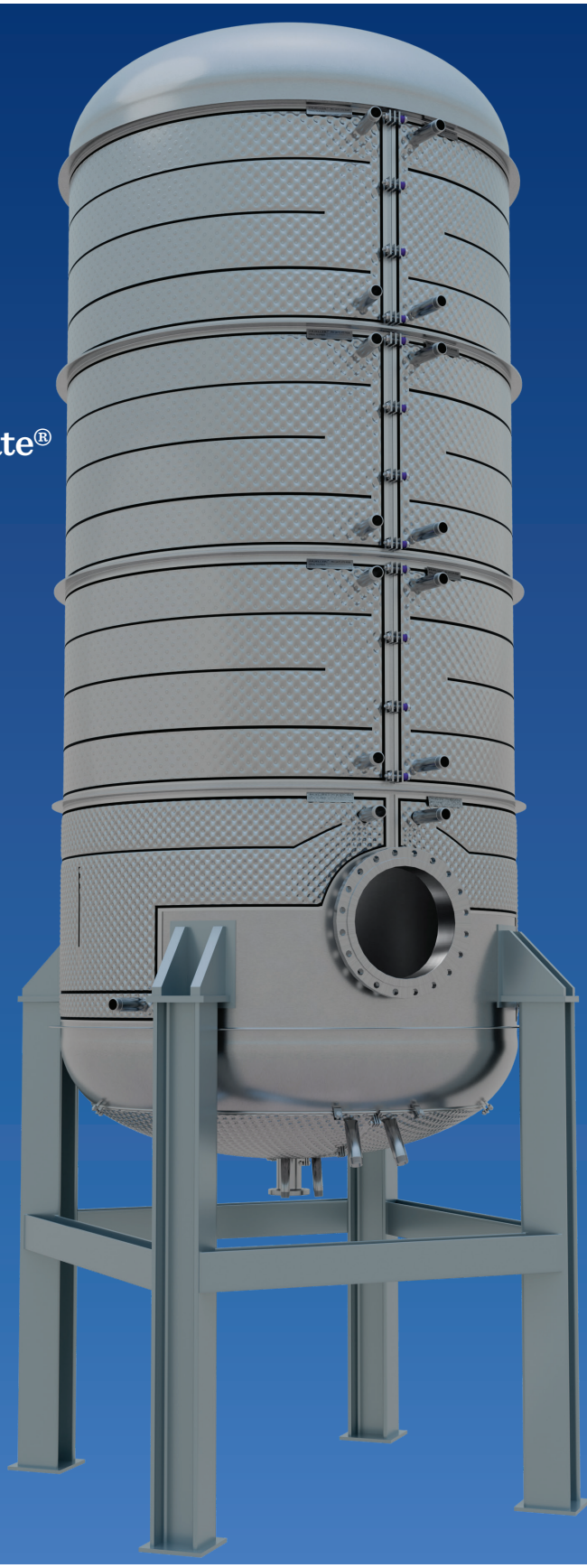
Layout and Installation Guide

Double-Embossed Clamp-On Temp-Plate®



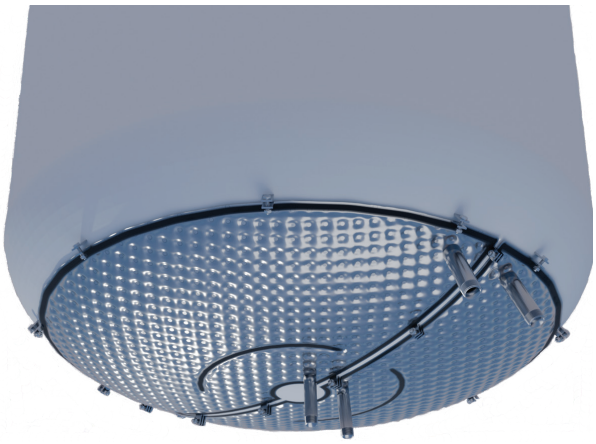
TEMP-PLATE®

MUELLER

Standard Applications

TANK SIDEWALL COVERAGE

Clamp-on panels can be tailored to suit vessels of any size or complexity, and can be designed with cutouts to fit around nozzles, manways, or other obstacles.



