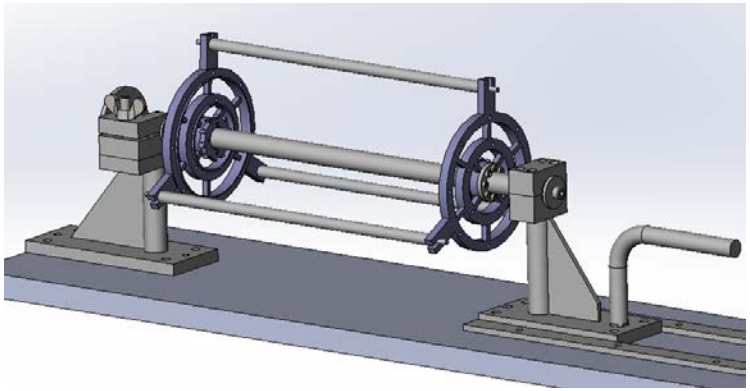
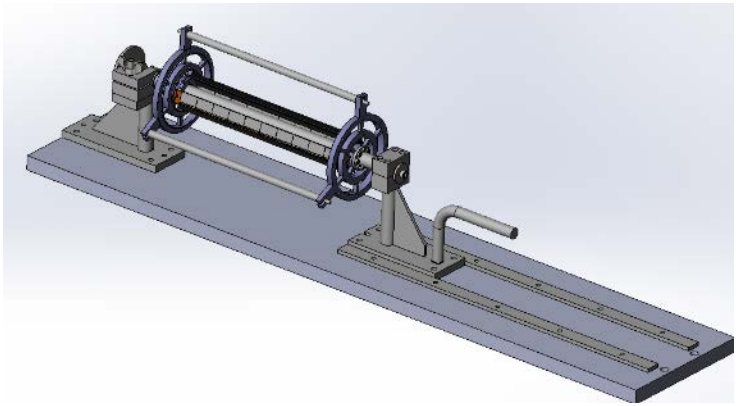
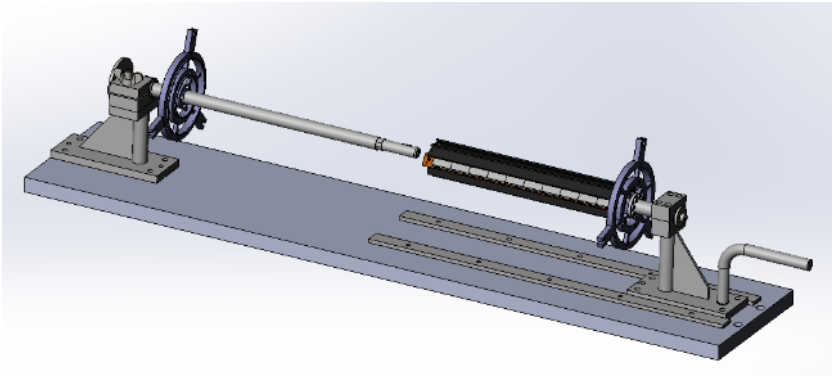
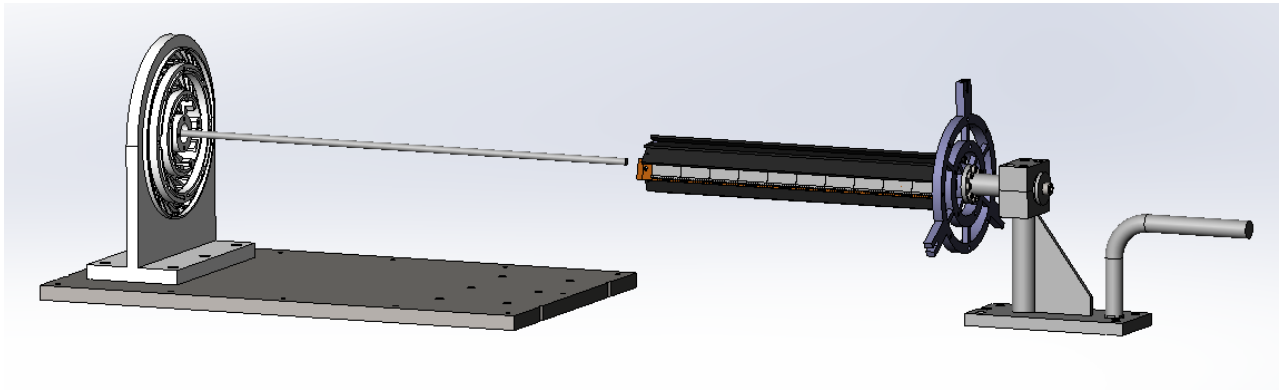
Tooling for barrel assembly

