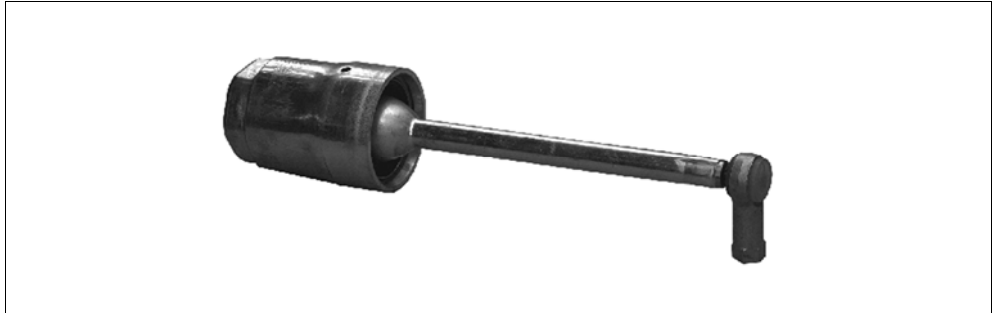


Knuckle joint 433 306



Application

Vehicles with leaf-springs. Knuckle joints are used in combination with mechanical LSV controllers.

Purpose

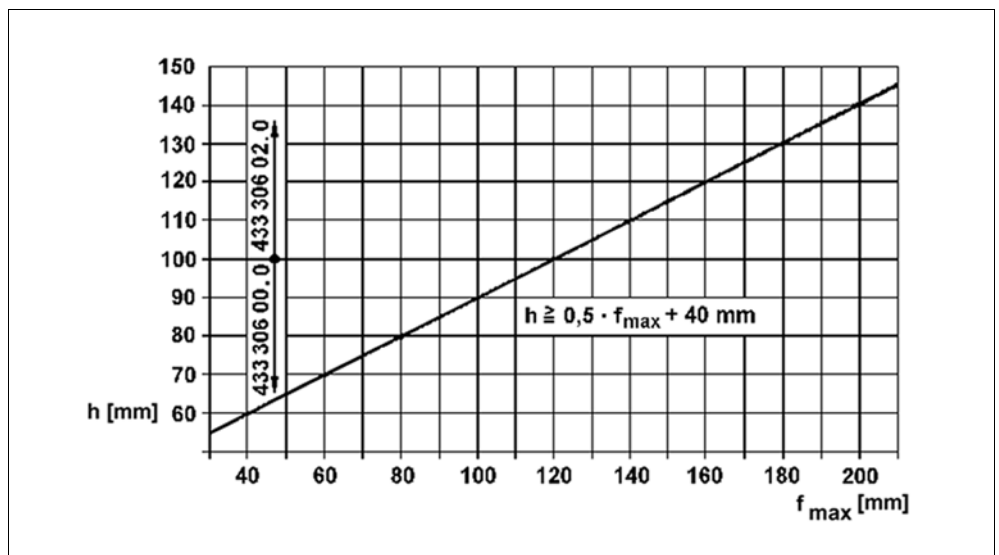
Prevents damages to load-dependent control valves or automatic brake force controllers, if the axle suspension is compressed or extended past the normal distance.

Maintenance

Special maintenance that extends beyond the legally specified inspections is not required.

Installation regulations

- Choose the knuckle joint that guarantees that the path exceeding the adjustment range of the controller is not greater than the possible displacement h .
- For trailers – single and dual-axle – take the dimension for the displacement h from the following diagram:



Legend

h	Displacement	f_{max}	Max. spring deflection according to the specifications of the axle manufacturer
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- Fasten the knuckle joint to the single axle or between the two axles of the dual-axle assembly based on the respective instructions of the axle manufacturer.

Knuckle joint 433 306

- Arrange the knuckle joint so that its ball joint is seated in the neutral point of the axle or axles.

