

Hydraulic Feed Controls

Regulate feed rates in the best way

ACE Hydraulic feed controls are recommended as the perfect solution when sawing, cutting, drilling and in order to prevent the stick-slip effect on pneumatic cylinders. They can be precisely adjusted and provide speeds from 1/2"/min. (12 mm/min.) with a very low feed force or up to 1.5"/min. (38 m/min.) with a high feed rate

These maintenance-free, ready-to-install hydraulic feed controls are self-contained hydraulic elements regulated by a precision throttle. The feed rate is set from the outside by turning the setting adjuster. The tried-and-tested rolling diaphragms used in many ACE shock absorbers also serve as a dynamic sealing element for a hermetic seal as well as volume compensation for the piston rod and provide the resetting of the piston when the force is removed.



Hydraulic Feed Controls



VC25

Page 228

Adjustable
For precision adjustment of feed rates
 Handling modules, Linear slides, Automatic machinery,
 Conveyor equipment



MA, MVC

Page 230

Adjustable
Designed for applications with low precision requirements
 Handling modules, Linear slides, Automatic machinery,
 Conveyor equipment

Shorter processing times

Different feed rates

Adjustment segment at the lower end of the feed control

Most accurate calibrations

Available immediately

Easy to mount



VC25

For precision adjustment of feed rates

Adjustable

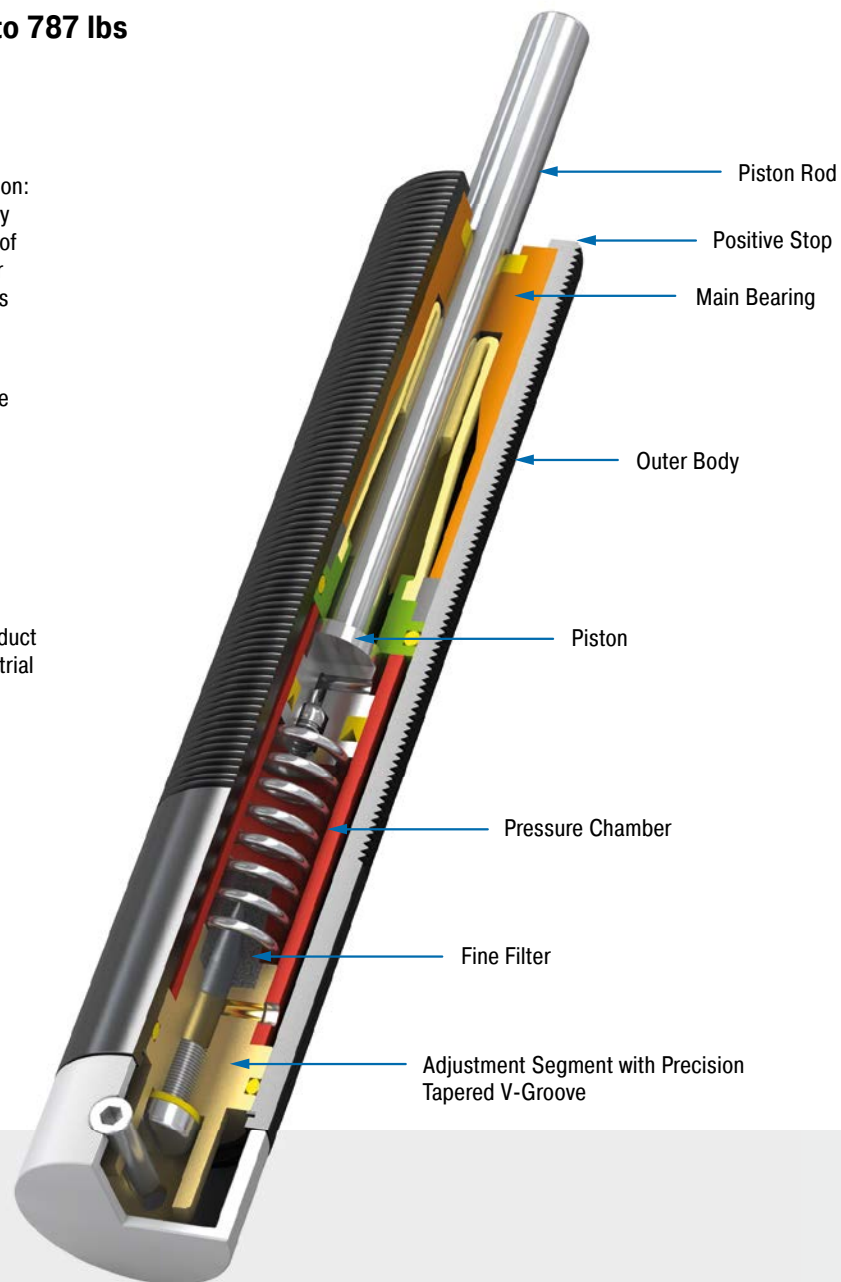
Compression force 6.74 lbs to 787 lbs

Stroke 0.59 in to 4.92 in

Precise adjustment for any type of application: Hydraulic feed controls of the product family VC are ideally suited for the precise tuning of constant feed rates. The thread of the outer body of this closed hydraulic element allows simple assembly. Smooth outer bodies can also be supplied.

As the hydraulic oil is forced out through the throttle opening, a constant feed rate is achieved on the stroke. In the models up to 2.17" (55 mm) stroke, the tried and tested rolling diaphragm, known from ACE shock absorbers, serves as a dynamic seal, as volume compensation of the piston rod and as a reset element.

