1.8 DPAR series round cylinder

This series of round cylinder meets the standard ISO 6432, the cylinder diameter is ϕ 20 ～ ϕ 40, the cylinder adopts high precision stainless steel steel pipe, the piston rod surface is pre-rolling hardening treatment, the rod with external thread or internal thread, after hard chromium, fine grinding treatment, has good rust prevention, wear resistance and other characteristics.

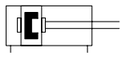
Summary

This series of round cylinder meets the standard ISO 6432, the cylinder diameter is ϕ 20 ～ ϕ 40, the cylinder adopts high precision stainless steel steel pipe, the piston rod surface is pre-rolling hardening treatment, the rod with external thread or internal thread, after hard chromium, fine grinding treatment, has good rust prevention, wear resistance and other characteristics.

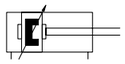
Product feature

· Stainless steel material
· Low priming pressure and rapid response
· Free of oil
· Diversified bracket, convenient installation

Diagram



Elastic buffer pad



Pneumatic adjustable buffer

Technical parameter

General technical data				
Diameter ϕmm	20	25	32	40
Standard	ISO 6432			
Pneumatic connection	G1/8	G1/8	G1/8	G1/4
Piston rod thread	M8	M10x1.25	M10x1.25	M14x1.25
Design	Piston/piston rod/cylinder barrel			
Cushioning	Elastic cushioning rings/pads at both ends-P Cushioning, adjustable at both ends-PPV			
Position sensing [1)]	Via magnetic switch			
Type of mounting	With accessories			
	Direct mounting			
Mounting position	Any			

Note 1) The cylinder with position sensing must travel at least 10 mm to ensure reliable sensing to customize longer travel

Operating and environmental conditions				
Diameter ϕ	20	25	32	40
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]			
Operating pressure MPa	0.05 ～ 1.0			
Ambient and fluid temperature ° C	-20 ～ 80 (Unfrozen)			
Corrosion resistance class	2			

Models selection

DPAR	-32		×50		-PPV	A		-C
Round cylinder	①		②		③	④		⑤
①	-Diameter: 20 25 32 40							
②	× Stroke [1)] :1...300，Refer to Datasheet							
③	-Cushion：P=Elastic cushioning pads at both ends；PPV=Cushioning, adjustable at both ends；							
④	Position sensing：A： With magnetic switch；None=Without magnetic switch							
⑤	-Variant							
	Piston rod		The type of piston rod thread		Cylinder type			
		One side		Male thread		Standard(With platform on both sides)	H	Direct installation type
	2	Through piston rod	F	Female thread	B	Flat end cover	C	Earrings are one size

Note 1）Refer to Datasheet

Datasheet[mm]

Diameter ϕ	Standard stroke	Max stroke（mm）
20，25，32，40	25 50 75 100 125 150 160 200 250 300	1...1000

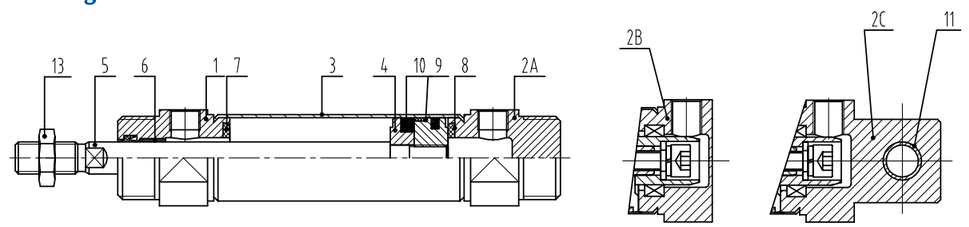
Please confirm the applicable trip according to the use situation. Using a cylinder with the travel length shorter than the effective buffer length may cause the decrease of the With Air Cushion performance. Please contact the sales representative.

-Technical parameter

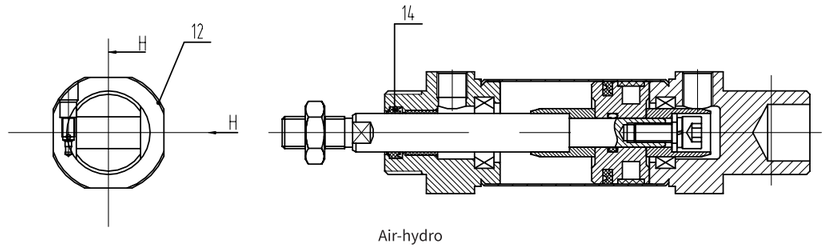
Speed [mm/s]	Measurements of less than 1 mm/s were not conducted			
Diameter ϕ	20	25	32	40
Speed with stick-slip-free operation, horizontal, without load, at 0.6 MPa (6 bar)	10... 100		8 ... 100	
Minimum speed, propulsion	5.3	＜ 1		
Minimum speed, and return	4.7	＜ 1		

Forces [N] and impact energy [J]	At 80 °C , these values will decrease by about 50%			
Diameter ϕ	20	25	32	40
Theoretical force at 0.6 MPa (6 bar), advancing	189	295	483	753
Theoretical force at 0.6 MPa (6 bar), retracting	158	247	415	633
Impact energy in the end positions	0.20	0.30	0.40	0.70

