

DVC-32 Hydraulic dampers

Independently adjustable on both sides

Adjustable, no free travel

Compression and extension force

range 42 N to 2,000 N

Stroke 50 mm to 150 mm

DVC-32EU

DVC-32EU-XX

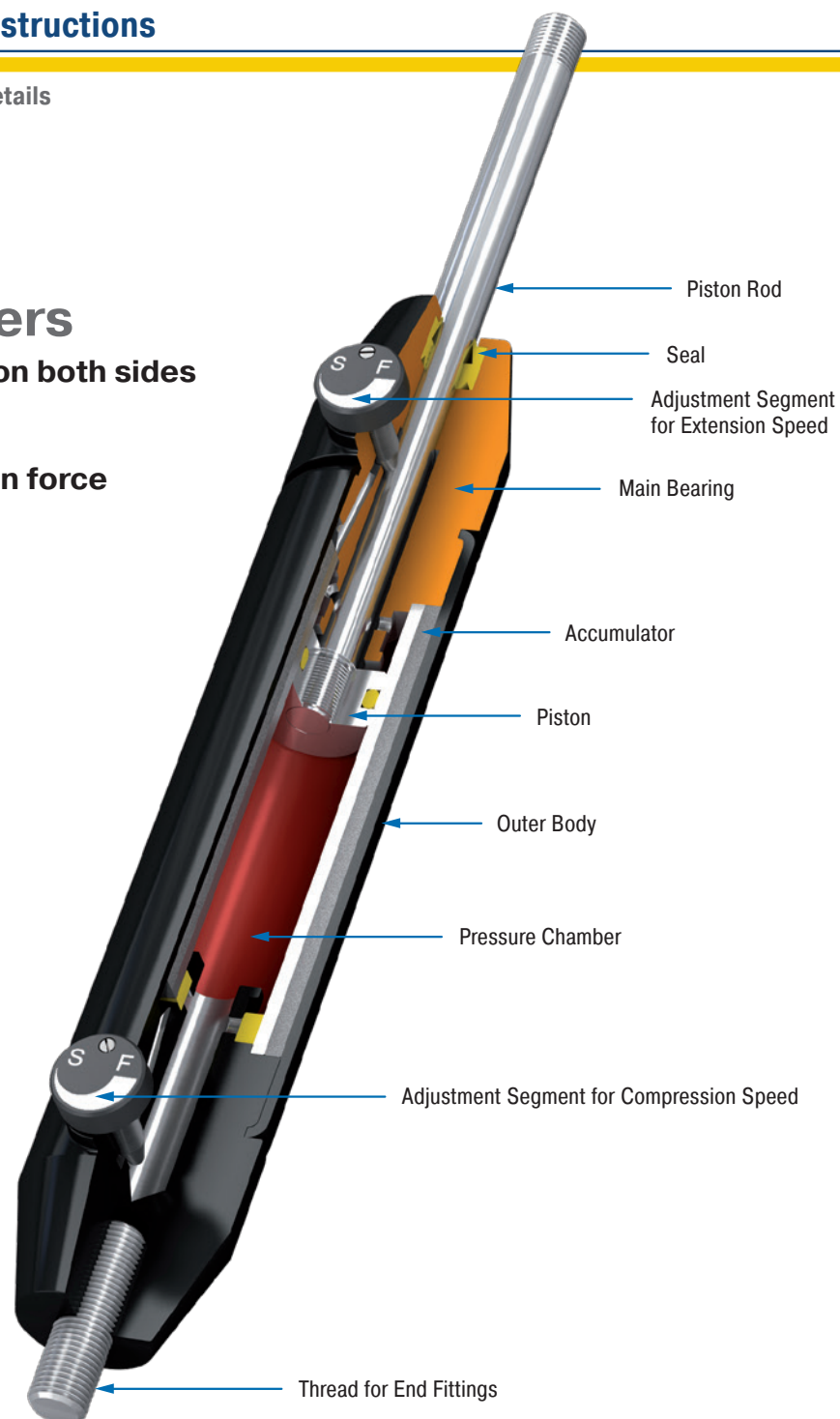


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Manual

General instructions

This manual is for the disruption-free use of the product types listed on page 1; its compliance is a prerequisite for the fulfilment of any warranty claims.

Therefore, make sure to read this manual before use.

Please always maintain the specified limits from the performance table (technical data). Take into account the predominant environmental conditions and restrictions.

Note the regulations of the trade association, TÜV or corresponding national, international and European regulations. Installation and commissioning only according to mounting instructions.

Safety information

WARNING

- ⚠ If ACE hydraulic dampers are used where a failure of the product could lead to personal injuries and/or material damage, additional safety elements must be implemented.
- ⚠ The flap/mass can fall down during installation of dampers. Secure the flap/mass to be moved against falling down.

Intended use

Hydraulic dampers by ACE are used wherever moving masses are to be subjected to an even, defined speed. The damping is retracting and/or extending. The damping is adjustable in both directions independently of one another.

Description and function

Hydraulic dampers are maintenance-free and ready-to-install. They are available off-the-shelf with a body diameter of 32 mm.

When extending or retracting the piston rod, the hydraulic fluid, located in the cylinder space in front of the piston, is displaced by the piston and pressed through the throttle into the cylinder space behind the piston. The balance is realised by an accumulator in order to avoid free travel. The sealing system reliably takes care of the sealing of the chrome-plated piston rod on the outside. In order to adjust the damping, the respective adjustment segment is twisted and the metering orifice is further opened or closed. The damping can be variably adjusted from the outside in both directions.

The hydraulic damper does not have its own return force and must be guided over the total working stroke in both directions.

