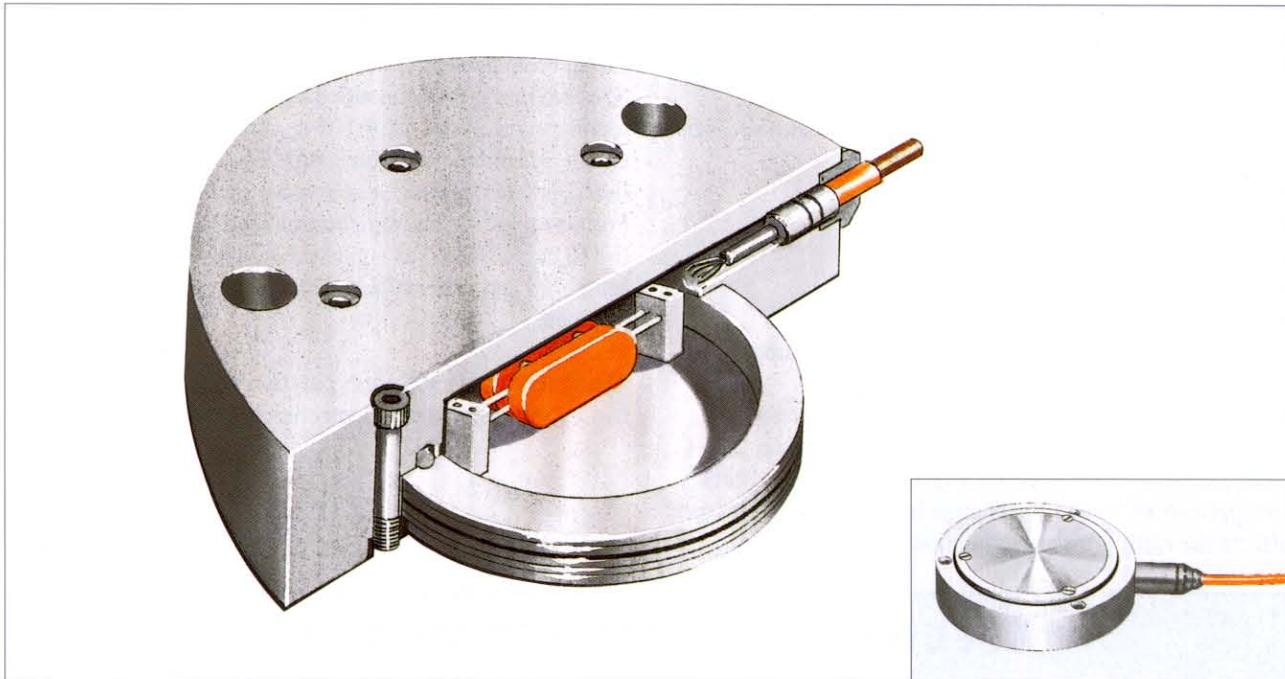




Geonor P-100 and P-105 Earth Pressure Cells

for total earth pressure measurements



Sensor and membrane design

FEATURES:

- Rugged construction
- Proven long term stability
- Built-in redundancy
- Vibrating wire technology
- For use in dams, retaining walls, foundations, tunnels, in-place cast concrete piles, offshore structures, sheet piles, etc.
- Designed by the Norwegian Geotechnical Institute



GEONOR P-100 AND P-105 EARTH PRESSURE CELLS

APPLICATIONS AND DESIGN FEATURES

GEONOR P-100 EARTH PRESSURE CELL

The P-100 earth pressure cell is designed to measure total pressure acting on plane structures. It is robust enough to tolerate moderate shocks during pile driving and has a good long term stability record. The membrane face can be modified to measure soil pressure acting on curved surfaces.

The most typical applications for the P-100 earth pressure cell are :

- sheet piles
- retaining walls
- foundations
- tunnels
- cast in-place concrete piles

The maximum recommended soil grain size acting on the membrane is 1.5 mm for P-100 applications.

For medium and low pressures, atmospheric pressure inside the gauge may be provided for using a twin jacket vented cable version (Geonor P-540). This is important for applications where the change in atmospheric pressure affects the earth pressure to be monitored.

GEONOR P-105 EARTH PRESSURE CELL

The P-105 earth pressure cell is designed for heavy loads and water pressures.

Typical applications are :

- contact pressure in offshore structures
- total earth pressure in earth/rock-fill dams

The maximum recommended soil grain size acting on the membrane is 2 mm for P-105 applications.

Gauge redundancy has been provided for by using two independent vibrating wire sensors in the cell.

For best possible instrumentation results, the Geonor P-430 cable is used as signal cable. This cable is steel armoured and water blocked by use of petroleum jelly and bitumen.

The P-100 and P-105 earth pressure cells are both designed by the Norwegian Geotechnical Institute.

TECHNICAL SPECIFICATIONS

Earth Pressure Cell:	P-100	P-105
Measuring range :	0-300 kPa	0-700 kPa
Linearity and hysteresis :	< 1% FS	< 1% FS
Frequency range :	1000 - 2000 Hz	1000 - 2000 Hz
Calibration :	Individual	Individual
Temperature operating range :	- 30 to + 50 °C	- 30 to + 50 °C
Material :	Stainless steel	Membrane : Stainless steel Housing : Galvanized steel
Dimensions :	OD 165 x 46 mm	OD 230 x 50 mm
Accessories :	P-100-2 protector for sheet pile applications	P-105-1 frame for embankment installations

ORDER REFERENCES

Part no.	Equipment
410000	P-100 earth pressure cell
412000	P-105 earth pressure cell
461400	P-430 signal cable, 2 pair, OD 16 mm, steel armoured, water blocked
461000	P-540 signal cable, 1 pair, OD 10 mm, with protecting PE tube