

# Hydraulic High-Pressure Generator Type 6906

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

Range	bar	0 ... 10'000
Piston Diameter	mm	6
Piston stroke	mm	76
Stroke per spindle rotation	mm	1,75
Swept volume	cm <sup>3</sup>	2,14
Pressure transmission	Oil	Type 1053
Oil reservoir	cm <sup>3</sup>	22
Weight	kg	15
Sensor connections (for Adapter 69...)		2 x M10x1
Pressure loss	bar/min	≈ 0

(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.

000-360e-09.01 (DB16.6906e)

## 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	6213BK
0 ... 5000 bar	6229AK
0 ... 8000 bar	6963A8000
0 ... 2000 bar	6962B2000

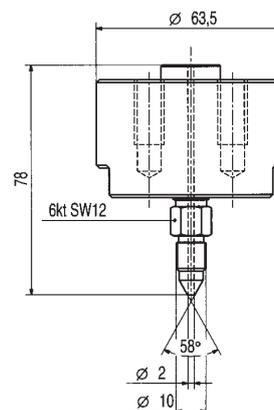
Sensor Type	Tightening torque
6213B	40 Nm
6215	20 Nm
6963A8000	10 Nm
6962B2000	10 Nm

### Adapters

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

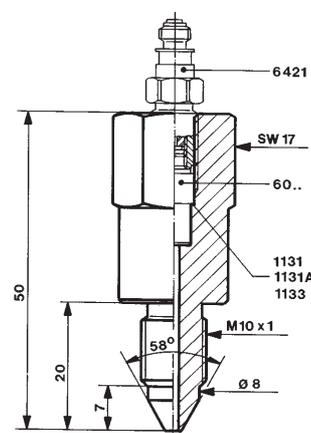
### Type 6927

The intermediate adapter allows for quasi-static 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...



### 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 6919

Adapter Type	Pressure Sensor Type
6919	60.., 4065A...
6921	6201... 6211, 6227
6923	6213BK, 6213B
6925	6215, 6229AK, 6229A, 4067A...
7913	70...

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