

Series **AMR**

Magnet Type Rodless Cylinder

Bore size(mm) : $\phi 10(0.39)$, $\phi 16(0.63)$, $\phi 20(0.79)$, $\phi 25(0.98)$, $\phi 32(1.26)$, $\phi 40(1.58)$

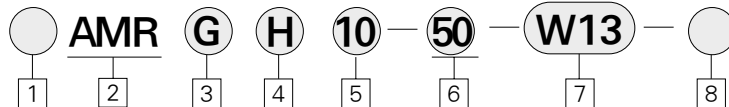


- PRECISION STAINLESS BODY FOR SMOOTH ACTUATION
- LIGHT WEIGHT
- COMPACT DESIGN
- LEAK FREE
- NON - LUBRICATION STANDARD
- POSITION SENSING CAPABLE

Symbol



How to Order



1 Series

Blank : Rc(PT)
U : NPT

2 Magnet Type Rodless Cylinder

3 Type of Bearing

B : Basic Type
G : With Guide Type(Auto Switch Capable Cylinder)

4 Magnet Holding Power(kgf)

Dia	H	L
$\phi 10$	5.5	-
$\phi 16$	12	-
$\phi 20$	24	15.7
$\phi 25$	37	22.5
$\phi 32$	60	36.5
$\phi 40$	94	58

5 Bore Size(mm) / (inch)

10: $\phi 10$ (0.39)
16: $\phi 16$ (0.63)
20: $\phi 20$ (0.79)
25: $\phi 25$ (0.98)
32: $\phi 32$ (1.26)
40: $\phi 40$ (1.58)

6 Stroke(mm) / (inch)

AMRB		AMRG	
$\phi 10$	50~300mm (0.5~12)	$\phi 10$	50~500mm (0.5~20)
$\phi 16$	50~300mm (0.5~12)	$\phi 16$	50~700mm (0.5~30)
$\phi 20$	100~1,500mm (0.5~60)	$\phi 20$	100~1,000mm (0.5~40)
$\phi 25$	100~1,500mm (0.9~60)	$\phi 25$	100~1,500mm (0.5~60)
$\phi 32$	100~2,000mm (0.5~78)	$\phi 32$	100~1,500mm (0.5~60)
$\phi 40$	100~2,000mm (0.5~78)	$\phi 40$	100~1,500mm (0.5~60)

7 Applicable Auto Switch (SeriesW1□)

(AMRG only)

Blank : Without Auto Switch

W13 : Reed Switch Type

(DC24V, AC110V)

W1H : Solid State Type(DC 24V)

Standard Auto Switch

Lead wire Length in 1m.

3m Leads available on all models by adding a "L" suffix to the part number.

8 Additional Symbol of Auto Switch

Blank : 2 pcs.

S : 1 pc.

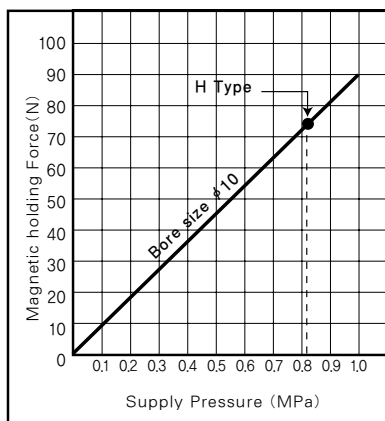
n : n pcs.

Specifications

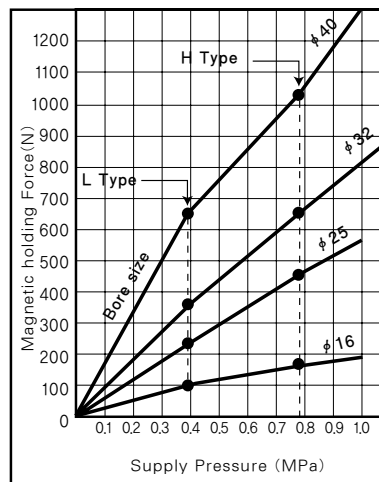
Fluid	Air	
Proof pressure	1.03MPa(149psi)	
Max. operating pressure	0.7MPa(9psi)	
Min. operating pressure	0.2MPa(28psi)	
Ambient and fluid temperature	5~60°C (41~140°F)	
Operating piston speed	50 ~ 400 mm/s	
Cushion	Rubber Cushion at Both Sides	
Lubrication	Non-lube	
Cushion	AMRB10, AMRB16	Rubber cushion
	AMRB20, AMRB25	Air cushion
	AMRB32, AMRB40	
	AMRG10, AMRG16, AMRG20	Rubber cushion
	AMRG25, AMRG32, AMRG40	

Cylinder Theoretical Output

φ 10



φ 16, φ 20, φ 25, φ 32, φ 40



Weight Table

kgf (lbs)

