

# Fantoccio QC

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UNIVERSITÀ  
DEGLI STUDI  
DI FERRARA  
- EX LABORE FRUCTUS -

Progetto SYRMA3D

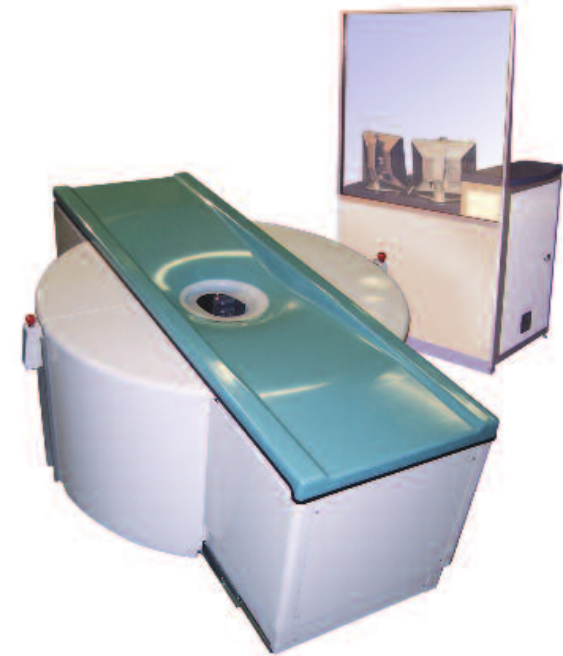
# *Controllo di qualità:*

CT

Mammo

Breast CT

Koning Breast CT (CBCT1000)



# CBCT1000 @ RU Nijmegen



**KONING**

## **User's Manual for the Koning Breast CT System**



### **Manufacturer tests**

Low Contrast Resolution  
CT Number Accuracy  
Field Uniformity  
Noise  
Contrast to Noise Ratio  
Spatial Resolution  
Table Position Indicator Accuracy  
Gantry Position Indicator Accuracy  
Alignment Light Accuracy  
Air Kerma at 100 mA

### **Other tests**

Radiation Leakage  
Tube Voltage  
HVL  
Detector Response  
Defective Detector Elements  
Thickness compensation  
Acquisition time  
Guard against over exposure  
Dosimetry  
Focal spot – detector distance  
Image edge to table top distance  
X-ray field to image field alignment  
Geometric Accuracy  
HU value Accuracy  
MTF – detector  
NPS  
Artefacts

