

Series **ARD**

Round Cylinder

Bore Size mm(inch) : Ø32(1 1/4), Ø40 (1 1/2), Ø50(2), Ø63(2 1/2)

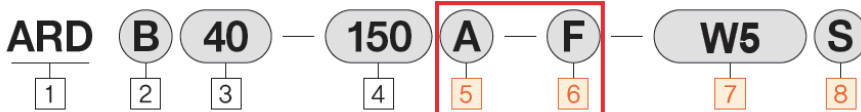


- Compact design
- High speed operation
- Standard rubber cushion (Air cushion is available)
- Light weight
- Built-in magnet for auto switch

Symbol



How To Order



1 Round cylinder

※ Built-in magnet, bumper, and non-lube type is standard

2 Mounting

B : Standard
L : Foot
F : Rod side flange
G : Head side flange
D : Double clevis

3 Bore size

20 : Ø20mm
25 : Ø25mm
32 : Ø32mm
40 : Ø40mm
50 : Ø50mm
63 : Ø63mm

※ Contact us for 80, 100, and 125

4 Stroke(mm)

* Rubber cushion
Ø20 : 25~350mm
Ø25 : 25~400mm
Ø32 : 25~450mm
Ø40 : 25~800mm
Ø50 : 25~1,200mm
Ø63 : 25~1,200mm
* Air cushion
Ø20 : 25~350mm
Ø25 : 25~400mm
Ø32 : 25~450mm
Ø40 : 25~800mm
Ø50 : 25~1,200mm
Ø63 : 25~1,200mm

5 Cushion

Blank : Rubber (standard)
A : Air cushion

6 Rod end shape

Blank : Male thread
F : Female thread

7 Auto switch

W5 : W5 reed switch (0.5m lead wire)
※ Please add L for 3m lead wire
ex) W5L

8 Number of switches

Blank : 2 pcs
S : 1pc
n : n pcs

※ Except mounting, cushion, and rod end shape, all options will remain same as before.

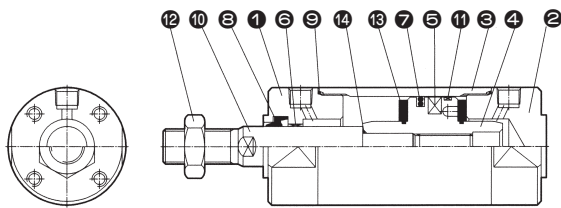
Series ARD

Specifications

Fluid	Air	
Proof Pressure	1.5MPa(220psi)	
Max. Operation Pressure	1.0MPa(150psi)	
Min. Operation Pressure	0.05MPa(8psi)	
Ambient and Fluid Temperature	5~ 60℃ (41~140°F)	
Lubrication	None(Non-Lube)	
Piston Speed	1.9~40inch/sec (50~1000 mm/sec)	
Stroke Tolerance (inch)	~40st: $^{+0.058}_0$ ~47st: $^{+0.071}_0$	
Thread Tolerance	KS 2 Class	
Cushion	Rubber Cushion	Air Cushion

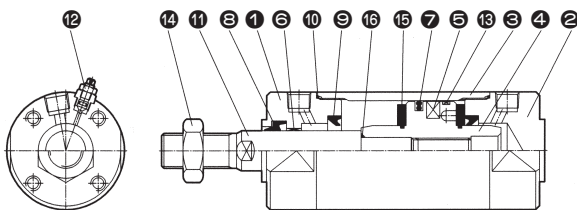
Construction/Parts List

ARD $\phi 32 \sim \phi 63$ (Rubber Cushion Type)



No.	Description	Material	Note
14	Piston Gasket	NBR	
13	Bumper	$\phi 20, \phi 25$ NBR $\phi 32 \sim \phi 63$ Urethane	
12	Rod End Nut	Rolled Steel	Zinc Plated
11	Wear Ring	-	
10	Piston Rod	Carbon Steel	Hard Chrome Plated
9	Tube Gasket	NBR	
8	Rod Packing	NBR	
7	Piston Packing	NBR	
6	Rod Bushing	Lead Bronze Casting	
5	Magnet	Ba Ferrite + NBR	
4	Piston	Al	Chromate
3	Cylinder Tube	Al	Hard alumite
2	Head Cover	Al	White alumite
1	Rod Cover	Al	"

ARDA $\phi 32 \sim \phi 63$ (Air Cushion Type)



