



CLIC G structure Update

Pedro Morales

Date

Copper characterization on going

No further actions for the moment.

As said in previous meetings, the temperature of the heat treatment for stress relief is set at 245deg, holding for 4 hours

Mock – up on going

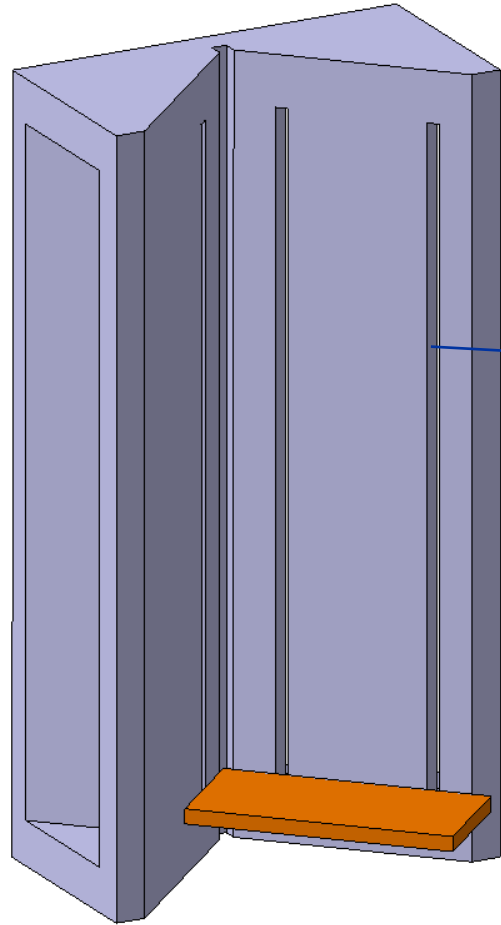
Pre-machining done

TTH doing the cycle after cleaning

Previsions – Next week start the back and forth with metrology and final machining.



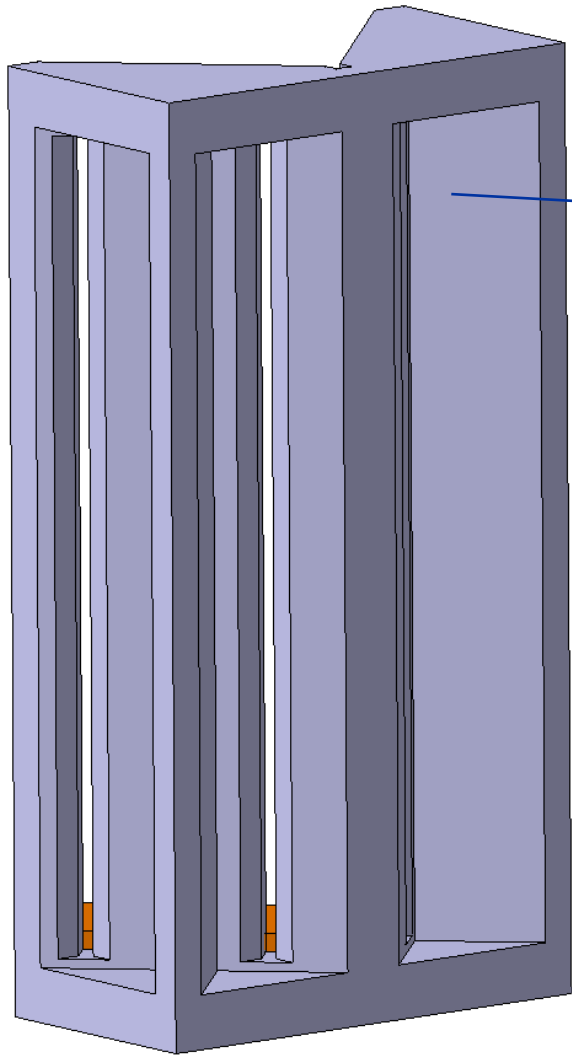
Alignment column granite



Checked with the two subsidiaries of Microplan and the answer is that we cannot produce the part we want without assuming a huge risk of damage on the V. In other words, the part will be fragile.

