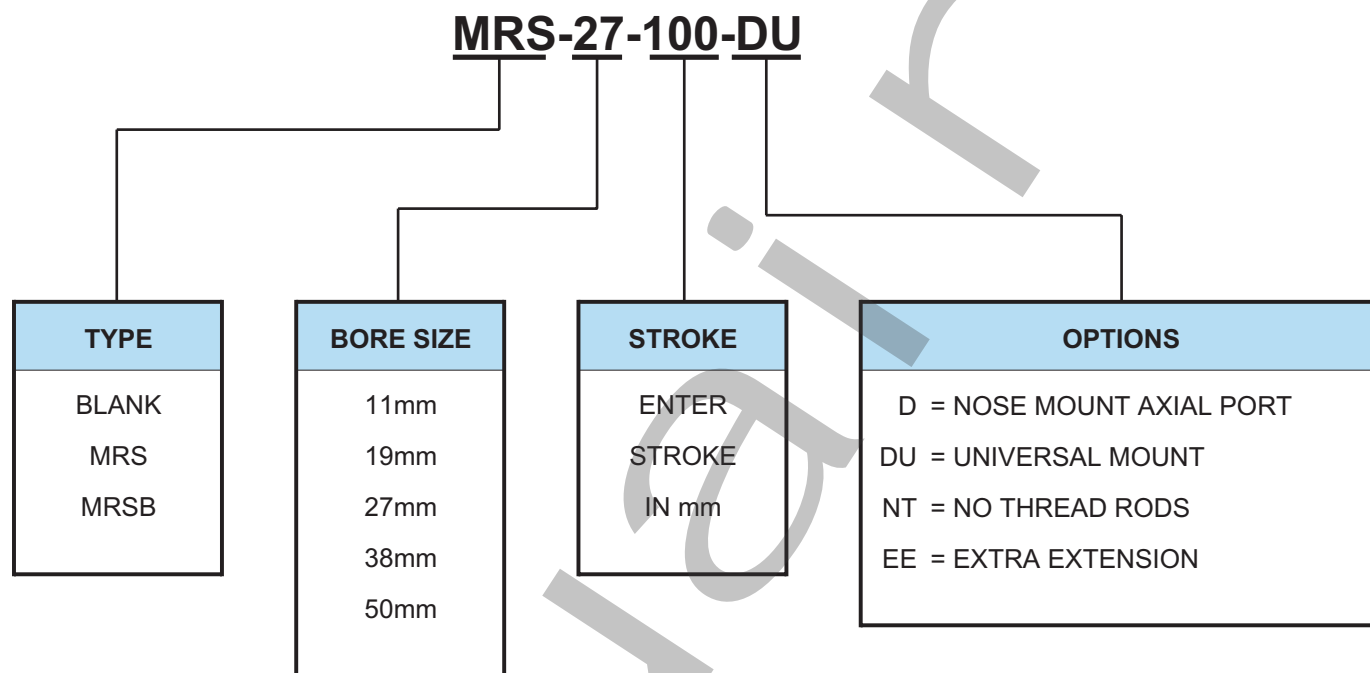


HOW TO ORDER

The Model Number for all Metric Original Line Cylinders consists of four Alpha-Numeric clusters. The first cluster designates the *Type*, the second the *Bore Size*, the third the *Stroke Length*, and the fourth the *Options*. Please refer to the chart below for an explanation of the following model number:

MRS-27-100-DU: This is an Metric Original Line Cylinder, with 27mm Bore size, 100mm Stroke Size, and a Magnetic Piston with Switch Mounting Track.