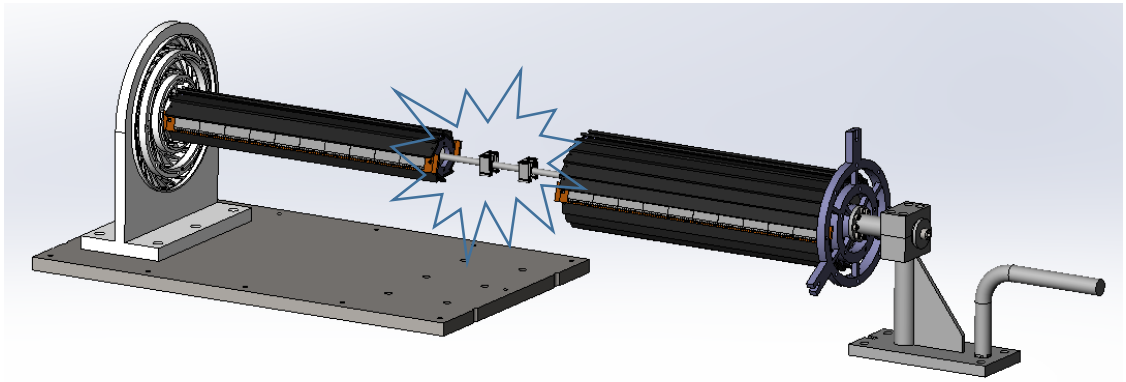


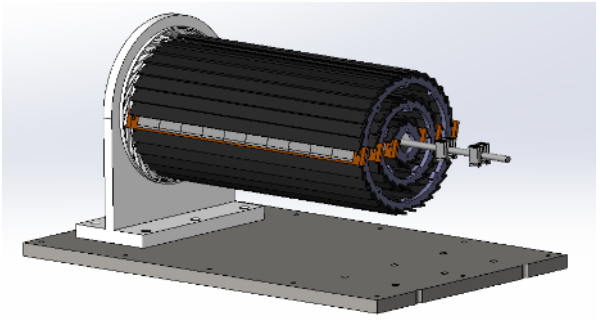


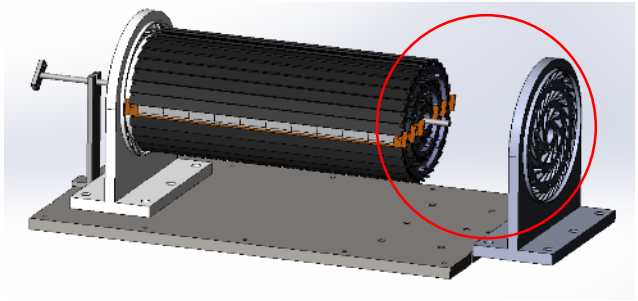


Barrel installation

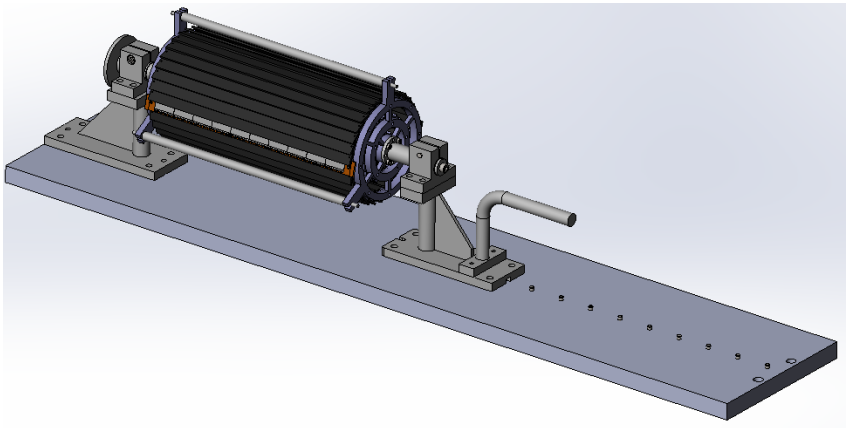


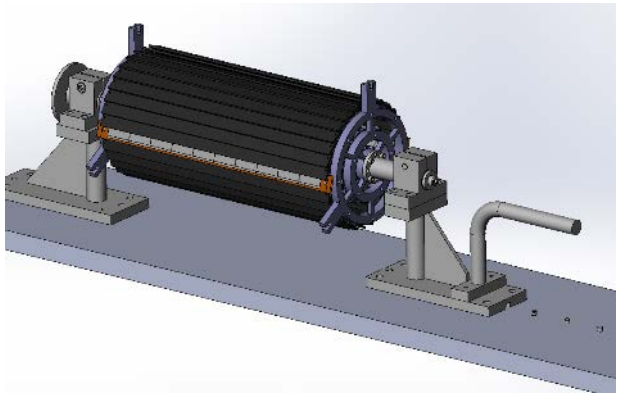


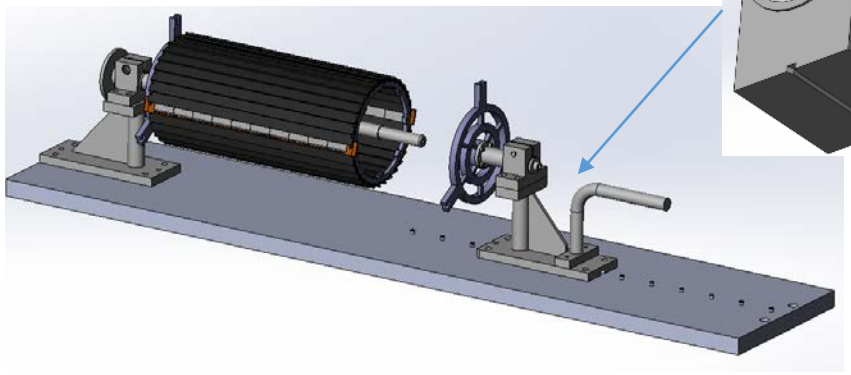


