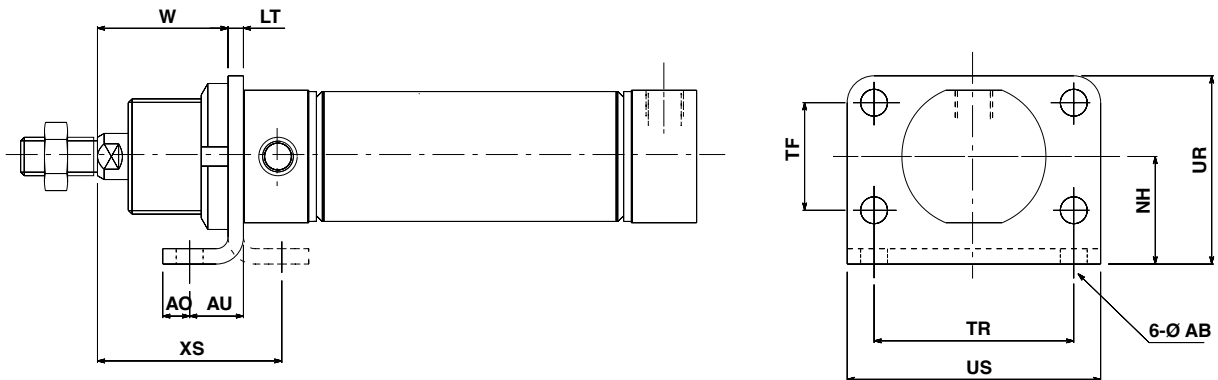
Air Cylinder: Standard/Non-rotating Type Single Acting, Spring Return/Extended **Series C76**

Dimensions with Mounting Bracket

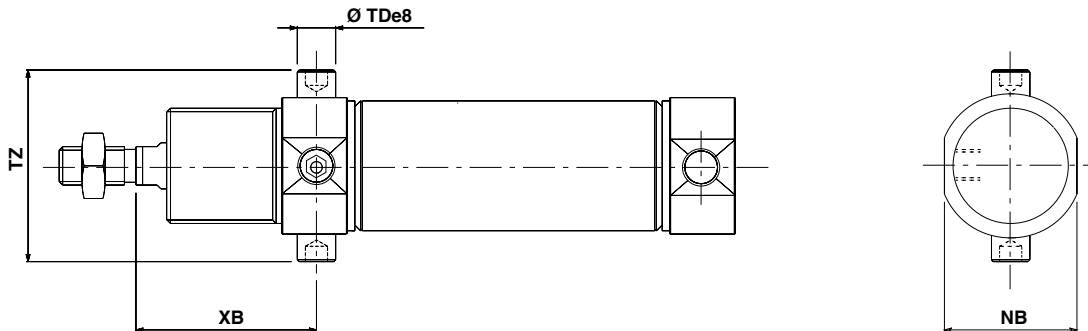
[First angle projection]

Single acting/Spring return, Single rod

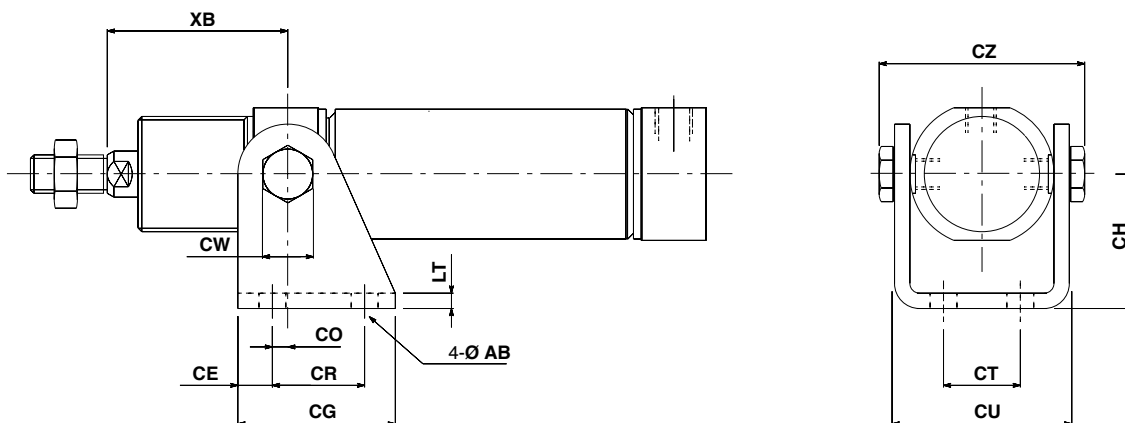
Rod foot (Flange), Rod and head foot: C76F32^{AB}, C76F40^{AB}



Rod trunnion, Head trunnion: C76T32, C76T40



Rod clevis, Head clevis: C76C32



[mm]																											
Bore	Rod foot (Flange)											Rod trunnion				Rod clevis											
	Ø AB	AO	AU	LT	NH	TF	TR	UR	US	W	XS	NB	Ø TDe8	TZ	XB	Ø 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

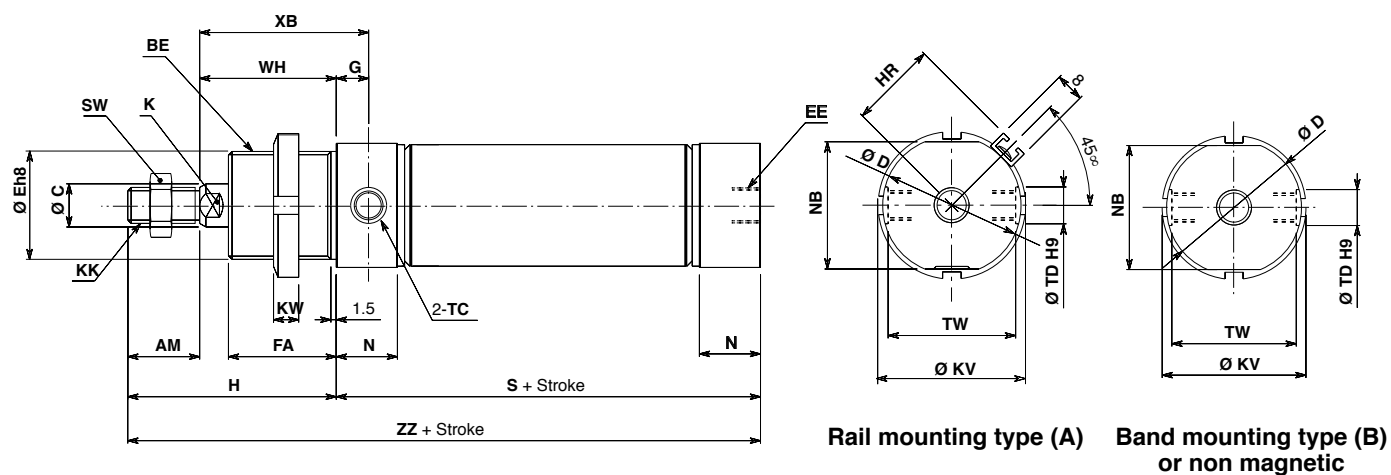
[mm]

Series C76

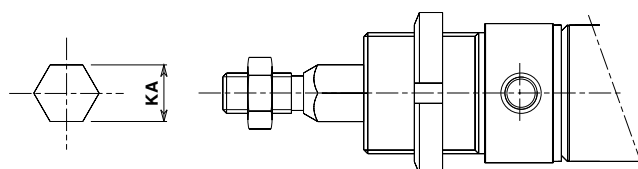
Dimensions

[First angle projection]

Single acting/Spring 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	Ø C	Ø D	Ø Eh8	EE	FA	G	H	K	KA	KK	Ø KV	KW	HR	N	NB	SW	TC	Ø TDH9	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