Structure Diagram



Rubber bumper Boss-cut Integrated clevis



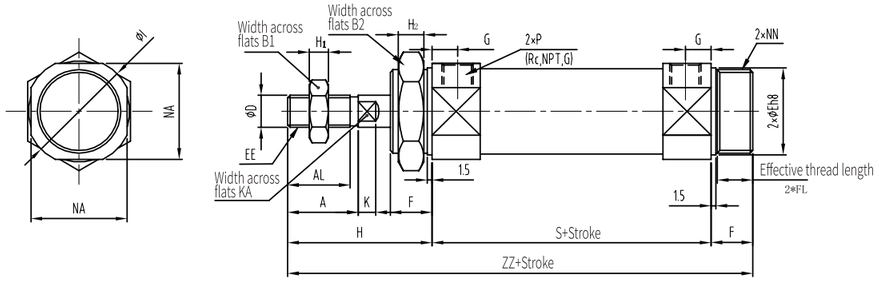
Air-hydro

Number	Name	Material	Note
1	Pole side cylinder head	Aluminium alloy	Anodized refined
2A	The rod-free side cylinder head A	Aluminium alloy	On both sides of the platform
2B	The rod-free side cylinder head B	Aluminium alloy	Flat end cover
2C	The rod-free side cylinder head C	Aluminium alloy	Earrings in one
3	Cylinder barrel	Stainless steel	
4	Piston	Aluminium alloy	
5	Piston rod	Carbon steel	Hard chrome plating
6	Guide sleeve	Bearing metal	

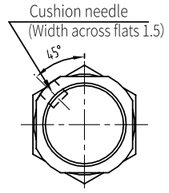
Number	Name	Material	Note
7	Buffer	Resin	Aboved Φ25 is the same
8	Buffer	Resin	
9	Wearing ring	Resin	
11	Axle sleeve used in earrings	Bearing metal	
12	Install nuts	Carbon steel	Nickelage
13	Pole end nut	Carbon steel	Zinc chromate
10	Magnet ring	—	
14	Rod seal ring	NBR	

Dimensions

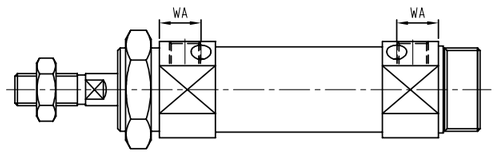
· Basic type (A with platform on both sides)

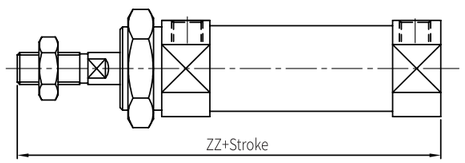


φ[mm]	A	AL	B_1	B_2	D	E	F	FL	G	H	H_1	H_2	I	K	KA	MM	NA	NN	P	S	ZZ
20	18	15.5	13	26	8	$20^{0}_{-0.033}$	13	10.5	8	41	5	8	28	5	6	M8 ×1.25	24	M20 × 1.5	1/8	62	116
25	22	19.5	17	32	10	$25^{0}_{-0.033}$	13	10.5	8	45	6	8	33.5	5.5	8	M10 ×1.25	30	M26 × 1.5	1/8	62	120
32	22	19.5	17	32	12	$26^{0}_{-0.033}$	13	10.5	8	45	6	8	37.5	5.5	10	M10 ×1.25	34.5	M26 × 1.5	1/8	64	122
40	24	21	22	41	14	$32^{0}_{-0.039}$	16	13.5	11	50	8	10	46.5	7	12	M14 ×1.5	42.5	M32 ×2	1/4	88	154

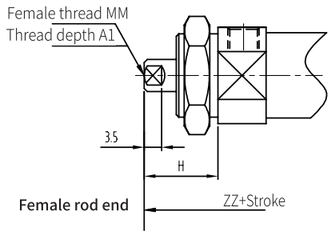


With Air Cushion





Boss-cut



Female rod end

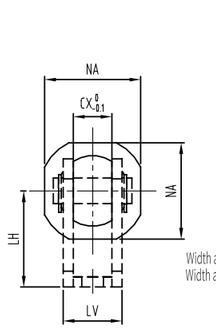
mm	With Air Cushion	Boss-cut	Female rod end			
Diameter	WA	ZZ	A1	H	MM	ZZ
20	12	103	8	20	M4 ×0.7	95
25	12	107	8	20	M5 ×0.8	95
32	11	109	12	20	M6 ×1	97
40	16	138	13	21	M8 × 1.25	125

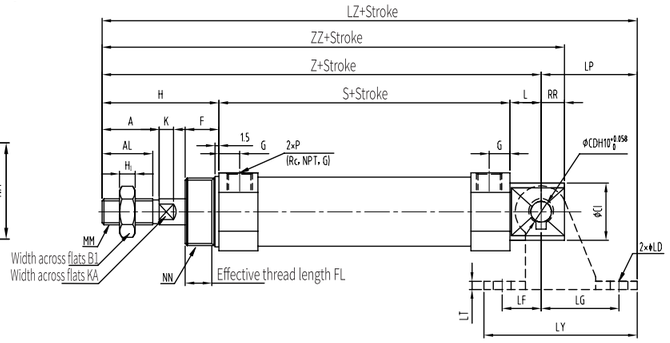
Note: For the internal thread use, please use a thin wrench to set the piston rod. Select the appropriate washer according to the workpiece material to prevent the deformation of the rod end contact part.

