DTT εCOOL SERIES
TOP MOUNTED COOLING UNITS

With Active Condensate Management

SHARING COMPETENCE

Pfannenberg
ELECTRO-TECHNOLOGY FOR INDUSTRY

DTT 6101- 6201 Top Mounted Cooling Units

1200 - 4000 Btu/h

Pfannenberg's DTT Series top mounted cooling units are 100% condensate safe. These units are ideal for space-saving installation on the top of the control cabinet.

One of the main features of the DTT's innovative condensate management design is the repositioning of the cooling circuits. Moving the cold area up prevents condensation from forming in the cabinet where the cooling unit meets the enclosure. A widened airflow in the evaporator stops the formation of condensate buildup. Finally return air channels are engineered to increase the speed of the air leaving the cooling unit, ensuring cool air is effectively distributed moisture-free within the enclosure.

Active Condensate Management
Condensate evaporator uses heat to eliminate condensate even when the system is not actively cooling.

Durable and Reliable Components
High quality compressor, fans and heat exchangers provide dependable cooling of electrical enclosure components. The micro-channel design provides a condenser coil that is harder to damage. Fin combing is not necessary to maintain proper airflow channels.

Energy Efficient
Our optional multi controller connected to a sensor, automatically turns off the fan when it is not needed.

Rugged Design
Powder coated steel or stainless steel cover designed for manufacturing environments. Easily painted to match enclosure or machine.

Ultra Efficient Design
Our micro-channel design provides greater efficiency. With up to 40% increased heat rejection vs. standard condensers, improving the transfer of heat from the refrigerant into the ambient air.

Fast and Easy Maintenance
Removable cover allows for easy access to the front facing control components. In addition the micro-channel condenser design allows for an air path that clogs less and is significantly easier to clean during general maintenance.

Reduced Maintenance Costs
Have a dirty environment? Use our optional tool-free quick release filter mat mounting frame and a standard Pfannenberg filter to extend the life of the unit and reduce maintenance costs.

✓ **Zero Sweat Guarantee**
Condensate will not form in the cabinet where the cooling unit meets the enclosure.

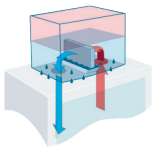
✓ **Managed Water Droplet Control**
As the airflow passes through the evaporator, any condensate generated on the evaporator will not be carried into the enclosure.

✓ **Eliminate the need for Duct Work**
Return air channels are engineered to increase the speed of the air leaving the cooling unit, ensuring cool air is effectively distributed moisture-free within the enclosure.

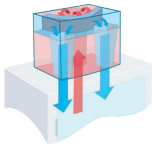
✓ **One Piece Leak-Proof Molded Tub**
Industry's only seamless molded condensate tray located at the top of the unit eliminates the ability for water to drip into the cabinet.

DTT – Guaranteed 4-fold condensate protection

Cold Bridge

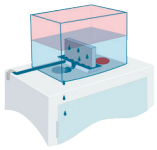


The challenge:
The lower, cold area of the cooling unit has direct contact with the ceiling of the warm electrical enclosure. As a result of this "cold bridge"effect, condensate can form on the inside ceiling of the electrical enclosure and drip into the inside.

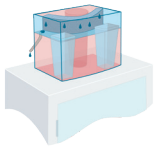


The Pfannenberg solution:
The position of the air-conditioning circuits was changed. When the cold area of the cooling unit is at the top and the warm area is at the bottom, a "cold bridge" cannot form on the inside ceiling eliminating the risk of condensate dripping inside the electrical enclosure.

Overflow of Condensate

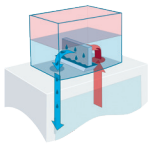


The challenge:
The horizontal condensate discharge which runs along the unit's floor makes the condensate drainage more difficult. Part of the condensate water that has accumulated in the cooling unit can overflow into the electrical enclosure via the air outlet opening.

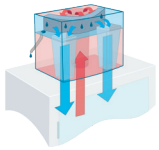


The Pfannenberg solution:
Vertical drainage of the condensate. The positioning of the evaporator in the top part of the cooling unit allows for problem-free drainage of the condensate water without contact to the electrical enclosure.

Condensate Build-Up

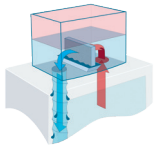


The challenge:
Concentrated warm air hits the evaporator. Parts of the condensate water formed there can be carried away by the airflow and can get into the electrical enclosure with the cold air.

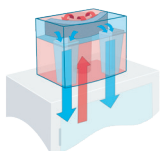


The Pfannenberg solution:
The warm air is spread out over a large evaporator. The reduced air speed at the evaporator reduces the risk of water being carried through the air, guaranteeing a condensate-free airflow in the direction of the electrical enclosure.

Air Hoses



The challenge:
The hoses conducting the cold air are surrounded by warm air from the electrical enclosure. As a result, condensate can form on the surface of the hose.



The Pfannenberg solution:
Integrated nozzles instead of air hoses. Air outlet nozzles are positioned on both sides of the cooling unit which accelerate the cold air and conduct it condensate-free down to the bottom of the electrical enclosure.

Product Variety

The new DTT Series is available in 3 sizes with 6 performances ranges:

- Size 1: DTT 6201 (2,500 - 4,000 Btu/h) / DTT 6101 (1,200 - 2,000 Btu/h)
- Size 2: DTT 6401 (5,500 - 7,000 Btu/h) / DTT 6301 (4,000 - 5,500 Btu/h)
- Size 3: DTT 6801 (12,000 - 14,000 Btu/h) / DTT 6601 (7,000 - 10,000 Btu/h)

Advantages of DTT Cooling Units:

- Space-saving installation on top of the control cabinet:
  Keep emergency exit routes and logistic paths clear. Free up space on the production floor.
- Protected placement above the production floor. Unit is out of reach from fork lift trucks and other vehicles.
- DTT cooling units fit on all manufacturers' cabinets.
- 100 % protection against condensate due to patented seamless molded condensate tray.

Ease of Installation and Service

Wherever space is at a premium and ease of installation and maintenance is crucial, the Pfannenberg DTT Series offers several useful benefits.

Simple to install (with optional Quick Installation Frame)

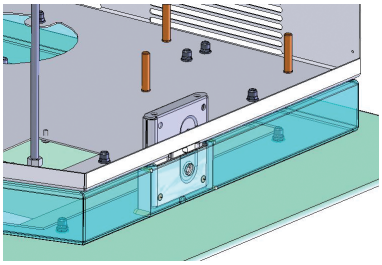
A screw-less locking mechanism makes it possible for the unit to be installed without any machine downtime, saving time and other resources. The pre-installed gasket also ensures high quality and time-saving installation.

Long service intervals

Larger fin spacing of the condenser coil prevents quick clogging and allows for filter-less operation in many industrial environments, lengthening the intervals between service time.

Innovative Service Panel

Design When a filter is used, it can be quickly replaced via the innovative front service compartment. This also provides easy access to controls, fuses and other components for quick troubleshooting under limited space conditions without removing the hood.



Pfannenberg
ELECTRO-TECHNOLOGY FOR INDUSTRY

Pfannenberg Incorporated
68 Ward Road
Lancaster, New York 14086 USA
Phone: 716-685-6866
Fax: 716-681-1521

sales@pfannenbergusa.com
www.pfannenbergusa.com

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