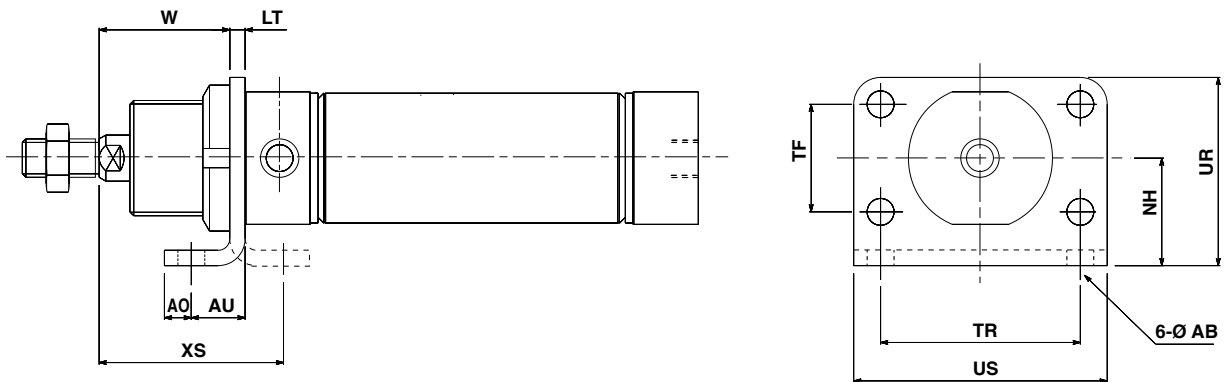
(): In the case of non-rotating

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

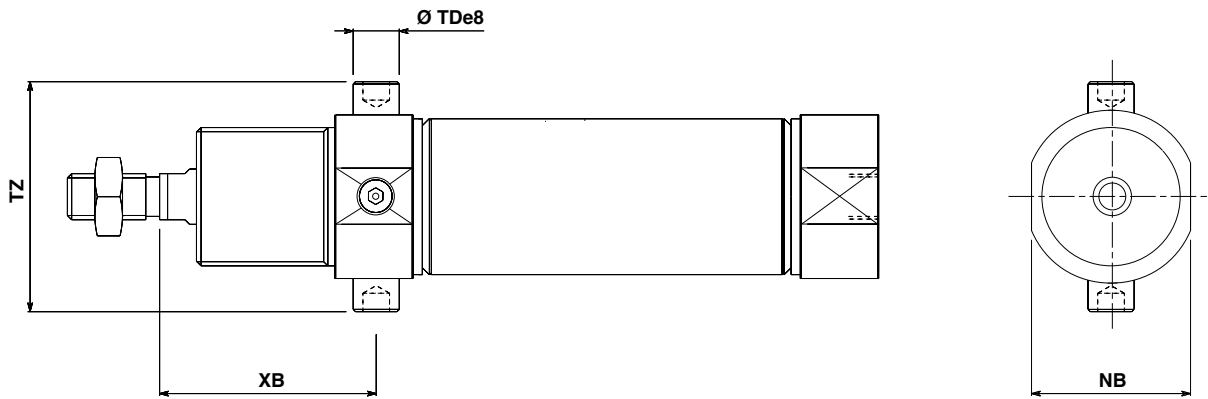
Dimensions with Mounting Bracket

[First angle projection]

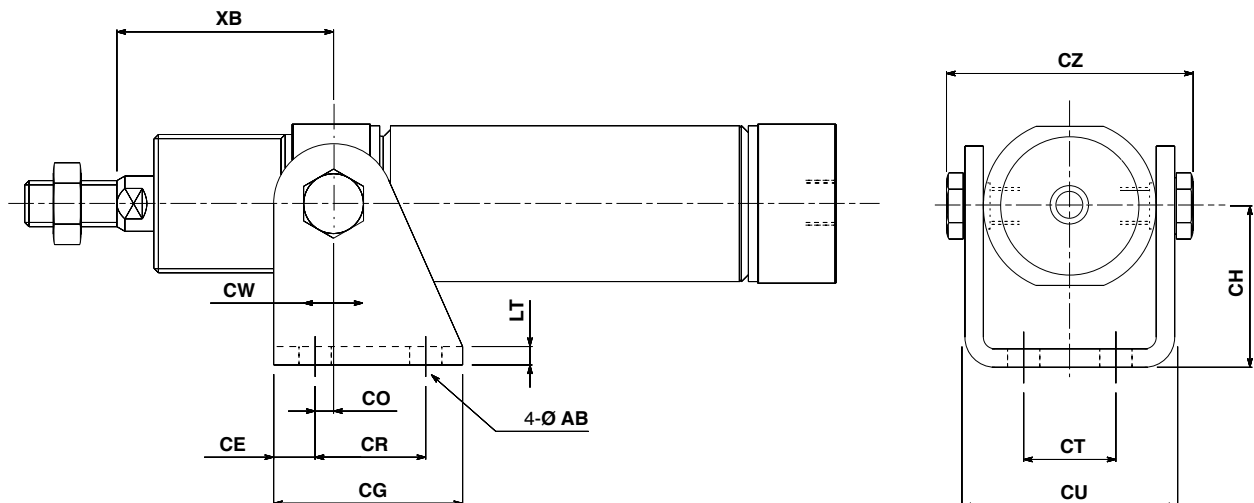
Single acting/Spring return, Single rod
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



																												[mm]
Bore	Rod foot (Flange)											Rod trunnion				Rod clevis												
	Ø AB	AO	AU	LT	NH	TF	TR	UR	US	W	XS	NB	Ø TDes	TZ	XB	Ø 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	

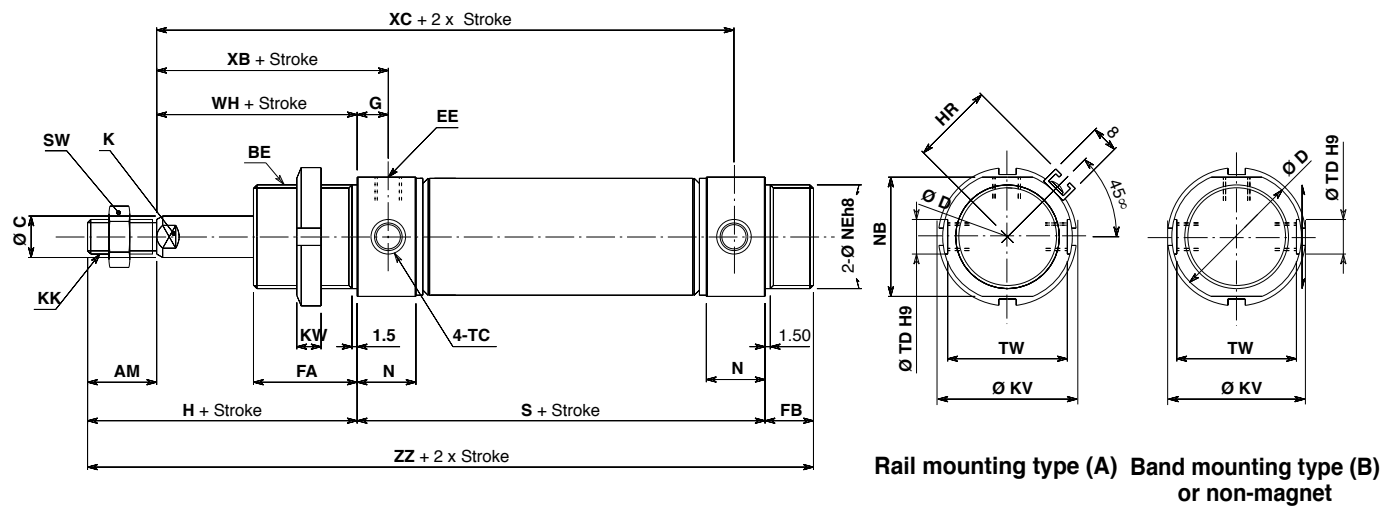
[mm]

Series C76

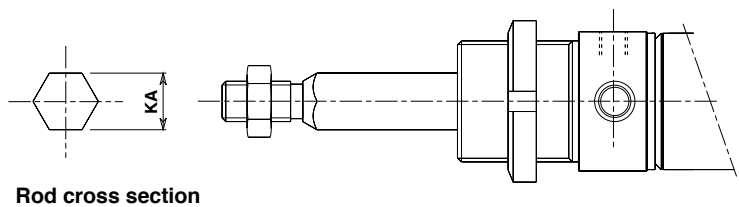
Dimensions

[First angle projection]

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



C□76KE
Non-rotating, Piston rod



[mm]

Bore	AM	BE	Ø C	Ø D	Ø Eh8	EE	FA	FB	G	H	K	KA	KK	Ø KV	KW	HR	N	NB	SW	TC	Ø TDH9	TW	WH	XB
32	20	M30 x 1.5	12	37.5	30 ⁰ _{-0.033}	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 _{-0.039}	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