These channels are for introducing the probe of the measurement column and check the alignment before moving it back.

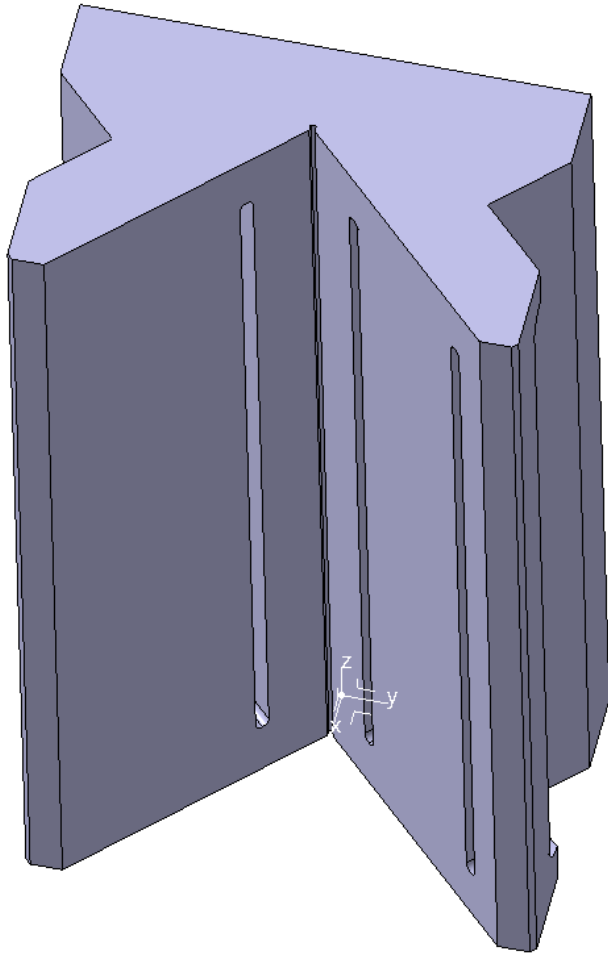
Alignment column granite



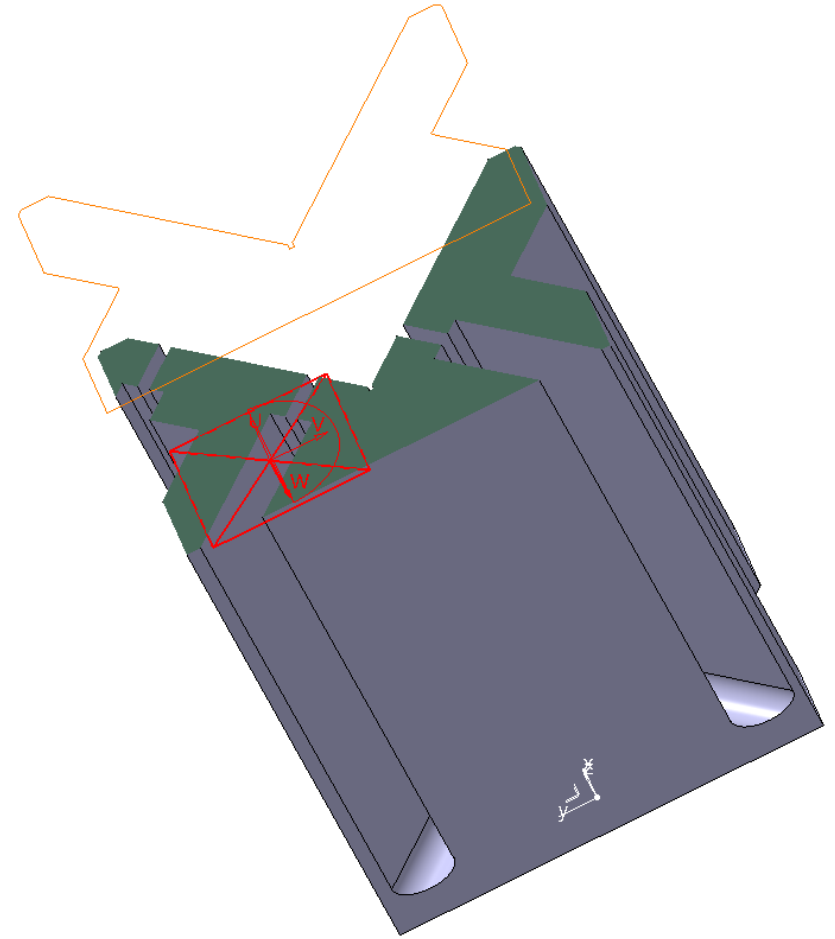
The back of the column is set to be with some empty gaps for allow us to access the reference pads with the probe.



