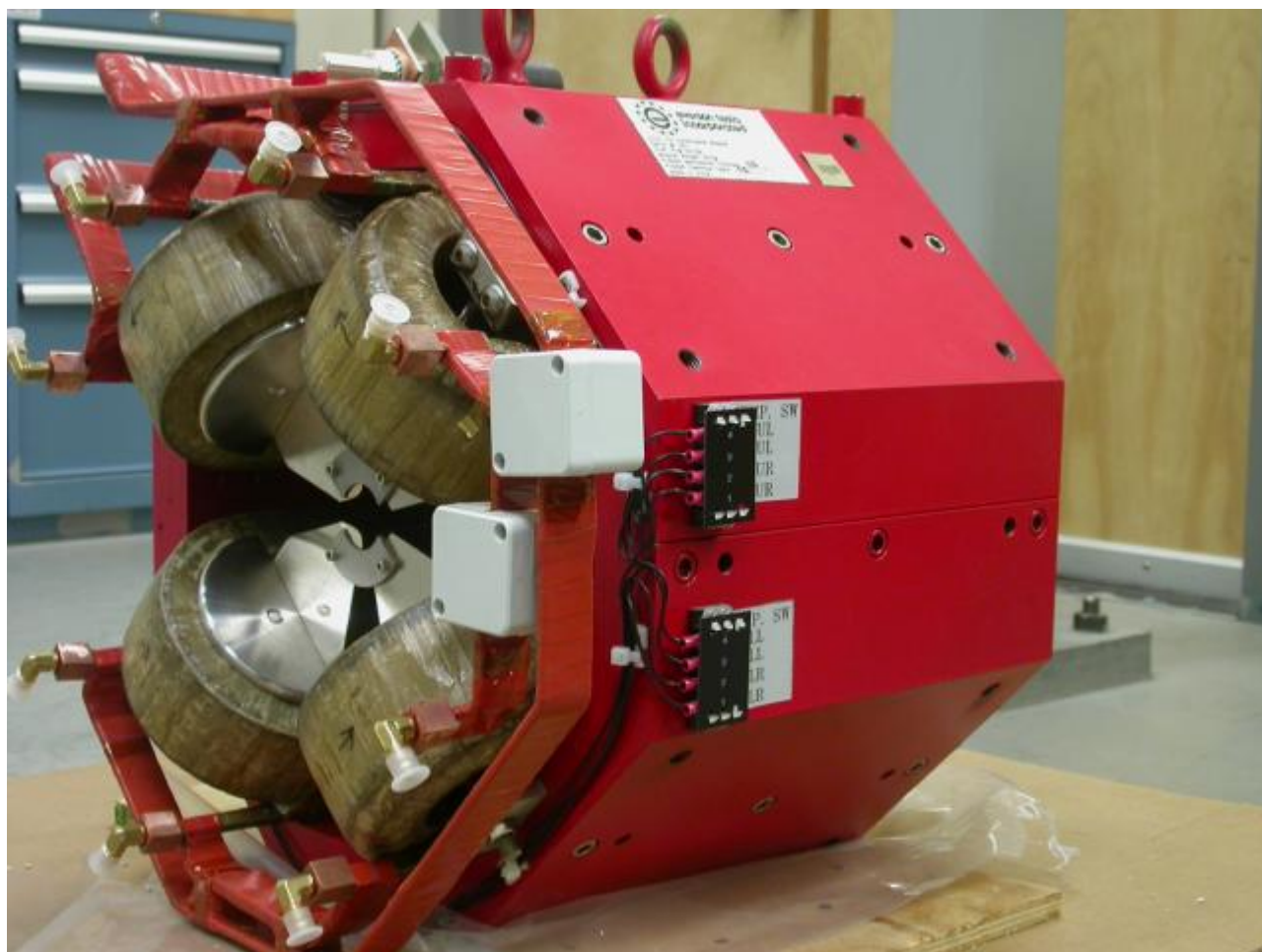


LCLS 'Q150kG' LTU QUADRUPOLE MAGNET FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	Carl Rago
Date:	Thursday, January 17, 2008
Work Order/Charge No.:	9242609
Serial Number:	SLAC – 002600/ SN 008
URL of Fiducial Report:	\\Web002\\www-group\\met\\Quality\\FIDUCIAL REPORTS\\LCLS LTU Q150kG QUADS\\002600.pdf

