



*Feel Empowered*

**Latest Highlights –  
Cadmatic Outfitting**

Tommi Henriksson

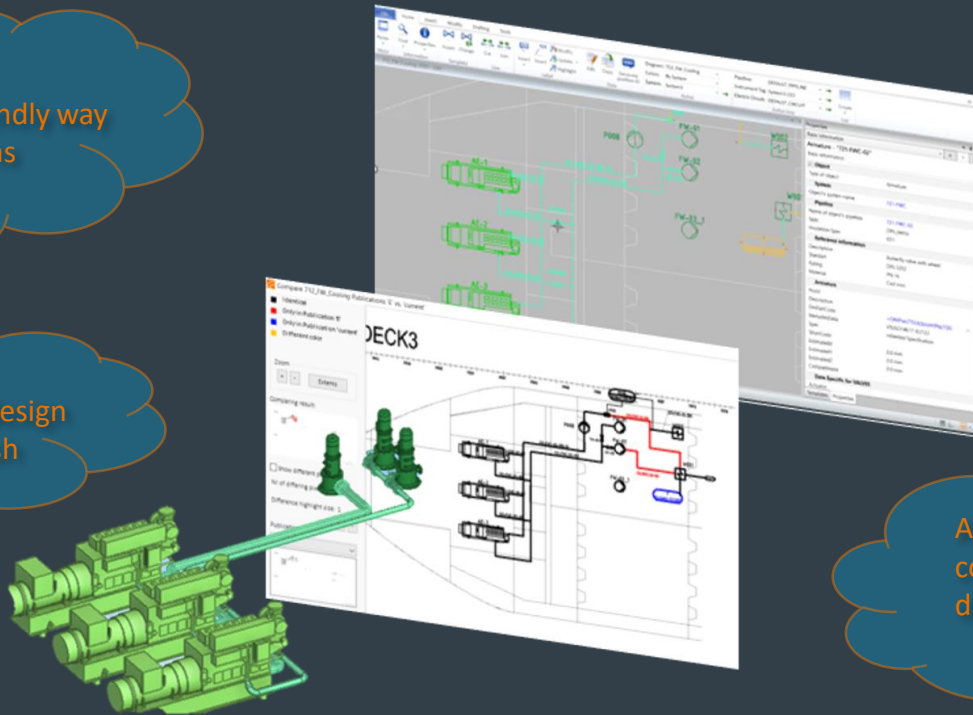
Product Manager - Asia

Image courtesy of  
Meyer Turku

# Piping & Instrumentation Diagram (P&ID)

An easy and user-friendly way to create P&I diagrams

Accurate and error-free design process from start to finish



A seamless part of the complete project scope and data sharing

# Property Pane

The image displays the CADMATIC software interface for a 3D model of a cooling system. The main window shows a 3D perspective view of the system with various components and piping. Two property panes are open, providing detailed information about the selected objects.

**Left Property Pane (Equipment - P002):**

- Basic information:** Equipment - P002
- Object:** AE\_EQU\_COOL (highlighted with an orange box)
- Equipment:**
  - Posid: P002
  - RoleInProcess: Not defined
  - Requires\_Electricity: Not defined
  - MenuData: TMS15FH0Y00CVRHWHY (highlighted with an orange box)
  - Pump: Cast Iron
  - Material: Cast Iron
  - Medium:
  - Manufacturer: Alweiler\_2
  - ManufCode: M4401
  - DataSheet:
  - URLink:
  - Type:
  - Size: 650
  - Notes:
  - test:
  - Compartment: RD0201\_2
  - RD0201\_2:
  - Pumps data:**
    - Capacity: 15 m3/min
    - Pressure: 16
    - RPM: 8000
    - Power\_str:
    - TechData1:
  - Preview:** (Includes a 3D model of the pump)

**Right Property Pane (System - AE\_EQU\_COOL):**

- Basic information:** System - AE\_EQU\_COOL
- Object:** AE\_EQU\_COOL
- Common attributes (COS):**
  - Use in Diagram: Deny
  - Use in Plant Modeller: Allow
  - Use in Isometrics: Allow
  - Allow Welds: Deny
  - Density of flowing material: 0 kg/m3
  - System type: Equipment
- Diagram Attributes (SQL):**
  - SystemId: AE\_EQU\_COOL
  - SystemCode:
  - Spec1:
  - Spec2:
  - Spec3:
  - Spec4:
  - Spec5:
  - CutLevel: 0
  - CutLevelOffThickLine: 0
  - Layer: 0
  - LayerName: 0
  - Notes:
- Visual properties:**
  - Color: forestgreen
  - Width: 0.50
  - Width\_of\_line: 0.00
  - Width\_of\_thickness: 0.00

