



Design & production of the prototype using new PCBs for testing in October

E. Voevodina, I. Crotty, S. Buontempo, N. Zaganidis



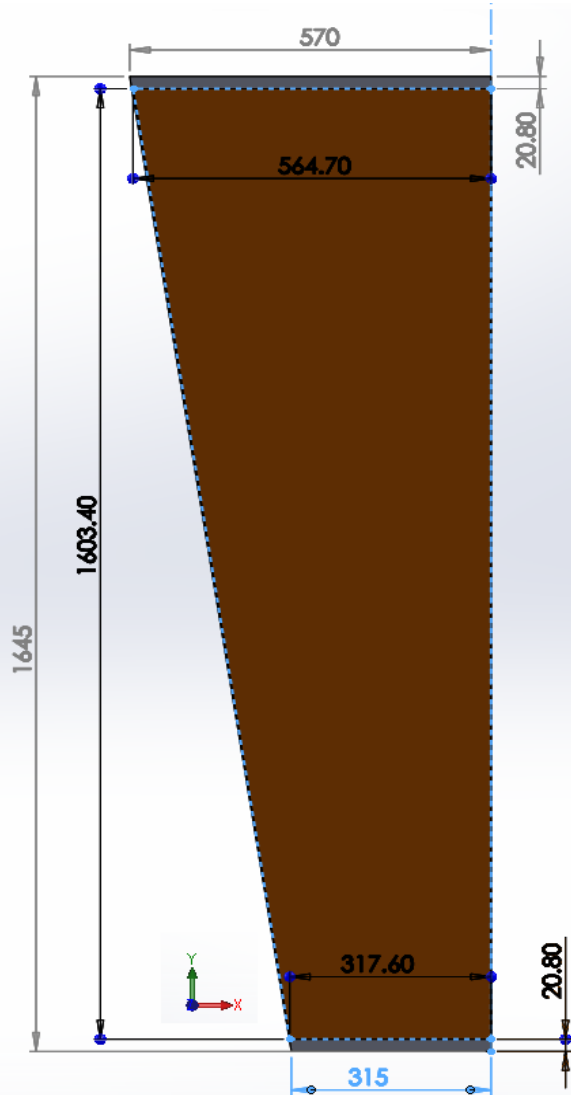
Three Options for prototype's production:

- **New Gas Gaps for PCBs of 44/88 of coaxial and return;**
- **Cut of RE4/2 bottom Gas Gaps using the available material in KODEL;**
- **Using the available of Gas gaps of RE4/2 Top narrow from CERN.**

