

Brake System Design for Trailers

Recommendation for the Brake Calculation

It is generally the case that the braking power distribution up to the medium pressure should be found in the upper area of the EC brake band for drum brakes. For disc brakes a linear process should take place.

The set pressure should be 0.6 to 0.7 bar in the control line (yellow brake coupling). For a brake coupling pressure of 2.0 bar, the deceleration value should be between 12% to 14% for a loaded trailer. The subsequent brake power distribution should remain constant up to the maximum pressure. For unloaded trailer the brake power distribution should be inside the tolerance range.

Recommendation for Vehicles in the Follow-Up Check

It is generally the case that the mechanics of the braking system are decisive for the braking action. The cylinder size, gear and piston rod length, as well as the movement of the camshaft must be checked and, if necessary, corrected according to the manufacturer's instructions. The correct setting and functionality of all the relevant components and systems in the trailer must be guaranteed.

Note:

In order to arrive at the theoretical deceleration values for the homologation test it may be necessary to conditioning the brakes (formation of carbon abrasion).

After 5,000 kms at the most, a tractor-trailer synchronization test or a brake adjustment test must be carried out for tractor-trailer with EBS.