Type of mounting

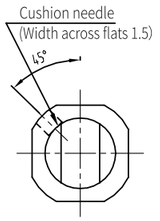
Integrated Clevis, one body size

Material: Anodized refined aluminum alloy

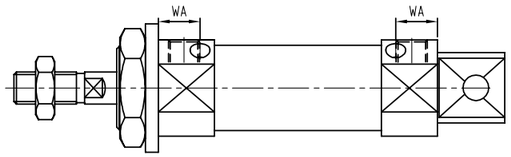


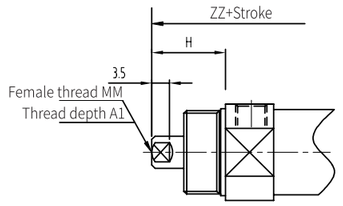


Diameter	A	AL	1	CD	CI	CX	D	E	F	FL	G	H	1	I	K	KA	L	MM	NA	NN	P	RR	S	U	Z	ZZ
20	18	15.5	13	8	20	12	8	$20^{0}_{-0.033}$	13	10.5	8	41	5	28	5	6	12	M8 ×1.25	24	M20 ×1.5	1/8	9	62	11.5	115	124
25	22	19.5	17	8	22	12	10	$26^{0}_{-0.033}$	13	10.5	8	45	6	33.5	5.5	8	12	M10 ×1.25	30	M26 ×1.5	1/8	9	62	11.5	119	128
32	22	19.5	17	10	27	20	12	$26^{0}_{-0.033}$	13	10.5	8	45	6	37.5	5.5	10	15	M10 ×1.25	34.5	M26 ×1.5	1/8	12	64	14.5	124	136
40	24	21	22	10	33	20	14	$32^{0}_{-0.039}$	16	13.5	11	50	8	46.5	7	12	15	M14 ×1.5	42.5	M32 ×2	1/4	12	88	14.5	153	165

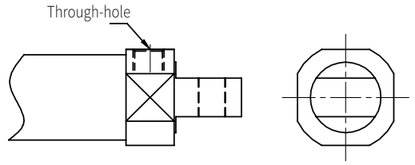


With Air Cushion





Female rod end



Earrings are one size (90°) (V)

mm	With Air Cushion	Female rod end			
Diameter	WA	A1	H	MM	ZZ
20	12	8	20	M4 ×0.7	103
25	12	8	20	M5 ×0.8	103
32	11	12	20	M6 ×1	111
40	16	13	21	M8 × 1.25	136

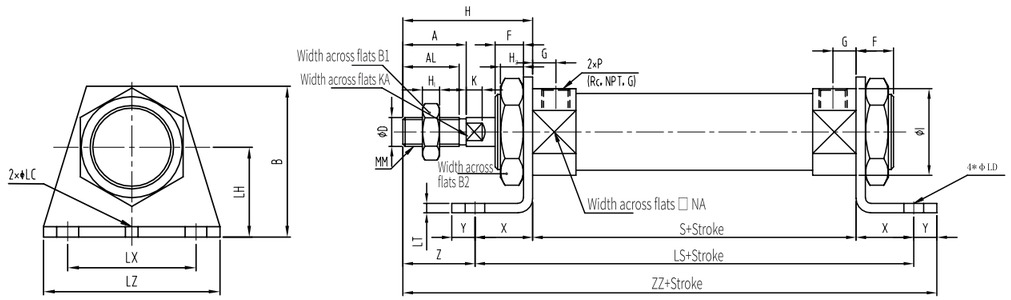
· Application installation example

Diameter	LD	LF	LG	LH	LP	LT	LV	LY	LZ
20	6.8	15	30	30	37	3.2	18.4	59	152
25	6.8	15	30	30	37	3.2	18.4	59	156
32	9	15	40	40	50	4	28	75	174
40	9	15	40	40	50	4	28	75	203