Precision hydraulic feed controls of the product family VC are used in automotive and industrial applications as well as in mechanical engineering and the electronics industry.



Technical Data

Compression force: 6.74 lbs to 787 lbs

Execution: F = Ø 0.94 in without thread
FT = M25x1.5 threaded body

Piston rod diameter: Ø 0.31 in

Feed rate/Compression force:

Min. 0.51 in/min. with 90 lbs;
Max. 1,500 in/min. with 787 lbs

Impact velocity range: At speeds of 0.98 ft/sec the maximum allowed energy is approx. 8.85 in-lbs for units up to 2.16 in stroke and approx. 17.70 in-lbs for units 2.95 in to 4.92 in stroke. Where higher energies occur use a shock absorber for the initial impact. Avoid high impact velocities.

Adjustment: Infinitely adjustable

Positive stop: External positive stops 0.04 in to 0.06 in before the end of stroke provided by the customer.

Damping medium: Oil, temperature stable

Material: Outer body: Black anodized aluminium ; Piston rod: Hard chrome plated steel ; Accessories: Steel with black oxide finish or nitride hardened

Mounting: In any position

Operating temperature range: 32 °F to 140 °F

Application field: Handling modules, Linear slides, Automatic machinery, Conveyor equipment, Absorption control

Note: Nylon button can be fitted onto piston rod. Unit may be mounted in any position.

Safety information: Do not rotate piston rod, if excessive rotation force is applied rolling seal may rupture. 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.

On request: Special oil and other special options available on request.

Products for
UNF and metric thread
available

MA, MVC

Designed for applications with low precision requirements

Adjustable

Compression force 2 lbs to 800 lbs

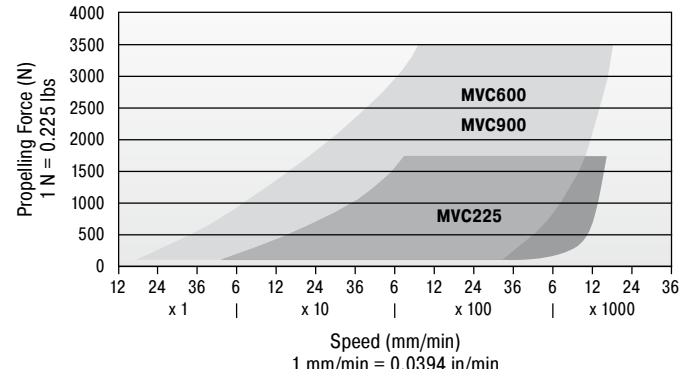
Stroke 0.28 in to 1.58 in

Many application options: the hydraulic feed controls in models MA and MVC are similar to that of the VC model. However, these hydraulic controls have been designed for applications that require less precision.