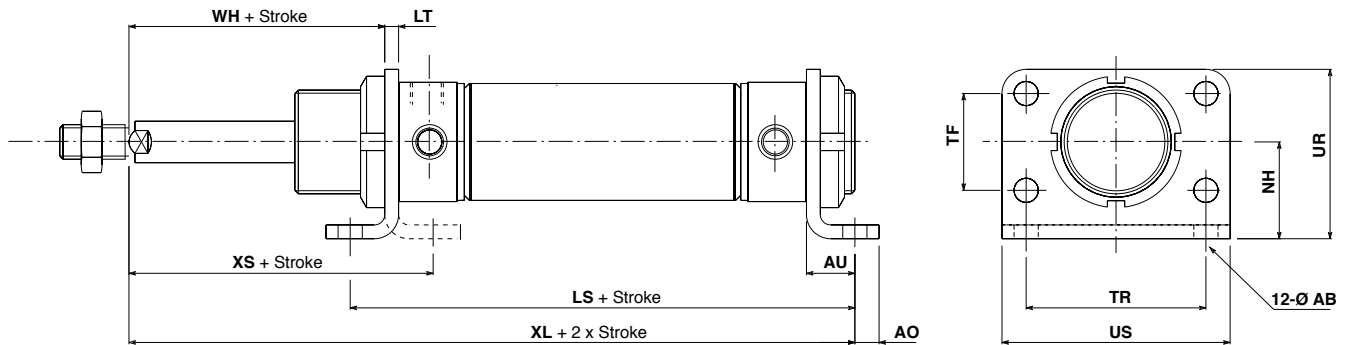
() : In the case of non-rotating

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

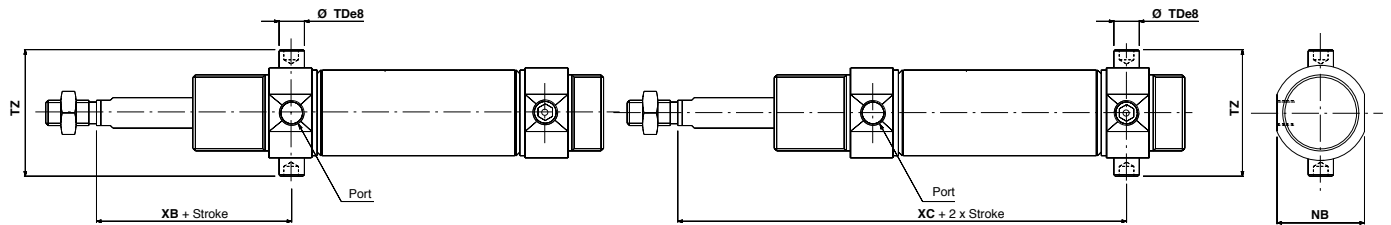
Dimensions with Mounting Bracket

[First angle projection]

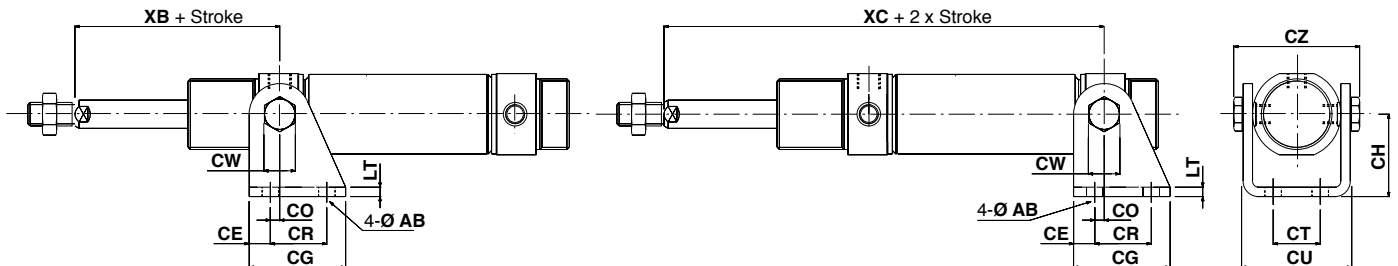
Single acting/Spring extended, Single rod
Rod foot (Flange): C76F32A, C76F40A



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												
	Ø AB	AO	AU	LT	NH	TF	TR	UR	US	WH	XS	NB	Ø TDe8	TZ	XB	Ø 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

<div><div></div><div>Item</div></div>	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

<div><div></div><div>Item</div></div>	Head clevis				
	XC				
<div>Bore</div> <div>Stroke</div>	1 to 50	51 to 100	101 to 150	151 to 200	20 to 250
32	122	147	172	197	—
40	147	172	197	222	247

Series C76

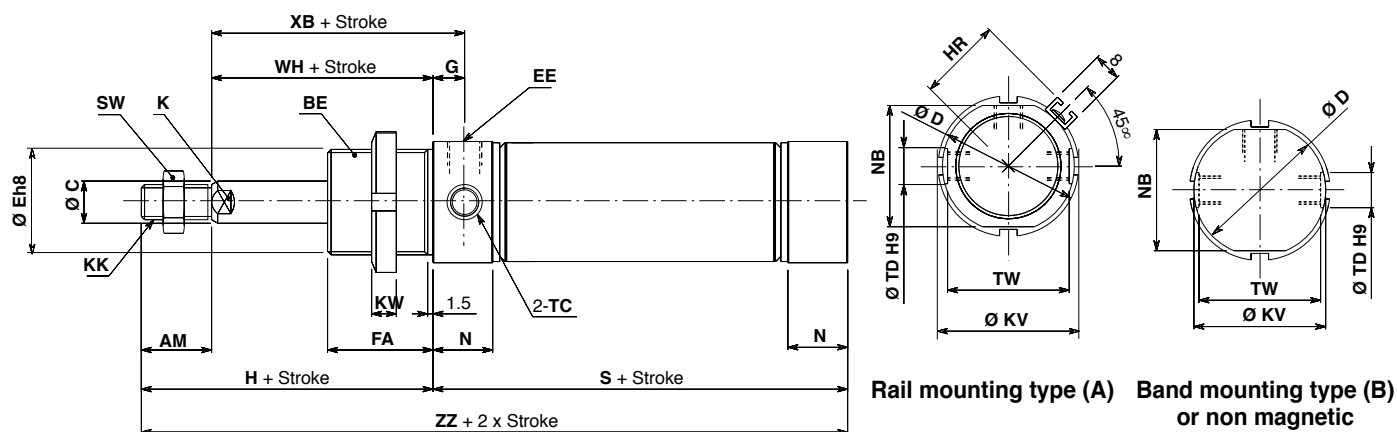
Dimensions

[First angle projection]

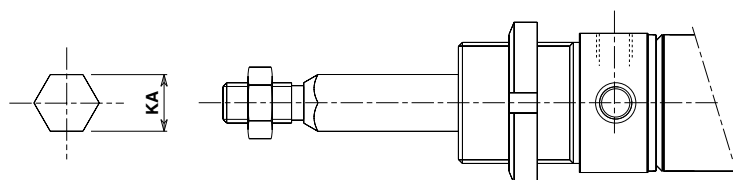
Single acting/Spring extended, Single rod

Rubber cushion: C 76 F Bore — Stroke T

Without magnet, Built-in magnet

**C□76KF**

Non-rotating, Piston rod



Rod cross section

[mm]

Bore	AM	BE	Ø C	Ø D	Ø Eh8	EE	FA	G	H	K	KA	KK	Ø KV	KW	HR	N	NB	SW	TC	Ø TDH9	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 ₀ ^{+0.036}	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 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

