

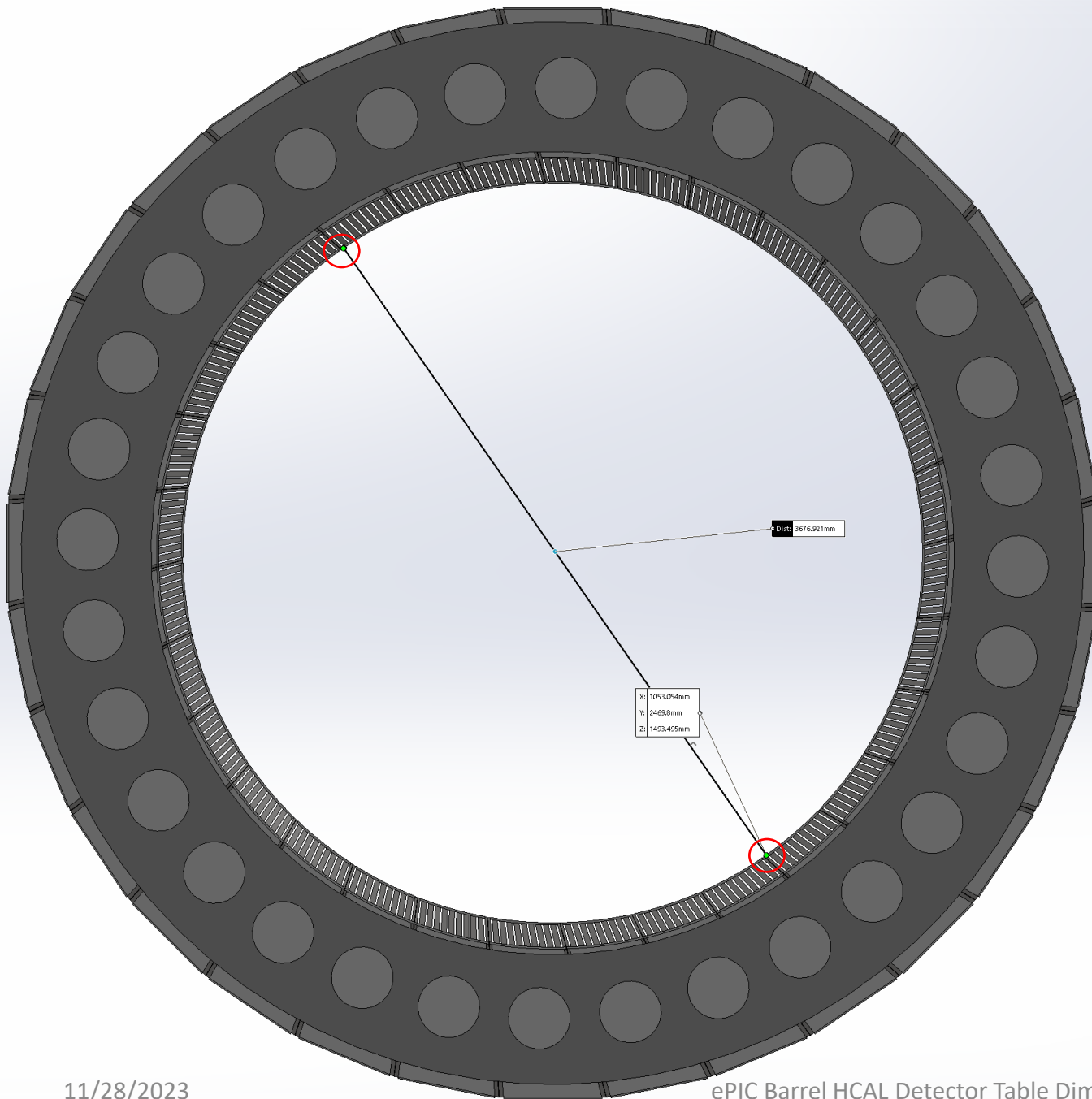
ePIC Barrel HCAL Detector Table Geometry

This table and the following slides summarize the ePIC Barrel HCAL geometry for the detector table. In all cases the measures should be taken as an envelope – the detector resides fully within the volume define by the measurements in the detector table. Measurements were taken from the sPHENIX 3D model of the as-built detector geometry.

