

## Product portfolio ZFR

# UNIVERSAL steam boiler ZFR

### Technical data of the UNIVERSAL

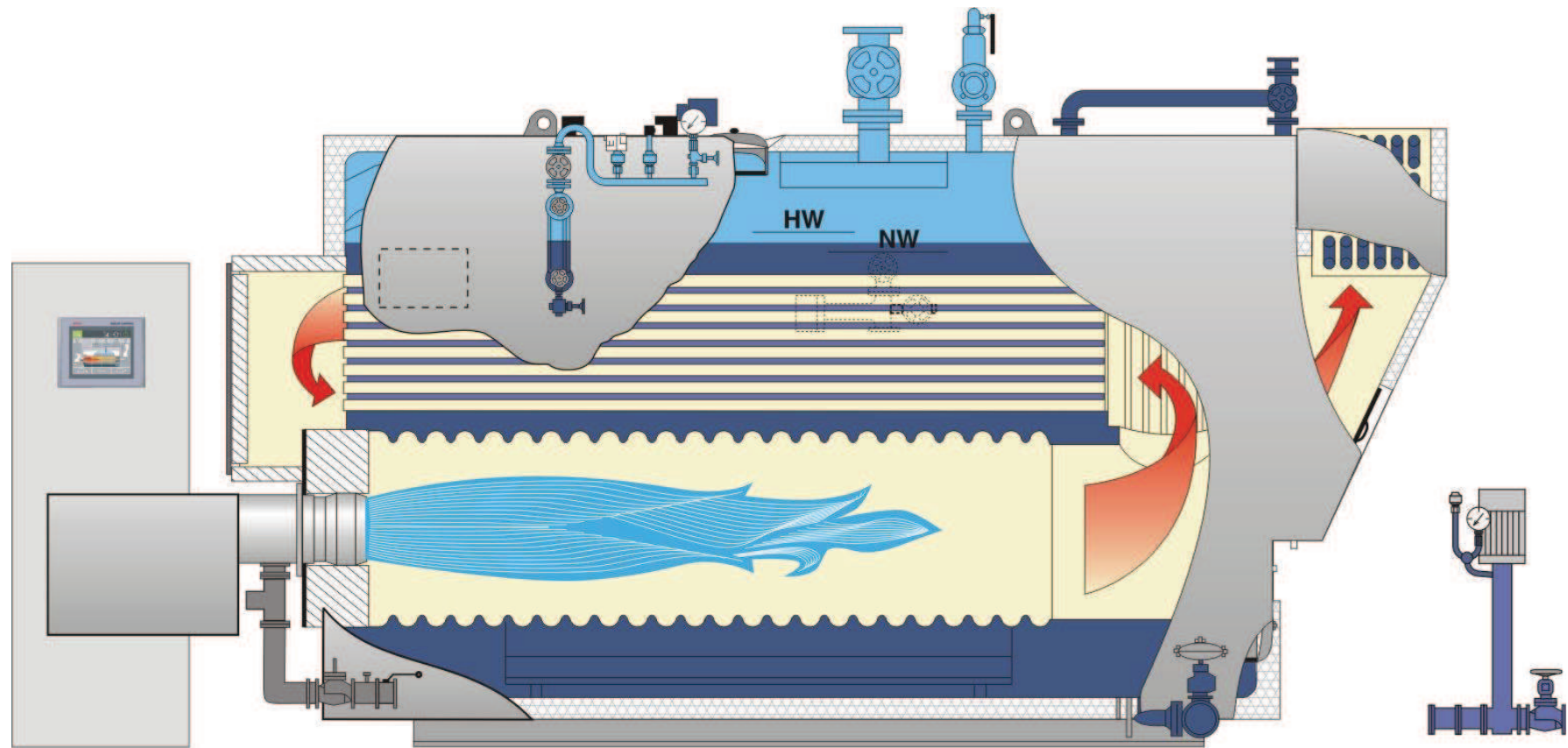
Type	ZFR	ZFR-X
Heat transfer medium	High pressure saturated steam	High pressure superheated steam
Design	Three-pass double-flame tube/smoke tube technology	Three-pass double-flame tube/smoke tube technology
Capacity in kg/hour	18 000 up to 55 000	18 000 up to 55 000
Safety design overpressure in bar	up to 30	up to 30
Max temperature in °C	235	300
Fuel	Oil, gas	Oil, gas



