

Passion
Knowledge
Innovation



VABO
COMPOSITES

Presentation 11-10-2017

Pula

The logo for E-LASS features the text "E-LASS" in a bold, blue, sans-serif font. A small orange triangle is positioned above the letter "A".

E-LASS



- Accedoo doors and hatches
- Antenna masts and jacuzzi's



- Industrial constructive elements
- Bucket, machine parts



- Art in public space
- HUBS, Olympic games 2012, Louvre (Paris)

- Commercial
- Naval
- Cruiseschip
- Super yachts



- Heavy equipment
- Machine parts
- Handling



- Architectonic projects for public spaces

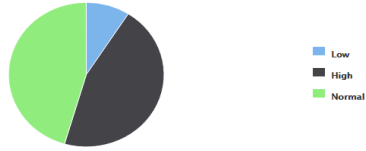


VABO Composites way of working:

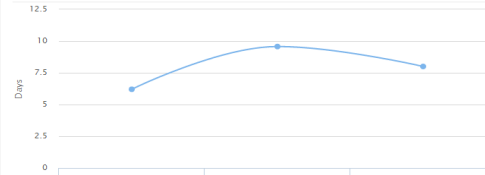
- Workshop approval Lloyds
- ISO 9001
 - Transparent administrative processes
 - Control on WHS (work, health and safety)
 - Production procedures
- CRM / QMS Project planning
 - One system to control
 - Administrative processes
 - Project/Resource planning
 - Issue tracking
 - Product tracking
 - Ordering and invoicing
 - Customer portal to view status of the project (on-line)
- Focus in Quality and Delivery

Welcome to the Client portal

Open Tickets By Priority



Tickets Closure Time By Priority



What would you like to do?

Documents

[Upload a Document](#)

Tickets

[New Ticket](#)

[View Open Tickets](#)

Recent Documents

[ZSH 7.0-Acc -21.06.2016-VH Mast.pdf](#)

[ZSH 7.0-Acc -21.06.2016-VH Mast.pdf](#)

Recent Tickets

[de- and acceleration forces on the mast](#)

[Open](#)

What are the de- and acceleration forces on the mast

See attached document; encircled in red

Mechanical load

[Wait For Response](#)

What are the mechanical loads on the mast apart from the loads needs for maintenance.
Waterload?

Natural frequency

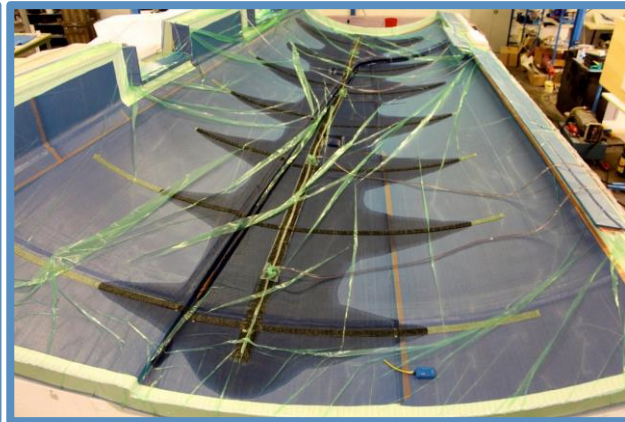
[Wait For Response](#)

What is the natural frequency bandwidth of the mast

Production facility (3000m2)



