

# Reference Brewery Pivovar Klášter

## The companies involved

### Operator: Pivovar Klášter

- ▶ Traditional art of brewing since 1894
- ▶ Former monastery of the Cistercians in the Czech Republic
- ▶ Production of five different beer specialties
- ▶ Annual production: around 76 000 hectoliters
- ▶ Steam and hot water demand for e.g. mashing, boiling and cleaning



## Renewal of the process heat supply

to increase supply reliability and efficiency – existing system >30 years in operation

### Our partner:

Bosch Termotechnika s.r.o.



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## Scope of delivery



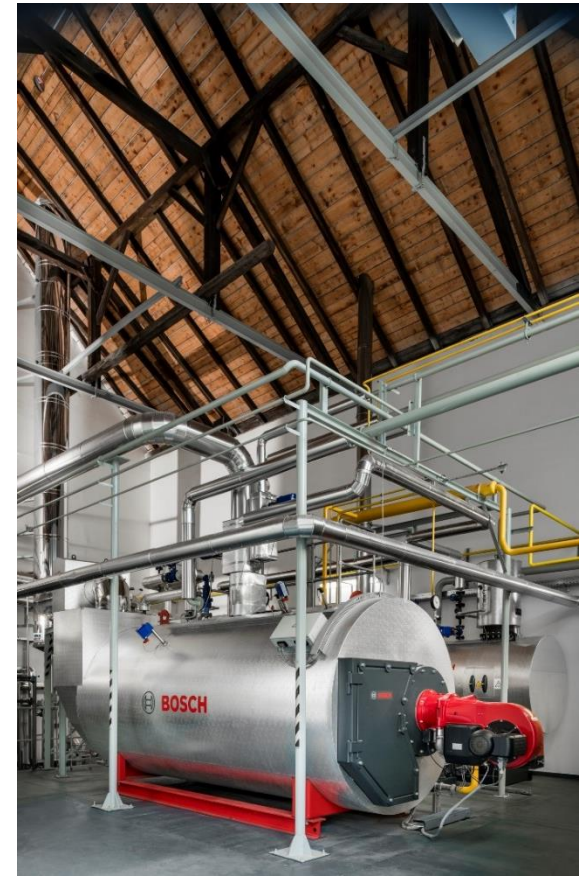
### Steam boiler and firing

- ▶ Use of a Bosch UL-S steam boiler with an output of 4 000 kg/h steam
- ▶ Modern natural gas firing with speed-controlled fan reduces the power consumption

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### Use of waste heat reduces gas consumption

- ▶ Integrated economizer uses waste heat for feed water preheating
- ▶ Downstream condensing heat exchanger uses condensation heat for heating up the brewing water



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## Scope of delivery

### Automation reduces mandatory supervision

- ▶ Boiler control BCO for analyzing important operating data
- ▶ Automatic desalting and blow-down increases reliability, longevity and prevents maloperation

