CAD Schroer

Create M4Iso Isometric

Select Reference Csys
Top assembly default CSYS

Select Pipeline(s)

Options
Output Directory .
Symbol Map File rea\cfg\isoreal_symbol_map.ptd
Nominal Size File fg\isoreal_nominal_size_map.ptd
Endtype Map File ea\cfg\isoreal_endtype_map.ptd

Style   Simple A1   Use Default
North Angle 180.0   Use Default
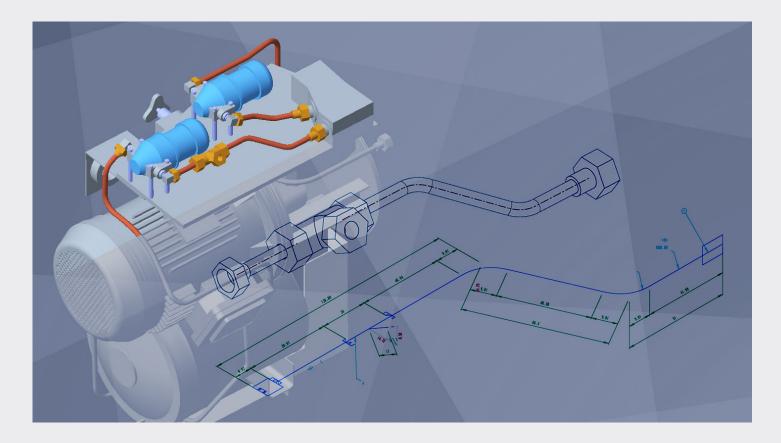Max Count   300   Use Default

OK   Cancel

M4ISO

Isometrics for PTC Creo® Piping

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M4 ISO for PTC Creo Piping

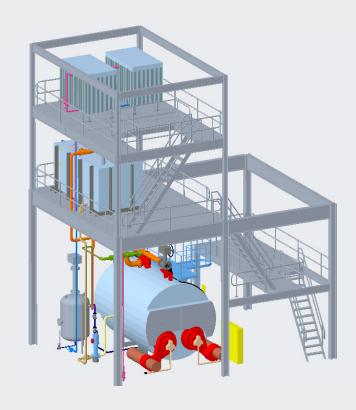## Automatic Piping Isometrics for Fabrication and Installation

It is not without reason that piping isometrics (ISOs) are the most important design drawing used in pipework construction today. Piping ISOs are an integral part of the multi-stage design process. They accurately and clearly document the pipework design and contain all the information necessary for fabrication. Due to their unscaled nature, very long and complex pipe runs can be depicted using a single piping ISO drawing. They also permit an unobstructed view of all piping components and ensure that even the smallest components can be clearly seen, even on very long pipe runs. Individual piping components are represented by familiar, standardized isometric symbols. This ensures that piping ISOs are universally recognised and understood by pipework fabricators throughout industry, which in turn leads to higher quality and fewer manufacturing errors.
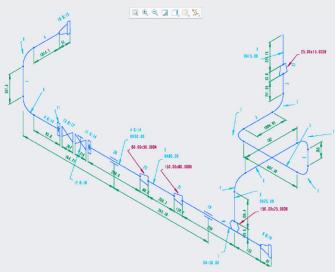
M4 ISO uses 3D pipework data from PTC Creo Piping to automatically create unscaled piping ISOs together with parts lists and other associated documents; works perfectly whether Creo Piping is spec driven or not. The documents are produced in seconds, ready for production use, and styled to suit company drawing standards. The automatic production of piping ISOs offers tremendous advantages over manually drawn 2D or isometric drawings, which in comparison are time-consuming to produce, highly prone to human error, and therefore inferior and much more expensive. With M4 ISO, project costs are always under control, even if the design undergoes numerous revisions before manufacture.

Directly integrated into Creo and Windchill

M4 ISO works as an extension to the Creo and Windchill environments. Users are provided with M4ISO functionality directly within the Creo user interface, giving them an unparalleled level of integration. At the touch of a button, selected Creo piping assemblies are converted by M4ISO into detailed piping ISOs in seconds, and saved in native Creo 2D drawing format (.drw). In addition, M4 ISO generates all associated documents, such as parts lists, bending and weldi tables, and stores them in the desired folder. This automated process also supports the use of Windchill, which facilitates even better integration with internal company processes.
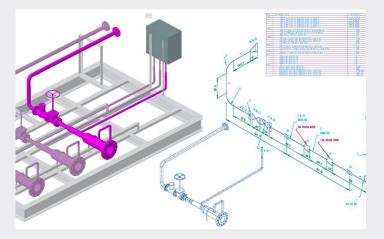

Pipework designs documented in line with production requirements

Through the use of industry-standard piping symbols and unscaled isometric representation, M4 ISO delivers production-ready piping ISOs at the push of a button. Piping ISOs are universally understood by pipework fabricators and clearly specify how individual pipe spools are to be manufactured and assembled. All piping components and pipes are automatically fully dimensioned and annotated. Detailed parts and cutting lists specify precisely the quantity and type of materials required. Machine-ready pipe bending tables also accelerate the fabrication process. Even welding lists are generated automatically to support downstream process at the construction site and beyond.
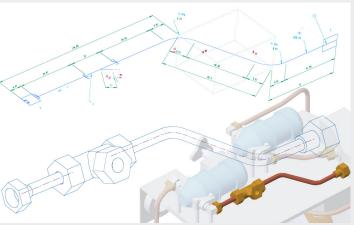
Functions

To ensure the consistent generation of highly legible piping isometrics, M4 ISO utilises a sophisticated algorithm that optimises the layout of the pipeline geometry, labels and dimensions. The orientation of the resulting isometric drawings is controlled by a user-specified North angle.

- Direct Creo and Windchill integration
- Automatic isometric generation
- Configurable dimensioning
- Detailed height information
- Gradient and angle information
- Annotation of weld types and locations
- Automatic item numbering
- Extendable symbol library with defaults
  for unknown symbols
- Detailed parts lists
- Customizable styles
- Optional 3D Creo view
- DRW drawing templates

Configurable Diagram Styles

M4 ISO allows administrators to configure their own isometric drawing styles according to company or project-specific requirements. Line styles, fonts, colours and the layers to be used are all configurable. The format and drawing location of the bill of materials, pipe cut-length, spool and weld lists, can all be configured. Additionally, the content of the bill of materials list can be grouped by component class.

List Generation

M4 ISO automatically generates a configurable bill of materials (BOM) from the Creo Piping model data, which can include part parameters defined in Creo.

M4 ISO also automatically generates the following lists:

- List of pipe spools
- List of pipe cut-lengths
  (with optional cutting allowances)
- List of welds (also for the welder on site)
- List of pipe bends

Lists can be automatically placed as tables on the isometric drawing and also output to CSV format, ready for use with downstream systems. In addition, pipe bend information can be output directly ready for NC pipe bending machines.

Licensing Policy

Each M4 ISO software license is sold for use on a specific end-user computer. In addition, M4 ISO licenses must be purchased for each Creo Piping & Cabling Extension license used at the customer's site

CAD Schroer

CAD Schroer is a global software development company and engineering solutions provider, helping to raise the productivity and competitiveness of customers working in manufacturing and industrial plant design with productivity-enhancing products and services, delivered by engineers for engineers. CAD Schroer has offices and subsidiaries throughout Europe and in the United States.

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