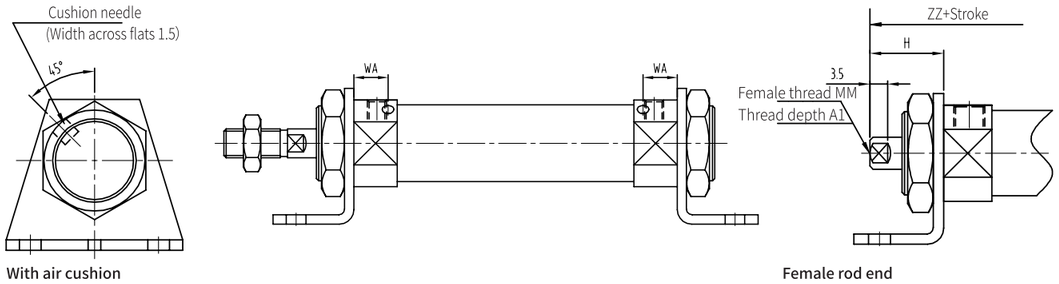
- Type of mounting

LB Axial foundation Type

Material: Galvanized steel



Diameter	A	AL	B	B_1	B_2	D	F	G	H	H_1	H_2	I	K	KA	LC	LD	LH	LS	LT	LX	LZ	MM	NA	P	S	X	Y	Z	ZZ
20	18	15.5	40	13	26	8	13	8	41	5	8	28	5	6	4	6.8	25	102	3.2	40	55	M8 ×1.25	24	1/8	62	20	8	21	131
25	22	19.5	47	17	32	10	13	8	45	6	8	33.5	5.5	8	4	6.8	28	102	3.2	40	55	M10 ×1.25	30	1/8	62	20	8	25	135
32	22	19.5	47	17	32	12	13	8	45	6	8	37.5	5.5	10	4	6.8	28	104	3.2	40	55	M10 ×1.25	34.5	1/8	64	20	8	25	137
40	24	21	54	22	41	14	16	11	50	8	10	46.5	7	12	4	7	30	134	3.2	55	75	M14 ×1.5	42.5	1/4	88	23	10	27	171



With air cushion

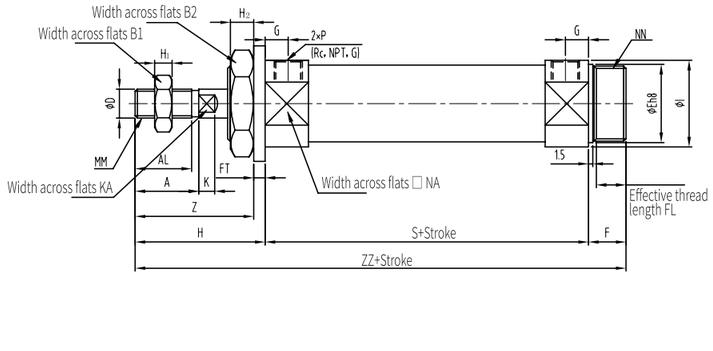
Female rod end

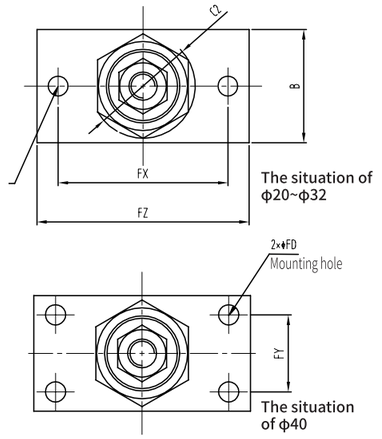
mm	With air cushion	Female rod end			
Diameter	WA	A1	H	MM	ZZ
20	12	8	20	M4 ×0.7	110
25	12	8	20	M5 ×0.8	110
32	11	12	20	M6 ×1	112
40	16	13	21	M8 × 1.25	142

- Type of mounting

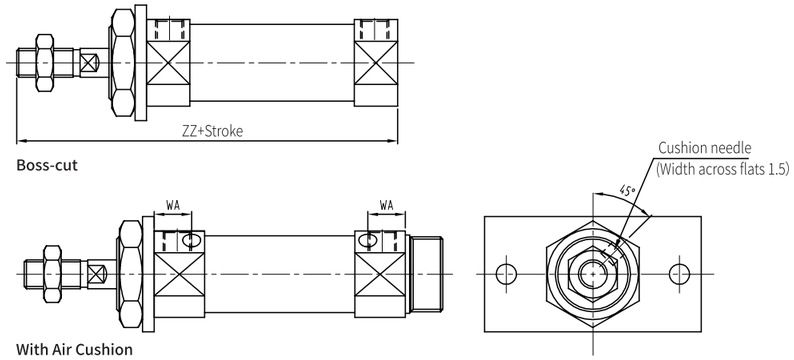
FA Front Flange Type

Material: Galvanized steel





Diameter	A	AL	B	B1	B2	B2	D	E	F	FL	FD	FT	FX	FY	FZ	G	H	H1	H2	I	K	KA	MM	NA	NN	P	S	Z	ZZ
20	18	15.5	34	13	26	30	8	$20^{0}_{-0.033}$	13	10.5	7	4	60	—	75	8	41	5	8	28	5	6	M8 ×1.25	24	M20×1.5	1/8	62	37	116
25	22	19.5	40	17	32	37	10	$26^{0}_{-0.033}$	13	10.5	7	4	60	—	75	8	45	6	8	33.5	5.5	8	M10×1.25	30	M26×1.5	1/8	62	41	120
32	22	19.5	40	17	32	37	12	$26^{0}_{-0.033}$	13	10.5	7	4	60	—	75	8	45	6	8	37.5	5.5	10	M10×1.25	34.5	M26×1.5	1/8	64	41	122
40	24	21	52	22	41	47.3	14	$32^{0}_{-0.039}$	16	13.5	7	5	66	36	82	11	50	8	10	46.5	7	12	M14 ×1.5	42.5	M32 ×2	1/4	88	45	154