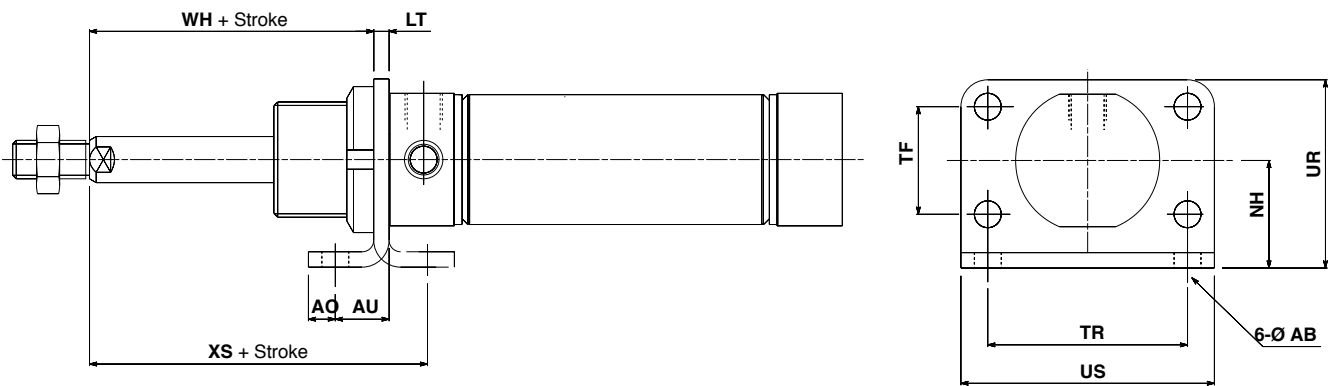
(): In the case of non-rotating

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

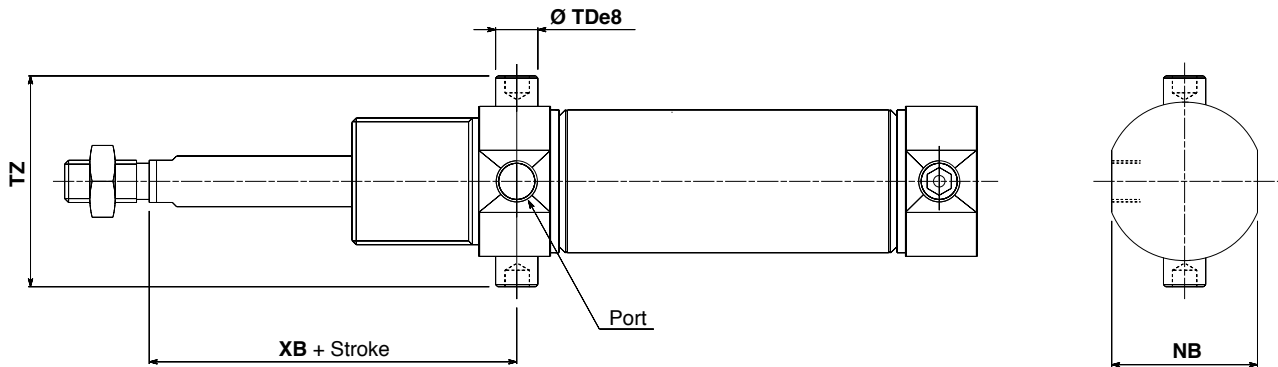
Dimensions with Mounting Bracket

[First angle projection]

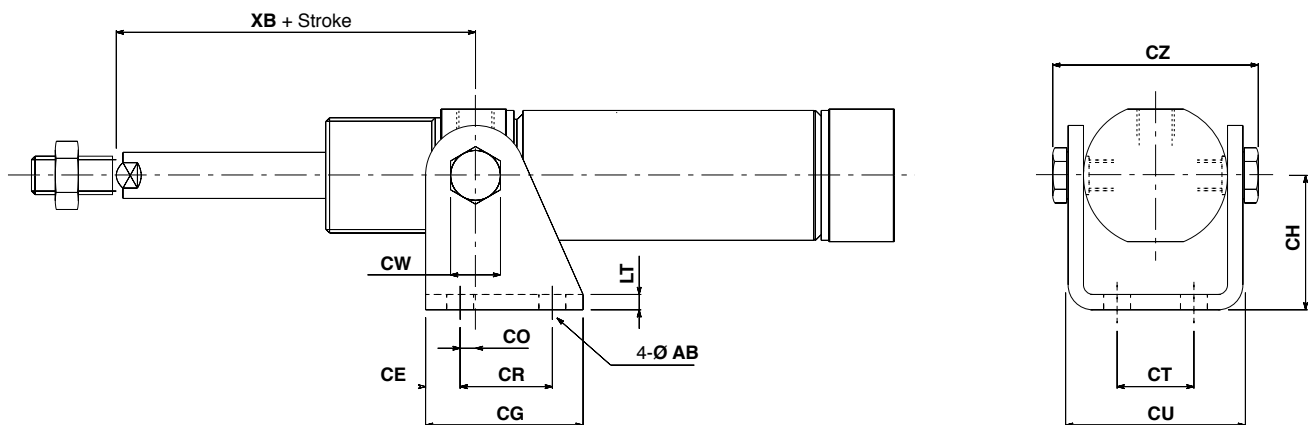
Single acting/Spring extended, Single rod
Rod foot (Flange): C76F32A, C76F40A



Rod trunnion: C76T32, C76T40



Rod clevis: C76C32, C76C40



[mm]

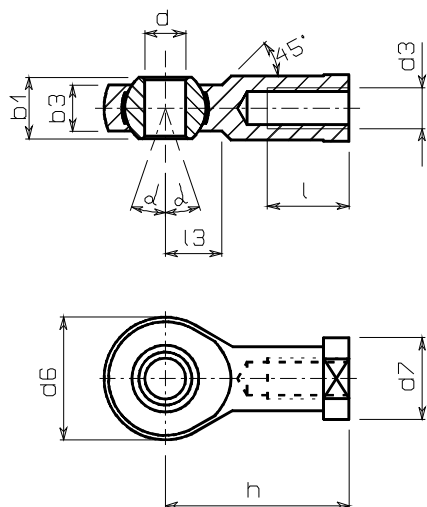
Bore	Rod foot (Flange), Rod and head foot												Rod trunnion				Rod clevis											
	Ø AB	AO	AU	LT	NH	TF	TR	UR	US	WH	XS	NB	Ø TDes	TZ	XB	Ø AB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB	
32	7	7	14	4	28	28	52	49	66	34	48	34.5	$10^{-0.025}_{-0.047}$	49.9	47	7	9	41	35	4	24	20	46.8	13	57.9	4	47	
40	9	10	20	5	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	

Series C76

Accessory Dimensions

[First angle projection]

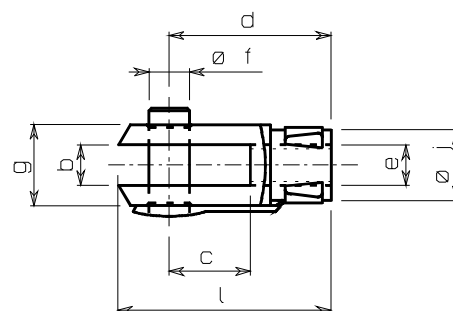
Single Knuckle Joint/DIN648-DIN 24335



Bore	Model	Thread d3	dH7	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

[mm]

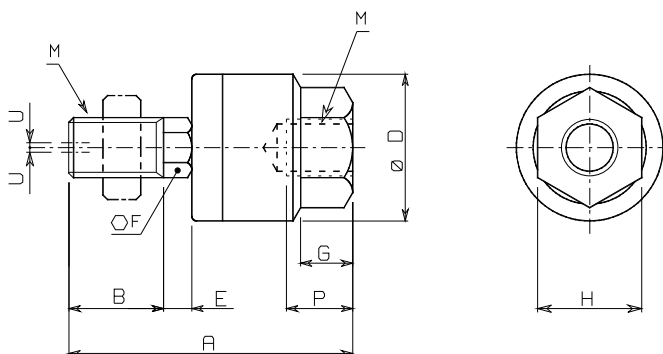
Double Knuckle Joint/ISO8140-DIN71752



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

[mm]

Floating joint/Series JA JA25/40



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

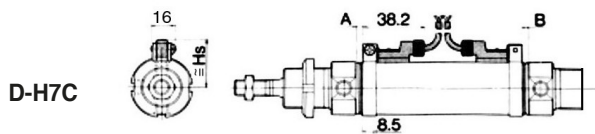
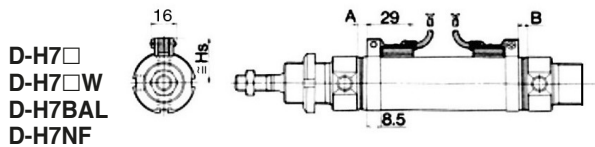
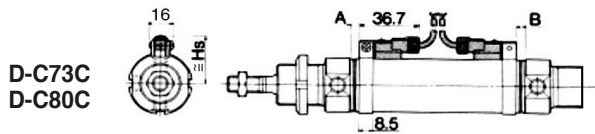
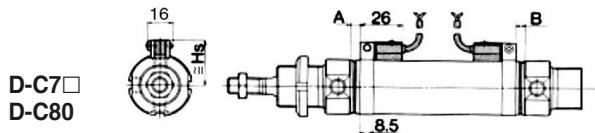
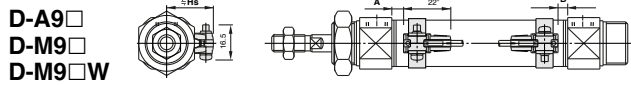
[mm]