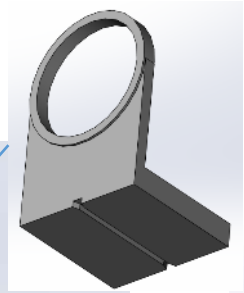


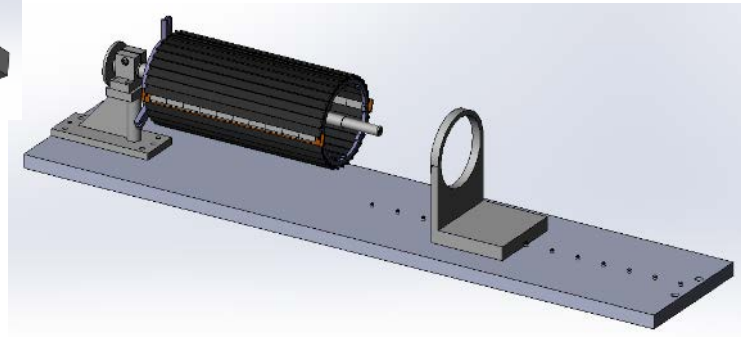
Updated tooling



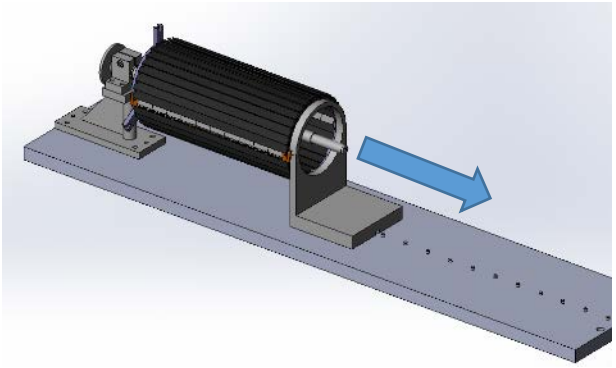


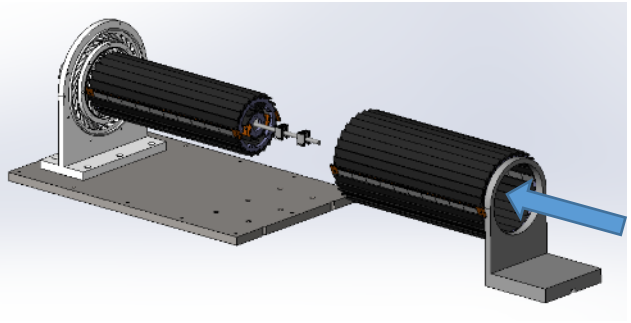


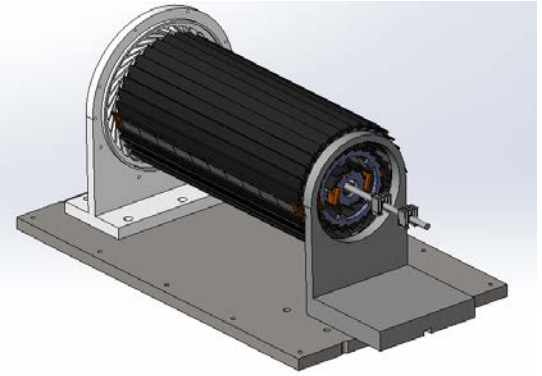




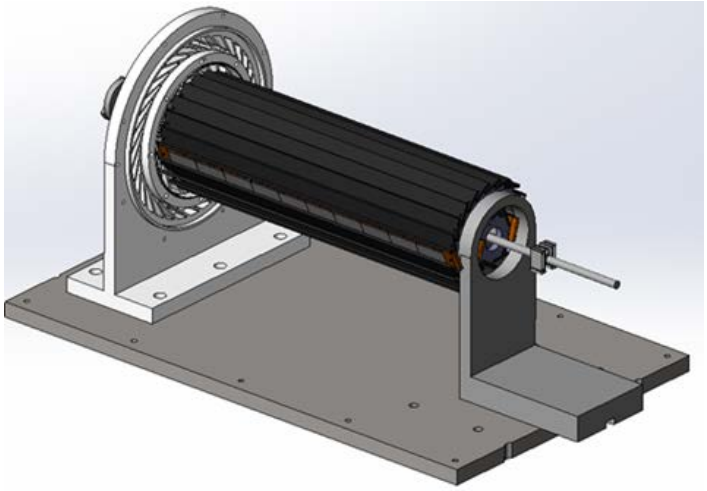
Barrel installation