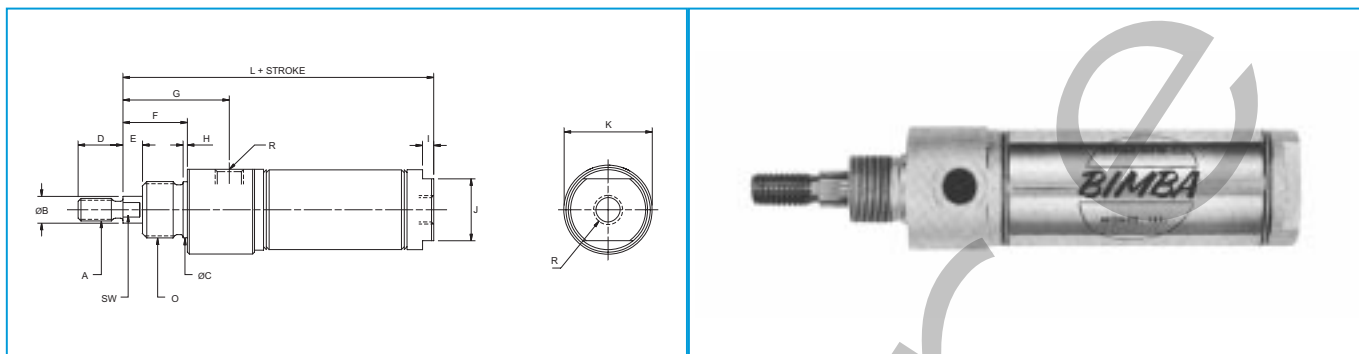
THE BIMBA MRS PNEUMATIC CYLINDER

The BIMBA MRS air cylinder combines a high strength type 304 stainless steel body, "U" cup piston and piston rod seals, ground and polished type 303 piston rod which is threaded into the piston. On the periphery of the piston is contained a Nitrile Bonded Anisotropic (oriented material) Barium Ferrite based permanent magnet designed to provide sufficient magnetomotive force to operate the MRS BIMBA SWITCH. The magnetic material will not be effected by vibration and shock. It is also highly resistant to loss of magnetic properties due to very low temperatures, is very stable, and in normal use, will stay magnetized indefinitely. A standard BIMBA MRS cylinder contains one extruded slotted track extending the full length of the cylinder rigidly mounted on both end caps. As an option more than one track can be mounted. As the piston travels back and forth within the MRS cylinder body, the magnet located on the piston will be brought in a parallel motion within a specific proximity of the MRS BIMBA SWITCH.

When the magnet is close enough, the normally open contacts will close or pull-in. When the magnet moves away, the contacts will open or drop-out. Being a proximity switch, the contacts will not close at the same position on the outward stroke as the inward stroke. The specific proximity of the magnet to the reed for blade contact to take place and the distance the piston will travel before the blades open depends upon the sensitivity of the switch and the strength of the magnet. Once the MRS BIMBA SWITCH is adjusted in the track, closing and opening of the contacts will repeat within 0.35mm. Time duration of signal pulse depends on operating speed of cylinder piston. Recommended operating time for any driven device (relays, counters, etc.) is one-half of signal pulse time. In making adjustments and checking operations it is recommended that an ohmmeter or a LED (light emitting diode) be used. Definitely, do not use a light bulb to check operation of the BIMBA SWITCH model MRS-.087-M.

METRIC ORIGINAL LINE

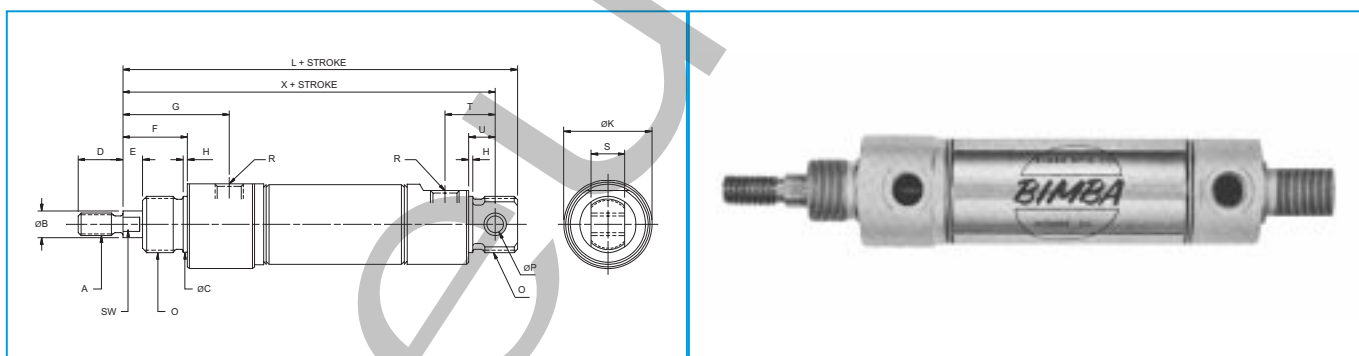
METRIC D SERIES PNEUMATIC CYLINDERS - NOSE MOUNT