**Examine Window:**

- Object:** P\_CF\_NSL150\_265
- Modification time:** 2021-03-12 10:39
- Checked out:** No
- Description:** P\_CF\_NSL150\_265
- Old SDE name:** Electrical
- Template ID:**
- Supplier:**
- Type of GDL component:**
- Manufacturer:**

Name	Value
<b>Attributes</b>	
GDL	Centrifugal pump
Description	P_CF_NSL150_265
Mass	257
<b>Parameters</b>	
DN1	150.0
DN2	150.0
a	400.0
x1	-365.0

**Bottom Right Panel (EQUIPMENTS LISTING):**

POSITION ID	DESCRIPTION	TECHNICAL INFO	POS
722-001	Sea Pump	62.00mm, 5.0 bar	1
722-002	Sea Pump	62.00mm, 5.0 bar	1
722-003	Sea Pump	62.00mm, 5.0 bar	1
722-004	Sea Pump	62.00mm, 5.0 bar	1
722-005	Sea Pump	62.00mm, 5.0 bar	1
722-006	Sea Pump	62.00mm, 5.0 bar	1
722-007	Sea Pump	62.00mm, 5.0 bar	1
722-008	Sea Pump	62.00mm, 5.0 bar	1
722-009	Sea Pump	62.00mm, 5.0 bar	1
722-010	Sea Pump	62.00mm, 5.0 bar	1
722-011	Sea Pump	62.00mm, 5.0 bar	1
722-012	Sea Pump	62.00mm, 5.0 bar	1
722-013	Sea Pump	62.00mm, 5.0 bar	1
722-014	Sea Pump	62.00mm, 5.0 bar	1
722-015	Sea Pump	62.00mm, 5.0 bar	1
722-016	Sea Pump	62.00mm, 5.0 bar	1
722-017	Sea Pump	62.00mm, 5.0 bar	1
722-018	Sea Pump	62.00mm, 5.0 bar	1
722-019	Sea Pump	62.00mm, 5.0 bar	1
722-020	Sea Pump	62.00mm, 5.0 bar	1
722-021	Sea Pump	62.00mm, 5.0 bar	1
722-022	Sea Pump	62.00mm, 5.0 bar	1
722-023	Sea Pump	62.00mm, 5.0 bar	1
722-024	Sea Pump	62.00mm, 5.0 bar	1
722-025	Sea Pump	62.00mm, 5.0 bar	1
722-026	Sea Pump	62.00mm, 5.0 bar	1
722-027	Sea Pump	62.00mm, 5.0 bar	1
722-028	Sea Pump	62.00mm, 5.0 bar	1
722-029	Sea Pump	62.00mm, 5.0 bar	1
722-030	Sea Pump	62.00mm, 5.0 bar	1
722-031	Sea Pump	62.00mm, 5.0 bar	1
722-032	Sea Pump	62.00mm, 5.0 bar	1
722-033	Sea Pump	62.00mm, 5.0 bar	1
722-034	Sea Pump	62.00mm, 5.0 bar	1
722-035	Sea Pump	62.00mm, 5.0 bar	1
722-036	Sea Pump	62.00mm, 5.0 bar	1
722-037	Sea Pump	62.00mm, 5.0 bar	1
722-038	Sea Pump	62.00mm, 5.0 bar	1
722-039	Sea Pump	62.00mm, 5.0 bar	1
722-040	Sea Pump	62.00mm, 5.0 bar	1
722-041	Sea Pump	62.00mm, 5.0 bar	1
722-042	Sea Pump	62.00mm, 5.0 bar	1
722-043	Sea Pump	62.00mm, 5.0 bar	1
722-044	Sea Pump	62.00mm, 5.0 bar	1
722-045	Sea Pump	62.00mm, 5.0 bar	1
722-046	Sea Pump	62.00mm, 5.0 bar	1
722-047	Sea Pump	62.00mm, 5.0 bar	1
722-048	Sea Pump	62.00mm, 5.0 bar	1
722-049	Sea Pump	62.00mm, 5.0 bar	1
722-050	Sea Pump	62.00mm, 5.0 bar	1
722-051	Sea Pump	62.00mm, 5.0 bar	1
722-052	Sea Pump	62.00mm, 5.0 bar	1
722-053	Sea Pump	62.00mm, 5.0 bar	1
722-054	Sea Pump	62.00mm, 5.0 bar	1
722-055	Sea Pump	62.00mm, 5.0 bar	1
722-056	Sea Pump	62.00mm, 5.0 bar	1
722-057	Sea Pump	62.00mm, 5.0 bar	1
722-058	Sea Pump	62.00mm, 5.0 bar	1
722-059	Sea Pump	62.00mm, 5.0 bar	1
722-060	Sea Pump	62.00mm, 5.0 bar	1
722-061	Sea Pump	62.00mm, 5.0 bar	1
722-062	Sea Pump	62.00mm, 5.0 bar	1
722-063	Sea Pump	62.00mm, 5.0 bar	1
722-064	Sea Pump	62.00mm, 5.0 bar	1
722-065	Sea Pump	62.00mm, 5.0 bar	1
722-066	Sea Pump	62.00mm, 5.0 bar	1
722-067	Sea Pump	62.00mm, 5.0 bar	1
722-068	Sea Pump	62.00mm, 5.0 bar	1
722-069	Sea Pump	62.00mm, 5.0 bar	1
722-070	Sea Pump	62.00mm, 5.0 bar	1
722-071	Sea Pump	62.00mm, 5.0 bar	1
722-072	Sea Pump	62.00mm, 5.0 bar	1
722-073	Sea Pump	62.00mm, 5.0 bar	1
722-074	Sea Pump	62.00mm, 5.0 bar	1
722-075	Sea Pump	62.00mm, 5.0 bar	1
722-076	Sea Pump	62.00mm, 5.0 bar	1
722-077	Sea Pump	62.00mm, 5.0 bar	1
722-078	Sea Pump	62.00mm, 5.0 bar	1
722-079	Sea Pump	62.00mm, 5.0 bar	1
722-080	Sea Pump	62.00mm, 5.0 bar	1
722-081	Sea Pump	62.00mm, 5.0 bar	1
722-082	Sea Pump	62.00mm, 5.0 bar	1
722-083	Sea Pump	62.00mm, 5.0 bar	1
722-084	Sea Pump	62.00mm, 5.0 bar	1
722-085	Sea Pump	62.00mm, 5.0 bar	1
722-086	Sea Pump	62.00mm, 5.0 bar	1
722-087	Sea Pump	62.00mm, 5.0 bar	1
722-088	Sea Pump	62.00mm, 5.0 bar	1
722-089	Sea Pump	62.00mm, 5.0 bar	1
722-090	Sea Pump	62.00mm, 5.0 bar	1
722-091	Sea Pump	62.00mm, 5.0 bar	1
722-092	Sea Pump	62.00mm, 5.0 bar	1
722-093	Sea Pump	62.00mm, 5.0 bar	1
722-094	Sea Pump	62.00mm, 5.0 bar	1
722-095	Sea Pump	62.00mm, 5.0 bar	1
722-096	Sea Pump	62.00mm, 5.0 bar	1
722-097	Sea Pump	62.00mm, 5.0 bar	1
722-098	Sea Pump	62.00mm, 5.0 bar	1
722-099	Sea Pump	62.00mm, 5.0 bar	1
722-100	Sea Pump	62.00mm, 5.0 bar	1