*Courtesy of Prof. Sechopoulos, RU Nijmegen*

# CBCT1000 @ RU Nijmegen



## **User's Manual for the Koning Breast CT System**



### **Manufacturer tests**

**LOW CONTRAST RESOLUTION  
CT NUMBER ACCURACY  
FIELD UNIFORMITY  
NOISE**

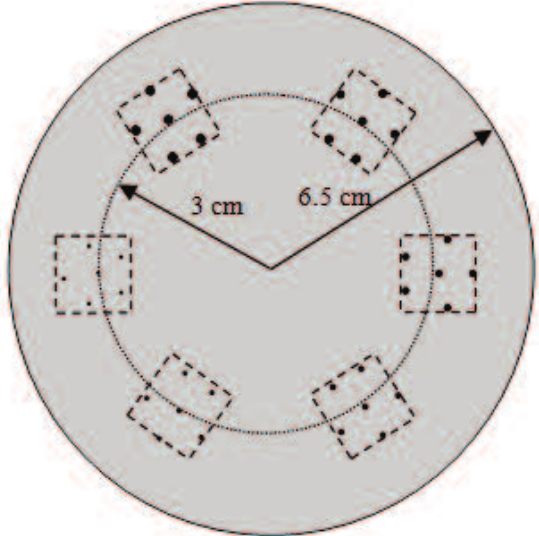
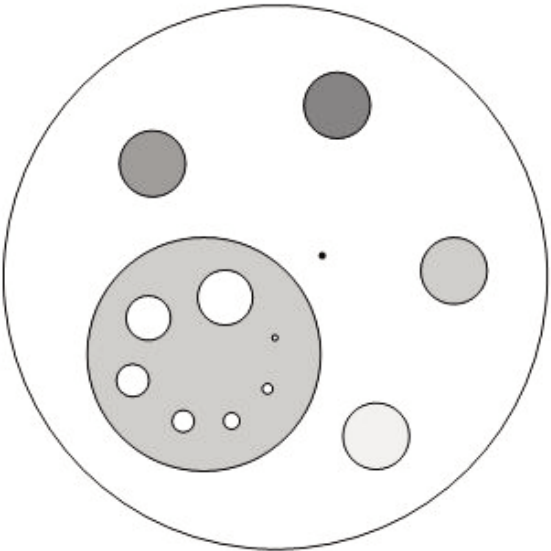
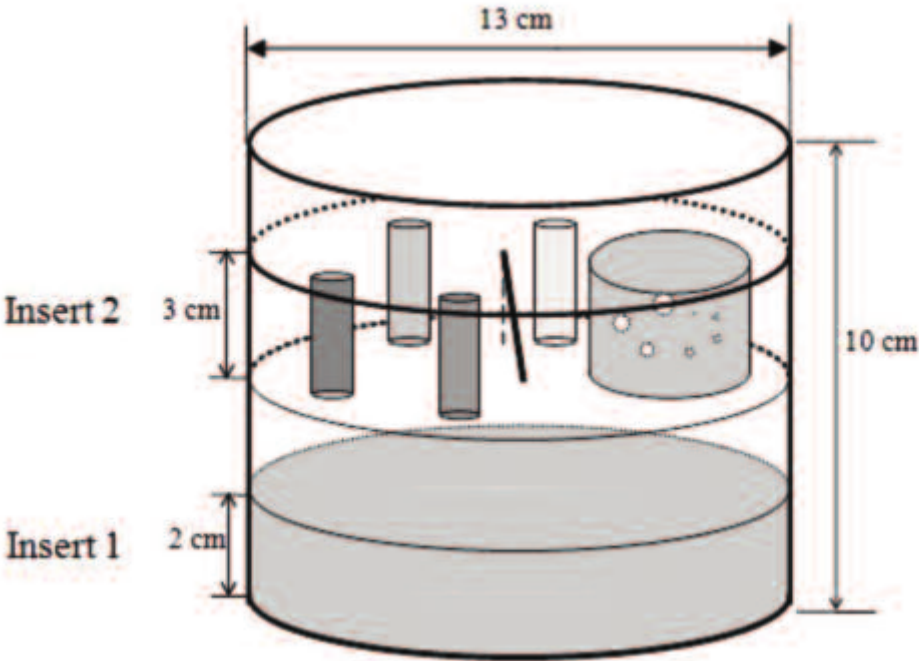
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Table Position Indicator Accuracy  
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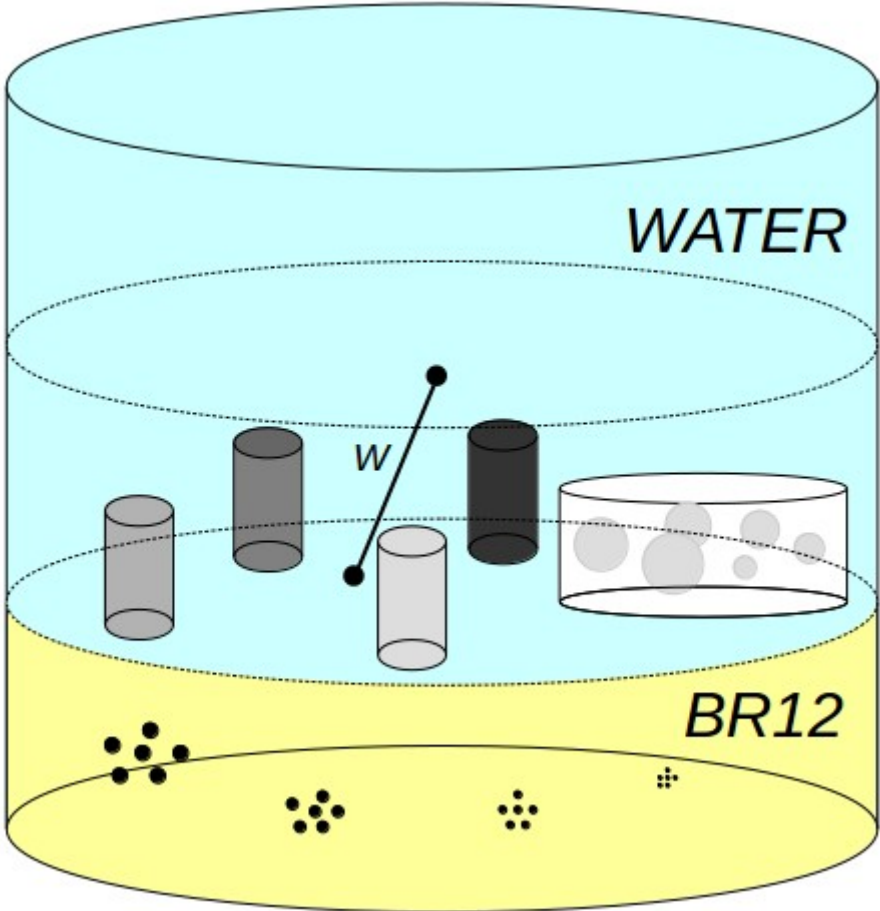
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# Koning Breast CT Quality Control Phantom