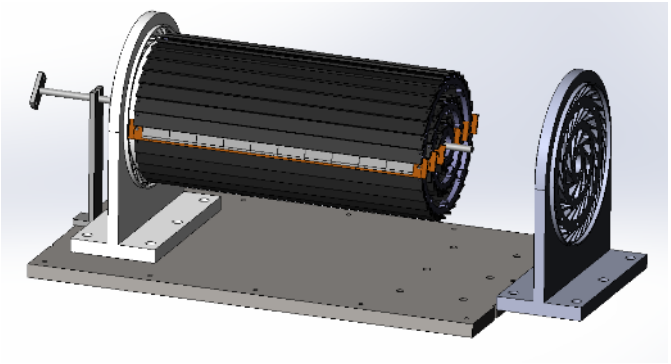






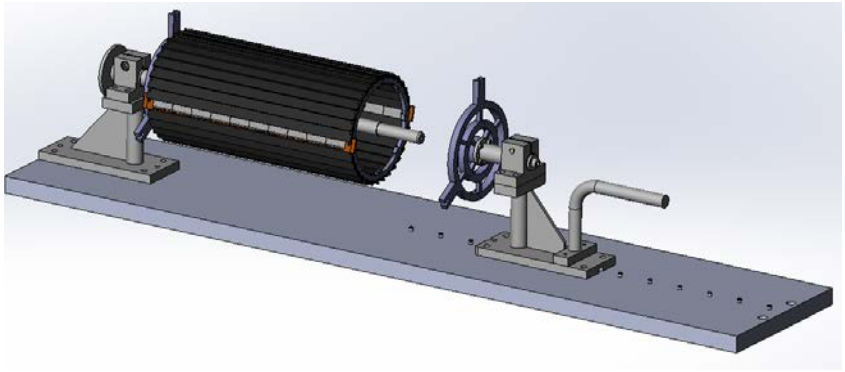
Similar auxiliary bracket for the middle barrel.

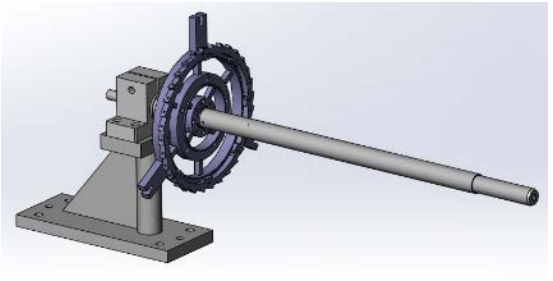




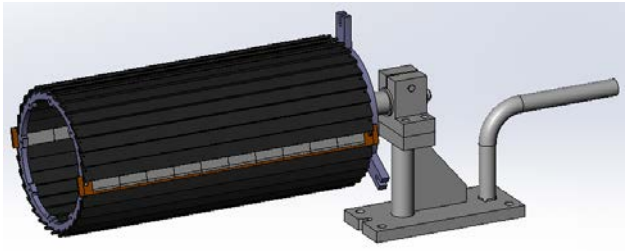
Deformation estimation

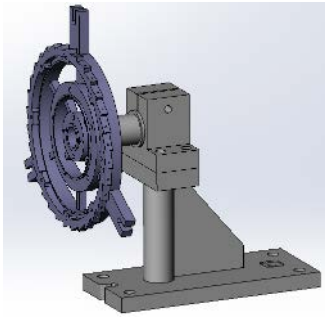