STANDARD STROKE LENGTHS (MM) - 25, 50, 75, 100, 150

Model No.	Bore	A	B	C	D	E	SW	F	G	H	I	J	K	L	O	R
11-00-D	11	M4x0.7	4.8	10	8	4.5	4	14.5	24	1	4	10	17	66	M10x1.0	M5x0.8
19-000-D	19	M6x1.0	7.9	16	12	5	7	18	32	1.5	4	17	28	92	M16x1.5	G1/8
27-000-D	27	M8x1.25	9.5	20	16	7	8	23	38	1.5	4	22	31.5	101	M20x1.5	G1/8
38-000-D	38	M12x1.75	12.7	24	24	8.5	11	29	48	2.5	6	27	42	115	M24x1.5	G1/4
50-000-D	50	M14x2.0	15.9	30	28	10	13	35	56	3	8	36	53	138	M30x1.5	G1/4

METRIC DU SERIES PNEUMATIC CYLINDERS - UNIVERSAL MOUNT

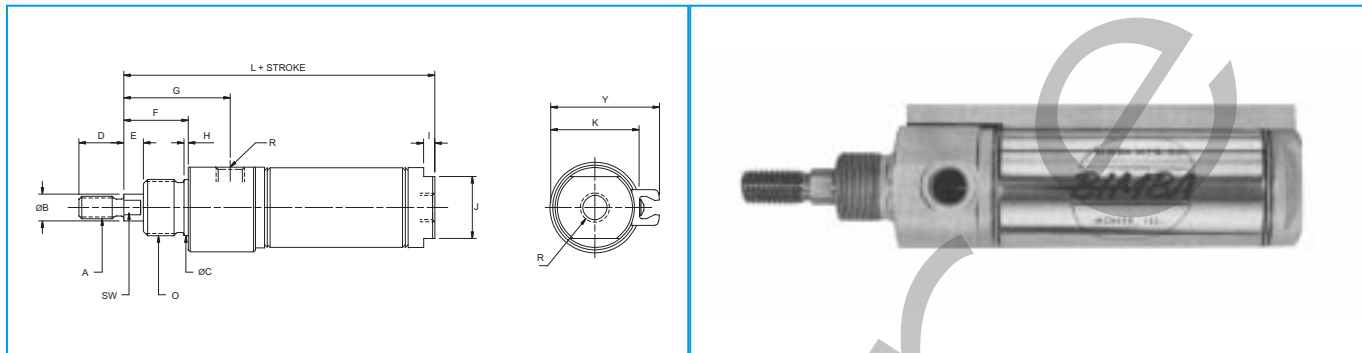


STANDARD STROKE LENGTHS (MM) - 25, 50, 75, 100, 150, 200*, 250*, 300*

Model No.	Bore	A	B	C	D	E	SW	F	G	H	K	L	O	P	R	S	T	U	X
11-00-DU	11	M4x0.7	4.8	10	8	4.5	4	14.5	24	1	17	83	M10x1.0	4	M5x0.8	8	12	7	78
19-000-DU	19	M6x1.0	7.9	16	12	5	7	18	32	1.5	28	123	M16x1.5	5	G1/8	10	17.5	9	116
27-000-DU	27	M8x1.25	9.5	20	16	7	8	23	38	1.5	31.5	131	M20x1.5	6	G1/8	12	18	9.5	123
38-000-DU	38	M12x1.75	12.7	24	24	8.5	11	29	48	2.5	42	159	M24x1.5	10	G1/4	18	28	15	146
50-000-DU	50	M14x2.0	15.9	30	28	10	13	35	56	3	53	185	M30x1.5	12	G1/4	24	31	18	170