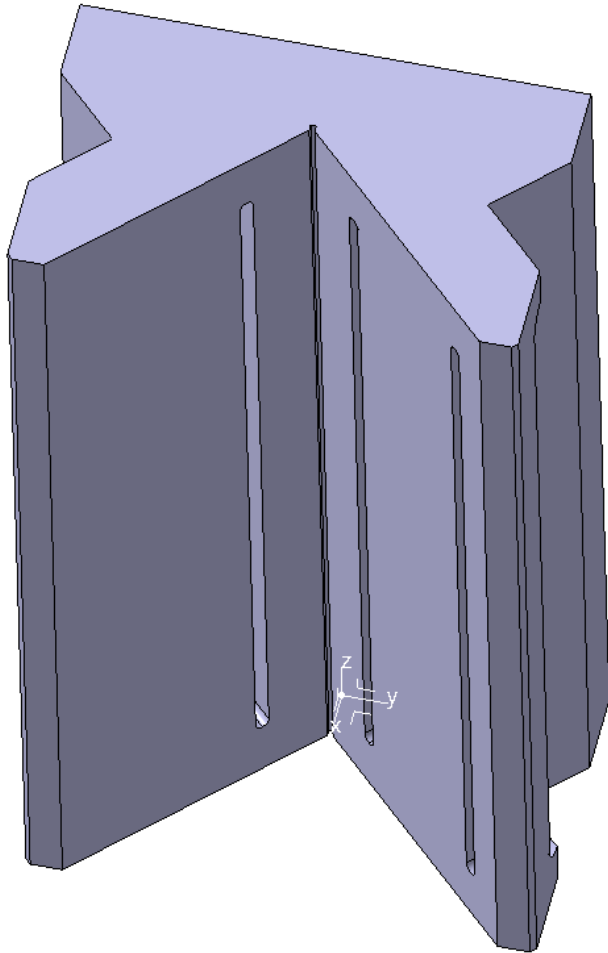
Alignment column granite – Microplan proposal



They propose to do this approach with the grooves but with the back very thick, this block us to access as we needed

