



Load Cell for pile forces

Type KLP

The Load Cell KLP is a pressure pad modified for the measurement of pile forces.

Depending on the version, the KLP Pressure Pad can either be installed on the pile foot to measure the base pressure or it can be installed on the pile head.

A Pile Tip Pressure Cell at the foot is usually equipped with a mounting bracket, foam rubber rim and a concreted cone. It is used to determine pressure at the pile tip. The pressure cell will be attached to the bottom of the reinforcement cage before the pile gets installed.

The Pile Head Pressure Cell will be integrated just below the foundation plate on top of the pile to measure the force introduced into the pile. The installation is therefore carried out subsequently on the already completed pile. For this purpose, the head area of the pile must be uncovered and reinstalled during the installation of the load cell.

Pressure Pads KLP are always custom made, they get adapted to the diameter of the pile and have a precisely defined area - the hydraulic pressure can be converted into force/load.

The difference between the force introduced into the pile top and the pile foot corresponds to the load ablated/removed on the ground by the skin friction. The skin friction can be determined more closely with an additional instrumentation with Strain Gauges DBA at different depths along the pile.

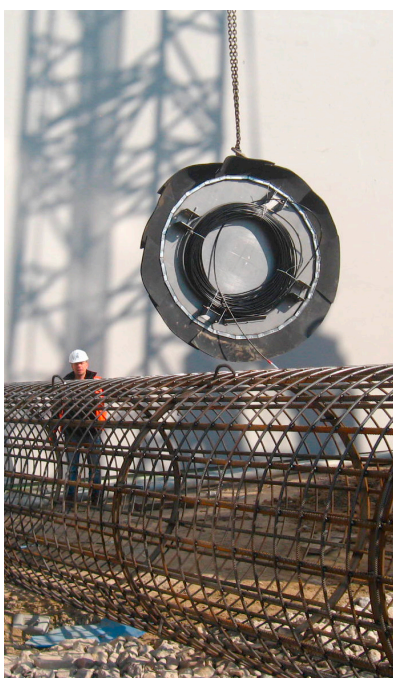
If required a redundant sensor assembly can be provided, this consists usually of a piezoelectric sensor and a hydraulic compensating valve.

TECHNICAL DATA

Type KLP Pile Pressure Cells*	Measuring Range**	Pressure Cells with diameter	Pile diameter
KLP 450	8 MN	450 mm	600 mm
KLP 650	12 MN	650 mm	800 mm
KLP 750	20 MN	750 mm	900 mm
KLP 1050	30 MN	1050 mm	1200 mm
KLP 1250	45 MN	1250 mm	1400 mm
KLP 1350	60 MN	1350 mm	1500 mm

*Further models or other dimensions upon request

**Please specify as required



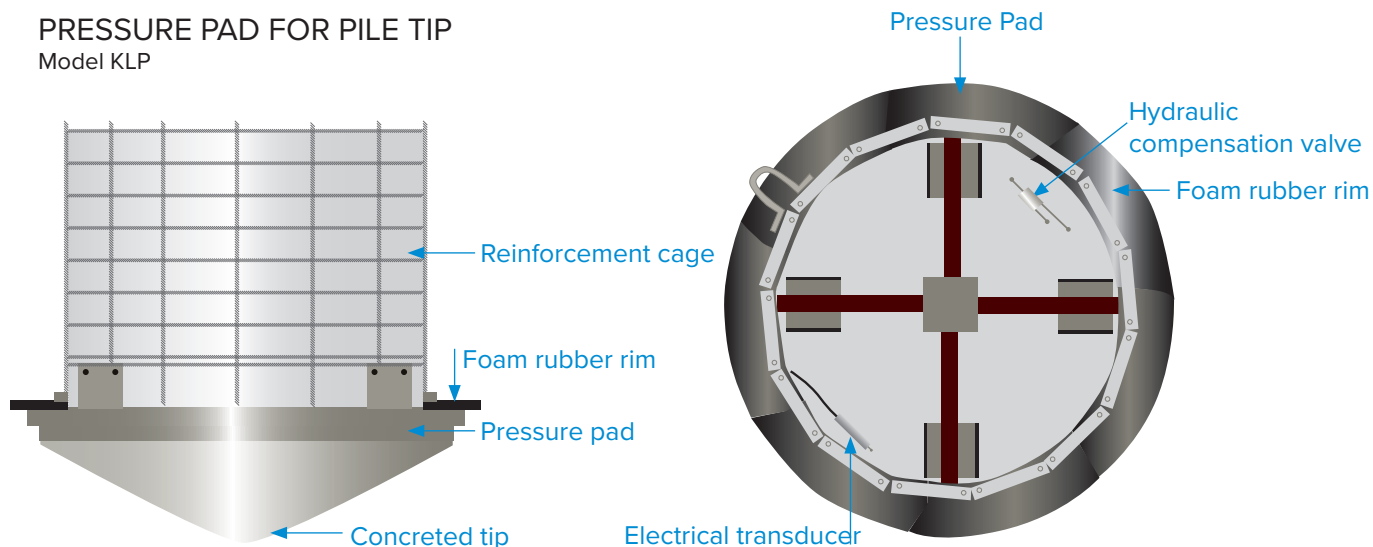
Model VHD and VHD/AU

For safety, a redundant sensor assembly can be selected. This consists optionally of e.g. a piezoresistive sensor and a hydraulic compensation valve.