There are also plenty of accessories for the MA and MVC models. All products are ready-to-install, maintenance-free, stable in temperature and avoid stick-slip effect. Speeds from 0.47"/min. (12 mm/min.) can be driven at a low thrust force using the adjustment screw on the base of the hydraulic control.

Hydraulic feed controls with the designations MA and MVC are especially used in handling modules or linear carriages and also for applications with changing usage data.

Operating Range MVC225 to MVC900



Performance and Dimensions

TYPES	Stroke inch	Compression force min. lbs	Compression force max. lbs	Return Force min. lbs	Return Force max. lbs	Return Time s	¹ Side Load Angle max. °	M	Weight lbs
MA30M	0.32	2	18	1.16	1.57	0.3	2	M8x1	0.029
MA50M	0.28	9	36	0.47	1.80	0.3	2	M10x1	0.055
MA35	0.40	3.3	45	1.20	2.60	0.2	2	1/2-20 UNF / M12x1	0.095
MA150	0.50	4.5	67.4	0.70	1.20	0.4	2	9/16-18 UNF / M14x1.5	0.135
MVC225	0.75	5	400	1.05	2.15	0.65	2	3/4-16 UNF / M20x1.5	0.381
MVC600	1.00	14	800	2.40	6.87	0.85	2	1-12 UNF / M25x1.5	0.776
MVC900	1.58	15	800	2.40	7.40	0.95	2	1-12 UNF / M25x1.5	0.913

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

Technical Data

Compression force: 2 lbs to 800 lbs

Execution: Thread M8 to M25

Impact velocity range: At speeds of 0.98 ft/sec the maximum allowed energy is approx. 17.70 in-lbs. Where higher energies occur use a shock absorber for the initial impact. Avoid high impact velocities.

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

Positive stop: Integrated

Damping medium: Oil, temperature stable

Material: Outer body: Nitride hardened steel; Piston rod: Steel with black oxide finish or nitride hardened

Mounting: In any position

Operating temperature range: 32 °F to 150 °F

Application field: Handling modules, Linear slides, Automatic machinery, Conveyor equipment, Absorption control

Note: Damper is preset at delivery in a neutral position between hard and soft.

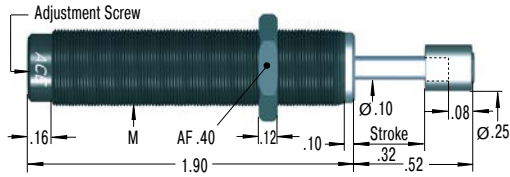
Safety information: External materials in the surrounding area can attack the seal components and lead to a shorter service life. Please contact ACE for appropriate solution suggestions.

On request: Nickel-plated, weartec finish (seawater resistant) or other special options available on request.

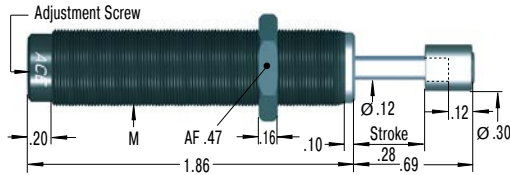
Products for UNF and metric thread available

Adjustable

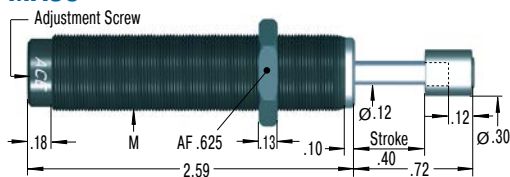
MA30M



MA50M

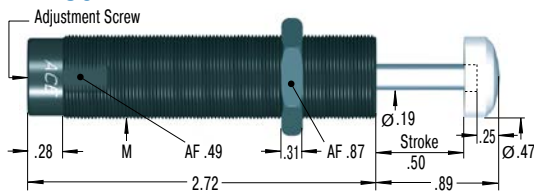


MA35



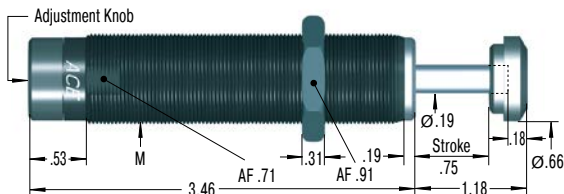
Product available for UNF and metric thread (for metric add suffix -M from part number)

