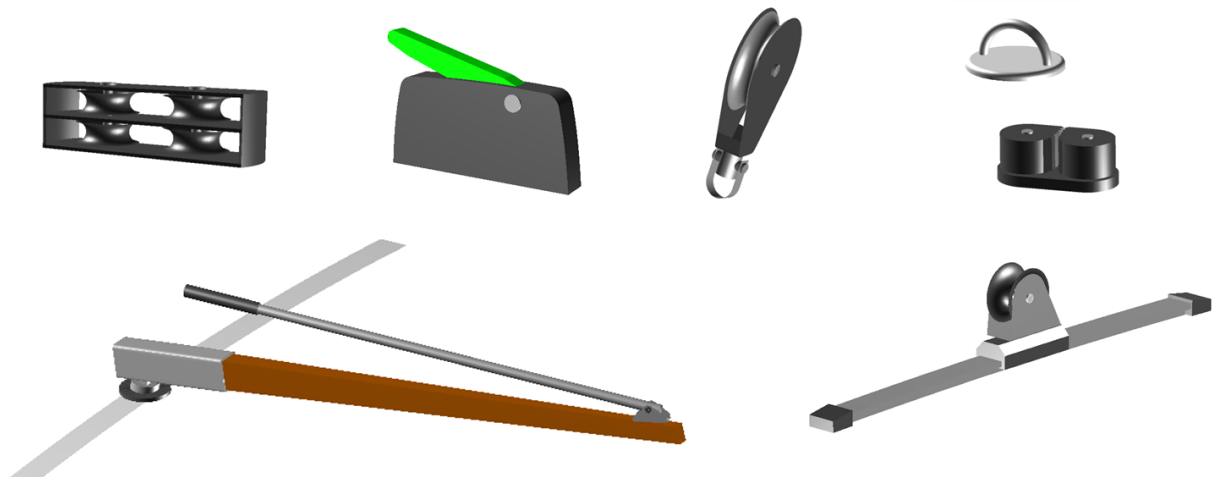


# Components

## Part 2 – Deck Equipment and Miscellaneous

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## Contents

Introduction

Deck Equipment Components

Cabin Window

Block

Pulpit

Deck Organiser

Halyard Block

Headsail Furler

Toerail

Handrail

Rope Clutch

Hatch

Padeye

Chain Plate

Tiller with Extension

Cam Cleat

Sheet Track

Traveller

Rigging Screw

Winch

## Miscellaneous

Components for Decks

Component Parallel 2D Curve

Component Similar Label

## Introduction

Part 1 of the component tutorials covers how to create components, load them into a model, and the tools available to do so. A number of components that come in handy when building a boat model are presented. Here in part 2 deck equipment components are shown, with which models can be given a realistic appearance. Also deck components and two other components that can be beneficial for solving certain geometry problems.

### Abbreviations used:

cp: control point (support point)

mc: master curve = support curve

cp1, cp2, ...: denotes 1st, 2nd, ... point in the list of supports of a curve. It is not an actual entity name.

mc1, mc2, ...: denotes 1st, 2nd, ... curve in the list of supports of a surface. It is not an actual entity name.

In the following the terms used for point, curve and surface types are those of MultiSurf. This may serve the understanding and traceability.



## Deck Equipment Components

The construction of the components listed below is not explained in detail. They do not consist of too many entities, so it is easy to figure out what is related to whom. The names of the points, curves and surfaces are also simple and short, so that the added component name in the working model does not impair the clarity in the Entities Manager.

In order to make changes to suit specific requirements, there is in the source model of the component the Entity List [edit](#), with which all base surfaces and their handles can be quickly displayed. With the two Entity Lists [parents](#) and [products](#) and the **SelectForComponent** command, all necessary component entities can be selected quickly and effectively. See Part 1 of the Components Tutorial for more information.

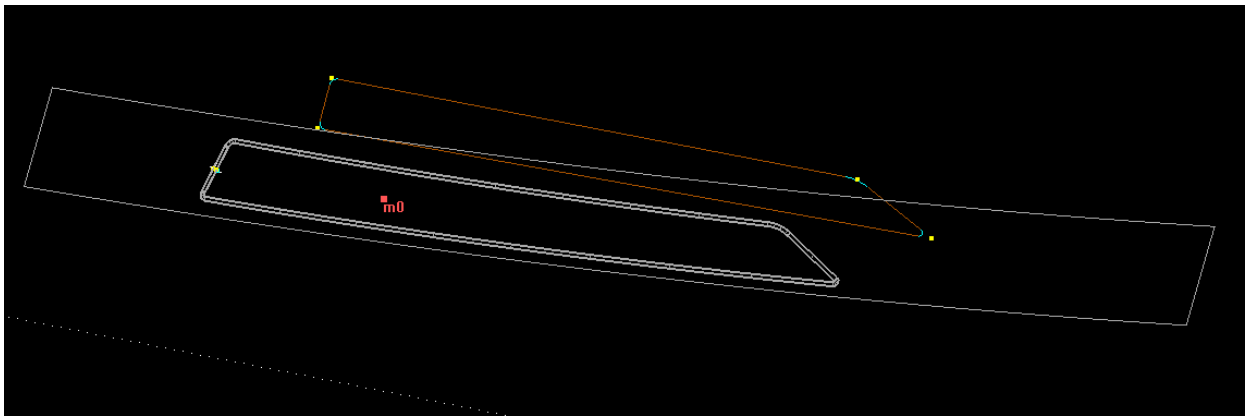
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**Note:** When inserting a component, it is very convenient to first preselect its required parents in the host model, and then load it. In the "Load Component: Resolving Parents" window, the preselection is inserted accordingly and you do not have to scroll through the perhaps long "Available parents" list of possible parents to make the right selection.