DISHED HEAD COVERAGE

Clamp-on panels can be formed to fit up to dished tank heads. Available dishing styles include: ASME flanged and dished, standard flanged and dished, 2:1 Elliptical, or customized upon request.

CONICAL HEAD COVERAGE

Clamp-on panels can be formed to custom fit around conical tank heads of nearly any shape or size.

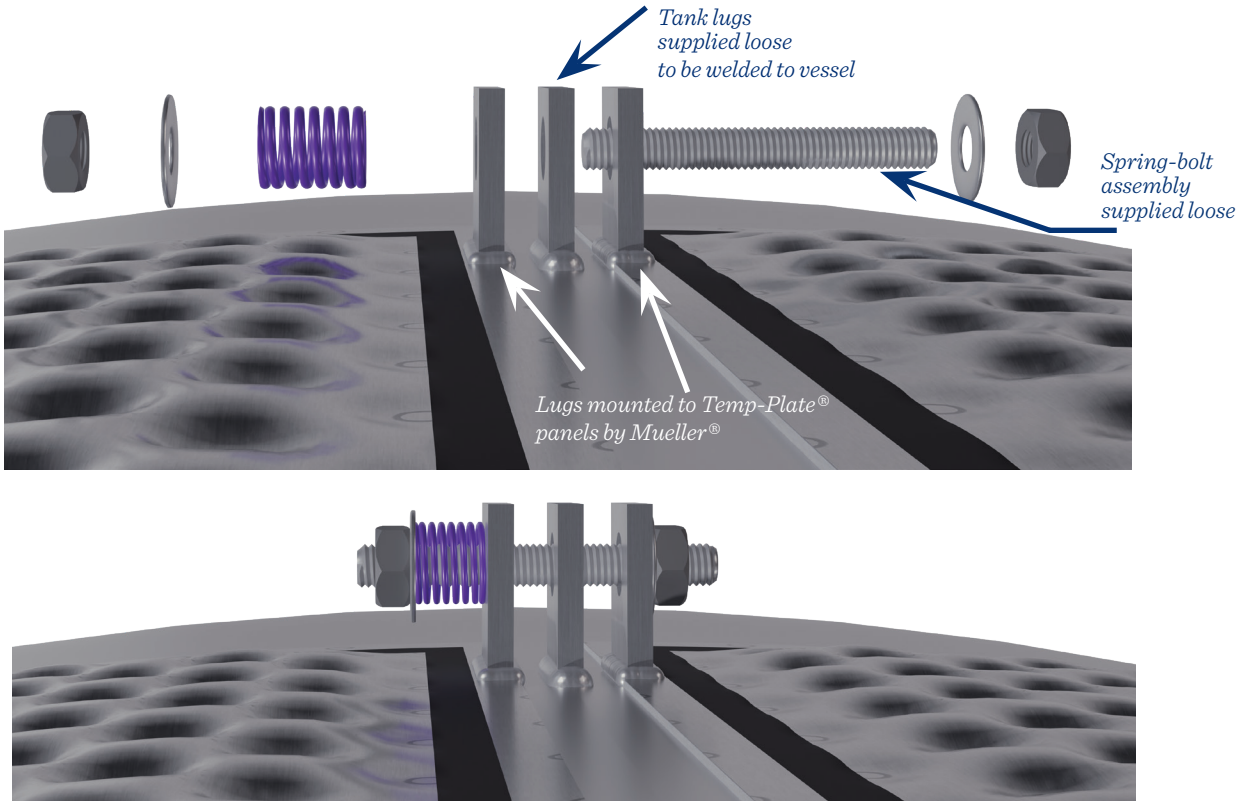
Clamp-On Panel Installation

TYPICALLY INCLUDED FEATURES

- Paul Mueller company will provide all mounting hardware required to ensure a smooth installation.
- Heat Transfer mastic is pre-applied to panels, when design temperature is below 450°F, to avoid an air gap between the panel and vessel wall.
- Spring-loaded bolt assembly design allows for safe thermal expansion of the Temp-Plate sections.