The cantilevered *outer barrel* on tooling (with shaft) sinks：
273/120 x (0.017+0.013)/ = 0.07mm





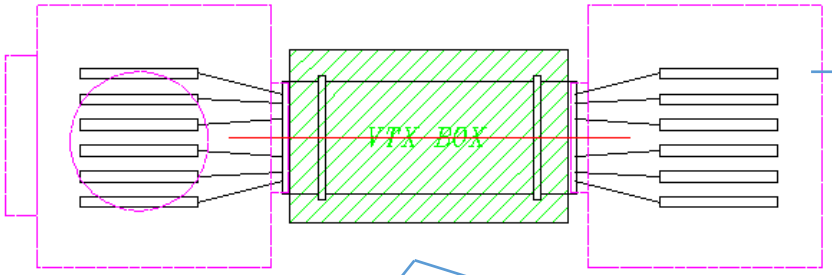
The cantilevered *outer barrel* on tooling sinks：(273/120) x 0.019= 0.04mm





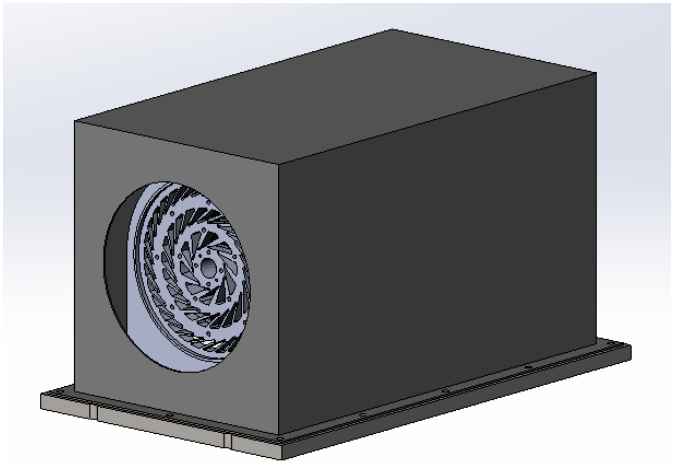
VTXD box

The box for VTXD beam test.

