



PROBAD

Code-based Strength calculations of Pressure parts

PROBAD 2026-1 New Features and Improvements

SIGMA Ingenieurgesellschaft mbH

The program system PROBAD is checked and modified continuously within the scope of the maintenance agreement.

List of innovations, improvements and corrections of the new PROBAD-Releases

PROBAD Modul / Standard	Description	Edition	PROBAD Release
EN 12952	Water-tube Boilers	2023	2026-1
EN 13445	Unfired Pressure Vessels	2021	2026-1
EN 13480	Metallic industrial Piping	2024	2026-1
EN 1591	Circular Flange Connections	2023	2026-1
EN Pipe series	Serial Piping Calculations	2024	5.01
AD 2000	Pressure Vessels	2025	2026-1
TRD	Steam Boilers	1997	8.13
WRC 107 / WRC 537	External Nozzle Loads	1979/2010	2026-1
WRC 297	External Nozzle Loads	1985	2026-1
FEZEN	Material Information System		2026-1/ 5.03
ASME I	Rules for construction of power boilers	2025	2026-1
ASME VIII/1	Rules for construction of pressure vessels	2025	2026-1
ASME B31.1	Power Piping	2024	2026-1
ASME B31.3	Process Piping	2024	2026-1
ASME B31.12	Hydrogen Piping – Industrial Pipes	2025	2026-1
ASME Pipe series	Pipe series	2025	2.01

Software Development, Sales and Support

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User interface

Features

- The import of models created in ROHR2 has been extended.
- The list function can be used to modify data for several components, drawings and orders can be changed at once.
- Drawings and data sets can be copied and pasted.
- After a calculation run, a dialog opens, presenting errors and warnings including corresponding information for all calculated components.
- Markers have been added to the project tree that represents the status of the calculation.
- Calculation and documentation at order level are possible.
- The AD-2000 module has been integrated into the new interface.
- The WRC 107/537 and WRC 297 regulations have been integrated into the new interface.
- Standardization of the input masks for flange connections across calculation codes (EN 1591, AD2000, ASME VIII, Div.2)

3D - Model

- Complete renewal of the 3D model including high level of detail
- Dimensioned Section Views/ cross sections
- Export of the model in various CAD formats (e.g. .step,.iges, .stl,.ifc).

Material database

FEZEN incl. ASME database

Update of material properties:

- VdTÜV Merkblätter
- ASME II-D

PED / DGRL 2014/68/EU

New

- Pressure vessels, steam generators and pipelines can be classified in accordance with the Pressure Equipment Directive.

EN 13445 – Unfired pressure vessels

Features

- Almost any number of branches on cylindrical, conical and spherical shells can be defined.

EN 13480 – Metallic industrial Piping

Features

- Almost any number of branches on cylindrical, conical and spherical shells can be defined.

EN 12952 – Water tube boilers

Features

- Calculation of rectangular collectors with openings implemented

ASME B31.1 – Power Piping

Features

- Calculation of miter bends implemented.
- Almost any number of branches on cylindrical, conical and spherical shells can be defined.

ASME B31.3 – Process Piping

Features

- Calculation of miter bends implemented.
- Almost any number of branches on cylindrical, conical and spherical shells can be defined.

ASME B31.12 – Hydrogen Piping and Pipelines (IP & PL)

Features

- Calculation of miter bends implemented.
- Almost any number of branches on cylindrical, conical and spherical shells can be defined.

EN 1591 – Circular Flange Connections

Features

- Gasket database was updated and extended.

DIN/EN- Serial Piping Calculations

Features

- Import of .pcex files implemented.
- Import of .csv files implemented.
- Input of comments for each component implemented.
- It is now possible to adopt the flange configuration for all ranges.
- Dimensions of ASME B16.21 blinding plates have been added to the database.

ASME VIII/1 – Rules for construction of pressure vessels

Features

- Adjustments to flange calculations. Flanges were made of ASME VIII-div. 1 to ASME VIII-div. 2. (Calculation still included in PROBAD module ASME VIII/1)

ASME- Serial Piping Calculations

Features

- Import of .pcex files implemented.
- Import of .csv files implemented.
- Input of comments for each component implemented.
- Dimensions of ASME B16.21 blinding plates have been added to the database.

PROBAD-Modeler

Features

- Definition and export of heat exchangers implemented.
- Definition of ladders and platforms implemented.

Corrections

- EN-Pipe series:
 - Corrections in the material selection window
 - Manufacturing tolerances in accordance with EN 10216-5 have been corrected.
 - The P/T rating has been corrected for branches.
 - Bug fixes in the creation of the short documentary.
 - Under certain circumstances, Weldolets were not considered correctly.
 - Under certain circumstances, the branch table could not be created.
- ASME-pipe series:
 - Corrections in the material selection window.
 - Manufacturing tolerances in accordance with EN 10216-5 have been corrected.
 - The P/T rating has been corrected for branches.
 - Bug fixes in the creation of the short documentary.
 - Under certain circumstances, Weldolets were not considered correctly.
 - Under certain circumstances, the branch table could not be created.
- Handling / user interface:
 - Fixed a bug of the interval for the automatic backup.
 - Entry of special characters in the file path is possible
 - An issue with "Copy data of older PROBAD Classic releases" has been fixed.
 - An error with licensing of the ASME B31.12 module has been fixed.
 - Problems with the ROHR2 import have been fixed.
 - EN 1591-1: MA is now only used in absolute terms when calculating term 3 for FGmin.
 - Determination of the y-factor in the creep range corrected
 - Factors A and B corrected for External Pressure Chart NFN-24.
 - EN 12952: For certain types of flat heads, the material of the connected cylinder was documented incorrectly
 - Bug fixes in the display of allowable stresses