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## Cabin Window

**Source model:** cabin\_window\_model.ms2



*Source model: cabin\_window-model.ms2*

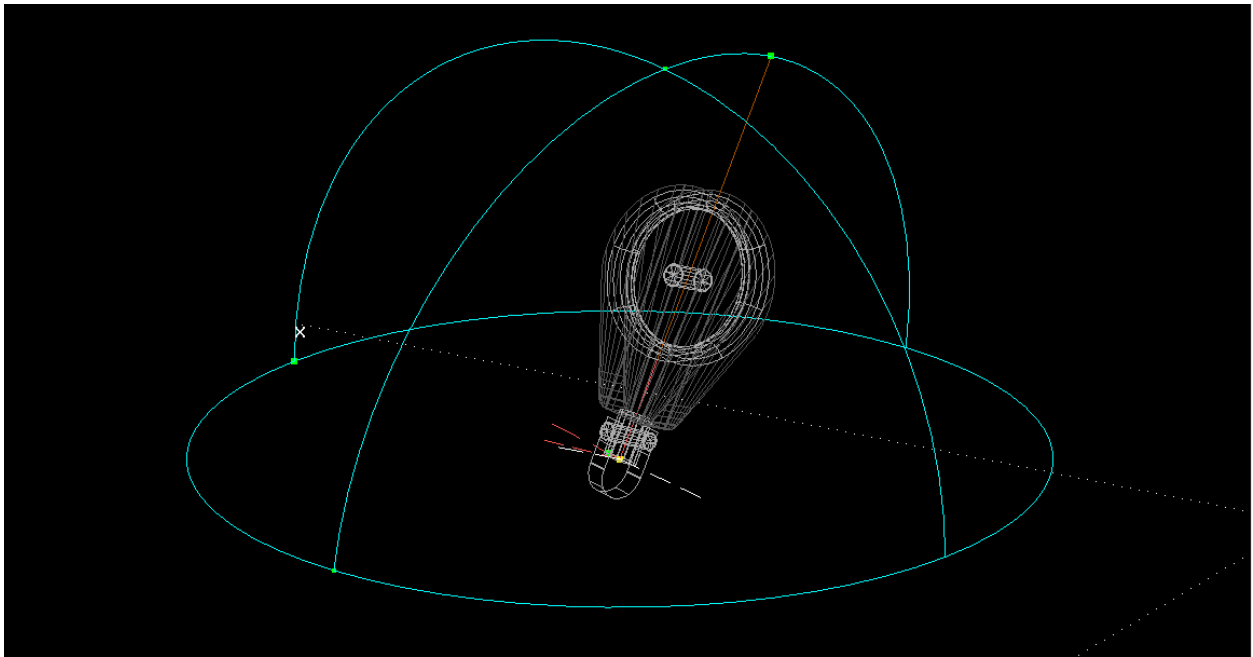
**Component file:** cabin\_window-component.mc2