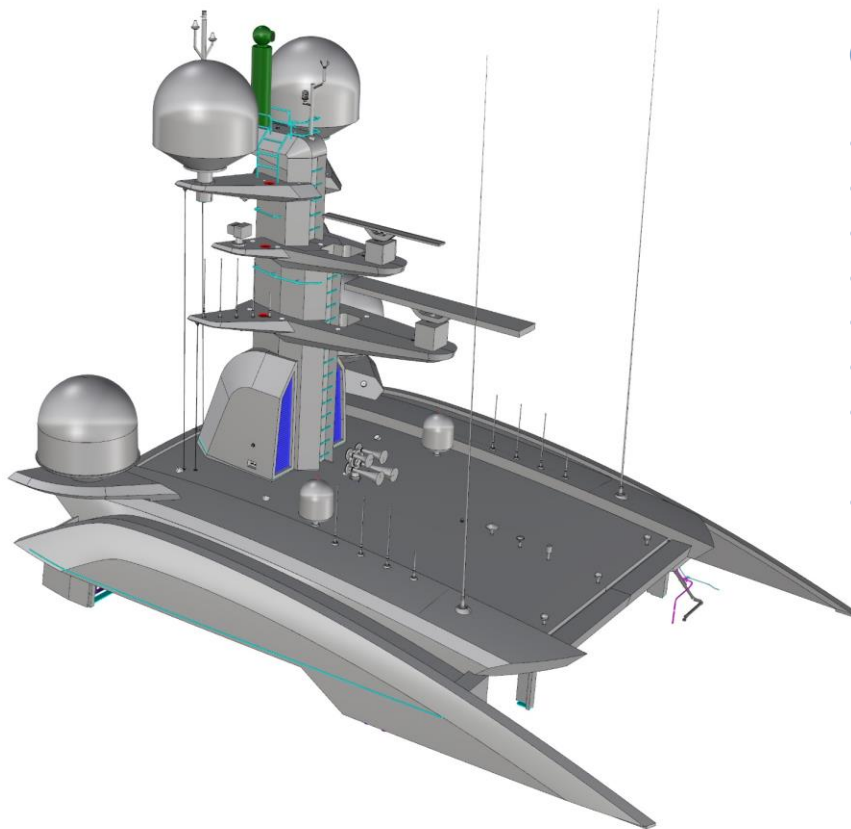
Production process





Composite project (240m²):

Ready for painting and installation.



Composite project (350m2) in progress:

- 3D measurements
- Pre-engineering
- Detail engineering
- Project management
- Consultation Class (Lloyds)
- Building and assembly
- Preparation piping and mounting plates equipment
- Ready for painting and installation



Composite custom jacuzzi:

- 3D measurements
- Detail engineering
- Project management
- Building
- Preparation for piping equipment
- Ready for (painting) and installation
- Installation and equipment done by third party



- Lightweight
- Transparent for navigation equipment
- Detail engineering
- Project management
- Building
- Preparation piping and mounting plates equipment
- Ready for painting and installation

Accedoo is the brand name for Composite plug and play ship doors developed and produced by VABO.

The doors are certified and ready for install by delivery. And all benefits are tested by reputable institutions and witnessed by regulations.

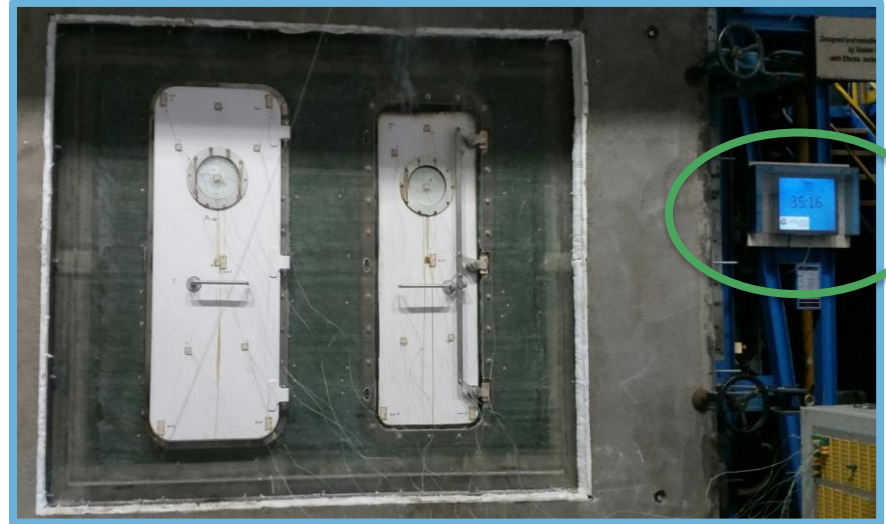
Markets:

- Commercial
- Fast ferry's
- Naval
- Superyachts
- Cruise ships



- Water, weather and gastight
- Modular mould system, no size limits
- Plug and play (tested in VABO workshop)
- Adjustable toggles and hinges
- Veritas certified
- Non-magnetic
- Weight reduction (50% vs steel)
- Easier to install and in usage
- Low maintenance
- Function integration (insulation, fire resistance, EMI)
- Acoustic damping

Fire tests, FRD 30 FTP part 3 (B30)



Strenght tests by NLR (Dutch Aerospace lab.), witnessed by Veritas



Acoustic tests
Damping of 38dB for the complete range



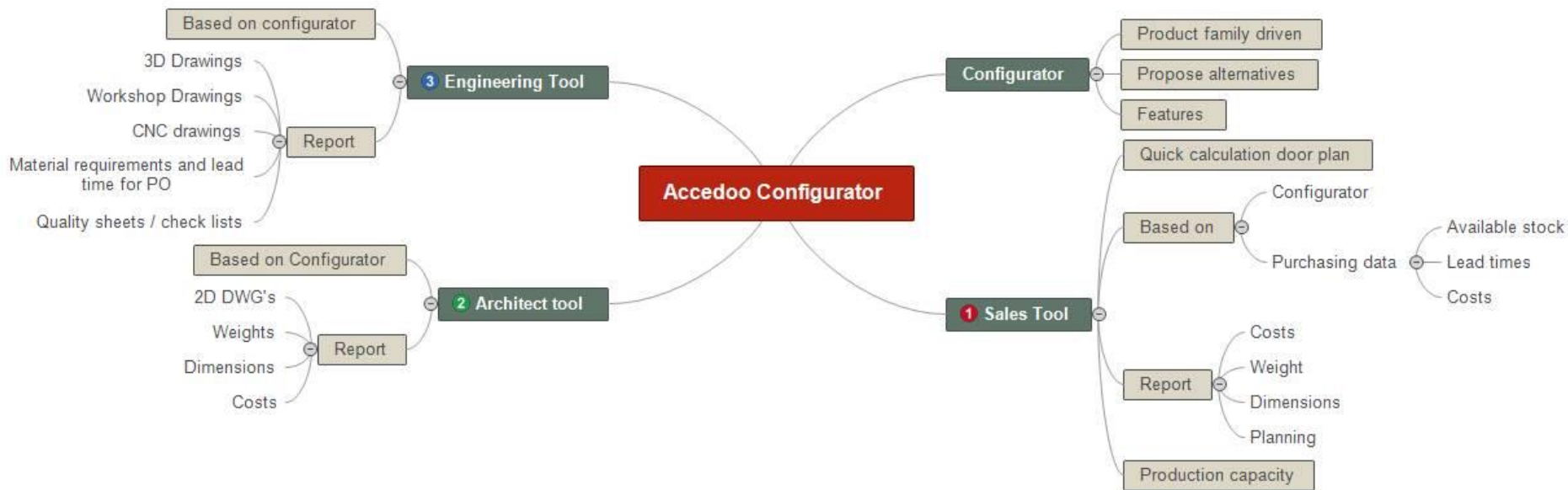
Goals

- Reduction sourcing time
- Reduction engineering
- Reduction production time



Solutions

- Configuration based ERP (BOM)
- Parametric 3D models in Solidworks
- Production automation