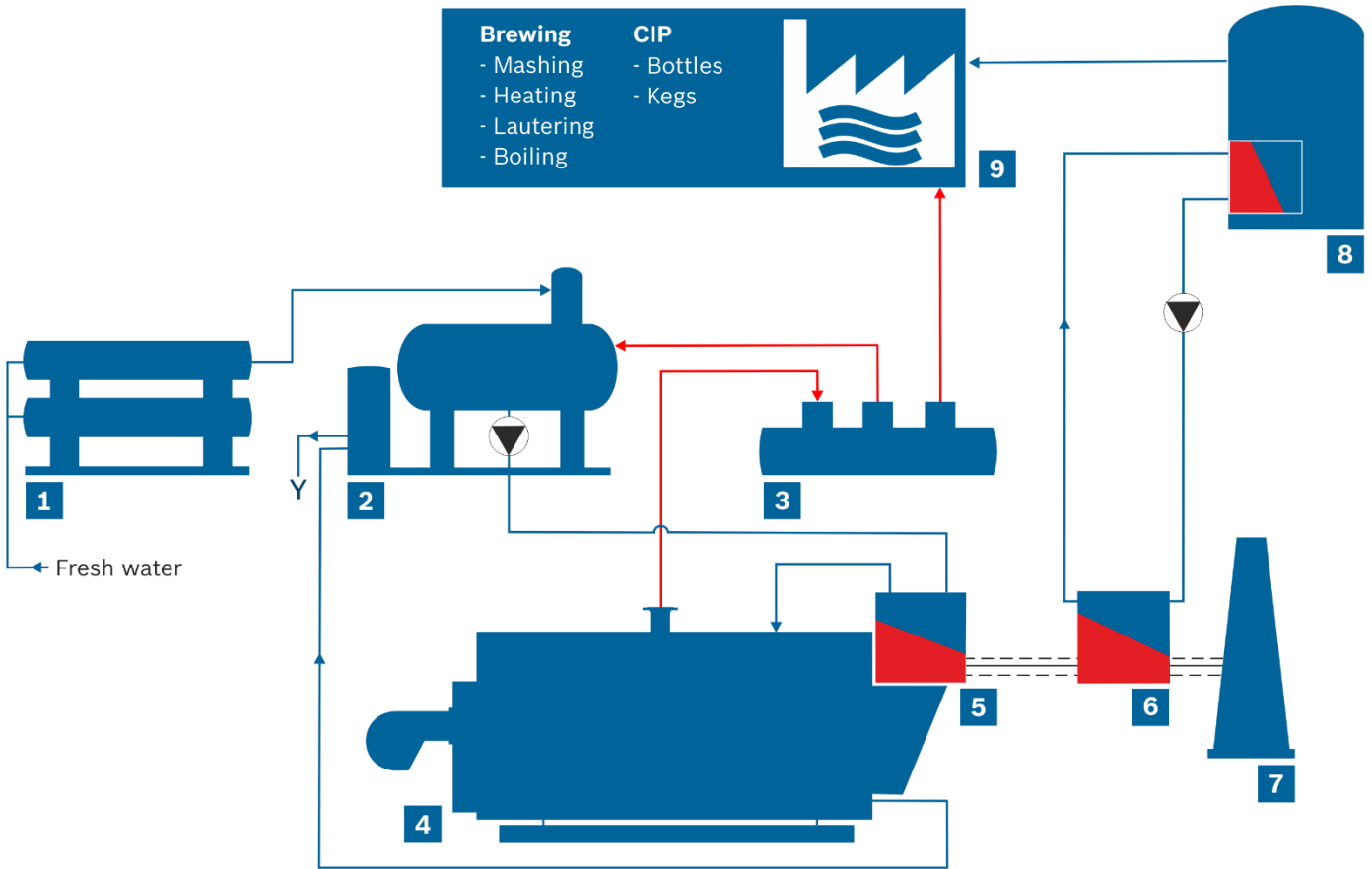


### Maximization of the boiler service life

- ▶ Full deaeration of the feed water protects the boiler against corrosion and increases the operating safety
- ▶ Considerable savings in chemical corrosion inhibitors
- ▶ Automatic start-up control (SUC) protects the boiler and the flue gas heat exchanger und prevents operating errors

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## Simplified piping diagram



<b>Brewing</b>	<b>CIP</b>
- Mashing	- Bottles
- Heating	- Kegs
- Lautering	
- Boiling	

- 1 Osmosis plant
- 2 Water service module WSM-V
- 3 Distributor
- 4 Steam boiler UL-S
- 5 Economizer ECO
- 6 Condensing heat exchanger
- 7 Chimney
- 8 Preheating process water
- 9 Brewery

— Water/Condensate  
— Steam  
--- Flue gas

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## The result

€ **16 % fuel savings** compared to the previous system



**Reduced** CO<sub>2</sub> emissions by effective recovery and use of flue gas heat



**Increased degree of automation** ensures a **reliable** process heat supply and reduces mandatory supervision



Perfectly matched components for **quick and easy installation**



**Zdenek Prokupek, manager of the brewery Pivovar Klášter:**

“With the new system we have managed to reduce our energy costs significantly and thanks to the high degree of automation we can now completely focus on our beer brewing. Both the quality as well as the local service from Bosch in the Czech Republic have convinced us.”