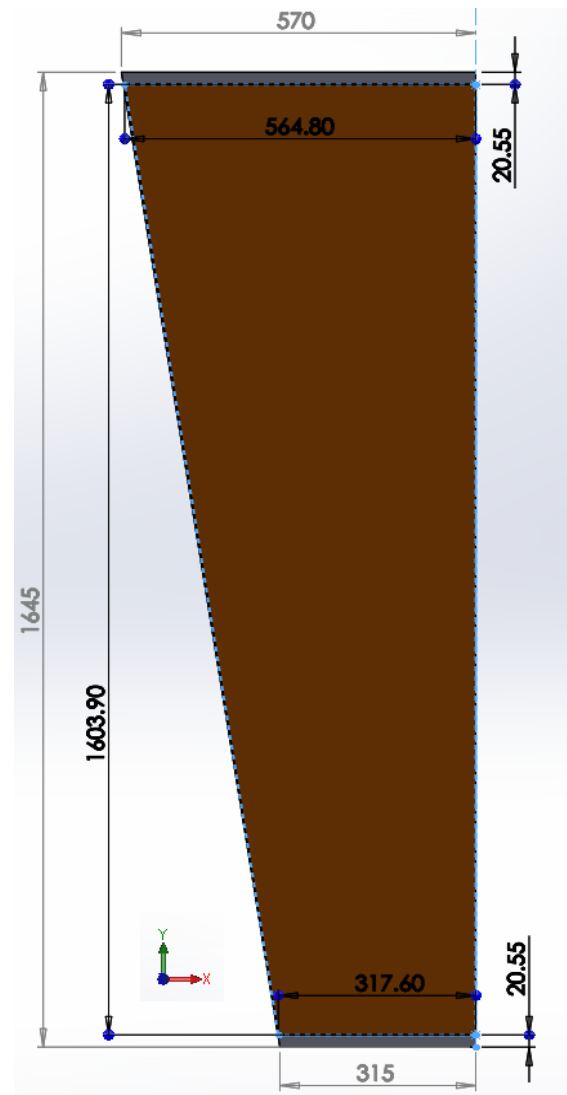


PCB with Coaxial cable

44 strips

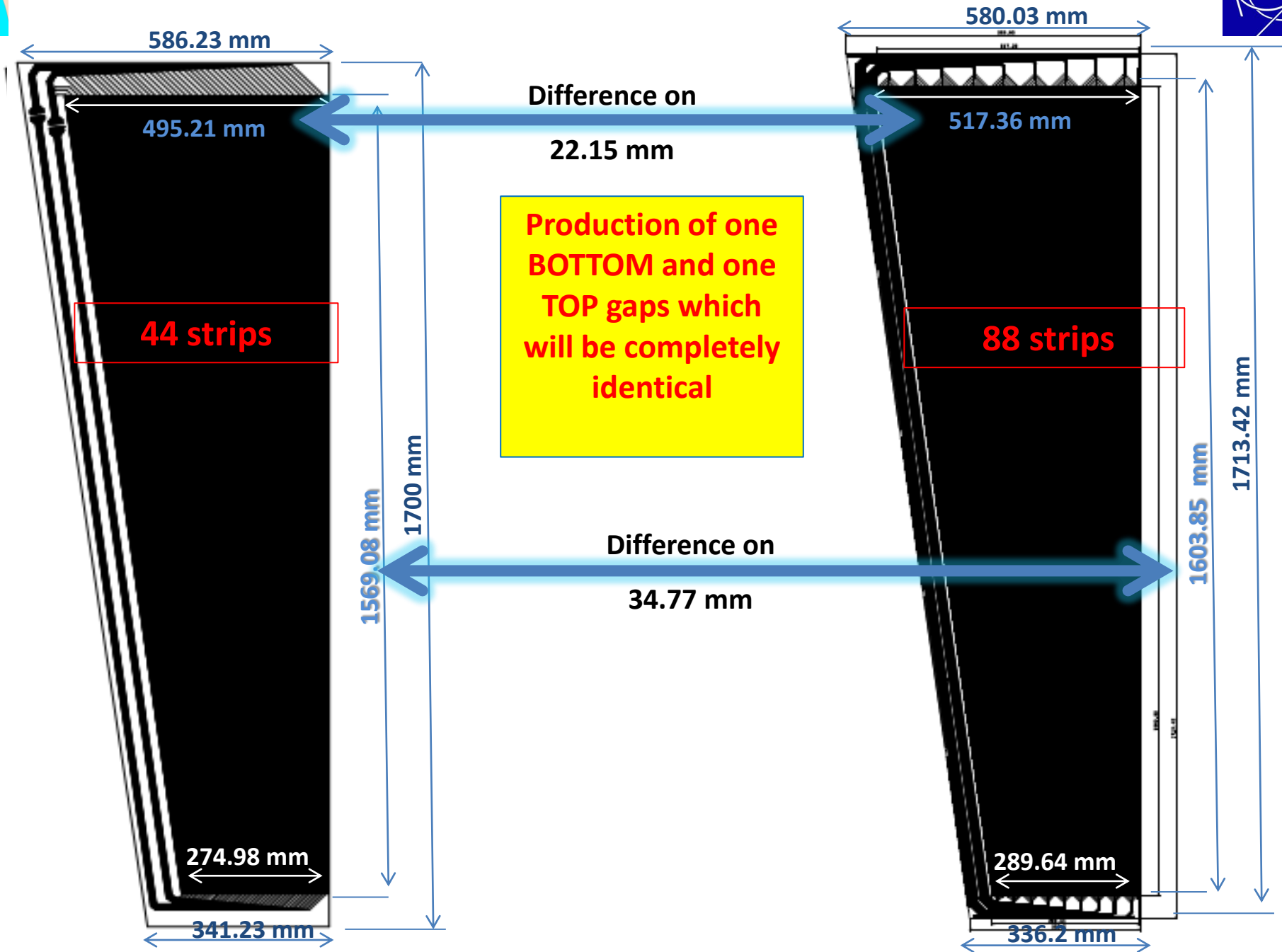


88 strips



**Production of one
BOTTOM and one
TOP gaps which
will be completely
identical**

PCBs with Pick-Up and Return strips

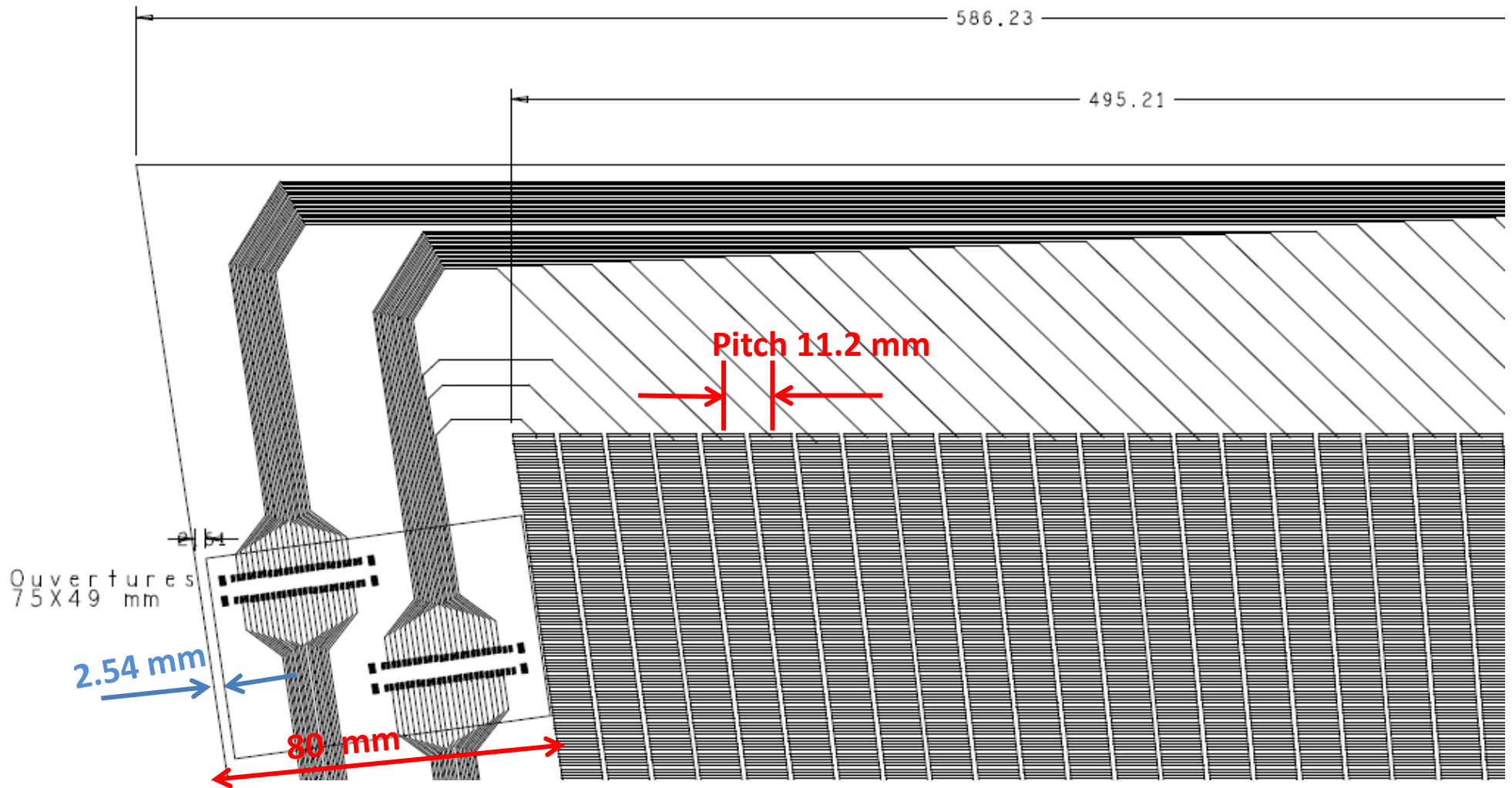




Features of PCBs with Pick Up and Return strips



44 strips

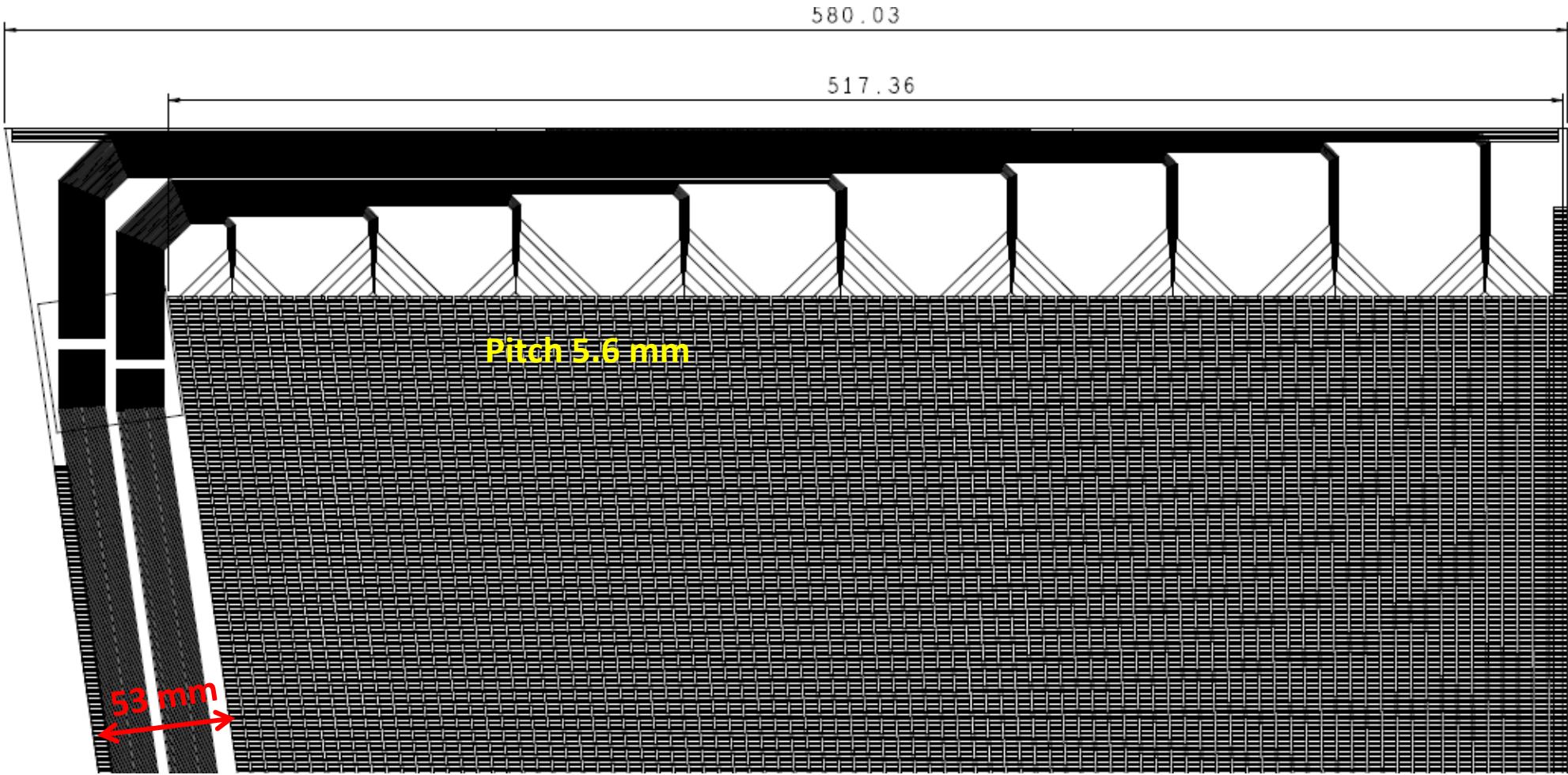




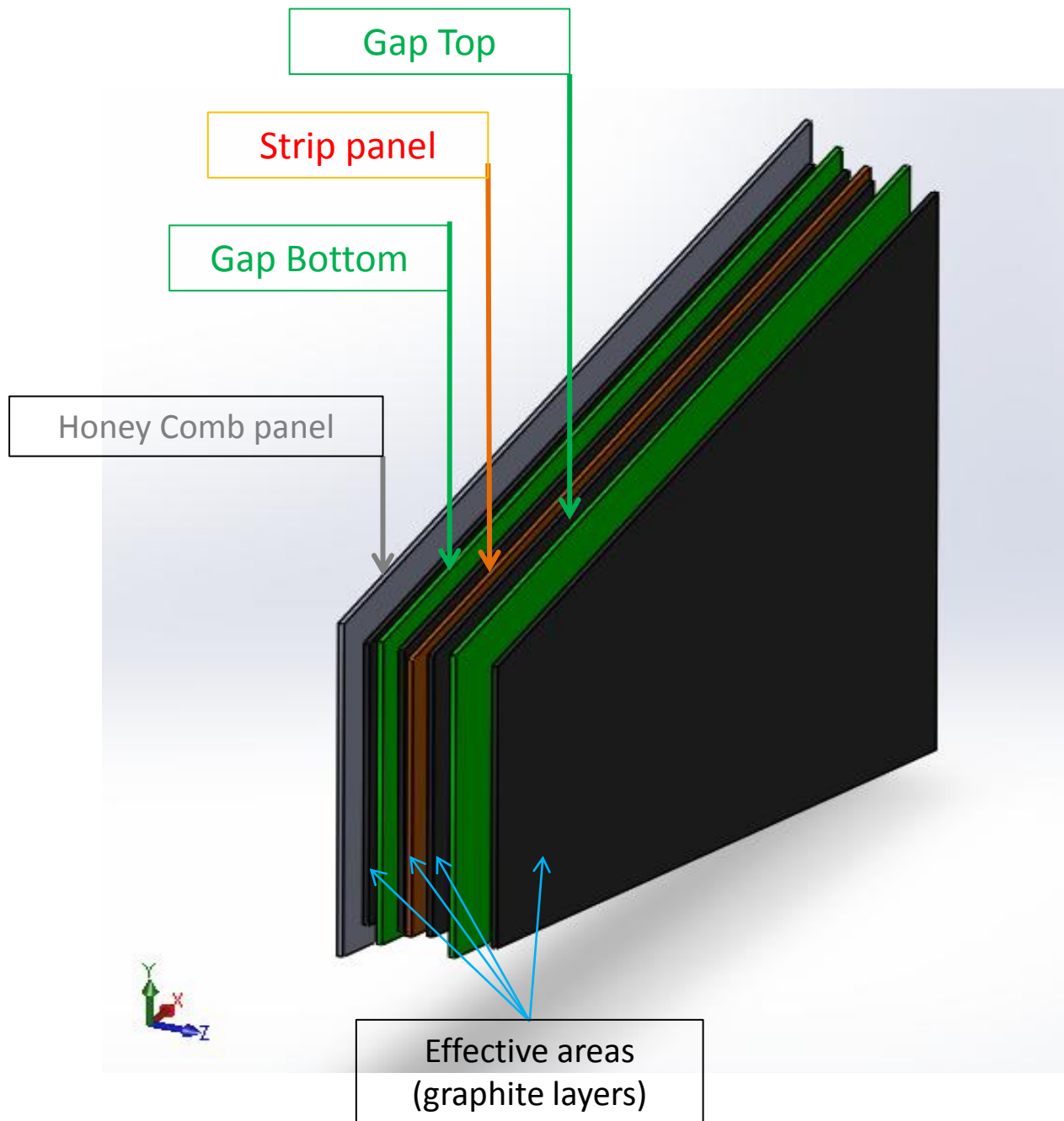
Features of PCBs with Pick Up and Return strips