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

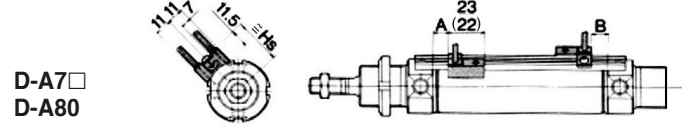
Auto Switch Mounting Position and Mounting Height

[First angle projection]

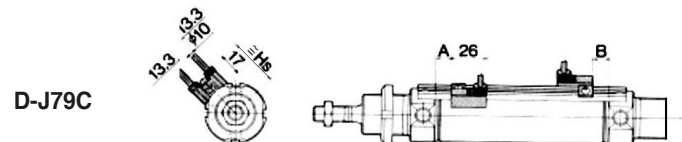
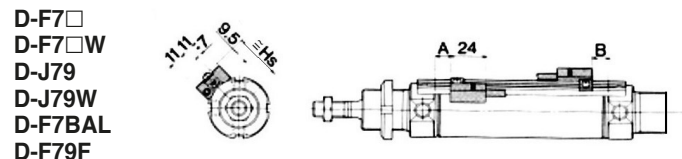
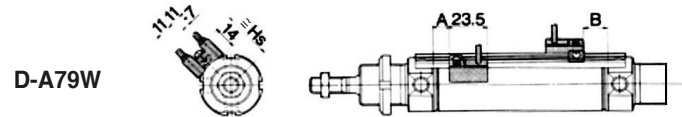
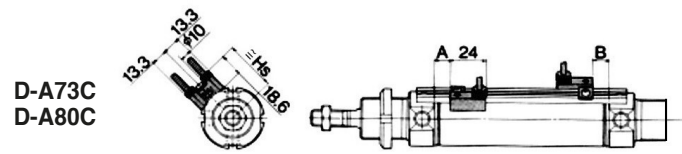
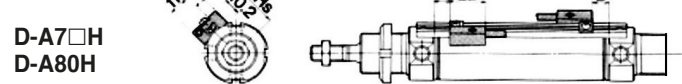
(Band mounting type)



(Rail Mounting type)



() : In case of D-A72



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-M9□	32	11.5 (36.5)	61.5	86.5	111.5	136.5	10.5
D-M9□W	40	16.5 (41.5)	66.5	91.5	116.5	141.5	15.5
D-A9□	32	7.5 (32.5)	57.5	82.5	107.5	132.5	6.5
	40	12.5 (37.5)	62.5	87.5	112.5	137.5	11.5
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 D-A73C/A80C D-F7□/F7□W D-J79/J79W D-F7□WV D-J79C D-F7BAL, D-F79F	32	9 (34)	59	84	109	—	8
	40	14 (39)	64	89	114	139	13
D-A79WL	32	6 (31)	56	81	106	—	5
	40	11 (36)	61	86	111	136	10
D-H7□/H7C /H7□W D-H7BAL, D-H7NF	32	7 (32)	57	82	107	—	6
	40	12 (37)	62	87	112	137	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□/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

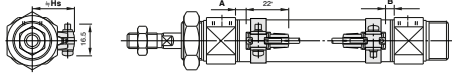
Series C76

Auto Switch Mounting Position and Mounting Height

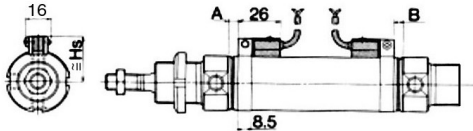
[First angle projection]

(Band mounting type)

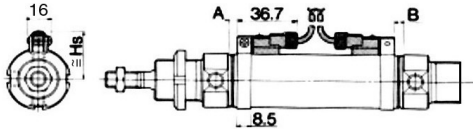
D-A9□
D-M9□
D-M9□W



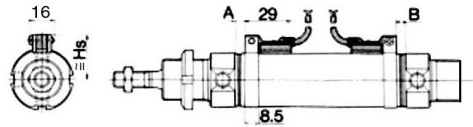
D-C7□
D-C80



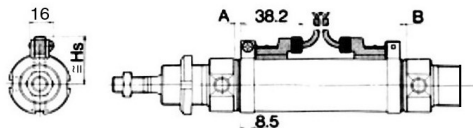
D-C73C
D-C80C



D-H7□
D-H7□W
D-H7BAL
D-H7NF

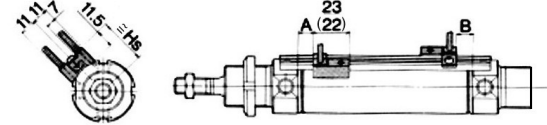


D-H7C

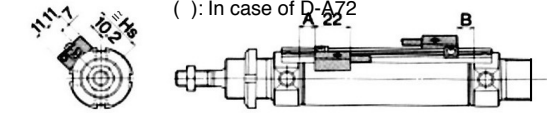


(Rail Mounting type)

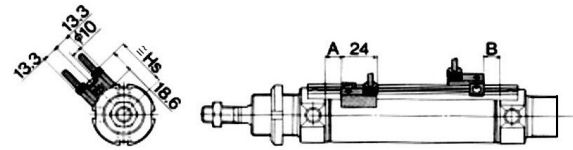
D-A7□
D-A80



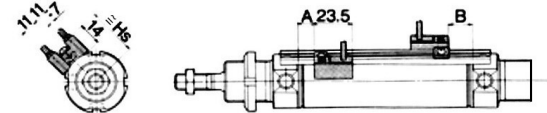
D-A7□H
D-A80H



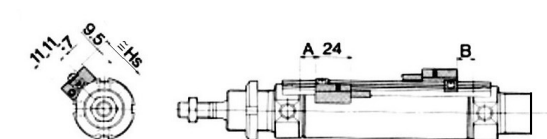
D-A73C
D-A80C



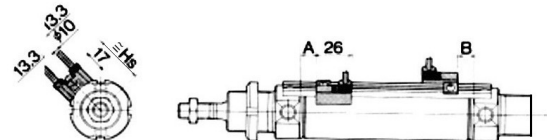
D-A79W



D-F7□
D-F7□W
D-J79
D-J79W
D-F7BAL
D-F79F



D-J79C



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-M9□	32	11.5	35.5	60.5	85.5	110.5	—
D-M9□W	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	32	8	32	57	82	107	—
D-C73C/C80C	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

Ø 32, Ø 40

How to Order

**Double acting
Single rod**

C D 76R A F 32 100 B

Built-in magnet

—	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

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

Stroke

Auto switch mounting type

B	Band mounting
----------	---------------

Applicable auto switches and bands are shown on pages 42 to 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

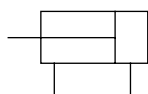
- Cylinder without auto switch, Bore size: 32, Stroke: 100, Double acting/Single rod, Bottom side mounting and Boss-cut type.
C76RAF32-100 1 pc. Cylinder
- Cylinder with auto switch (Band mounted type, 2 pcs.), Bore size: 40, Stroke: 100, Double acting/Single rod, Front side mounting and Front nose type.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

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	G1/8	G1/4
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

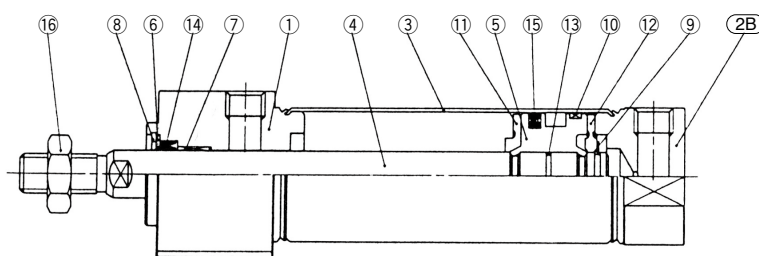
Band Mounting Type

[mm]

