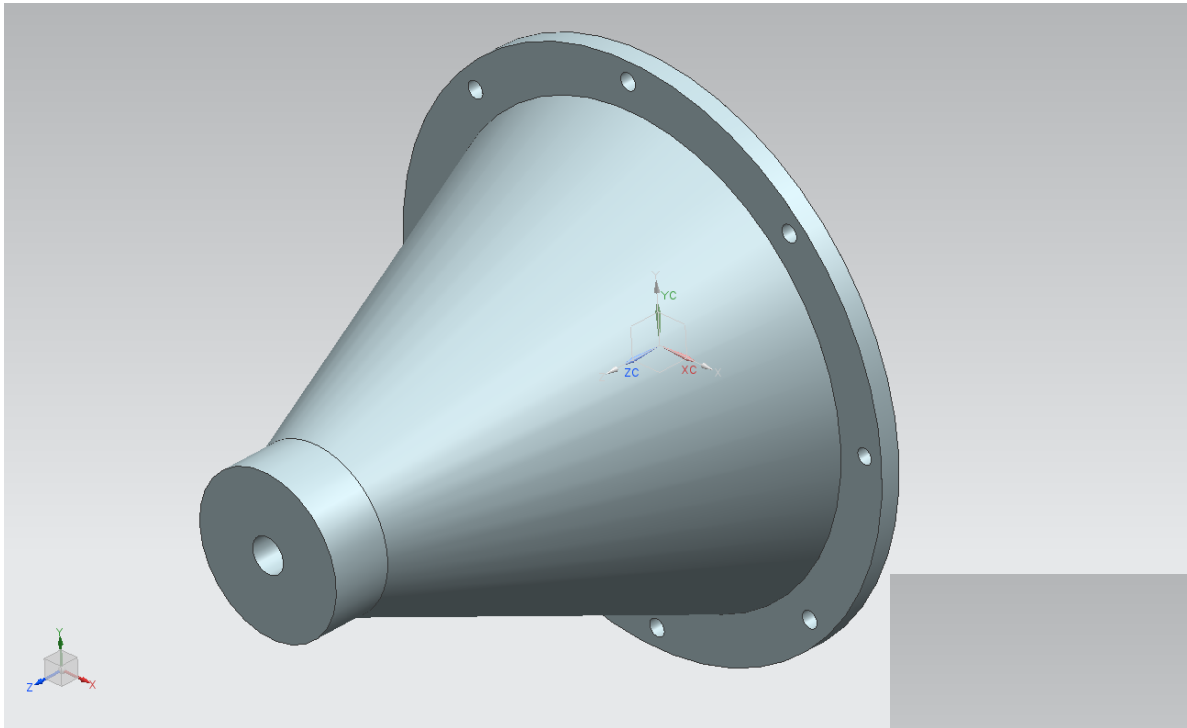


NA62 RICH

LUNGHEZZA CONI SUPPORTO SPECCHI

MIRROR SUPPORT – VERSION 1



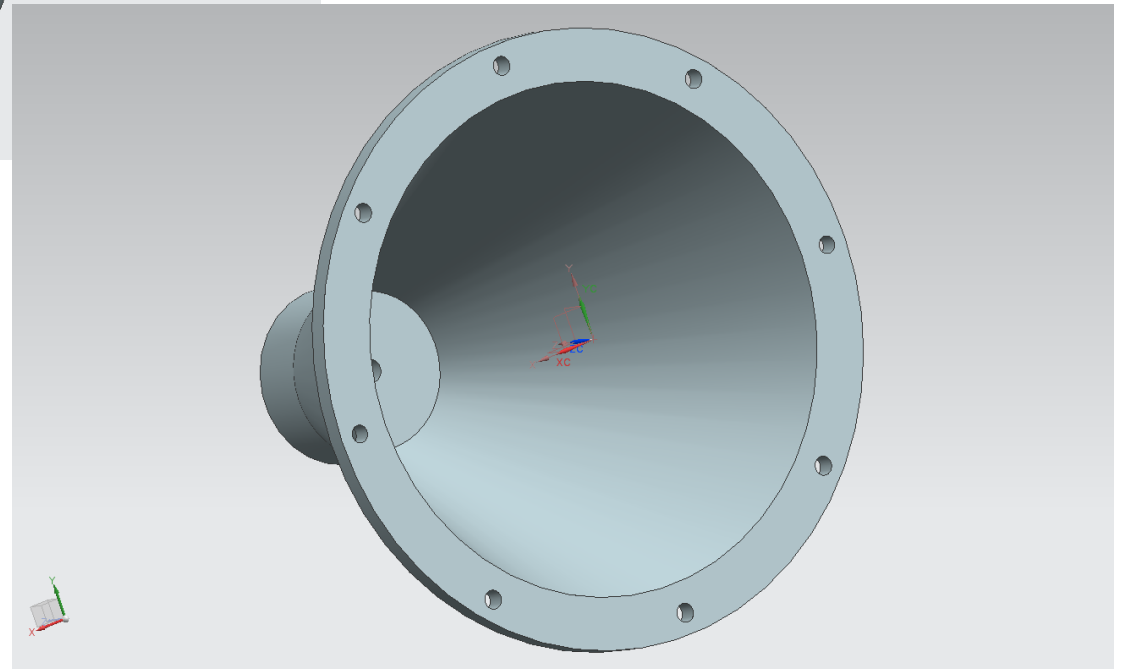
MATERIAL : ALUMINUM 6082

$R_m = 290 \text{ MPa}$

$R_{p_{0,2}} = 250 \text{ Mpa}$

$A = 8 \%$

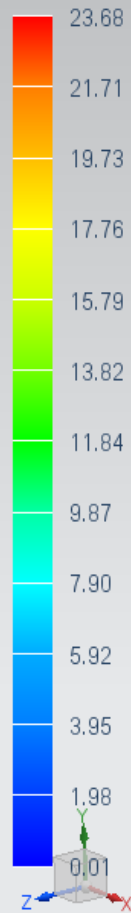
$E = 69 \text{ GPa}$



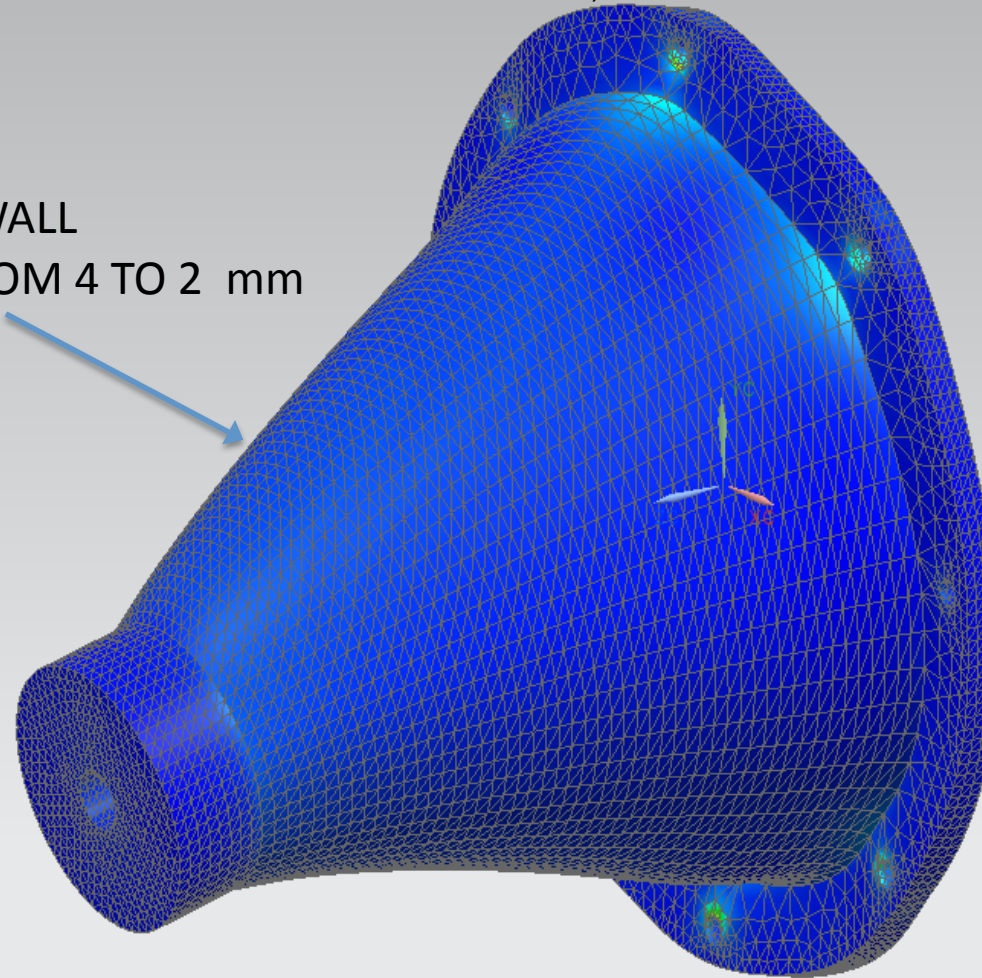
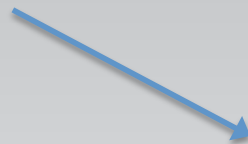
MIRROR SUPPORT VESION 1 – STRUCTURAL ANALYSIS 1

MSC-10_L_V2_sim2 : Solution 1 Result
Subcase - Static Loads 1, Static Step 1
Stress - Element-Nodal, Unaveraged, Von-Mises
Min : 0.01, Max : 23.68, Units = N/mm²(MPa)
Deformation : Displacement - Nodal Magnitude

STRESS SAFETY FACTOR ($R_{p_{0,2}}$) = $250/24 = 10.4$ (most stressed support)