**Parents from host model:** Magnet [m0](#) on cabin side surface

**Note:** –

## Block

**Source model:** block-model.ms2



Source model: block-model.ms2

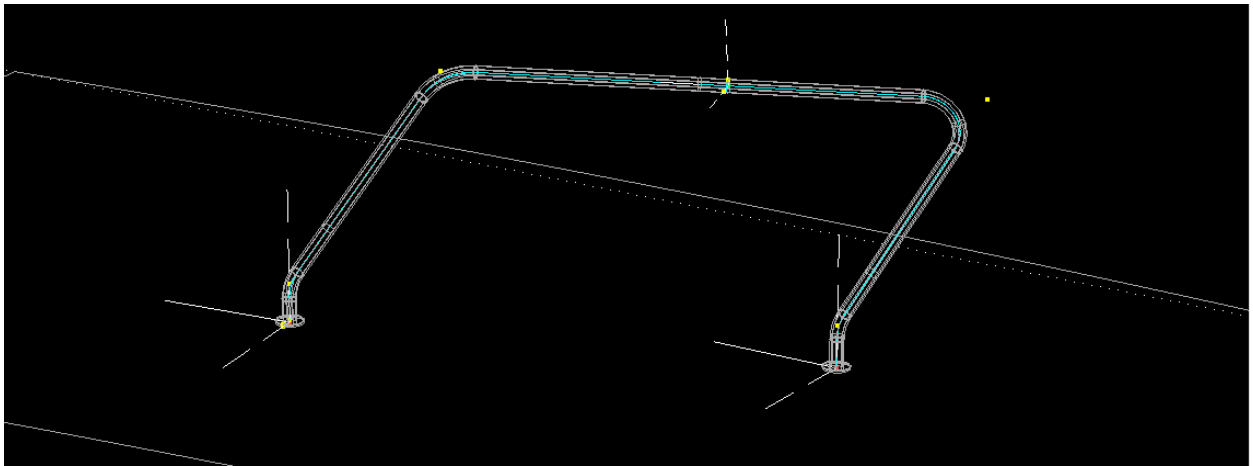
**Component file:** block-component.mc2

**Parents from host model:** none

**Note:** base point is Point [ip](#).

## Bow Pulpit

**Source model:** bow\_pulpit-model.ms2



Source model: bow\_pulpit.ms2

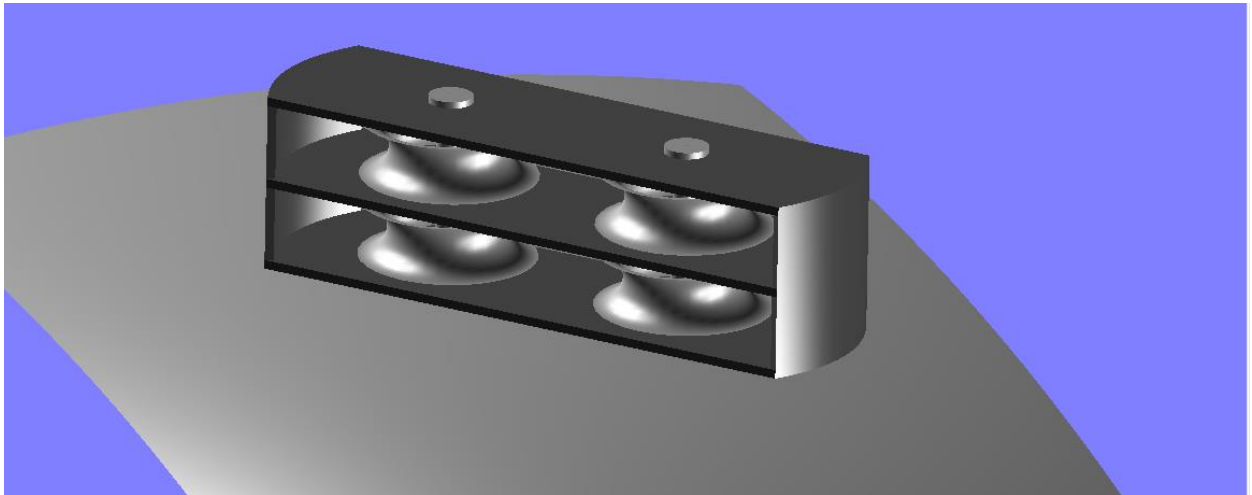
**Component file:** bow\_pulpit.mc2

**Parents from host model:** surface

**Note:** front base is Magnet [m1](#); rear base is Magnet [m2](#).

## Deck Organiser

**Source model:** deck\_organiser-model.ms2



Source model: deck\_organiser-model.ms2

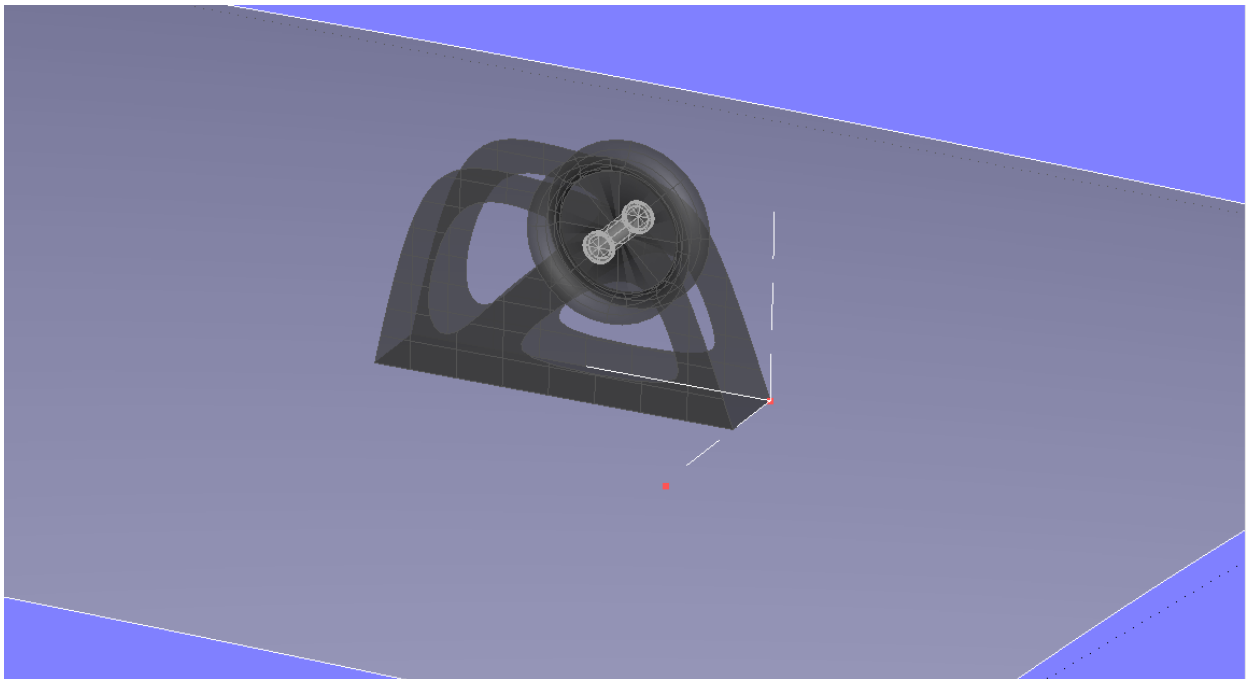
**Component file:** deck\_organiser-component.mc2

**Parents from host model:** surface

**Note:** base point is Magnet [ip](#); the organiser can be rotated with Magnet [m1](#).

## Halyard Block

**Source model:** lead\_block-model.ms2



Source model: lead\_block-model.ms2

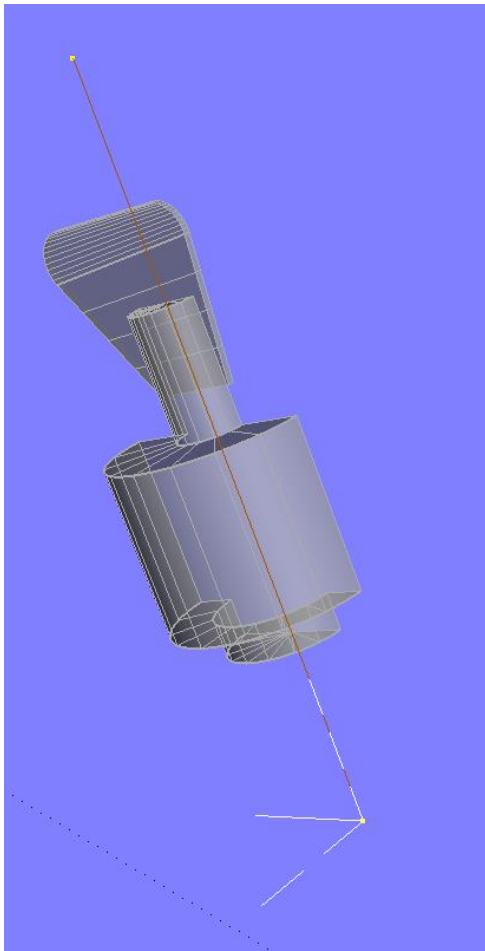
**Component file:** lead\_block-component.mc2

**Parents from host model:** surface

**Note:** base point is Magnet [ip](#); the lead block can be rotated with Magnet [m1](#).

## Headsail Furler

**Source model:** furler-model.ms2



*Source model: furler-model.ms2*

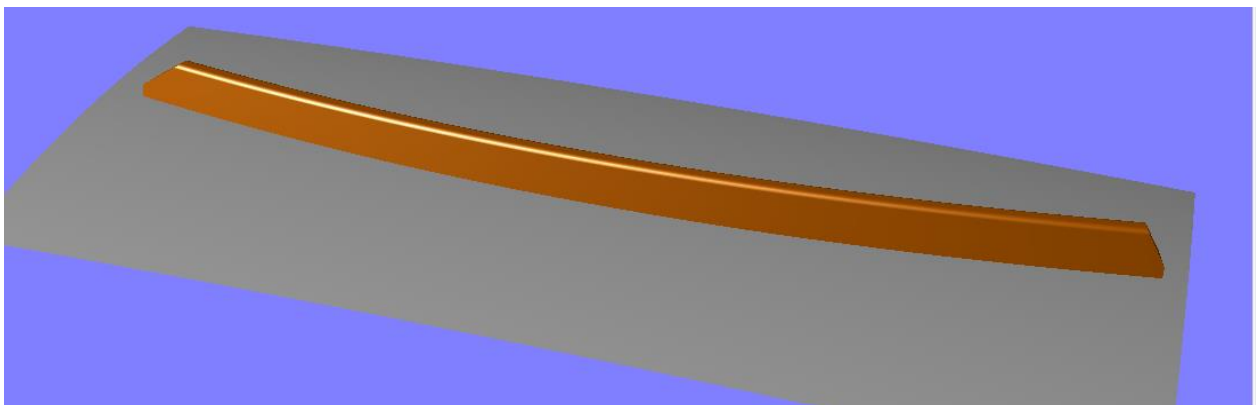
**Component file:** furler-component.mc2

**Parents from host model:** none

**Note:** base point is Point [ip](#).

## Toerail

**Source model:** toerail-model.ms2



*Source model: toerail-model.ms2*

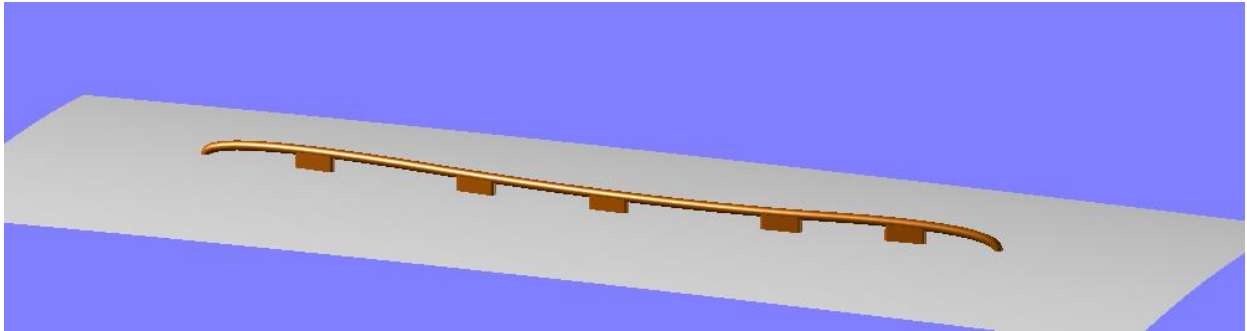
**Component file:** toerail-component.mc2