**Bottom Right Panel (CADMATIC Logo and Project Info):**

**CADMATIC**

**722 Sea Water Cooling System Diagram**

**CADMATIC TenderDemo**

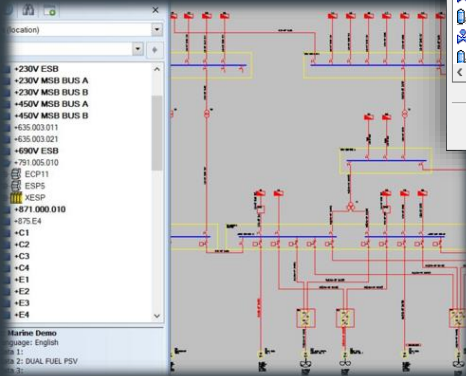
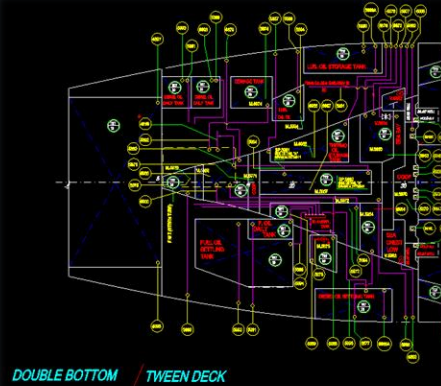
**Sheet:** 722-01-01

**Page:** 1

**Rev:** B

Instant access to relevant data.

