## Plantware

Design of Pharma Grade Piping Installation according to PED and EN13480 for different applications such as

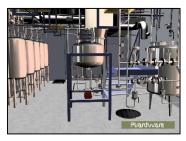
- Life-Sciences
- Pharmaceutical Plants
- API Plants
- Food & Beverage

The design work covers from creating piping specifications with detail calculations of e.g., Olets, Reducers, Tees, and Elbow for a specific set of Pressure and Temperature to making overall 3D Piping Arrangement, creating Fabrications Isometrics with Pipe Support including support steel.

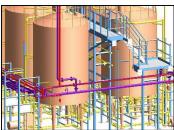
Design and Arrangement according to Project Design Specifications for e.g.,

- Dead Leg
- Overall Drain-ability
- Bending Radius Minimum
- Instrument Placement
- Orientation Membrane Valves

P-Engineering has automated Design Validation of above with a Special Program checking the overall 3D model – all piping including drain-ability through Equipment such as Pumps.











Pictures from various Pharma and API project with Pharma Grade Piping.

P-Engineering uses e.g., <u>AVEVA PDMS</u> Software for 3D design <u>DXT</u> EN13480 Software for Detail Calculations

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