**Parents from host model:** path (snake)

**Note:** –

## Handrail

**Source model:** handrail-model.ms2



*Source model: handrail-model.ms2*

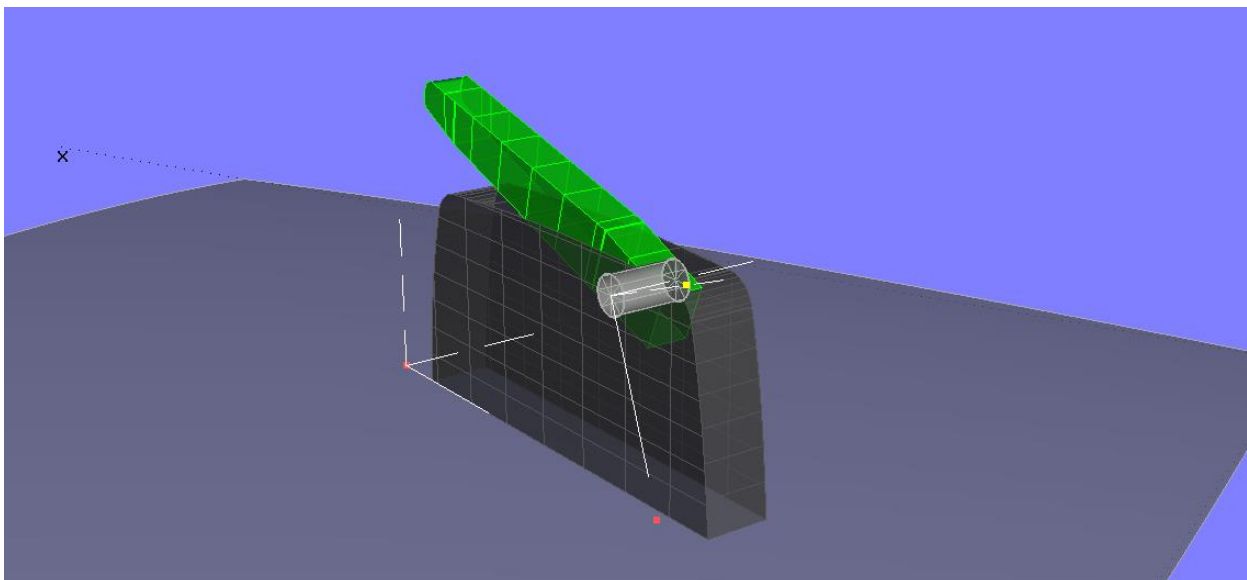
**Component file:** handrail-component.mc2

**Parents from host model:** surface

**Note:** –

## Rope Clutch

**Source model:** rope\_clutch-model.ms2



*Source model: rope\_clutch-model.ms2*

**Component file:** rope\_clutch-component.mc2

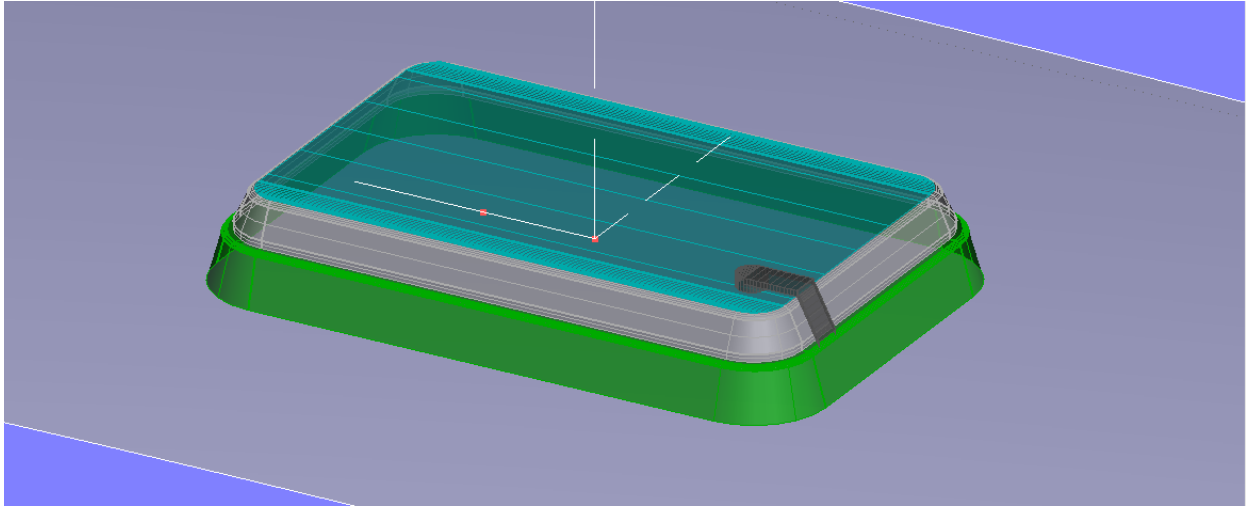
**Parents from host model:** surface

**Note:** base point is Magnet [ip](#); the clutch can be rotated with Magnet [m1](#); Point [pt17](#) adjusts the clamping lever.