INSTALLATION IN 3 EASY STEPS

1. With the plastic covering still attached, align the Temp-Plate panel in the proper location and mark the locations for the installation of the tank mounting lugs.
2. Remove Temp-Plate panel and weld the tank mounting lugs in position.
3. Remove the protective plastic covering and mount the panels using the provided spring-bolt assemblies as depicted in the diagram below.



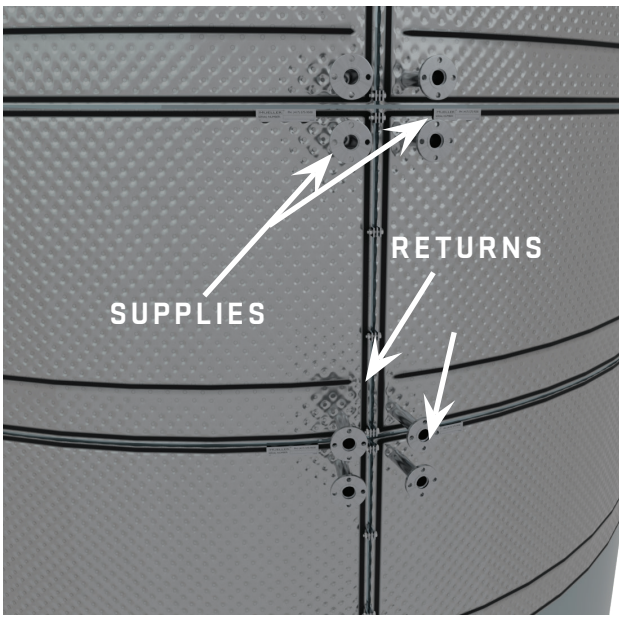
Assembled View

Recommended Layouts for Vertical Vessels

The following connection patterns are the most commonly used configurations, categorized by tank size for retrofitting. These combinations provide the optimal balance of installation simplicity and practicality for piping arrangements.

UP TO 150” OD TANKS

- To make a complete wrap around the tank’s circumference, two 180 degree panel sections will be needed.
- Type 7 and Type 6 Temp-Plate panels have their supply and return connections on the same sides of the panels using welded baffles.
- By mirroring the panels that mount adjacent to each other, the panel connections align next to each other.
- This configuration ensures that the connections for all panels are aligned on the same side of the tank, making piping installation easier.

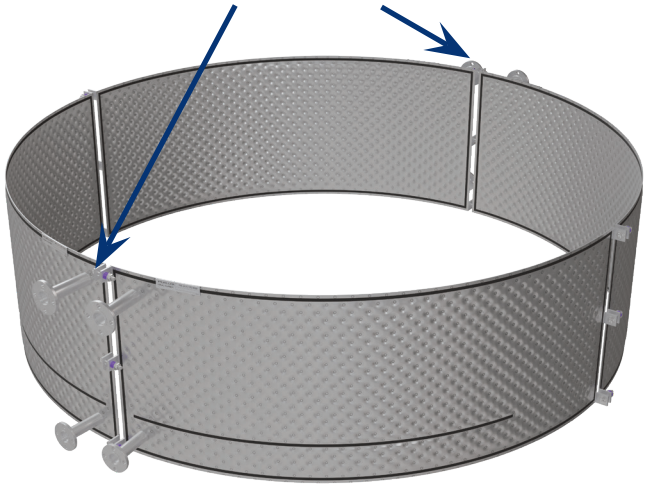


Supply and return locations are indicated for Type 7 steam panels. For use with fluid medias, locations will be reversed.

150” OD TO 300” OD TANKS

- For each complete wrap around the tank’s circumference, four 90 degree panel sections will be needed.
- Type 7 and Type 6 Temp-Plate panels can be used in a similar form as above. Mirroring the panel adjacent to it, the supply and return connections will align next to each other.
- This configuration allows the connections to meet up with each other on either side of the tank, requiring piping to be done on two sides of the vessel.