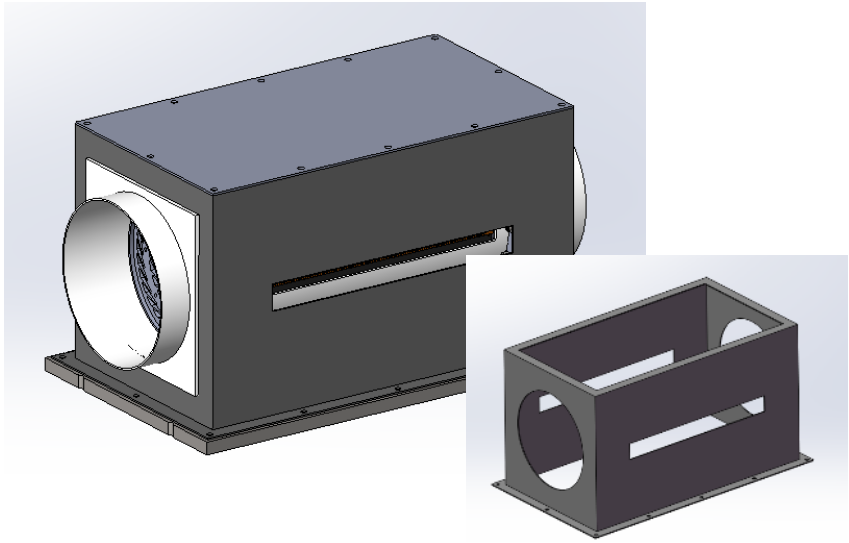


The connections with those which are outside the box (like fan and electronic components) are to be considered.

