

Hydraulic pressure comparison test pump Serie LR-Cal LSP-H

- Pressure source for calibration purposes
- Spindle pump and priming pump

Model **LR-Cal LSP 1000-H**: 1,000 bar/14,500 psi

Model **LR-Cal LSP 1200-H**: 1,200 bar/17,400 psi

Model **LR-Cal LSP 1600-H**: 1,600 bar/23,200 psi

Operating fluid: mineral oil based hydraulic fluid or distilled water

Pressure comparison test pumps are used for generating pressure for the testing, adjusting and calibrating of mechanical and electronic pressure measuring instruments by means of comparison measurements. These pressure tests can be carried out in laboratories, workshops or on site at the set measuring point. When the device under test and a reference measuring instrument with an adequate accuracy are connected to the pressure comparator, the same pressure will act on both measuring instruments after actuating the pump. A calibration or an adjustment can be carried out by comparing the two measured values at any pressure value.

In order to enable an accurate generation of the measuring points, the pressure comparison test pumps series LR-Cal LSP-H are provided with a fine adjustable spindle pump.



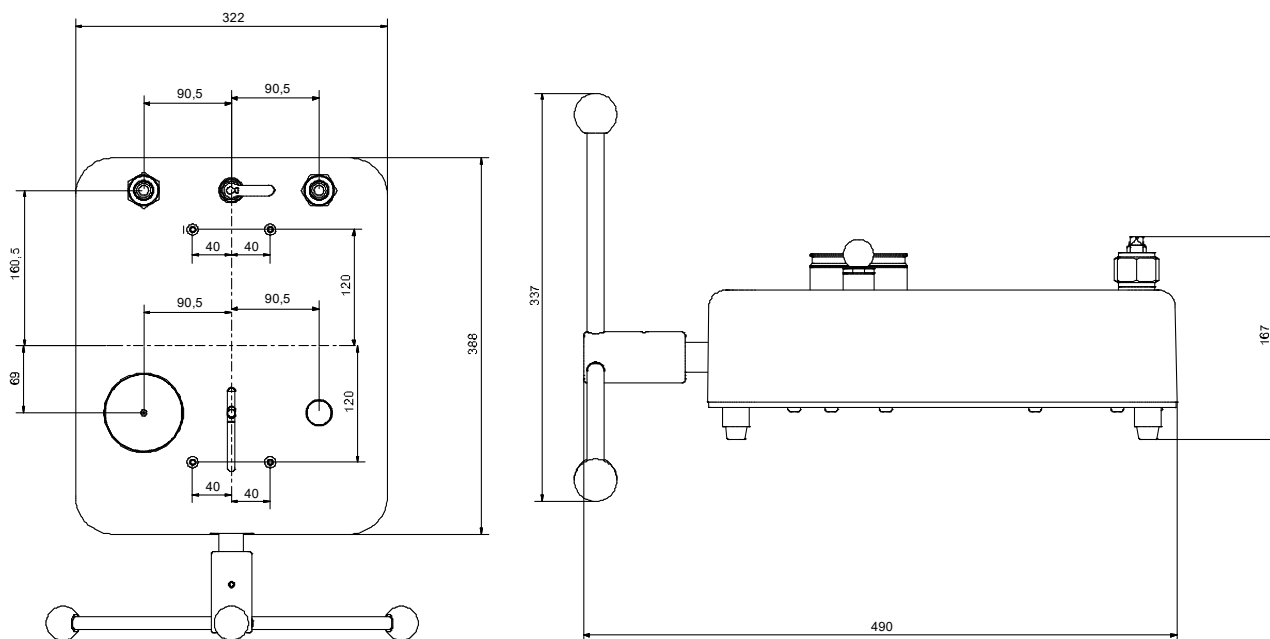
In addition the series LR-Cal LSP-H feature a threaded spindle which only runs within the pump body. Thus there is no adverse bending moment acting on an outstanding spindle, and particularly for field use this has the advantage that the dimension of these pressure comparison pumps will not change when the spindle is turned during operation. The series LR-Cal LSP-H needs only little force to generate also high pressures.

For an easier operating, the LR-Cal LSP-H series pressure comparators are fitted with a priming pump.

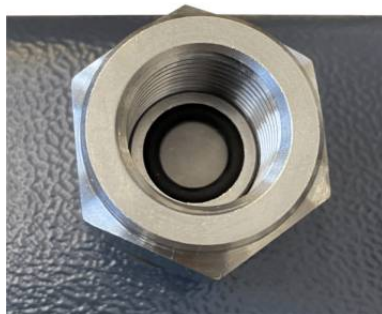
Versions for aggressive media like SKYDROL® or brake fluids available on request (max. 1,000 bar / 1,200 bar).