The application range in the compression and tension can be found in the diagrams.

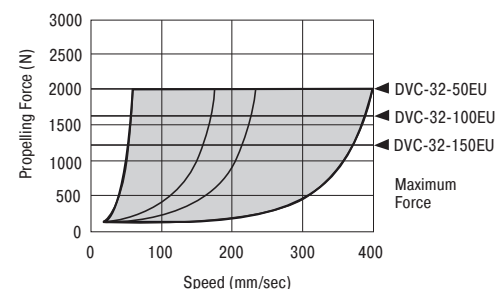
Calculation and design

In order to ensure an optimum and durable function of the hydraulic damper they must be correctly dimensioned and designed. The following parameters must be known:

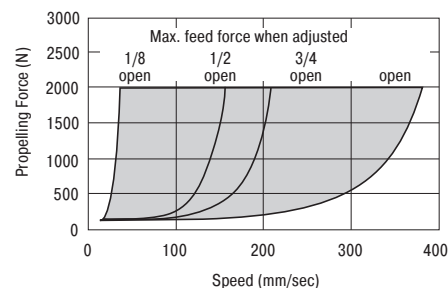
- Moving mass
- Feed force
- Feed speed
- Number of strokes or cycles per minute

For the correct sizing, please phone +49 (0)2173 - 9226-20 for free advice.

Compression Speed Control Chart



Tension Speed Control Chart



Delivery and storage

- After delivery please check the damper for any damage.
- The damper can become damaged if it falls down; remove the product from packaging carefully.
- Dampers can generally be stored in any position.
- Always store dampers in a dry place in order to avoid oxidation.
- The recommended maximum storage time is 1 year.
- Any protective packaging must be removed before installation.

Maintenance and care

Regularly check the hydraulic dampers for oil loss, function and external damage.

Hydraulic dampers are maintenance-free and ready-to-install.

Hydraulic dampers are machine elements that are subject to continuous wear.

Disassembly and disposal

Take account of environmental protection during disposal of the hydraulic dampers.

Hydraulic dampers cannot be repaired. The corresponding disposal instructions are available on request. You can return the hydraulic dampers to ACE for disposal that is free of charge.

Manual

Warranty

Fundamentally, all modifications to the product by third parties lead to exclusion from the warranty.

Obvious defects must be reported to the vendor in writing immediately after delivery, no later than one week, but in any case before processing or installation, otherwise the assertion of a warranty claim is excluded. A timely dispatch is sufficient to keep the term.

The vendor is to be given an opportunity to check on site. If the complaint is justified the vendor offers warranty by repair or replacement at its own discretion. If the rectification fails, the buyer may choose to demand reduction of payment (abatement) or cancellation of the contract (withdrawal). If there is only a minor lack of conformity, particularly with only minor defects, the buyer nevertheless has a right of withdrawal.

If, after failed rectification, the buyer chooses to cancel the contract due to a defect of title or material defect, they are not entitled to additionally claim for damages.

If, after failed fulfilment, the buyer chooses compensation, the goods remain with the buyer, if this is reasonable.

The compensation is limited to the difference between the purchase price and the value of the defective item. This does not apply if the vendor maliciously causes the breach of contract.

The quality of the goods is only considered as agreed upon with the product description of the vendor. Public statements, claims or advertising of the manufacturer do not represent an additional contractual specification of quality of the goods.

If the buyer receives defective mounting instructions, the buyer is only obligated to deliver defect-free mounting instructions and only if the defect to the mounting instructions prevents proper mounting.

The warranty period is two years and begins upon completion. Exchange and return of custom products are fundamentally excluded. The factory conditions of the manufacturing factory apply to parts not manufactured and processed by the vendor, which can be viewed by the orderer at the vendor at any time. Construction and installation parts are delivered according to the present standard of engineering.

Service life

In general, hydraulic dampers are machine elements that are subject to wear. Wear parts such as seals and pistons are excluded from the general warranty. The wear of seals is largely dependent upon the operating conditions and the respective application with its operating parameters.

In general, the hydraulic damper DVC-32 by ACE is tested over a lifetime of approx. 10,000 complete strokes. Adverse environmental and operating conditions can significantly reduce the expected service life.

Performance data

TYPES	Stroke mm	Traction force range		Compression force		Weight kg
		min. N	max. N	min. N	max. N	
DVC-32-50EU	50	42	2,000	42	2,000	0.345
DVC-32-100EU	100	42	2,000	42	1,670	0.415
DVC-32-150EU	150	42	2,000	42	1,335	0.480
DVC-32-50EU-XX	50	42	2,000	42	2,000	0.345
DVC-32-100EU-XX	100	42	2,000	42	1,670	0.415
DVC-32-150EU-XX	150	42	2,000	42	1,335	0.480

Technical data

Compression and extension force: 42 N to 2,000 N

Outer body diameter: Ø 32 mm

Piston rod diameter: Ø 8 mm

Lifetime: approx. 10,000 m

Operating temperature range: 0 °C to 65 °C

Adjustment: Stepless adjustment

Positive stop: External positive stops 1 mm to 1.5 mm before the end of stroke provided by the customer.

Damping medium: Automatic Transmission Fluid (ATF)

Material: Outer body: Aluminium coated; piston rod: Chrome-plated steel; end fittings: Zinc-plated steel

Mounting: in any position

Application field: Cylinder speed control, damping regulation, production and processing centres

Note: Increased clamping torque with longer downtimes. Damping force adjustable in fitted condition.

End fittings: Can be combined in any manner and must be secured against twisting by the customer, if necessary.

On request: Special oils and other special options and further accessories are available.