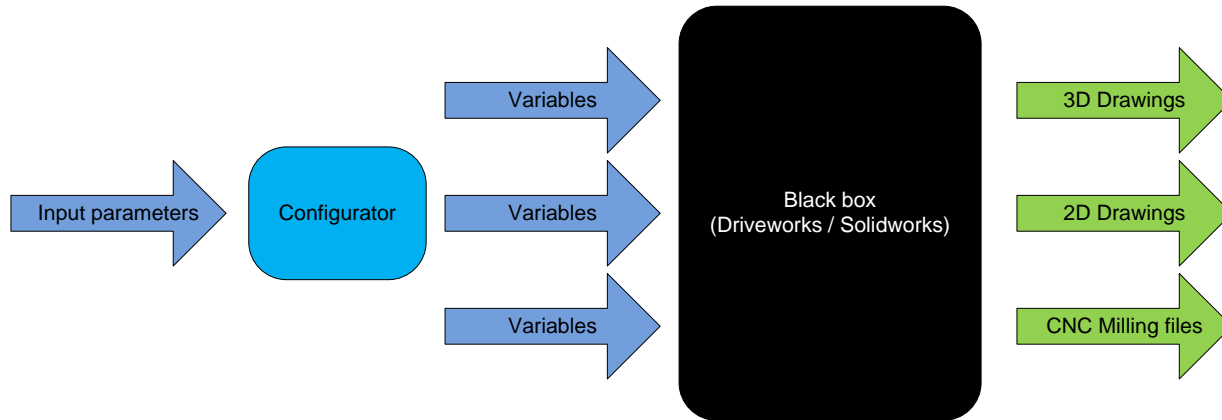


Edit Parameters

Action	Name	Instructions	Value	Option
✓	Height	Height door in mm	1800,00	-
✓	Width	Width door in mm	650,00	-
✓	Fire	No Fire Classification or FRD30	-	No Fire Classification ▾
✓	Seal	Weathertight or Watertight	-	Weathertight ▾
✓	Type	Door, Hatch or Scuttle	-	Door ▾
✓	Amountggl	Amount of toggles	-	2 ▾
✓	Opening	Position of hinges (outside view)	-	Right ▾
✓	amounthinge	Amount of Hinge's	-	2 ▾
✓	Coaming_type	Coaming type	-	Standard ▾
✓	Porthole	Porthole?	-	Yes ▾
✓	Version	-	-	2.0 ▾
✓	Colour inside (RAL)	-	9010	-
✓	Colour outside (RAL)	-	9010	-
✓	Barhandle_type	Barhandle type	-	Straight ▾
✓	Hinge_side	Position of hinges (outside view)	-	Right ▾
✓	Material_reactionarm	-	-	Carbon ▾

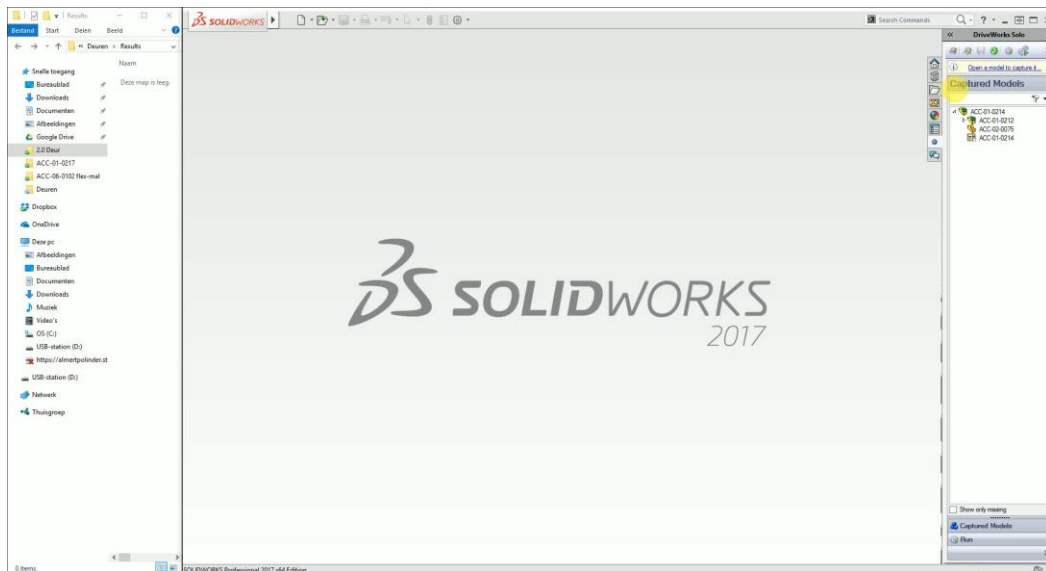
Article	Quantity	Cost category
Vinylesterhars Injectie	12,23	Build ▾
Glaslegsel EQX 1200	5,62	Build ▾
Moss rubber 40x15-L	4,90	Assembly ▾
CFM 300	2,01	Build ▾
Injectievlies	2,81	Build ▾
Corecork NL10 1000x1250x4mm	1,00	Build ▾
PIR 100CS 31mm x 1800 x 650	0,90	Build ▾
Insert gasspring door	1,00	Build ▾
Neogel NPG 8375 (transparant)	2,81	Build ▾
Productie uren	12,00	Build ▾
Igus® Iglidur® J Kraaglager, JFM-2023-11	2,00	Assembly ▾
Verzonkenschroef DIN 7991 M8x25 A4	6,00	Assembly ▾
Draadbus M8 RVS 316	6,00	Assembly ▾
Cilinderkopschroef ISO 4762 M10x40 A4	1,00	Assembly ▾
O-ring 19x3 EPDM 70 shore	2,00	Assembly ▾
Barhandle insert alu	2,00	Assembly ▾
Barhandle pin	1,00	Assembly ▾
Cover handle/wheel outside	1,00	Assembly ▾