88 strips

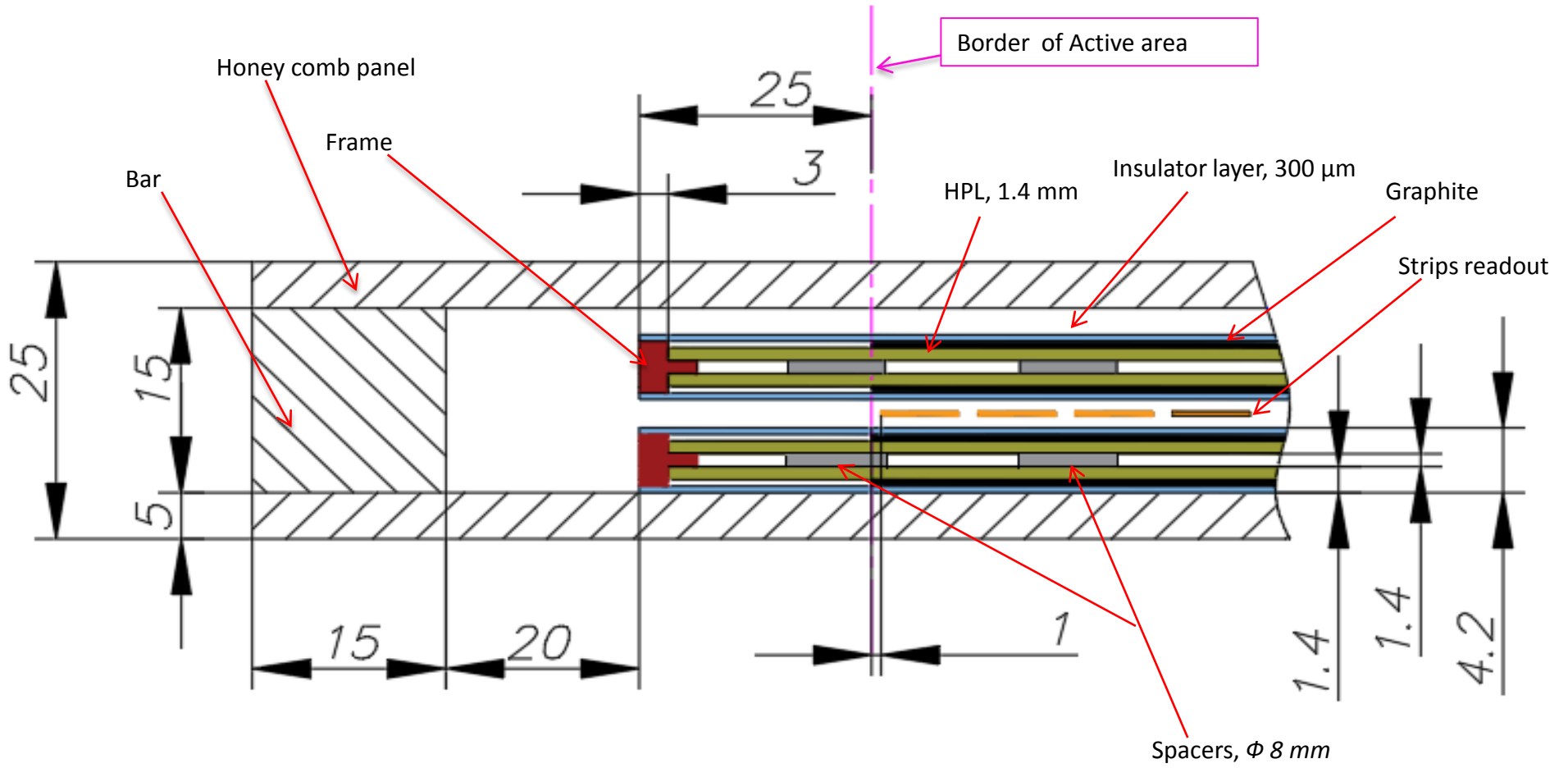


Topology of RPC chamber



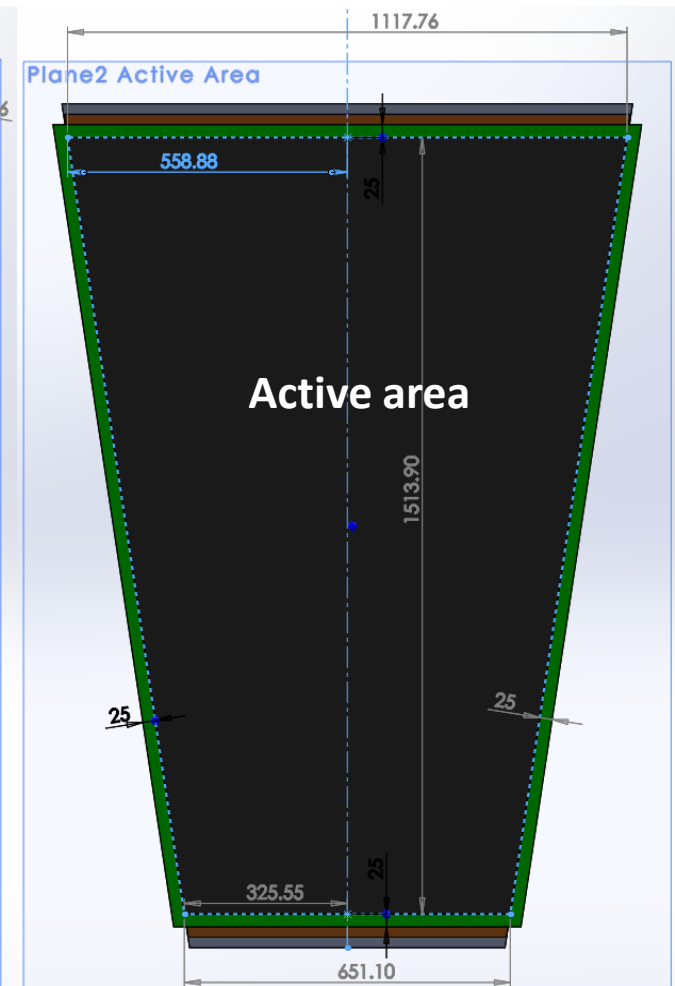
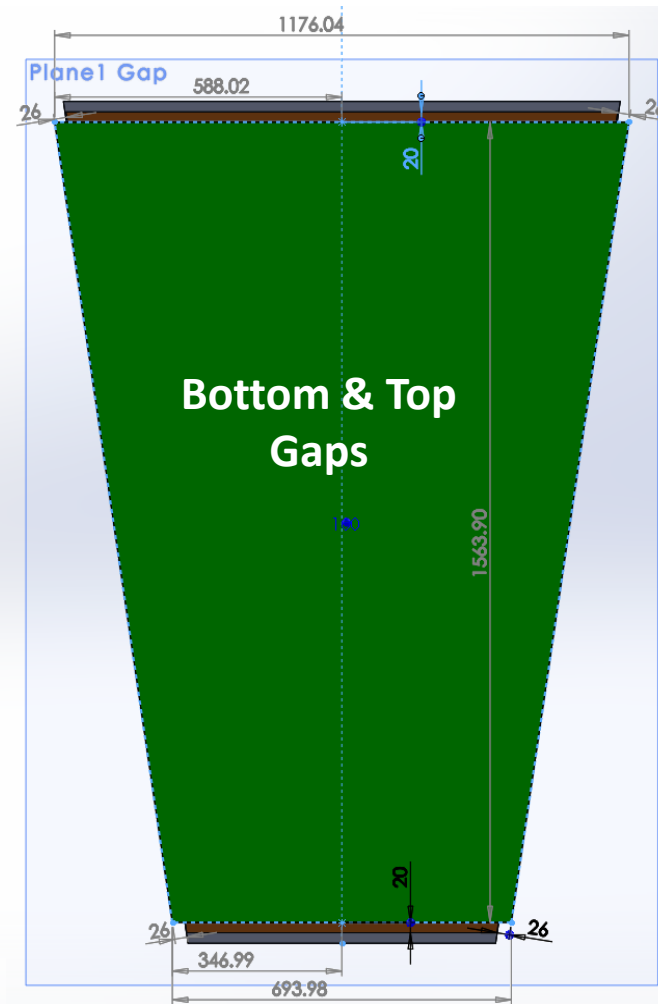
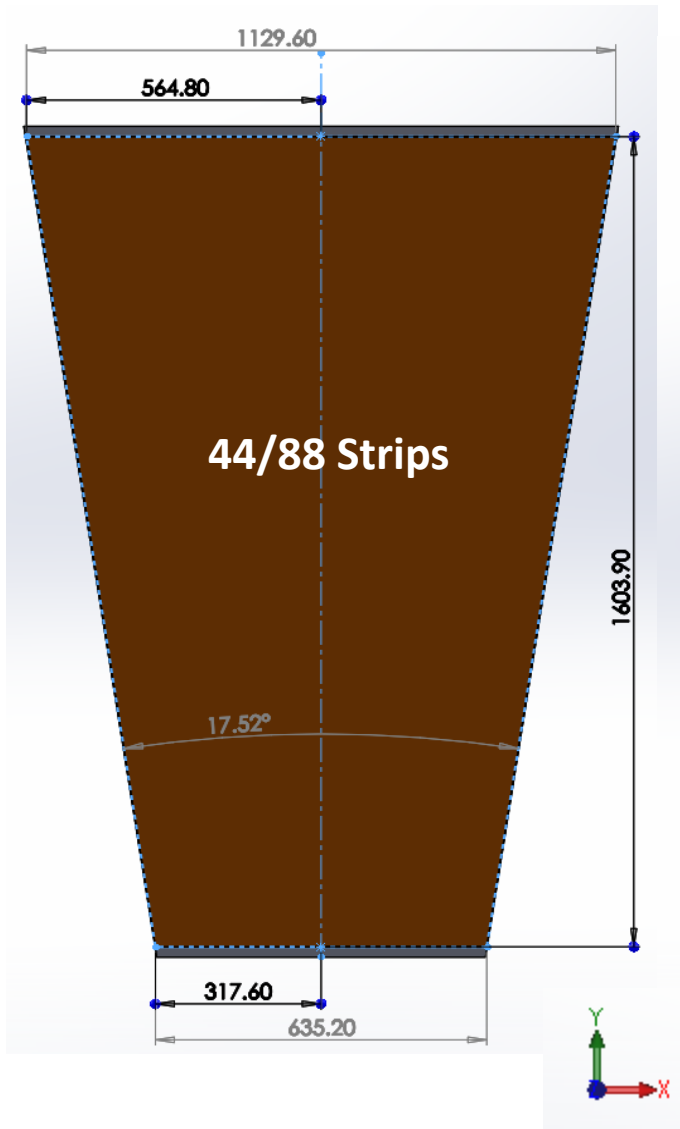


