

## MA30 to MA900

### Stepless adjustment

#### Adjustable

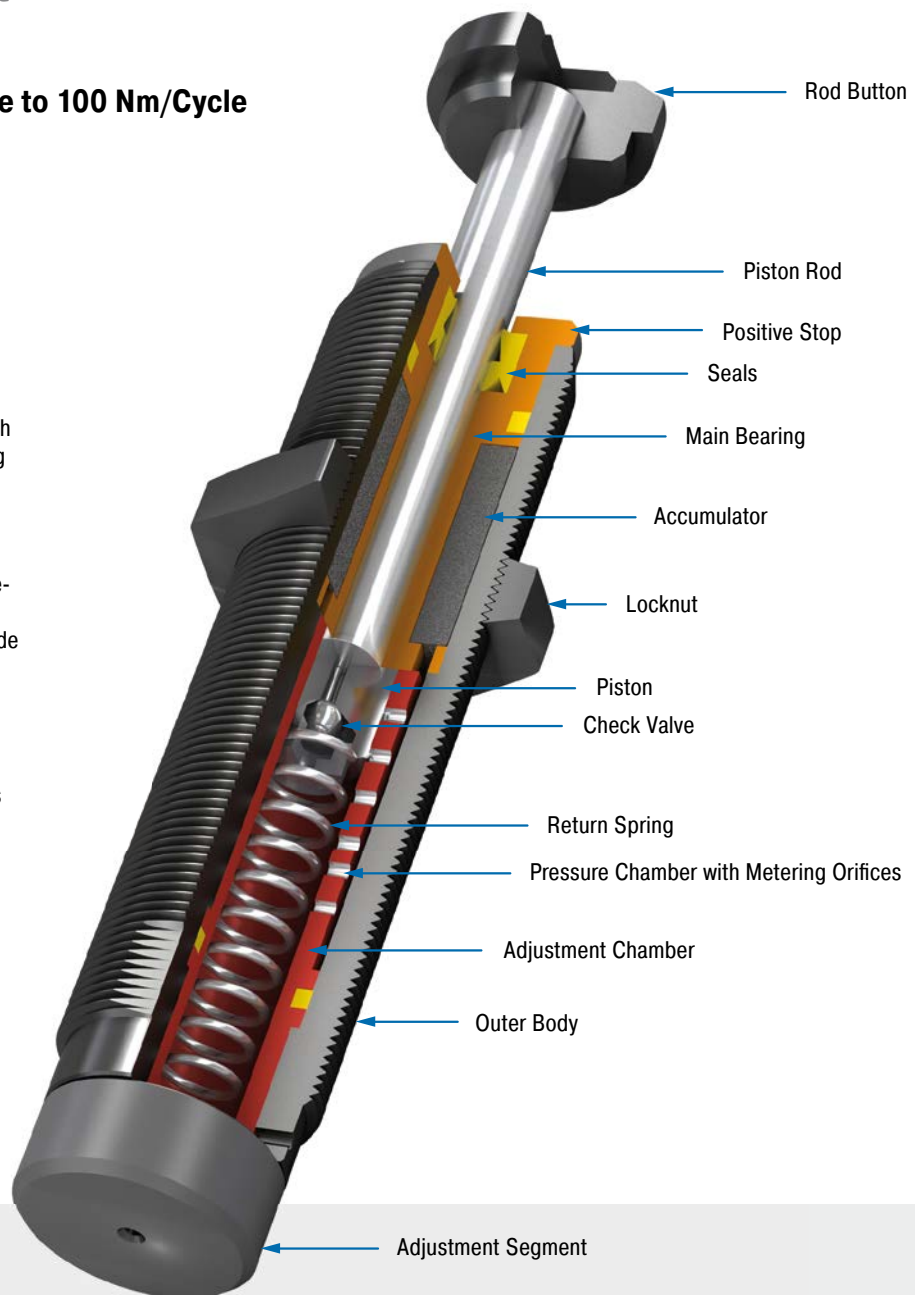
**Energy capacity 3.5 Nm/Cycle to 100 Nm/Cycle**

**Stroke 8 mm to 40 mm**

The miniature shock absorbers from the MA30 to MA900 product family can be adjusted and precisely adapted to your requirements. For example, the MA150 displays the rolling diaphragm technology from the MC150 to MC600 family and offers all of the advantages of this technology, such as use in pressure chambers. Thanks to long strokes (including 40 mm on the MA900) lower reaction forces result, which provide a soft damping characteristic.