The length of the central section is defined as the distance between the two points where the inner radius begins to transition from the LD/HD section radius to the central section radius.

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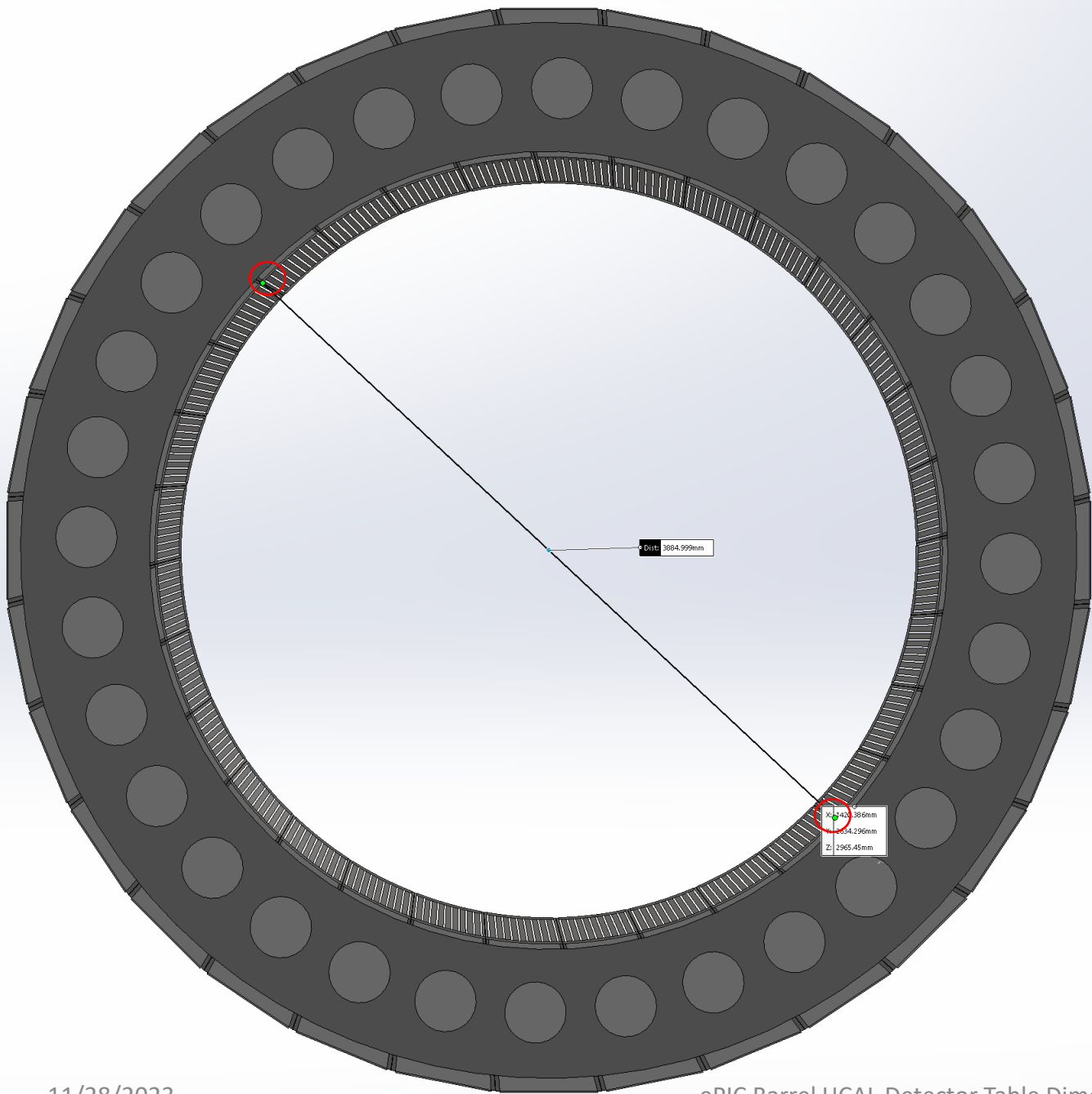
	WBS	Length (cm)	Inner Radius (cm)	Outer Radius (cm)	Offset from Center (cm)	Physical Start (cm)	Physical End (cm)
Barrel Hadron Calorimeter		632	183	270	0	-316	316
	HD Section	156.6	194	270	79.75	159.5	316
	Central Section	319	183	270	0	-159.4	159.4
	LD Section	156.6	194	270	-79.75	-159.4	-316



