



# PRIESS DISTRICT HEATING

PRIESS



Infrastructure solutions  
for the public space

**Even more efficient district heating plants**

# FUTURE-PROOF SOLUTIONS FOR DISTRICT HEATING PLANTS

For more than 30 years, Priess A/S has supplied technical cabins to the Danish market. We have developed with the market, and therefore supply more and more complete solutions today.

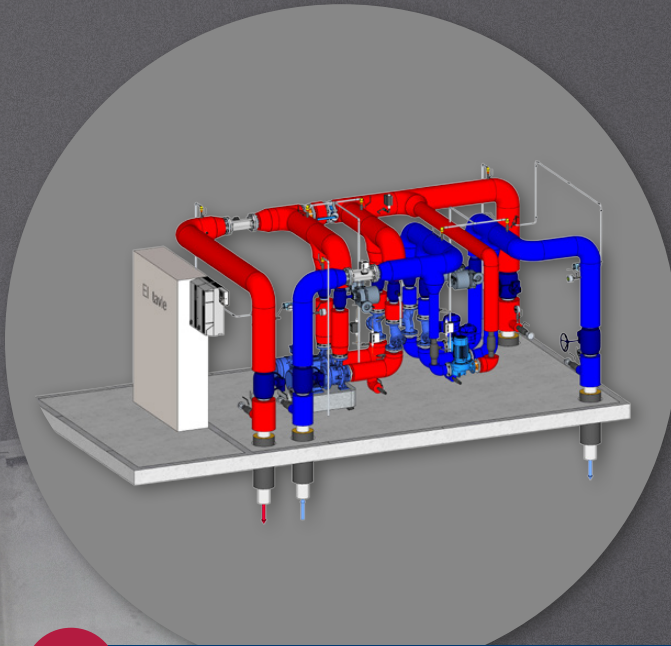
With our solution, we have gained expert knowledge in district heating solutions, where we now not only tailor your technical cabin, but also your piping systems and pumping stations. This means, among other things:

- **We offer complete pumping solutions for district heating**
- **As a customer, you only need to connect district heating pipes and supply cables — we call it “Plug & Play”**
- **30 years of know-how in building Danish district heating systems and pumping stations**
- **We are specialists in “Plug & Play”**
- **Our pumping stations lower energy costs and CO<sub>2</sub> emissions at the heating plants**

DISTRICT HEATING PLANTS ARE SUBJECT TO HIGH-ENERGY EFFICIENCY REQUIREMENTS. TODAY, DISTRICT HEATING PLANTS TYPICALLY SUPPLY HEAT TO THEIR CUSTOMER GROUP WITH ONE CENTRAL PUMP, WHICH PUMPS HOT WATER OUT TO CONSUMERS' HOMES THROUGH PIPING SYSTEMS. THE PRESSURE OF THE CENTRAL PUMP INCREASES OR DECREASES DEPENDING ON HOW FAR AWAY THE FARTHEST HOUSE IS. THIS MEANS THAT THE PRESSURE MUST BE INCREASED CENTRALLY IF THE PIPELINE IS EXPANDED — AN OPERATION THAT CAN NORMALLY ONLY BE PERFORMED FROM THE MAIN PUMP, WHICH ENTAILS SIGNIFICANT ADDITIONAL COSTS FOR ELECTRICITY.

**NOW THERE'S A BETTER WAY.**





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## PHASE 1: 3D DESIGN MODELLING

All products are drawn as 3D models before production starts. This provides great security for you as a customer, because you can participate in the entire design phase and see the final product before the start of prefabrication.

These drawings are further used to carry out our prefabrication of individual components.

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## PHASE 2: FUNCTION & CONTROLS

Preparation of the station's function is extremely important, which is why we also offer the preparation of PI-D diagrams. Once this is established, a component list of function and control signals is generated.

It is now quite easy to define which controls should be built into the panel. The control panel is produced and the PLC is programmed with the set parameters from the PI-D diagram. The station is now ready to be connected to the SRO-SCADA system.





