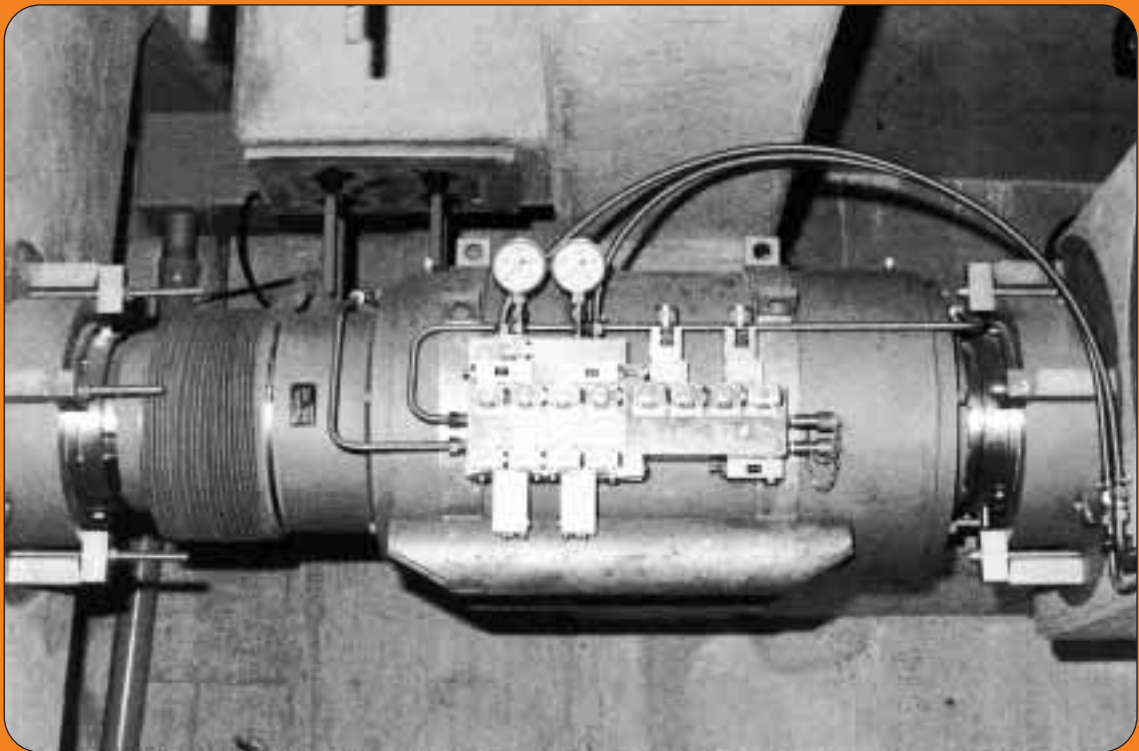




# ***Eberspächer high-pressure hydraulics***

## ***Hydraulic buffers***



**450 – 4000 kN  
Stroke 80 – 1150 mm**

## Hydraulic buffers

### Examples of implemented systems

Device-Nr.	Operating force kN	Stroke mm	Pressure bar	Action
SD 50/20	500	± 100	70	double-acting
GS 27	2000	± 40	210	double-acting
GS 26	450	320	250	single-acting
BZ 170/14	1700	140	410	single-acting
GS 30	2000	80	200	single-acting
GS 33	4000	800	200	single-acting
GS 35.1	4000	850	200	single-acting
GS 39	4000	510	200	single-acting
GS 40	4000	1150	200	single-acting

### General

Hydraulic buffers are used in prestressed concrete bridges either as a protection against earthquakes or for absorption of braking forces. For this purpose, the brake dampers are commonly arranged between bridge end and abutment. Hydraulic buffers can be designed as single-acting or double-acting models.

### Operation

At slow motion of the piston, as e.g. due to thermal expansion of the bridge, piston movement will be pressureless and, thus, requiring no force. At higher speeds, which may be caused by inertial forces, the buffer

acts as a rigid pressure element which permits forces to pass through it. Additional oil in a compensating vessel in combination with a valve system permits the necessary volume compensation on movement of the piston and when temperature changes occur.

### Maintenance

Maintenance is limited to checking the oil level in the compensating vessel once a year. The device should be demounted after twelve years and disassembled at the factory and tested for operation and proper bearings. For this purpose, it is recommended that a replacement buffer should be available.



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