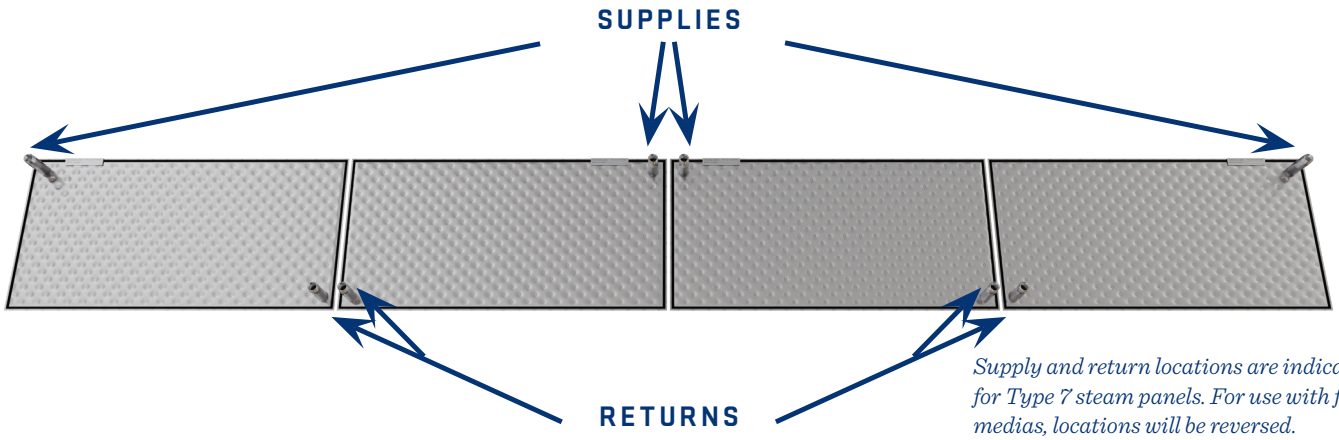
Two sets of connections on either side of vessel.



Recommended Layouts for Vertical Vessels

300” OD TANKS AND LARGER
RECOMMENDATION 1

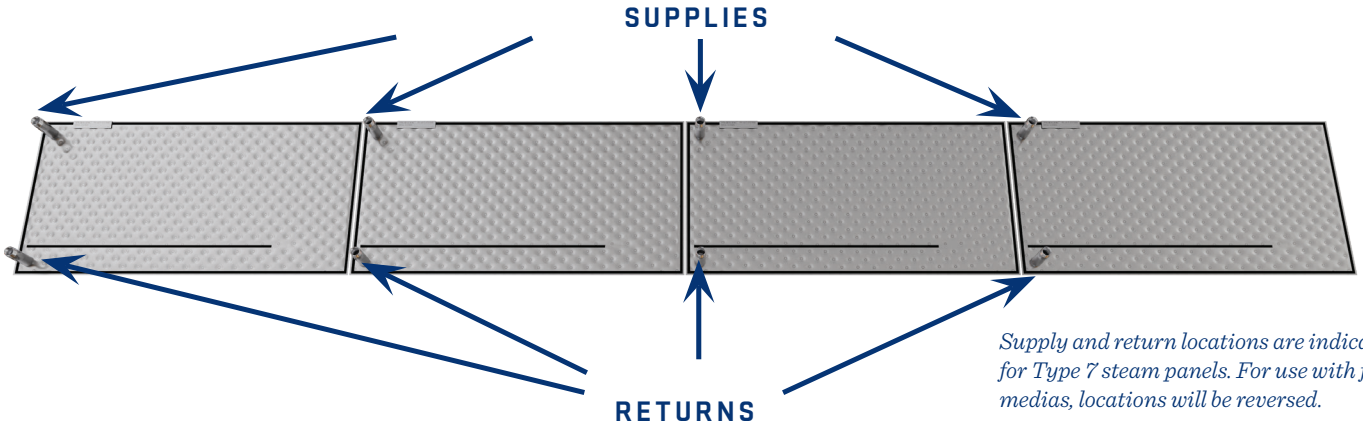
- Type 8 panels have their supply and return connections in diagonal corners from each other.
- Use left and right-handed Type 8 panels so the supply and return connections align in alternating positions.
- Type 8 panels are suitable for both steam and liquid media, and an even number would be required to maintain the pattern.