Part Set-up – Coordinate System Set-up

Spatial Alignment

- Geometric axis of the poles of the magnet.

Planar Alignment

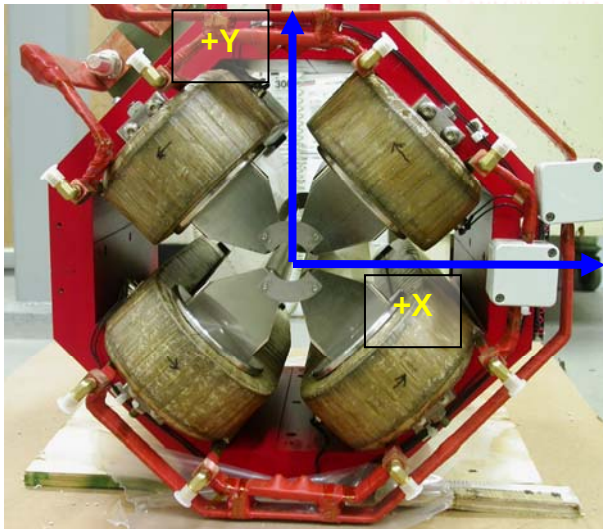
- Plane on top of magnet where tooling ball sockets are welded to.

“Z” Zero

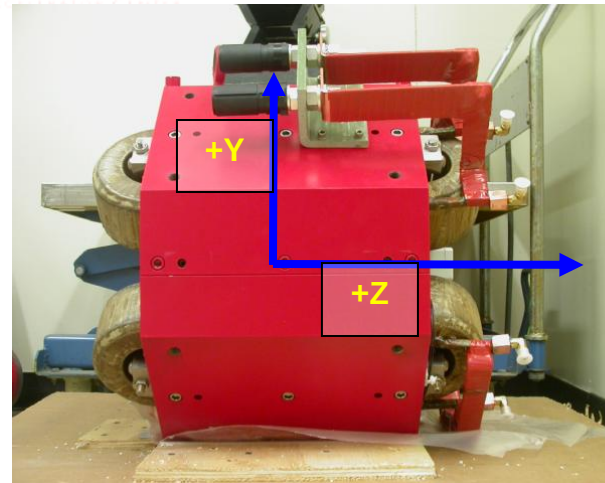
- Mid-plane of the magnet (middle of upstream and downstream ends).

“X” & “Y” Zero

- Geometric axis of the poles of the magnet.

