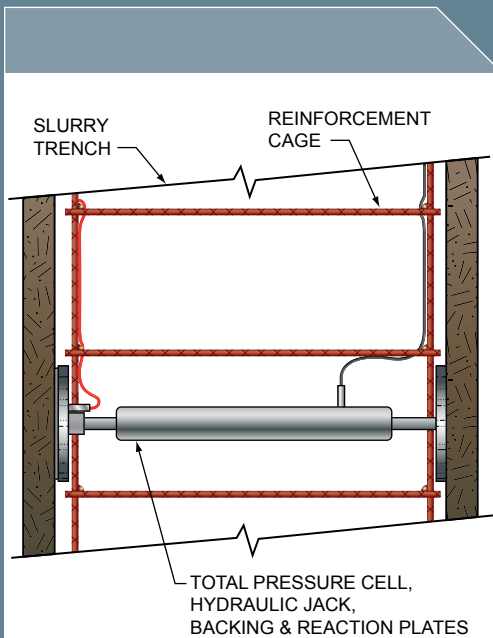




Jack Out Earth Pressure Cell



RST Jack Out Earth Pressure Cells are used to measure active and passive pressures on diaphragm walls. The cell itself is constructed of two circular, stainless steel plates welded around their periphery. The space between the two plates is filled with an incompressible fluid. A transducer is connected to this space and measures the pressure exerted on the incompressible fluid. This cell is connected to a backing plate, which is connected to a double acting hydraulic jack and an opposite reaction plate that is the same diameter as the cell. When the hydraulic jack is expanded it acts on the backing plate so that the cell is not damaged. The backing plate is also attached to the hydraulic jack by a swivel joint allowing for some misalignment in placement of the jack out pressure cell.

This complete unit is installed in the reinforcing cage that is to be placed in the slurry filled trench. After the reinforcement cage is lowered into the trench the hydraulic jack is expanded, forcing the earth pressure cell and reaction plate against the sides of the trench. The hydraulic jack is kept pressurized until the concrete has set.

RST Jack Out Earth Pressure Cells can be combined with an integral piezometer to allow effective stress readings to be made. Standard cell size is 22.9 cm (9 in.) and others sizes are available upon request.

specifications

| ITEM | MODEL: JOPC-V |
|-----------------------------------|---|
| Transducer Type | Vibrating Wire |
| Range | up to 5000 psi/34500 kPa |
| Overrange | 200% F.S. |
| Accuracy | to 0.1% F.S. |
| Resolution | 0.1% F.S. minimum |
| Thermal Effect on Transducer Zero | 0.1 % F.S. per °C |
| Excitation Voltage | 5 V sq. Wave |
| Signal Output | 1200-2000 Hz |
| Conductor | 2x#20 4x#20 with thermistor |
| Operating Temperature | -20° to +150°F -29° to +65°C |
| Cell Diameter | 15.25 cm (6 in.) |
| Hydraulic Jack Size | depends on trench width (many sizes available) |
| Reaction Plate Diameter | same as chosen cell size |

ordering info

When ordering, please specify your trench width, accuracy requirements and pressure range.

| CELL SENSOR TYPE AND SIZE | PART # |
|--|-------------|
| Vibrating Wire- 6 in. diameter (other sizes available upon request) | LPJOPC-V(6) |



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applications

Measurement and control of contact pressures on diaphragm walls.

Verifying design assumptions, assuring soil pressures are not larger than those the structure was designed to withstand.

features

Choice of pneumatic, strain gauge, or vibrating wire pressure transducers.

High accuracy and sensitivity.

Suitable for remote monitoring and datalogging.

Cell is designed to have a stiffness similar to that of typical soils.

Field rugged, easy to install, easy to operate.

Fluid pressure calibrated.