Number of magnets	Bore size	φ 10	φ 16	φ 20	φ 25	φ 32	φ 40
	Basic weight	AMROH	0.08(0.17)	0.30(0.62)	0.37	0.71(1.56)	1.34(2.95)
AMROL		-	-	0.26	0.62(2.62)	1.19(4.34)	1.97(6.83)
Additional weight per 50 stroke		0.014(0.03)	0.02(0.04)	0.04	0.05(0.11)	0.07(0.15)	0.08(0.17)

Calculation method/Example: AMRB32-0400

Basic weight 1.34kg
 Additional weight ... 0.07/50s } 1.34 + 0.07 × 20 ÷ 2 = 2.04kg
 Cylinder stroke 500st

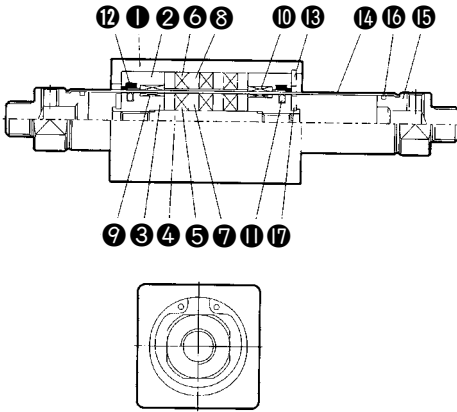
Main Parts

Description	Material	Note
Head cover	Aluminium alloy	Colored hard alumite
Cylinder tube	Stainless steel	
Body	Aluminium alloy	Colored hard alumite
Magnet	Rare earth magnet	

Series AMR

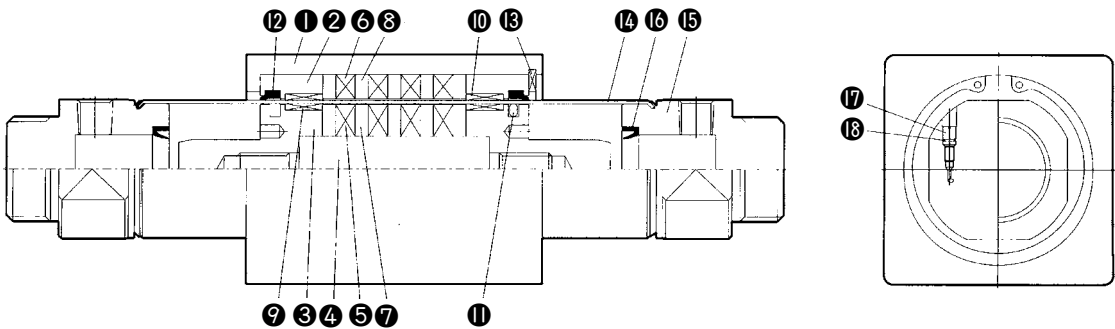
Basic Type:Construction/Parts List

AMRBH ϕ 10, ϕ 16



No.	Description	Material	Note
1	Slider	Aluminum alloy	White Alumite
2	Holder	Aluminum alloy	"
3	Piston	Aluminum alloy	Zinc Chromate
4	Shaft	Stainless steel	
5	Inner Magnet	-	Nickel Platel
6	Outer Magnet	-	"
7	Inner Yoke	Carbon steel	
8	Outer Yoke	Carbon steel	
9	Inner Wear Ring	Resin	
10	Outer Wear Ring	Resin	
11	Piston Packing	NBR	
12	Wiper Ring	NBR	
13	Snap Ring	Spring	
14	CylinderTube	Stainless steel	
15	End Cover	Aluminum alloy	
16	Tube Gasket	NBR	
17	Bumper	Urethane	

AMRBH ϕ 20, ϕ 25, ϕ 32, ϕ 40

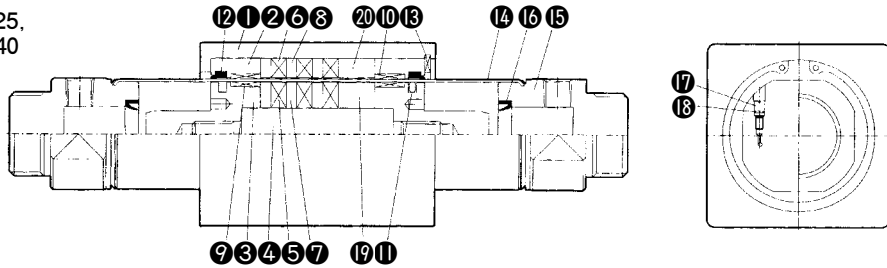


No.	Description	Material	Note
1	Slider	Aluminum alloy	White Alumite
2	Holder	Aluminum alloy	"
3	Piston	Aluminum alloy	Zinc chromate
4	Shaft	Stainless steel	
5	Inner Magnet	-	Nicke Plated
6	Outer Magnet	-	"
7	Inner Yoke	Carbon steel	Zinc chromate
8	Outer Yoke	Carbon steel	"
9	Inner Wear Ring	Resin	
10	Outer Wear Ring	Resin	
11	Piston Packing	NBR	
12	Wiper Ring	NBR	