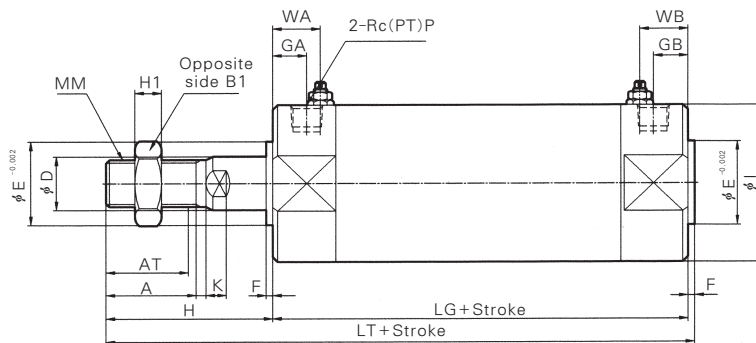
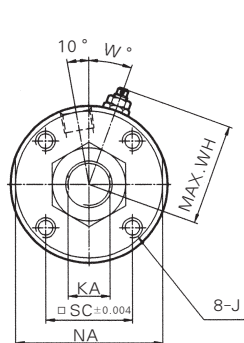
No.	Description	Material	Note
16	Piston Gasket	NBR	
15	Bumper	$\phi 20, \phi 25$ NBR $\phi 32 \sim \phi 63$ Urethane	
14	Rod End Nut	Rolled Steel	Zinc Plated
13	Wear Ring	-	
12	Cushion Valve Ass'y		
11	Piston Rod	Carbon Steel	Hard Chrome Plated
10	Tube Gasket	NBR	
9	Cushion Packing	NBR	
8	Rod Packing	NBR	
7	Piston Packing	NBR	
6	Rod Bushing	Lead Bronze Casting	
5	Magnet	Ba Ferrite + NBR	
4	Piston	Al	Chromate
3	Cylinder Tube	Al	Hard alumite
2	Head Cover	Al	White alumite
1	Rod Cover	Al	"

Series ARD

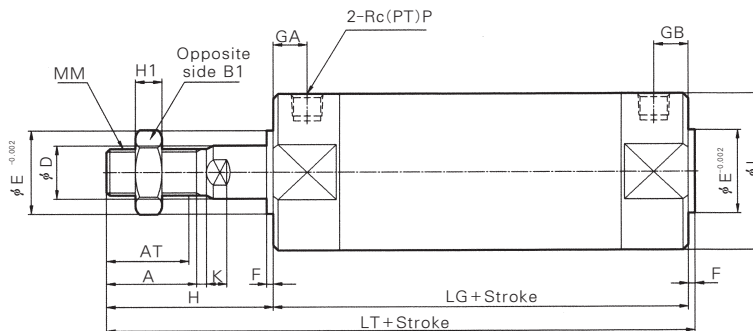
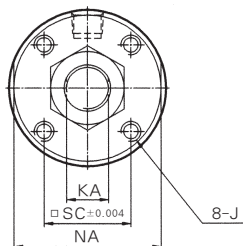
Dimensions

(inch)

Air Cushion Type



Rubber Cushion Type



Bore size (mm)	Standard stroke Range mm Extended stroke Range mm	(mm)																							
		AT	A	□SC	φD	φE	F	GA	GB	φI	J	K	KA	MM	NA	P	LG	H	LT	WA	WB	WH	W	H1	B1
φ32	~300 301~450	19.5	22	20	12	18	2	12	12	38	M5×0.8 DP:8	5.5	10	M10×1.25	36	1/8	32	40	124	14	14	28.5	25	6	7
φ40	~300 301~800	27	30	26	16	25	2	13	13	47	M6×1 DP:12	6	14	M14×1.5	44	1/8	87	50	139	15	15	33	20	8	22
φ50	~300 301~1200	32	35	32	20	30	2	14	14	58	M8×1.25 DP:16	7	18	M18×1.5	55	1/4	102	58	162	16	16	38.5	20	11	27
φ63	~300 301~1200	32	35	38	20	32	2	14	14	72	M10×1.5 DP:16	7	18	M18×1.5	69	1/4	105	58	165	16	16	45.5	20	11	27

Bore size (inch)	Standard stroke Range mm Extended stroke Range mm	(inch)																							
		AT	A	□SC	φD	φE	F	GA	GB	φI	J	K	KA	MM	NA	P	LG	H	LT	WA	WB	WH	W	H1	B1
φ32(1 1/4)	~300(12) 301~450(18)	0.77	0.87	0.79	0.48	0.71	0.08	0.48	0.48	0.67	10-32UNF	0.22	0.40	1 1/16-20UNF	1.42	1/8	3.23	1.57	4.88	0.48	0.48	1.12	0.98	0.24	0.67
φ40(1 1/2)	~300(12) 301~800(32)	1.06	1.18	1.02	0.63	0.98	0.08	0.51	0.51	1.85	1/4-28UNF	0.24	0.24	1 1/16-20UNF	1.73	1/8	3.43	1.97	5.47	0.60	0.60	1.30	0.79	0.31	0.87
φ50(2)	~300(12) 301~1200(48)	1.26	1.38	1.26	0.79	1.18	0.08	0.55	0.55	2.28	5/16-24UNF	0.28	0.71	1 1/2-20UNF	2.17	1/4	4.02	2.28	6.38	0.63	0.63	1.52	0.79	0.43	1.06
φ63(2 1/2)	~300(12) 301~1200(48)	1.26	1.38	1.50	0.79	1.26	0.08	0.55	0.55	2.83	9/16-24UNF	0.28	0.71	1 1/2-20UNF	2.72	1/4	4.13	2.28	6.50	0.63	0.63	1.79	0.79	0.43	1.06