MA150



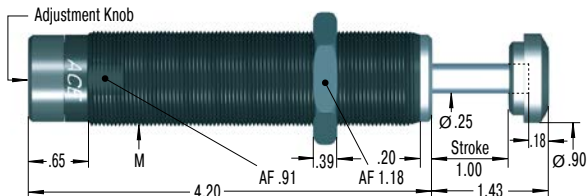
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MVC225



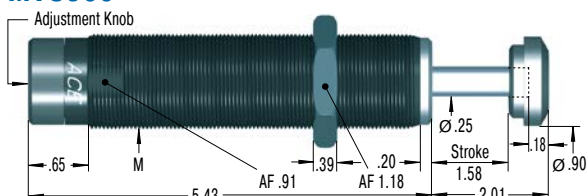
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MVC600



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

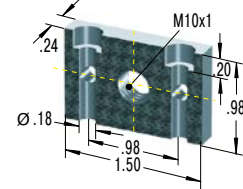
MVC900



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

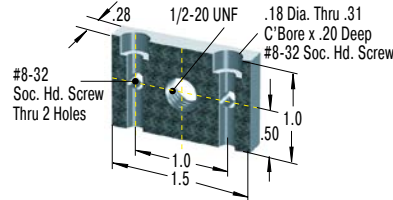
250-0307

Mounting Block



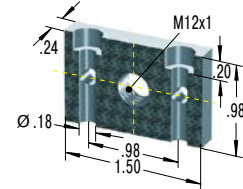
250-0308

Mounting Block



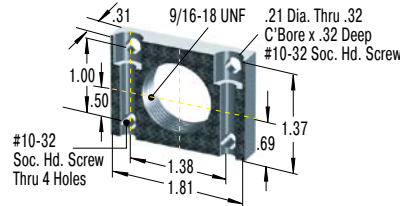
250-0309

Mounting Block



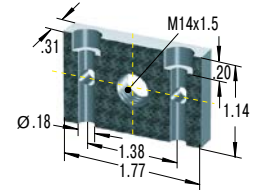
250-0318

Mounting Block



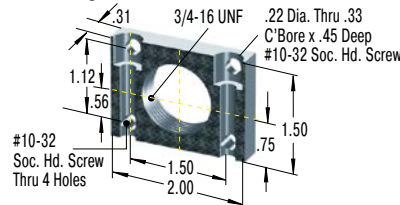
250-0352

Mounting Block



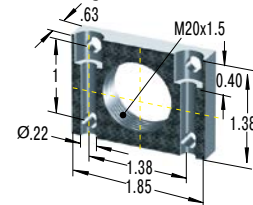
250-0401

Mounting Block



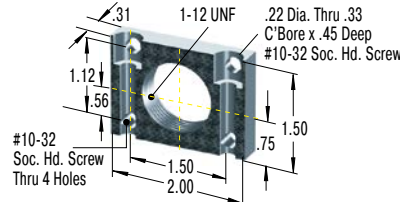
250-0353

Mounting Block



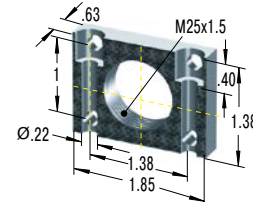
250-0402

Mounting Block



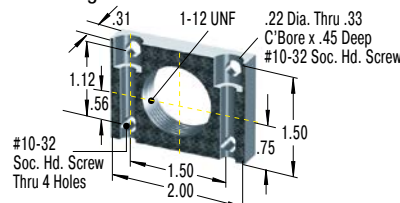
250-0044

Mounting Block



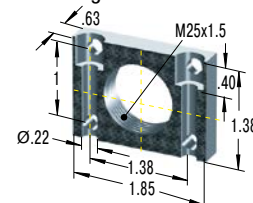
250-0402

Mounting Block



250-0044

Mounting Block



Additional accessories, mounting, installation ... see from page 44.