No.	Description	Material	Note
13	Snap Ring	Spring steel	
14	CylinderTube	Stainless steel	
15	End Cover	Aluminum alloy	Hard Alumite
16	Cushion Packing	NBR	
17	Cushion Valve	Carbon steel	
18	Cushion Valve O-Ring	NBR	

Basic Type : Construction/Parts List

AMRBL $\phi 20, \phi 25,$
 $\phi 32, \phi 40$

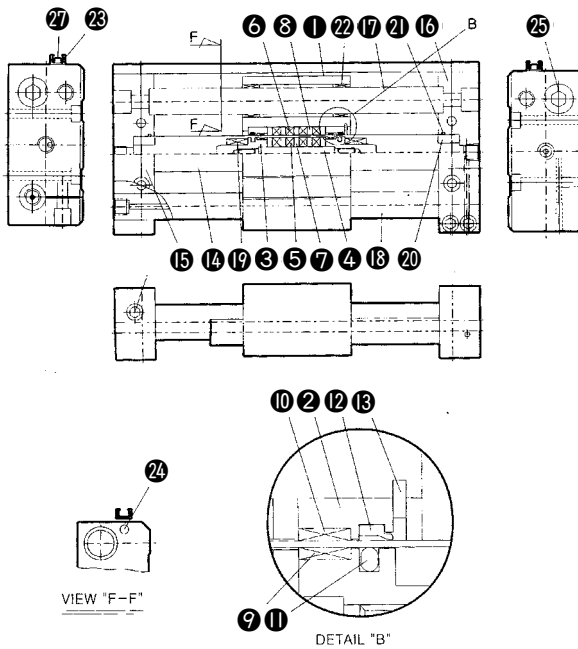


No.	Description	Material	Note
1	Slider	Aluminum alloy	Hard Alumite
2	Holder	Aluminum alloy	White Alwnite
3	Piston	Aluminum alloy	Zink Chromate
4	Shaft	Stainless steel	
5	Inner Magnet	-	Nickel Plated
6	Outer Magnet	-	"
7	Inner Yoke	Carbon steel	Zinc Chromate
8	Outer Yoke	Carbon steel	"
9	Inner Wear Ring	Resin	
10	Outer Wear Ring	Resin	
11	Piston Packing	NBR	
12	Wiper Ring	NBR	

No.	Description	Material	Note
13	Snap Ring	Spring steel	
14	Cylinder Tube	Stainless steel	
15	End Cover	Aluminum alloy	Hard Alumite
16	Cushion Packing	NBR	
17	Cushion Valve	Carbon steel	
18	Cushion Valve O-Ring	NBR	
19	Inner Spacer	Aluminum alloy	
20	Outer Spacer	Aluminum alloy	

Guide Type:Construction/Part List

AMRGH $\phi 10, \phi 16$



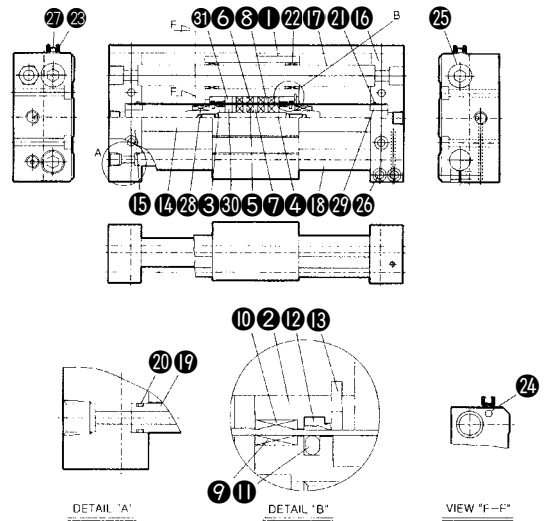
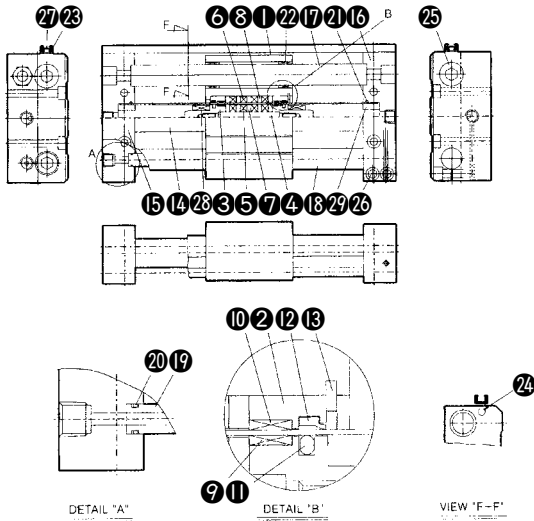
No.	Description	Material	Note
1	Slider	Aluminum alloy	Hard Alumite
2	Holder	Aluminum alloy	White Alumite
3	Piston	Aluminum alloy	Zinc Chromate
4	Shaft	Stainless steel	
5	Inner Magnet	-	Nickel Plated
6	Outer Magnet	-	"
7	Inner Yoke	Carbon Steel	Zomc Chromate
8	Outer Yoke	Carbon Steel	"
9	Inner Wear Ring	Resin	
10	Outer Wear Ring	Resin	
11	Piston Packing	NBR	
12	Wiper Ring	NBR	
13	Snap Ring	Spring Steel	
14	Cylinder Tube	Stainless steel	
15	End Cover A	Aluminum alloy	Hard Alumite
16	End Cover B	Aluminum alloy	"
17	Guide Rod A	Carbon Steel	Hard Chrome Plated
18	Guide Rod B	Carbon Steel	"
19	Bumper	Urethane	
20	Cushion Stopper	Aluminum alloy	Zinc Chromate
21	Cyl' Tube Gasket	NBR	
22	Guide Bush	PBC3	
23	S/W Holder	Aluminum alloy	White Alumite
24	S/W Magnet	-	Nickel Plated
25	Guide Rod Bolt A	Carbon Steel	"
26	Guide Rod Bolt B	Carbon Steel	"
27	S/W Holder Bolt	Carbon Steel	"

