

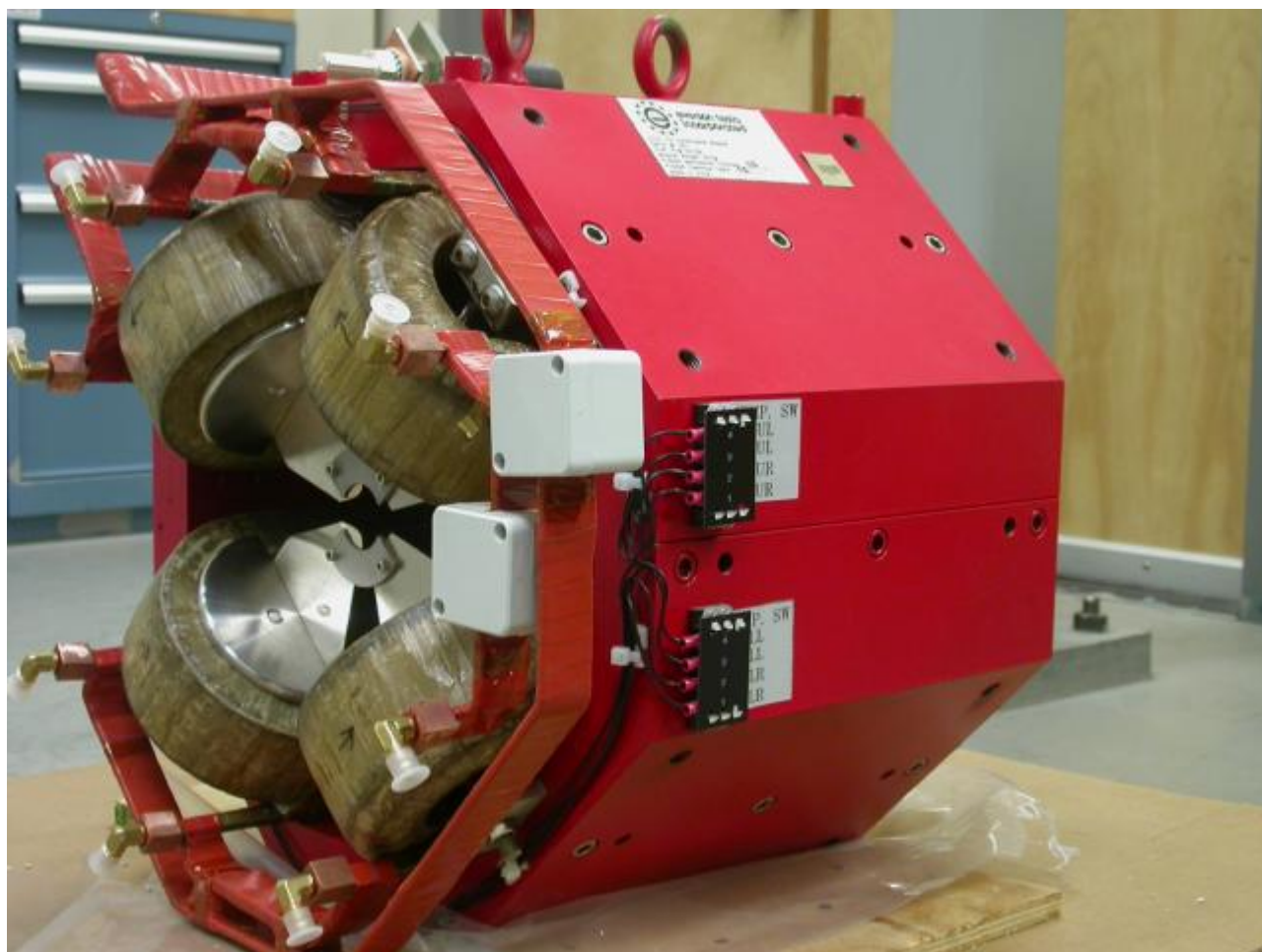


Linac Coherent Light Source

Stanford Linear Accelerator Center

Stanford Synchrotron Radiation Laboratory

LCLS 'Q150kG' LTU QUADRUPOLE MAGNET FIDUCIALIZATION REPORT



Inspector:

