

Series AXW

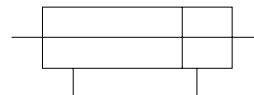
Standard Type/Double Acting : Double Rod

Bore Size(mm) : $\phi 20$, $\phi 25$, $\phi 32$, $\phi 40$

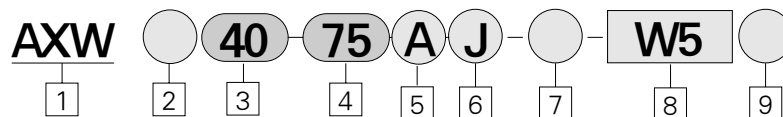


- STAINLESS STEEL BODY
- HIGH CYCLE LIFE
- LOW BREAKAWAY
- NUMEROUS MOUNTING OPTION
- MAGNET STANDARD FOR AUTO SWITCH
- BUMPERS STANDARD (AIR CUSHION OPTIONAL)
- DESIGNED FOR NON-LUBRICATED SERVICE
- COMPACT LIGHT DESIGN
- REPLACEABLE ROD GLAND
- MANUFACTURING CERTIFIED TO ISO 9001 / 9002

Symbol Double Acting/Double Rod



How to Order



1 Double Rod Type
(Built-in Magnet Standard)

2 Mounting
B : Basic Type
L : Foot Type
F : Flange Type
U : Trunnion Type

3 Bore Size(mm)
20 : $\phi 20$
25 : $\phi 25$
32 : $\phi 32$
40 : $\phi 40$

4 Stroke(mm)
※ For Stroke Refer to page A-61

5 Cushion
Blank : Rubber Cushion
A : Air Cushion

6 Rod Boot Option
Blank : Without Boot
J : Nylon Tarpaulin(Single side)
JJ : Nylon Tarpaulin(Both side)
K : Neoprene Cloth(Single side)
KK : Neoprene Cloth(Both side)

7 Special Option
Blank : Standard type
XC16 : Copper-free

8 Applicable Auto Switch Reed Switch
(Band mounted type)
(Grommet)
Blank : Without auto switch
W5 : W5
※ Standard Lead Length 0.5m
(up to 3m optional)

9 Number of Switches
Blank : 2 pcs.
S : 1 pc.
n : (n) pcs.

Model				
Bore size(mm)	φ 20	φ 25	φ 32	φ 40
Type	Air Cylinder			
Cushion	Rubber Cushion, Air Cushion			
Piping Method	1/8 Rc(PT)	1/8 Rc(PT)	1/8 Rc(PT)	1/4 Rc(PT)

Standard Stroke List	
Action	Double Acting Double Rod
Fluid	Air
Proof Pressure	15kgf/cm ² (1.5 MPa)
Max. Operating Pressure	9.9kgf/cm ² (1.0 MPa)
Min. Operating Pressure	0.5kgf/cm ² (0.05 MPa)
Ambient and Fluid Temperature	40~140° F (5~60° C)
Lubrication	None (Non-Lube)
Thread Tolerance	KS 2 Class
Stroke Tolerance	$\begin{matrix} +1.4 \\ 0 \end{matrix}$ mm

Piston Speed				
Bore Size(mm)	φ 20	φ 20	φ 32	φ 32
Piston Speed(mm/sec)	50~750			
Allowable Kinetic Energy(kgf/cm)	2.7	4	6.5	12

Auto Switch Specifications		
Mounting	Lead Wire Entry	Reed Switch
Band Mounted Type	Grommet	W5

Standard Stroke			
Bore Size(mm)	Standard Stroke	※ Long stroke	Production Max.Stroke
φ 20	25, 50, 75, 100,	400	500
φ 25	125, 150, 200,	450	
φ 32		450	
φ 40	250, 300	500	

※ A long stroke applies to the foot type and the flange type. For other mountings and case exceeding the Standard stroke limit, the max.