Mechanical details of RPC chambers





Prototype for PCB with 44/88 coaxial



Dimensions for Mechanics

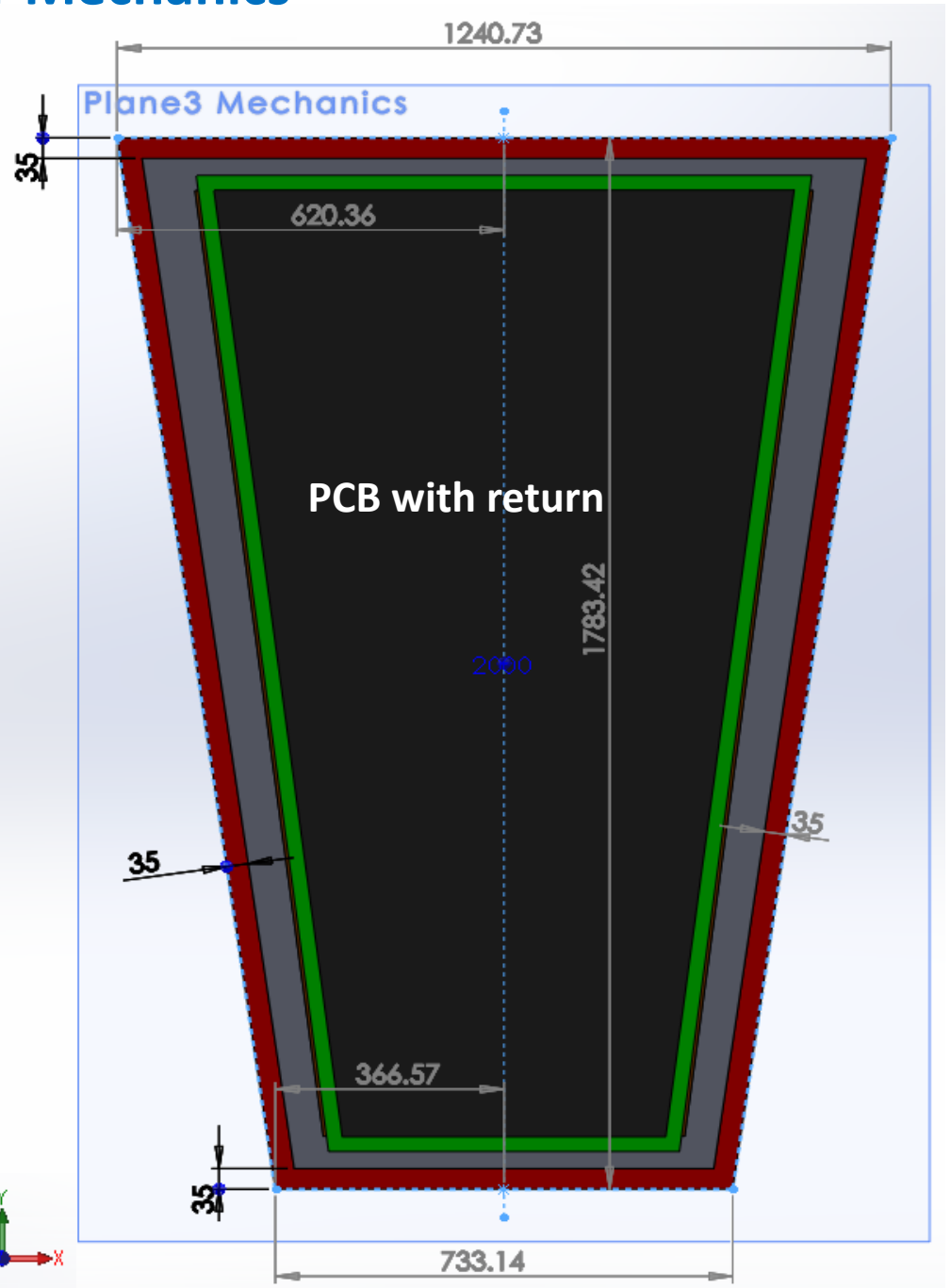
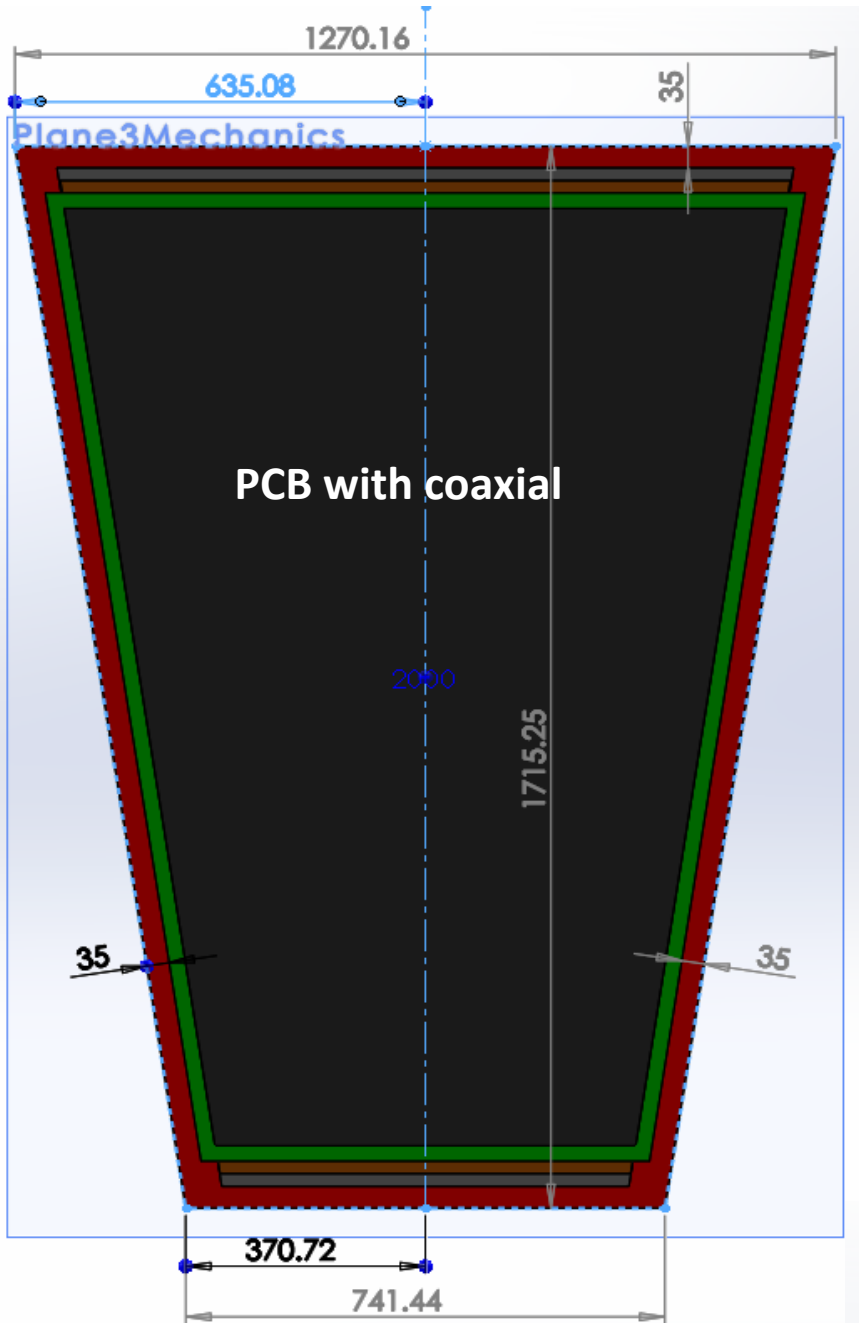




Table with main dimensions

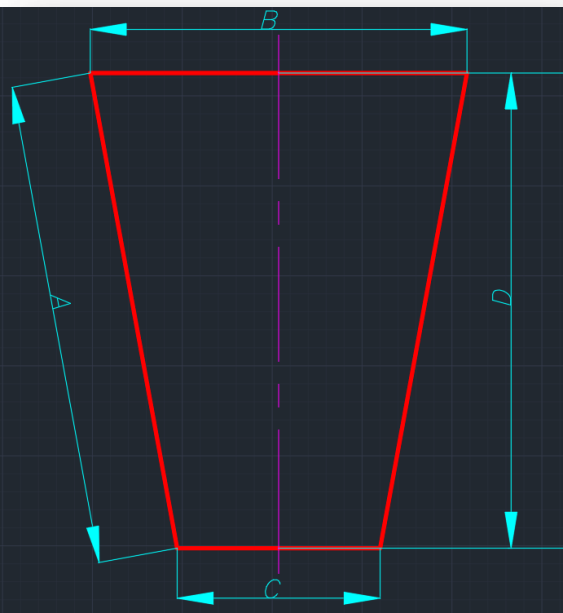
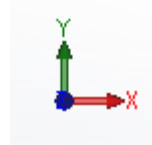