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Responsible Engineer:

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Date:

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Work Order/Charge No.:

9242609

Serial Number:

SLAC – 002883 / SN 001

URL of Fiducial Report:

<\\Web002\\www-group\\met\\Quality\\FIDUCIAL REPORTS\\LCLS LTU Q150kG QUADS\\002883.pdf>

Part Set-up – Coordinate System Set-up

Spatial Alignment

- Geometric axis of the poles of the magnet.

Planar Alignment

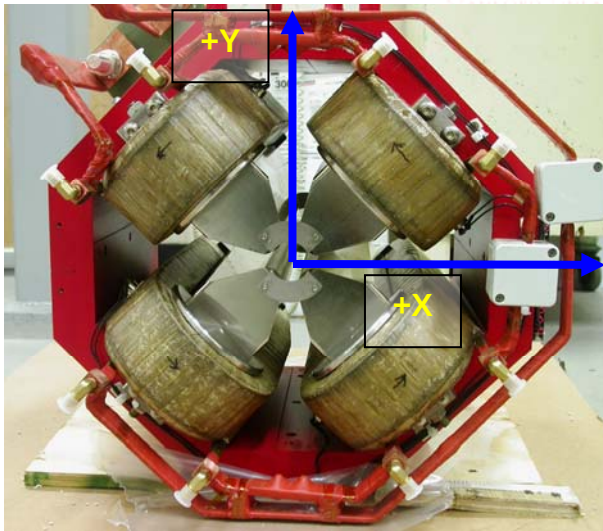
- Plane on top of magnet where tooling ball sockets are welded to.

“Z” Zero

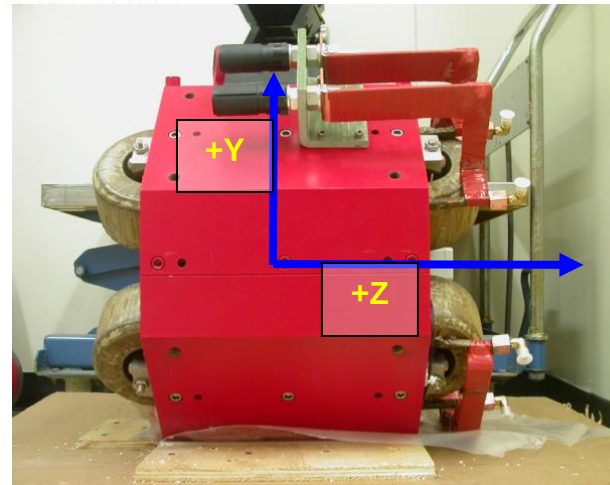
- Mid-plane of the magnet (middle of upstream and downstream ends).

“X” & “Y” Zero

- Geometric axis of the poles of the magnet.