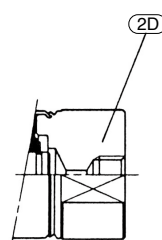
Auto switch model	No. of auto switches				1 pc.
	2 pcs.		n pcs.		
	Different sides	Same side	Different sides	Same side	
D-C7□ D-C80	15	50	$15 + 45(\frac{n-2}{2})$ (n = 2, 4...)	$50 + 45(n - 2)$	10
D-C73C D-C80C D-H7C	15	65	$15 + 45(\frac{n-2}{2})$ (n = 2, 4...)	$65 + 50(n - 2)$	10
D-H7□ D-H7□W D-H7BAL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

Construction

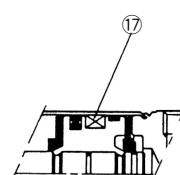
C□76R_B 32 to 40



Standard: Front nose



Front nose in line port



Built-in magnet

Component Parts

No.	Description	Material	Qty.	Note
①	Rod cover	Aluminium alloy	1	White anodised
②B	Head cover F	Aluminium alloy	1	White anodised
②D	Head cover Y	Aluminium alloy	1	White anodised
③	Cylinder tube	Stainless steel	1	
④	Piston rod	Carbon steel	1	Hard chrome plated
⑤	Piston	Aluminium 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	

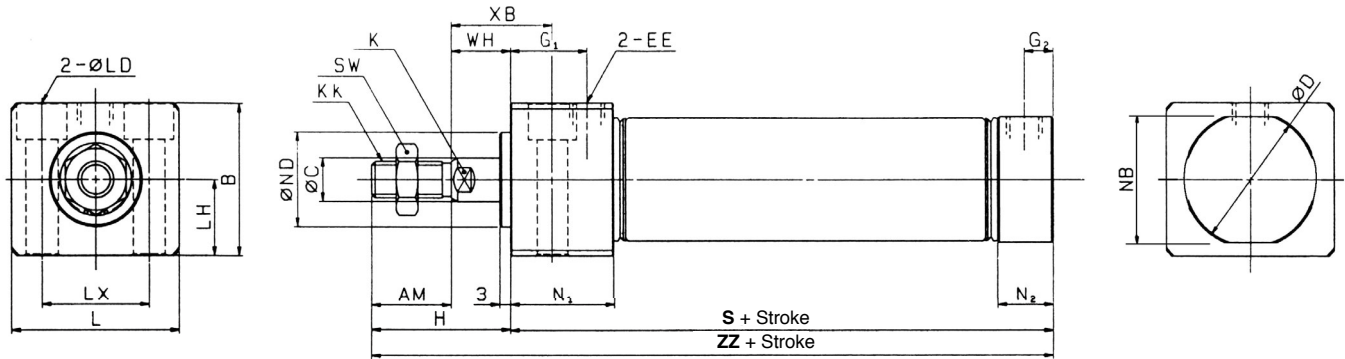
No.	Description	Material	Qty.	Note
⑪	Bumper A	Urethane	1	
⑫	Bumper B	Urethane	1	
⑬	Piston gasket	NBR	1	
⑭	Rod seal	NBR	1	
⑮	Piston seal	NBR	1	
⑯	Rod end nut	Carbon steel	1	Nickel plating
⑰	Magnet	Magnet	1	(Switch type only)

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

Dimensions

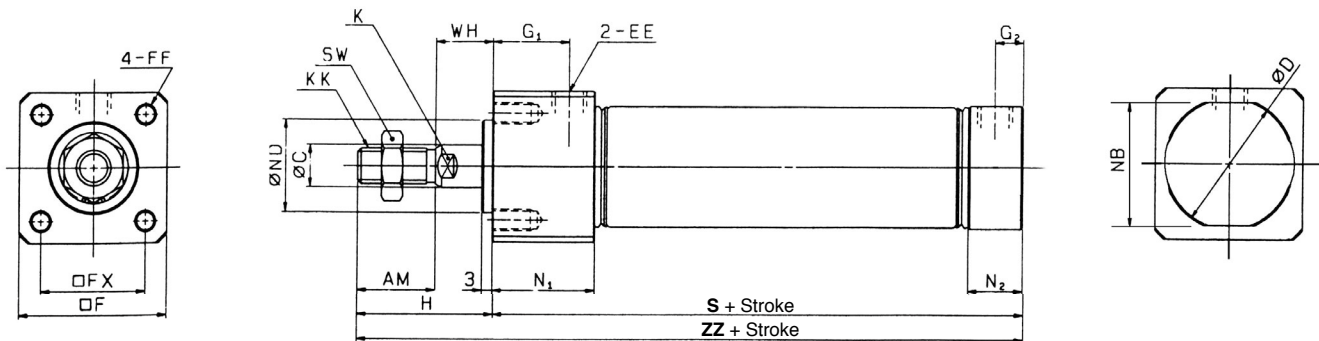
[First angle projection]

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



Bore	AM	B	Ø C	Ø D	EE	G1	G2	H	K	KK	L	Ø LD	LH	LX	N1	N2	NB	Ø NDh8	S	SW	WH	XB	ZZ
32	20	42.3	12	37.5	G1/8	22	9	36	10	M10 x 1.5	47	Ø 9, Ø 14 depth of counterbore 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	12	40	12	M12 x 1.75	58.5	Ø 11, Ø 17.5 depth of counterbore 12.5	26	38	38	22	42.5	32 _{-0.039}	105	19	16	31	145

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



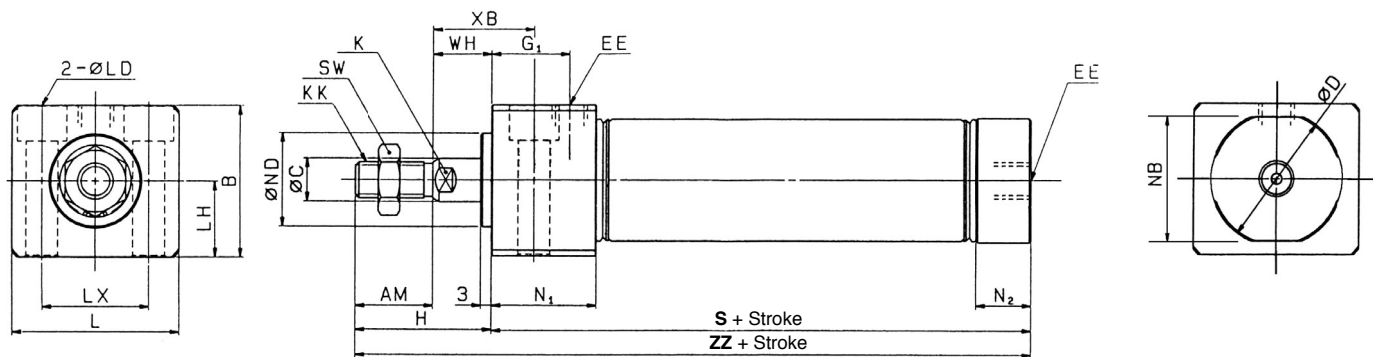
Bore	AM	Ø C	Ø D	EE	F	FF	FX	G1	G2	H	K	KK	N1	N2	NB	Ø NDh8	S	SW	WH	ZZ
32	20	12	37.5	G1/8	42.4	M6 x 1 depht 11	30	22	9	36	10	M10 x 1.5	29	17	34.5	26 _{-0.033}	80	17	16	116
40	24	14	46.5	G1/4	52.4	M8 x 1.25 depht 14	36	27	12	40	12	M12 x 1.75	38	22	42.5	32 _{-0.039}	105	19	16	145

Series C76R

Dimensions

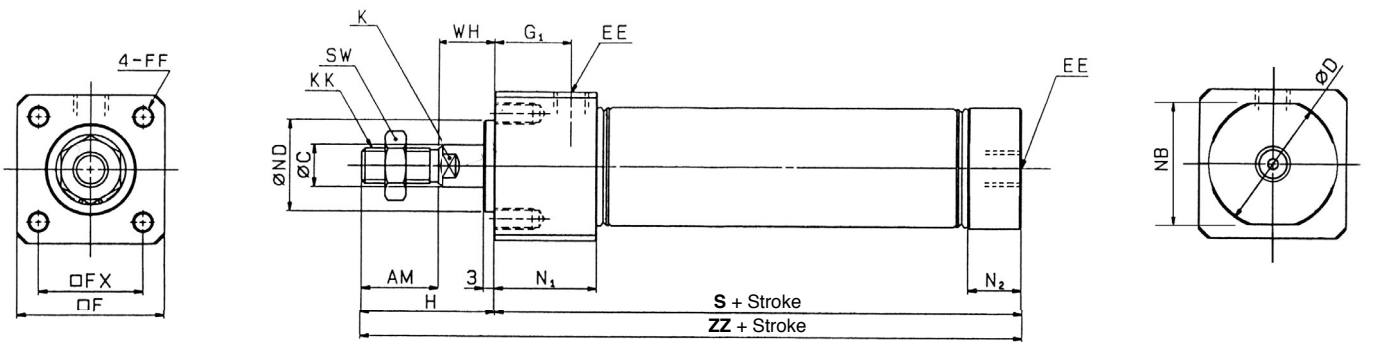
[First angle projection]