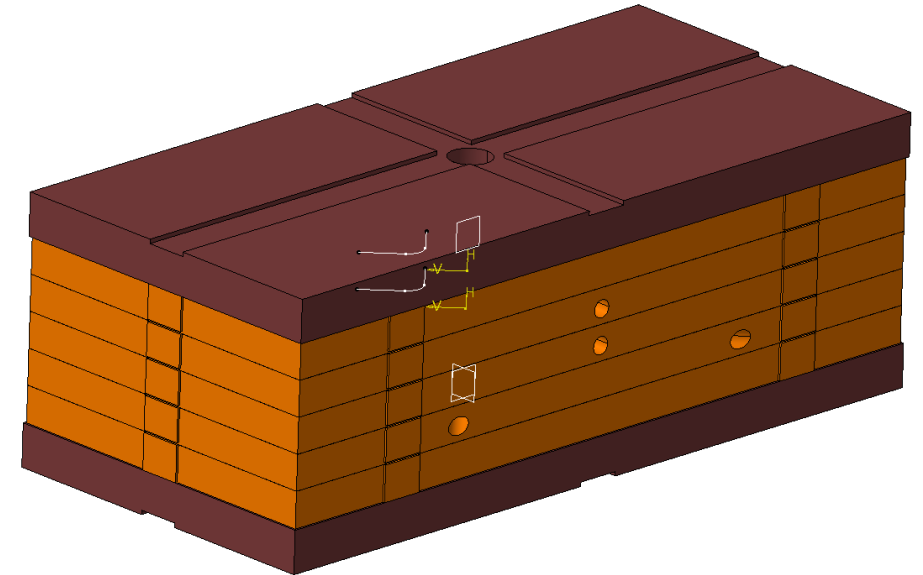
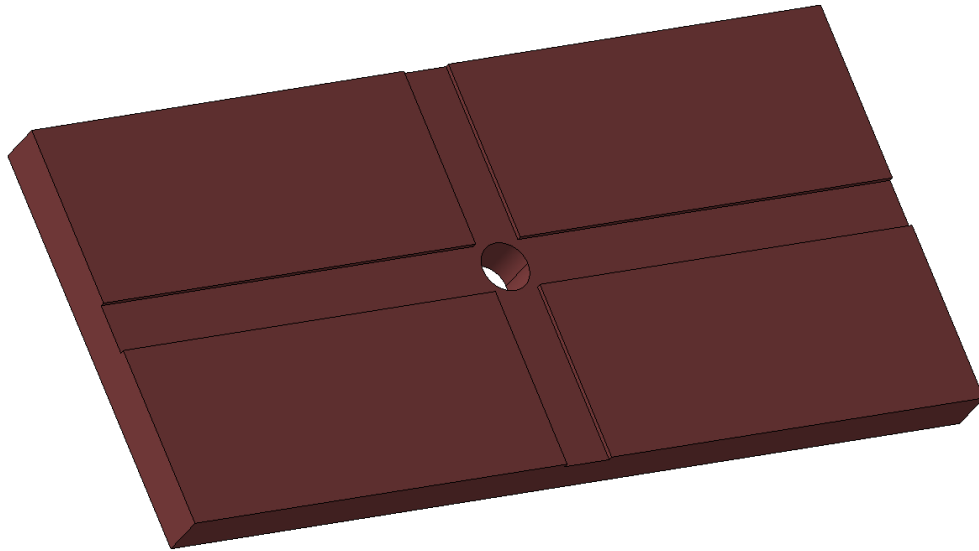