Supply and return locations are indicated for Type 7 steam panels. For use with fluid medias, locations will be reversed.

RECOMMENDATION 2

- Type 7 or Type 6 panels with the same orientation can be used in this connection style. The advantage of this configuration is that it does not require an even number of panels.

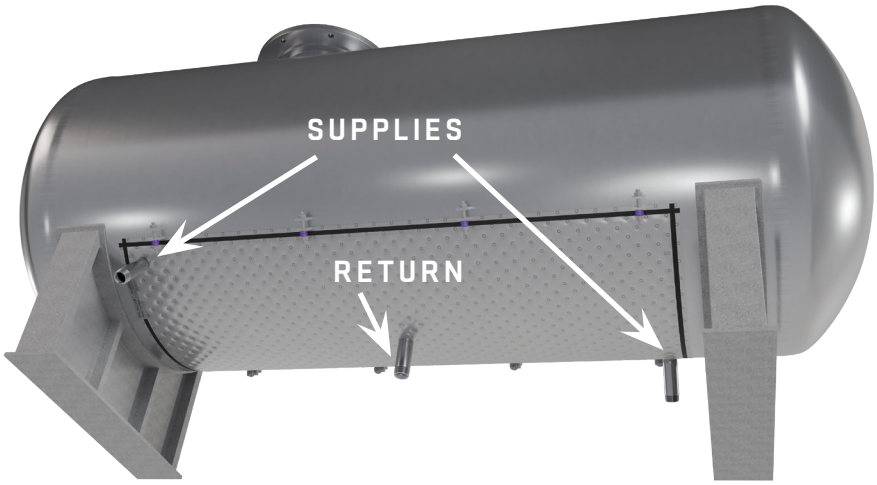


Supply and return locations are indicated for Type 7 steam panels. For use with fluid medias, locations will be reversed.

Recommended Layouts for Horizontal Tanks

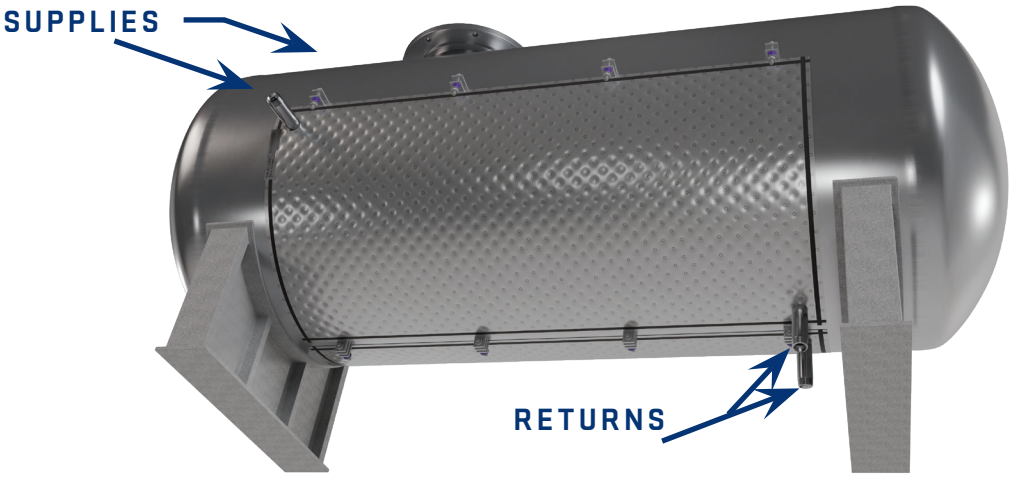
RECOMMENDATION 1

- When heat transfer requirements are minimal, a single panel, rolled along its width, can be positioned directly along the lower centerline of the vessel.