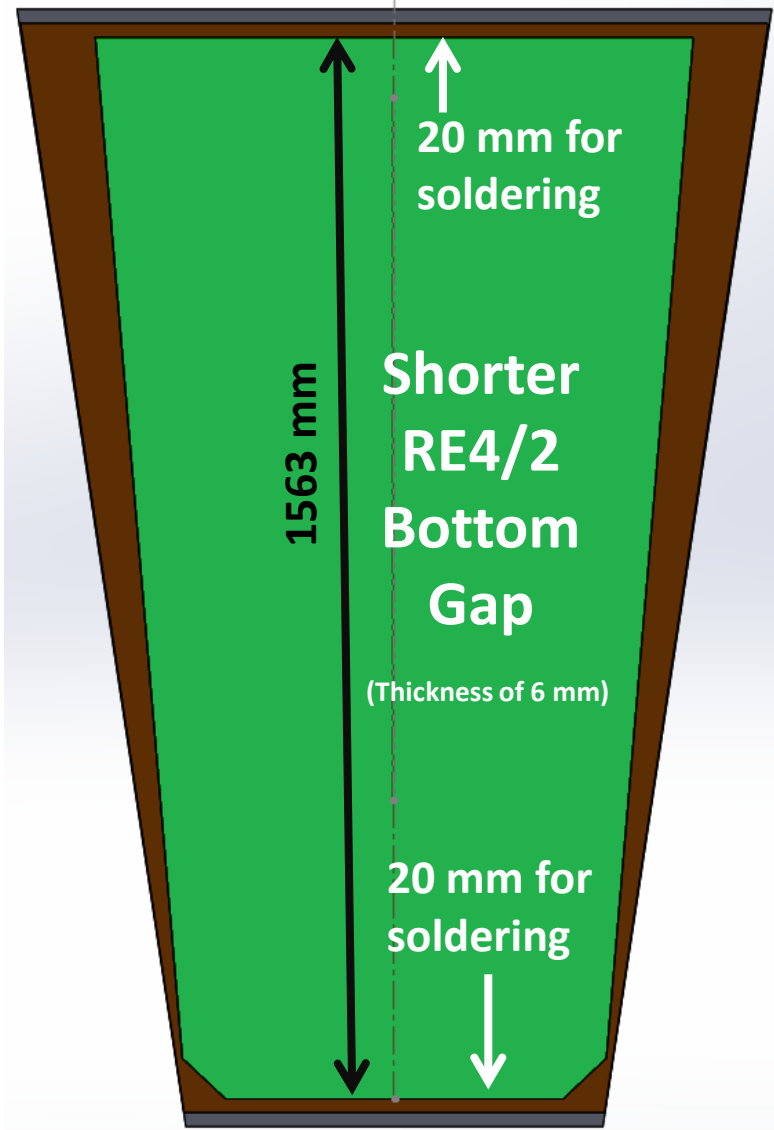
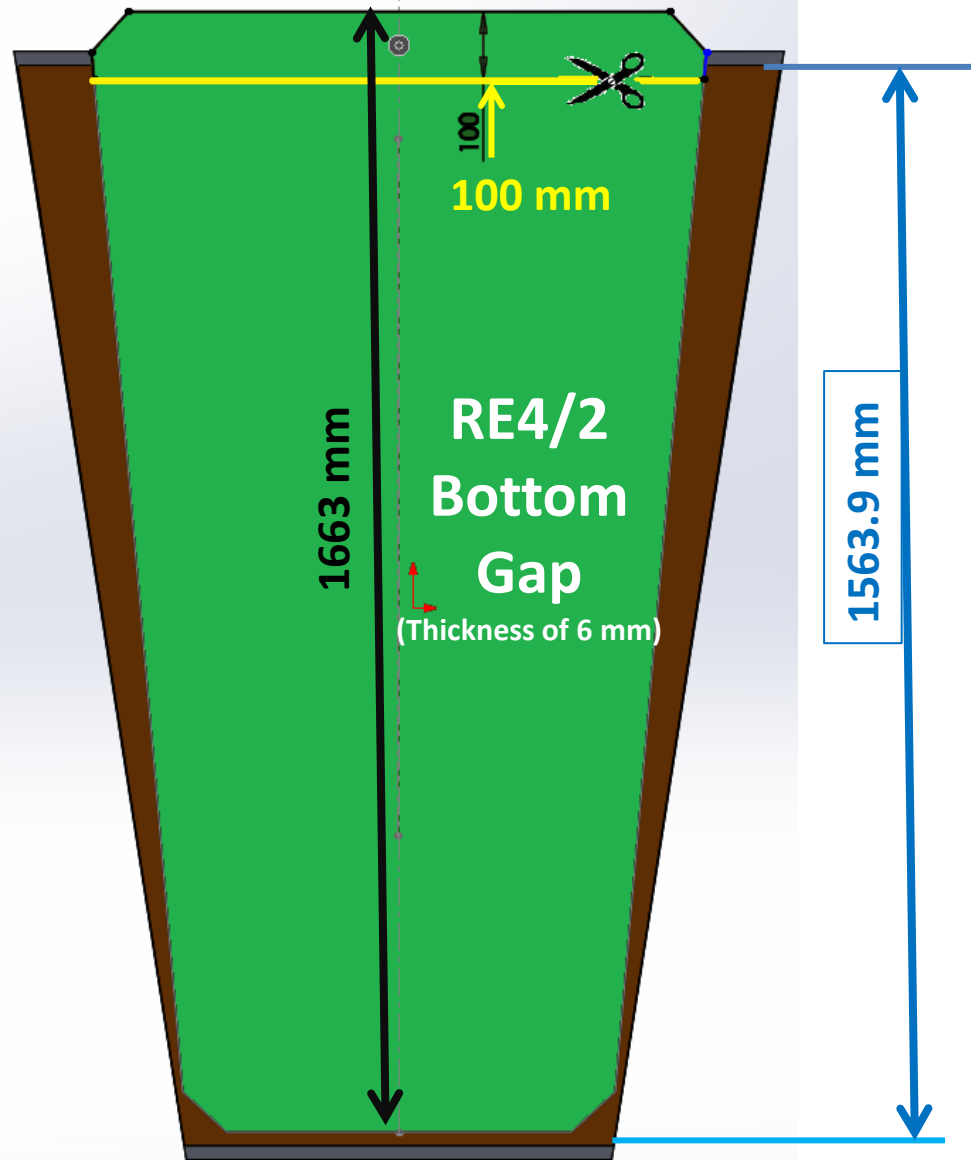
Table 1: Strip area				
Name	A, [mm]	B, [mm]	C, [mm]	D, [mm]
44/88 coaxial	1622.84	1129.60	635.20	1603.9
44/88 return	1616.97	990.42	579.28	1603.85
Table 2: Gap Details				
44/88 coaxial	1582.37	1176.04	693.98	1563.90
44/88 return	1669.40	987	562.54	1655.85
Table 3: Active Area				
44/88 coaxial	1531.78	1117.76	651.10	1513.90
44/88 return	1618.99	930.18	518.54	1605.85
Table 4: Mechanics				
44/88 coaxial	1735.50	1270.16	741.44	1715.25
44/88 return	1801.39	1240.73	733.14	1783.42





Shorter of RE4/2 (Bottom Gap) form KODEL

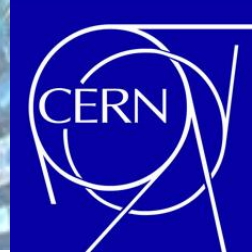
Adaptation of RE4/2 Bottom Gap for PCB with 44/88 coaxial cable