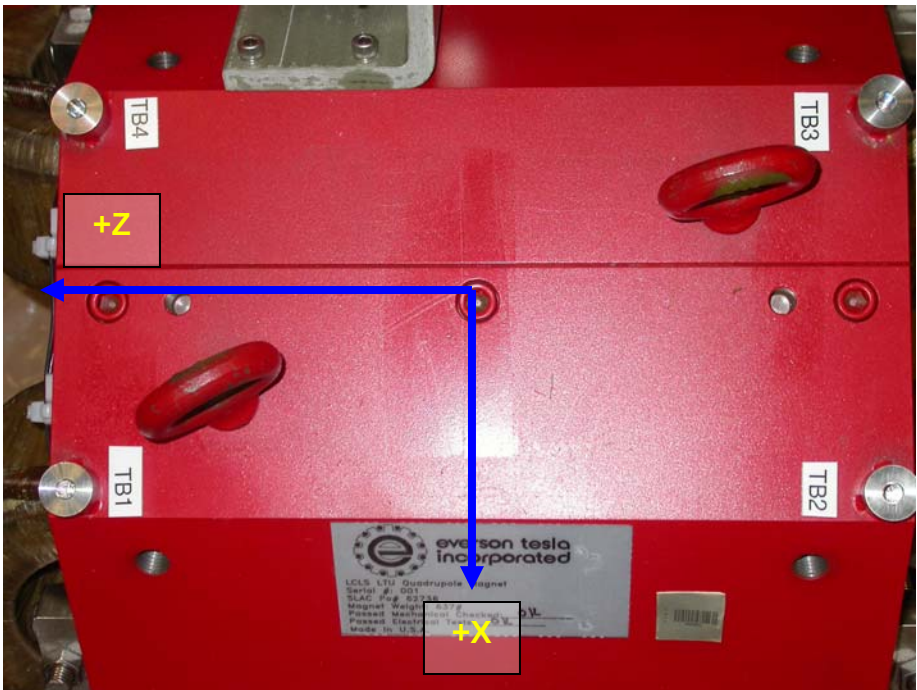


Front View



Side View

Tooling Ball Measurements/Locations

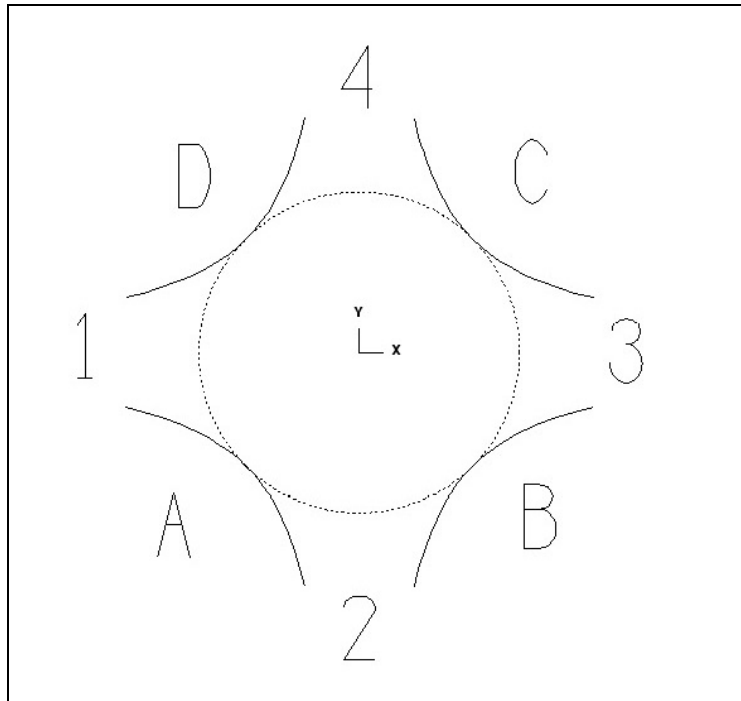


Tooling Ball Adapter Cylinder Projected 1" Offset to the Tooling Ball Adapter Plane

Tooling Ball	Form	Cyl. Dia.	X	Y	Z	
Proj. TB 1	0.00012	0.24994	2.62941	10.21758	5.60874	0.00014
Proj. TB 2	0.00009	0.24999	2.62459	10.21296	-5.60809	0.00042
Proj. TB 3	0.00007	0.24999	-2.67558	10.20643	-5.61092	0.00007
Proj. TB 4	0.00011	0.24996	-2.67858	10.21112	5.60749	0.00013

Pole Data

*Data looking from Downstream End



Side	Pole Dist A-C	Pole Dist B-D	Gap 1	Gap 2	Gap 3	Gap 4
Downstream End (+Z)	1.26021	1.26078	0.43186	0.43504	0.43517	0.43808
Upstream End (-Z)	1.26098	1.26058	0.43122	0.43494	0.43494	0.43718