RECOMMENDATION 2

- When heat transfer requirements are higher, two panels, rolled along their widths, will be recommended to be placed along either side of the lower centerline of the vessel.



RECOMMENDATION 3

- As the size and complexity of the vessel increases, it may be advisable to roll the panels along their lengths and position them on either side of the lower centerline.
- This approach provides flexibility in panel design to accommodate nozzles, manways, or other obstructions, while still ensuring effective condensate management for steam panels.

At Paul Mueller Company, our team of sales and engineering experts are committed to customizing each application to meet your unique needs, ensuring a smooth and efficient installation process. When you place your order, you can request a tank layout drawing that illustrates the mounting locations for the Clamp-on Temp-Plate panels. We understand that every situation is different, and the standard layouts above may not always apply, which is why we're here to provide personalized support and assist you in finding the best solution for your specific requirements.

PAUL MUELLER COMPANY

Who We Are

At Paul Mueller Company, we are united by a belief that the only quality that matters is quality that works for life. With every piece of processing equipment we build, our goal is to have lasting impact. This collective vision has led us from a small sheet metal shop to a global supplier of heating, cooling, processing, and storage solutions. Our equipment allows farmers, brewers, and engineers to keep their products fresh and their inventory strong. Whether our equipment preserves milk in rural areas or helps manufacture medicine with broad health benefits, we are making an impact across the globe.

Creating Quality for *Life*

Our Products and Services

Skids and Integrated Systems
- Small Scale to Custom Automated Systems
- Modular Process Systems
- Water-for-Injection Distribution Skids

Custom Tanks and Vessels
- Mixing, Storage, and Process
- Design and Fabrication
- Routine to Extreme Specialty Process

Refrigeration Solutions
- Falling Film Chillers
- Batch Chillers
- Packaged Chillers
- Air-Cooled Condensing Units
- Heat Recovery
- Controls

Clean Utilities
- Pure Steam Generators
- Multiple-Effect Stills
- Water-for-Injection Distribution Systems

Heat Transfer Solutions
- Heat Transfer Surfaces
- Preformed Heat Transfer Panels
- Plate Heat Exchangers
- Replacement Parts
- Service and Repair

Component Products
- Tank Heads
- Tank Shells
- Manways
- Agitators

Cleaning Systems
- Clean-in-Place (CIP) Systems
- Chemical Dosing Systems

Specialty Hauling with Mueller Transportation, Inc.
- Door-to-Door Specialty Handling
- Oversized Hauling Capabilities

Industries We Serve

- Animal Health
- Battery Production and Recycling
- Beverage
- Brewing
- Chemical
- Dairy Farm
- Dairy Processing
- Food
- Heat Transfer
- HVAC
- Mining
- Oil and Gas
- Personal Care
- Pharmaceutical
- Refrigeration
- Tank Fabrication
- Wine
- And More

Facilities and Resources

- Domestic Facilities With Nearly One Million Square Feet Under Roof
- Comprehensive Test Facilities for Factory Acceptance Testing
- Expert Fabricators and Manufacturing Staff
- Onsite, Experienced Engineering Department

Project Support Services

- Comprehensive, Customizable Documentation Packages
- IQ/OQ Protocols and Execution
- Seamless Shipping with Mueller Transportation, Inc.
- Expanded Scope Facility Construction and Expansion
- Installation Supervision and Site Acceptance Testing

Quality and Process Certification

- ASME (American Society of Mechanical Engineers)
- ASME BPE (American Society of Mechanical Engineers Bioprocessing Equipment Standard)
- API (American Petroleum Institute)
- UL (Underwriters Laboratories)
- CSA (Canadian Standards Association)
- PED CE (Pressure Equipment Directive Certification)
- UKCA (United Kingdom Conformity Assessed)
- CRN (Canadian Registration Number)
- TSSA (Technical Standards and Safety)

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