*Except 11mm bore

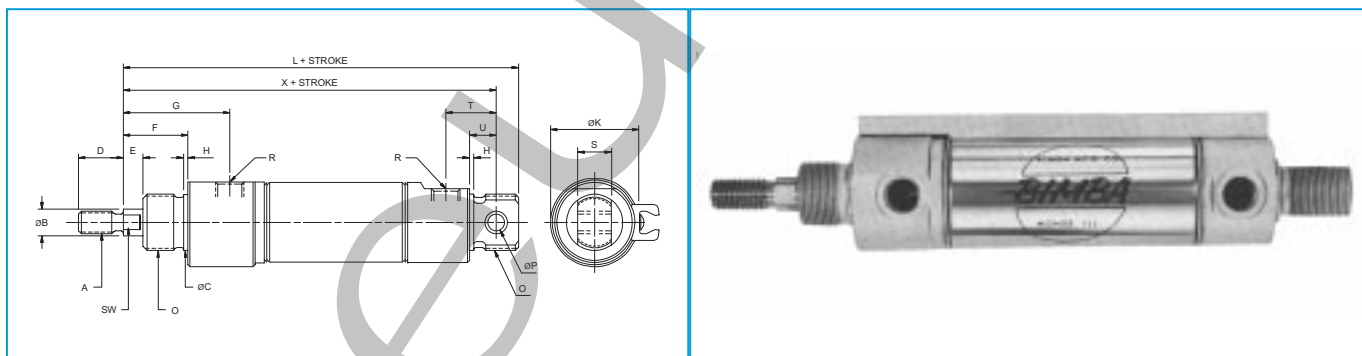
MRS METRIC D SERIES PNEUMATIC CYLINDERS - NOSE MOUNT



STANDARD STROKE LENGTHS (MM) - 25, 50, 75, 100, 150

Model No.	Bore	A	B	C	D	E	SW	F	G	H	I	J	K	L	O	R	Y
MRS-19-000-D	19	M6x1.0	7.9	16	12	5	7	18	32	1.5	4	17	28	92	M16x1.5	G1/8	35.7
MRS-27-000-D	27	M8x1.25	9.5	20	16	7	8	23	38	1.5	4	22	31.5	101	M20x1.5	G1/8	38.8
MRS-38-000-D	38	M12x1.75	12.7	24	24	8.5	11	29	48	2.5	6	27	42	115	M24x1.5	G1/4	49.5
MRS-50-000-D	50	M14x2.0	15.9	30	28	10	13	35	56	3	8	36	53	138	M30x1.5	G1/4	62.2

MRS METRIC DU SERIES PNEUMATIC CYLINDERS - UNIVERSAL MOUNT



STANDARD STROKE LENGTHS (MM) - 25, 50, 75, 100, 150

Model No.	Bore	A	B	C	D	E	SW	F	G	H	K	L	O	P	R	S	T	U	X	Y
MRS-19-000-DU	19	M6x1.0	7.9	16	12	5	7	18	32	1.5	28	123	M16x1.5	5	G1/8	10	17.5	9	116	35.7
MRS-27-000-DU	27	M8x1.25	9.5	20	16	7	8	23	38	1.5	31.5	131	M20x1.5	6	G1/4	12	18	9.5	123	38.8
MRS-38-000-DU	38	M12x1.75	12.7	24	24	8.5	11	29	48	2.5	42	159	M24x1.5	10	G1/4	18	28	15	146	49.5
MRS-50-000-DU	50	M14x2.0	15.9	30	28	10	13	35	56	3	53	185	M30x1.5	12	G1/8	24	31	18	170	62.2

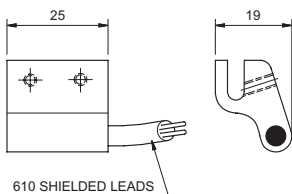
METRIC ORIGINAL LINE

MRS BIMBA METRIC SWITCHES

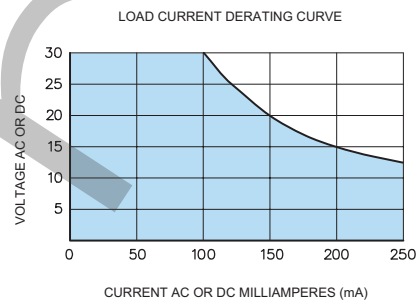
BIMBA Reed Switches are available in four styles to accommodate the different bore size of cylinders and to meet various electrical loads. Models MRS .027-M and .087-M are intended for moderate current and voltage applications while the Models MRS 1.5-M and 1.5-SM incorporate a Triac for solid state switching of AC inductive loads. All types may be positioned as desired along the length of the cylinder body.