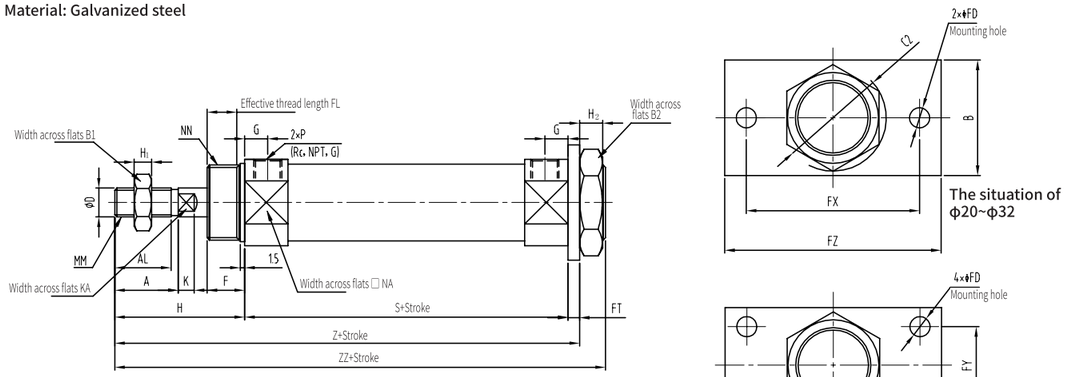


mm	Boss-cut	With Air Cushion	Female rod end			
Diameter	ZZ	WA	A1	H	MM	ZZ
20	103	12	8	20	M4 ×0.7	95
25	107	12	8	20	M5 ×0.8	95
32	109	11	12	20	M6 ×1	97
40	138	16	13	21	M8 × 1.25	125

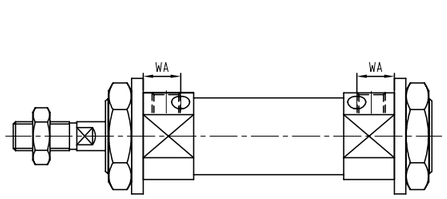
- Type of mounting

FB Rear Flange Type

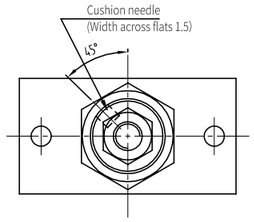
Material: Galvanized steel

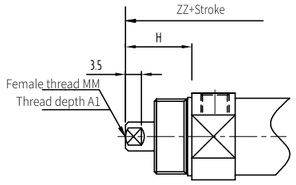


Diameter	A	AL	B	B_1	B_2	C_2	D	E	F	FL	FD	FT	FX	FY	FZ	G	H	H_1	H_2	I	K	KA	MM	NA	NN	P	S	Z	ZZ
20	18	15.5	34	13	26	30	8	$20^{0}_{-0.033}$	13	10.5	7	4	60	—	75	8	41	5	8	28	5	6	M8 × 1.25	24	M20 × 1.5	1/8	62	107	116
25	22	19.5	40	17	32	37	10	$26^{0}_{-0.033}$	13	10.5	7	4	60	—	75	8	45	6	8	33.5	5.5	8	M10 × 1.25	30	M26 × 1.5	1/8	62	111	120
32	22	19.5	40	17	32	37	12	$26^{0}_{-0.033}$	13	10.5	7	4	60	—	75	8	45	6	8	37.5	5.5	10	M10 × 1.25	34.5	M26 × 1.5	1/8	64	113	122
40	24	21	52	22	41	47.3	14	$32^{0}_{-0.039}$	16	13.5	7	5	66	36	82	11	50	8	10	46.5	7	12	M14 × 1.5	42.5	M32 ×2	1/4	88	143	154



With Air Cushion





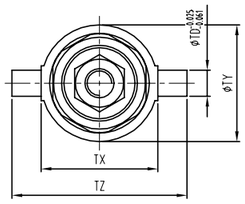
Female rod end

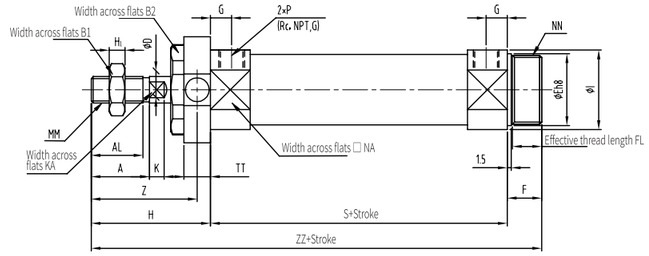
	With Air Cushion	Female rod end			
Diameter	WA	A1	H	MM	ZZ
20	12	8	20	M4 ×0.7	95
25	12	8	20	M5 ×0.8	95
32	11	12	20	M6 ×1	97
40	16	13	21	M8× 1.25	125

- Type of mounting

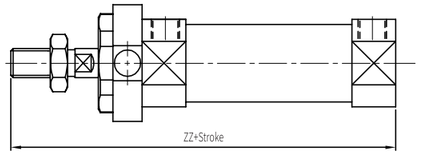
Rod-side ear shaft type (TA)