APPLICATION EXAMPLES

PRESSURE PAD FOR PILE TIP

Model KLP



TECHNICAL SPECIFICATIONS SENSORS

Model AU	
Material:	Steel St52
Power supply:	1 mA opt. 10 V DC
Output signal:	0 up to 250 mV
Measurement range:	8 up 60 MN
Resolution:	1 kN
Linearity:	<0.5 % f.s.
Reproducibility:	0.01 %
Temperature range:	-30 °C up to 100 °C
Temperature error:	<0.1 % °C f.s.
Protection class:	IP 68

mV

Model VW	
Material:	Steel St52
Power supply:	Frequenz
Measurement range:	8 up to 60 MN
Resolution:	1 kN
Linearity:	<0.5 % f.s.
Reproducibility:	0.01 %
Temperature range:	-30 °C up to 100 °C
Temperature error:	<0.1 % °C f.s.
Protection class:	IP 68

VW

Accessories Pressure Pad for pile tip

- foam rubber rim
- mounting bracket for connection to reinforcement cage
- concreted tip

Accessories Pressure Pad for pile head

- double sheet ring

PRESSURE PADS FOR PILE HEAD

Model KLP

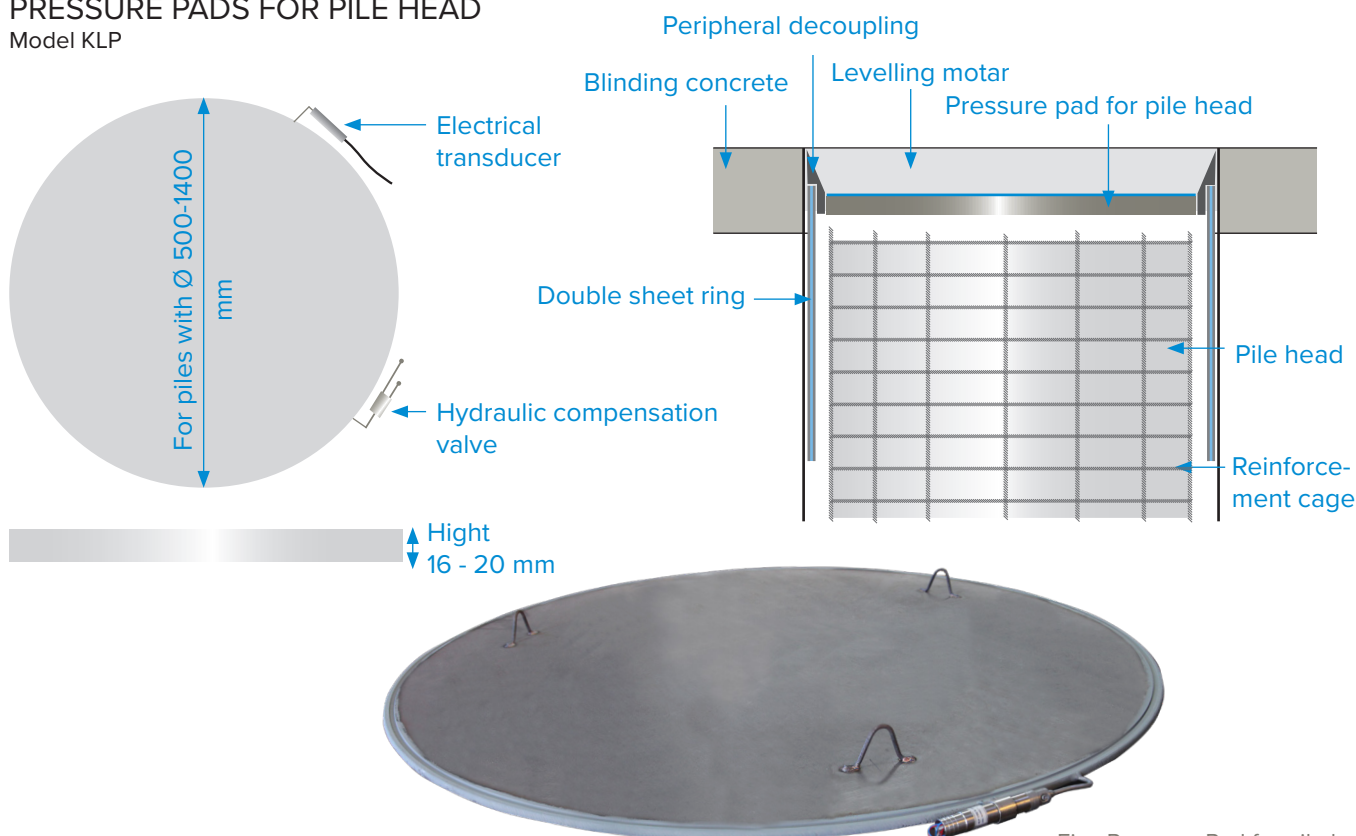


Fig.: Pressure Pad for pile head with electrical transducer