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



																					[mm]	
Bore	AM	B	Ø C	Ø D	EE	G1	H	K	KK	L	Ø LD	LH	LX	N1	N2	NB	Ø NDh8	S	SW	WH	XB	ZZ
32	20	42.3	12	37.5	G1/8	22	36	10	M10 x 1.5	47	Ø 9, Ø 14 depth of counter bore 10	21	30	29	17	34.5	26 ⁰ _{-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	Ø 11, Ø 17.5 depth of counter bore 12.5	26	38	38	22	42.5	32 ⁰ _{-0.039}	105	19	16	31	145

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



																				[mm]
Bore	AM	Ø C	Ø D	EE	F	FF	FX	G1	H	K	KK	N1	N2	NB	Ø NDh8	S	SW	WH	ZZ	
32	20	12	37.5	G1/8	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	G1/4	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	

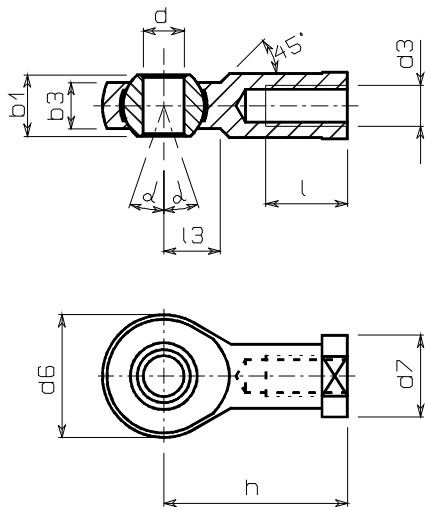
Air Cylinder: Direct Mount Type

Double Acting, Single Rod **Series C76R**

Accessory Dimensions

[First angle projection]

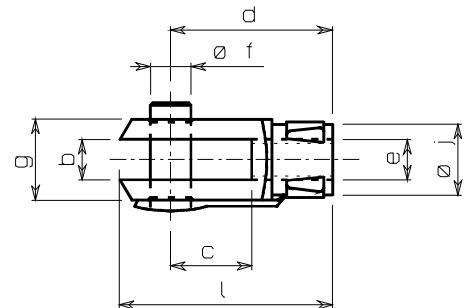
Single Knuckle Joint/DIN648



[mm]

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

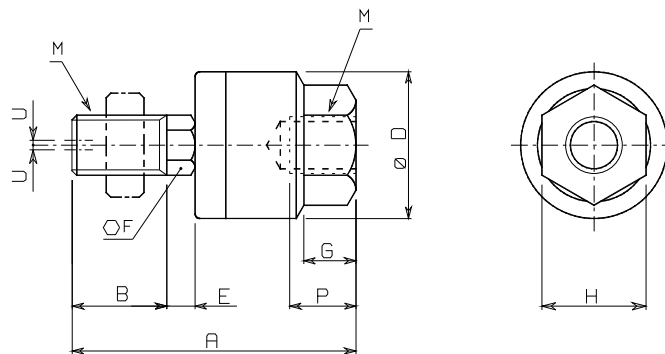
Double Knuckle Joint/DIN71751



[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]

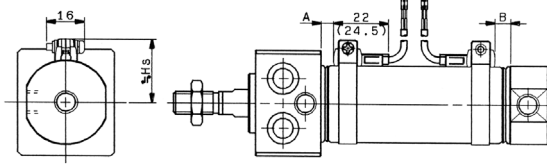
Bore	Model	M		A	B	D	E	F	G	H	Maximum screwed depth P	Allowable eccentricity U	Max. operating tension and compression power (kN)
		Nominal thread dia.	Pitch										
32	JA25-10-150	10	1.5	49.5	19.5	24	5	8	8	17	9	0.5	2.5
40	JA40-12-175	12	1.75	60	20	31	6	11	11	22	13	0.75	4.4

Series C76R

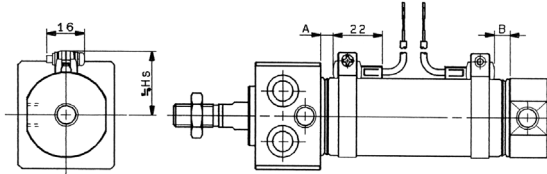
Auto Switch Mounting, Position and Mounting Height

Reed Switch Setting Position (Stroke end) (Band mounting type)

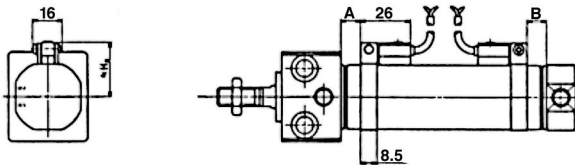
D-A9□



D-M9□
D-M9□W

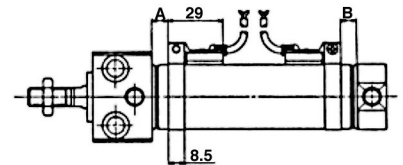
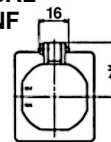


D-C7□
D-C80

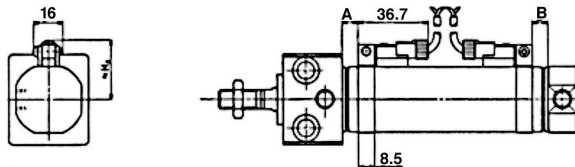


Solid State Switch Setting Position (Stroke end) (Band mounting type)

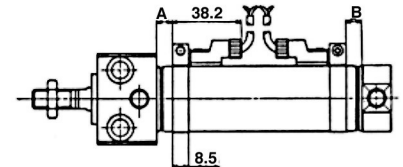
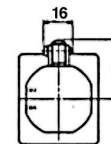
D-H7□
D-H7□W
D-H7BAL
D-H7NF



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	Relay, PLC	
				2-wire	—	—	200 V	—	A72	A72H	●	●	—	—	—			
					24 V	12 V	100 V	—	A73	A73H	●	●	●	—	—			
							100 V	A93	—	—	●	●	—	—	—			
		100 V	A90				A80	A80H	●	●	—	—	—					
		—	C73C				A73C	—	●	●	●	●	—					
	Connector	No	24 V	—	C80C	A80C	—	●	●	●	●	—						
Diagnostic indication (2-colour)	Grommet	Yes	—	—	—	A79W	—	●	●	—	—	—						
Solid state switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9N	F7NV	F79	●	●	○	—	○	IC circuit	Relay, PLC		
				3-wire (PNP)			M9P	F7PV	F7P	●	●	○	—	○				
		Connector		2-wire	12 V		M9B	F7BV	J79	●	●	○	—	○	—			
				H7C	J79C		—	●	●	○	●	—	—					
	Diagnostic indication (2-colour)	Grommet		3-wire (NPN)	5 V, 12 V		M9NW	F7NWV	F79W	●	●	○	—	○	IC circuit			
				3-wire (PNP)			M9PW	—	F7PW	●	●	○	—	○				
				Water resistant (2-colour)	Grommet		2-wire	12 V	M9BW	F7BWV	J79W	●	●	○	—		○	—
							H7BA	F7BAV	F7BA	—	●	○	—	○				
	With diagnostic output (2-colour)	Grommet		4-wire (NPN)	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 Ø 8, Ø 10, Ø 12 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		—
	D-H7NW, H7PW, H7BW		Diagnostic indication (2-colour)

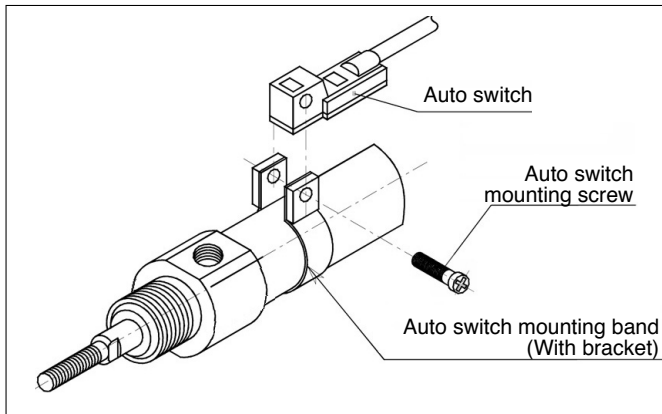
* With pre-wire connector is available for solid state auto switch, too. Refer to page 6-16-1 for details.
 * Normally closed solid state switch (D-F9G, F9H type) is also available.