Material: Cast iron without electrolytic nickel plating

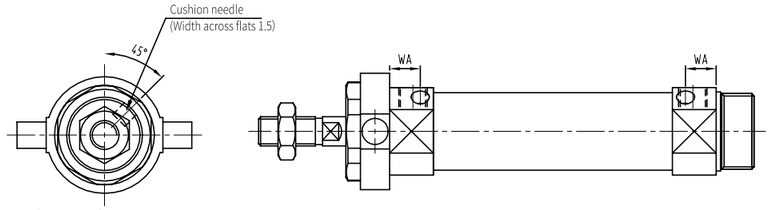




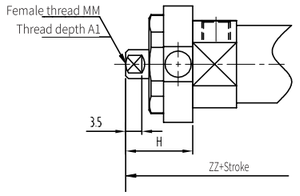
Diameter	A	AL	B1	B2	D	E	F	FL	G	H	H1	I	K	KA	MM	NA	NN	P	S	TD	TT	TX	TY	TZ	Z	ZZ
20	18	15.5	13	26	8	$20^{0}_{-0.033}$	13	10.5	8	41	5	28	5	6	M8×1.25	24	M20×1.5	1/8	62	8	10	32	32	52	36	116
25	22	19.5	17	32	10	$26^{0}_{-0.033}$	13	10.5	8	45	6	33.5	5.5	8	M10×1.25	30	M26×1.5	1/8	62	9	10	40	40	60	40	120
32	22	19.5	17	32	12	$26^{0}_{-0.033}$	13	10.5	8	45	6	37.5	5.5	10	M10×1.25	34.5	M26×1.5	1/8	64	9	10	40	40	60	40	122
40	24	21	22	41	14	$32^{0}_{-0.039}$	16	13.5	11	50	8	46.5	7	12	M14×1.5	42.5	M32×2	1/4	88	10	11	53	53	77	44.5	154



Boss-cut



With Air Cushion



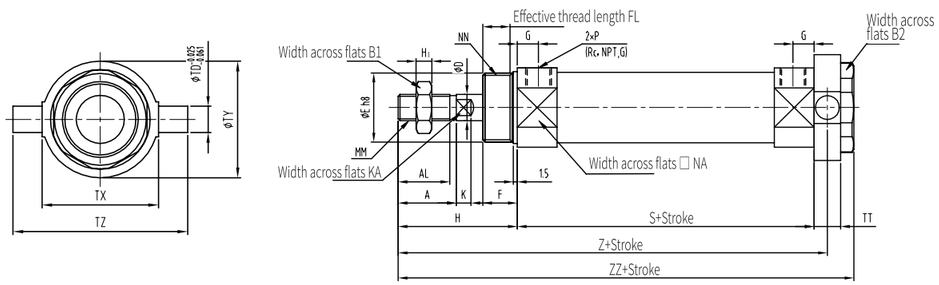
Female rod end

mm	Boss-cut	With Air Cushion	Female rod end			
Diameter	ZZ	WA	A1	H	MM	ZZ
20	103	12	8	20	M4×0.7	95
25	107	12	8	20	M5×0.8	95
32	109	11	12	20	M6×1	97
40	138	16	13	21	M8×1.25	125

- Type of mounting

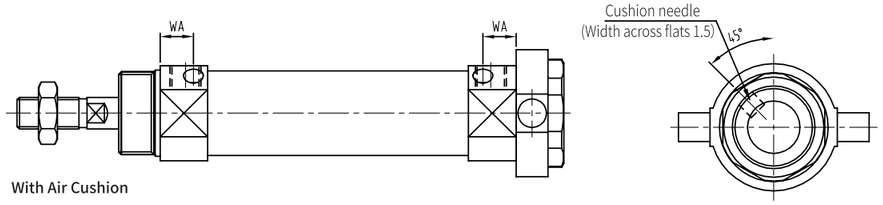
Head Trunnion (TB)

Material: Cast iron without electrolytic nickel plating

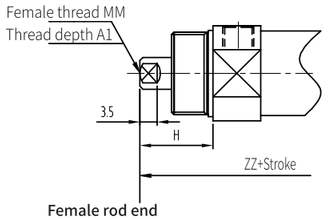


Diameter	A	AL	B_1	B_2	D	E	F	FL	G	H	H_1	I	K	KA
20	18	15.5	13	26	8	$20^{0}_{-0.033}$	13	10.5	8	41	5	28	5	6
25	22	19.5	17	32	10	$26^{0}_{-0.033}$	13	10.5	8	45	6	33.5	5.5	8
32	22	19.5	17	32	12	$26^{0}_{-0.033}$	13	10.5	8	45	6	37.5	5.5	10
40	24	21	22	41	14	$32^{0}_{-0.039}$	16	13.5	11	50	8	46.5	7	12

Diameter	MM	NA	NN	P	S	TD	TT	TX	TY	TZ	Z	ZZ
20	M8×1.25	24	M20×1.5	1/8	62	8	10	32	32	52	108	118
25	M10×1.25	30	M26×1.5	1/8	62	9	10	40	40	60	112	122
32	M10×1.25	34.5	M26×1.5	1/8	64	9	10	40	40	60	114	124
40	M14×1.5	42.5	M32×2	1/4	88	10	11	53	53	77	143.5	154



