

**Heavy-Duty Shock Absorbers**

LDS series shock absorbers are delivered ready for installation.

After receiving the shock absorbers, check for transport damage. This applies particularly for damage to the chrome finish on the piston rod. Before using, ensure that the part number in the order confirmation and on the shipping documents coincides with the number on the shock absorber.

Use the shock absorbers only as specified in the technical data, based on the design.

Always observe the following installation instructions:

- Ensure that shock absorbers are installed rigidly and vibration-free.
- Ensure that the stop surfaces are perpendicular to the stop cap and mounting flange
- Ensure that the mass is applied parallel to the damping direction and in the center of the stop cap/piston rod (see angle deviation in our catalog)
- The mounting bolts should not be more than 2 mm smaller than the intended mounting holes.
- Ensure that the shock absorbers are never subjected to direct or indirect distortion, because this would prevent the piston rod from moving.
- Protect the piston rod against damage
- From 800 mm stroke the shock absorber has to be mounted with foot mounting or with flanges at each side

We recommend to use a front flang mounting from 300 mm stroke.

For the LDS series is recommended for an easy maintenance to mount the damper so that the filling valve is at the top.

Heavy duty shock absorbers versions "FVFH" (2 flanges) and "FB" (foot mounting): In these versions, the rear flange and the rear foot mounting are not glued in (status: 10.06.2009). The shock absorber must be mounted free of tension. This is possible by twisting the rear flange if necessary. Control: the shock absorber can be removed without tools after loosening the fastening screws.

For safety reasons we recommend the use of a security chain when the installation height of the LDS heavy-duty shock absorber is 2 m or above. The customer decides on the use.

In creep gear (maximum shock absorber compression rate 0.5 m/s) the shock absorber should not be compressed more than 70% of its maximum stroke.

**Operating temperature**

Standard:	-20°C up to +80°C
HT version:	-5°C up to +100°C
HTT version:	-5°C up to +120°C
LT version:	-32°C up to +50°C
LTT version:	-50°C up to +50°C

**Continuous operation**

Standard:	-10°C up to +70°C
HT version:	-5°C up to +90°C
HTT version:	-5°C up to +110°C
LT version:	-32°C up to +50°C
LTT version:	-50°C up to +50°C

When used at low temperatures LT and LTT execution we recommend stationary installation; mobile mounting can result in leakage of the shock absorbers due to transfer of vibration!

Do not weld shock absorbers or subject to aggressive liquids. If shock absorbers are painted, ensure that the piston rod and the area where the piston rod enters the housing remain paint-free.

If it is not possible to maintain the above conditions, obtain written approval from Weforma Dämpfungstechnik GmbH before using.

**Standard version: with gas return**

If the piston rod does not extend by itself, the gas bladder can be filled through the pressure valve similar to a passenger car tire. Filling pressure: 6 bars/85 psi. Medium: Nitrogen, compressed air also possible.

The filling valve for gas is labelled "AIR". In the LDS series in the front flange mounting; in older versions (up to 2007) it is situated in the base of the housing.

The filling screw for oil is located in the front flange mounting in the LDS. The filling screw for oil must not be opened by the customer without consulting Weforma.

Before refueling the filling valve needs to point vertically upward, as it can otherwise lead to a loss of oil.

After an accident be sure to check the shock absorber for proper function and leakage. Otherwise perform this test once a year.

Design: Compression of piston rod in creep gear; after the load is relieved the piston rod should return to the original position.

Caution: The shock absorber is charged with gas at a pressure of 6 bars and should never be opened by customers. Risk of injury!

**Version with return spring**

The return of the piston is effected by the return spring.

The shock absorber must be checked for leakage and to ensure that it is still functional after every emergency incident. Should no emergency incidents occur, this test must be performed once per year.

Procedure: Compress the piston rod at creep speed; when the load is relieved, the piston rod should automatically return to its original position. The current versions of our operating and installation instructions apply. These can be downloaded from [www.weforma.com](http://www.weforma.com) under the menu point Login/Service.

We reserve the right to make changes without further notice!

**Weforma Dämpfungstechnik GmbH**

Werther Str. 44 • D-52224 Stolberg

Tel: +49 (0) 24 02 / 98 92 - 0

Fax: +49 (0) 24 02 / 98 92 - 20

[www.weforma.com](http://www.weforma.com) • [info@weforma.com](mailto:info@weforma.com)