## Hatch

**Source model:** hatch-model.ms2



*Source model: hatch-model.ms2*

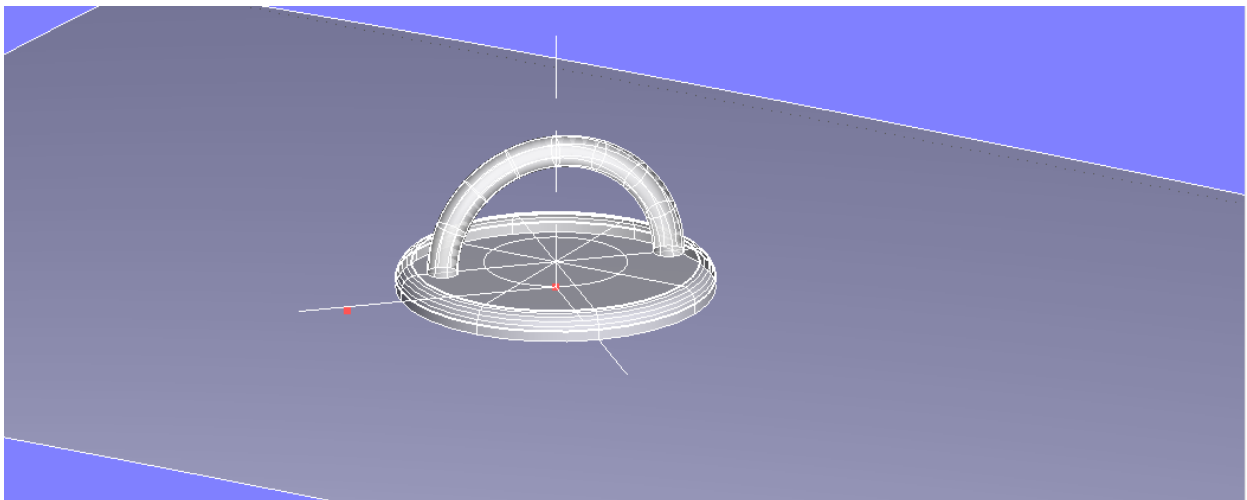
**Component file:** hatch-component.mc2

**Parents from host model:** surface

**Note:** base point is Magnet [ip](#); the hatch can be rotated with Magnet [m1](#).

## Padeye

**Source model:** padeye-model.ms2



*Source model: padeye-model.ms2*

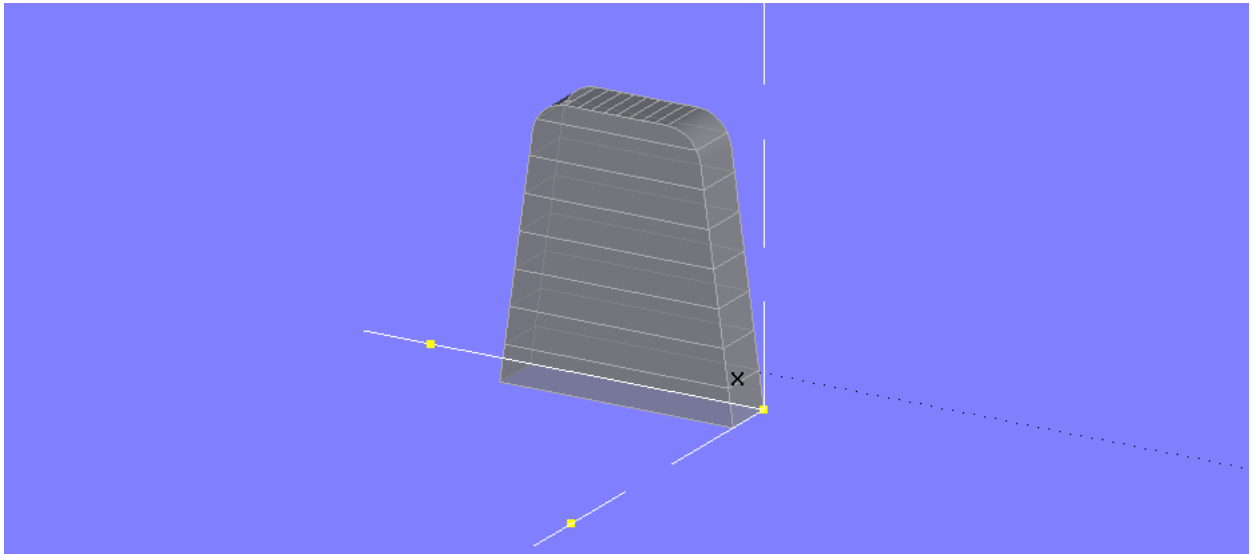
**Component file:** padeye-component.mc2

**Parents from host model:** surface

**Note:** base point is Magnet [ip](#); the padeye can be rotated with Magnet [m1](#).

## Chainplate

**Source model:** chain\_plate-model.ms2



*Source model: chain\_plate-model.ms2*

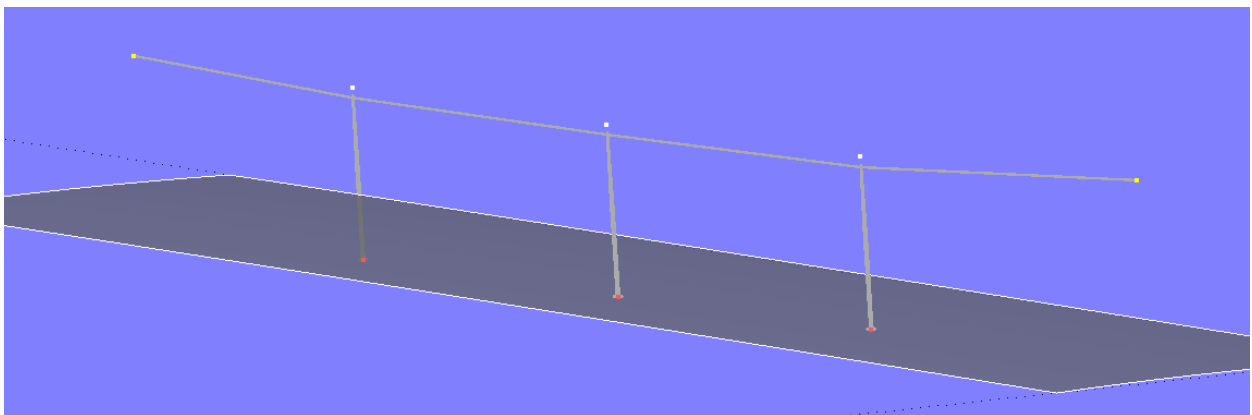
**Component file:** chain\_plate-component.mc2

**Parents from host model:** none

**Note:** –

## Rail Stanchion

**Source model:** rail\_stanchion-model.ms2



*Source model: rail-stanchion-model.ms2*

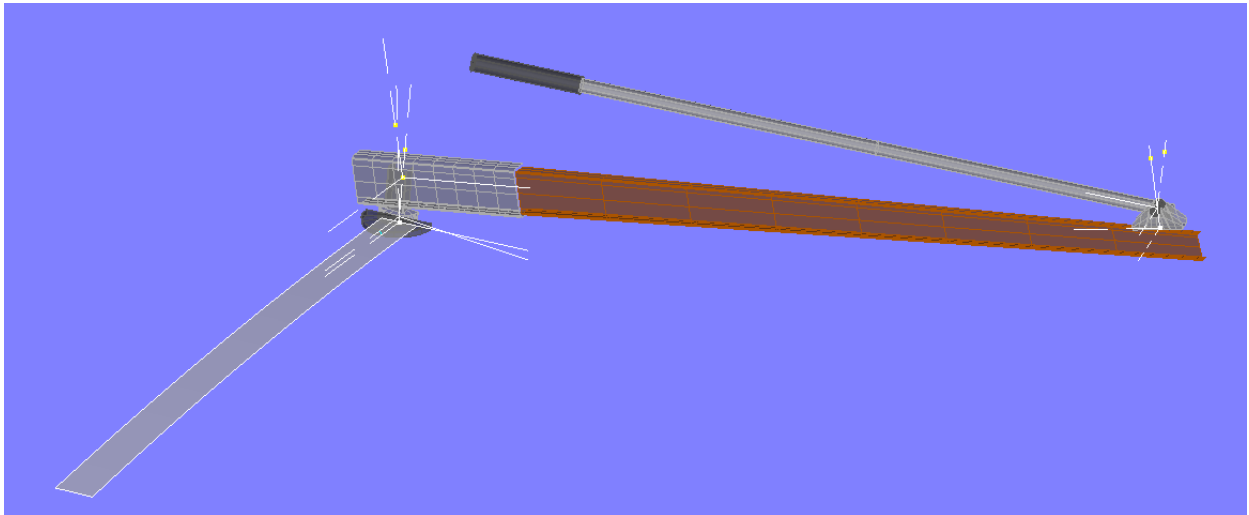
**Component file:** rail\_stanchion-component.mc2