Series AMR

Construction/Guide Type

AMRGH $\phi 20, \phi 25, \phi 32, \phi 40$

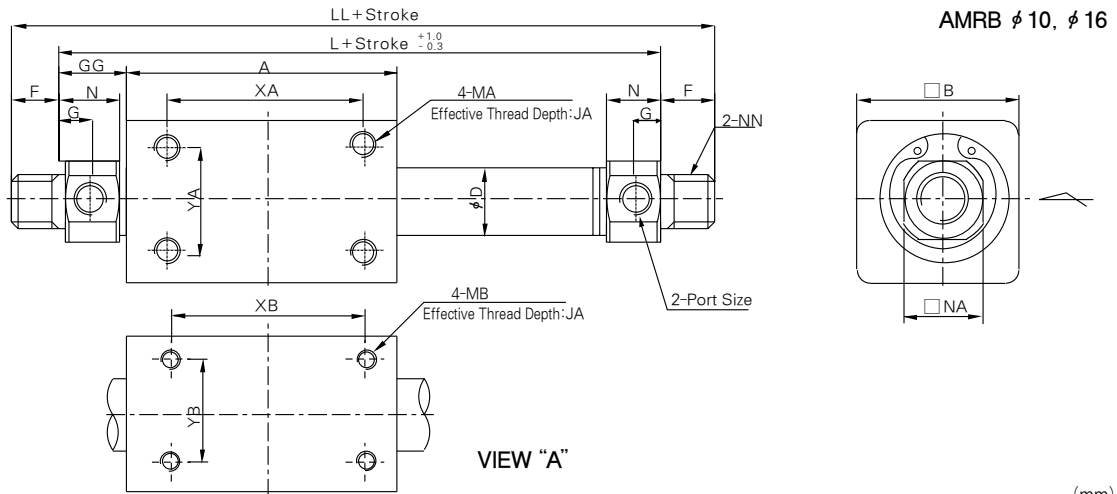
AMRGL $\phi 20, \phi 25, \phi 32, \phi 40$



No.	Description	Material	Note
1	Slider	Aluminum alloy	Hard Alumite
2	Holder	Aluminum alloy	"
3	Piston	Aluminum alloy	Zinc Chromate
4	Shaft	Stainless steel	
5	Inner Magnet	-	Nickel Plated
6	Outer Magnet	-	"
7	Inner Yoke	Carbon Steel	Zinc Chromate
8	Outer Yoke	Carbon Steel	"
9	Inner Wear Ring	Resin	
10	Outer Wear Ring	Resin	
11	Piston Packing	NBR	
12	Wiper Ring	NBR	
13	Snap Ring	Spring steel	
14	Cylinder Tube	Stainless steel	
15	End Cover A	Aluminum alloy	White Alumite
16	End Cover B	Aluminum alloy	"
17	Guide Rod A	Carbon Steel	Hard Chrome Plated
18	Guide Rod B	Carbon Steel	"
19	Air Pipe	Carbon Steel	
20	Air Pipe O-Ring	NBR	
21	Cyl. Tube O-Ring	NBR	
22	Guide Bush	PBC3	
23	S/W Holder	Aluminum alloy	White Alumite
24	S/W Magnet	-	Nickel Plated
25	Guide Rod Bolt A	Carbon Steel	"
26	Guide Rod Bolt B	Carbon Steel	"
27	S/W Holder Bolt	Carbon Steel	"
28	Bumper	Urethane	
29	Cushion Stopper	Aluminum alloy	Zinc Chromate