Dimension



Protection against material pollution



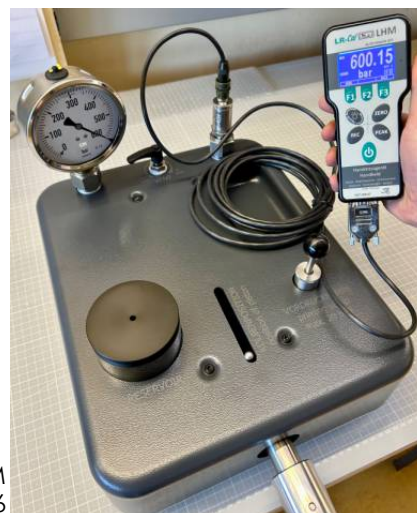
The pressure comparison test pumps models LR-Cal LSP-H are equipped with strainer dirt collectors in the pressure ports as well as in the bottom of the operation fluid reservoir. This reduces considerably the risk of material pollution of the operation fluid.

(Note: if operated with hydraulic oil, the dirt collector in the reservoir has to be removed.)

Recommended pressure reference instruments

Type	Description	Accuracy
LR-Cal TLDMM-3.0+KL002	Pressure calibrator	$\pm 0.025\%$ FS
LR-Cal TLDMM-3.0	Pressure calibrator	$\pm 0.05\%$ FS
LR-Cal LHM+KL005	Pressure calibrator	$\pm 0.05\%$ FS
LR-Cal LHM	Pressure calibrator	$\pm 0.1\%$ FS
LR-Cal LDM 80+KL01	Digital test pressure gauge	$\pm 0.1\%$ FS
LR-Cal LDM 80	Digital test pressure gauge	$\pm 0.2\%$ FS
LR-Cal LDM 70-E25	Digital pressure gauge	$\pm 0.125\%$ BFSL
LR-Cal LDM 70-K50	Digital pressure gauge	$\pm 0.25\%$ BFSL
DM 80	Digital pressure gauge	$\pm 0.25\%$ BFSL
DM 80-UMS	Digital pressure gauge with USB	$\pm 0.25\%$ BFSL

Operation with pressure calibrator LR-Cal LHM
with external pressure sensor LR-Cal LHM-TP16








Technical Data

		LR-Cal LSP 1000-H	LR-Cal LSP 1200-H	LR-Cal LSP 1600-H
Pressure range	[bar]	0...1,000	0...1,200	0...1,600
Medium		Distilled water or mineral oil		
Pressure ports		2 x 1/2" BSP female rotating, incl. strainer and gasket		
Fluid reservoir	[cm³]	200		
Piston diameter	[mm]	8		
Spindle stroke	[cm³]	approx. 3.9 (per turnaround: approx. 0.1)		
Needed force	[Nm]	at 250 bar: 2.0 at 500 bar: 4.0 at 1,000 bar: 8.0		
Materials		Stainless steel, aluminium, viton, NBR, plastics		
Dimensions				
distance of pressure ports	[mm]	181		
Depth	[mm]	388 without star handle 490 incl. star handle		
Width	[mm]	322		
Height	[mm]	167 without star handle 337 incl. star handle		
Weight	[kg]	10.5		
Design		Base plate with feet and right housing		

Version for aggressive media such like SKYDROL® and brake fluids available on request:
max. 1,000 bar = Order-Code: **LSP-1000-H-S**; max. 1,200 bar = Order-Code: **LSP-1200-H-S**.
This versions are not suitable for mineral oil or water.

Optional Accessories

Order-Code	Description	
HAP-02	Hand suction pump for easy emptying (and filling) of the reservoir. Capacity: 125 ml per stroke. Simultaneous suction and squeezing. 2 hoses, each 50 mm length, suction hose with rotating 3/8" BSP female swivel nut.	
LSP-H-WARTUNG	Maintenance kit, with following content: 10 O-rings for pressure ports (top), 10 O-rings for pressure ports (bottom), 2 sinter filter for reservoir, 4 strainer dirt collectors for pressure ports, 2 O-rings for priming pump (piston).	
BLINDSTOPFEN-G12-VA	Blind plugs in st.st. for pressure port (1/2" BSP), PN 3,600 bar	
LSP-ADAPTER-SET	Set of stainless steel adapter, PN 1,000 bar 1/4" BSP, M20x1.5, 1/4" NPT, 1/2" NPT, gaskets	
VA-M16X2-G12A	Minimess®1620 coupling to 1/2" BSP male for pressure port	
MMS-M16X2-1-0 MMS-M16X2-2-0 MMS-M16X2-3-2 MMS-M16X2-4-0	Minimess®1620 test hose 1.0 meter length Minimess®1620 test hose 2.0 meter length Minimess®1620 test hose 3.2 meter length Minimess®1620 test hose 4.0 meter length	
MSV-G12-M16X2	Minimess®1620 adapter to 1/2" BSP female	