Elevator Buffer LP

Elevator Buffer LP 40

For elevators **up to 2,5 m/s** rated speed according to EN 81-1/2, EN 81-20, EN 81-50 5.5

The elevator buffer LP is an **energy dissipation type buffer** according to EN 81-1/2, EN 81-20, EN 81-50 5.5 and therefore may be universally used for all applications in the construction of elevators. The design type approval permits the use in passenger and freight elevators both under the elevator car and under the counter weight.

The modern design provides many advantages for the construction of today's elevators.

- The buffer is supplied ready for operation filled with oil and gas. Transport and storage are admissible in every position as it is a hermetically closed system. The installation position is vertical.
- The oil level may be verified from the outside by a sight glass without opening the buffer (visual inspection). This reduces the maintenance expenditure of the buffer to a minimum.
- A mechanical safety limit switch according to DIN EN 50047 monitors the extended piston rod of the buffer.
- The hydraulic damping permits an optimum retardation of the system in a broad mass range as well as a very large energy conversion.
- The integrated pneumatic spring permits a short construction length of the buffer and low restoring forces after a buffer stroke.
- The oil chamber uses double sealing as leakage protection and thus increases the operating safety.
- An impact plate of rubber provides for damping both the impact noise and shock.
- The buffer can be supplied with an optional protective tube for heavily soiled installation situations

Operation

During the buffer stroke operation the piston rod **2** is pushed into the cylinder tube **1**. By this the hydraulic oil **3** is displaced and pressed through small throttling borings **4** in the cylinder jacket. Inside the outer jacket **5** the oil is collected. At the same time the gas **6** placed on top of the hydraulic oil is being compressed. The hard-chrome plated piston rod is sealed reliable with the sealing system **7**.

After a buffer stroke took place and the piston rod is released, the hydraulic oil is pressed back into the cylinder **1** by the compressed gas. Hereby pushing out the piston rod again. With extended piston rod the oil level can be checked always from the outside by a sight glass **9** without opening the buffer.

The safety limit switch **13** monitors the extended piston rod of the buffer. When the piston rod is pushed, the operation bar **10** mounted on the buffer head **11** operates the switch. An impact plate **16** of rubber provides for damping both the impact noise and shock.

For servicing the oil filling plug **14** and the gas valve **15** are easily accessible.
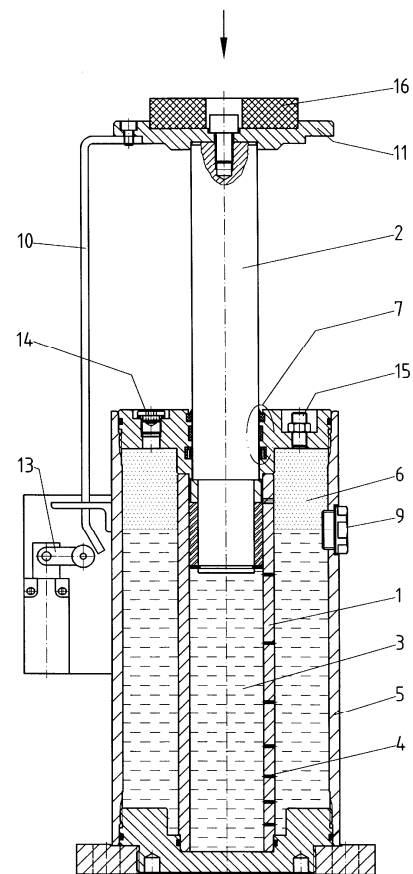
Elevator Buffer LP

Application data type LP 40

Order-number	stroke s [mm]	rated speed max. v [m/s] [1)	impact mass min. - max. m [kg]	impact energy max. E [kNm]	buffer force max. F [kN]	weight with oil filling G [kg]
240 080	80	1,0	450 - 3200	4,96	90	14
240 120	120	1,3	450 - 3200	7,44	90	16
240 175	175	1,6	450 - 3200	10,9	90	19
240 275	275	2,0	450 - 3200	17,1	90	24
240 430	430	2,5	450 – 3200	26,7	90	32

1) according to EN 81-1/2, EN 81-20, EN 81-50 5.5
Ambient temperatures for the standard design: -10 °C up to +50 °C.
Low temperature design: -20 °C up to +40 °C. (on request)

Dimensions type LP 40

S	L	N	A	B	C	D	E	F	G	P
80	305	225								
120	385	265								
175	495	320	160	120	20	18	116	115	130	80
275	715	440								
430	1065	635								

All dimensions in mm.
We reserve the right for modifications

Information for inquiry and order

Should you need further technical information please contact us. If you require a specific offer, please let us have the following data:

- Determination of the buffer to EN 81.
  If other guideline, which one?
- Installation under the elevator car or
  under the counterweight?
- Number of buffers per point of impact.
- Number of elevators and total number of buffers.
- Rated speed of the elevator.
- Maximum and minimum mass at impact.
- Desired stroke.
- With optional protective tube on request

Please, do not forget your address and a contact name.