No.	Description	Material	Note
1	Slider	Aluminum alloy	Hard Alumite
2	Holder	Aluminum alloy	"
3	Piston	Aluminum alloy	Zinc Chromate
4	Shaft	Stainless steel	
5	Inner Magnet	-	Nickel Plated
6	Outer Magnet	-	"
7	Inner Yoke	Carbon Steel	Zinc chromate
8	Outer Yoke	Carbon Steel	"
9	Inner Wear Ring	Resin	
10	Outer Wear Ring	Resin	
11	Piston Packing	NBR	
12	Wiper Ring	NBR	
13	Snap Ring	Spring Steel	
14	Cylinder Tube	Stainless steel	
15	End Cover A	Aluminum alloy	White Alumite
16	End Cover B	Aluminum alloy	"
17	Guide Rod A	Carbon Steel	Hard Chrome Plated
18	Guide Rod B	Carbon Steel	"
19	Air Pipe	Carbon Steel	
20	Air Pipe O-Ring	NBR	
21	Cyl. Tube Gasket	NBR	
22	Guide Bush	PBC3	
23	S/W Holder	Aluminum alloy	White Alumite
24	S/W Magnet	-	Nickel Plated
25	Guide Rod Bolt A	Carbon Steel	"
26	Guide Rod Bolt B	Carbon Steel	"
27	S/W Holder Bolt	Carbon Steel	"
28	Bumper	Urethane	
29	Cushion Stopper	Aluminum alloy	zinc Chromate
30	Inner Spacer	Aluminum alloy	White Alumite
31	Outer Spacer	Aluminum alloy	"

Dimensions / Basic Type

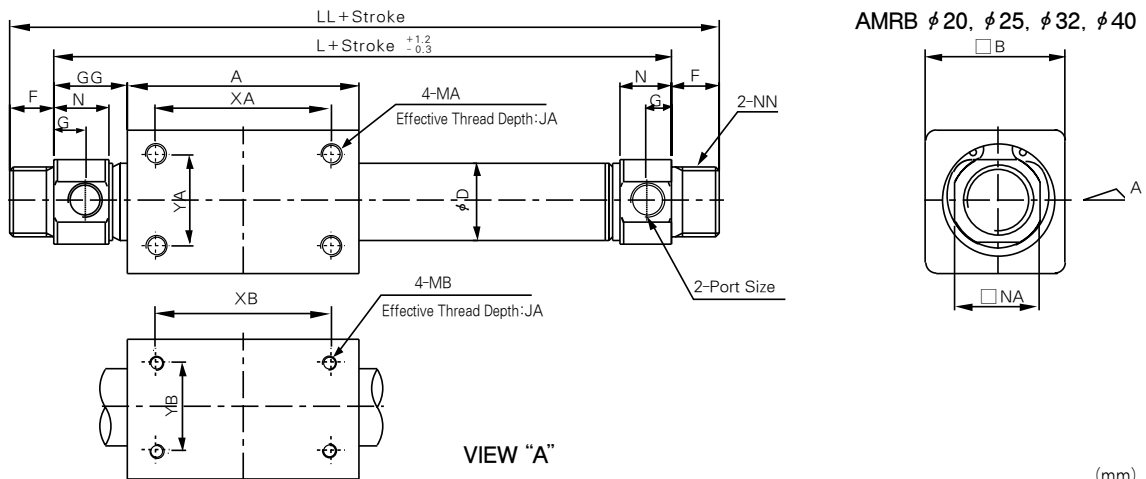


(mm)

Model	Stroke Range	Port Size	A	B	φD	F	G	GG	JA	JB	L	LL	MA	MB	N	NA	NN	XA	YA	XB	YB
AMRB*10	~300	M5×0.8	42	25	11	8	4.5	10.5	4.5	4.5	63	79	M4×0.7	M3×0.5	9	12	M8×1.0	30	16	30	16
AMRB*16	~300	M5×0.8	55	35	17.4	8	4.5	14	5.5	5.5	83	99	M5×0.8	M4×0.7	9	18	M10×1.0	35	20	35	19

(inch)

Model	Stroke range	Port size	A	B	φD	F	G	GG	JA	JB	L	LL	MA	MB	N	NA	NN	XA	YA	XB	YB
UAMRBH10	12inch	No.10-32UNF	1.65	0.98	0.43	0.31	0.18	0.41	0.18	0.18	2.48	3.11	8-32UNC	5-40UNC	0.35	0.47	5/16-24UNF	1.18	0.63	1.18	0.63
UAMRBH16	12inch	No.10-32UNF	2.17	1.38	0.69	0.31	0.18	0.55	0.22	0.22	3.27	3.90	10-32UNF	8-32UNC	0.35	0.71	3/8-24UNF	1.38	0.79	1.38	0.75



