

MA series Miniature Shock Absorbers - Adjustable

- Maintenance free, self-contained hydraulic components
- Provides the highest possible cycle lifetime; up to 25 million cycles
- Extremely low rod return force
- Can be directly mounted into the end cover of pneumatic cylinders (up to 7 bar)
- Integral positive stop incorporated on all models



Technical features

Adjustment:

On model MA 150: by turning the adjustment screw at rear. On MA 225 and MA 600: by turning the adjustment knob against the scale marked 0 to 9. After installation, cycle the machine a few times and turn the adjustment knob until optimum deceleration is achieved (i.e. smooth deceleration throughout stroke). Hard impact at start of stroke > Turn adjuster towards '9' Hard setdown at end of stroke > Turn adjuster towards '0'.

Impact velocity range:

0,3 ... 3,6 m/s (check effective weight calculation.): FA units max. 2 m/s.

W4 capacity rating (max. energy per hour Nm/hr):

If your application exceeds tabulated W4 figures consider additional cooling i. e. cylinder exhaust air etc.

Mounting:

In any position. If precise end position datum is required consider use of the optional stop collar type AH.

Ambient temperature:

0°C ... +66°C
Air supply must be dry enough to avoid ice formation at temperatures below

Body:

Steel with black oxide finish
Piston rod:
Hardened stainless steel

Max. energy capacity Nm per cycle per hour		Effective weight me Self-compensating			Return force	Rod reset time	Max. side load angle	Model
W3	W4	min	kg	max	N	s	o	
								
22	35 000	1	–	109	3 - 5	0,4	5	MA 150 M
25	45 000	2,3	–	226	5 - 10	0,1	2	MA 225 M
68	68 000	9	–	1360	10 - 30	0,2	2	MA 600 M

Accessories

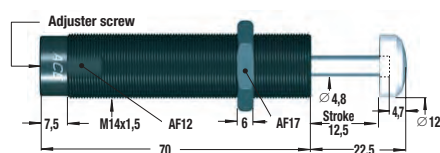
Rectangular flange	Clamp mount	Stop collar
		
RF 14	MB14	AH14
RF 20	MB 20	AH20
RF 25	MB 25	AH25

Dimensions

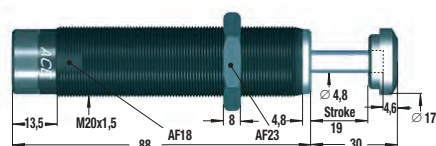
Dimensions in mm
Projection/First angle



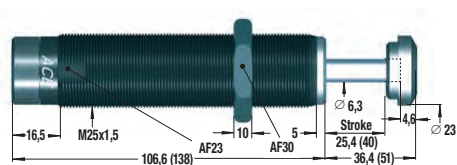
MA 150 M



MA 225 M



MA 600 M



Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under **»Technical features/data«**.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult Norgren.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.