



CASE STUDY

Service friendliness and reliability are top priority

Electrical enclosures cooling units from experts – for experts!

Reliable products which, in an emergency case, have to be maintained or replaced immediately – this is the requirement that our industrial clients have to us and to our products that they use. In order to meet these requirements, we need reliable partners whose products fulfil this criteria. In the cooling unit sector, we have found a competent partner in Pfannenberg. Their thermal management solutions meet exactly these demands.

Thorsten Drewes, Geitekk GmbH

Reliable thermal management solutions are necessary when sensitive electronics in electrical enclosures need to be protected against too high temperatures – otherwise lengthy expensive downtime can occur. The cooling units' reliability becomes more of a focus point at the assembly line – such as at Mercedes-Benz, because the standstill of an assembly line can barely be financially compensated. Geitekk GmbH is a full service provider for the thermal management sector at the automobile plants Bremen and Hamburg and is responsible for the high uptime of the plants and systems.

A solution for all cases

With the second generation of the tried and tested **ECOOL** cooling units, Pfannenberger offers an extremely efficient, modern thermal management range. The units are available as models for door or side mounting (series DTS/DTI) and as top-mounted cooling units (DTT). The DTS/DTI models are available in five performance classes from 1,000 - 4,000 watts and can easily be switched with each other thanks to a uniform mounting cut-out or they can replace models from the previous series as part of modernisation processes. "This has allowed us to simplify and reduce warehouse storage", says Drewes "and still have a suitable unit available quickly in a service case."



ECOOL cooling unit DTS

Mounting and service friendly cooling unit series

The cooling units have a robust, modern industrial design. Their steel plate cover can be removed easily so that the entire outside area is easily accessible at all times. The easy to clean condenser with large fin spacing, which enables very long service intervals, and the construction of the interior and exterior fans as a total unit box round off the complete package. The removable cover can also be painted quickly and easily, so that the cooling unit can be optimally integrated in the desired customer design.

One technician alone can install a cooling unit from the DTI series in less than three minutes without tools. On the whole, this results in immense advantages regarding mounting-time compared to comparable cooling units. The aluminium, vlies and fluted filters can be retrofitted with an optional filter adapter – they can be fitted, also without tools, in less than a minute.

Using the quick installation frame, the top-mounted cooling units can be installed quickly and can be removed again either for maintenance or for transportation. The

whole cover can be pulled off to the front, and filtermats and control elements at the front are easily accessible.

Space-saving top-mounted cooling units

The **ECOOL** cooling unit series includes the innovative DTT models for top-mounting which is particularly suitable for applications with little installation space. It remedies problems that occur in traditional top-mounted cooling units: Condensate can arise here, this penetrates the electrical enclosure and, in the worst case, leads to machine breakdowns. Thanks to an intelligent, patented condensate management system, DTT top-mounted units reliably prevent the creation of condensate and the penetration of condensate into the electrical enclosure. To do this, the cooling units were literally turned upside down: Contrary to previously, the cold side no longer touches the ceiling of the electrical enclosure. Thus, larger differences in temperature on the contact surface between cooling unit and electrical enclosure are avoided and the condensate accumulated in the cooling unit is led securely into the integrated condensate evaporator.

„As a result of the high acceleration of the cold outlet air, an airflow path in the inside of the electrical enclosure can be dispensed with. Firstly, this saves installation time and secondly, it reduces costs“ adds Patrick Sassmann, Industry Group Manager Automotive at Pfannenberger.



DTT-top-mounted cooling units reliably prevent the penetration of condensate into electrical enclosures

Facts at a glance

Task	<ul style="list-style-type: none"> • Ensure availability of the plants in automotive industry through reliable enclosure thermal management • Provide mounting and service friendly cooling unit series
Challenge	<ul style="list-style-type: none"> • Protect sensitive electronics in electrical enclosures against too high temperatures – to avoid lengthy expensive downtime
Products used	<ul style="list-style-type: none"> • ECOOL cooling units for door or side mounting (series DTS / DTI 1,000 – 4,000 Watt) • ECOOL top-mounted cooling units (DTT)
Success factors	<ul style="list-style-type: none"> • Cooling units can easily be switched with each other thanks to a uniform mounting cut-out • Robust, modern industrial design • Installation of DTI cooling units without tools in less than three minutes • Quick installation frame of top-mounted cooling units can be installed quickly and can be removed again either for maintenance • Intelligent, patented condensate management system

Conclusion

„Pfannenberger cooling units have proven themselves in operation up to now and are distinguished by very small maintenance costs“, summarizes Drewes. “In particular, we are able to provide answers to our customers from the automobile environment who attach importance to reliable solutions. The price-performance ratio is optimal. We can also always count on reliable advice from Pfannenberger: If special cases or special customer wishes arise, we receive personal support immediately.”