THICKNESS WALL
REDUCED FROM 4 TO 2 mm

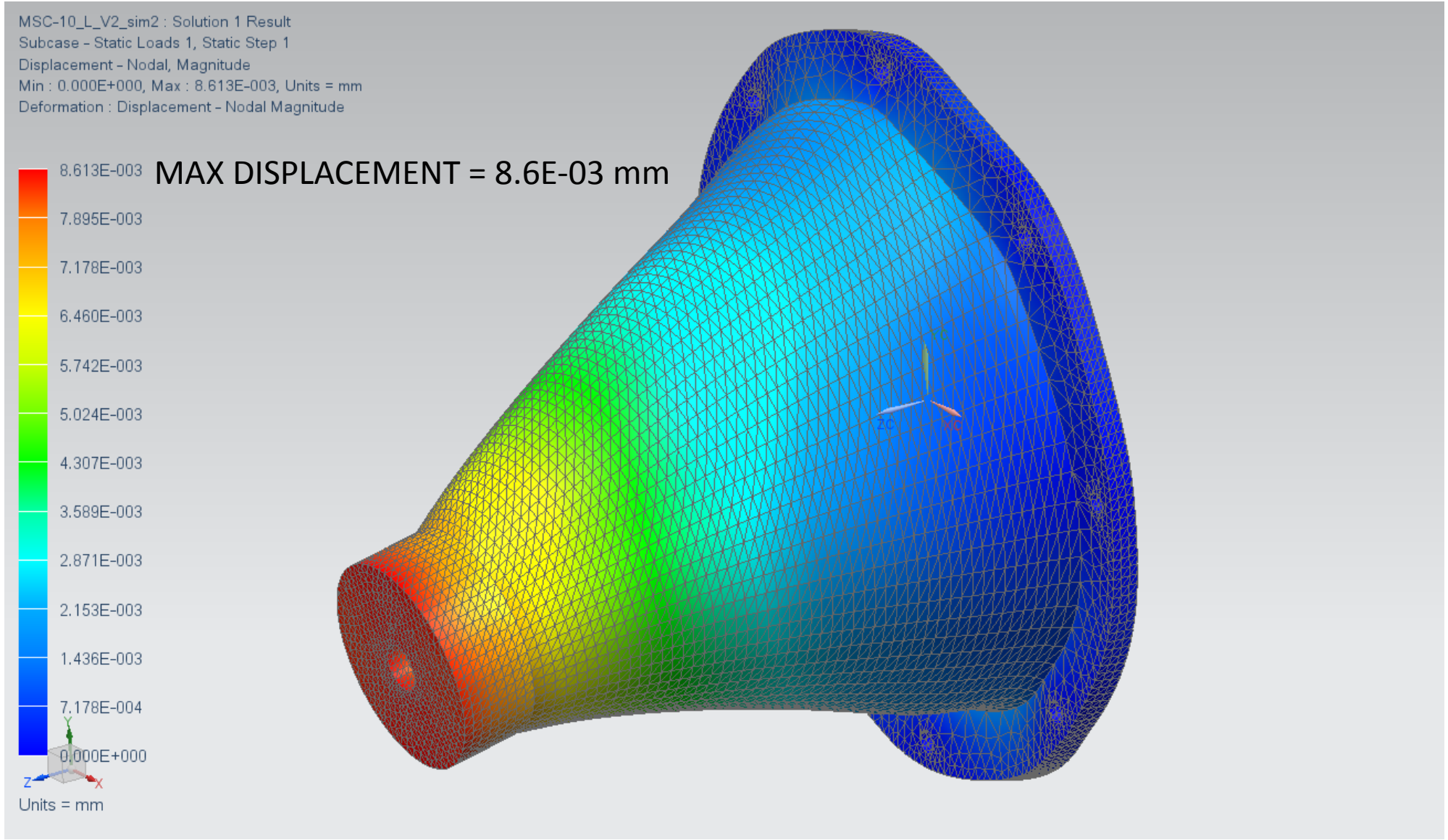


THICKNESS FRAME
INCREASED FROM 4 TO 5 mm



Units = N/mm²(MPa)

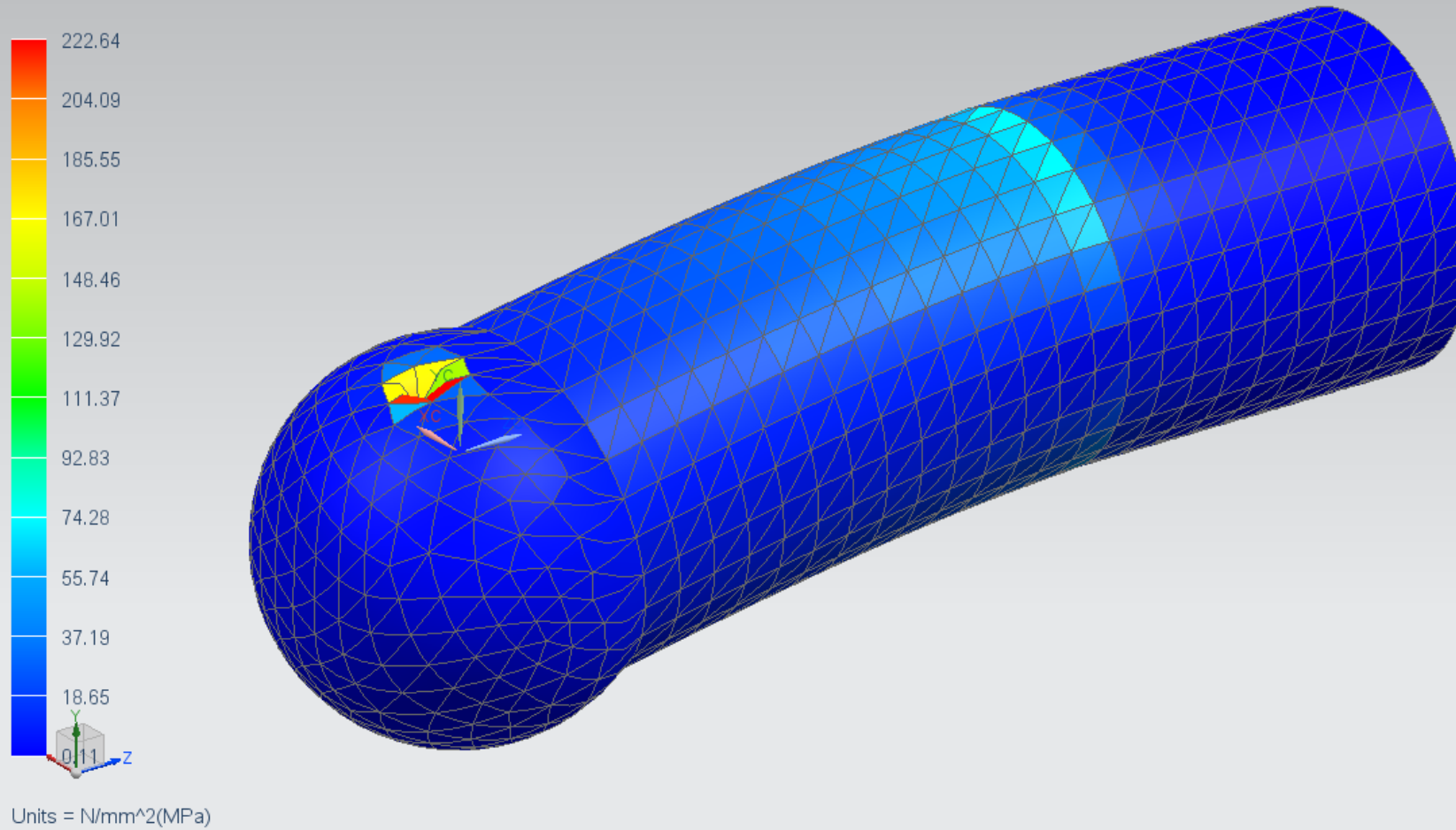
MIRROR SUPPORT VERSION 1 – STRUCTURAL ANALYSIS 2