Alignment column granite – Possible solution



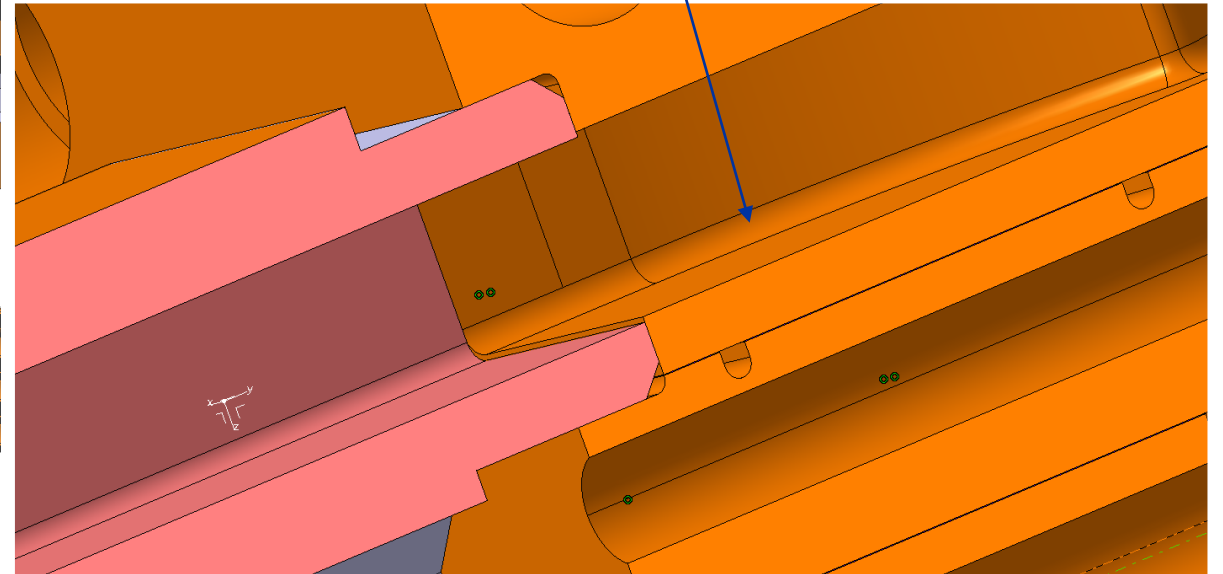
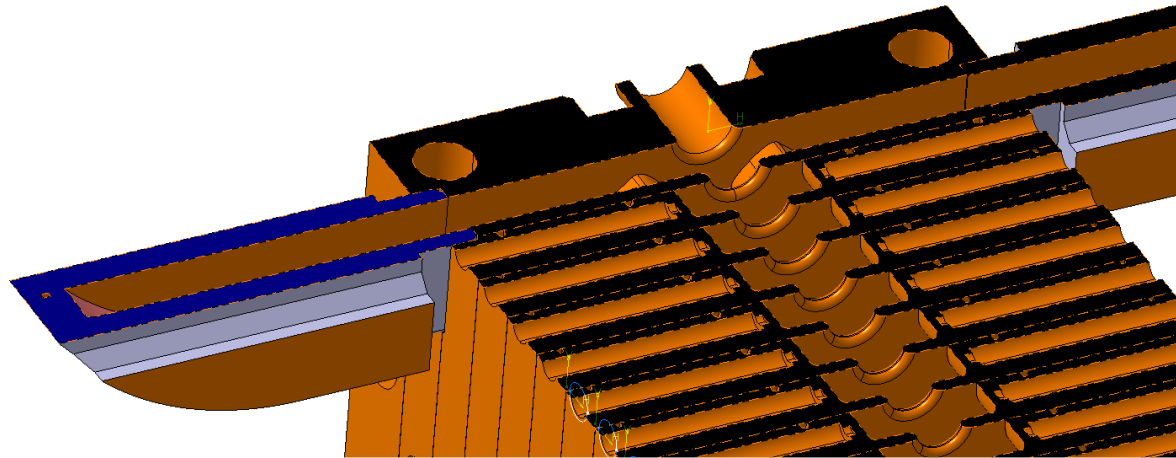
Eliminate the grooves and do the same as we have done with the mock-up, duplicate the references and control de alignment from them

Graphite for brazing



Started the quotation to bid to check with previous suppliers of this items.
We have been checking with the main users and brazing experts and the tolerances and size seems to be the correct one

