Osterberg Cell (O-cell) - expensive heavy and bulky

Yu Cell (Y-cell) – new technology easy handling & mobility in remote area

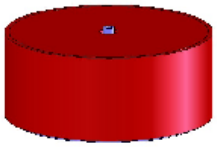
Y-cell vs O-cell

O-cell

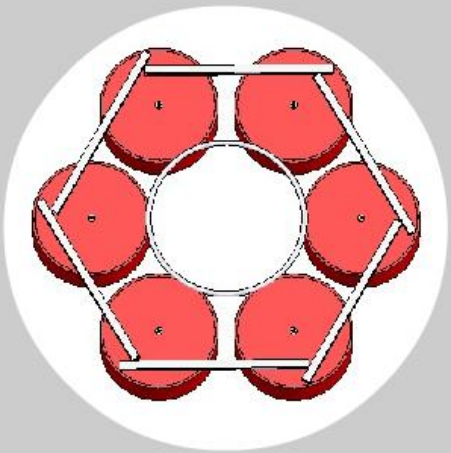
The loads are applied by using hydraulic jack units

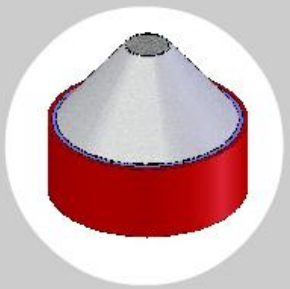
Y-cell

The loads are applied by using hydraulic capsule units



Y-cell vs O-cell

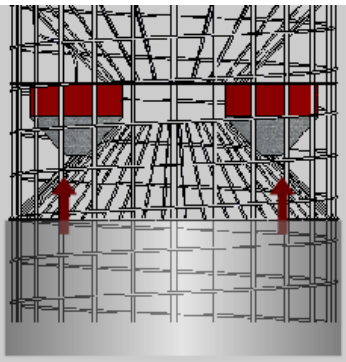


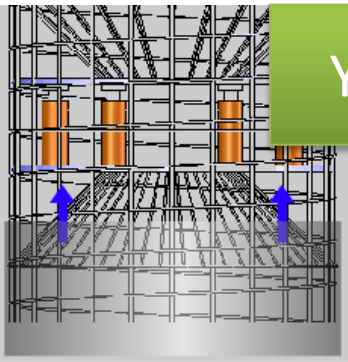


Y-cell

The bottom of the capsule cells can be fabricated the cone shape concrete blocks (or steels) in order to ease the concrete flow during concreting

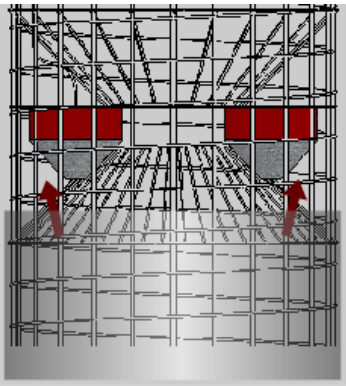
Y-cell vs O-cell

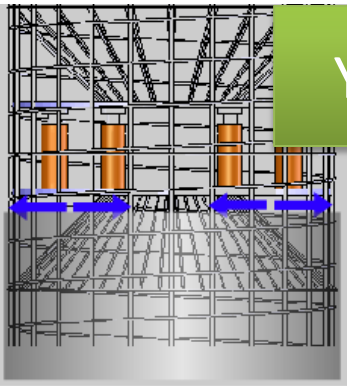




Y-cell	O-cell
No steel plates and the capsule units only occupy relatively small cross-section, hence the concrete can flow upward easily	Steel plates located at bottom & top of the cells which occupy most of the cross-section, hence block the concrete to flow

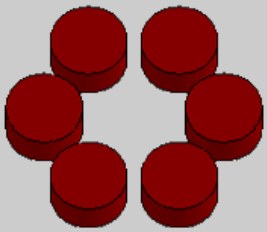
Y-cell vs O-cell

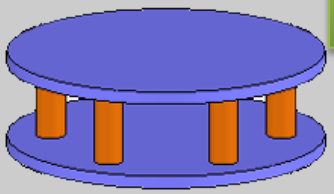




Y-cell	O-cell
Due to concrete can flow upward easily, hence the contact points at bottom are 100% intact. Accurate measurement.	Due to difficulty of concrete to flow, the bottom of the cells may not fully intact. Measurement may not accurate.

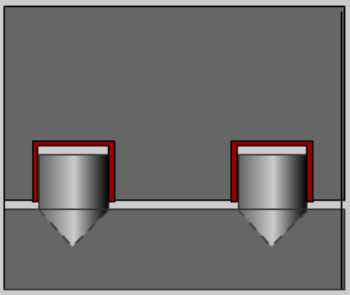
Y-cell vs O-cell

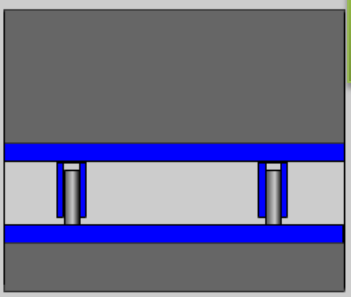




Y-cell	O-cell
Capsule units only occupy <50% of the cross-section, hence only required 50% grouting area. The pile body at this section has at least 50% of contact surface.	The cells occupy most of the cross section. The area at this section may not fully grouted and the pile can be regarded as discontinue at this section.

Y-cell vs O-cell





Y-cell	O-cell
Capsule units are “inserted” in the pile body, after loading and unloading, the pile body still “holding” together.	The plates move and open up the gap at pile body, hence the pile is regarded as discontinue at this section (Integrity Class 4).

Bi-Directional Static Load Test

Y-jack












Advantages

Y-cells are easy handling and very mobility in remote area.
Y-cells can be calibrated in factory prior to mobilize to project site.
Assembly of Y-cells at site is easy and simple.
Multiple Y-cells can achieve very high load.