# Integrated design



Manage Integration Objects

Object Source:  P&ID  External  Electrical

System: TestCampPipes  Show all systems  Show objects with no system

Status: All

Search:  Columns: Attributes

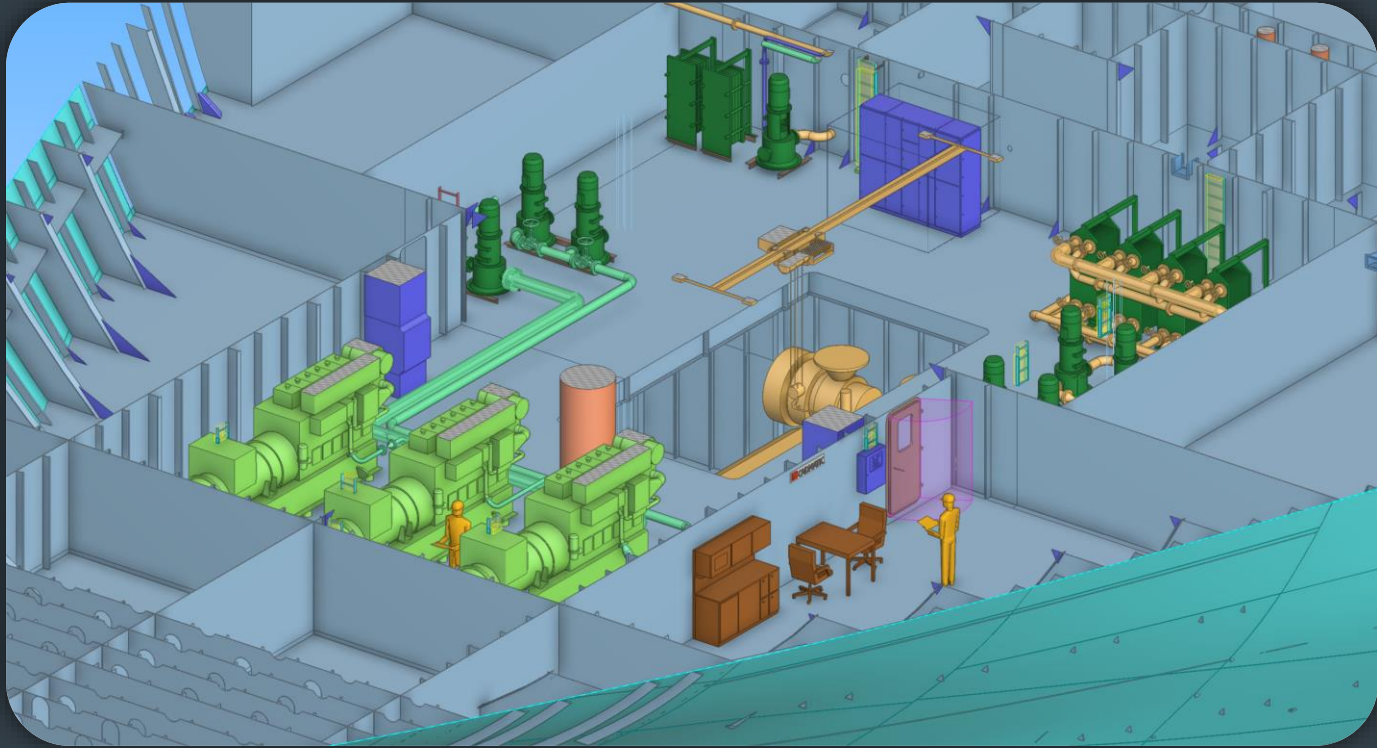
Position ID	Linked to Model	Not linked to Model	Notification	System
V1-200-01		External		Unknown
V1-110-20		External		Unknown
V1-110-12		External		Unknown
V1-110-11		External		Unknown
V050	External	Electrical	Partially linked to model	CIP
V049	P&ID, External	Electrical	Partially linked to model	CIP
V048	P&ID, External		Multiple Position ID types	CIP
V047	P&ID, External		Multiple Position ID types	CIP
V046	P&ID, External		Multiple Position ID types	CIP
V044		External		Unknown
V012A	P&ID			AA_Water
Test webaei P9	External			SALAsahket

Buttons: Browse, Details..., Pick Model Object to Link to, Find Model Object to Link to, Link by Position ID, Unlink from Model, Browse in Model, Query Model Object, Done, Help



Cadmatic has excellent integrations with Outfitting, P&ID, Electrical eProducts and Wave. With External Data Management (EDM) this is possible also with external software. Used when designers need external data in design documents, listings, or in remote replica sites.