ACP

UACP

AX

AS

AM

AL
ALX

UARD

UAQ

AJ

AG

UAG

ADM

ADR

AMR

UAMR

AST

W~

Series AXW

Mounting and Accessories

Accessories	Standard		Option		
	Mounting Nut	Rod end Nut	Single Knuckle Joint	Double Knuckle Joint	Rod Boot
Basic Type	●(2pcs)	●(2pcs)	●	●	●
Foot Type	●(2pcs)	●(2pcs)	●	●	●
Flange Type	●(1pc)	●(2pcs)	●	●	●
Trunnion Type	●(1pc)	●(2pcs)	●	●	●
Note				With pin	Single, Both side

Material of Gaiter

Symbol		Material of Boot	Max. Ambient Temperature
Single Side	Both Side		
J	JJ	Nylon tarpaulin	140°F(60°C)
K	KK	Neoprene cloth	※230°F(110°C)

※ The max. ambient temperature of Boot only.

Weight Table

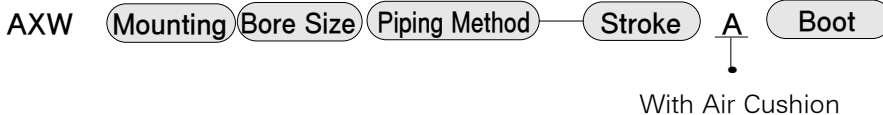
Bore Size(mm)		φ 20	φ 25	φ 32	φ 40
Basic Weight	Basic Type	0.16	0.25	0.32	0.65
	Foot Type	0.31	0.41	0.48	0.92
	Flange Type	0.22	0.34	0.41	0.77
	Trunnion Type	0.20	0.32	0.38	0.75
Additional weight for each 50 of stroke		0.06	0.09	0.13	0.19
Mounting Bracket	Single Knuckle Joint	0.06	0.06	0.06	0.23
	Double Knuckle Joint(with pin)	0.07	0.07	0.07	0.20

Calculation

(Example) AXWL32-100

- Basic weight-0.48(Foot type, φ 32)
- Additional weight-0.13/50 stroke
- Cylinder stroke -100 stroke
- $0.48 + 0.13 \times 100 / 50 = 0.74 \text{kgf}$

With Air Cushion



With covers on both sides equipped with the cushion function, the cylinder absorbs the impact during high-speed operation without vibrating the section around it, and the cylinder provides longer life.

Specifications

Action	Double acting double rod
Bore Size	φ 20, φ 25, φ 32, φ 40
Max. Operating Pressure	140PSI (1.0MPa)
Min. Operating Pressure	70PSI (0.05MPa)
Cushion	Air Cushion
Piping Method	Screwed Type
Piston Speed	50~1,000mm/sec
Mounting	Basic Type, Foot Type, Flange Type, Trunnion Type

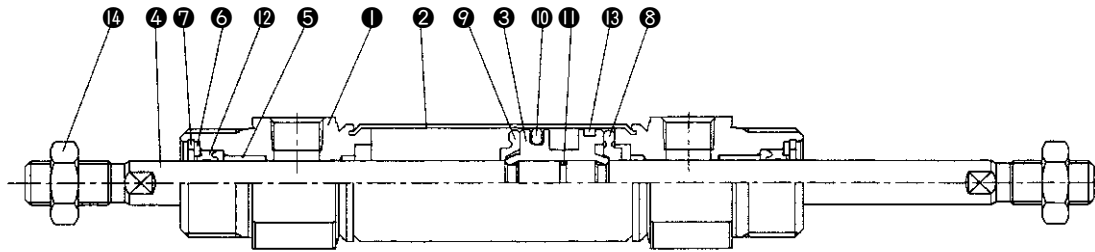
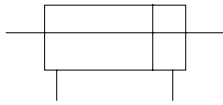
※Auto switch Available