Parametric 3D models



Edit Parameters

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✓	Colour inside (RAL)	-	9010	-
✓	Colour outside (RAL)	-	9010	-
✓	Barhandle_type	Barhandle type	-	Straight ▾
✓	Hinge_side	Position of hinges (outside view)	-	Right ▾
✓	Material_reactionarm	-	-	Carbon ▾



Composite plug and play ship doors and hatches



- Hinges adjustable
- Toggles adjustable
- Watertight 1800 x 650 <45kg
- Easy to install

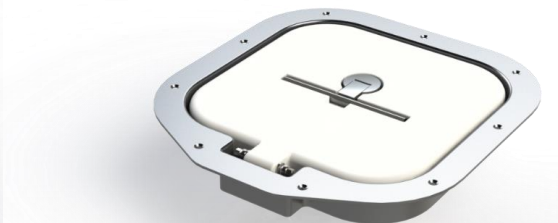




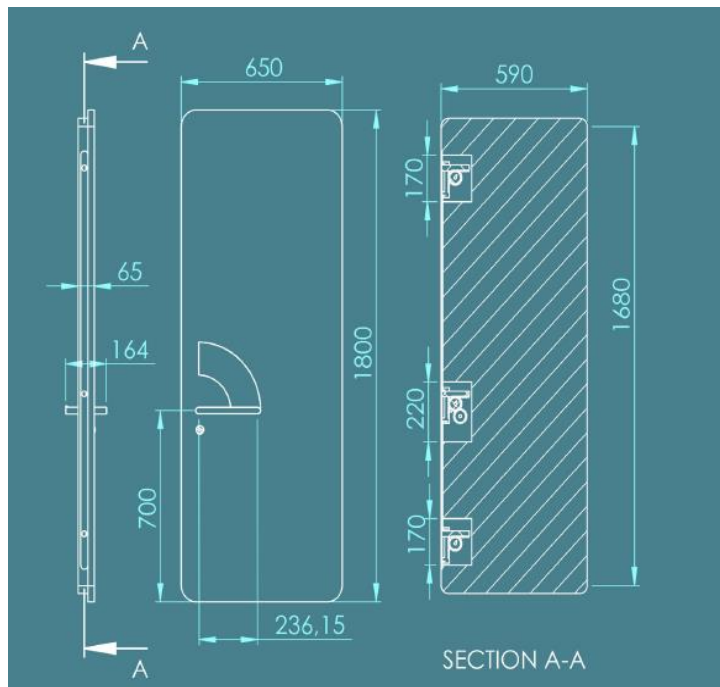
Composite escape hatches

Watertight and fire resistance

Dimensions 600x600, 750x750 and 900x900



Development ship door with internal lockingsystem



Project goals

- Will be presented September 2018 (SMM)
- Internal locking system
- Smooth and nice design
- And all benefits as other doors

- Plug and play (easy to install)
 - Splash tight
 - Drained flush coaming
 - Polished stainless steel parts
- Modular mould system allows all size's between 300-300 to 1500-1500mm





Any questions?





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