ALUMINUM DOWEL – STRUCTURAL ANALYSIS 1

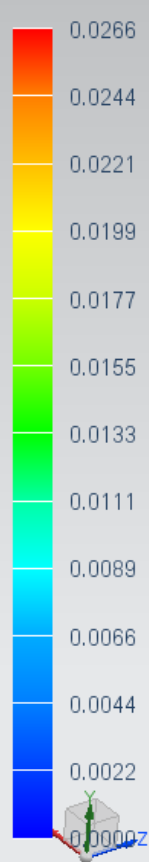
aluminum_dowel_sim5 : Solution 1 Result
Subcase - Static Loads 1, Static Step 1
Stress - Elemental, Von-Mises
Min : 0.11, Max : 222.64, Units = N/mm^2(MPa)
Deformation : Displacement - Nodal Magnitude

STRESS SAFETY FACTOR ($R_{p_{0,2}}$)= $250/75 = 3.3$

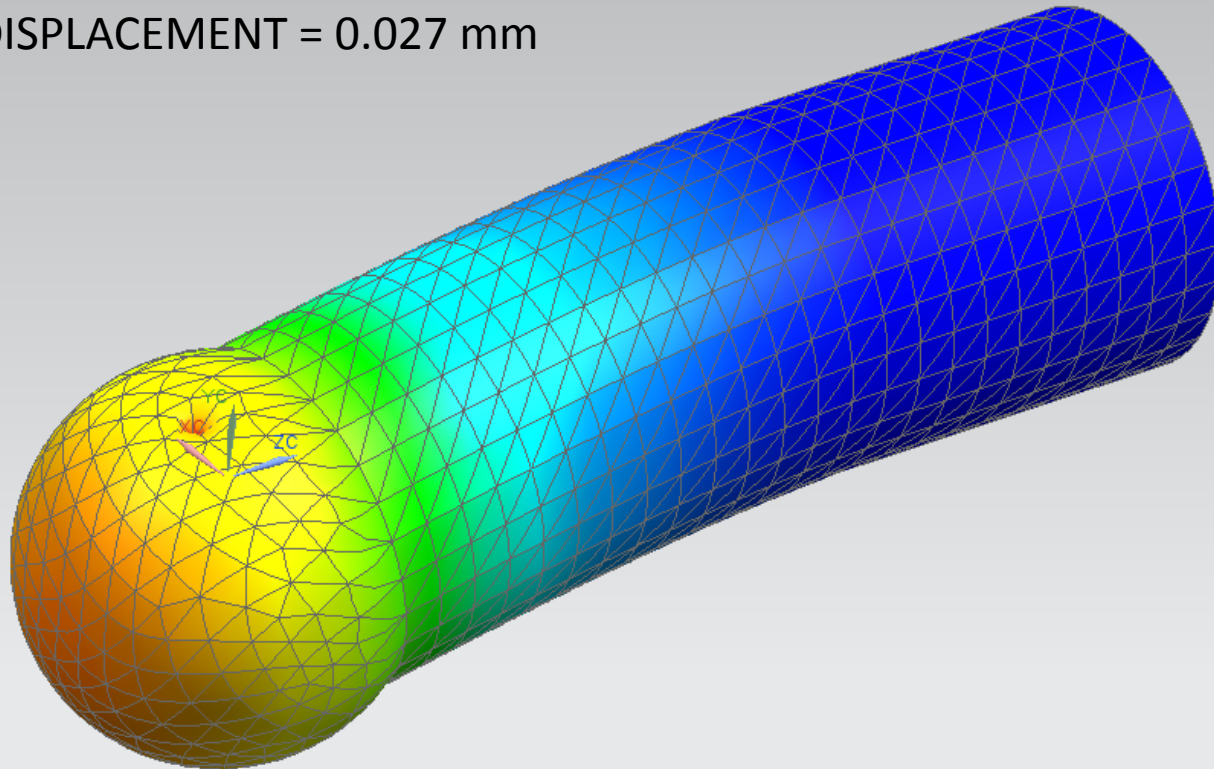


ALUMINUM DOWEL – STRUCTURAL ANALYSIS 2

aluminum_dowel_sim5 : Solution 1 Result
Subcase - Static Loads 1, Static Step 1
Displacement - Nodal, Magnitude
Min : 0.0000, Max : 0.0266, Units = mm
Deformation : Displacement - Nodal Magnitude



