

Series **ARD**

Round Cylinder

Bore Sizemm(inch) : Ø32(1¹/₄), Ø40 (1¹/₂), Ø50(2), Ø63(2¹/₂)

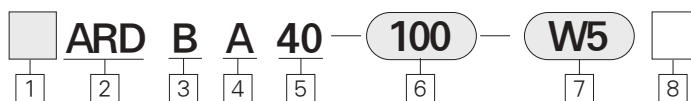


- COMPACT DESIGN
- HIGH SPEED ACTUATOR
- STANDARD RUBBER BUMPER (AIR CUSHION OPTIONAL)
- LIGHTWEIGHT
- BUILT-IN MAGNET FOR AUTO SWITCH

Symbol



How To Order



1 Series

Blank : Rc(PT)
U : NPT

2 Round Cylinder

* (Built-in Magnet, Bumper, Non-lube standard)

3 Mounting

B : Basic type

4 Cushion

Blank : Rubber Cushion
A : Air Cushion

5 Bore Size(inch)

32 : 32mm(1¹/₄)
40 : 40mm(1¹/₂)
50 : 50mm(2)
63 : 63mm(2¹/₂)

6 Stroke

Rubber Cushion Type	Stroke	Air Cushion Type	Stroke
φ 32 (1 ¹ / ₄)	25(0.984)~450(17.7)	φ 32 (1 ¹ / ₄)	25(0.984)~450(17.7)
φ 40 (1 ¹ / ₂)	25(0.984)~800(31.5)	φ 40 (1 ¹ / ₂)	25(0.984)~800(31.5)
φ 50 (2)	25(0.984)~1200(47.2)	φ 50 (2)	25(0.984)~1200(47.2)
φ 63 (2 ¹ / ₂)	25(0.984)~1200(47.2)	φ 63 (2 ¹ / ₂)	25(0.984)~1200(47.2)

7 Auto Switch

Blank : None
(Cylinder with built-in Magnet)

Reed Switch

W5(2wire DC24V, AC 100V)

Band mounted type

※ Standard Lead 1m

(upto 3m optional)

8 Number of Auto Switches

Blank : 2 pcs

S : 1 pc

N : N pcs

ACP

APM

AS

AX

AM2

AM

AL

ALX

AQ

ADQ

AQ2

ADQ2

AJ

AJM

ABK

ACK1

NSK

AG

NGQ

AGX

GX

NP

ADR

AMR

NDM

ARD

NST

AST

ASTH

NLCD

NLCS

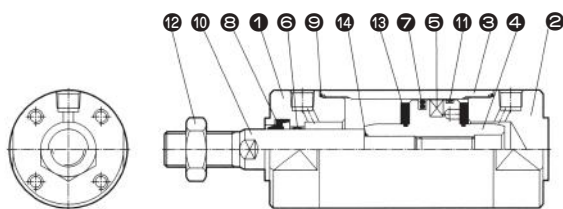
Series ARD

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

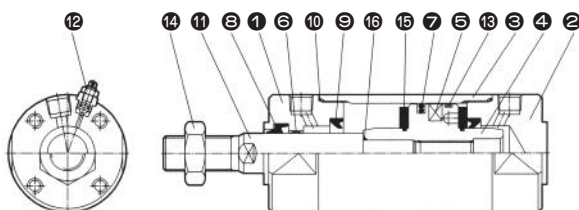
Construction/Parts List

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)



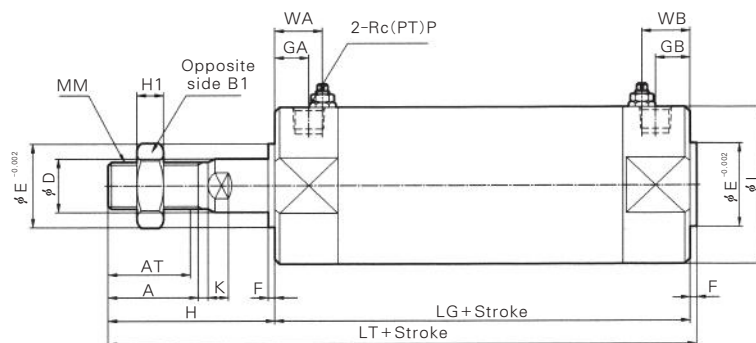
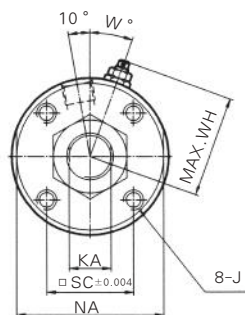
No.	Description	Material	Note
16	Piston Gasket	NBR	
15	Bumper	$\phi 20, \phi 25$ NBR $\phi 32 \sim \phi 63$ Urethane	
14	Rod End Nut	Rolled Steel	Zinc Plated
13	Wear Ring	-	
12	Cushion Valve Ass'y		
11	Piston Rod	Carbon Steel	Hard Chrome Plated
10	Tube Gasket	NBR	
9	Cushion Packing	NBR	
8	Rod Packing	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