- ACP
- APM
- AS
- AX
- AM2
- AM
- AL
- ALX
- AQ
- ADQ
- AQ2
- ADQ2
- AJ
- AJM
- ABK
- ACK1
- NSK
- AG
- NGQ
- AGX
- GX
- NP
- ADR
- AMR
- ARD
- NST
- AST
- ASTH
- NLCD
- NLCS

Series ARD

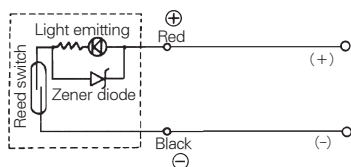


Auto Switch Specifications

Auto Switch Model	W5	
Application	Relay, Sequence Control	
Voltage	DC24V	AC110V
Range of Load Current	5~40mA	5~20mA
Protection Circuit for Contact Breaker Point	None	
Internal Voltage Drop	2.4V or less	
Indicator Lamp	ON:Red light emitting diode	

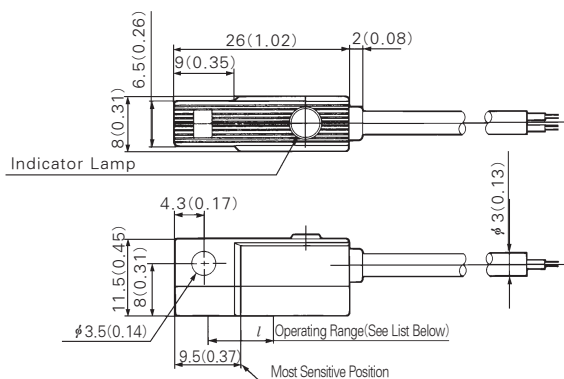
- Leakage current - None
 - Response time - 1.2 ms
 - Lead Wire - Oil proof vinyl. ϕ 3.4, 0.2mm², 2 wire(red, black), 0.5 m(0.02inch)
 - Impact Resistance - 30G
 - Insulation Resistance - 50M Ω or more under the test voltage 500VDC (Between case and cable)
 - Withstand Voltage - 1500VAC 1min(between case and cable)
 - Ambient Temperature - 40~140° F (5~60°C)
 - Protection Structure - IEC spec IP67, Water-proof(JISCO920), oil-proof.
- ※ If 3m(118 in) lead wire is required, L is put at end of model numbers.
(Example) W5L

Auto Switch/Internal Circuit



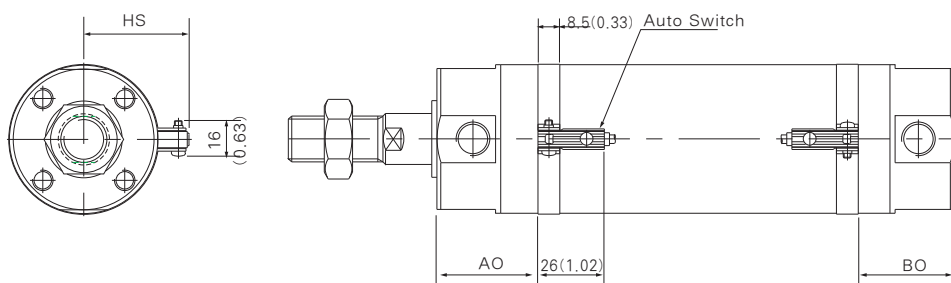
Auto Switch Dimensions

mm(inch)



Auto Switch Setting Position

mm(inch)



Auto Switch Mounting Position

mm(inch)

Bore size mm (inch)	W5		
	AO	BO	HS
ϕ 32(1.26)	23(0.91)	33(1.30)	30.5(1.20)
ϕ 40(1.57)	32(1.26)	29(1.14)	35(1.38)
ϕ 50(1.97)	39.5(1.56)	37.5(1.48)	40.5(1.59)
ϕ 63(2.48)	41(1.61)	38(1.50)	47.5(1.87)

Minimum Auto Switch Mountable Stroke

mm(inch)

Type of Auto Switch	Number of Switch		
	With 2pcs.		With 1pc.
	Different Orientation	Same Orientation	
W5	15(0.59)	50(1.97)	10(0.39)