MAX DISPLACEMENT = 0.027 mm

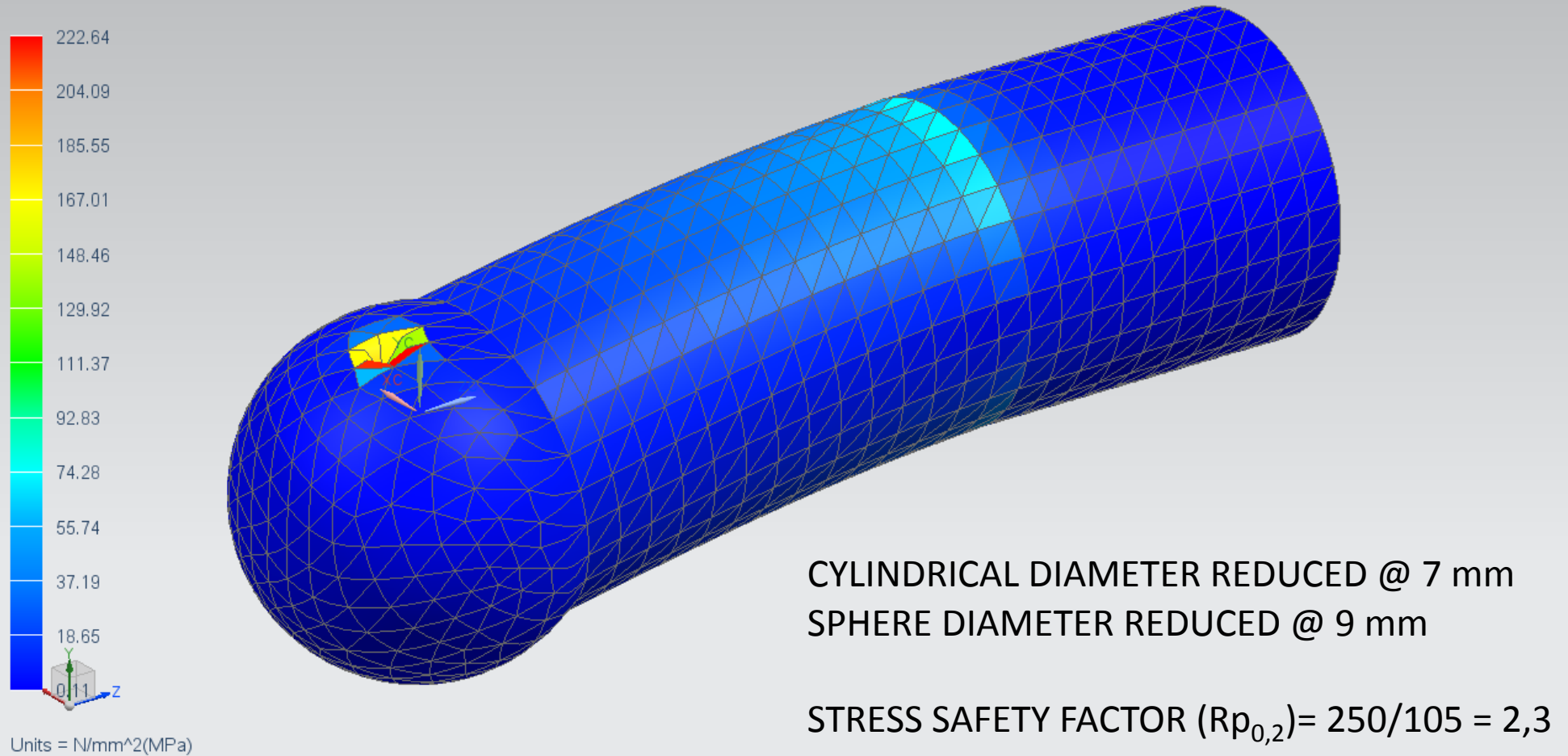


TOTAL DISPLACEMENT (MIRROR SUPPORT ENCLOSED) = 0.036 mm

Units = mm

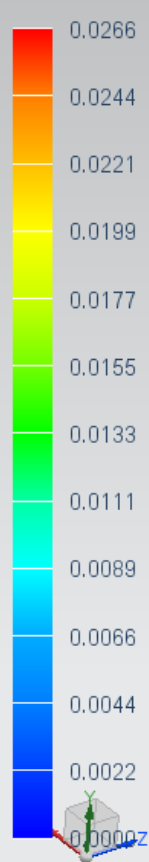
ALUMINUM DOWEL – REDUCED DIMENSIONS 1

aluminum_dowel_sim5 : Solution 1 Result
Subcase - Static Loads 1, Static Step 1
Stress - Elemental, Von-Mises
Min : 0.11, Max : 222.64, Units = N/mm^2(MPa)
Deformation : Displacement - Nodal Magnitude