All variations of these units are maintenance-free, ready-to-install machine elements and have an integrated positive stop. They provide the best service where application data changes, where the calculation parameters are not clear or where maximum flexibility in the possible usage is required.

These adjustable miniature shock absorbers from ACE can be used to precisely meet the customer's application needs and are therefore found everywhere in industrial, automation and machine engineering and many other applications.



#### Technical Data

**Energy capacity:** 3.5 Nm/Cycle to 100 Nm/Cycle

**Impact velocity range:** 0.15 m/s to 4.5 m/s.  
Other speeds on request.

**Operating temperature range:** 0 °C to 66 °C

**Mounting:** In any position

**Positive stop:** Integrated

**Adjustment:** Hard impact at the start of stroke, adjust the ring towards 9 or PLUS. Hard impact at the end of stroke, adjust the ring towards 0 or MINUS.

**Material:** Outer body, Accessories: Steel corrosion-resistant coating; Piston rod: Hardened stainless steel

**Damping medium:** Oil, temperature stable

**Application field:** Linear slides, Pneumatic cylinders, Swivel units, Handling modules, Machines and plants, Finishing and processing centers, Automatic machinery, Tool machines, Locking systems

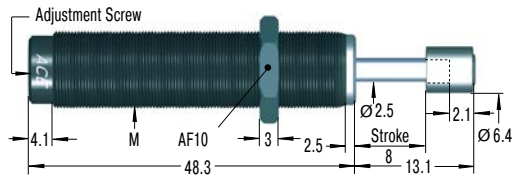
**Note:** If precise end position data is required consider use of a stop collar. Shock absorber is preset at delivery in a neutral position between hard and soft.

**Safety information:** External materials in the surrounding area can attack the seal components and lead to a shorter service life. Please contact ACE for appropriate solution suggestions. Do not paint the shock absorbers due to heat emission.

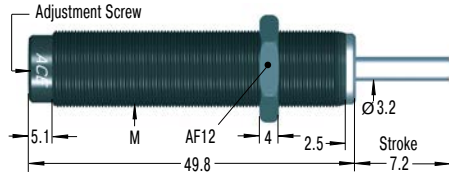
**On request:** Nickel-plated or other special options available to special order. Models without rod end button.



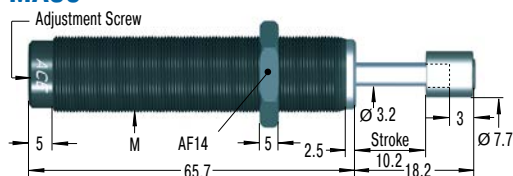
### MA30M



### MA50M

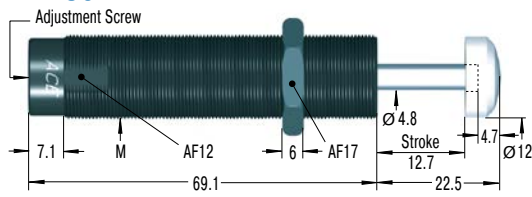


### MA35



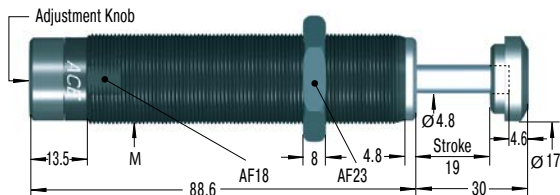
Product available for UNF and metric thread (for metric add suffix -M from part number)

### MA150



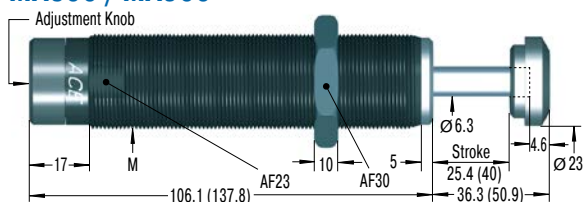
Product available for UNF and metric thread (for metric add suffix -M from part number)  
M14x1 also available to special order

### MA225



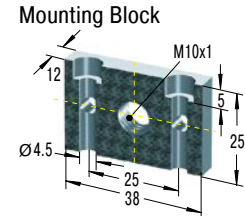
Product available for UNF and metric thread (for metric add suffix -M from part number)

### MA600 / MA900

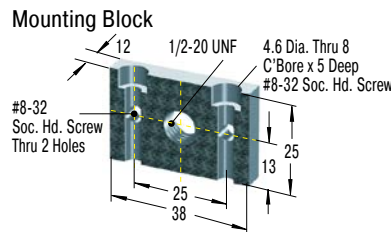


Product available for UNF and metric thread (for metric add suffix -M from part number)  
Dimensions for MA900M in ( ).