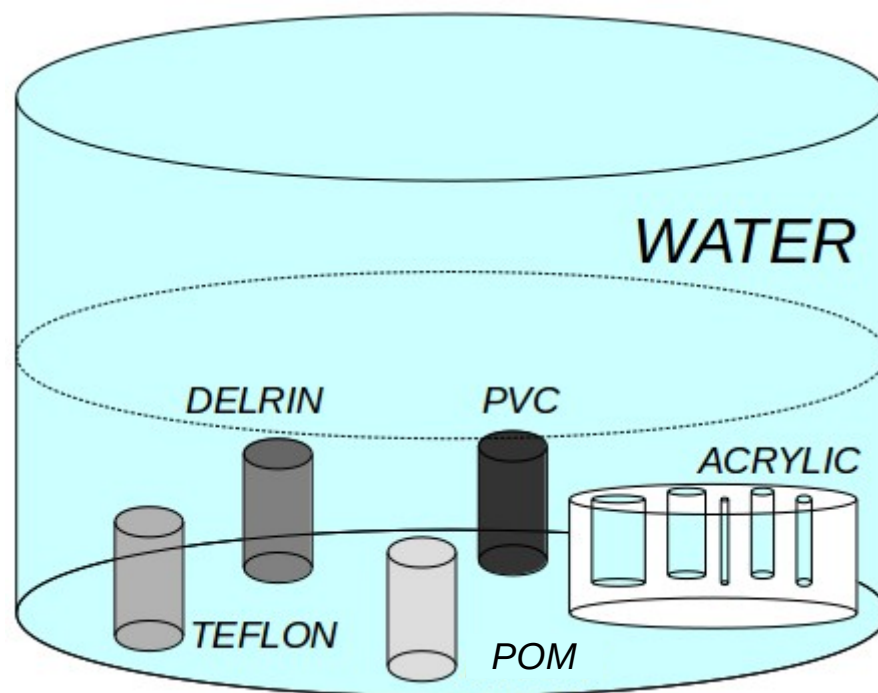
# Koning Breast CT Quality Control Phantom