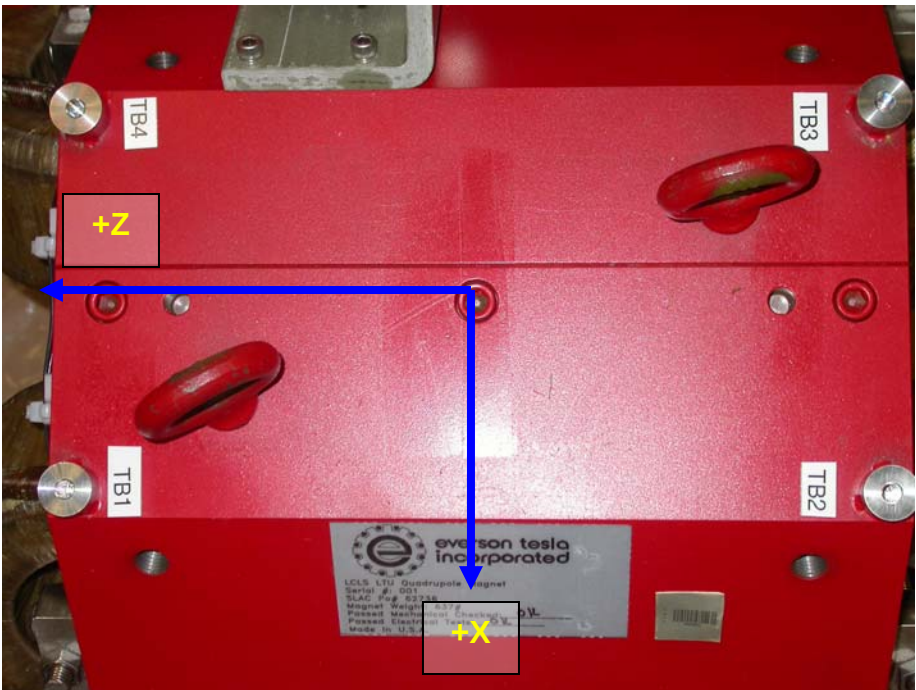


Front View



Side View

Tooling Ball Measurements/Locations



Tooling Balls Measured with 1/2" Tooling Ball Socket

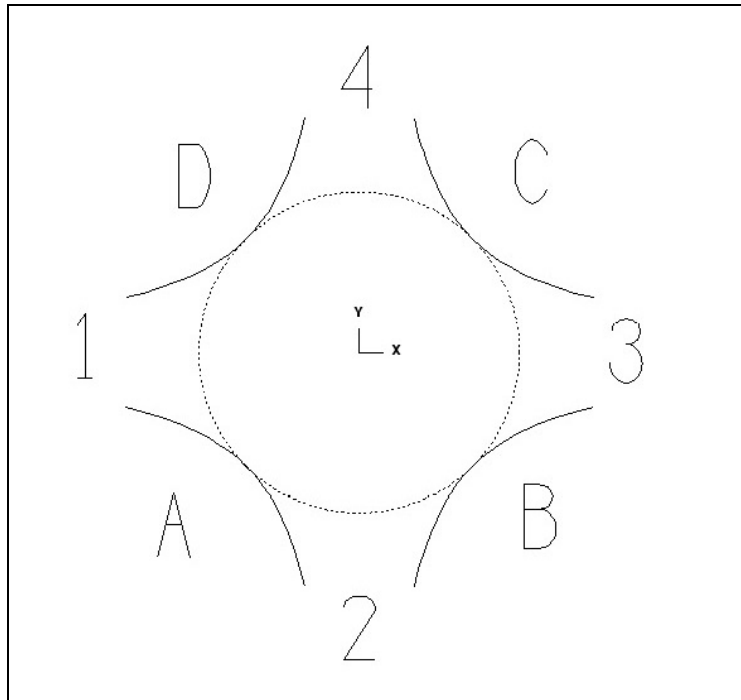
Tooling Ball	FORM	Sph. Dia.	X	Y	Z
TB 1	0.00039	0.49815	2.64678	10.20691	5.61076
TB 2	0.00017	0.49925	2.64939	10.20316	-5.60822
TB 3	0.00042	0.49866	-2.67355	10.20241	-5.61104
TB 4	0.00032	0.49742	-2.67314	10.20636	5.60569

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

Tooling Ball	Cyl. Dia.	X	Y	Z
Proj. TB 1	0.25004	2.64571	10.20597	5.61020
Proj. TB 2	0.24995	2.65028	10.20249	-5.60908
Proj. TB 3	0.25006	-2.67258	10.20174	-5.61180
Proj. TB 4	0.25011	-2.67289	10.20496	5.60672

Pole Data

*Data looking from Downstream End



Side	Pole Diameter	Pole Dist A-C	Pole Dist B-D	Gap 1	Gap 2	Gap 3	Gap 4
Downstream End (+Z)	1.25905	1.25900	1.25936	0.43818	0.43105	0.43693	0.43453
Upstream End (-Z)	1.25826	1.25820	1.25830	0.43858	0.42942	0.43517	0.43238