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 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

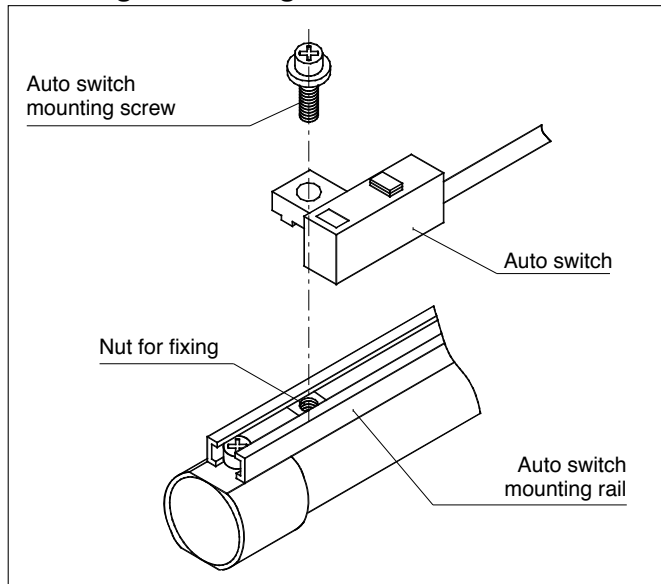
1. Remove the switch mounting screw from the switch holder.
2. Move the switch back towards the position where it stops at the lead wire side.
3. Hold up the lead wire side of the switch at the angle of around 45°.
4. Maintain the angle, and pull back the switch obliquely at the same angle.

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.

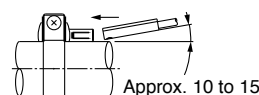
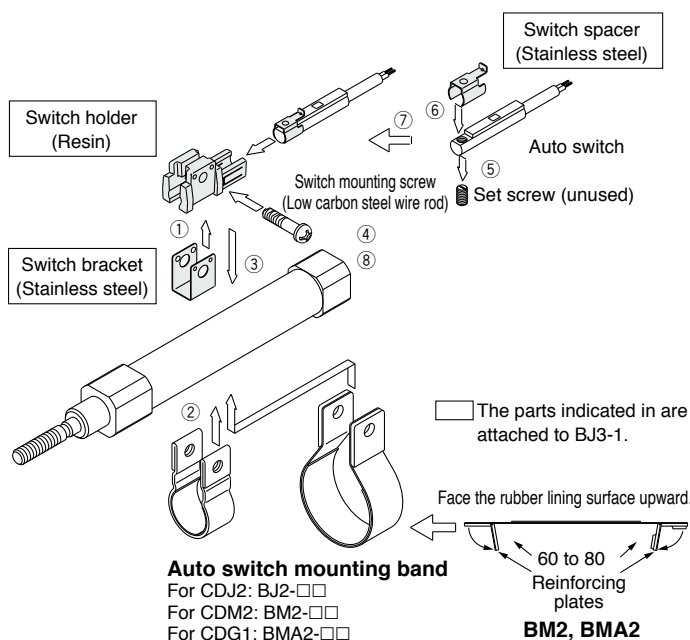
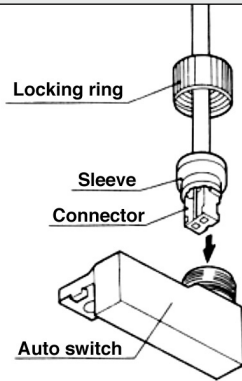


Figure 1. Switch insert angle



Plug-in Connector Assembly

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



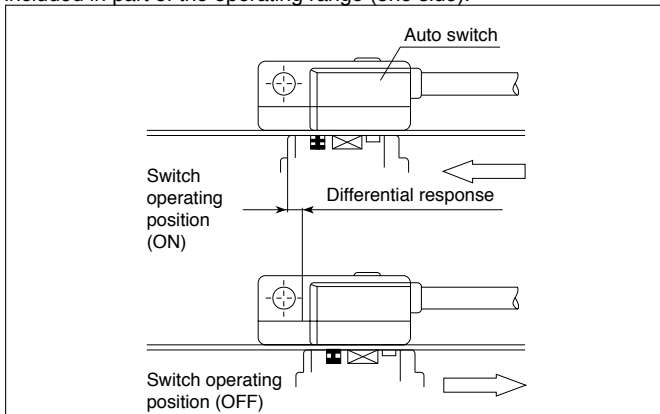
With the convex port of the connector highest, insert the connector into the auto switch up to the sleeve. Screw the locking ring into the switch (do not tighten with pliers, hand tighten only).

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		
	D-A79W	13	14
	D-F7□/J79/F7□W/J79W		
	D-F7□V/F7□WV/F79F	6	6.5
	D-J79C/F7BA□		

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

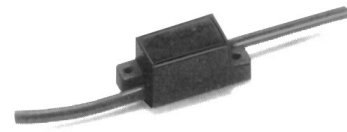
The auto switch of D-A7/A8 type, D-A7□H/A80H type, D-A73C/A80C type, D-C7/C8 type, D-C73C/C80C type are not incorporated with a contact protective circuit.

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

Contact Protective Box of Specifications

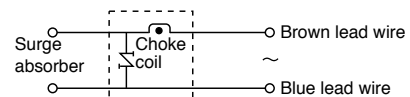
Part no.	CD-P11		CD-P12
Load voltage	100 VAC	200 VAC	24 VDC
Max. load current	25 mA	12.5 mA	50 mA

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

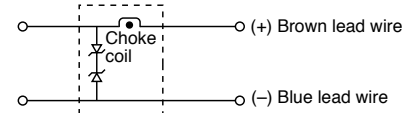


Contact Protective Box/Internal Circuit

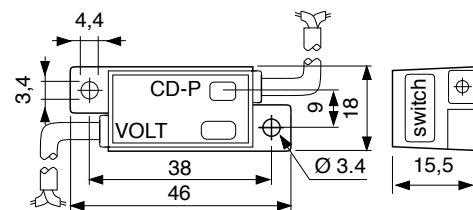
CD-P11



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.

Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “Caution,” “Warning” or “Danger.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)¹⁾, and other safety regulations.

-  **Danger:** **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.
-  **Warning:** **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
-  **Caution:** **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

- 1) ISO 4414: Pneumatic fluid power – General rules and safety requirements for systems and their components.
ISO 4413: Hydraulic fluid power – General rules and safety requirements for systems and their components.
IEC 60204-1: Safety of machinery – Electrical equipment of machines. (Part 1: General requirements)
ISO 10218-1: Robots and robotic devices - Safety requirements for industrial robots - Part 1: Robots.
etc.

Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalogue information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Our products cannot be used beyond their specifications. Our products are not developed, designed, and manufactured to be used under the following conditions or environments. Use under such conditions or environments is not covered.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Use for nuclear power, railways, aviation, space equipment, ships, vehicles, military application, equipment affecting human life, body, and property, fuel equipment, entertainment equipment, emergency shut-off circuits, press clutches, brake circuits, safety equipment, etc., and use for applications that do not conform to standard specifications such as catalogues and operation manuals.
3. Use for interlock circuits, except for use with double interlock such as installing a mechanical protection function in case of failure. Please periodically inspect the product to confirm that the product is operating properly.

Caution

We develop, design, and manufacture our products to be used for automatic control equipment, and provide them for peaceful use in manufacturing industries.

Use in non-manufacturing industries is not covered.

Products we manufacture and sell cannot be used for the purpose of transactions or certification specified in the Measurement Act.

The new Measurement Act prohibits use of any unit other than SI units in Japan.

Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements”. Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.²⁾ Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products.
- 2) Vacuum pads are excluded from this 1 year warranty.
A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

Safety Instructions

Be sure to read “Handling Precautions for SMC Products” (M-E03-3) before using.

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