





Protecting man, machine and the environment.

WE MAKE COMPANIES MORE PRODUCTIVE.

For more than 60 years, the Pfannenberg Group has been helping to guarantee production safety for companies throughout the world. Our mission is to satisfy the increasing demands of modern industries by developing progressive ideas. This led to the invention of many products in the field of thermal management, signaling technology and process cooling.

A spirit of invention and German engineering genius are not our only strengths. We are also proud of the close relationships we maintain with our clients and their industries.

Pfannenberg's experience in delivering a broad range of cooling solutions has led to a wide product range and a team of experts that shares it's competencies with customers worldwide. We develop customised high quality, cost effective, energy efficient solutions for demanding industrial requirements. This is the real value for our customers.

To understand more about how we can help you, please contact your Pfannenberg local sales office. As one of the few companies around the world with

a complete range of industrial thermal management solutions and services, we have a wide range of expertise which we would like to share with you.

Being a global team, we place the knowledge and technical expertise of our engineers and experts at your disposal so that you can find the best possible solutions for your requirements. Today and in the future.

What can we do for you?



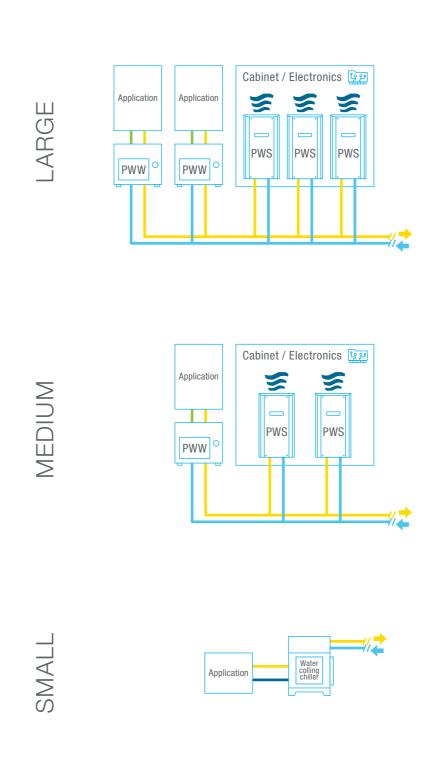
Marcello Chiozza Global Product Manager Liquid Cooling Solutions

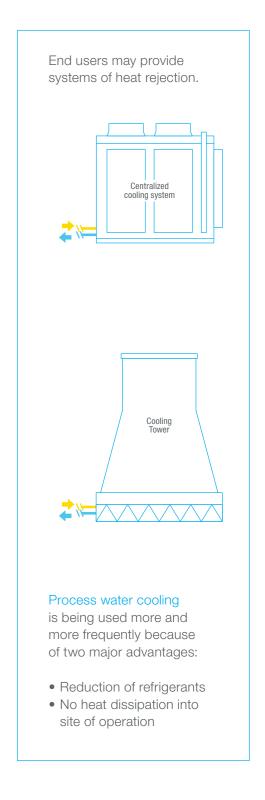
Pfannenberg liquid cooling solutions for decentralized cooling applications

LARGE

PWS Cabinet / Electronics [9] Cabinet cooling based on Application Application liquid cooling solutions PWS PWS Liquid cooling for wide PWW PWW range of applications • Independent from ambient conditions (dust, heat, humidity) Low noise Compact unit • Precise control of temperatures Cabinet / Electronics [19] Application Application 1 Motor or other applications MEDIUM with special requirements like keeping temperature limits PWS PWS and avoiding condensate. PWW Pfannenberg offers a wide range of active cooling units. Liquid cooling for applications with small cooling capacity suitable for operation when SMALL ambient temperature is below cooling temperature No refrigerants Low cost of operation

Pfannenberg liquid cooling solutions for centralized cooling applications





- Hot air from chiller (active or passive unit) into site of operation
- Cold water provided by active cooling unit low temperature due to required cooling capacity
- Cool water provided by passive cooling unit (PWW/PWL) temperature matching requirements of application

Cold air provided by passive cooling unit (PWS)

- Process water from local source (process water)
- Warm water returning from application temperature depending on actual heat load

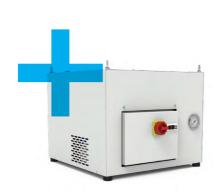
Reflecting many years of experience in numerous areas of the industry: State-of-the-art standard units

The plus to protect against condensate and corrosion. Optimizing energy consumption and costs.



PWS

- Air / water heat exchangers
- Mounted on door or side
- 0,5 10 kW
- + 1°C / +70°C *



PWW

- Water / water heat exchanger
- Stand above or for interstices
- 3 40 kW
- +10°C / +50°C *



PWL

- Water / Air heat exchanger
- Stand above or for interstices
- 1 10 kW
- +5°C / +40°C *



UL approval





rted microchannel ology technology



n env



extreme environmenta condition



Visit us online.

Online you can get comprehensive information on all our liquid cooling devices. Additionally, you are able to download product data sheets, manuals, declarations of conformity and certificates.

PFANNENBERG.COM/LIQUIDCOOLING



FROM PLANNING TO SERVICES

Pfannenberg offers the full range of products and support to help you creating and operating reliable and efficient cooling solutions with only one contact for all questions.

ALL AROUND THE WORLD.



CUSTOMIZED LIQUID COOLING

Pfannenberg passive cooling units are key elements of high performance and low maintenance cooling solutions matching a wide range of industrial applications. They can be adjusted to the application and provided as customer-specific equipment.

CUSTOM SOLUTIONS.

^{*} Range of ambient air or recooling water temperatures suitable for operation of the units.

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