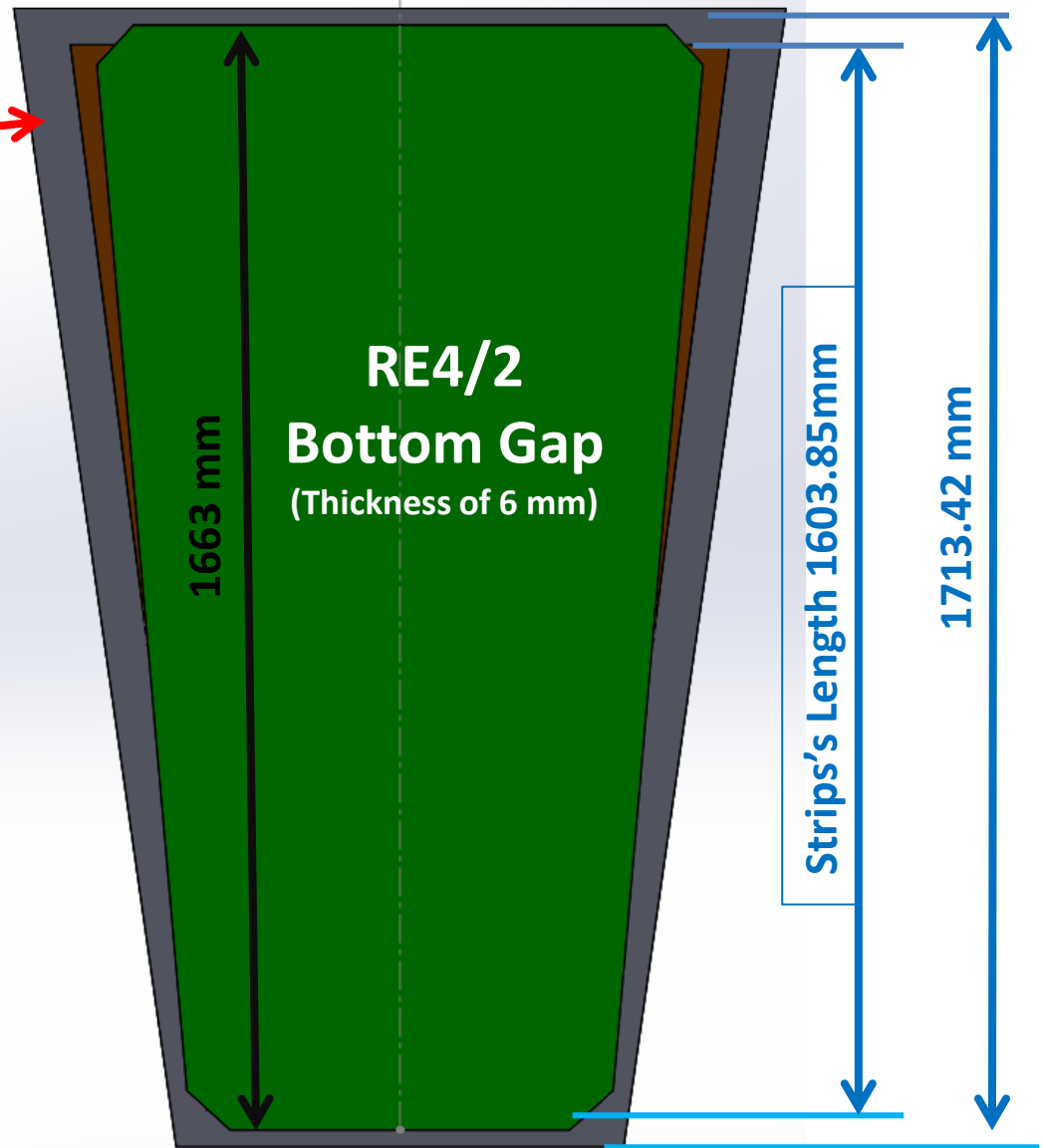


Shorter of RE4/2 (Bottom Gap) form KODEL

Adaptation of RE4/2 Bottom Gap for PCB with 44/88 return



PCB with
44/88 Pick Up & Return

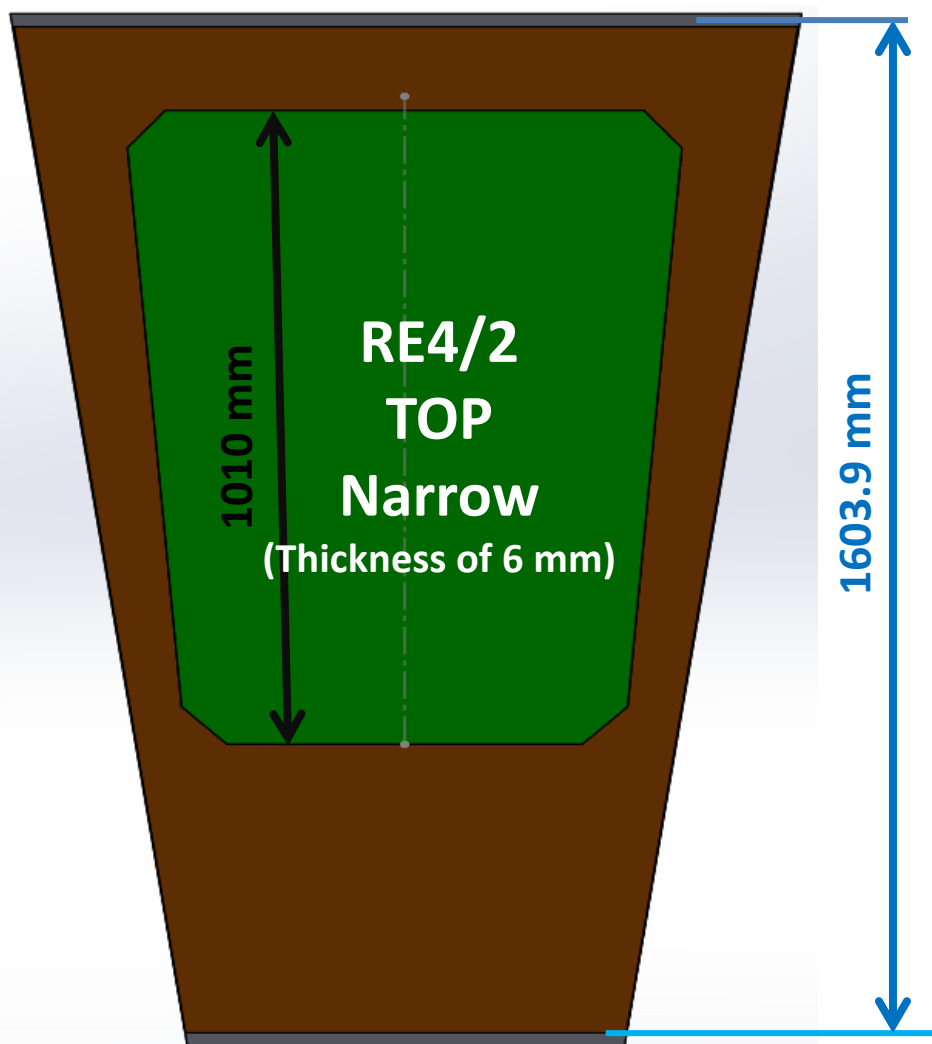




Using RE4/2 Top Narrow from CERN



PCB with 44/88 coaxial cable



PCB with 44/88 Pick Up & Return

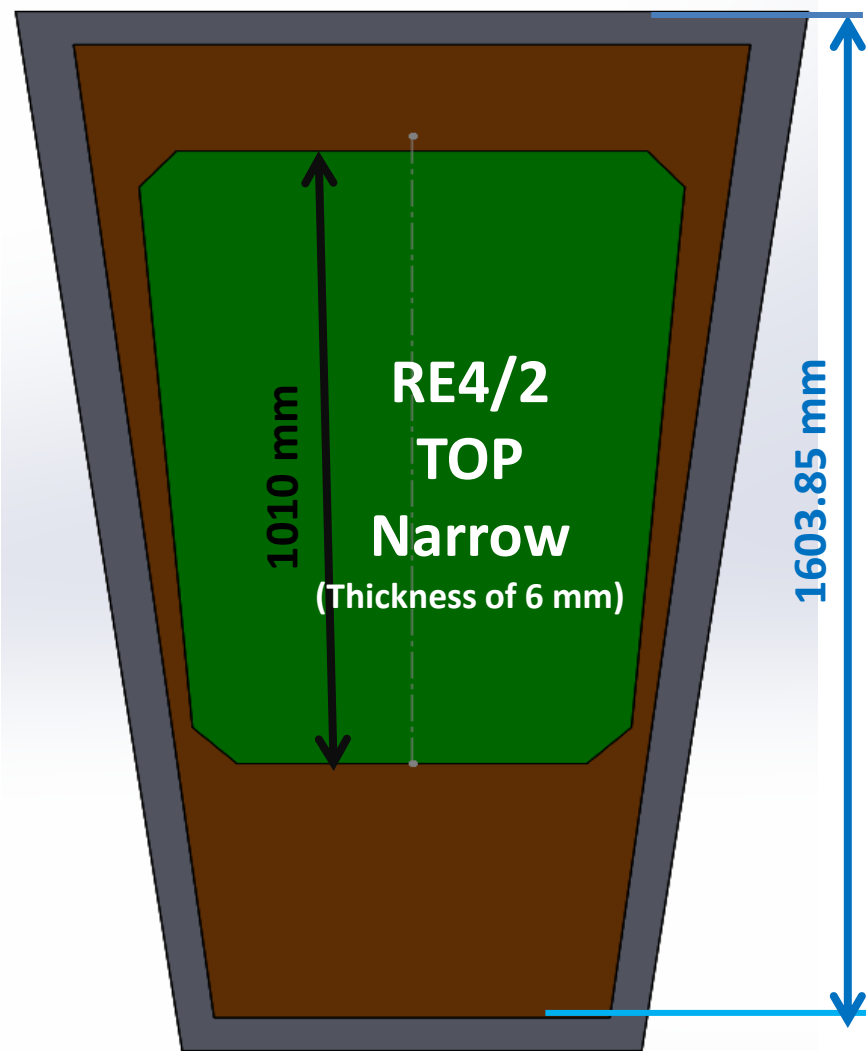




Table with main dimensions

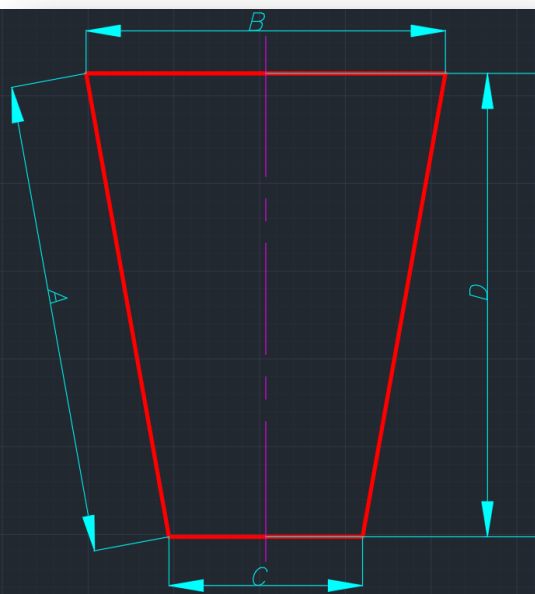


Table 1: Strip area

Name	A, [mm]	B, [mm]	C, [mm]	D, [mm]
44/88 coaxial	1622.84	1129.60	635.20	1603.9
44/88 return	1616.97	990.42	579.28	1603.85

Table 2: Gap Details

44/88 coaxial	1582.37	1176.04	693.98	1563.90
44/88 return	1669.40	987	562.54	1655.85
RE4/2 Bottom	1669	921	630	1663
RE4/2 Top Narrow	1014	809	632	1010

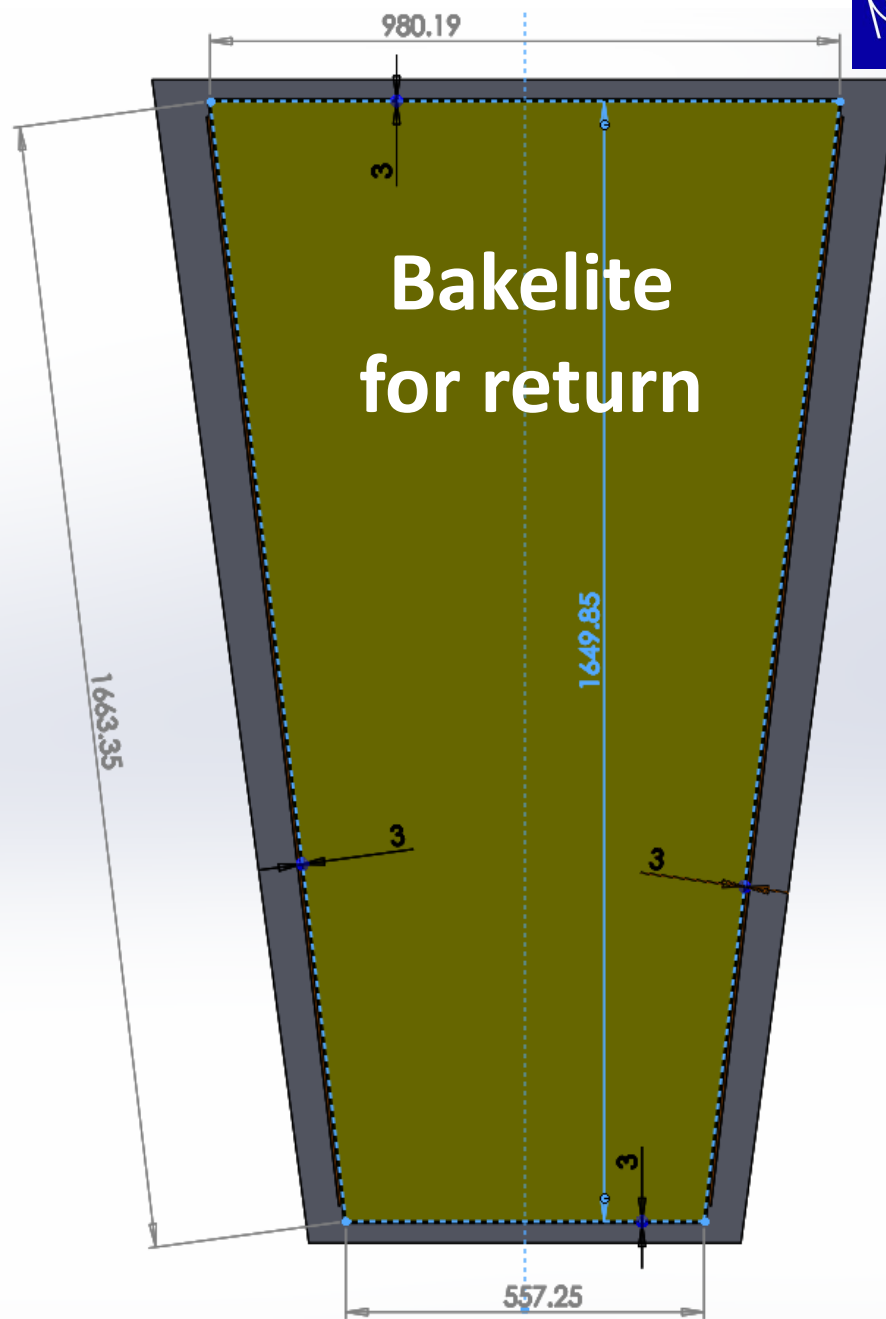
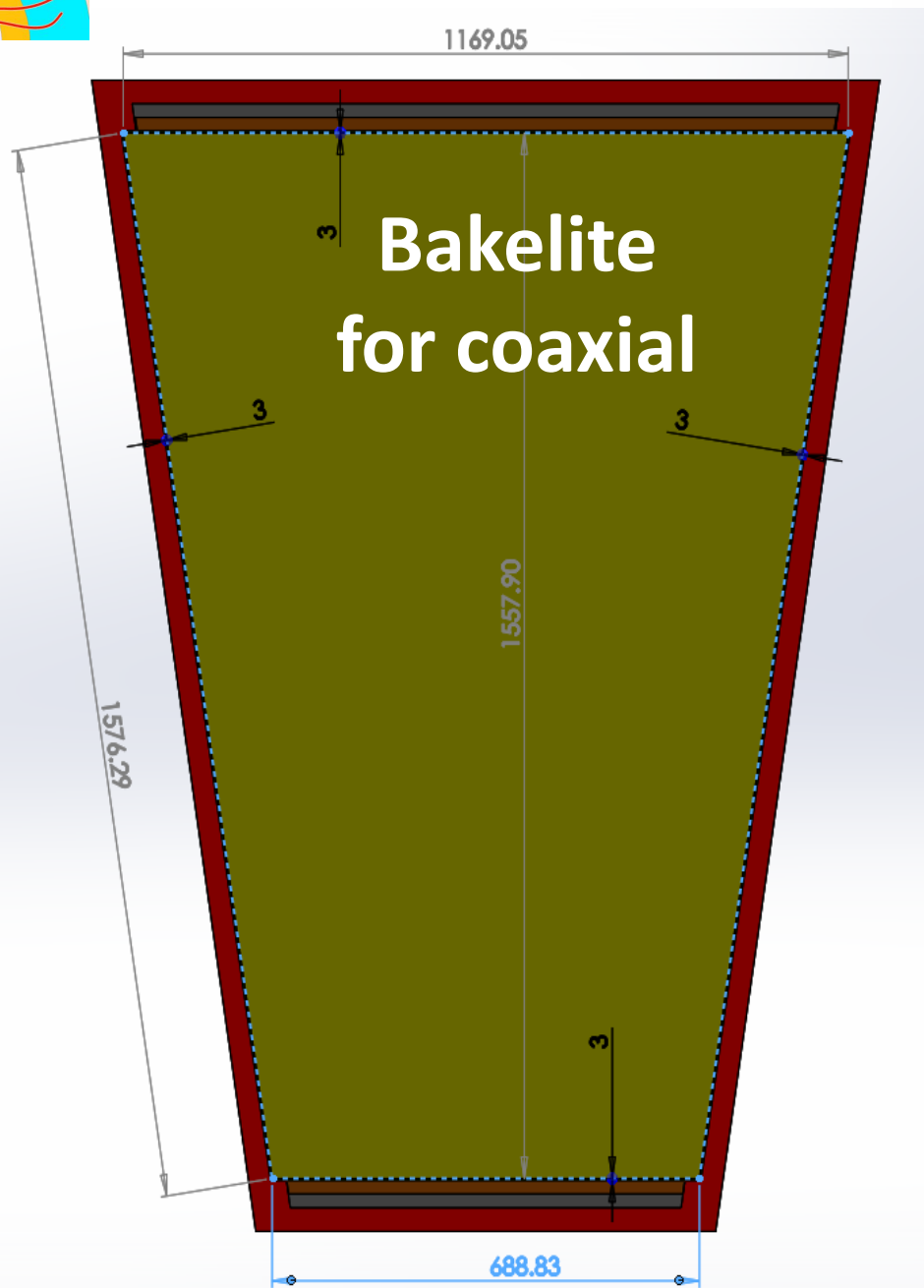
Table 3: Active Area