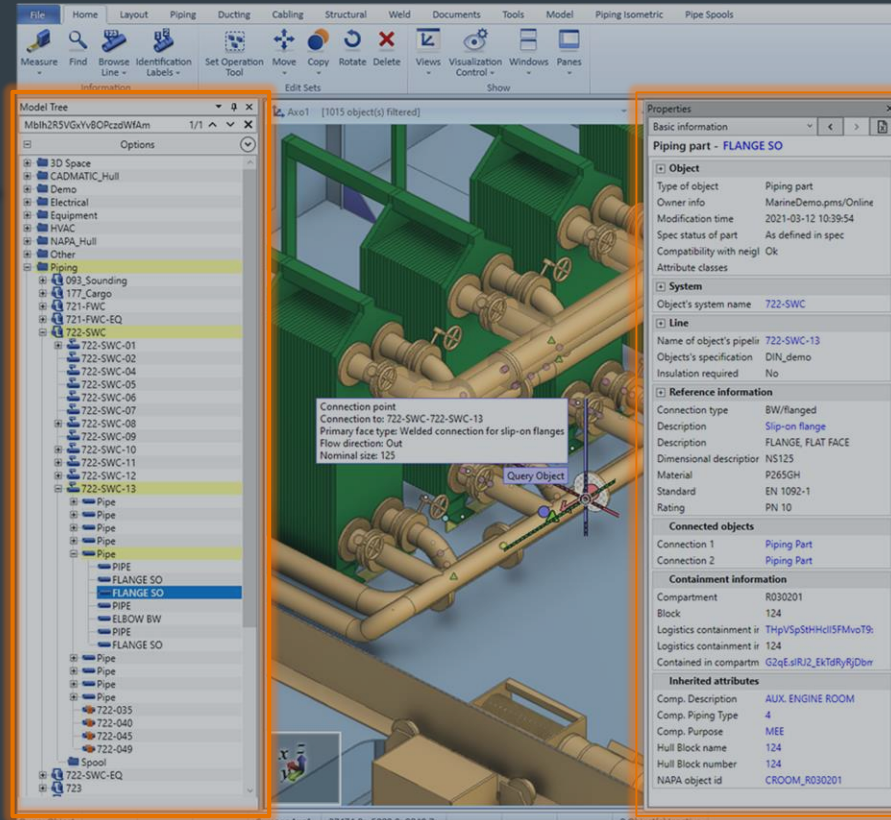
# Plant Modeller (3D)



# Streamline workflows and visualize information

## Model Tree

- ✓ Visualized model structure
- ✓ Create hierarchies and filters
- ✓ Find objects
- ✓ Manage ownerships
- ✓ Manage lines and groups
- ✓ Visualize in 3D
- ✓ Preselecting can be utilized while modelling

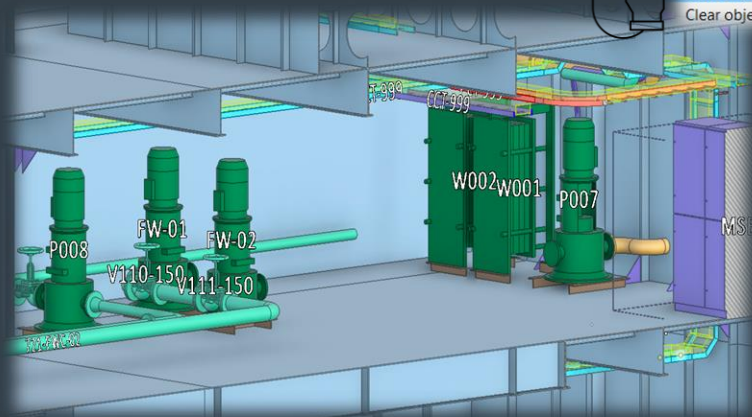
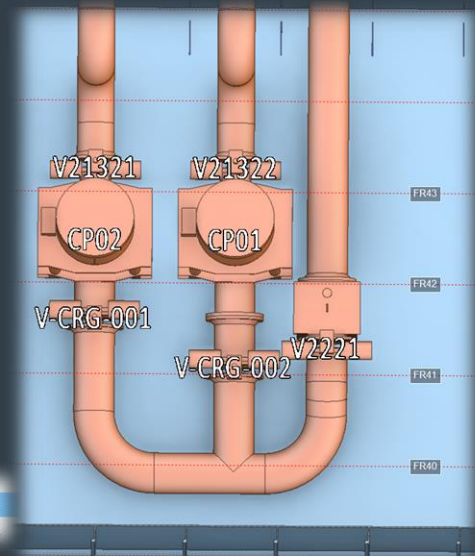
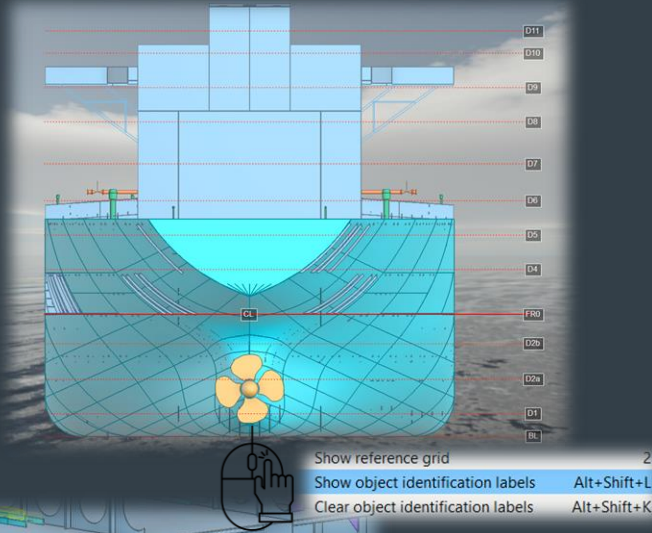