The inner diameter of the central section is taken from the innermost point on the combs, so this measure serve as the inner envelope of the central section.

Diameter: 3676.9mm

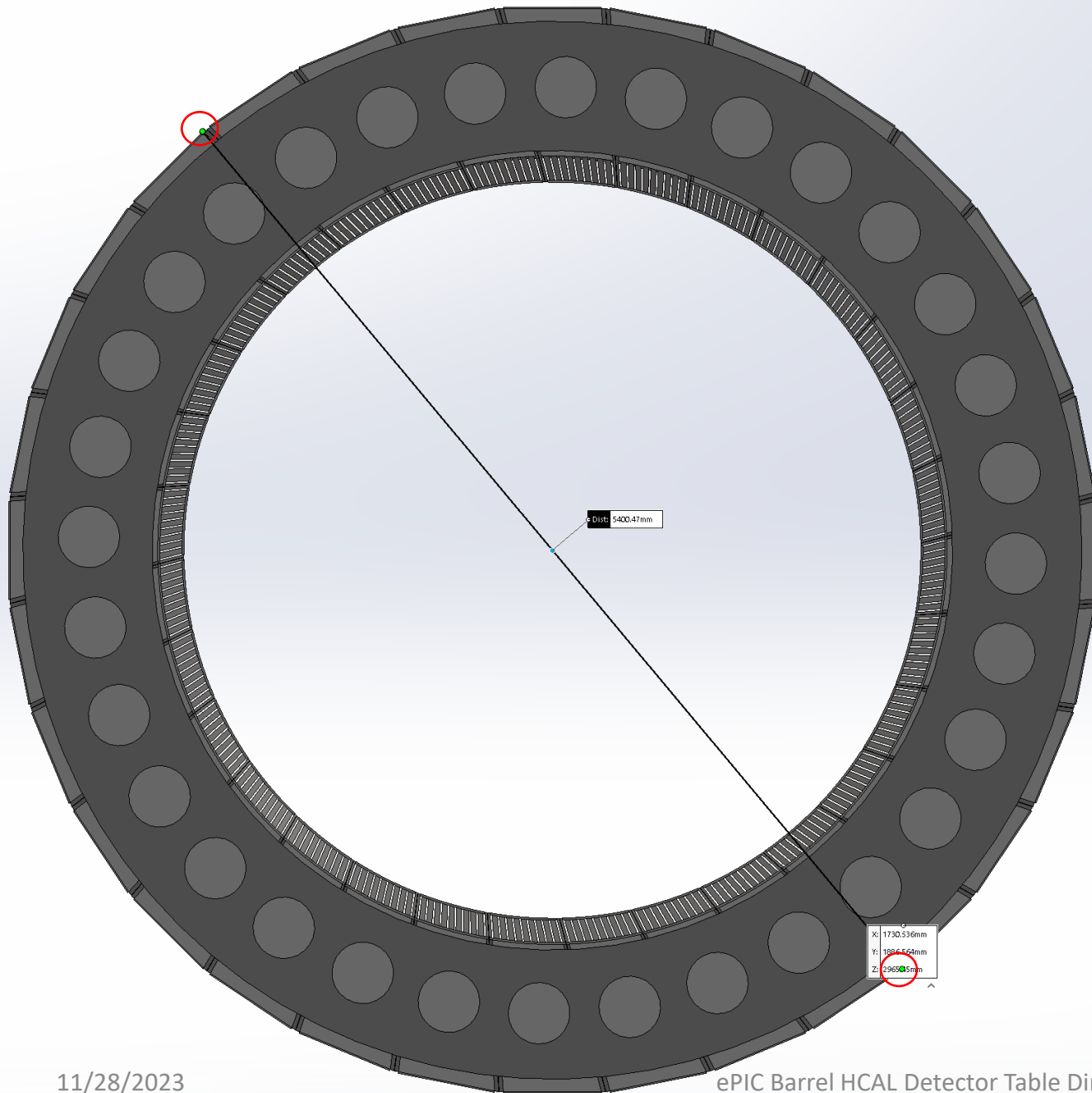
Radius: 1838.5 mm



The inner diameter of the hadron/lepton sections is taken from the innermost point on the combs, so this measure serves as the envelope of the hadron/lepton sections.

Diameter: 3885.0 mm

Radius: 1942.5 mm

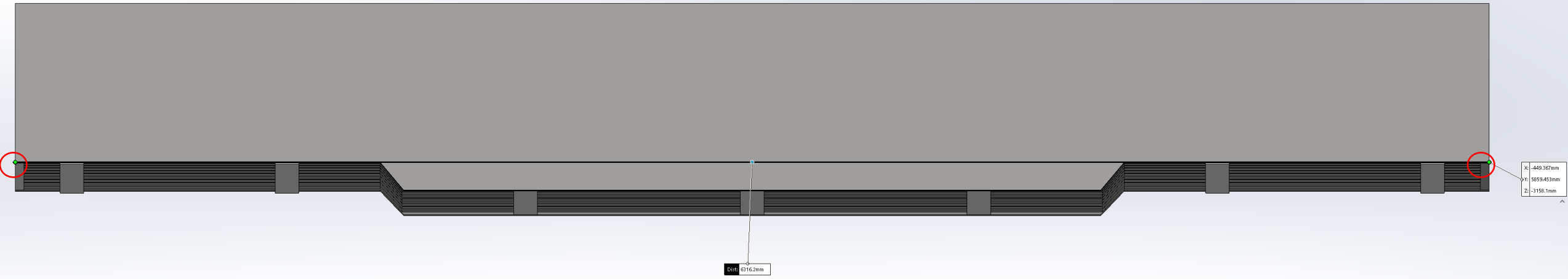


