

The GRL-Cell is a high capacity device installed within a deep foundation to statically load test the foundation. As the GRL-Cell is pressurized, it loads the foundation element in two directions. The portion of the foundation element above the cell location is pushed upward against its shaft resistance. At the same time, the foundation element below the cell location is pushed downward against its shaft resistance as well as against the toe bearing or “base resistance.” Shaft and toe movements as well as embedded strain gage instrumentation are monitored for each applied load. An estimated top load-movement curve is constructed from the measured shaft resistance load-movement and base resistance load-movement responses. Contact us for additional details on the GRL-Cell, manufactured and calibrated in Cleveland, OH.



2000 Ton Load Frame with NIST Traceable Load Cells

## Standard GRL-Cell Details\*

GRL-Cell Capacity (tons)	Maximum Test Load (tons)	Outside Diameter (inches)	Maximum Stroke (inches)
375	750	12	9
750	1500	16	9
1100	2200	21	9
1500	3000	23	9
2000	4000	28	9

\*GRL-Cell sizes are subject to change.

## Bi-Directional Test Benefits

- High capacity static load test method for drilled shafts, bored piles, barrettes, and ACIP/CFA piles.
- Separates soil/rock resistance and movement data for shaft and toe.
- Determines magnitude of the mobilized shaft and toe resistances.
- Embedded strain gauges within the foundation determine the soil/rock resistance distribution along the foundation length for optimizing the foundation design.
- Not restricted by structural or geotechnical limit of load frame, reaction beams, or reaction piles.



1100 Ton Cell Being Calibrated at 6 Inch Stroke