With Air Cushion

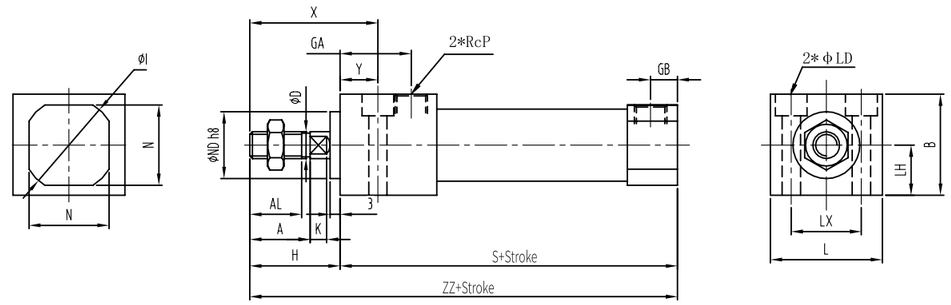


Female rod end

mm	With Air Cushion	Female rod end			
Diameter	WA	A_1	H	MM	ZZ
20	12	8	20	M4×0.7	97
25	12	8	20	M5×0.8	97
32	11	12	20	M6×1	97
40	16	13	21	M8×1.25	125

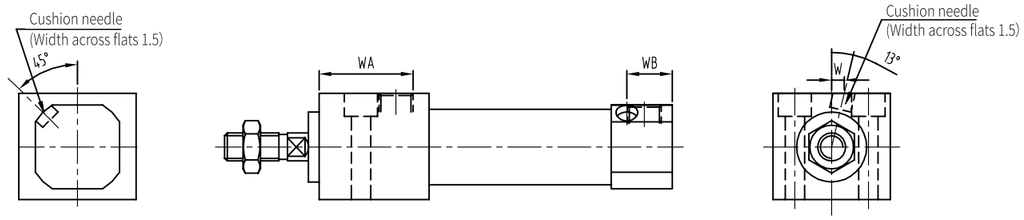
- Type of mounting

Direct installation type H

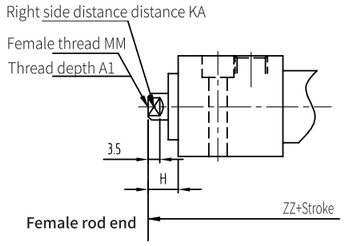


Diameter	Stroke range	A	AL	B	B_1	D	GA	GB	H	H_1	I	K	KA	L
20	1~150	18	15.5	30.3	13	8	22	8	27	5	28	5	6	33.5
25	1~200	22	19.5	36.3	17	10	22	8	31	6	33.5	5.5	8	39
32	1~200	22	19.5	42.3	17	12	22	8	31	6	37.5	5.5	10	47
40	1~300	24	21	52.3	22	14	27	11	34	8	46.5	7	12	58.5

Diameter	Stroke range	LD	LH	LX	MM	N	ND	P	S	X	Y	ZZ
20	1~150	ø5.5、ø9.5 sink depth 6.5	15	21	M8 ×1.25	24	$20^{0}_{-0.033}$	1/8	76	39	12	103
25	1~200	ø6.6、ø11 sink depth 7.5	18	25	M10 ×1.25	30	$26^{0}_{-0.033}$	1/8	76	43	12	107
32	1~200	ø9、ø14 sink depth10	21	30	M10 ×1.25	34.5	$26^{0}_{-0.033}$	1/8	78	43	12	109
40	1~300	ø11、ø17.5 sink depth12.5	26	38	M14 ×1.5	42.5	$32^{0}_{-0.039}$	1/4	104	49	15	138



With Air Cushion



Female rod end

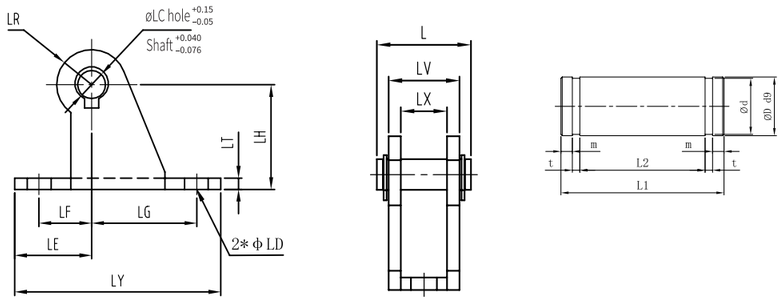
mm	With Air Cushion			Female rod end				
Diameter	WA	WB	W	W_1	H	KA	MM	ZZ
20	27	13	8.5	8	10	6	M4×0.7	86
25	27	13	10.5	8	10	8	M5×0.8	86
32	27	13	11.5	12	10	10	M6×1	88
40	32	16	15	13	10	12	M8×1.25	114

Note: When using the internal thread, please select the appropriate washer according to the workpiece material to prevent the deformation of the rod end contact part and tighten the piston rod with a thin wrench.

