



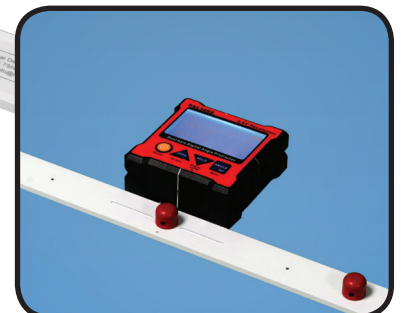
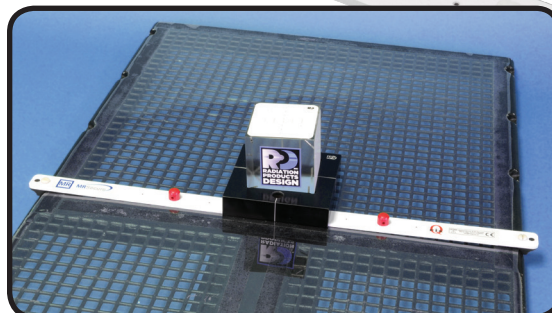
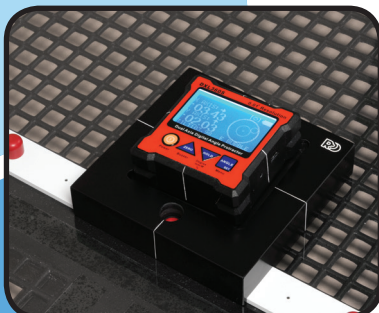
# PERFECTPITCH 6 DEGREES OF FREEDOM QA CUBE

## Item 356-210

The accuracy of CBCT alignment and couch shift QA is of fundamental importance in the accuracy of delivered dose in Image Guided Radiation Therapy (IGRT). The 73mm cube has one (1) central axis titanium marker and two (2) offset titanium markers (2mm diameter) for the testing and verification of predetermined measurable couch shifts. This cube can be used to test the accuracy of CBCT alignment and couch shift in a simple and efficient manner. Images can be transferred to the treatment planning system to check coincidence of treatment planning system to couch shifts.

### Instructions:

1. Verify that the couch is level, straight, and perpendicular to the CT slice by attaching only the Locking Bar to treatment couch. Place the digital level against the locking bar in the center. The level will read zero degrees in both directions indicating the couch is level. Take a CT slice through the center of the locking bar to observe the two titanium 1.56mm balls spaced at 30cm apart. There are also two open air holes spaced at 15cm apart indicating that the couch is perpendicular to the CT slice.
2. Place the Base over the center pin on the Locking Bar so it fits in the base slot and is flat on the couch top. The RPD logo should be toward the head end of couch. The white lines on the base will align with the sagittal laser line and the right and left laser lines.
3. Place the level inside the base and reference it to a corner. The couch must be adjusted for 2.5 degrees roll, 2.5 degrees pitch, and 2.5 degrees rotation. The level will read zero degrees in both directions after adjustment.
4. Remove the level and place the cube in the base matching the RPD logo on the base to the RPD logo on the cube label. Lower the couch so the right and left laser crosshairs intersect with the cube central axis lines. Take a CT slice through the cube to see the center ball. Couch offsets can be done by moving the couch in even centimeters to the cross marks on the cube. The two offset titanium markers check couch movement in 6 directions - in, out, right, left, up, and down.



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