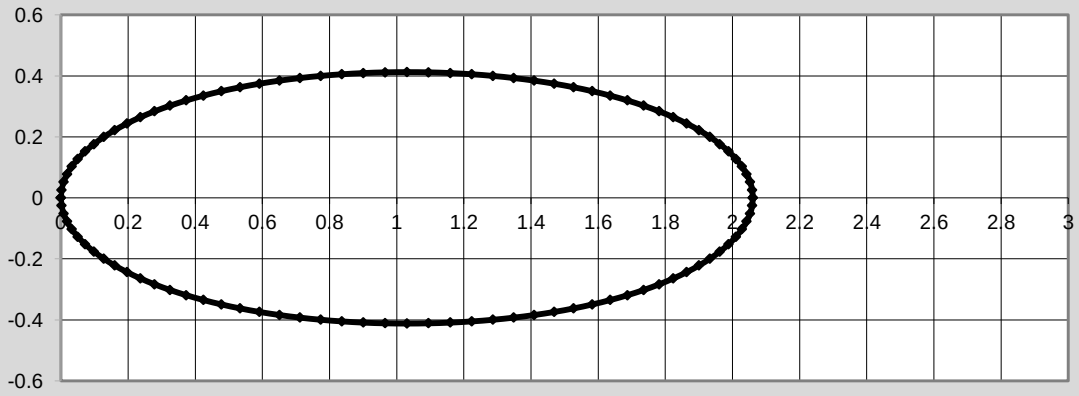
Airship Envelope Datasheet

Identifier:	Faculté des sciences du sport	Date of Design:	2023-04-18
Designed by:	Dr Julien Serres	Date of Production:	
Organisation:		Place of Production:	Windreiter HQ



Material Parameter		Gertler Shape Coefficients	
Envelope Material:	TritaX Silver	Position of max. thickness:	0.5
Surface Weight [g/m²]:	30	Bow Radius:	0.5
Tension Strength [MPa]:	245	Stern Radius:	0.5
Bonding Technique:	Point Welding	Prismatic Coefficient:	0.67

Design Parameter		Lift Assumptions*	
Length to Diameter:	2.500	Lift at Sea Level He [g]:	600.40
Block Volume [m³]:	1.400	Lift at 300 m Helium [g]:	578.41
Block Coefficient:	0.526	Lift at Sea Level H2 [g]:	647.01
Envelope Volume [l]:	736.70	Lift at 300 m H2 [g]:	623.31
Length [m]:	2.06	*The calculations assume pure lifting gas	
Diameter [m]:	0.82		
Surface Area [m²]:	4.54		
Envelope Weight [g]:	136.30		
Number of gores	4		

Gertler 4621 Shape spreadsheet. Computes shape, volume, centre of volume, and pattern for a Series58 Model 4621 body of revolution.Copyright (C) 2019 Johannes Eissing

Balloon Handling Notes

Fill the balloon until wrinkles start to dissapear.

Seal the balloon with the clip after folding the tube multiple times.

Store the balloon either filled or relase all lifting gas.
Use a vacuum cleaner to fully remove all gas.
Fold the balloon carefully flat as it was shipped.
This ensures a long lifetime of the material.