Energy Efficiency in Heating and Cooling Networks

Dynamic Flow Control Concept of Products and Services

Partner to: HEATNET GLOBAL

Complete District Energy Solutions

"Complete District Energy Solutions from Frese" is a dynamic flow control concept comprising products and services for heating and cooling networks, aimed at maximising ΔT, reducing energy consumption and flow, and thereby lowering carbon emissions.

Optimising your district heating and cooling system is more relevant than ever, given the conversion wave, which is a major task. This task requires increased heating and cooling capacity and solutions to problems such as too low ΔT, as well as overflows and underflows in the system.

By working with us as your partner, you will benefit from intelligent solutions to these challenges and gain a holistic overview of your system.

Optimisation with Dynamic Valves

Valves are a critical part of every district heating and cooling system, and we can provide help and advice on valves throughout the distribution network. For example, you can optimise flow with pressure independent control valves, such as the OPTIMA Compact, which provide optimal control and ΔT, and lower flow and pump pressure.

You can also resolve any problems with large consumers using dynamic flow limiters. They can limit the amount of district heating and cooling sent to large consumers, secure design ΔT and capacity and ensuring a smooth distribution to all consumers in an area.

Fully welded steel ball valves with low pressure drop complete the product range.

ΔT Optimisation

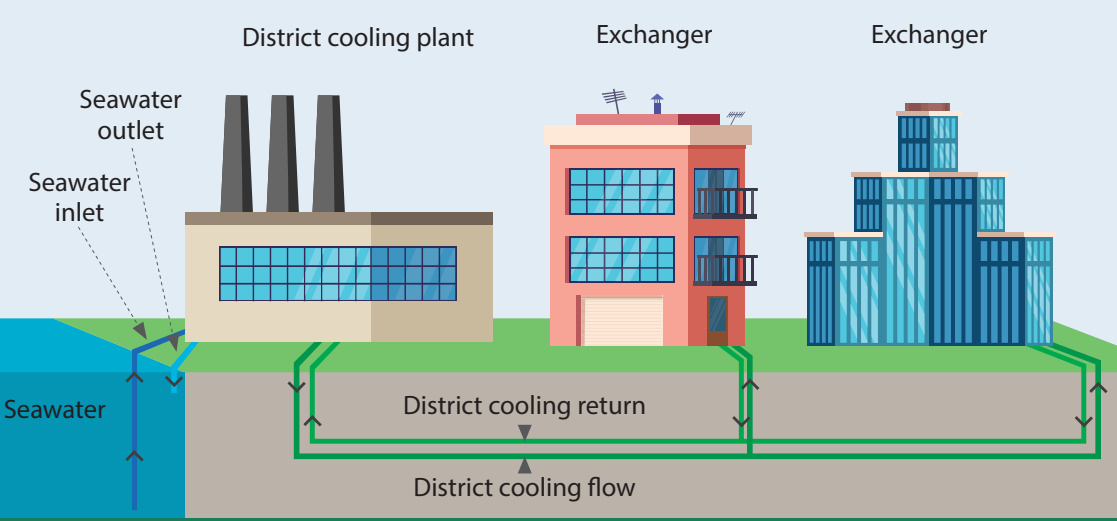
Optimisation of the ΔT between the inlet and outlet in both heating and cooling network systems is crucial for increasing system efficiency and reducing pump energy. For this purpose, the Frese dynamic flow control system can help you measure, monitor, and optimise the ΔT.

With the right solutions and a holistic overview of your system, you can achieve significant benefits with relatively few measures. Through better utilisation of water, you can cover more consumers with the same capacity, reducing the need for additional boilers or investments in alternative energy sources. Therefore, it makes good financial and sustainable sense to investigate how the district heating system can be improved, enabling us to resolve the conversion task in an intelligent and efficient way.

