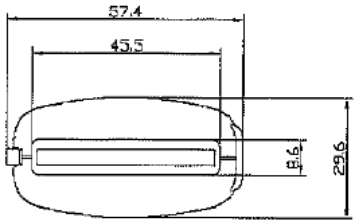
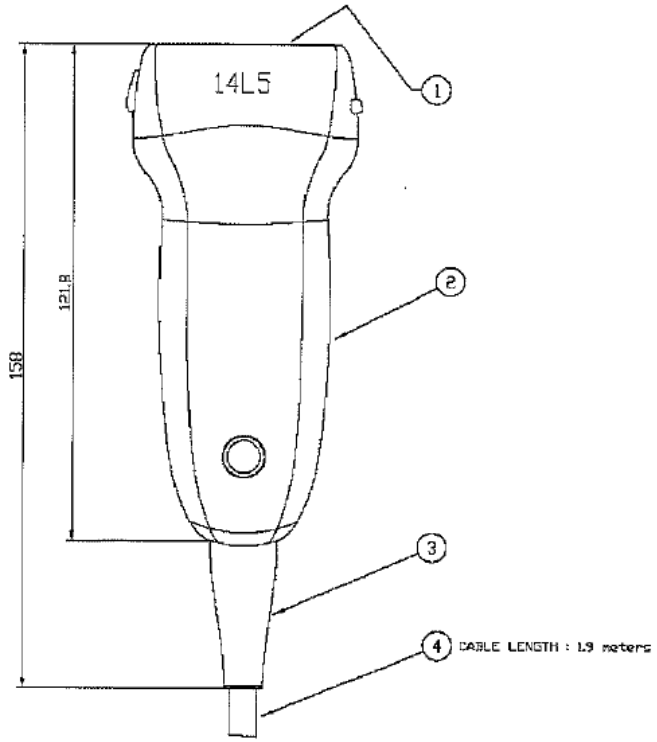
Variables

- Geometry of Probe
- Geometry of Load Cell
- Orientation of Probe
- Loads applied to the subject
- Calibration Type

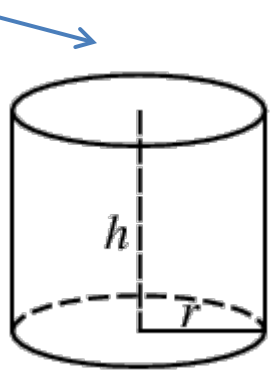
		Rates				Resolution				Size/weight		
	Calibration	Fx,Fy	Fz	Tx,Ty	Tz	Fx,Fy	Fz	Tx,Ty	Tz	Weight*	Diameter*	Height*
Nano 25	SI-125-3	125 N	500 N	3 Nm	3 Nm	1/48 N	1/16 N	1/1320 Nm	1/2640 Nm	0.0634 kg	25 mm	21.6 mm
Nano 25	SI-250-6	250 N	1000 N	6 Nm	3.4 Nm	1/24 N	1/8 N	1/660 Nm	1/1320 Nm	0.0634 kg	25 mm	21.6 mm





160N compression, 30N shear

Sensing Surface



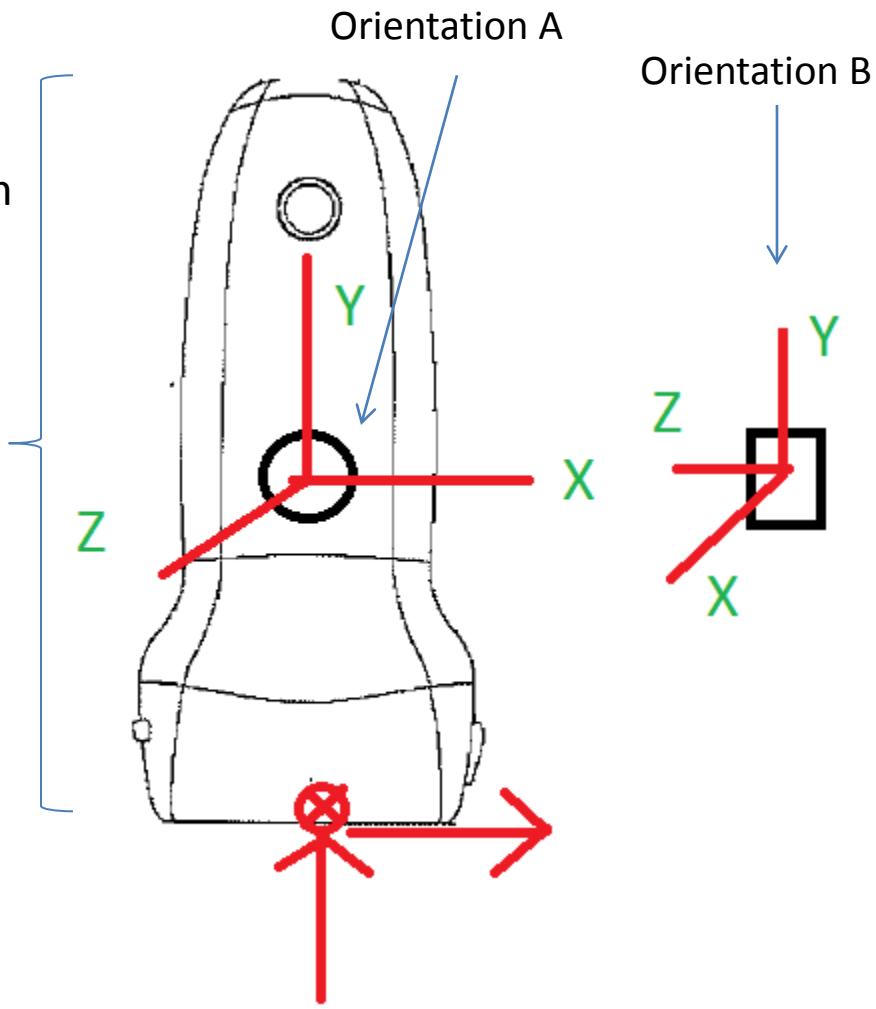
H=21.6 mm

D= 25 mm

Best Solution

Cal B

- Ty=30N(d_h)=6Nm
- Tx=160(d_h)+30(d_v)=6Nm limiting eqn
- Tz=30(d_v)=3.4Nm
- If d_h=14.8 mm, d_v=121mm
- If d_v=0mm, d_h= 37.5mm
  - 37.5-14.8=22.7mm spacing
- Cal A will not work because F_y exceeds 125N



Orientation C

Cal A:

- $T_x=160(d_h)+30(d_v)=3Nm$
  - If $d_v=0$, $d_h=18.75mm$
  - This is greater than the radius of the load cell plus width/2 of probe (27.3 mm)

Cal B:

- $T_x=160(d_h)+30(d_v)=6Nm$
  - If $d_v=0$, $d_h=37.5mm$
  - 37.5-(14.8+12.5)=10.2mm spacing