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### PHASE 3: INSTALLATION

The station is built in several parallel lines to ensure consistently high quality and, not least, to reduce delivery time.

We see the entire station as a modular solution, which consists of several parts that are built independently from each other and which are eventually put together as a building set consisting of the technical cabin, concrete structure, piping and technical production, insulation work, electricity and controls.

The finished district heating station is delivered directly on site. Here, the station is connected to the customer's piping system and electricity supply (Plug & Play).

The station is now ready for operation.

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### PHASE 4: DELIVERY AND OPERATION.



# BENEFITS



## 1. More people get the benefits of district heating

The solution enables low-cost and environmentally friendly district heating to be delivered to areas that do not currently have district heating.

## 2. Operating savings

The solution provides the plants with economies of scale either by being able to expand the supply area and get more consumers on the pipeline system or by improving the pressure conditions on an existing district heating network.

## 3. Greater security of supply

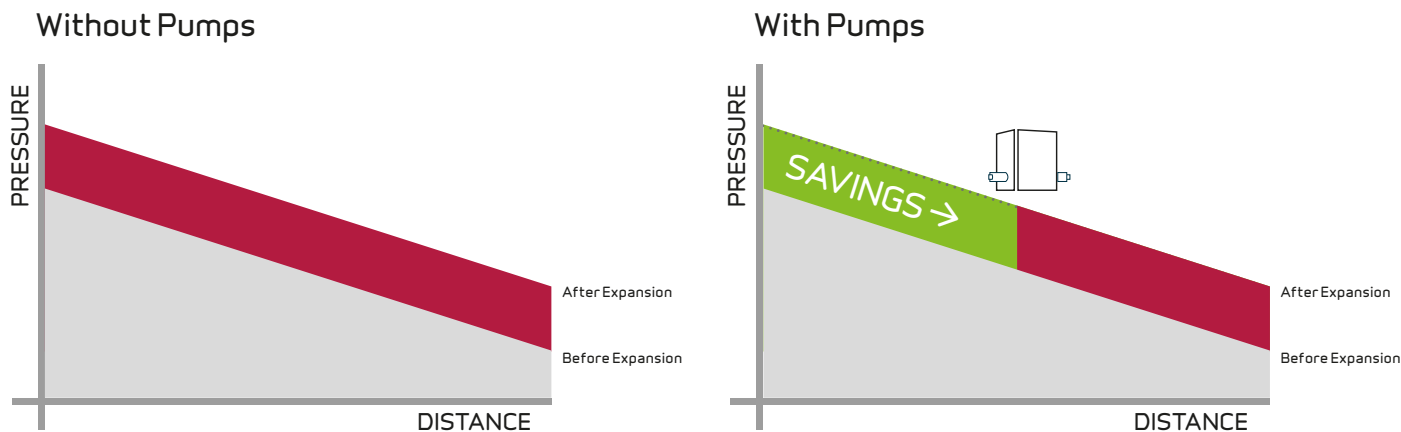
If the pump itself is combined with a shunt pump (also called a mixing shunt), the flow water temperature is lowered. The loss of pipeline decreases and the pressure ratios improve.

## 4. Installation savings

The Pries pumping stations are prefabricated with pumps, fittings, cabling and insulation – and delivered directly to the site of use – complete and ready for operation.

## 5. Better environment

CO<sub>2</sub> – emissions are considerably lower from district heating than from other fuel sources. Thus, when more consumers join the district heating network, CO<sub>2</sub> is saved – and energy saving points are earned.



There are two ways to compensate for pressure loss in the district heating network – for example, when the grid is expanded. There is the traditional way in which the pressure is raised from the central pump – and thus throughout the grid. And then there is the Pries way, where smaller customised pumping stations are deployed in strategic places on the network, so that the pressure is only raised where it is needed. This creates savings.

# WE PROVIDE DEVELOPMENT



## The primary benefits of the Priess solution are:

- Plug & Play
- More consumers get the benefits of district heating
- Operating savings for the district heating plant and thus for consumers
- Greater security of supply
- Installation savings
- Better environment



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