$d = 13 \text{ cm}$

$h = 10 \text{ cm}$

# Fantoccio QC per misure di contrasto



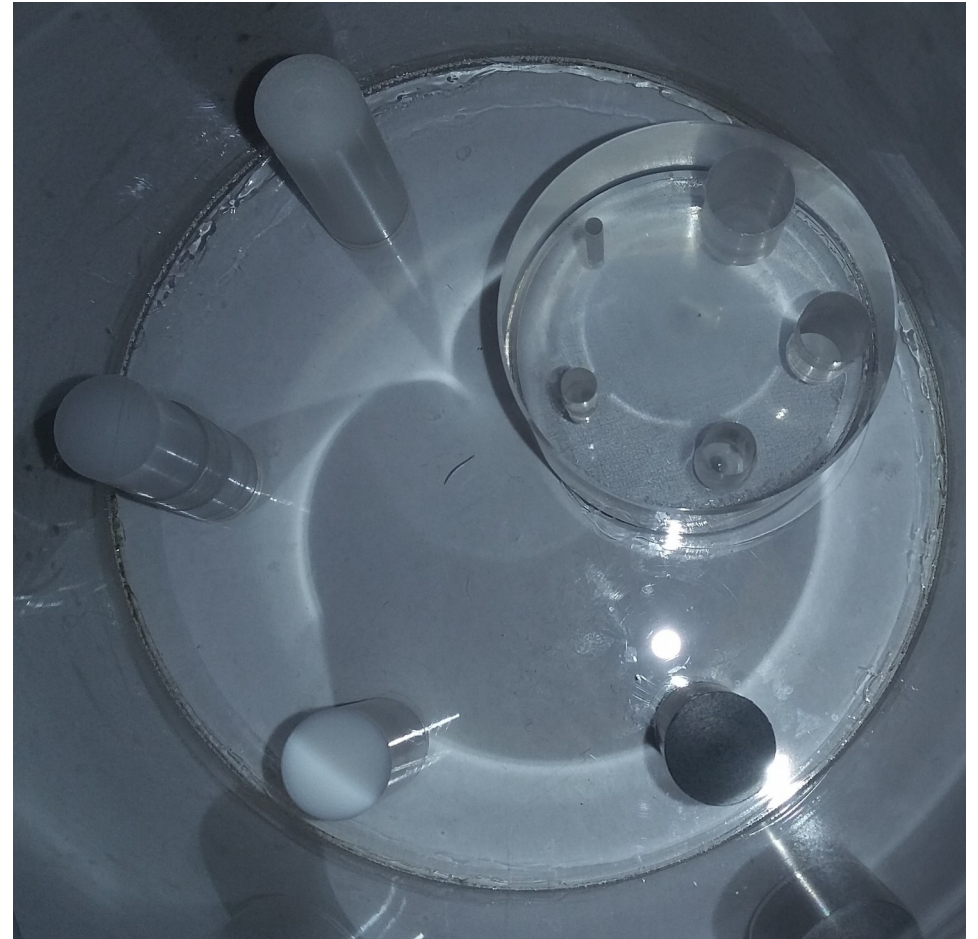
$d = 12 \text{ cm}$

$h = 10 \text{ cm}$

Struttura proveniente dal progetto SYRMA-CT