## Property Pane

- ✓ Extract information
- ✓ Edit information
- ✓ Compare objects
- ✓ Navigate to settings
- ✓ Links to other objects
- ✓ View eShare data

See extensive information easily behind the 3D model.

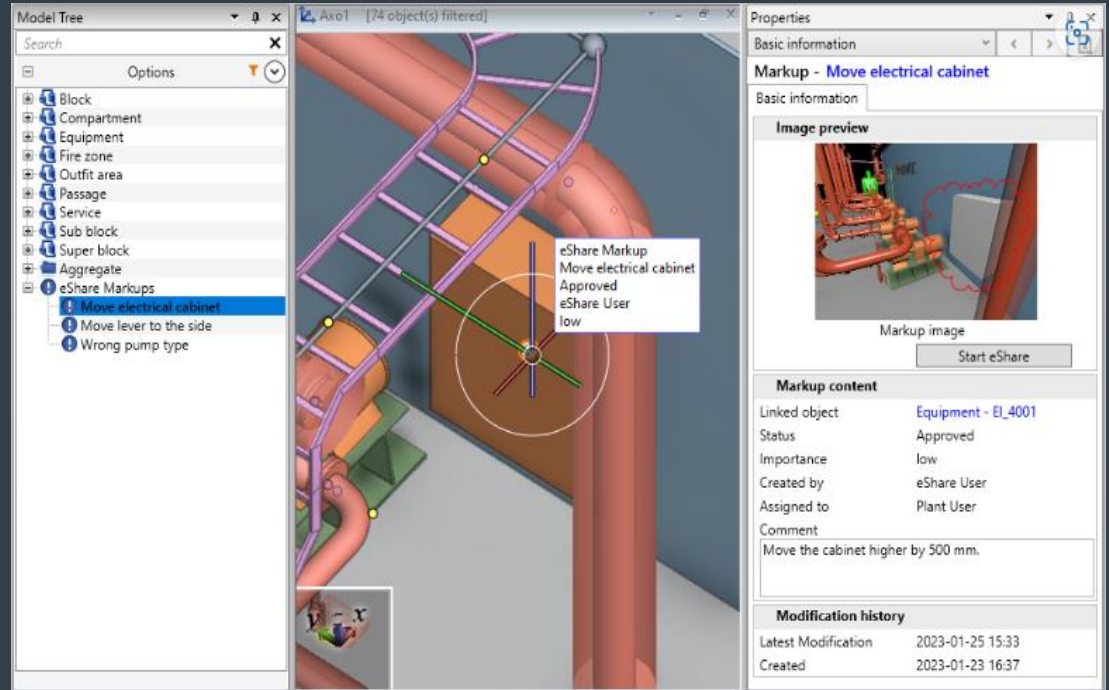
# Visualize information dynamically in the model view



- ✓ Object identification labels
- ✓ Show reference grid in model view

# View eShare markups and data

- **Markups Integration:**
  - CADMATIC eGo and CADMATIC eShare markups are now seamlessly integrated with Outfitting.
- **Model Tree Inclusion:**
  - Markups created in eGo or eShare can be loaded into Outfitting and are listed in the model tree.
  - This enhances visibility and accessibility..
- **Detailed Information:**
  - When selected, markup details are displayed in the property pane.





# Production Checks

Collision

Minimum clearance: 10.0 mm

Accuracy limit: 1.0 mm

Ignore test: Select...