The outer diameter of the central section point on the combs, so this measure serves as the envelope of the entire structure.

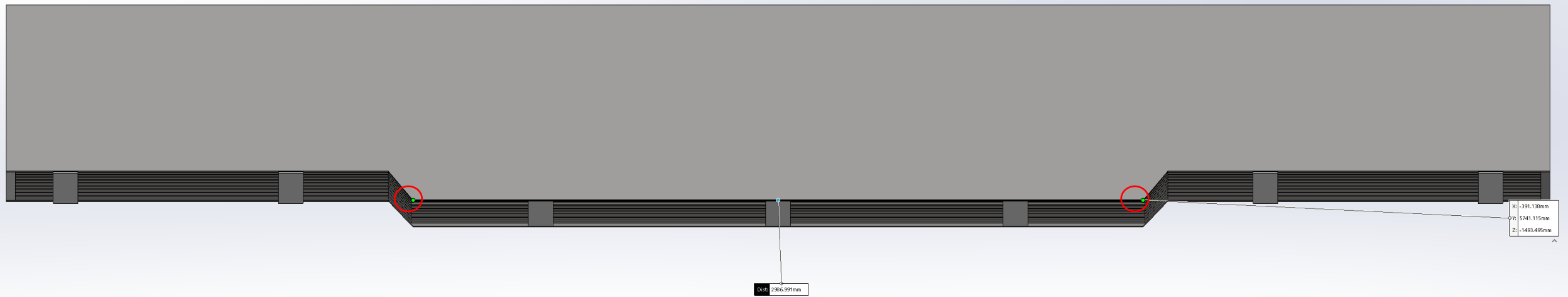
Diameter: 5400.5mm

Radius: 2700.3 mm

Overall length of the barrel is 6316.2 mm



The length of the central section, measured from the start of the transition on both ends, is 2987.0 mm



The length of the central section, measured from the ends of the transition on both ends, is 3187.1 mm

