

Productivity and quality benefits

Key benefits

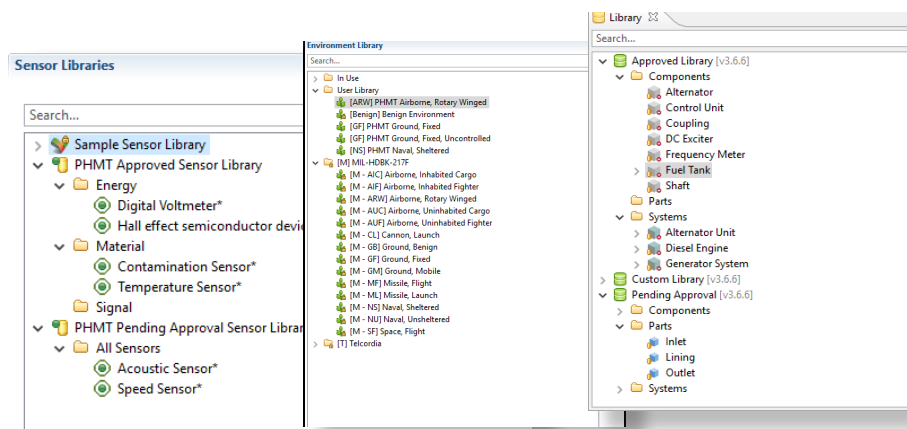
- ▶ Productivity – palette / library items save time in creating a new component / system
- ▶ Quality – items with verified / validated properties can be saved to the user library and reused for new models

Key features

- ▶ Centralized data repository – items are saved in a single location to be accessed internally (on customer network)

The Problem: model-based engineering requires investment by the customer to establish the initial model/s, in addition to any learning curve required to become proficient with the tool. Therefore the business case for model-based tools must reflect this schedule & resource impact during implementation of the solution, before any productivity benefits are realised.

The Solution: MADe provides a library of generic items to accelerate development of initial models – including parts, components and assemblies (the MADe palette and MADe Example Systems library). Once customized to reflect specific design configurations, the items can be saved in a user-defined Library for re-use in future models. User Libraries can be created for projects, programs or the organization and ensure consistent model development and actualize significant productivity benefits.



Left to Right: Sensor Library ,Environment Library and Custom Library

Why have a palette and library?

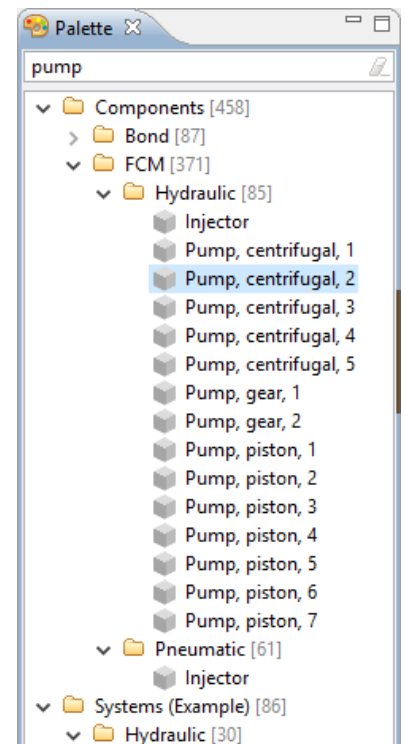
The MADe Palette accelerates initial model development by providing generic items to be used in construction of the model. Items from the Palette can be customized for a design configuration based on specific parameters (failure rate, failure diagrams, etc.) that are associated with the item – which can then be stored in a user defined MADe library.

A MADe library allows the user to save and reuse customized model items in other models. Each model item stores all defined parameters including: functions, failure diagrams, maintenance schedules, properties, reliability parameters etc.

So what?

MADe libraries are created to assist modelling by providing example components which are customizable to accurately represent the components:

- ▶ MADe palette and MADe Example Systems library – MADe Palette provides generic parts, components and sub-systems to accelerate modelling, covers electrical, hydraulic, mechanical and pneumatic domains
- ▶ Sensor Library – The sensor library consists of sample sensors for the PHM Module. Specific sensors can be generated with specific (OEM / operational) parameters and costings
- ▶ Custom Libraries – The custom libraries are specific repositories of customized components, subsystems and models. These items can be accessed locally, reviewed, approved and be reused to create new models
- ▶ Environment Library – MADe Environment Library stores user defined Operating Environments that can be applied to a system model for use in trade-studies for maintenance costings and (future) failure occurrence rates

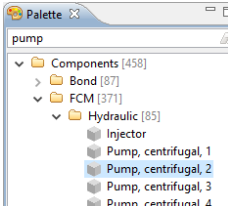


Palette Library


Using MADE Palette and Library

Palette item to model

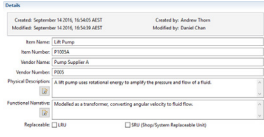
1) Search Palette



2) From Palette to Model



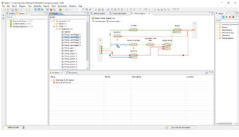
3) Modify Item



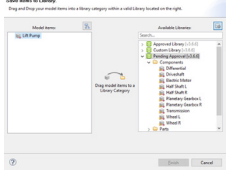
1) Search the palette for item
 2) Drag the item from palette to the model
 3) Modify item properties such as name and description. Additional properties such as reliability, functions, maintenance, failure diagrams etc. may be added to the item

Reuse of library item

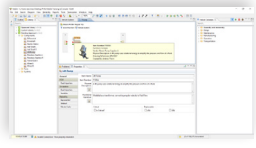
4) Connect modified item to Model Modes



5) From Model to Library Effects



6) From Library to Model

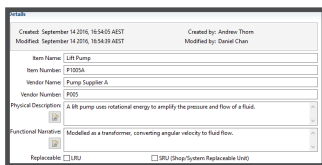


4) Connect modified item to the model
 5) Save the item to user library
 6) Drag saved item from user library to another model

Maintenance actions

Item	Item Number	Item Name	Item Description	Item Category	Item Status	Item Location	Item Date	Item Time	Item Cost	Item Weight	Item Volume	Item Area	Item Length	Item Width	Item Height	Item Diameter	Item Radius	Item Circumference	Item Surface Area	Item Volume	Item Mass	Item Density	Item Specific Gravity	Item Viscosity	Item Thermal Conductivity	Item Thermal Expansion	Item Thermal Capacity	Item Thermal Resistance	Item Thermal Conductance	Item Thermal Resistance	Item Thermal Conductance
1	1000	Pump	A 1000 gallon pump	Pump	Active	Plant A	2023-10-27	10:00	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		

Item properties



Functions