- Type of mounting

Clevis foot N-For Integrated Cleviss and one body shape

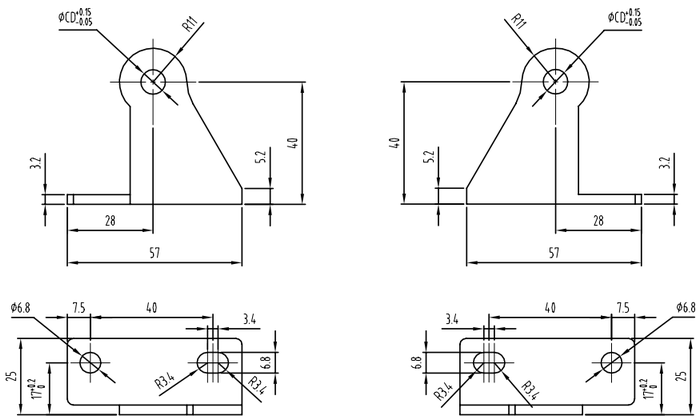
Material: Carbon steel galvanized



Diameter	L	LC	LD	LE	LF	LG	LH	LR	LT	LX	LY	LV	Dd9	d	L1	L2	m	t
20,25	24.5	8	6.8	22	15	30	30	10	3.2	12	59	18.4	8 -0.040 -0.076	7.6	24.5	19.5	1.6	0.9
32,40	34	10	9	25	15	40	40	13	4	20	75	28	10 -0.040 -0.076	9.6	34	29	1.35	1.15

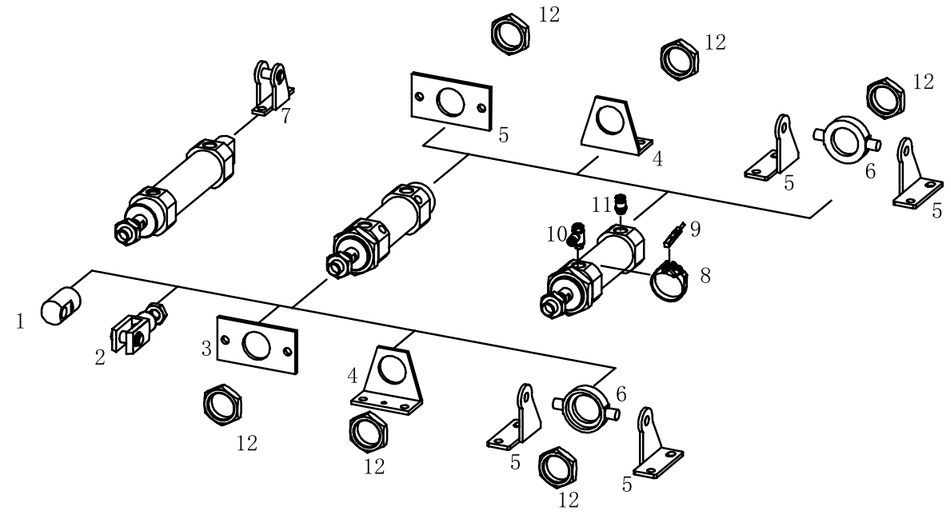
Ear shaft assembly U / T

Ear shaft: no electrolytic nickel plating for cast iron
Swing base (mounting part): steel nickel plating



Diameter	CD
20	8
25,32	9
40	10

Peripherals overview



List of installation components and accessories			
Number	Code	Name	Description
[1]	I	I joint	
[2]	Y	Y joint	
[3]	FA\FB	Front / rear flange	ϕ20~32（2 holes），ϕ40（4 holes）
[4]	LB	Axial Foundation	For bearing or end cap
[5]	T	Swing base	Cooperate, eartrunion installation assembly
[6]	U	Ear shaft	
[7]	N	Clevis foot	For Integrated Cleviss and one body shape
[8]	CJ	Assembly	Fixed magnetic switch
[9]	C	Magnetic switch	Hold the hoop type
[10]	NSE	One-way flow control valve	For speed regulation
[11]	PC	Push-in fitting	Pass-through, for connection to a standard outer diameter windpipe
[12]		Pole end nut	Use it together with the air cylinder

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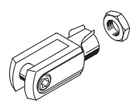
Accessories

·Pole end

Name	Diameter ∅	Code	Name	Diameter ∅	Code
Y joint			I joint		
	20	Y-M8×1.25		20	I-M8×1.25
	25, 32	Y-M10×1.25		25，32	I-M10×1.25
	40	I-M14×1.25		40	I-M14×1.25

·C Magnetic switch

Magnetic switch is used for T-groove (With switch mounting assembly)						
	Type of mounting	Switching output	Connection	Cable length m	Type	For Diameter ϕ
Normal open						
	Tighten the hoop and screws	PNP	Magnetoresistive，3-wire	1.3	CDX-15P-1.3	20~40
		NPN	Magnetoresistive，3-wire	1.3	CDX-15N-1.3	
		R	Tongue spring type，2-wire	1.3	CDX-15R-1.3	
				2.5	CDX-15R-2.5	

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