

## Fact sheet - PCC version 2.0 (Pipe Class Component calculation software)

### GENERAL

Release date	October 2005
Platform	Windows 98/NT/2000/XP Desktop Laptop Network terminal
Application	True 32 bit Object oriented program structure Extensible independent of number of calculation codes Prepared for sever/client application modus Year 2000 compliant
Calculation Modules	ASME B31.3 (two calculation modes, with- or without Table 326.1) EN13480 RToD
Output	Screen Printer Disk Export to MSEXcel spreadsheet format Import/export to XML format (possible to create html page)
User interface	Full interactive interface standalone user Full interactive interface network user
Error, warning	Error's and warning's are displayed on screen, are part of the export file and are visible on printed sheets
Help and manual	Extensive help file giving information about the software, the use of the software, the calculations and code related subjects, user manual available in the help file, latest revision of user manual available on Internet
Help desk	Contact by phone or e-mail, questions are handled by software specialists or experienced engineers

Database components

ASME B16.5  
ASME B16.9  
ASME B16.10  
ASME B16.11  
ASME B16.20  
ASME B16.21  
ASME B16.28  
ASME B16.34  
ASME B16.47  
ASME B36.10M  
ASME B36.19M  
Boney Forge Weldolets  
DIN 2605-1  
DIN 2605-2  
DIN 2616-1  
DIN 2616-2  
DIN 2615-1  
DIN 2615-2  
DIN 2617  
DIN 2690  
DIN 2691  
DIN 2692  
DIN 2693  
DIN 2695  
DIN 2697  
EN 1514-1  
EN 1514-2  
EN 1514-3  
EN 1514-4  
EN 10253-2  
EN 10253-4  
ISO-DIN (flanges)  
ISO-4200  
MSS SP-43  
MSS SP-75

...and many more.

Database materials

More than 1000 ASME, RTOD, EN and DIN materials  
User can add new materials

Global default settings (editable by user)

Project database location  
Standards database location  
Default materials for components  
Default dimension standard for components  
Default joint efficiency factors  
Default cap cold formed seamless selection  
Default crotch factor for Tees  
Default radius factor for Tees

## USER INTERFACE

Project	Number of projects unbound Copy/paste facility of full project data
Pipe class	Number of pipe classes unbound Number of components unbound Copy/paste facility of individual pipe class
Pressure Temperature combination	Number of PT combinations unbound PT combinations can be selected from the standard flange classes  - ASME B16.5, all material groups - EN 1092-1, all material groups  with possibility to limit the maximum temperature
Pipe sizes	Number of pipe sizes unbound Selection as per international standards Custom pipe sizes
Components	Number of pipe components unbound Selection of flange, pipe, elbow, reducer, tee, weldolet, stubon, cap, valve, gasket, bolt/nut as per standards, refer to database components Wallthickness editor for tee, reducer, etc. Drag, drop, cut and paste for quick component selection
Branch table	Selection of equal tee, reducing tee, reducing tee with reducer, weldolet, unreinforced welded branch (stubon), reinforced welded branch (stubon) Drag, drop, cut and paste for quick branch type selection
Material	Material as per user default setting or selected per individual component, e.g. weldolet can be made of different material than the pipe or material can be different per size of pipe, import facility Drag, drop, cut and paste for quick material selection. Material database can be edited with custom materials
Commodity code	Each component can be labeled with a commodity code. The code can be entered per group of sizes or per individual size.
Notes	User can add notes to the pipe class, notes can be grouped per subject such as prefabrication notes, design notes.
Overview (Summary)	The main screen shows the summary sheets which gives the general overview of the pipe class components. Overview sheet can be exported to MSExcel Summary consists of pipe/flange/fitting summary, valves/gasket/fastener summary and a notes summary

Input verification	User can select 'View component data' to review the database component data such as detail dimensions and the material selected as selected by the user
Output, quick review of calculations	The summary sheet is used to get a quick overview of problem area's which are indicated by the colors red, yellow and blue. Criteria are set by the user and are based on the percentage of the maximum allowable pressure used for each component
Output, detail review of component calculation	For each component the calculation can be presented on screen per type, size of component and per design pressure and temperature combination. Each individual detail calculation can be exported to MSExcel
Output, list of relevant critical calculations	For each component size the most critical calculation is selected and is part of the list output. The pressure and temperature related to the allowable stress of the materials is also listed. The list can be exported to MSExcel
Calculations ASME (USA)	B31.3 para. 304.1 – straight pipe B31.3 para. 304.2.1 – pipe bends B31.3 para. 304.3.3 – reinforcement of welded branch connections B31.3 para. 304.3.4 – reinforcement of extruded outlet headers B31.3 para. 304.4.1- closures, general B31.3 para. 304.6 – reducers According B31.3 para. 304.7.2: Section VIII UG32 – formed heads, and sections, pressure on the concave side Section VIII UG28 – external pressure
Calculation EN (EU)	13480 clause 6.1 – straight pipe 13480 clause 6.2 – pipe bends and elbows 13480 clause 6.4 – reducers 13480 clause 7.1.4 – ellipsoidal ends 13480 clause 8.4 – isolated openings 13480 clause 9 – external pressure
Calculation RTuD (NL)	D0201 – cylindrical, conical, spherical shells and pipes under internal pressure D0203 – knuckled heads with pressure on the concave side D0207 – cylinder-cone junction without knuckle D0210 – toroidal bends under internal pressure D0301 – pipe under external pressure D0501 – Openings in a curved wall
Adding component standards	Additions are made upon request. Number of components and standards are unbound
Existing pipe class	Fully functional review of existing pipe class
Functions	Pipe class design wizard, automatic selection of the minimum schedules required Automatic check of rating curves, flanges, valves, fittings