Cushion Mechanism

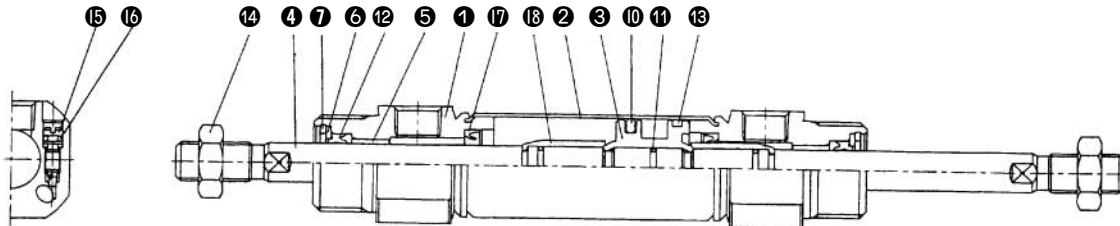
Bore Size (mm)	Effective Cushion Length(mm)	Cushion Effective orifice(mm ²)	Allowable Kinetic Energy(kgf-cm)
φ 20	11.0	2.09	5.5
φ 25	11.0	3.30	8.0
φ 32	11.0	5.86	13
φ 40	11.8	9.08	24

Construction/Parts List

Standard



With Air Cushion



- ACP
- UACP
- AX**
- AS
- AM
- AL
ALX
- UARD
- UAQ
- AJ
- AG
- UAG
- ADM
- ADR
- AMR
- UAMR
- AST
- W~

Parts List

No.	Description	Material	Note
1	Rod Cover	Aluminum Alloy	White Alumite
2	Cylinder Tube	Stainless Steel	
3	Piston	Aluminum Alloy	Chromate
4	Piston Rod	Carbon Steel	Hard Chrome Plated
5	Bush	Sintered Metal	
6	Packing Retainer	Rolled Steel	Nickel Plated
7	Stopper Ring	Carbon Steel	Nickel Plated
8	Damper A	Urethane	
9	Damper B	Urethane	
10	Piston Packing	NBR	
11	Piston Gasket	NBR	
13	Wear Ring	-	

No.	Description	Material	Note
14	Rod End Nut	-	Nickel Plated
15	Cushion Valve	-	Nickel Plated
16	Cushion Valve Gasket	NBR	
17	Cushion Packing	NBR	
18	Cushion Ring	-	

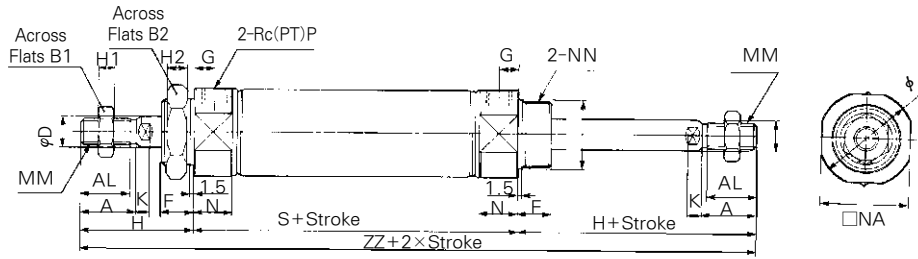
Spare Parts/ Packing List

•With Rubber Cushion /With Air Cushion						
No.	Description	Material	Bore Size(mm)			
			φ 20	φ 25	φ 32	φ 40
12	Rod Packing	NBR	PDU-8Z	PDU-10Z	PDU-12LZ	PDU-14LZ

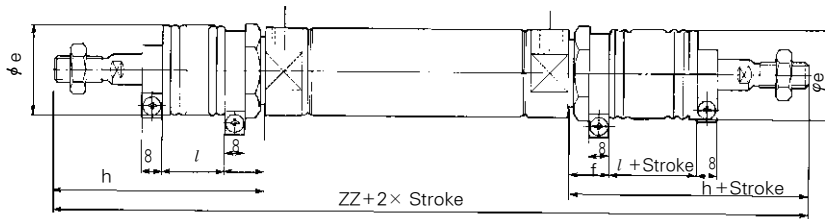
Series AXW

Basic Type(B)

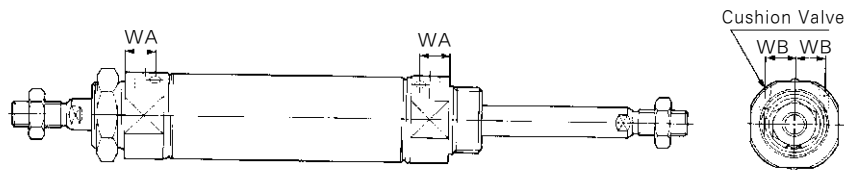
AXWB Bore Size Stroke



With Rod Boot(Both side)