Found a small misalignment



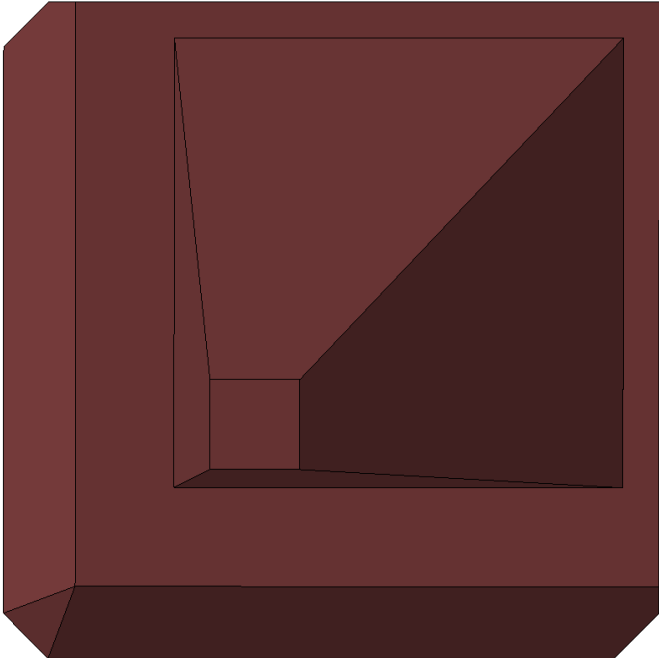
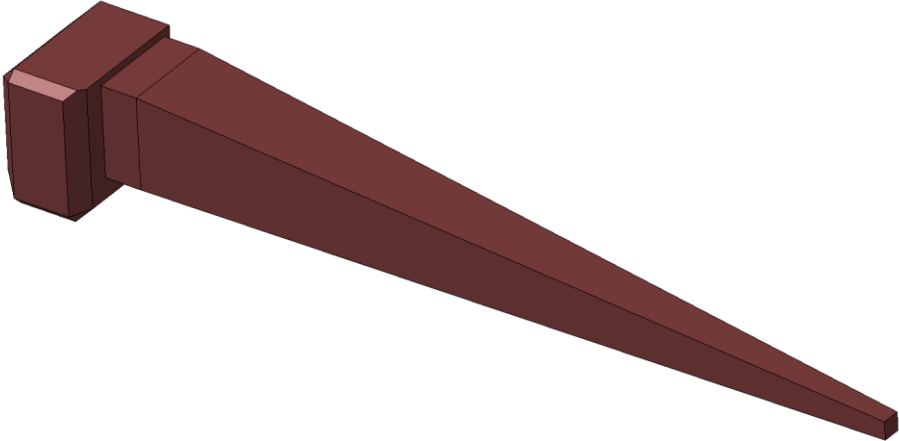
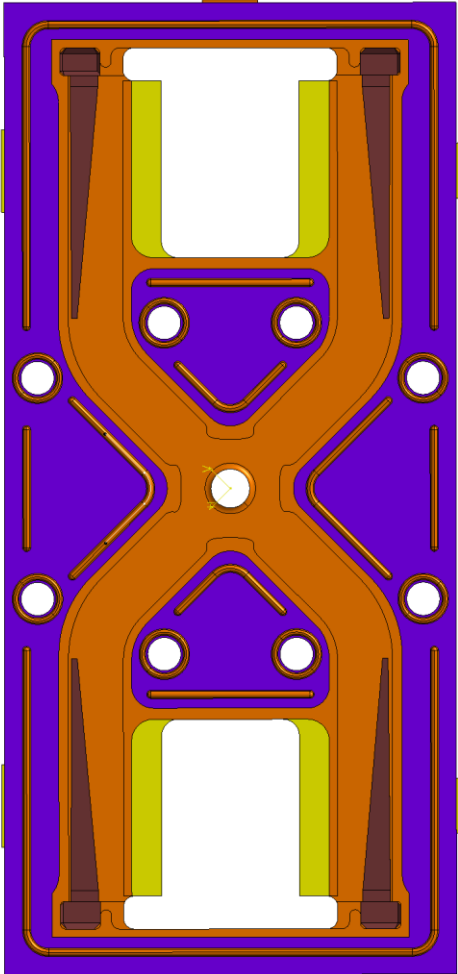
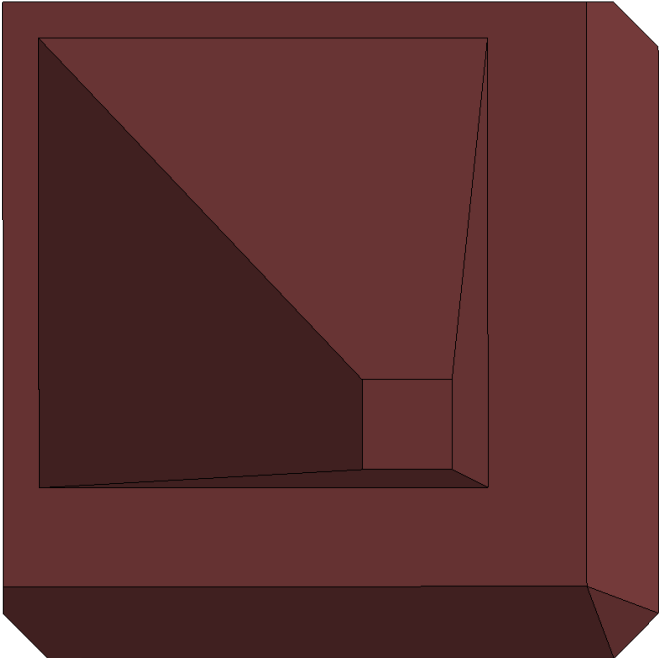
Question about Rr

This is mostly due to the scaling of the internal cavity and not in the WG.

