

Hydraulic Feed Controls

Regulate feed rates in the best way

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

The 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-testing 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 resetting element.



Hydraulic Feed Controls



VC25

Adjustable

For precision adjustment of feed rates

Handling modules, Linear slides, Automatic machinery,
Conveyor equipment

Page 216



MA, MVC

Adjustable

Designed for applications with low precision requirements

Handling modules, Linear slides, Automatic machinery,
Conveyor equipment

Page 218

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

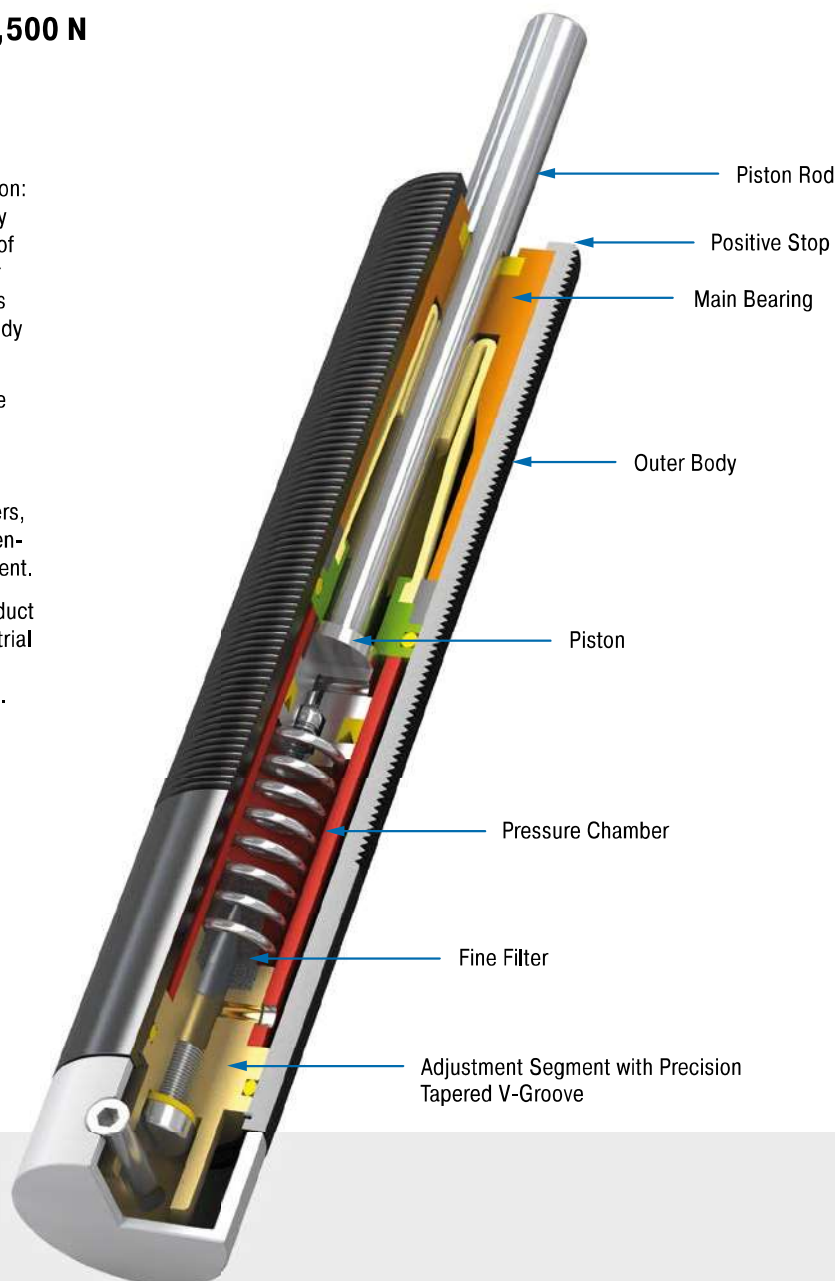
Compression force 30 N to 3,500 N

Stroke 15 mm to 125 mm

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. Designs with a smooth body 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 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 automation and machine building and electronics industries.