MRS-.027-M

(For 19mm bore only)

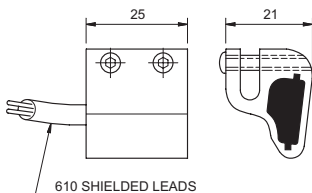


Contacts S.P.S.T. Form A
 (Normally Open)
 Contact Rating 3 Watts Max.
 Switching Voltage 28 Volts Max.
 Maximum Current 250 mA-Max.
 (Resistive)
 Initial Contact Resistance
 0.20 OHMS Max.
 Breakdown Voltage 200 Volts Min.
 Actuating Time average . . . 1.0 Milliseconds

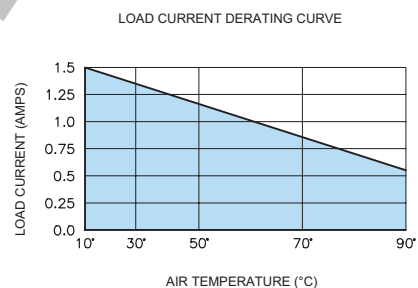


MRS-1.5-SM

(For 19mm bore only)

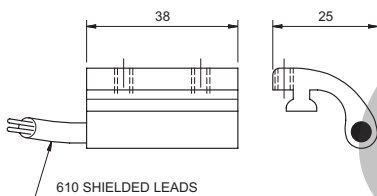


Contacts S.P.S.T. Form A
 (Normally Open)
 Voltage Rating 12V-230 V
 (AC ONLY)
 Maximum Current 1.5 Amps
 Actuating Time Average 2 Milliseconds

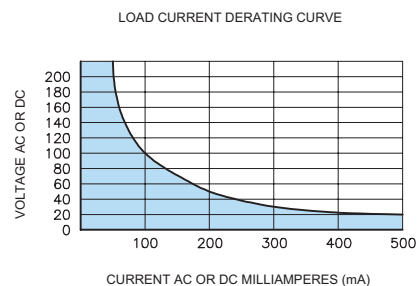


MRS-.087-M

(For 27 to 50mm bore only)

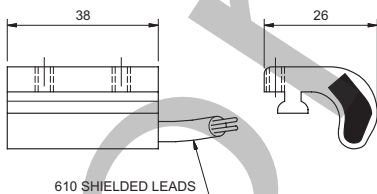


Contacts S.P.S.T. Form A
 (Normally Open)
 Contact Rating 10 Watts Max.
 Switching Voltage 200 Volts Max.
 (Resistive)
 Maximum Current . . . 500mA-Max Initial
 Contact Resistance 0.10 OHMS
 Max. Breakdown Voltage 400 Volts
 Min. Actuating Time Average 1.0 Millisecond

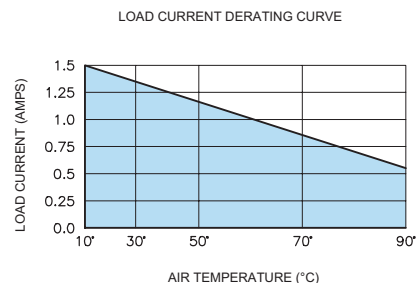


MRS-1.5-M

(For 27 to 50mm bore only)

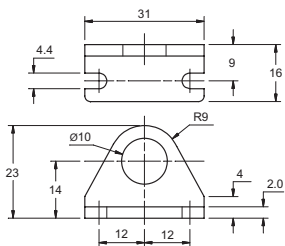


Contacts S.P.S.T. i. Form A
 (Normally Open)
 Voltage Rating 12V-230V
 (AC ONLY)
 Maximum Current 1.5 Amps
 Actuating Time average 2 Milliseconds