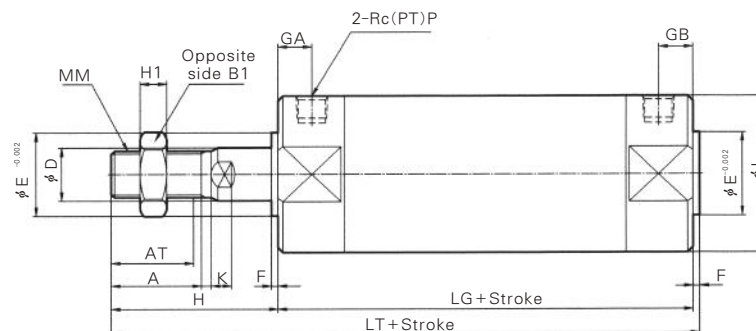
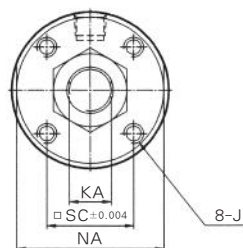
Dimensions

(inch)

Air Cushion Type



Rubber Cushion Type



Bore size (mm)	Standard stroke Range mm Extended stroke Range mm	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	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	3/8-24UNF	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

(mm)

(inch)

ACP

APM

AS

AX

AM2

AM

AL

ALX

AQ

ADQ

AQ2

ADQ2

AJ

AJM

ABK

ACK1

NSK

AG

NGQ

AGX

GX

NP

ADR

AMR

NDM

ARD

NST

AST

ASTH

NLCD

NLCS

Series ARD

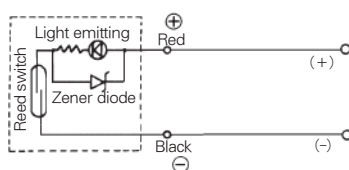


Auto Switch Specifications

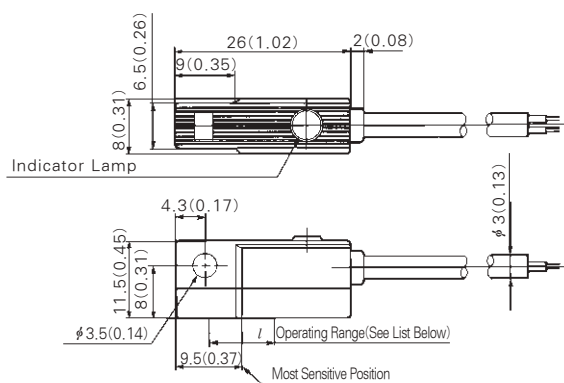
Auto Switch Model	W5	
Application	Relay, Sequence Control	
Voltage	DC24V	AC110V
Range of Load Current	5~40mA	5~20mA
Protection Circuit for Contact Breaker Point	None	
Internal Voltage Drop	2.4V or less	
Indicator Lamp	ON:Red light emitting diode	

- 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℃)
 - 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

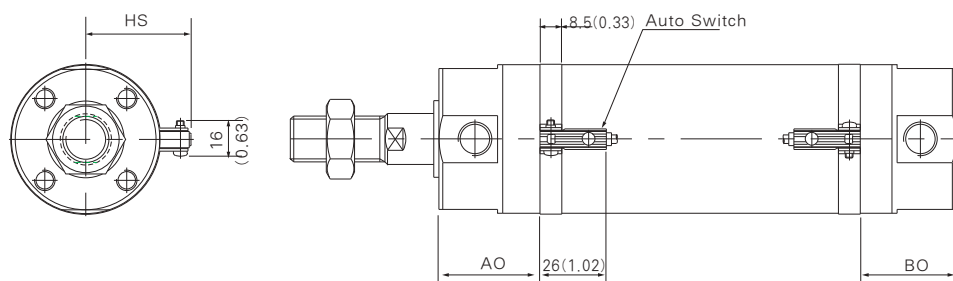
Auto Switch/Internal Circuit



Auto Switch Dimensions



Auto Switch Setting Position



Auto Switch Mounting Position

Bore size mm (inch)	W5		
	AO	BO	HS
$\phi 32(1.26)$	23(0.91)	33(1.30)	30.5(1.20)
$\phi 40(1.57)$	32(1.26)	29(1.14)	35(1.38)
$\phi 50(1.97)$	39.5(1.56)	37.5(1.48)	40.5(1.59)
$\phi 63(2.48)$	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)