44/88 coaxial	1531.78	1117.76	651.10	1513.90
44/88 return	1618.99	930.18	518.54	1605.85
RE4/2 Bottom	1619	866	584	1613
RE4/2 Top Narrow	964	754	586	960

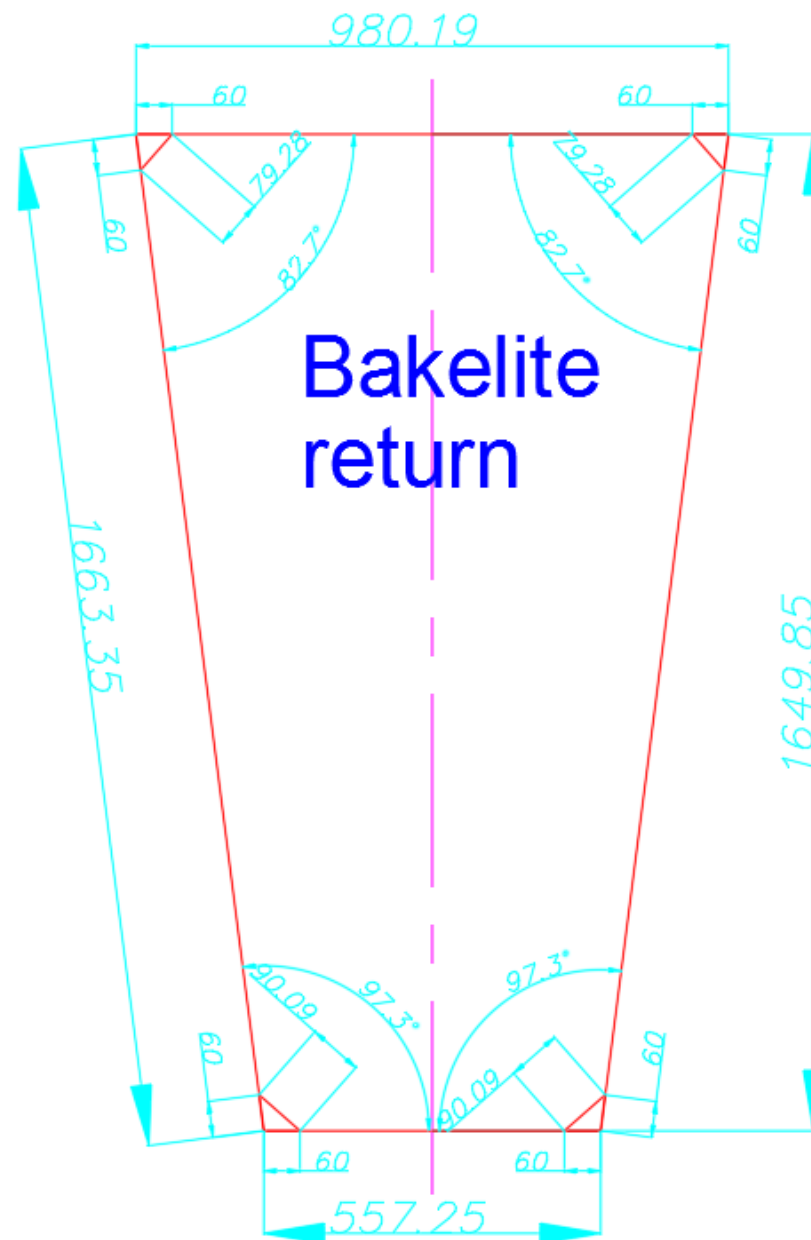
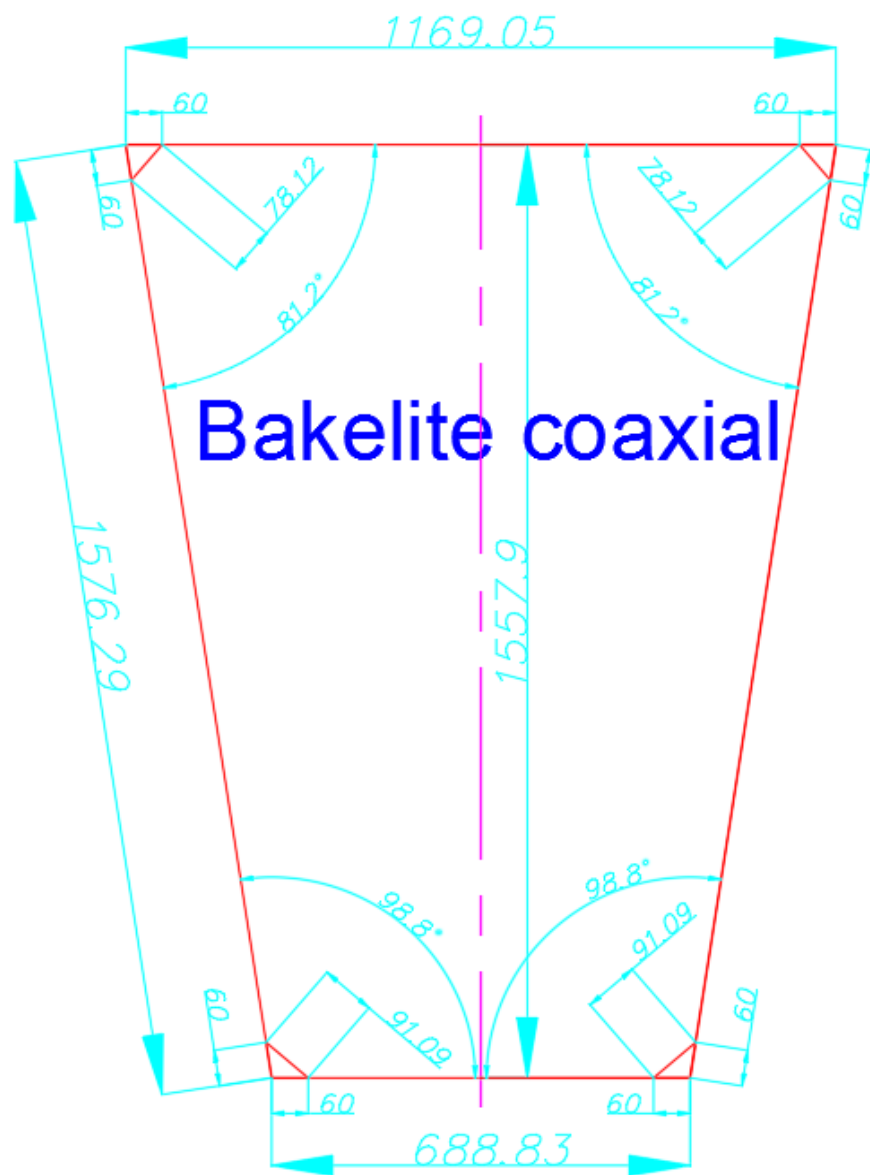
Table 4: Mechanics

44/88 coaxial	1735.50	1270.16	741.44	1715.25
44/88 return	1801.39	1240.73	733.14	1783.42
RE4/2	1693	979	684	1687