Our Products

District Cooling: City 1 mill. inhabitants

- 40% savings on energy costs
- 70% CO_2 reduction
- No service on chillers
- No noise from condenser fans
- Lower investments



Read more about our services and products on our website **www.frese.eu/districtenergy**

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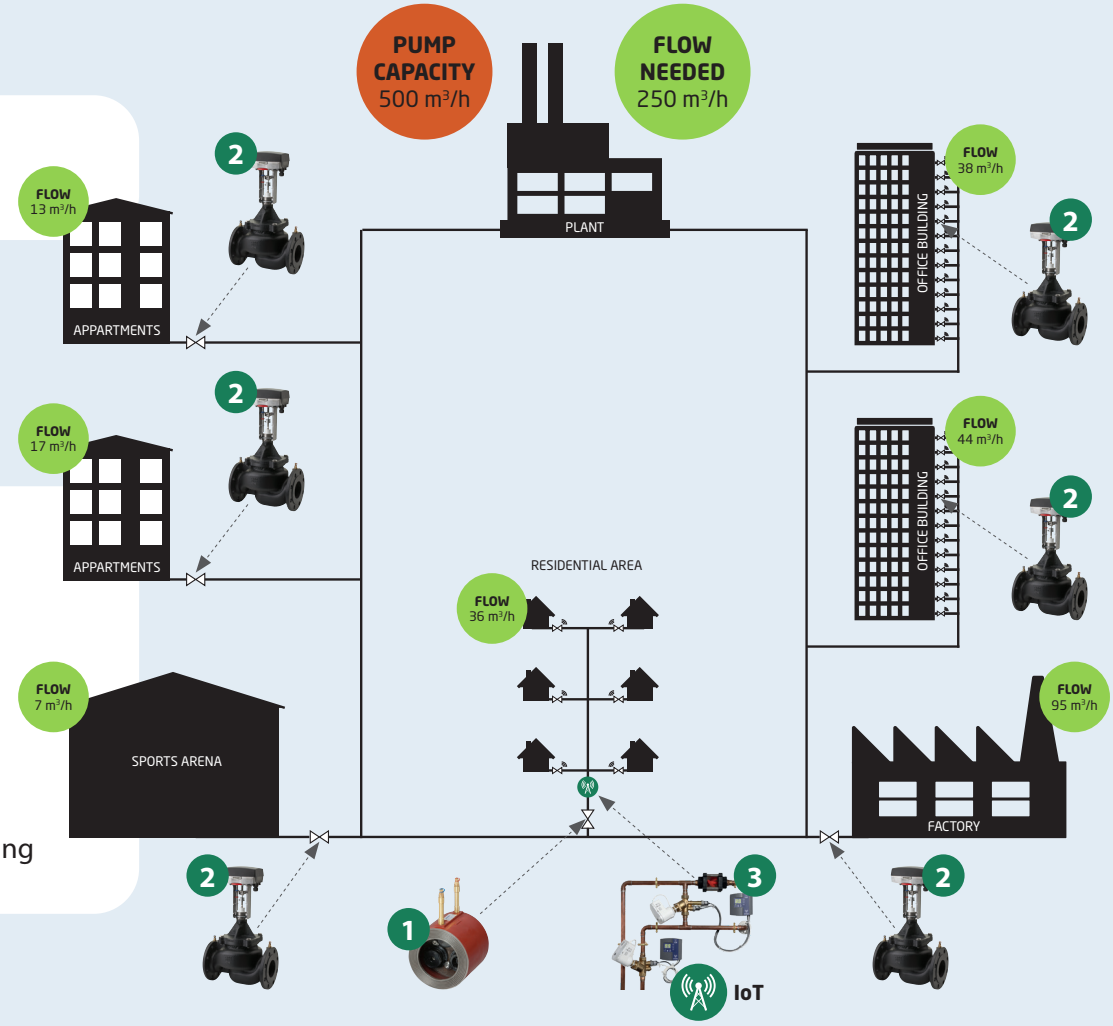
Easy Commissioning & Flow Verification

Dynamic Solutions in Heating/Cooling Networks

1. Basic: Flow Limiting
2. Perfect: Flow Control
3. Advanced: Flow Monitoring



Istanbul Airport Energy Centers

Frese has provided dynamic balancing valves for the heating and cooling lines of the ECA, ECB, and ECC buildings, which supply the new Istanbul Airport Energy Centers. Due to the very high capacity requirements of these buildings, we delivered our first set of two DN1000 ALPHA Wafers, each with an impressive capacity of 6000 m3/h, for the chiller return lines.

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