I think we should do it without the scaling.
Do you?

HOM Loads advantages

Symmetric part



HOM material issue

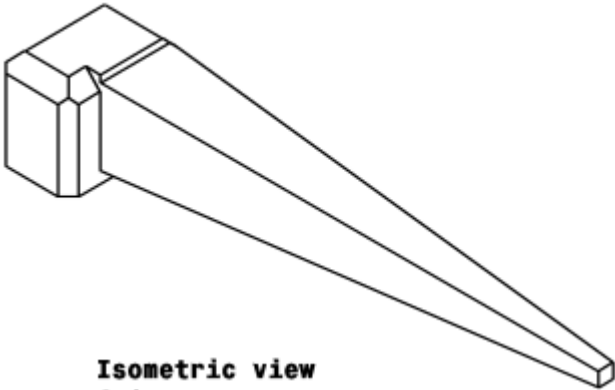
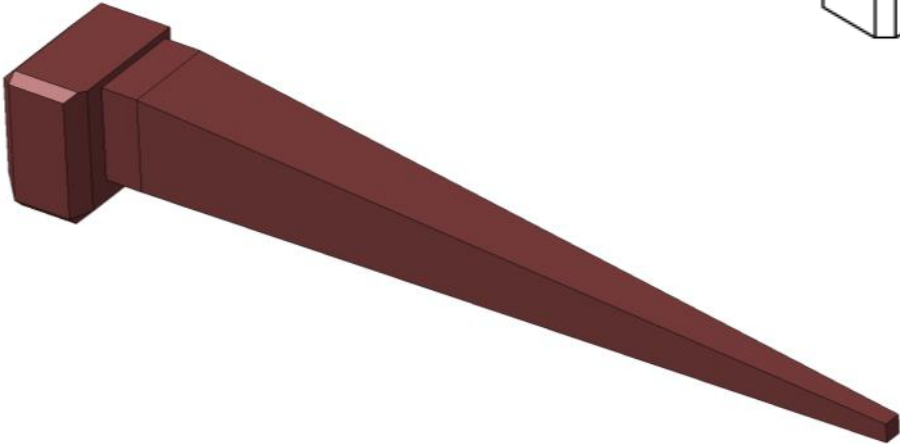
Ekasic P is no longer available in the market.

There is no data why this material is working well but it is, so for finding a substitute we have ask Ping to run some measurements and we have asked 2 different materials from different suppliers

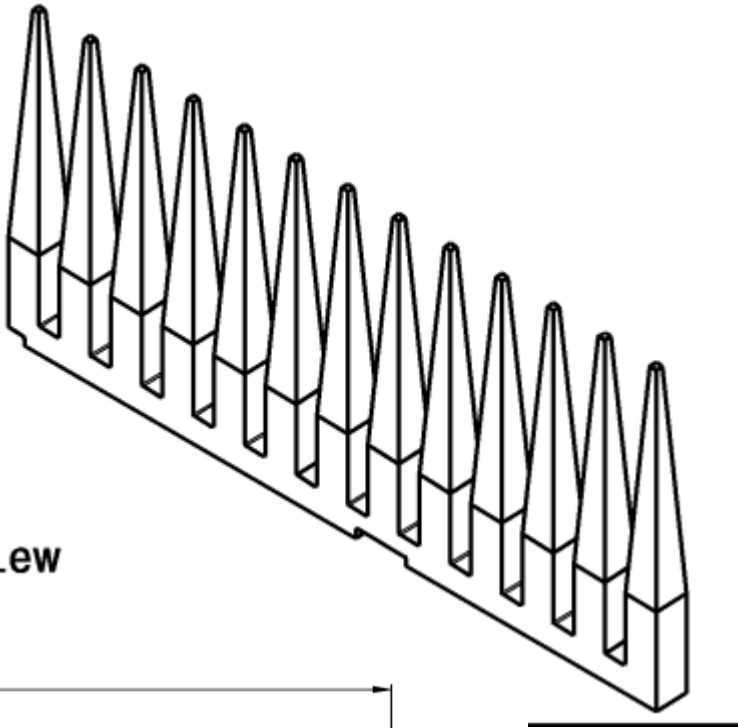
Mention the cost surge because of the complicated shape. Can we carry out a sim of the tolerances we can accept?