**Parents from host model:** surface

**Note:** –

## Tiller with Extension

**Source model:** tiller-model.ms2



Source model: tiller-model.ms2

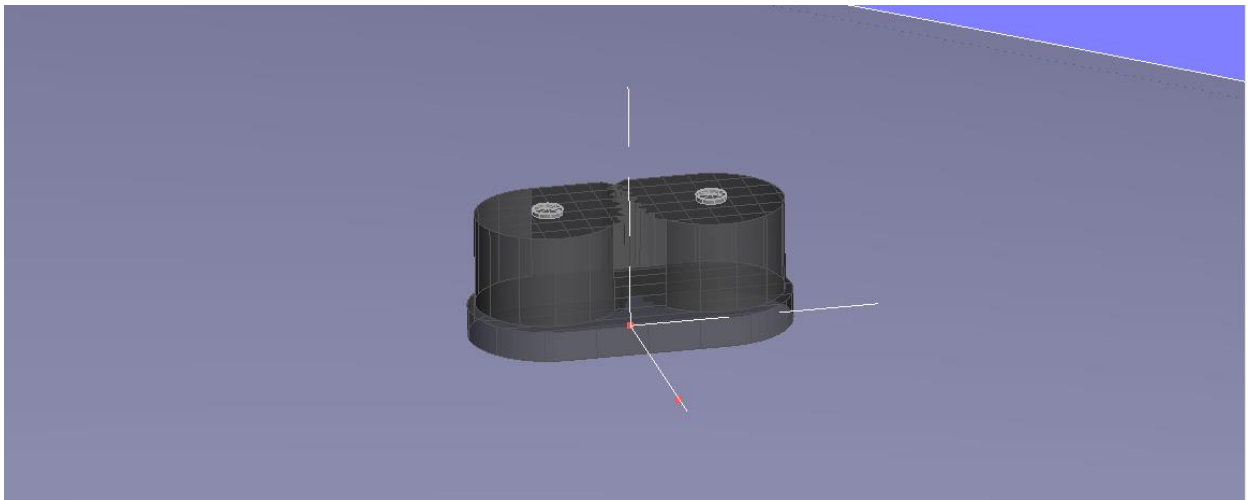
**Component file:** tiller-component.ms2

**Parents from host model:** ring on midships snake

**Note:** tiller and extension adjustable in all directions

## Cam Cleat

**Source model:** cam\_cleat-model.ms2



Source model: cam\_cleat-model.ms2

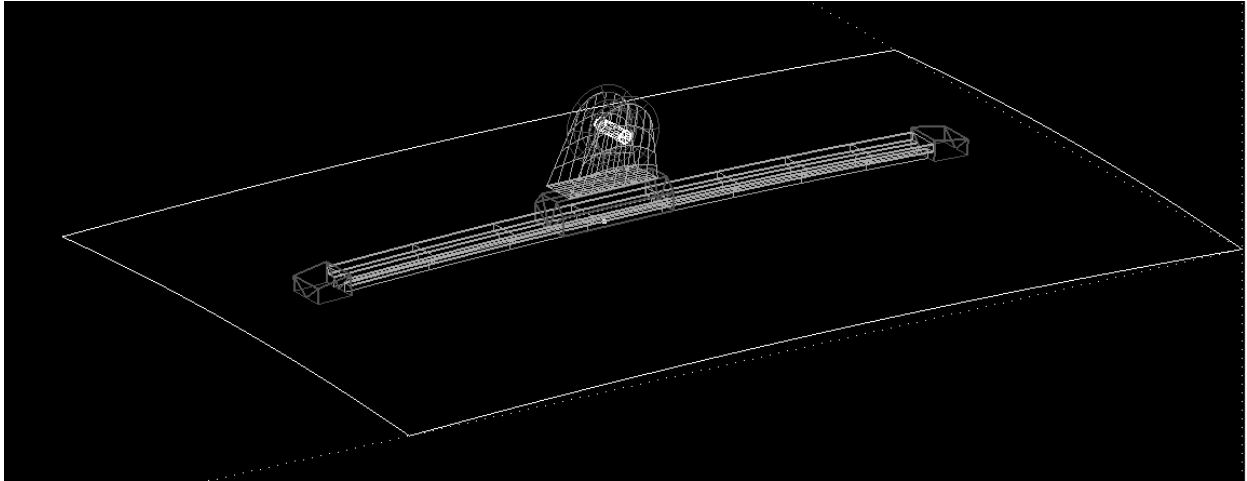
**Component file:** cam\_cleat-component.mc2

**Parents from host model:** surface

**Note:** base point is Magnet [ip](#); the cam cleat can be rotated with Magnet [m1](#).

## Sheet Track

**Source model:** track-model.ms2



Source model: track-model.ms2

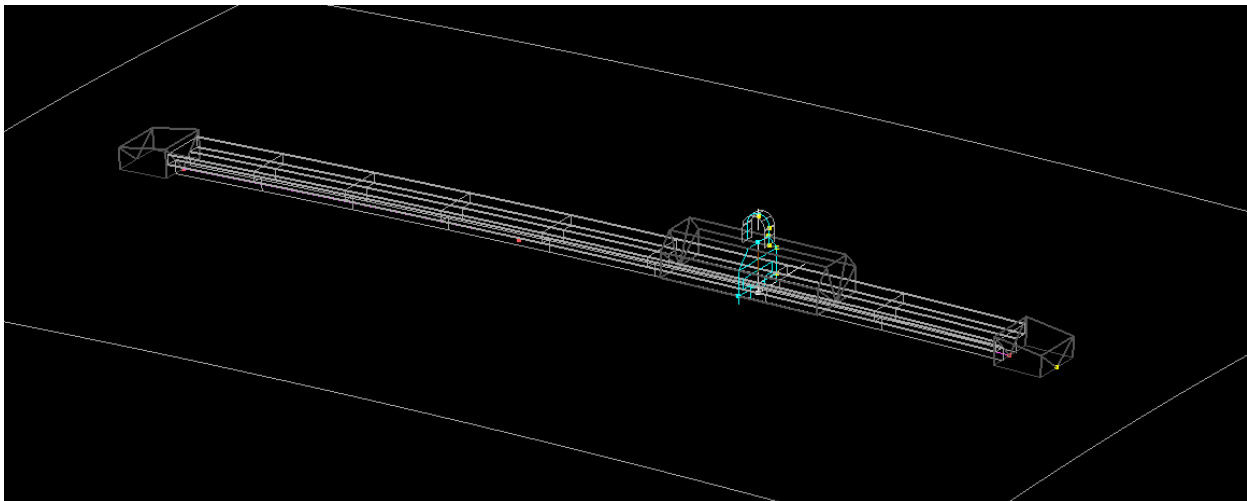
**Component file:** track-component.mc2

**Parents from host model:** path (snake)

**Note:** the sheet car can be moved with Ring [r1](#).

## Traveller

**Source model:** traveller-model.ms2



Source model: traveller-model.ms2

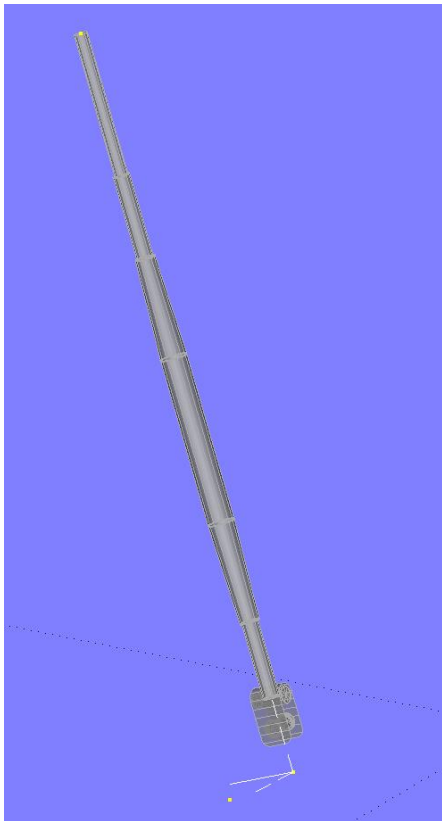
**Component file:** traveller-component.mc2

