Portable pressure generator for calibrating pressure sensors with a pressure range of between 500 and 10'000 bar. In combination with the reference sensors and evaluating devices offered by Kistler, a complete calibration system can be assembled for calibrating piezoresistive and piezoelectric pressure sensors.

The hydraulic pressure generator makes it possible to generate extremely high pressures of up to 10'000 bar. The pressure created can be maintained for a long period of time, thereby also enabling static calibrations to be undertaken. For safety reasons, the pressure generator is provided with a swiveling safety hood.

- For pressures up to 10'000 bar
- With swiveling safety hood
- Suitable for static calibration

**Technical Data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>bar</td>
<td>0 ... 10'000</td>
</tr>
<tr>
<td>Piston Diameter</td>
<td>mm</td>
<td>6</td>
</tr>
<tr>
<td>Piston stroke</td>
<td>mm</td>
<td>76</td>
</tr>
<tr>
<td>Stroke per spindle rotation</td>
<td>mm</td>
<td>1.75</td>
</tr>
<tr>
<td>Swept volume</td>
<td>cm³</td>
<td>2.14</td>
</tr>
<tr>
<td>Pressure transmission</td>
<td>Oil</td>
<td>Type 1053</td>
</tr>
<tr>
<td>Oil reservoir</td>
<td>cm³</td>
<td>22</td>
</tr>
<tr>
<td>Weight</td>
<td>kg</td>
<td>15</td>
</tr>
<tr>
<td>Sensor connections</td>
<td></td>
<td>2 x M10x1</td>
</tr>
<tr>
<td>Pressure loss</td>
<td>bar/min</td>
<td>* 0</td>
</tr>
</tbody>
</table>

(Depending on the volume of air enclosed, the pressure drops slightly before it stabilizes)

**Description**

Spindle rotation can generate a pressure of up to 10'000 bar, and the pressure created can be maintained for up to five minutes. Depending on the volume of air enclosed, the pressure drops slightly at the start. The position of the piston is indicated by a scaled piston rod. A swiveling safety hood ensures optimum protection for the user without restricting operation of the pressure generator.

**Application**

The pressure generator is used for the testing or comparative calibration of static or dynamically measuring high-pressure sensors. It is possible to maintain the pressure generated for a period of up to 5 minutes (e.g. for calibrating a measuring chain).

**Operation**

The high-pressure generator can be fixed to a workbench with screws or the screw clamps provided. The reference sensor and the sensor to be tested are installed using an adapter (see accessories). The piston is then retracted so that oil is drawn from the oil reservoir.

After the piston has been fully retracted, the valve to the oil reservoir is closed and the safety hood swiveled over the sensors. The piston is now moved forward with the spindle until the required pressure is obtained.
Accessories

Reference sensors
Sensors which are used as a reference for a comparison measurement must be checked by means of a standard of a higher category within defined time intervals.

Types 6962B.../6963A...
These types consist of a pressure sensor which is mounted into a special calibrating adapter and which has been calibrated and sealed by an accredited calibrating authority (SCS). The type is approved by all national calibrating laboratories and is especially used as a reference standard.

Types 6213BK, 6229AK
These sensors have an excellent linearity of $\pm 0.3\%$. The remaining technical data correspond to the standard type. The sensors are used together with the corresponding adapter as a service standard.

see data sheet 16.012

Important:
Prior to operating, the reference sensors Types 6229AK, 6213BK must first be calibrated as a unit together with the adapter in order to rule out sensitivity changes due to mounting. We recommend to order the reference sensors together with the corresponding adapters so that they can be calibrated as a unit in the Kistler works.

Pressure range | Sensor Type
---|---
0 ... 8000 bar | 62138K
0 ... 5000 bar | 6229AK
0 ... 8000 bar | 6963A8000
0 ... 2000 bar | 6962B2000

Sensor Type | Tightening torque
---|---
6213B | 40 Nm
6215 | 20 Nm
6963A8000 | 10 Nm
6962B2000 | 10 Nm

Adapters
Adapters are available for all Kistler pressure sensors which are suitable for calibration with the pressure generator.

Adapters for Pressure Generator Type 6906
All adapters with conical sealings (e.g. 6919) must be tightened exclusively with the specified torque of 10 Nm. For higher tightening torques the sealing part may be damaged. For sealing of the sensor in the adapter the original sealing ring appertaining to the sensor must be used.

Type 6927
The intermediate adapter allows for quasistatic calibration of standards which are used for dynamic testing. Thus these standards can be traced to standards of a higher category such as Type 6963A... .

Type 6919

<table>
<thead>
<tr>
<th>Adapter Type</th>
<th>Pressure Sensor Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>6919</td>
<td>60... 4065A...</td>
</tr>
<tr>
<td>6921</td>
<td>6201... 6211, 6227</td>
</tr>
<tr>
<td>6923</td>
<td>6213BK, 6213B</td>
</tr>
<tr>
<td>6925</td>
<td>6215, 6229AK, 6229A, 4067A...</td>
</tr>
<tr>
<td>7913</td>
<td>70...</td>
</tr>
</tbody>
</table>

For the adapters Type 6919 and Type 7913 the corresponding connecting nipple must be ordered separately.

This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.