(mm)

Model	Stroke Range	Port Size	A	B	φD	F	G	GG	JA	JB	L	LL	MA	MB	N	NA	NN	XA	YA	XB	YB
AMRB*20	~1,500	Rc 1/8	66	40	21.6	13	8	20	9	9	106	132	M6×1.0	M4×0.7	14.8	24	M20×1.5	50	26	50	25
AMRB*25	~1,500	Rc 1/8	75	50	26.6	13	8	18	9	9	111	137	M6×1.0	M5×0.8	14.8	30	M26×1.5	50	35	50	30
AMRB*32	~1,500	Rc 1/8	88	60	33.8	13	8	18	12	12	124	150	M8×1.25	M6×1.0	14.8	34.5	M26×1.5	60	40	50	40
AMRB*40	~1,500	Rc 1/4	91	70	42	16	11	29.5	11	11	150	182	M8×1.25	M6×1.0	21.3	42.5	M32×2.0	60	45	60	40

(inch)

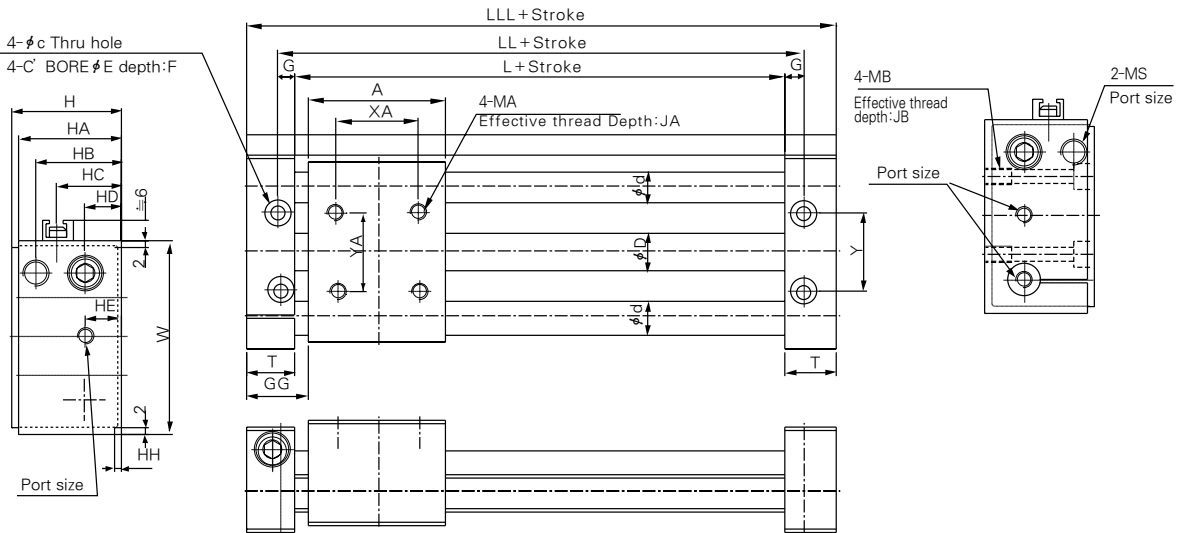
Model	Stroke range	Port size	A	B	φD	F	G	GG	JA	JB	L	LL	MA	MB	N	NA	NN	XA	YA	XB	YB
UAMRB□20	0.5~60inch	NPT 1/8	2.60	1.57	0.85	0.51	0.31	0.64	0.35	0.35	4.17	5.20	1/4-28UNF	8-32UNC	0.58	0.94	3/4-16UNF	1.97	1.02	1.97	0.98
UAMRB□25	0.5~60inch	NPT 1/8	2.95	1.97	1.05	0.51	0.31	0.60	0.35	0.35	4.37	5.40	1/4-28UNF	10-32UNF	0.58	1.18	1-12UNF	1.97	1.38	1.97	1.18
UAMRB□32	0.5~60inch	NPT 1/8	3.46	2.36	1.33	0.51	0.31	0.61	0.47	0.47	4.88	5.90	5/16-24UNF	1/4-28UNF	0.58	1.36	1-12UNF	2.36	1.57	1.97	1.57
UAMRB□40	0.5~60inch	NPT 1/4	3.58	2.76	1.65	0.63	0.43	1.06	0.43	0.43	5.90	7.17	5/16-24UNF	1/4-28UNF	0.84	1.67	1 1/4-12UNF	2.36	1.77	2.36	1.57