Technical Data

Compression force: 30 N to 3,500 N

Execution: F = \varnothing 23.8 mm without thread
FT = M25x1.5 threaded body

Piston rod diameter: \varnothing 8 mm

Feed rate/Compression force:
Min. 0.013 m/min. at 400 N; Max. 38 m/min.
at 3,500 N

Impact velocity range: At speeds of 0.3 m/s the maximum allowed energy is approx. 1 Nm for units up to 55 mm stroke and approx. 2 Nm for units 75 mm to 125 mm 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 1 mm to 1.5 mm 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: 0 °C to 60 °C

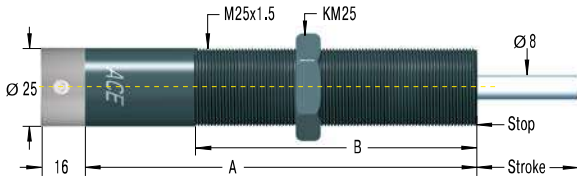
Application field: Handling modules, Linear slides, Automatic machinery, Conveyor equipment, Absorption control

Note: Nylon button PP600 can be fitted onto piston rod. Unit may be mounted in any position.

Safety instructions: 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.

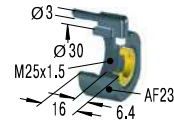
On request: Special oil and other special options available on request.

VC25EUFT



SP25

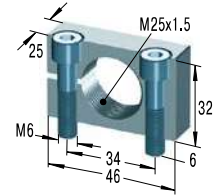
Air Bleed Collar



For VC2515FT to VC2555FT
reduction of the stroke 6.4 mm

MB25

Clamp Mount



Additional accessories, mounting, installation ... see from page 42.

Complete details required when ordering

Load to be decelerated: m (kg)
Impact velocity: v (m/s)
Propelling force: F (N)
Operating cycles per hour: c (/hr)
Number of absorbers in parallel: n
Ambient temperature: $^{\circ}\text{C}$

Ordering Example

Type (Feed Control) _____
Thread Size M25 _____
Stroke (55 mm) _____
EU Compliant _____
FT = with thread M25x1.5 _____
F = without thread, plain body (\varnothing 23.8 mm)

VC 25 55 EUFT

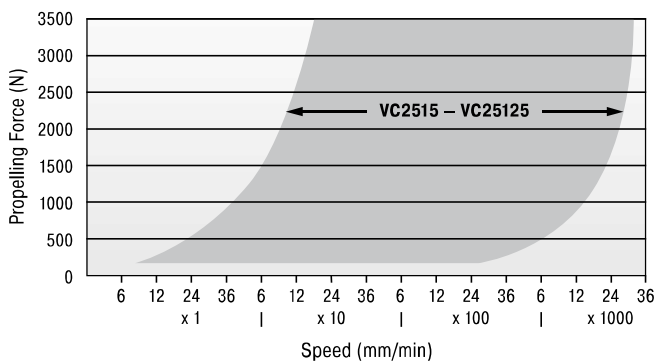
Performance and Dimensions

TYPES	Stroke mm	A mm	B mm	Compression force min. N	Compression force max. N	Return Force min. N	Return Force max. N	Return Time s	Side Load Angle max. °	Weight kg
VC2515EUFT	15	128	80	30	3,500	15	30	0.2	3	0.260
VC2530EUFT	30	161	110	30	3,500	5	30	0.4	2	0.470
VC2555EUFT	55	209	130	35	3,500	5	40	1.2	2	0.420
VC2575EUFT	75	283	150	50	3,500	10	50	1.7	2	0.701
VC25100EUFT	100	308	150	60	3,500	10	50	2.3	1	0.814
VC25125EUFT	125	333.5	150	70	3,500	10	60	2.8	1	0.928

Suffix FT: M25x1.5 threaded body.

Suffix F: plain body 23.8 mm dia. (without thread), with optional clamp type mounting block.