With Air Cushion



* 301mm Stroke or more : Long Stroke

(Unit : mm)

Bore Size	Stroke Range	A	AL	B ₁	B ₂	D	E	F	G	H	H ₁	H ₂	I	K	MM	N	NA	NN	P	S	ZZ
φ 20	~300	18	15.5	13	26	8	20 ⁰ _{-0.033}	13	8	41	5	8	27	5	M8×1.25	15	24	M20×1.5	1/8	62	144
φ 25	~300	22	19.5	17	32	10	26 ⁰ _{-0.033}	13	8	45	6	8	33	5.5	M10×1.25	15	30	M26×1.5	1/8	62	152
φ 32	~300	22	19.5	17	32	12	26 ⁰ _{-0.033}	13	8	45	6	8	37.5	5.5	M10×1.25	15	34.5	M26×1.5	1/8	64	154
φ 40	~300	24	21	22	41	14	32 ⁰ _{-0.039}	16	11	50	8	10	46.5	7	M14×1.5	21.5	42.5	M32×2	1/4	88	188

With Gaiter

Bore Size	e	f	h							l							zz						
			1~50	51~100	101~150	151~200	201~300	301~400	401~500	1~50	51~100	101~150	151~200	201~300	301~400	401~500	1~50	51~100	101~150	151~200	201~300	301~400	401~500
φ 20	30	16	68	81	93	106	131	156	—	12.5	25	37.5	50	75	100	—	198	224	248	274	324	374	—
φ 25	30	16	72	85	97	110	135	160	185	12.5	25	37.5	50	75	100	125	206	232	256	282	332	382	432
φ 32	30	16	72	85	97	110	135	160	185	12.5	25	37.5	50	75	100	125	208	234	258	284	334	384	434
φ 40	40	18	77	90	102	115	140	165	190	12.5	25	37.5	50	75	100	125	242	268	292	318	368	418	468

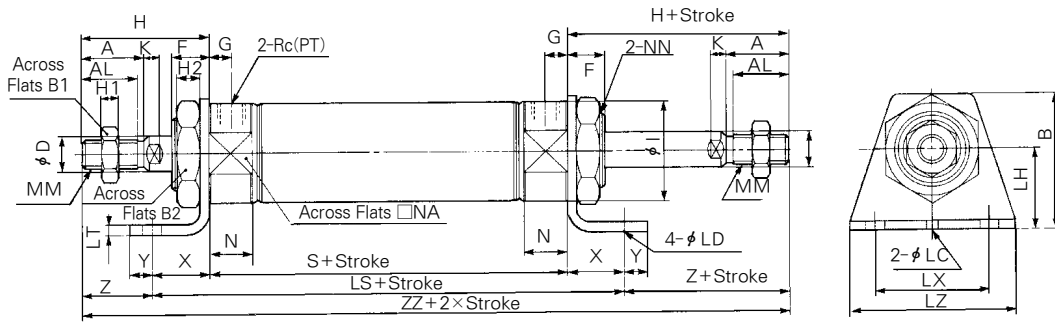
With Air Cushion

Bore size	WA	WB
φ 20	11.5	8.5
φ 25	11.5	10
φ 32	11.5	11.5
φ 40	14.5	15

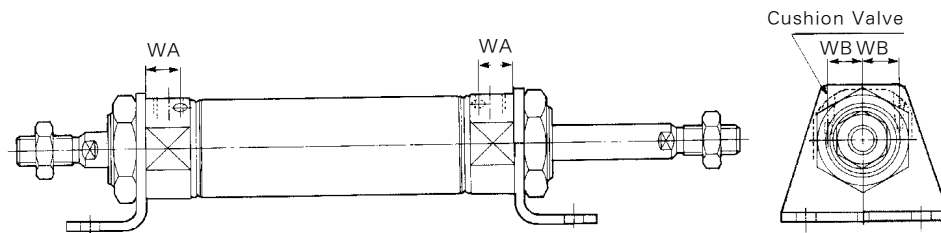
Foot Type(L)