- ACP
- UACP
- APM
- AX
- AS
- AM2
- AM
- AL ALX
- ARD
- AQ
- AQ2
- AJ
- AG
- AGX GX
- NDM
- ADR
- AMR
- NST
- AST
- NLCD
- NLCS
- NF
- NR
- ASL

Series AMR

Guide/ Slider Bearing Type

AMRG $\phi 10, \phi 16$



(mm)

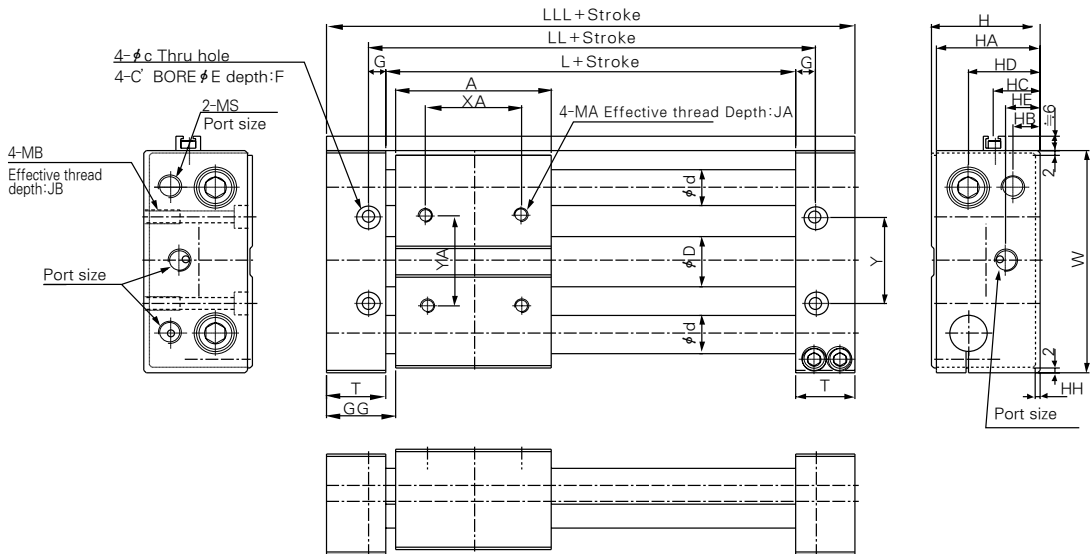
Model	Stroke Range	Port Size	A	ϕC	ϕD	ϕd	ϕE	F	GG	G	H	HA	HB	HC	HD	HE	HH	JA	JB	L	LL	LLL	MA	MB	MS	T	W	XA	Y	YA
AMRG*10	~500	M5×0.8	42	4.3	11	10	8	5	19	5	34	32	27	20	12	12	2	10	8	50	60	80	M5×0.8	M5×0.8	M8×1.0	15	60	25	24	25
AMRG*16	~700	M5×0.8	55	5.2	17.4	10	10	7	23	7	40	38	30	24	15	15	2	12	10	61	75	101	M5×0.8	M8×1.0	M8×1.0	20	75	30	30	30

(inch)

Model	Stroke range	Port size	A	ϕC	ϕD	ϕd	ϕE	F	GG	G	H	HA	HB	HC	HD	HE	HH	JA	JB	L	LL	LLL	MA	MB	MS	T	W	XA	Y	YA
UAMRGH10	0.5~20inch	10-32UNF	1.65	0.17	0.43	0.39	0.31	0.20	0.74	0.20	1.34	1.26	1.06	0.79	0.47	0.39	0.31	1.97	2.36	3.15	10-32UNF	10-32UNF	5/16-24UNF	0.59	2.36	0.98	0.94	0.98		
UAMRGH16	0.5~20inch	10-32UNF	2.17	0.20	0.69	0.39	0.39	0.28	0.90	0.28	1.57	1.50	1.18	0.94	0.51	0.47	0.39	2.40	2.95	3.98	1/4-28UNF	1/4-28UNF	5/16-24UNF	0.79	2.95	1.18	1.18	1.18		

Guide/ Slider Bearing Type

AMRG $\phi 20$, $\phi 25$, $\phi 32$, $\phi 40$



(mm)

Model	Stroke Range	Port Size	A	ϕC	ϕD	ϕd	ϕE	F	GG	G	H	HA	HB	HC	HD	HE	HH	JA	JB	L	LL	LLL	MA	MB	MS	T	W	XA	Y	YA
AMRG $\square 20$	~1,000	Rc 1/8	66	5.2	21.6	16	10	6	29	8	46	44	11	19	30	14.5	2	8	15	74	90	124	M6 \times 1.0	M6 \times 1.0	M10 \times 1.0	25	98	40	38	40
AMRG $\square 25$	~1,500	Rc 1/8	74	6.8	26.6	16	11	7	25	8	54	52	15	23	34	18.5	2	8	16	74	90	124	M6 \times 1.0	M8 \times 1.25	M14 \times 1.5	25	102	40	42	40
AMRG $\square 32$	~1,500	Rc 1/8	88	8.6	33.8	20	14	8.6	29	10	64	62	19.5	29.5	42.5	19	4	12	16	90	110	146	M8 \times 1.25	M10 \times 1.5	M20 \times 1.5	28	122	50	50	50
AMRG $\square 40$	~1,500	Rc 1/4	91	8.6	42	25	14	8.6	34.5	10	74	72	20	34.5	47.5	20	4	12	14	100	120	160	M8 \times 1.25	M10 \times 1.5	M20 \times 1.5	30	145	64	64	64