The "neutral point" is the point that is free of outside influence:

Twisting movement of the axle during braking procedure

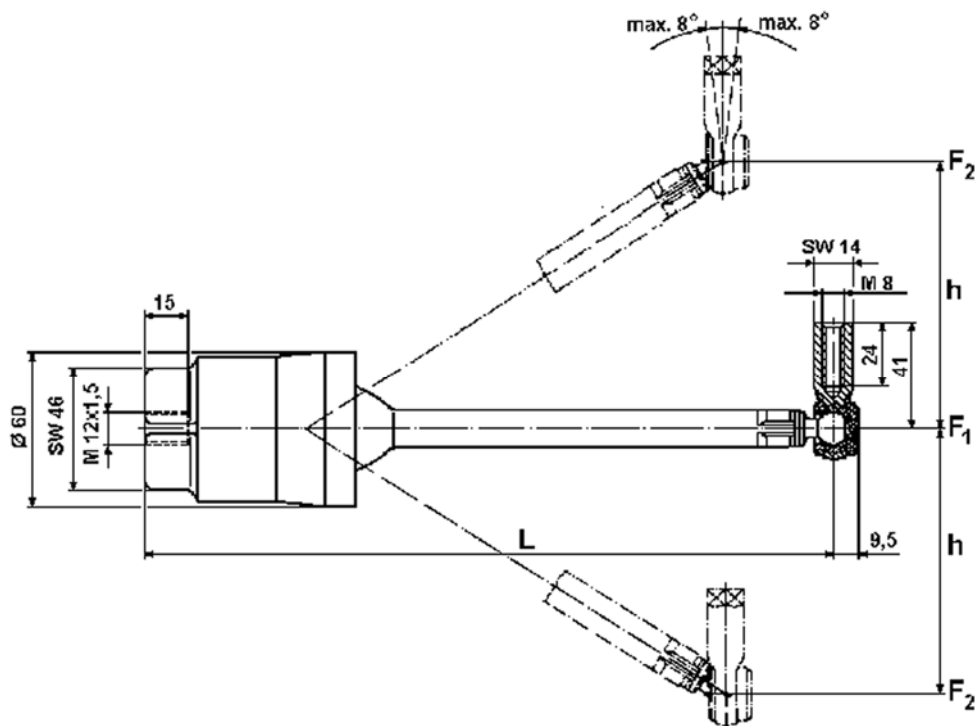
Wandering in curves with steering axles

One-sided load on the axle with uneven streets

! Only the static and dynamic axle changes are permitted to be the initiation for adjusting the automatic brake force controller.

- Connect the knuckle joint through a round rod with an M8 thread and hexagon nut M8 DIN 934 (not included in delivery) with the adjustment lever of the automatic brake force controller.
The length of this connection rod depends on the mounting of the devices on the vehicle.
- Depending on the existing fastening capabilities for the connecting rod of the brake force controller to be used, either leave the connecting rod smooth or apply an M8 thread of approx. 25 mm in length.
- Thread an M8 DIN 934 hexagon nut onto the thread.
- Screw the other end of the connecting rod into the ball joint and secure it with the hexagon nut.
- Carefully trim the smooth ends to prevent any damage to the rubber thrust members.

Installation dimensions

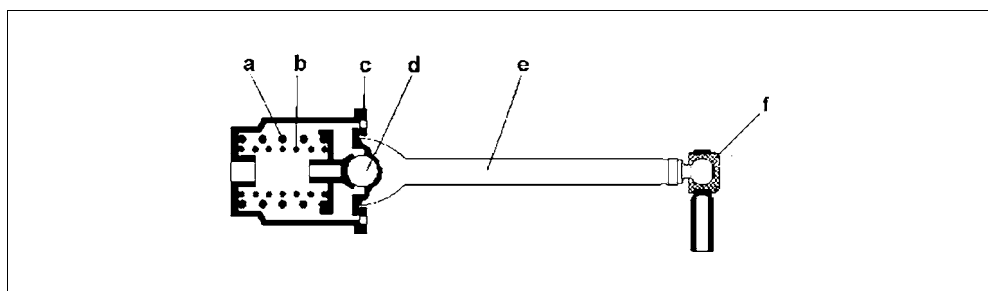


Knuckle joint 433 306

Technical data

Order number	Length L [mm]	Displacement h [mm]	Displacement [N]	
			F ₁	F ₂
433 306 002 0	260	100	90	190

Operation



In the event of large axle movements in excess of the range of movement of the automatic load sensing valve, arm (e), which is horizontal while at rest, is deflected about a fixed point in housing (c). Pressure springs (a and b) exert pressure on ball (d) providing constant tensional contact with housing (c) until arm (e) again returns to its normal horizontal position where it is again in full contact with the front face of the housing. Deformation of the connecting linkage to the automatic load sensing valve is prevented by a ball joint (f) attached to arm (e).