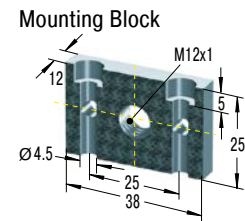
### 250-0307



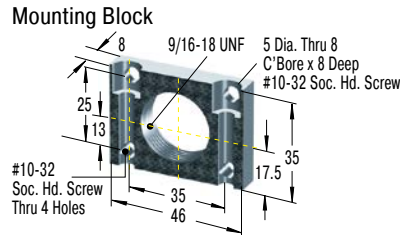
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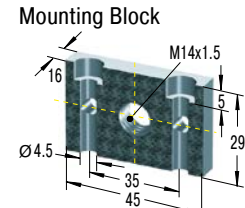
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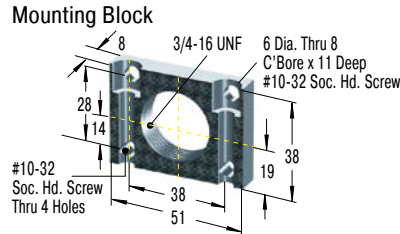
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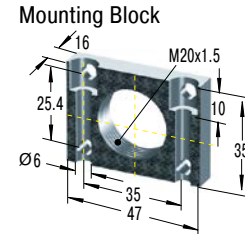
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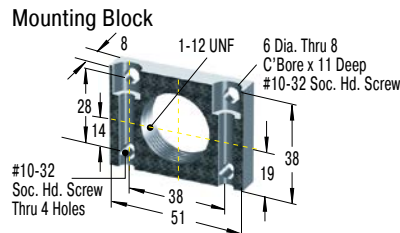
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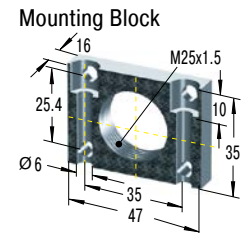
### 250-0353



### 250-0402



### 250-0044



Additional accessories, mounting, installation ... starting on page 40.

### Performance

| TYPES | Max. Energy Capacity    |                     | Effective Weight |            | Return Force min. N | Return Force max. N | Return Time s | Side Load Angle max. ° | M                     | Weight kg |
|-------|-------------------------|---------------------|------------------|------------|---------------------|---------------------|---------------|------------------------|-----------------------|-----------|
|       | E <sub>3</sub> Nm/cycle | E <sub>4</sub> Nm/h | We min. kg       | We max. kg |                     |                     |               |                        |                       |           |
| MA30M | 3.5                     | 5,650               | 0.23             | 15         | 1.7                 | 5.3                 | 0.3           | 2                      | M8x1                  | 0.013     |
| MA50M | 5.5                     | 13,550              | 4.5              | 20         | 3                   | 6                   | 0.3           | 2                      | M10x1                 | 0.025     |
| MA35  | 4                       | 6,000               | 6                | 57         | 5                   | 11                  | 0.2           | 2                      | 1/2-20 UNF / M12x1    | 0.043     |
| MA150 | 22                      | 35,000              | 1                | 109        | 3                   | 5                   | 0.4           | 2                      | 9/16-18 UNF / M14x1.5 | 0.061     |
| MA225 | 25                      | 45,000              | 2.30             | 226        | 5                   | 10                  | 0.4           | 2                      | 3/4-16 UNF / M20x1.5  | 0.173     |
| MA600 | 68                      | 68,000              | 9                | 1,360      | 10                  | 30                  | 0.2           | 2                      | 1-12 UNF / M25x1.5    | 0.352     |
| MA900 | 100                     | 90,000              | 14               | 2,040      | 10                  | 35                  | 0.4           | 1                      | 1-12 UNF / M25x1.5    | 0.414     |

<sup>1</sup> For applications with higher side load angles consider using the side load adaptor, pages 44 to 49.