(inch)

Model	Stroke range	Port size	A	ϕC	ϕD	ϕd	ϕE	F	GG	G	H	HA	HB	HC	HD	HE	HH	JA	JB	L	LL	LLL	MA	MB	MS	T	W	XA	Y	YA
UAMRG $\square 20$	0.5~40inch	NPT 1/8	2.60	0.20	0.85	0.63	0.39	1.14	0.24	0.31	1.81	1.73	0.43	0.75	0.57	0.31	0.59	2.91	3.54	4.88	1/4-28UNF	1/4-28UNF	3/8-24UNF	0.98	3.86	1.57	1.50	1.57		
UAMRG $\square 25$	0.5~60inch	NPT 1/8	2.91	0.27	1.05	0.63	0.43	0.98	0.28	0.31	2.12	2.05	1.59	0.91	0.73	0.31	0.63	2.91	3.54	4.88	1/4-28UNF	5/16-24UNF	3/16-18UNF	0.98	4.02	1.57	1.65	1.57		
UAMRG $\square 32$	0.5~60inch	NPT 1/8	3.46	0.34	1.33	0.79	0.55	1.14	0.34	0.39	2.52	2.44	0.77	1.16	0.75	0.47	0.63	3.54	4.33	5.75	5/16-24UNF	3/8-24UNF	3/4-16UNF	1.10	4.80	1.97	1.97	1.97		
UAMRG $\square 40$	0.5~60inch	NPT 1/4	3.58	0.34	1.65	0.98	0.55	1.36	0.34	0.39	2.91	2.83	0.79	1.36	0.79	0.47	0.55	3.94	4.72	6.30	5/16-24UNF	3/8-24UNF	3/4-16UNF	1.18	4.72	2.52	2.52	2.52		

Specifications

Auto Switch Specifications



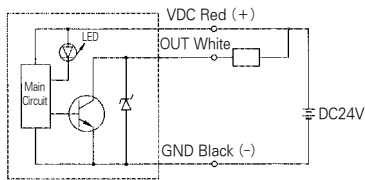
Auto Switch No.	W1H□	W13□
Type	Solid State Switch	Reed Switch
Application	Relay, Sequence Control	
Wiring Method	3 Wire System	2 Wire System
Power Source	DC10~28V	—
Load Voltage	DC28V Less	DC24V, AC110V
Current Consumption	100mA Less	DC24V : 5~40mA AC110V : 5~20mA
Internal Voltage Drop	100mA~0.5V Less	40mA~2.4V Less
Leakage Current	DC24V~10μA Less	
Load Current	OFF: 5mA or Less ON : 35mA or Less	—

- Operating Time : Max. 1ms
- Lead Wire : Oil resistant vinyl cord. ϕ 0.13, 0.2mm², 3 cores(red white, black), cores(red, black), 0.5m
- Shock Resistance : 1000m/S² (102G)
- Insulation Resistance : 50M Ω or more under the test voltage 500V DC between case and cable.
- Withstand Voltage : 1000VAC for 1min.(between lead wire and case)
- Ambient Temperature : -10~60°C. (14~140°F)
- Protection Structure : IEC Standard, water-tight and oil resistant structure

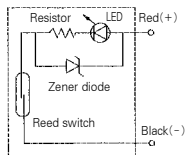
※ "L" is added to the end when the lead is 3m long.
(ex) W1H□L

Auto Switch Internal Circuit

W1H□

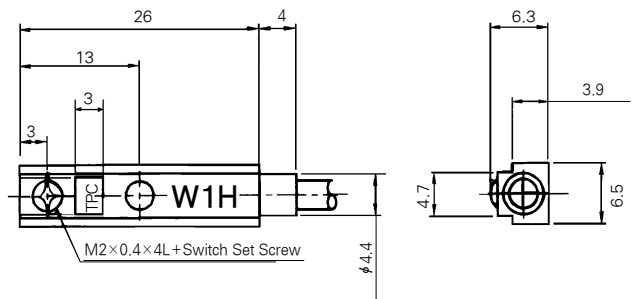


W13□



Auto Switch Dimensions

(mm)



	(mm)	
Stations	W1H□	W13□
L	10	15
Operating Range	4~10	4~10