

### Comparison Test Pumps LSP 3000 - LSP 5000 - LSP 7000

#### Pressure Source for calibration purposes Operating fluid: oil

Pressure Comparison Test Pumps are used to generate pressures for checking, adjusting and calibrating mechanical and electronic pressure measuring instruments by comparative measurements. These pressure tests may be carried out in laboratories, workshops or on site at the measuring point.



The comparison test pumps **LSP 3000**, **LSP 5000** and **LSP 7000** are equipped with two connections for the test specimen and the reference instrument which can be used in any order. If the instrument to be tested and a sufficiently accurate reference measuring instrument are connected to the test pump, the same pressure is applied to the two measuring instruments when the pump is operated. By comparing the two measured values at random pressure values, the accuracy can be verified or the instrument under test can be adjusted. First the pressure is set via an integrated initial (priming) pressure pump. For further pressure generation and for fine adjustment by approaching the measuring points precisely an adjustable volume with precision spindle is available. Another important feature of the **LSP 3000**, **LSP 5000** and **LSP 7000** is the rotating spindle that only runs inside the body of the pump. This eliminates the negative effect of a bending torque on a spindle turning outside the body and offers the advantage, especially for use in the field, that the dimensions of these pumps do not change during operation due to the spindle turning.

#### Technical Data

| Order-Code:                       |                 | LSP-3000                                                           | LSP-5000                         | LSP-7000                       |
|-----------------------------------|-----------------|--------------------------------------------------------------------|----------------------------------|--------------------------------|
| Pressure Range::                  |                 | 0...3000 bar<br>0...43511 psi                                      | 0...5000 bar<br>0...72520 psi    | 0...7000 bar<br>0...101520 psi |
| Medium:                           |                 | oil                                                                |                                  |                                |
| Pressure connections:             |                 | 2 x M16 x 1,5 male thread, rotating, changeable, with sealing cone |                                  |                                |
| Distance of the test connections: |                 | 346 mm                                                             |                                  |                                |
| Liquid reservoir:                 |                 | 250 cm³                                                            |                                  |                                |
| Piston diameter:                  |                 | 8.0 mm                                                             | 7.5 mm                           |                                |
| Swept volume per revolution:      |                 | appr. 0.15 cm³                                                     | appr. 0.08 cm³                   |                                |
| Overall swept volume:             |                 | appr. 3.0 cm³                                                      | appr. 2.5 cm³                    |                                |
| Required moment at                | 250 bar         | 2.0 Nm                                                             | 1.5 Nm                           | 1.5 Nm                         |
|                                   | 500 bar         | 4.0 Nm                                                             | 3.0 Nm                           | 3.0 Nm                         |
|                                   | 1000 bar        | 8.0 Nm                                                             | 6.0 Nm                           | 6.0 Nm                         |
|                                   | 3000 bar        | 24 Nm                                                              | 18 Nm                            | 18 Nm                          |
|                                   | 5000 bar        |                                                                    | 30 Nm                            | 30 Nm                          |
|                                   | 7000 bar        |                                                                    | -                                | 42 Nm                          |
| Material                          | Cylinder        | stainless steel                                                    | stainless steel                  |                                |
|                                   | Piston          | hardened stainless steel                                           | hardened steel                   |                                |
|                                   | Tubing          | stainless steel 1.44.04, 6 x 2 mm                                  | stainless steel 1.4404, 6 x 2 mm |                                |
|                                   | Sealing gaskets | PTFE                                                               | NBR                              |                                |
| Dimensions:                       |                 | W 460 x D 445 x H 265 mm                                           |                                  |                                |
| Weight:                           |                 | 33.5 kg                                                            | 32.5 kg                          |                                |
| CE-Conformity:                    |                 | 97/23/EC Pressure equipment directive (Module A)                   |                                  |                                |



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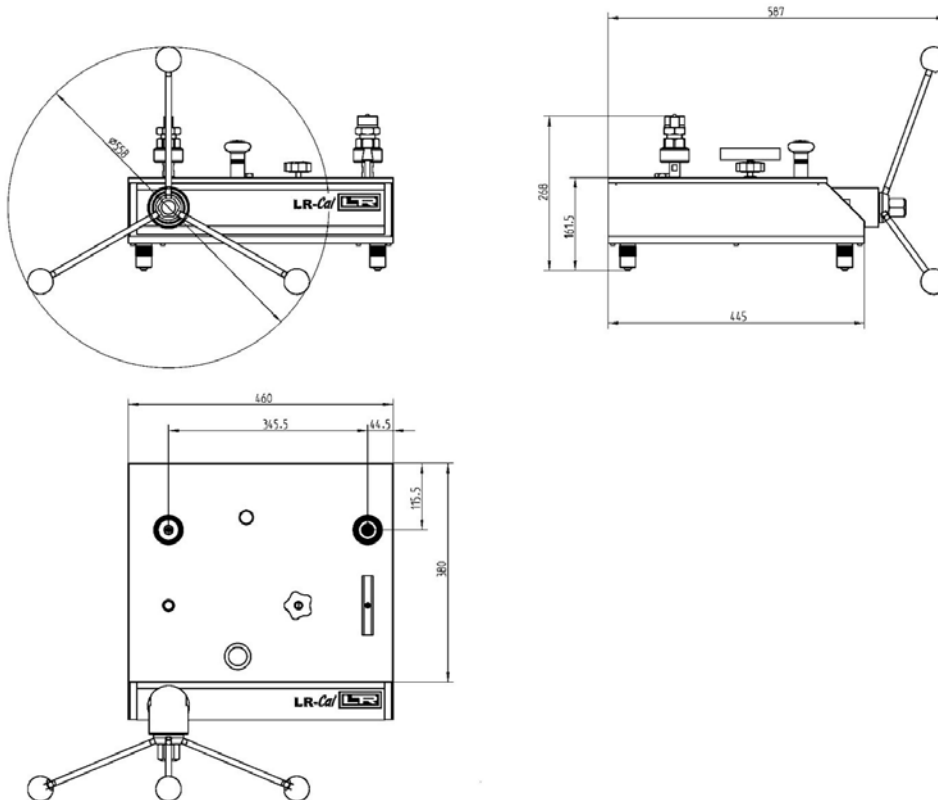
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### Dimensions:



### Optional Accessories:

| Order-Code   | Description                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------|
| LSP-HP-FLUID | Operation liquid, 0.5 l in plastic bottle                                                                                |
| LSP-HP-A-M16 | Threaded adapter M16 x 1.5 male thread with sealing cone<br>Material: hardened stainless steel                           |
| LSP-HP-A-M20 | Threaded adapter M20 x 1.5 male thread with sealing cone<br>Material: hardened stainless steel                           |
| LSP-HP-A-916 | Threaded adapter 9/16-18 UNF male thread with sealing cone<br>Material: hardened stainless steel                         |
| LSP-HP-A-G12 | Threaded adapter 1/2" BSP female thread with O-ring, max. 1600 bar<br>(max. 23200 psi). Material: stainless steel 1.4571 |

### Recommended Reference Instrument:

Electronic **pressure calibrator LPC 300**, together with High-Pressure-Transmitter. This special pressure transmitter are available e.g. with ranges **0-5000 bar** (0-72520 psi) or **0-8000 bar** (0-116000 psi). Used with the LPC 300 calibrator, the total accuracy is better than **±0.25%** of full scale value. In this way, the functionality of the LPC 300 calibrator is also available for this very high pressures.

Supply includes a traceable certificate of calibration.  
Optional: DKD certification.



Or: pressure calibrator **LPC 200**, up to 8000 bar (0...116000 psi)



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