**Eltern im Host-Modell:** path (snake)

**Note:** the traveller car can be moved with Ring [r1](#).

## Rigging Screw

**Source model:** rigging-screw-model.ms2



Source model: rigging-screw-model.ms2

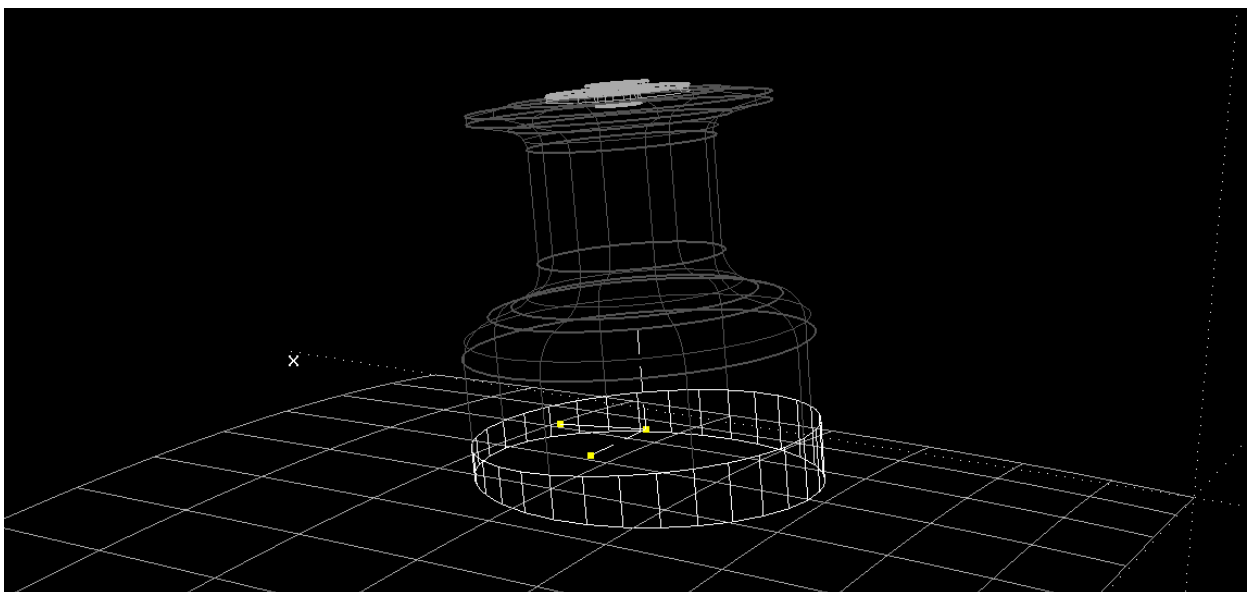
**Component file:** rigging\_screw-component.mc2

**Parents from host model:** none

**Note:** –

## Winch

**Source model:** winch1-model.ms2



Source model: winch1-model.ms2

**Component file:** winch1-component.mc2

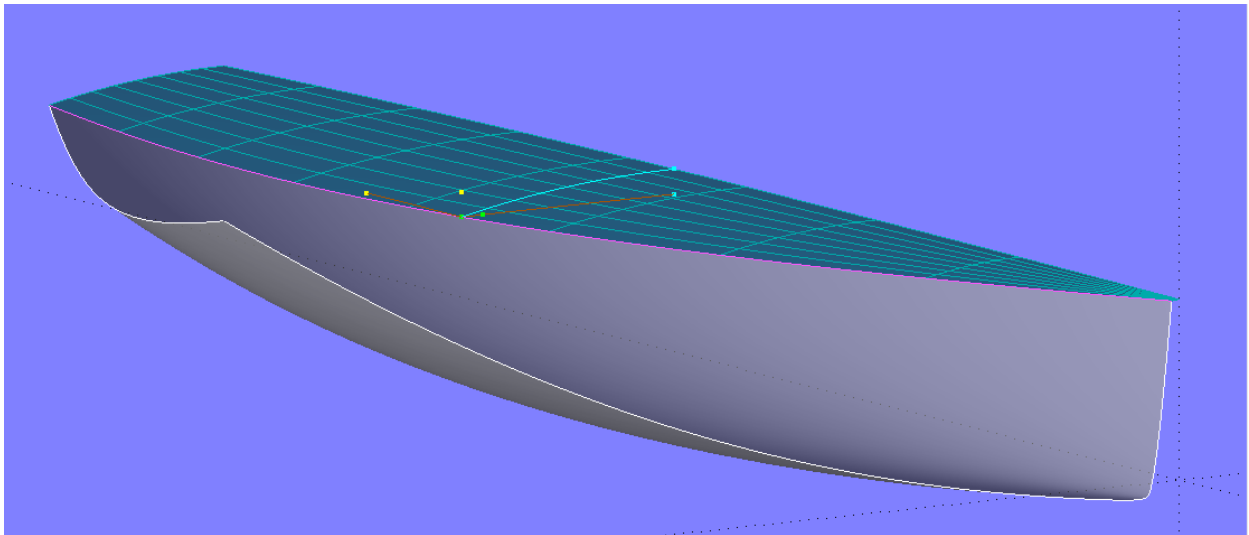
**Parents from host model:** surface

**Note:** –

## Miscellaneous

### Deck component 1

**Source model:** const\_camber\_deck-model.ms2



*Source model: const\_camber\_deck-model.ms2*

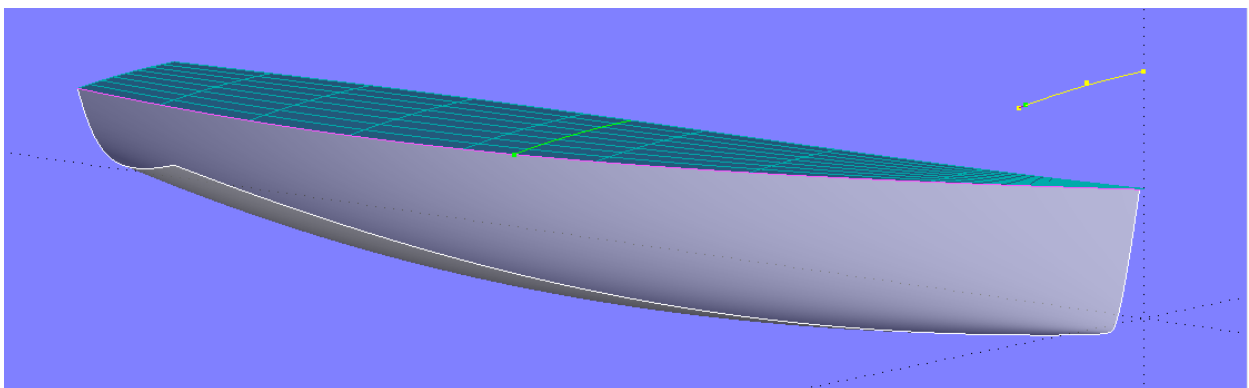
**Component file:** const\_camber\_deck-model.mc2