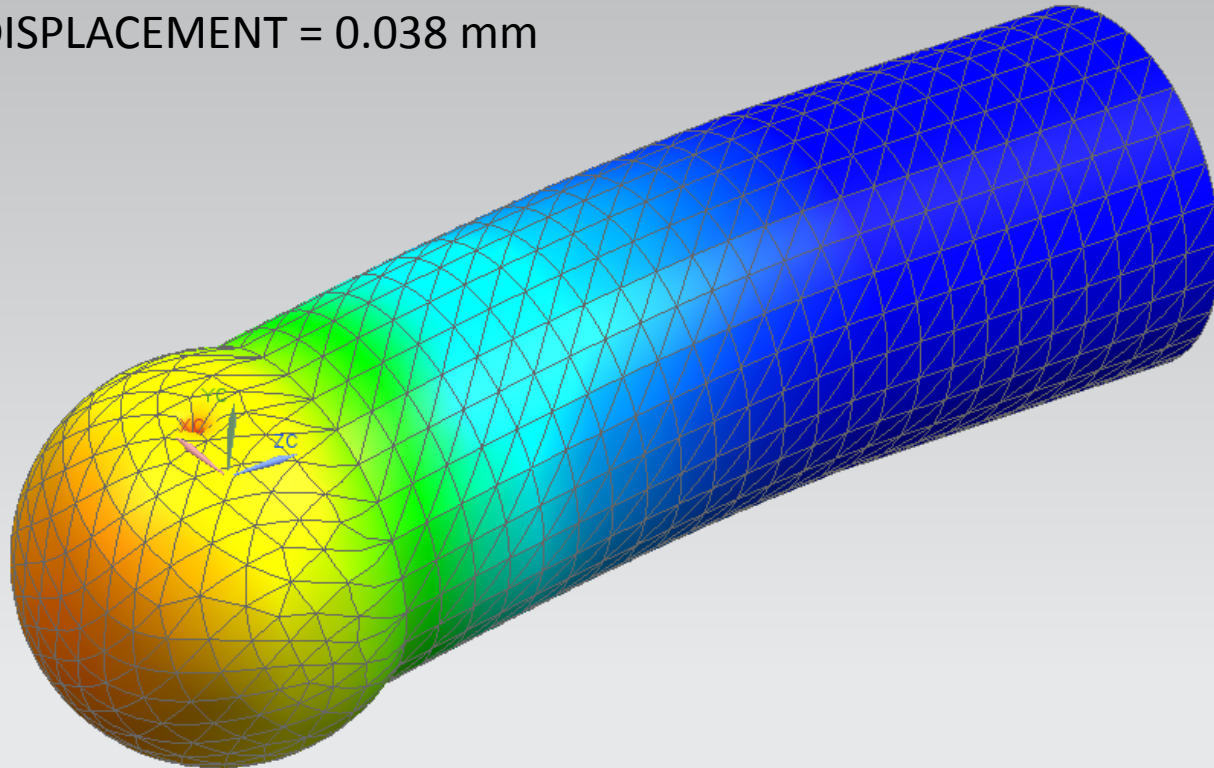


ALUMINUM DOWEL – REDUCED DIMENSIONS 2

aluminum_dowel_sim5 : Solution 1 Result
Subcase - Static Loads 1, Static Step 1
Displacement - Nodal, Magnitude
Min : 0.0000, Max : 0.0266, Units = mm
Deformation : Displacement - Nodal Magnitude