Materials		Ekasic P	Ekasic F	SC-C	Boostec
Density	g/cm3	2.76-2.89	3.15	3.12	3.2
Porosity	%	10 - 14	<2	<3	1.5
Hardness	GPa	24.5	24.5	22	22
Thermal expansion (Coef)	10e-6/K	3.8	3.8	3.3	2.2
Thermal conductivity	w/mK	110	130	120	180
Specific electrical resistance	Ohm*cm	>10e8	>10e3	10e5-10e7	10e6-10e9

HOM Evolution

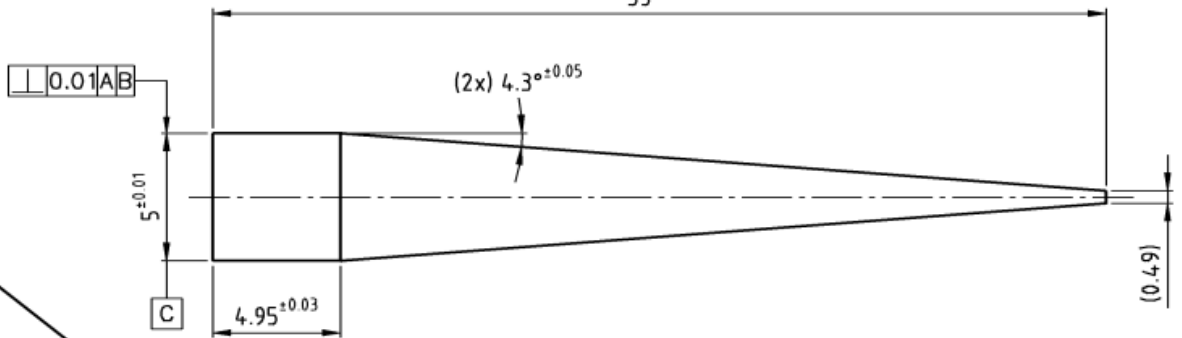
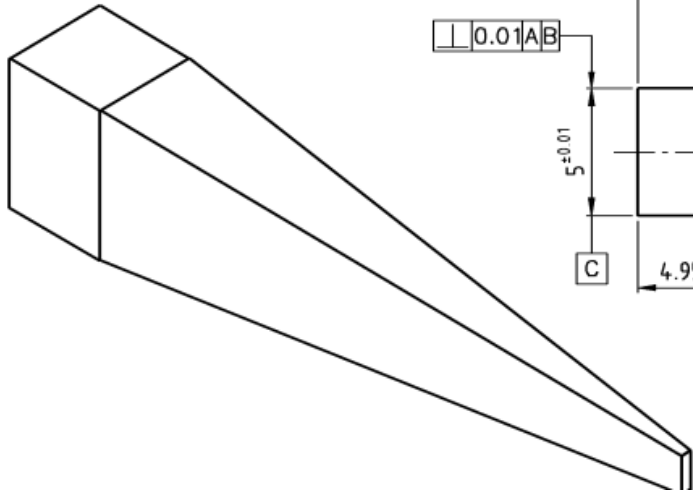


Isometric view
A-A



view
1

Folder



SHEET 11 - 6 mm mini | CERN/INF CADD/INF



home.cern