Continuity

Delivered length

Specification

Weld clearance

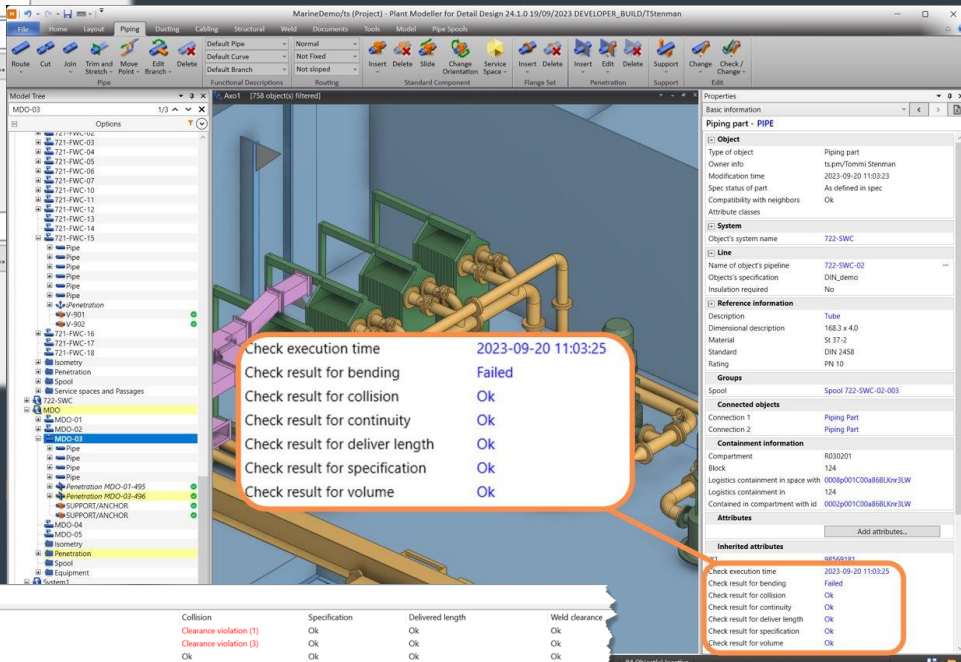
Minimum clearance: 50.0 mm

Welded connection types: Select...

Bending

Slope

Topology



## Enhanced Design Quality

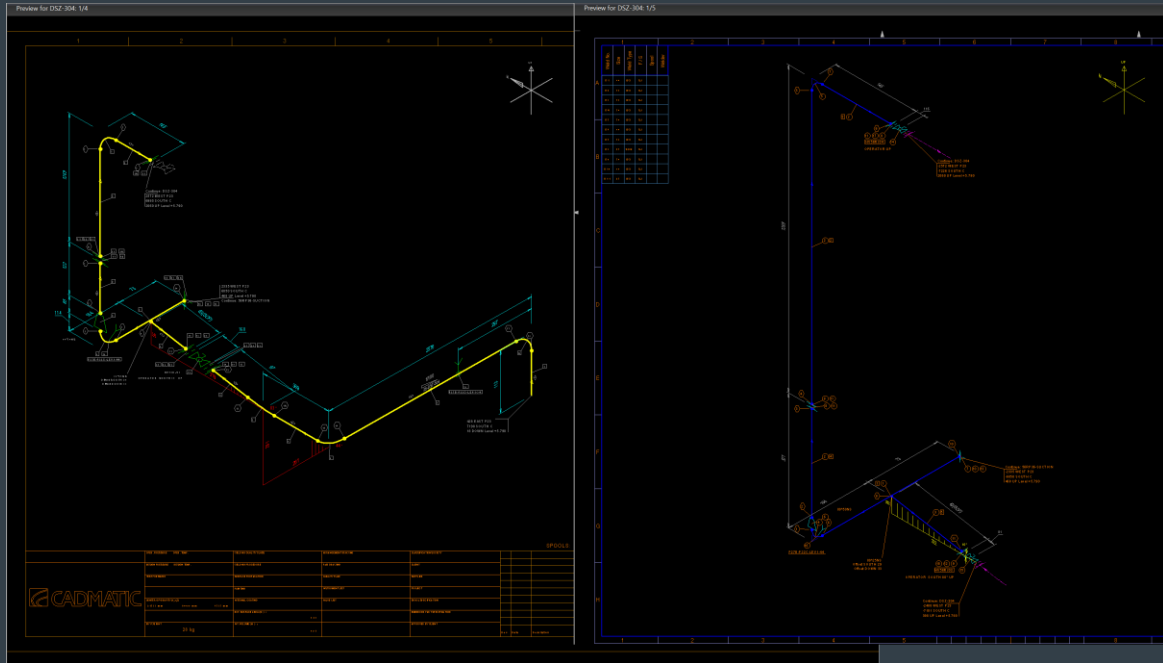
Production checks ensure that design quality is exceptional, making it easy to identify and address any areas requiring improvement.