Dimensions of Bakelite



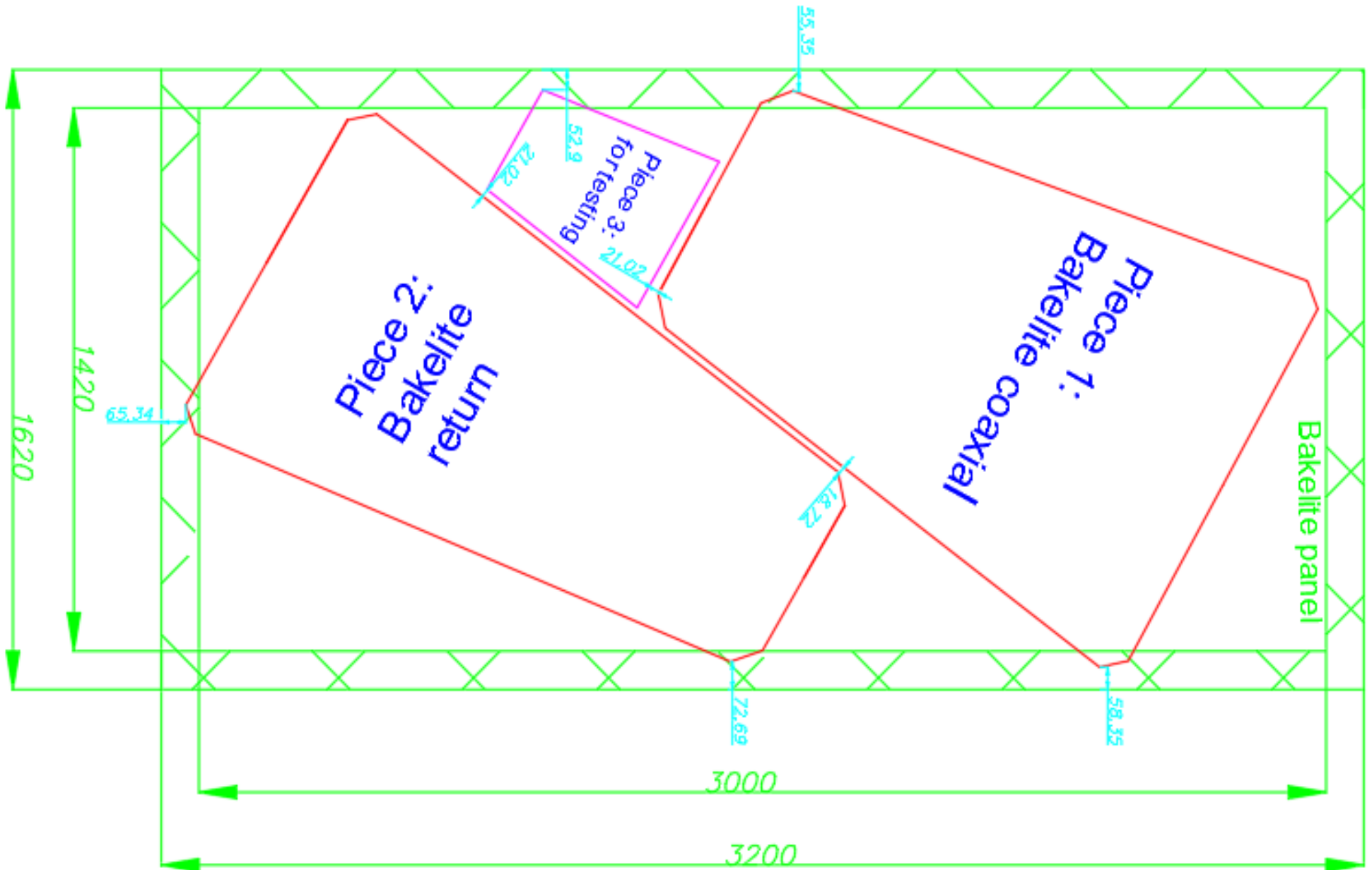
Drawing with Dimensions of Bakelite



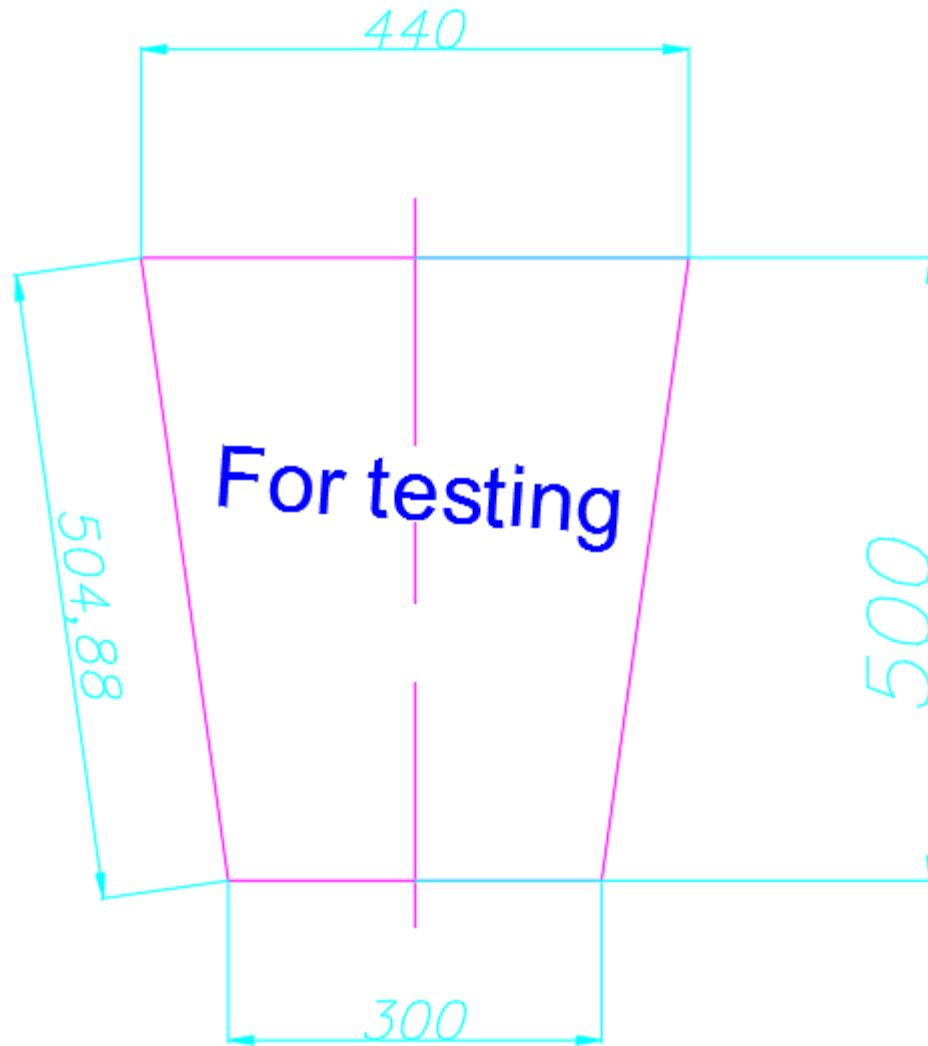
Pieces for cutting



Cutting of HPL's panels



Piece 3: for testing



Final table with main dimensions

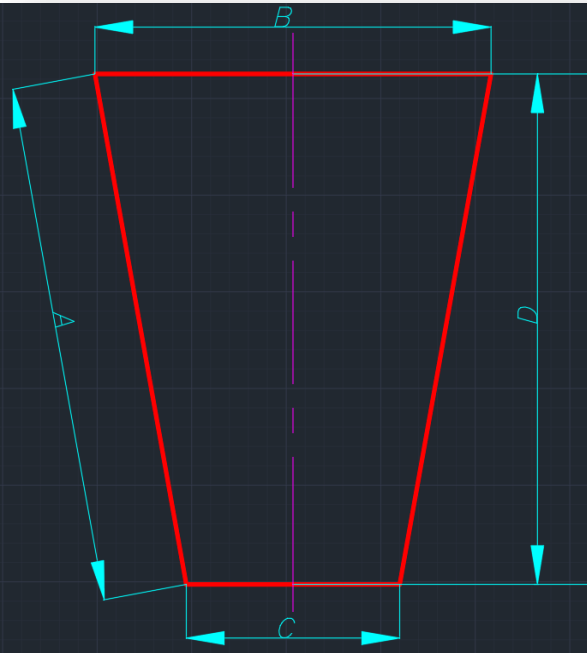


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44/88 coaxial	1622.84	1129.60	635.20	1603.9
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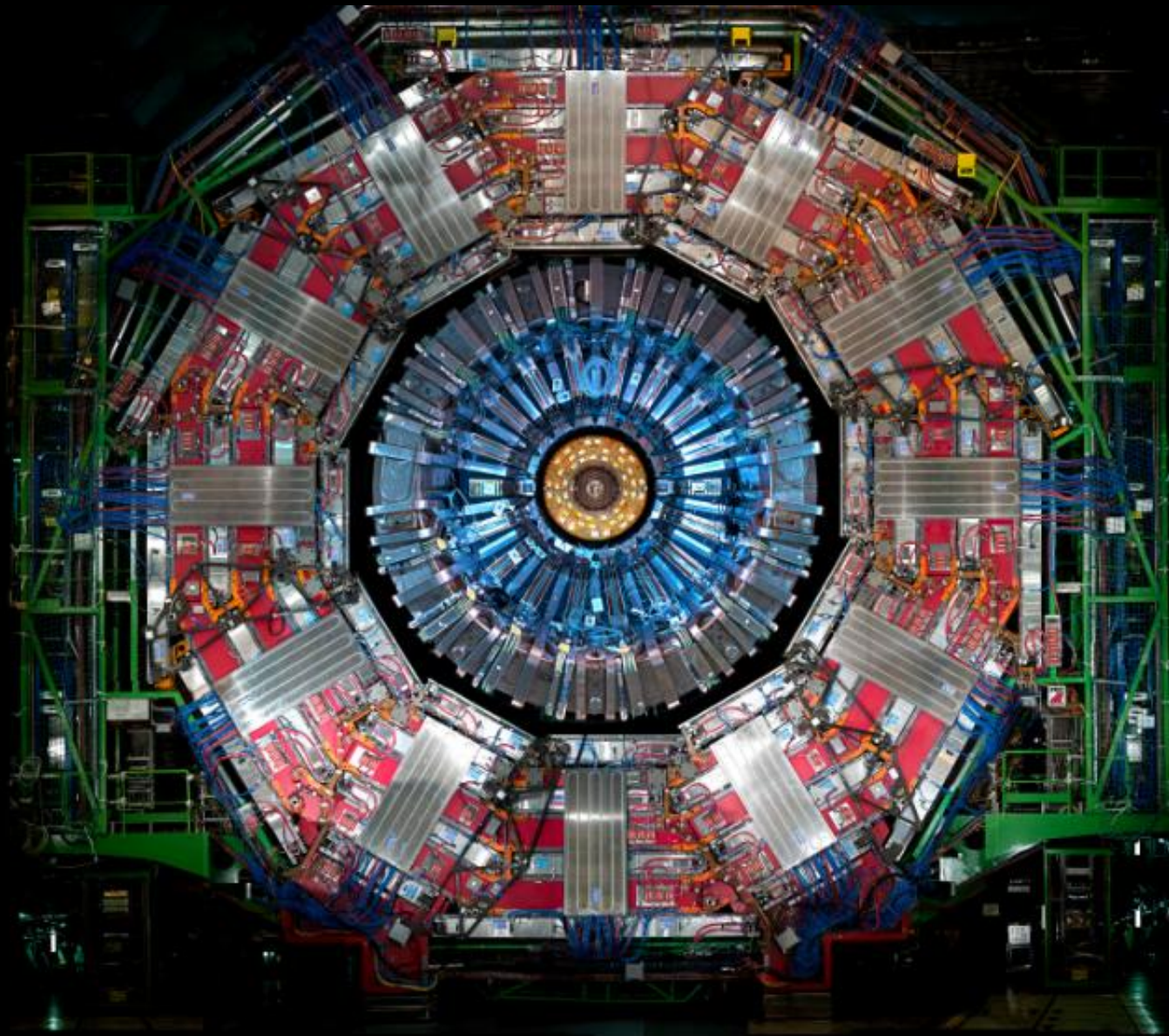
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Table 4: Mechanics

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44/88 return	1801.39	1240.73	733.14	1783.42

Table 5: Bakelite

44/88 coaxial	1576.29	1169.05	688.83	1557.90
44/88 return	1663.35	980.19	557.25	1649.85



Thank you for your attention!