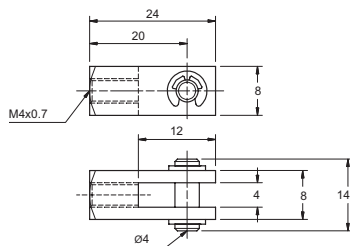


ACCESSORIES

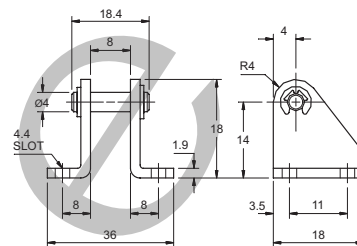
11mm
BORE



D-9623
Foot Bracket

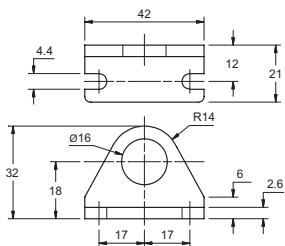


D-9628-A
Rod clevis

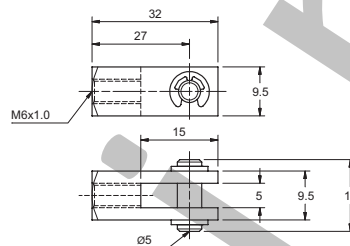


D-9633-A
Pivot Bracket

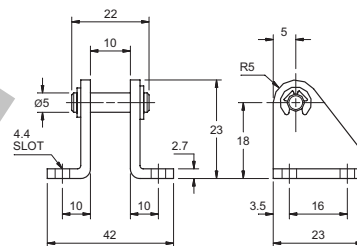
19mm
BORE



D-9624
Foot Bracket

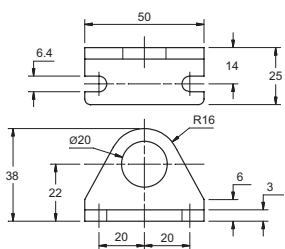


D-9629-A
Rod clevis

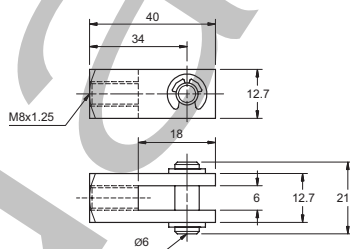


D-9634-A
Pivot Bracket

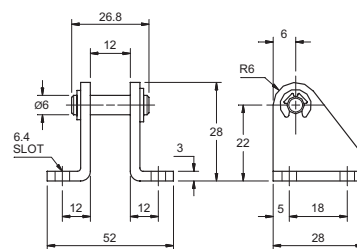
27mm
BORE



D-9625
Foot Bracket

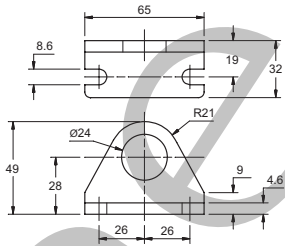


D-9630-A
Rod clevis

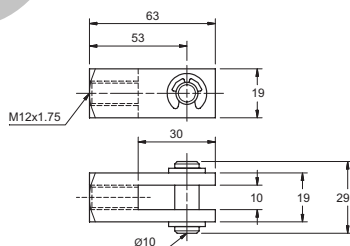


D-9635-A
Pivot Bracket

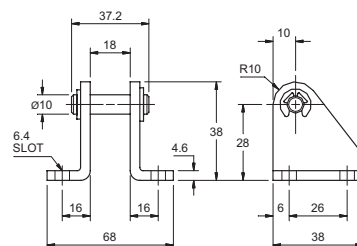
38mm
BORE



D-9626
Foot Bracket

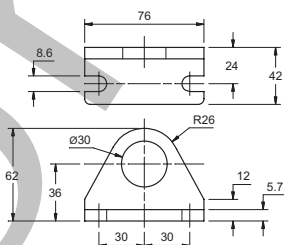


D-9631-A
Rod clevis

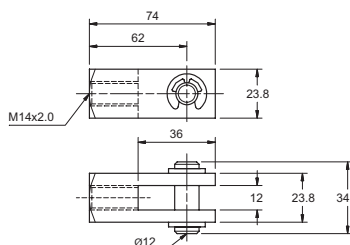


D-9636-A
Pivot Bracket

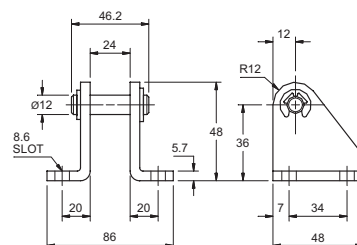
50mm
BORE



D-9627
Foot Bracket



D-9632-A
Rod clevis



D-9637-A
Pivot Bracket