Operating Range VC



Accessories with Mounting Example



Mounting with clamp mount MB25

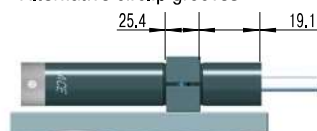


Installed with air bleed collar SP25



Installed with switch stop collar inc. proximity switch and steel button AS25 plus PS25

Alternative circlip grooves



Bulkhead mounting for VC25...F with mounting block KB... (23.8 mm plain body option)

MA, MVC

Designed for applications with low precision requirements

Adjustable

Compression force 8 N to 3,500 N

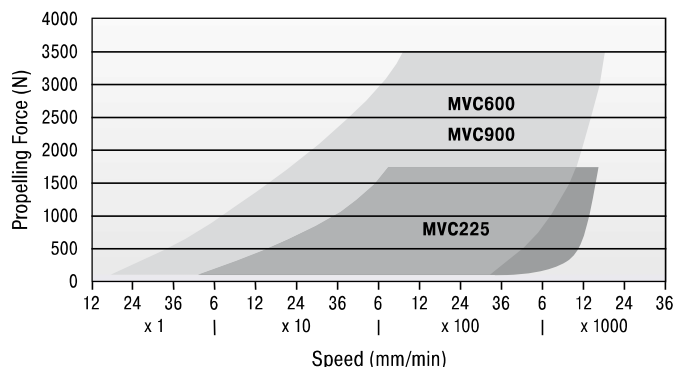
Stroke 7 mm to 40 mm

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 avoids stick-slip effect. Speeds from 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 mm	Compression force		Return Force min. N	Return Force max. N	Return Time s	Side Load Angle max. °	Weight kg
		min. N	max. N					
MA30EUM	8	8	80	1.7	5.3	0.3	2.0	0.011
MA50EUM-B	7.2	40	160	3.0	6.0	0.3	2.0	0.025
MA35EUM	10.2	15	200	5.0	11.0	0.2	2.0	0.045
MA150EUM	12.7	20	300	3.0	5.0	0.4	2.0	0.061
MVC225EUM	19	25	1,750	5.0	10.0	0.65	2.0	0.160
MVC600EUM	25	65	3,500	10.0	30.0	0.85	2.0	0.320
MVC900EUM	40	70	3,500	10.0	35.0	0.95	2.0	0.420

¹ For applications with higher side load angles consider using the side load adaptor (BV) pages 38 to 45.

Technical Data

Compression force: 8 N to 3,500 N

Execution: Thread M8 to M25

Impact velocity range: At speeds of 0.3 m/s the maximum allowed energy is approx. 2 Nm. 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: 0 °C to 66 °C

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

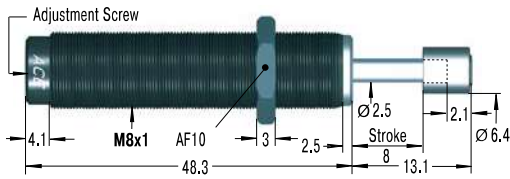
Note: Damper is preset at delivery in a neutral position between hard and soft.

Safety instructions: External materials in the surrounding area can attack the seal components and lead to a shorter service life. Please

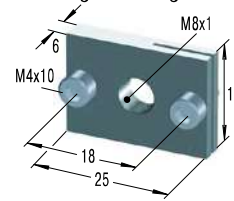
contact ACE for appropriate solution suggestions.

