

## Pipe Design: Pipe Series Def. P-091

P-Engineering can help you Develop Pipe Series for various Application in the following steps:

- Specifying the Actual Pipe Series
- Defining the range of Use for Each Series.
- Making Input for 3D BIM tool.

Pipe Series created based on Material and then Assembly Methods and Pressure Rating

- A – Cast Iron
- C – Carbon Steel
- D – Duplex Steel
- N – Cupper Based
- P – Polymer
- R – Stainless Steel (6Mo type)
- S – Stainless Steel

For e.g., Series C, R and S with Welded Assembly all Tube Pieces, Tees, Olets etc. will be calculated according to EN13480 for Pressure Rating PN 10/16/25/40/63 & 100 except Series for Water, that will follow EN10312 directly. Others will follow Manufacturing Specifications like Press Systems. For all Pressure Testing Levels will be calculated.

P-Engineering uses [DXT](#) EN13480 Software for Detail Calculations of pipe items.

Contact Information:

Christian Pallesen; +45 2526 8805; [cp@p-engineering.dk](mailto:cp@p-engineering.dk)



Piping Class sheet		General
Name	PN 16	PRIMARY SERVICE
Material	Carbon Steel (AISI 304)	Branch 0-10 bar
Pressure Rating	PN 16	Utility 0-10 bar
Welding Procedure	AW 102	
Corrosion Allowance	0.0 mm	
Nominal Size	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Outer Diameter	21.3, 26.7, 33.4, 42.2, 51.0, 60.3, 76.2, 89.1, 114.3, 141.3, 168.3	
Wall Thickness	1.0, 1.2, 1.5, 1.8, 2.0, 2.3, 2.8, 3.2, 3.8, 4.5, 5.5, 6.5, 8.0	
PIPE	ASME B31.1	
FITTINGS	ASME B31.1	
WELDS	ASME B31.1	
FLANGES	ASME B31.1	
COUPLINGS	ASME B31.1	
WELTING	ASME B31.1	
ASSEMBLY	ASME B31.1	
REMARKS	See drawing for details	

Insulation Class Sheet		General
H04 (A)		
Material	Insulation	PRIMARY SERVICE
Fire Classification	Non-combustible (EN 10312)	Hot Tap Water, Indoor
Internal Surface	Stainless Steel 316	Hot Tap Water Circulation, Indoor
External Surface	Aluminum 0.55	Direct Heating, Outdoor, Indoor
Pipe Class	EN 10312	Direct Heating, Outdoor, Indoor
Surrounding Temp.	20°C (Indoor Heated Area)	
Layer Coding	The Class Coding refers to the most common temperature use for the media in question	
Nominal size	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Outer diameter	21.3, 26.7, 33.4, 42.2, 51.0, 60.3, 76.2, 89.1, 114.3, 141.3, 168.3	
Insulation thickness	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Insulation material	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Insulation density	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Insulation thermal conductivity	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Insulation thermal resistance	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Insulation thermal resistance (with external surface)	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Insulation thermal resistance (with internal surface)	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Insulation thermal resistance (with both surfaces)	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Insulation thermal resistance (with external surface and insulation)	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Insulation thermal resistance (with internal surface and insulation)	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	
Insulation thermal resistance (with both surfaces and insulation)	10, 15, 20, 25, 32, 40, 50, 63, 80, 100, 125, 150, 200	

Pictures from P-Engineering Training Course [TC-220](#) for Definition and Practical Use of Pipe Series.