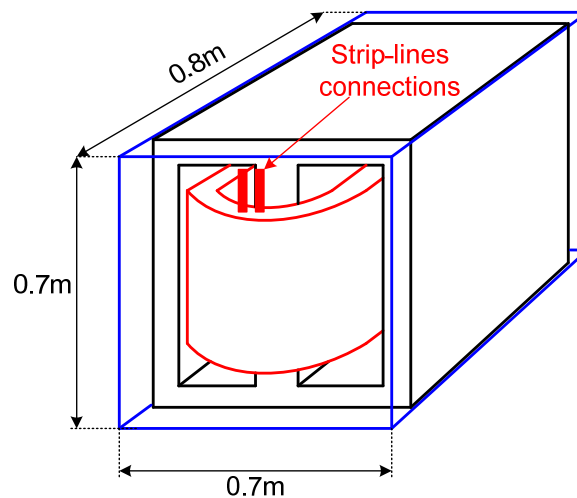


Preliminary size estimation of BWS1 transformers to be installed in the Booster tunnel for the new injection chicane

A preliminary rough analysis to derive the size of the four transformers to be installed in the Booster tunnel has been done. For the solution considering **BSW1 with 4 turns, 6.8kA, 5ms ramp time**, the preliminary overall dimensions are depicted in the figure, and are equivalent to the outer box which will contain the transformer.



The strip-lines connections can be easily placed on the 0.7m \times 0.7m face (either the front or the back one of the Figure). The primary connections would be on one of these two faces as well. The strip line size will have 1000mm² of cross-section. Transformers will be relatively easily stackable. The weight of each transformer is estimated between 350kg and 450kg.

Talking with Jan Borburgh it was not clear yet what is the exact current ramp length. I always have been told 5ms, but now the 10ms seems to be a possibility. Anyhow, just for the sake of comparison, the same transformer for the same magnet but considering **10ms of ramp time** would present roughly the double of weight and preliminary overall dimensions: 0.8m \times 0.8m \times 0.9.