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

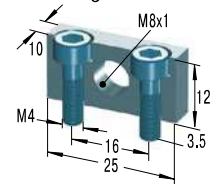
MA30EUM



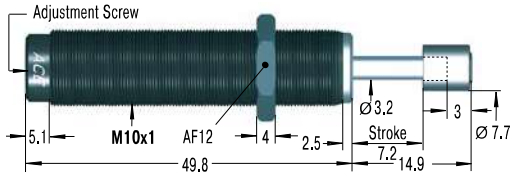
RF8 Rectangular Flange



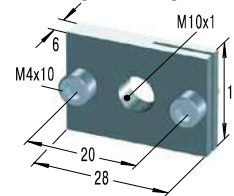
MB8SC2 Mounting Block



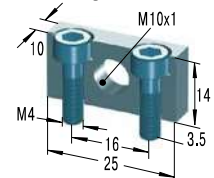
MA50EUM-B



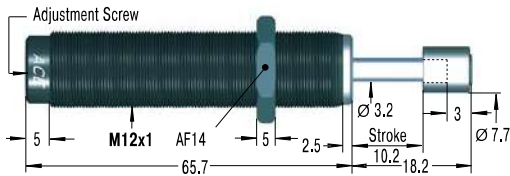
RF10 Rectangular Flange



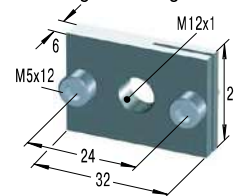
MB10SC2 Mounting Block



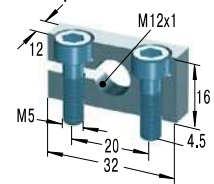
MA35EUM



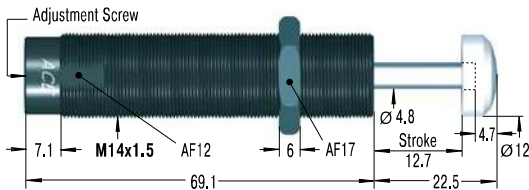
RF12 Rectangular Flange



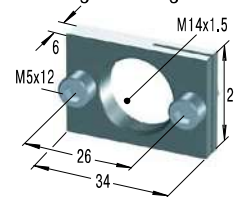
MB12 Clamp Mount



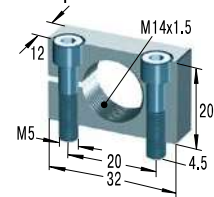
MA150EUM



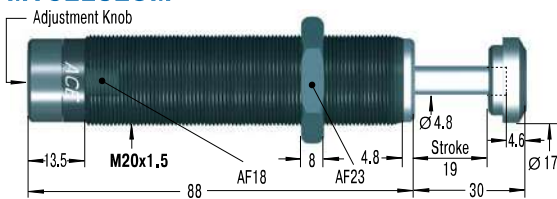
RF14 Rectangular Flange



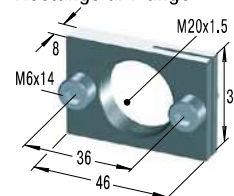
MB14 Clamp Mount



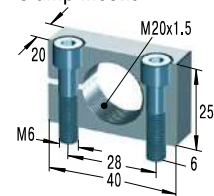
MVC225EUM



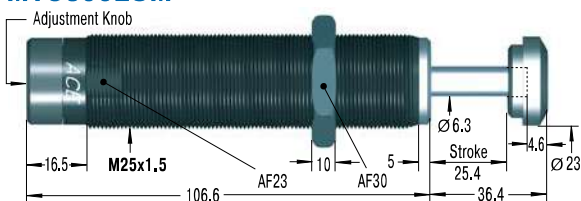
RF20 Rectangular Flange



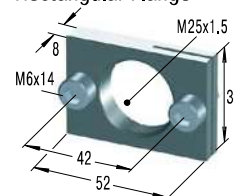
MB20 Clamp Mount



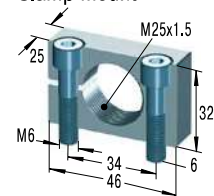
MVC600EUM



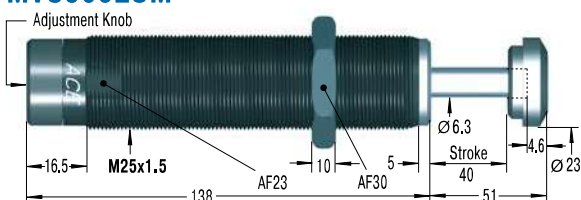
RF25 Rectangular Flange



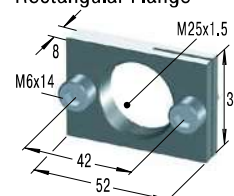
MB25 Clamp Mount



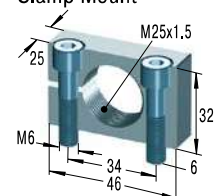
MVC900EUM



RF25 Rectangular Flange



MB25 Clamp Mount



Additional accessories, mounting, installation ... see from page 38.