AXWL Bore Size Stroke

Standard



With Air Cushion



(Unit : mm)

Bore Size	Stroke Range	A	AL	B	B ₁	B ₂	D	F	G	H	H ₁	H ₂	I	K	LC	LD	LH	LS	LT	LX	LZ	MM	N	NA	NN	P	S	X	Y	Z	ZZ
φ 20	~400	18	15.5	40	13	26	8	13	8	41	5	8	27	5	4	6.8	25	102	3.2	40	55	M8×1.25	15	24	M20×1.5	1/8	62	20	8	21	144
φ 25	~450	22	19.5	47	17	32	10	13	8	45	6	8	33	5.5	4	6.8	28	102	3.2	40	55	M10×1.25	15	30	M26×1.5	1/8	62	20	8	25	152
φ 32	~450	22	19.5	47	17	32	12	13	8	45	6	8	37.5	5.5	4	6.8	28	104	3.2	40	55	M10×1.25	15	34.5	M26×1.5	1/8	64	20	8	25	154
φ 40	~500	24	21	54	22	41	14	16	11	50	8	10	46.5	7	4	7	30	134	3.2	55	75	M14×1.5	21.5	42.5	M32×2	1/4	88	23	10	27	188

With Air Cushion

Bore size	WA	WB
φ 20	11.5	8.5
φ 25	11.5	10
φ 32	11.5	11.5
φ 40	14.5	15

ACP

UACP

AX

AS

AM

AL
ALX

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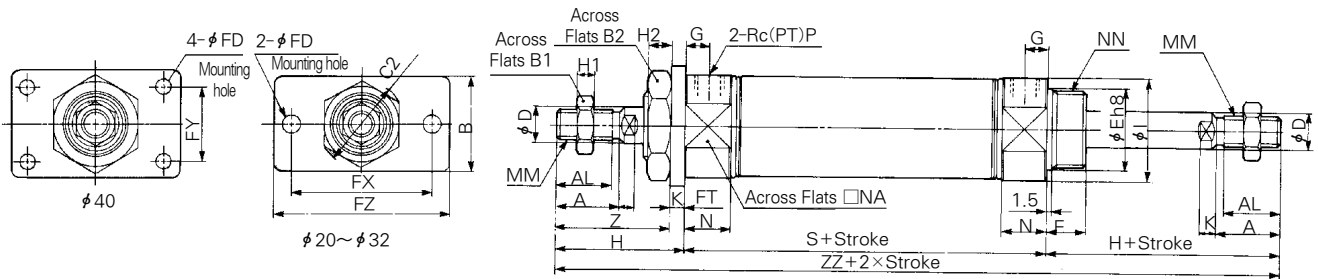
AST

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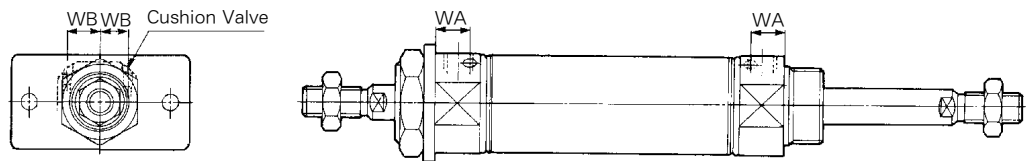
Series AXW

Foot Type(F)

AXWF Bore Size Stroke



With Air Cushion



(Unit : mm)

Bore Size	Stroke Range	A	AL	B	B ₁	B ₂	C ₂	D	E	F	FD	FT	FX	FY	FZ	G	H	H ₁	H ₂	I	K	MM
φ 20	~300	18	15.5	34	13	26	30	8	20 ⁰ _{-0.033}	13	7	4	60	—	75	8	41	5	8	27	5	M8×1.25
φ 25	~300	22	19.5	40	17	32	37	10	26 ⁰ _{-0.033}	13	7	4	60	—	75	8	45	6	8	33	5.5	M10×1.25
φ 32	~300	22	19.5	40	17	32	37	12	26 ⁰ _{-0.033}	13	7	4	60	—	75	8	45	6	8	37.5	5.5	M10×1.25
φ 40	~300	24	21	52	22	41	47.3	14	32 ⁰ _{-0.039}	16	7	5	66	36	82	11	50	8	10	46.5	7	M14×1.5

