

HPL / HPM

Lift buffer

Data sheet EN_V 1.0.1



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Lift buffer HPL / HPM

For lift systems up to 2.5 m/s rated speed in accordance with EN 81-20, EN 81-50 5.5

The HPL / HPM type buffer is a buffer with **high energy absorption** in accordance with EN 81-20, EN 81-50 5.5, and can therefore be used universally for all applications in lift construction. The type examination permits use in passenger and freight lifts, both under the car and under the counterweight.

The state-of-the-art construction offers many advantages for modern lift construction:

- The buffer is supplied ready for operation and filled with oil. The buffer may be transported and stored in any position, as it has a hermetically sealed system. When installing, it should be positioned standing up.
- The oil level must be checked from the outside using a dipstick (visual inspection). This helps to keep maintenance costs for the buffer to a minimum.
- A mechanical safety switch in accordance with DIN-EN 50047 monitors the position of the buffer's piston rod.
- Hydraulic damping allows for an optimal system delay in a wide range of masses, and high energy absorption.
- Double sealing of the oil chamber for leak protection increases operational safety.
- A rubber bumper absorbs the stopping noise and the shock of impact.

Function description

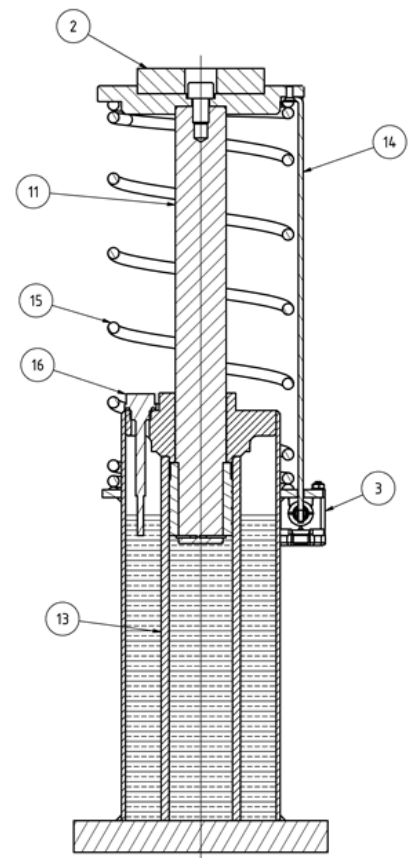
In the event of an impact, the piston rod **11** is pushed into the metering tube **13**. This displaces the hydraulic fluid in the tube and forces it out through small drilled holes in the wall of the tube and is collected in the outer cylinder. The seal system provides a reliable seal along with the chrome plated piston rod.

After the buffer has impacted and the piston rod is released, the compressed spring **15** returns the piston rod back to the starting position.

The level of hydraulic fluid in the extended piston rod can be measured using the dipstick **16**.

A rubber bumper **2** cushions the impact and reduces the noise of the impact.

The switch **3** monitors the buffer's extended position. When the piston rod is pushed down, the switch is activated by the striker **14**.



Order information:

When ordering, please provide the following information:

- If the buffer should be in accordance with EN81 or any other standard.
- If it is for installation under car or counterweight
- Number of buffers per impact point
- Number of ifts and total number of buffers
- Rated speed of lift
- Maximum and minimum impact weights
- Desired stroke

HPL / HPM 40 type performance data:

Baugröße x Hub s [mm]	max. Nenn- geschwin- digkeit v [m/s]	Aufprallmasse min. - max. m [kg]	max. Energie- aufnahme E [kJm]	max. Puf- ferkraft F [kN]	Gewicht betriebsbereit G [kg]
HPL 40 x 80	1,0	450 - 3500	5,07	95	12
HPL 40 x 120	1,3	450 - 3500	8,04	95	13
HPL 40 x 175	1,6	450 - 3500	11,94	95	14
HPM 40 x 275	2,0	450 - 3500	18,70	95	17
HPM 40 x 430	2,5	450 - 3500	29,23	95	22

1) for design in accordance with EN 81-20, EN 81-50 5.5

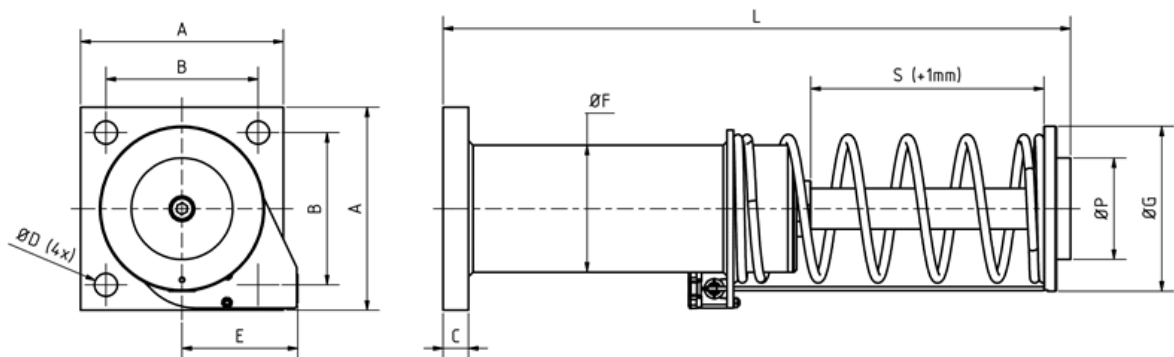
The permissible ambient temperatures for standard designs are -10 °C to +50 °C.

For special designs, ambient temperatures of -20°C to +40°C are permissible.

Other temperature ranges on request.

Dimensions of type HPL / HPM:

	S	L	A	B	C	D	E	F	G	P
HPL 40 x 80	80	305	160	120	20	18	91	115	130	80
HPL 40 x 120	120	385								
HPL 40 x 175	175	495								
HPM 40 x 275	275	715								
HPM 40 x 430	430	1122								



All dimensions in mm.
Subject to modifications!

Hydraulic fluids and permissible ambient temperatures in operation:

a) Standard design:

Hydraulic oil DIN 51524-2 HLP or ISO 6743/4 HM
Viscosity ISO VG 46 for temperatures of -10 °C to +50 °C

b) Low-temperature design (on request):

Hydraulic oil DIN 51524-3 HVLP or ISO 6743/4 HV
Viscosity ISO VG 22 for temperatures of -20 °C to +40 °C

c) Special designs with biodegradable or highly inflammable hydraulic fluids (on request):

Different special fluids are tested and cleared for use with the HPL/HPM hydraulic buffer.
In individual cases, please note the specific label on the buffer and the additional paperwork for job documentation!

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