Local Spool Check Results

Spool	Continuity	Volume	Collision	Specification	Delivered length	Weld clearance
Spool 722-SWC-12-253	Ok	Ok	Clearance violation (1)	Ok	Ok	Ok
Spool 722-SWC-12-259	Ok	Ok	Clearance violation (3)	Ok	Ok	Ok
Spool 722-SWC-10-254	Ok	Ok	Ok	Ok	Ok	Ok
Spool 722-SWC-16-247	Ends not connected.	Ok	Clearance violation (2), Collision (2)	Is not according to specs.	Ok	Has welds with
Spool 722-SWC-16-248	Ok	Ok	Ok	Ok	Ok	Ok
Spool 722-SWC-11-243	Ok	Ok	Ok	Ok	Ok	Ok
Spool 722-SWC-16-249	Ok	Ok	Ok	Ok	Ok	Ok
Spool 722-SWC-01-268	Ok	Ok	Ok	Ok	Ok	Ok
Spool 722-SWC-01-267	Ok	Ok	Ok	Ok	Ok	Ok
Spool 722-SWC-10-254	Ok	Ok	Ok	Ok	Ok	Ok
Spool 722-SWC-01-266	Ok	Ok	Ok	Is not according to specs.	Ok	Ok
Spool 722-SWC-01-269	Ok	Ok	Ok	Is not according to specs.	Ok	Ok
Spool 722-SWC-13-24b	Ok	Ok	Clearance violation (1)	Ok	Ok	Ok
Spool 722-SWC-13-24c	Ok	Ok	Clearance violation (1)	Ok	Ok	Ok

# Style based Isometric drawings

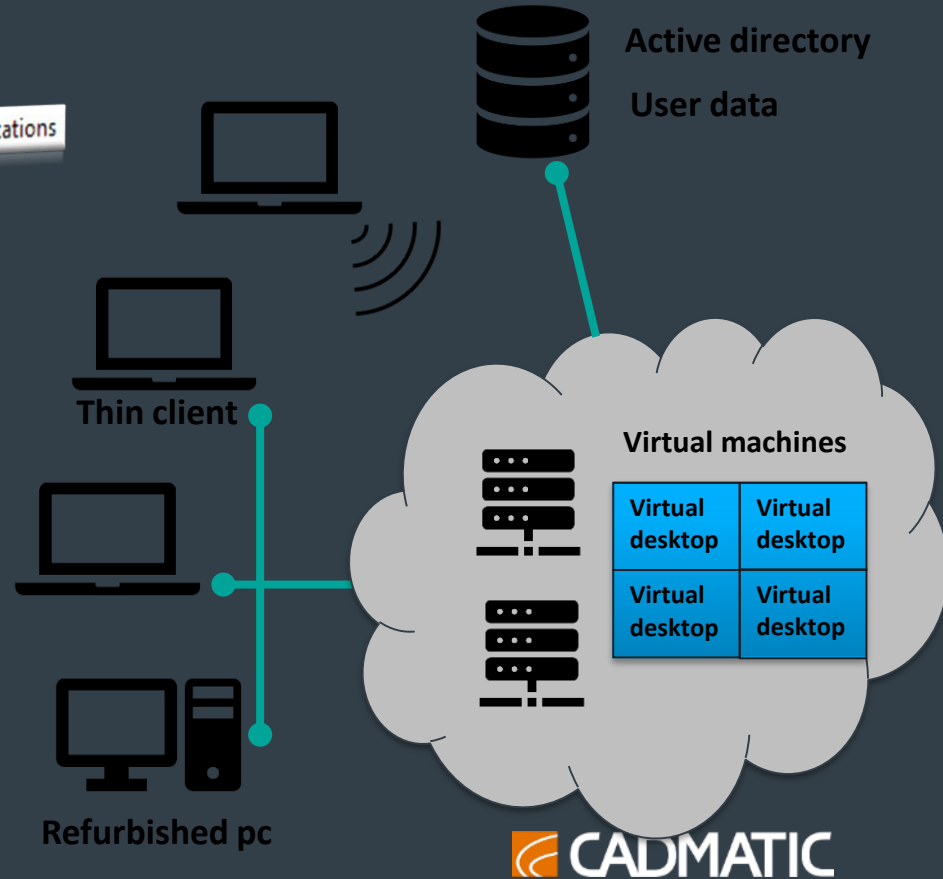
- Same pipe can be in several different isometric document at same time.
- One isometric drawing for stress analysis and another style for production.
- Each style has own annotation settings including sheets dimensions, BOMs and all another automatic annotations.
- Separate isometric groups.



# Going for a virtual environment?

Direct cursor mode - recommended for remote desktop and virtual workstations

- Recommended setting for virtual desktops
- Provides opportunities for IT management
- Raise data security in big and small companies
- Better workplace flexibility





**Thank you!**

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