(Unit : mm)

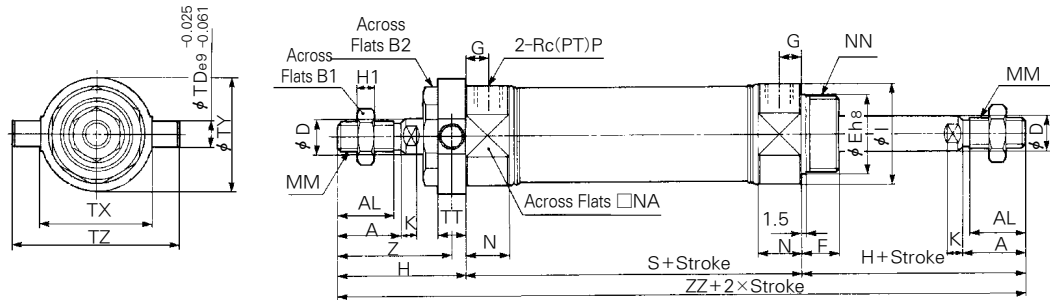
Bore Size	N	NA	NN	P	S	Z	ZZ
φ 20	15	24	M20×1.5	1/8	62	37	144
φ 25	15	30	M26×1.5	1/8	62	41	152
φ 32	15	34.5	M26×1.5	1/8	64	41	154
φ 40	21.5	42.5	M32×2	1/4	88	45	188

With Air Cushion

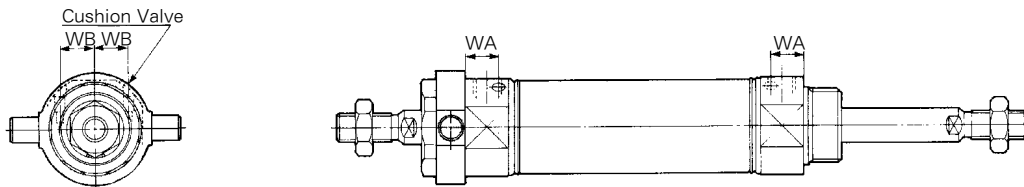
Bore size	WA	WB
φ 20	11.5	8.5
φ 25	11.5	10
φ 32	11.5	11.5
φ 40	14.5	15

Trunnion Type(U)

AXWU Bore Size Stroke



With Air Cushion



(Unit : mm)

Bore Size	Stroke Range	A	AL	B ₁	B ₂	D	E	F	G	H	H ₁	I	K	MM	N	NA	NN	P	S
φ 20	~300	18	15.5	13	26	8	20 ⁰ _{-0.033}	13	8	41	5	27	5	M8×1.25	15	24	M20×1.5	1/8	62
φ 25	~300	22	19.5	17	32	10	26 ⁰ _{-0.033}	13	8	45	6	33	5.5	M10×1.25	15	30	M26×1.5	1/8	62
φ 32	~300	22	19.5	17	32	12	26 ⁰ _{-0.033}	13	8	45	6	37.5	5.5	M10×1.25	15	34.5	M26×1.5	1/8	64
φ 40	~300	24	21	22	41	14	32 ⁰ _{-0.039}	16	11	50	8	46.5	7	M14×1.5	21.5	42.5	M32×2	1/4	88

(Unit : mm)

Bore Size	TD	TT	TX	TY	TZ	Z	ZZ
φ 20	8	10	32	32	52	36	144
φ 25	9	10	40	40	60	40	152
φ 32	9	10	40	40	60	40	154
φ 40	10	11	53	53	77	44.5	188

With Air Cushion

Bore Size	WA	WB
φ 20	11.5	8.5
φ 25	11.5	10
φ 32	11.5	11.5
φ 40	14.5	15

ACP

UACP

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AST

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