**Parents from host model:** top edge of hull (snake)

**Note:** the ratio of the deck camber can be set with Bead [ratio](#).

### Deck component 2

**Source model:** const\_radius\_deck-model.ms2



*Source model: const\_radius\_deck-model.ms2*

**Component file:** const\_radius\_deck-model.mc2

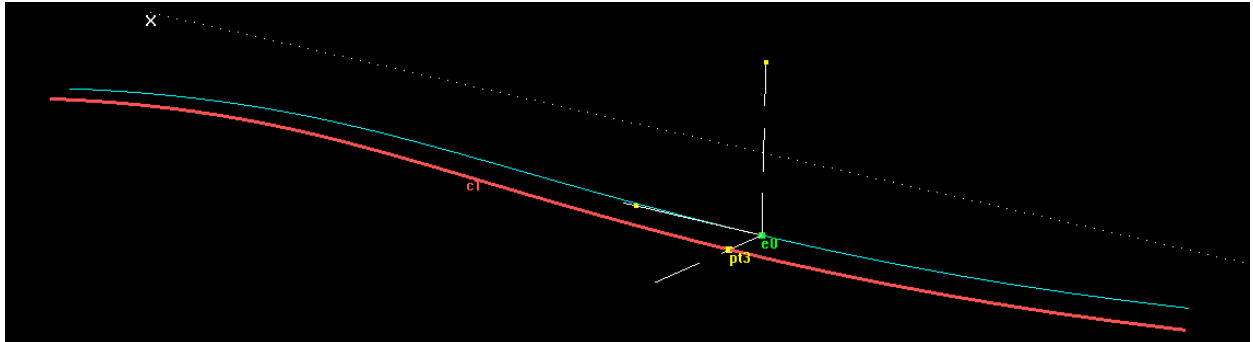
**Parents from host model:** top edge of hull (snake)

**Note:** –

## Parallel 2D Curve

For a curve running parallel to the XY plane (2D curve) the component creates a parallel curve.

**Source model:** 2D-parallel\_curve-model.ms2



Source model: 2D-parallel-curve-model.ms2

**Component file:** 2D-parallel\_curve-component.mc2

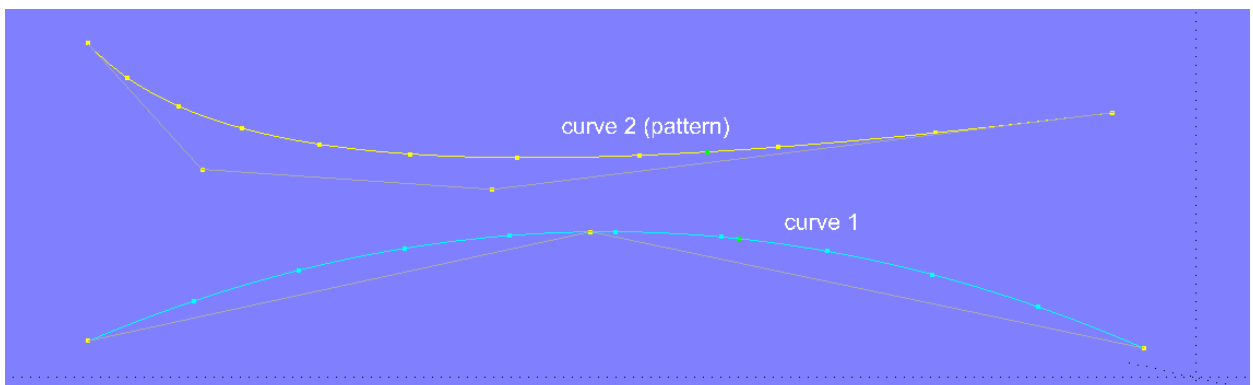
**Parents from host model:** planar curve running parallel to the XY-plane

**Note:** distance variable with Point [pt1](#)

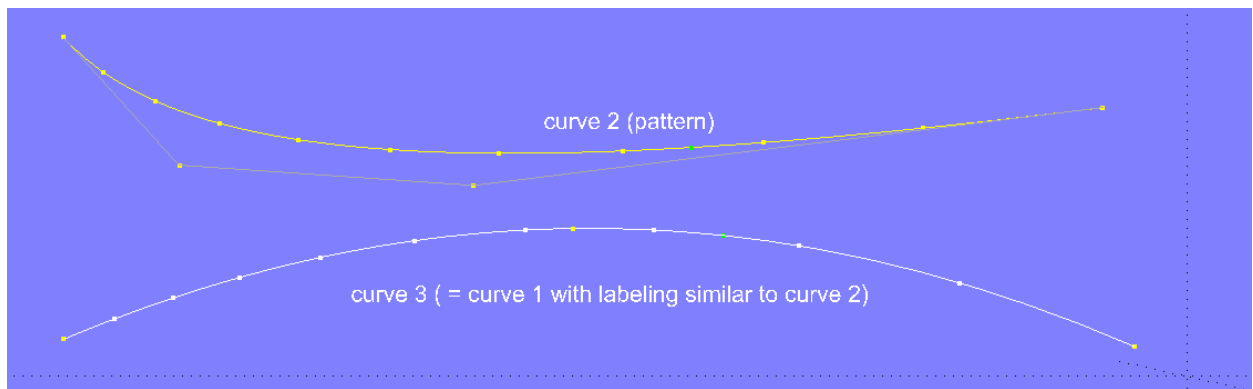
## Similar Label

The component creates a curve of the same shape as curve 1, but with a similar labeling to curve 2 (pattern). For detailed derivation of model construction see „*Advanced Tutorials/ Workshop/ Alkmaar 2017/ Selected Support Topics/ Similar Label*“.

**Source model:** similar\_label-model.ms2



Source model: similar\_label-model.ms2 – curve 1 is a C-spline Curve, curve 2 is a B-spline Curve (the tick marks show the different t-parameter distribution (labeling)).



Source model: *similar\_label-model.ms2* – curve 3 is a Procedural Curve with similar labeling as curve 2 (pattern)

**Component file:** *similar\_label-component.mc2*

**Parents from host model:** curve 1 (curve to be relabeled), curve 2 (pattern)

**Note:** –

Part 1 and Part 2 only showed a few examples, but hopefully it made it clear how one can use components and how to use an own component library to do repetitive tasks effectively.





So much for components. **MultiSurf** – no limits.

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