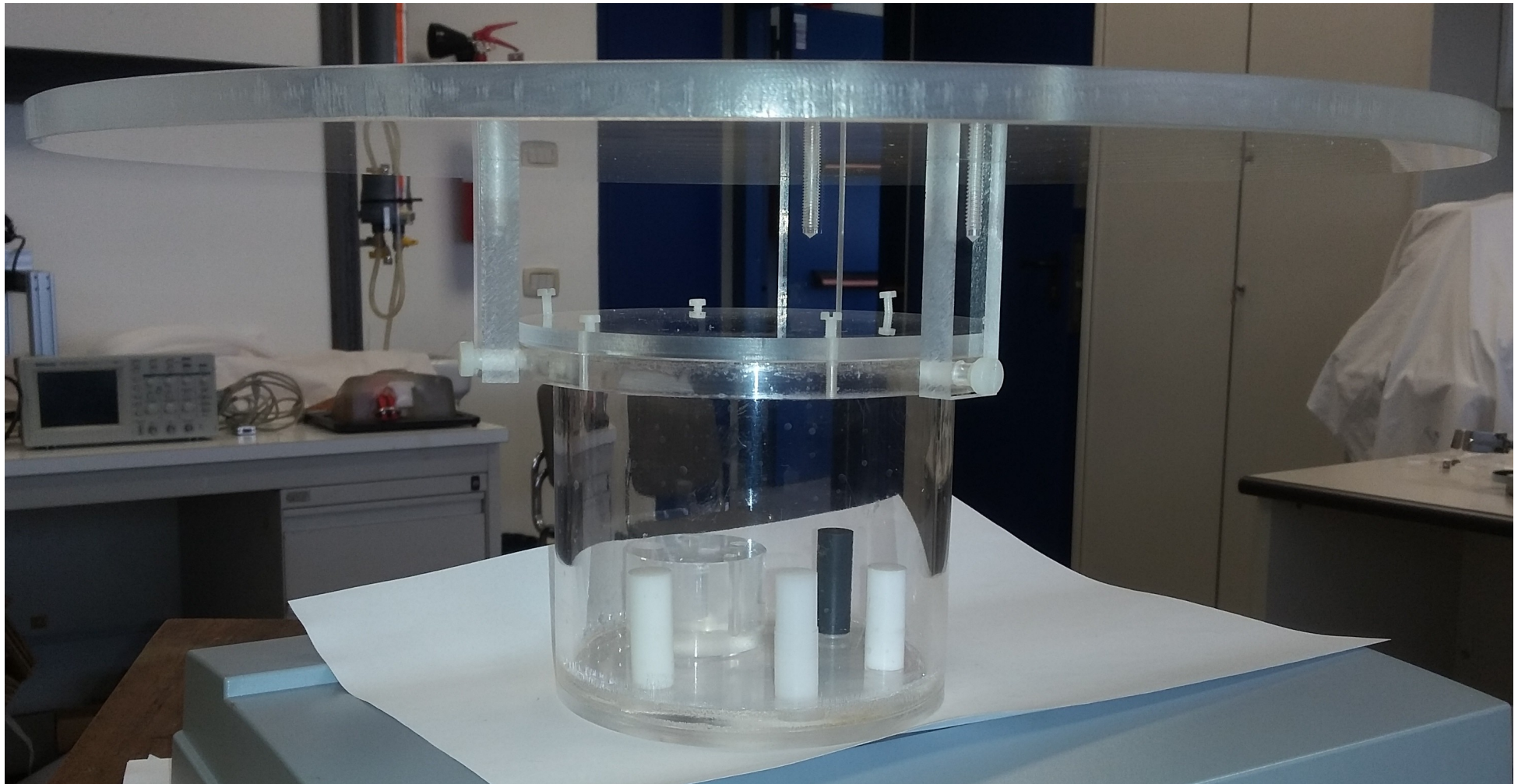


# Fantoccio QC per misure di contrasto



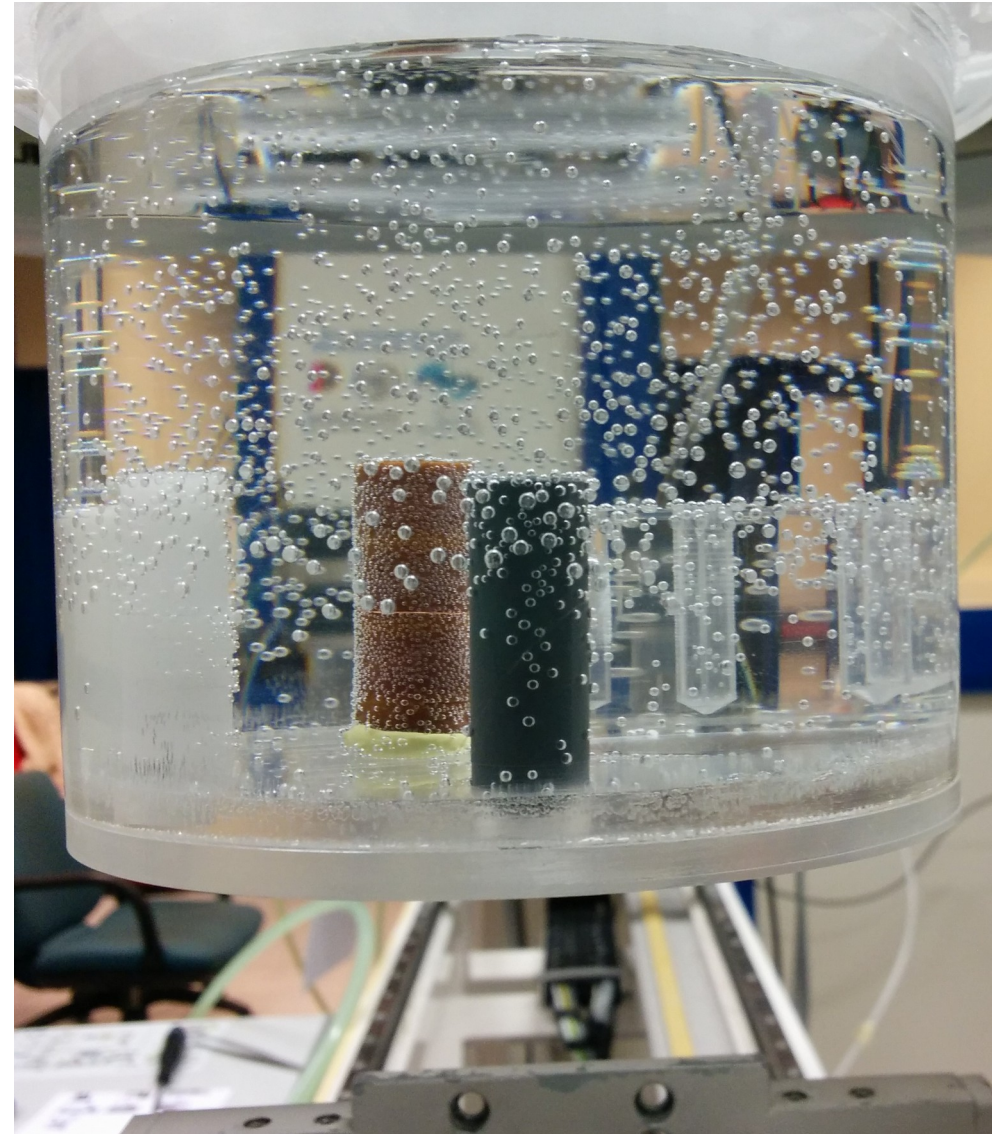
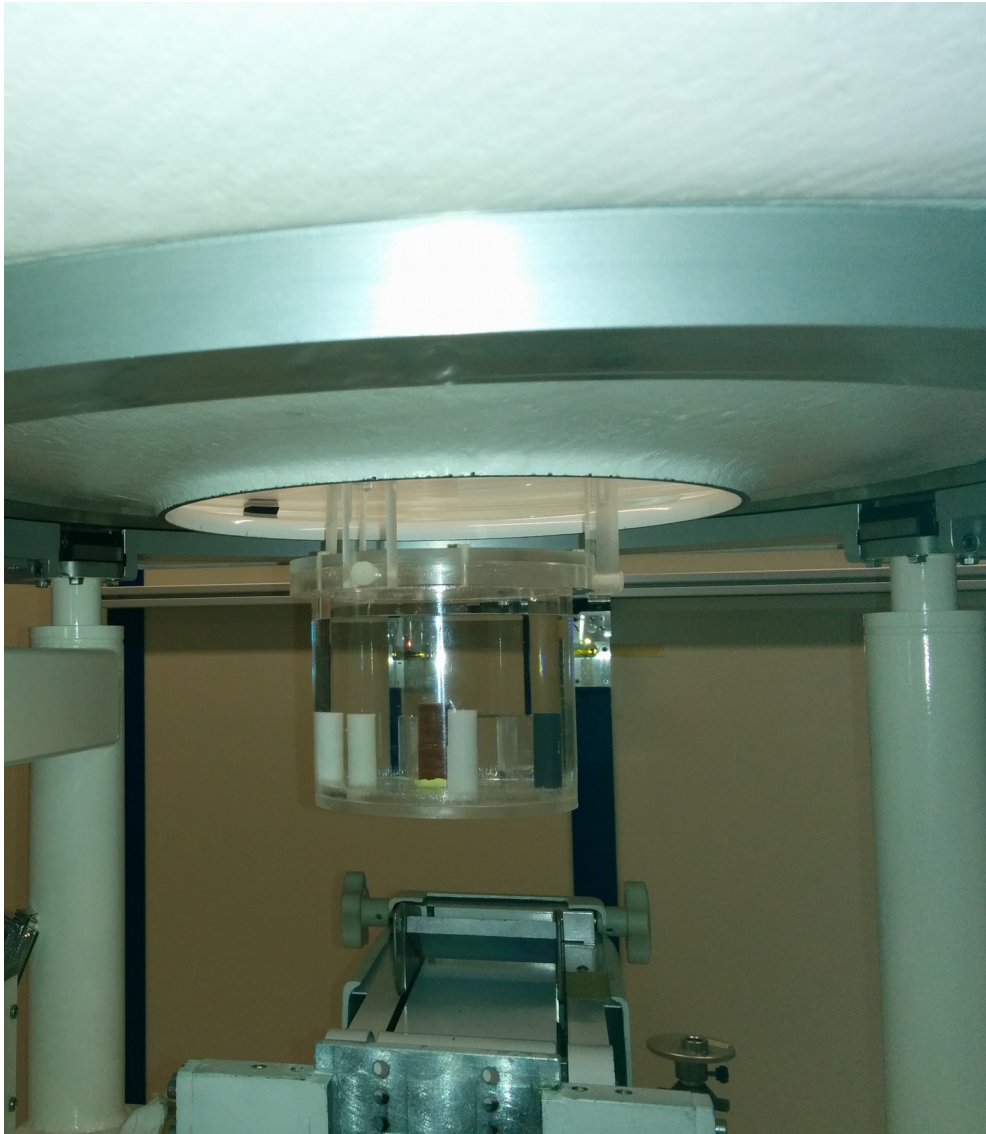


# Fantoccio QC per misure di contrasto





# Fantoccio QC per misure di contrasto



Che problematiche emergono  
dall'utilizzo di questo fantoccio?

In che direzione andare per ottimizzarlo?

Per saperlo, bisogna guardare le immagini...