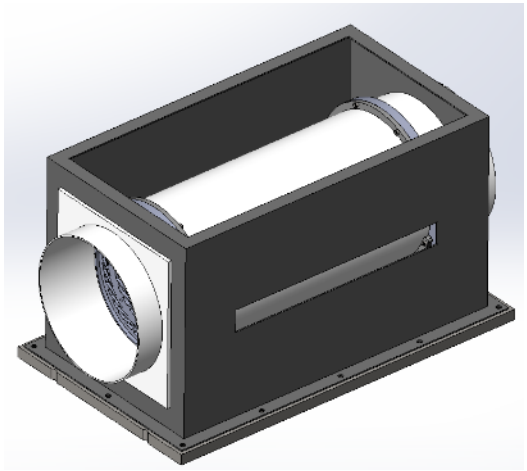
Beam test without the shell

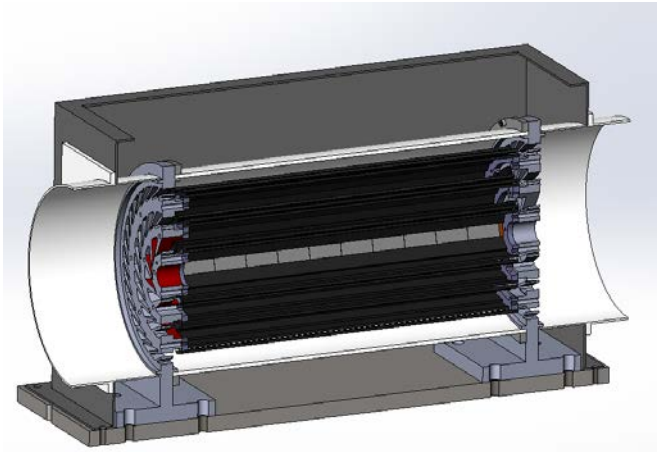


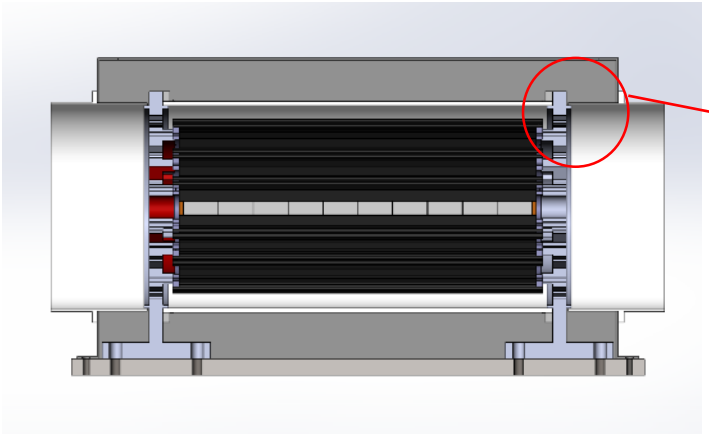
Beam test with the shell

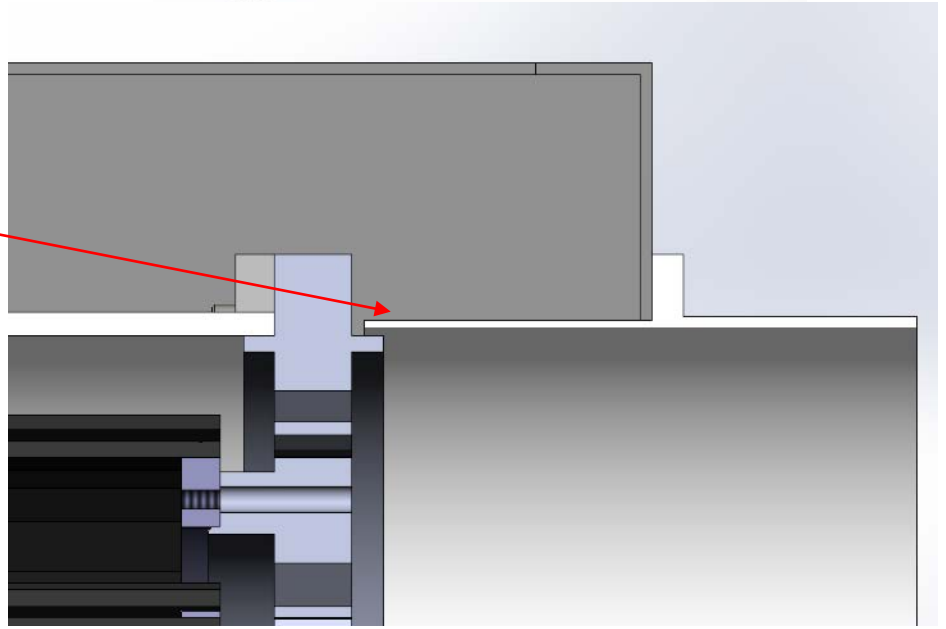


VTXD box









Weight estimation of the VTXD box

Bracket: 3.25 kg

base plate : 9.9 (SS) / 3.4 (AL)

shell : 1.5 mm thick $1.5 \cdot \frac{7.86}{2.7} = 4.367$ SS 1.5 AL

1 mm thick $4.4 \cdot 0.75 = 3.3$ SS 1 AL

Vent tube $\pi \cdot \left(0.0775^2 - 0.0745^2\right) \cdot 0.29 \cdot 1200 = 0.499$

			1.5 mm	1 mm
VTX	$0.51 + 0.34 + 0.16 = 1.01$			
Total（1）	$3.25 \cdot 2 + 9.9 + 4.4 + 0.5 + 1 = 22.3$		21.8	20.7
total（2）	$3.25 \cdot 2 + 3.4 + 1.5 + 0.5 + 1 = 12.9$	optimized bracket 0.5 kg reduced	12.4	11.9