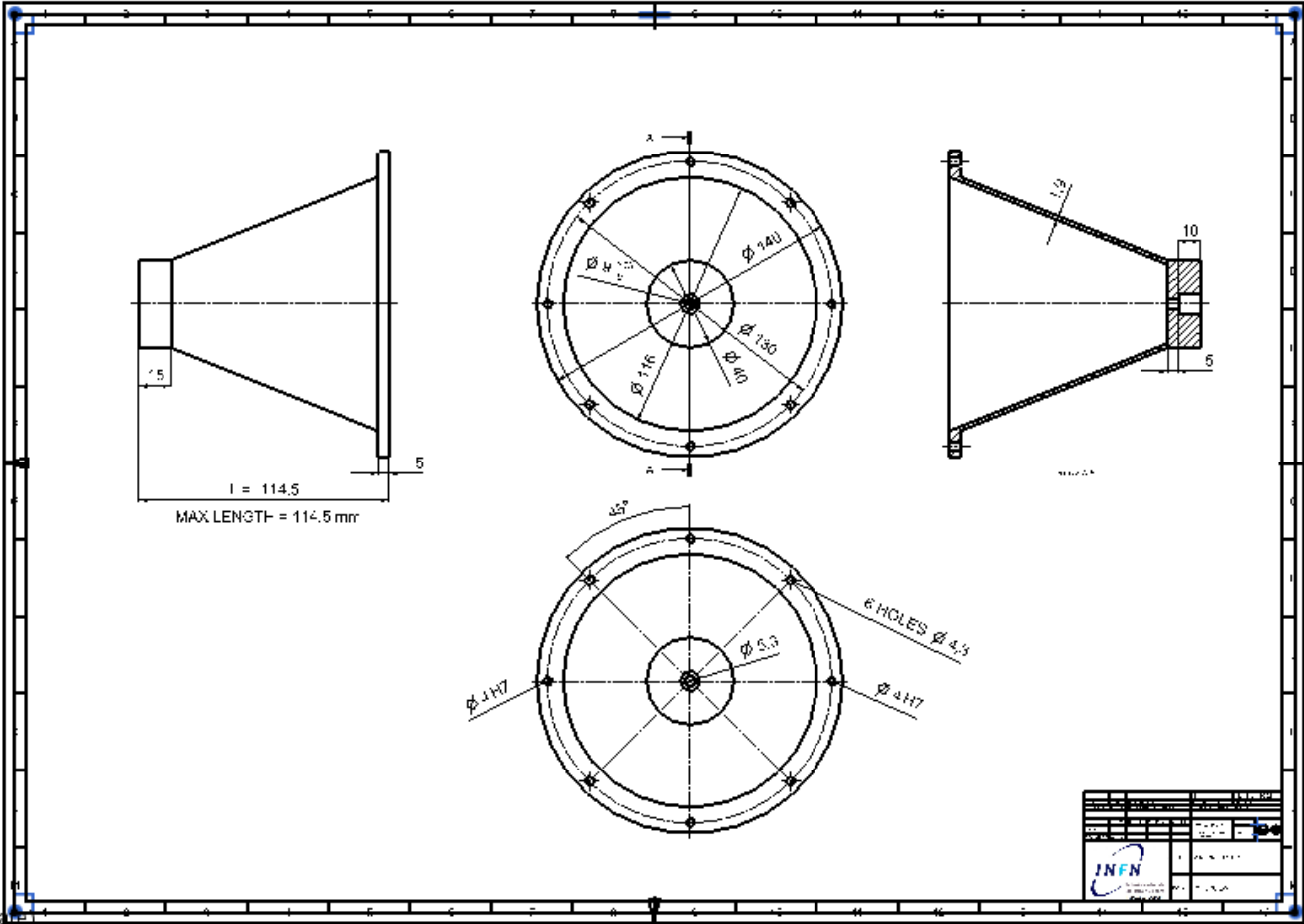
MAX DISPLACEMENT = 0.038 mm



TOTAL DISPLACEMENT (MIRROR SUPPORT ENCLOSED) = 0.047 mm

Units = mm

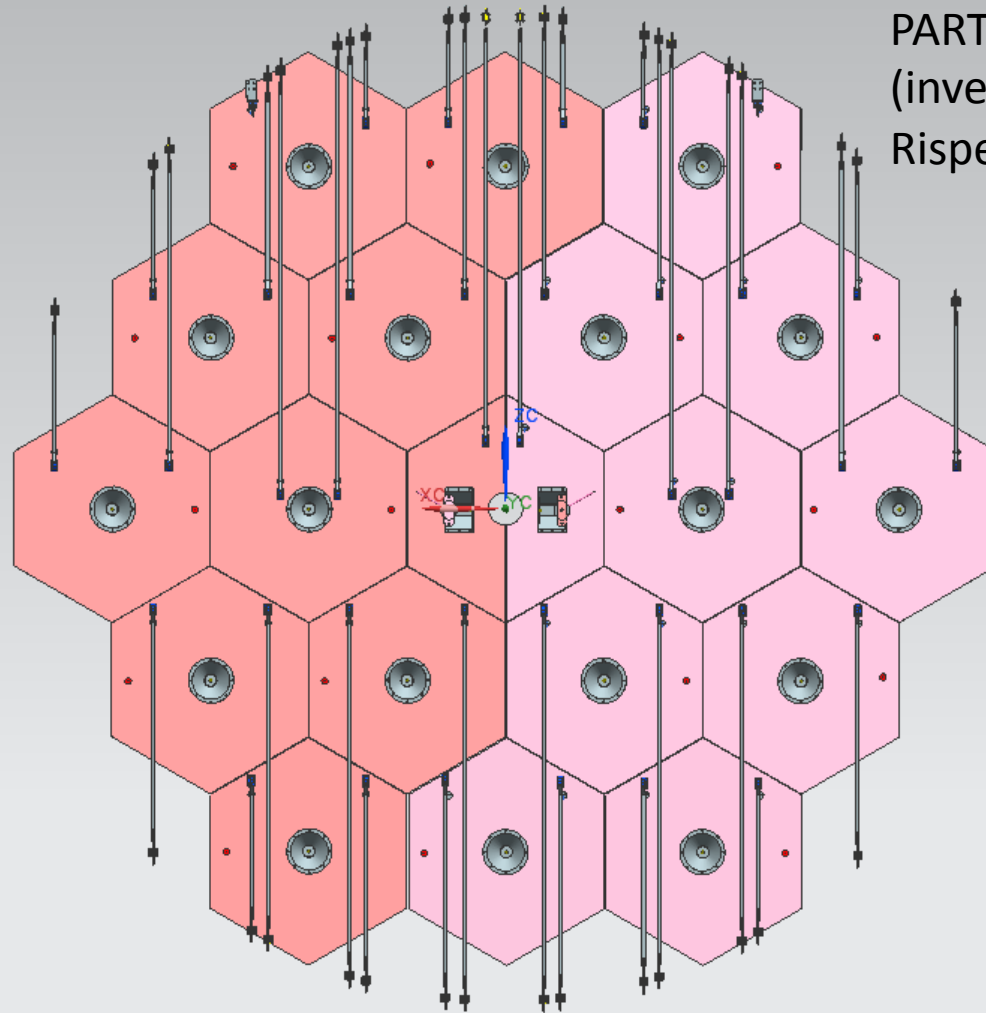
MIRROR SUPPORT – DETAILED DRAWING



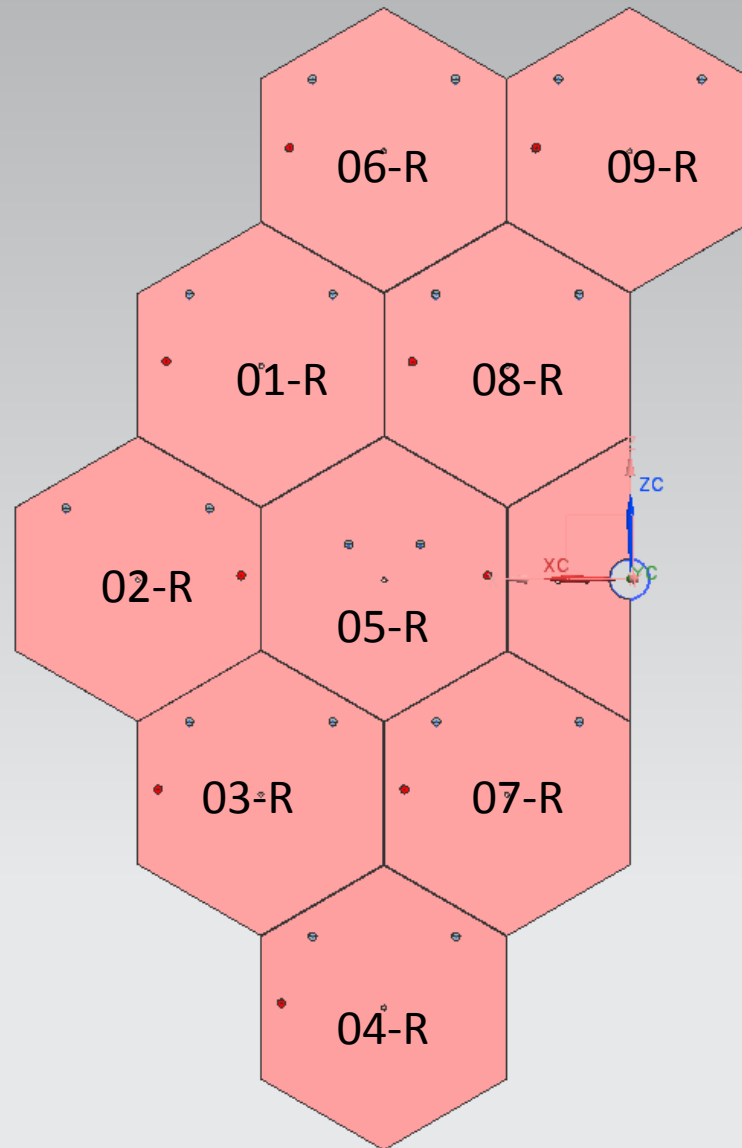
Sheet "Sheet 1" Work (Out of Date)

MIRRORS LAYOUT

SPECCHI VISTI DALLA
PARTE DEI CONI
(invertita destra con sinistra
Rispetto a vista parte montaggio)



MIRRORS LAYOUT – RIGHT HALF SIDE