### Thermotechnology



## Product portfolio ZFR



### Thermotechnology

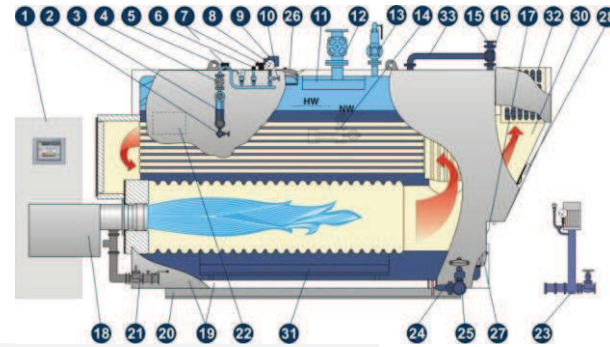
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## Product portfolio ZFR



- 1 Control switchgear cabinet with boiler control BCO
- 2 Blow-off tap
- 3 Reflective water level indicator
- 4 Manostat tube shut-off valve, maintenance-free
- 5 Pressure limiter
- 6 Pressure transducer (4-20 mA)
- 7 Low-level limiter electrode
- 8 Pressure gauge
- 9 Level transducer (4-20 mA)
- 10 Pressure gauge shut-off valve with testing flange
- 11 Steam dryer
- 12 Steam removal valve
- 13 Full-lift safety valve
- 14 Fully automatic conductivity measurement and desalting
- 15 Feed water non-return valve
- 16 Feed water shut-off valve, maintenance-free

- 17 Sight hole
- 18 Burner
- 19 Insulation with protective shell
- 20 Base frame
- 21 Gas regulation module
- 22 Terminal box
- 23 Pump module
- 24 Drain shut-off valve, maintenance-free
- 25 Quick shut-off blow-down valve
- 26 Inspection opening, steam side
- 27 Inspection opening, water side
- 28 Inspection opening, flue gas side
- 30 Flue gas collection chamber
- 31 Water circulation guide profiles
- 32 Flue gas heat exchanger ECO
- 33 Connection piping ECO/boiler

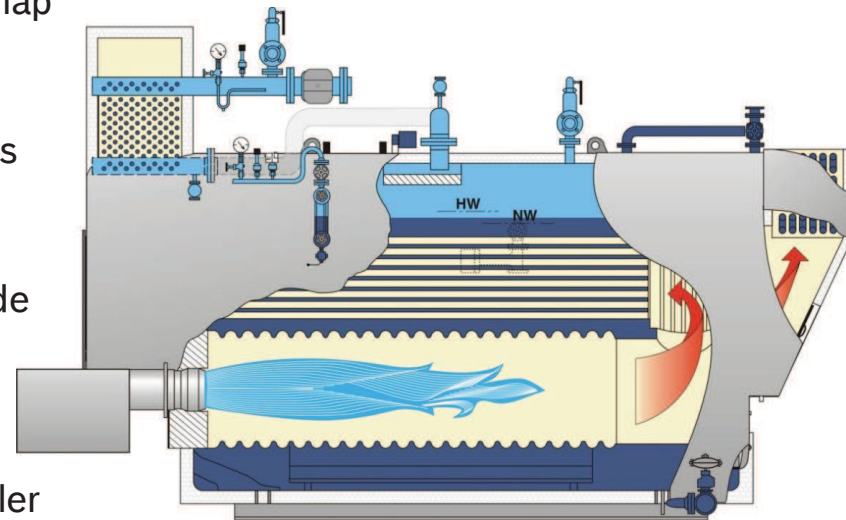
### Thermotechnology



# UNIVERSAL steam boiler ZFR-X

If superheated steam is required instead of saturated steam, a superheater module can be placed on the front reversing chamber. A bypass flap constantly controls the temperature of the superheated steam over a large load range. The smoke tube areas remain easily accessible thanks to the pivoting door of the reversing chamber.

- Modular system, controlled on the flue gas side – no injection water required for temperature control of the superheated steam
- Easy maintenance and installation – simple cleaning possible for the second and third boiler pass
- High service life thanks to low thermal loading of the heat exchanger bundle of the superheater



### Benefits at a glance:

- Intuitive boiler control on SPC basis with very high transparency of operating data
- High level of efficiency due to three-pass technology, an integrated economizer and effective heat insulation materials
- High level of pressure consistency and steam quality even with widely fluctuating steam demand
- Automatic start-up, standby and shutdown control SUC
- Suitable for all burner systems
- Pollutant reduced combustion thanks to the use of highly developed firing systems and careful matching of the best boiler and burner combination
- Easy for maintenance – simple to inspect on both the flue gas side as well as the water side
- Delivery as boiler type ZFR-X for superheated steam is possible
- Robust, reliable and unsurpassed in its durability
- Acceptance in accordance with the European Pressure Equipment Directive – applied worldwide
- Extremely high control range thanks to single-flame tube operation
- Simple extension options thanks to integrated module technology
- Simple commissioning due to pre-parameterised boiler control
- Easy wiring on site thanks to plug-in connections