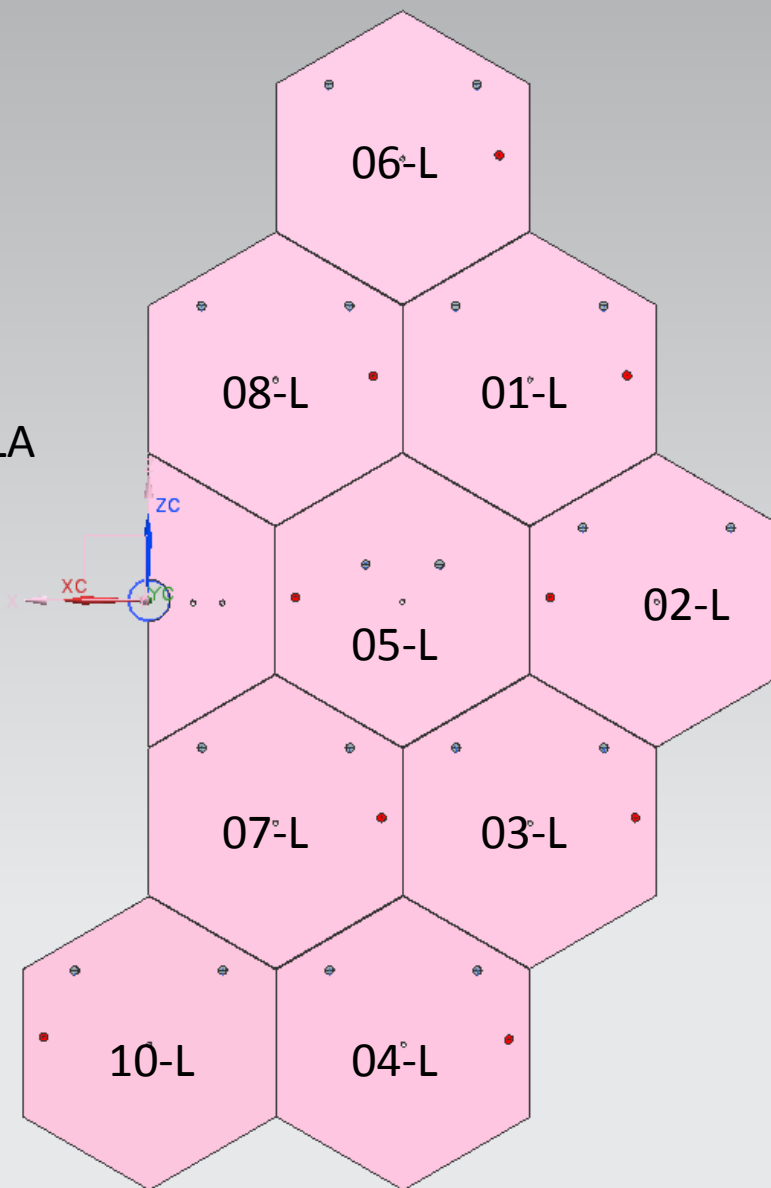
SPECCHI VISTI DALLA
PARTE DEI CONI

LUNGHEZZE CONI SUMMARY TABLE - RIGHT HALF SIDE

MIRROR	CONE LENGTH L (mm)
01-R	95,9
02-R	85,4
03-R	86,0
04-R	97,3
05-R	80,9
06-R	97,3
07-R	86,9
08-R	86,8
09-R	103,7

MIRRORS LAYOUT – LEFT HALF SIDE

SPECCHI VISTI DALLA
PARTE DEI CONI



LUNGHEZZE CONI SUMMARY TABLE - LEFT HALF SIDE

MIRROR	CONE LENGTH L (mm)
01-L	90,5
02-L	88,0
03-L	90,6
04-L	104,1
05-L	87,6
06-L	104,0
07-L	95,6
08-L	95,5
10-L	114,5