

## **Oil & Gas Boilers**

Making energy both economical & clean





# Steam boiler

The Noviter WT ST - boiler is designed to produce both super heated and saturated steam. The boiler is water tube constructed and equipped with drum. Water and steam flow is based on buoyancy driven natural circulation. Each produced boiler is tailor-made in order to meet customer's specific needs in steam production. Valmet uses the latest state of the art dimensioning and designing tools together with years of experience in boiler engineering in order to make every constructed boiler into a success.

## User-friendly & flexibility with fuels

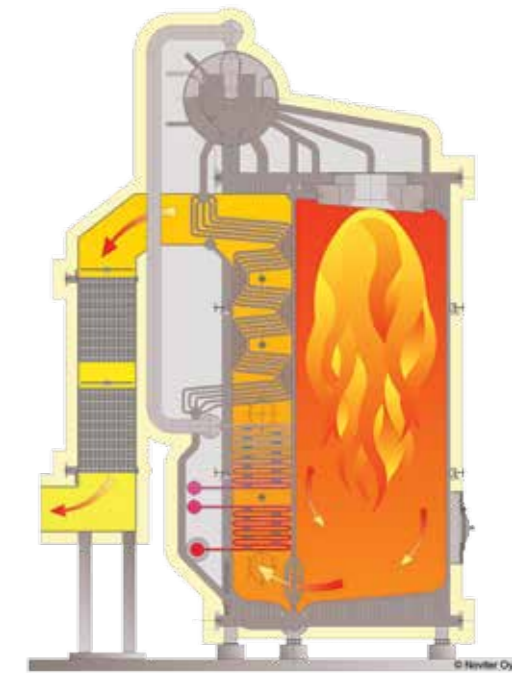
Selection of burner technology is flexible and wide range of gaseous or liquid fuels can be utilized. Boilers up to 40 MW (about 60 t/h steam) are designed to operate with one burner. This ensures low cost in boiler auxiliary equipment as well as ease of use, maintenance, tuning and start-up.

Safe flue gas exit temperature is selected based on fuel analysis in order to utilize all the available energy as far as it is technically feasible. All the economizers are designed for specific conditions to ensure maximum compatibility between boiler and economizer.

Output range of Noviter WT ST boiler type goes from 10 t/h to 200 t/h.

The Noviter WT ST-boilers are self standing and supported from ground, which enables installation without heavy frame-work required by boilers, which are suspended from the top.

High efficiencies are ensured by fitting economizer after the boiler.



Example of boiler plant delivery:  
**AS Narva Elektriijaamad,**  
 Narva, Estonia  
 3 x 117 t/h  
 Steam boilers 300 C, 15 bar

# Hot water boiler

The Noviter WT W is designed from the beginning as a water boiler. No compromises have been made. All dimensioning and structural solutions serve the same end – to make an outstanding hot water boiler – simple in structure and operation, long serving and reliable.

## Efficient heat transfer & clean combustion

The Noviter WT W – is a very compact and resistant combined boiler. Boilers up to 47 MW are made in two factory made transportation blocks and are equipped with one burner which ensures short assembly time at site, good manufacturing quality and low auxiliary equipment costs. The fire chamber and intermediate duct are water-tube structured and the convection part fire-tube structured. Characteristic to this boiler is efficient heat transfer and clean combustion.

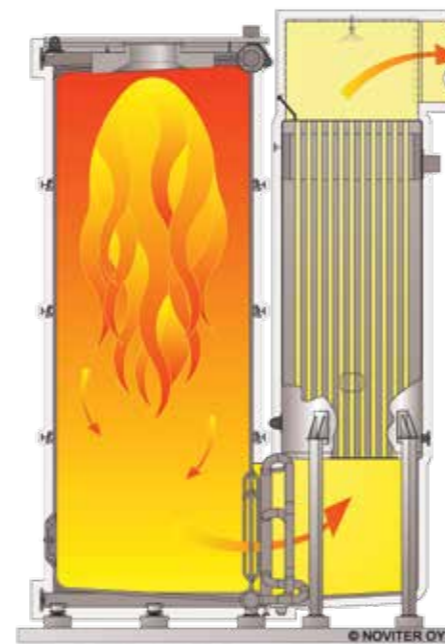
The intermediate duct, constructed of water tubes, carries gas from the combustion chamber to the convection part of the boiler. Sweeping water from the convection part of the boiler is discharged at the bottom of the duct. The heat transfer surfaces of the convection part are formed of fire tubes. Gas flows upwards in the tubes and water flows down on the outside

of the tubes in the convection section. The tops of the fire tubes are fitted with turbulators which enable more efficient heat transfer from the gas to the water.

The Noviter WT W boiler is designed to burn both liquid and gaseous fuels. The combustion chamber is dimensioned to allow for combustion properties of modern heavy fuel oils and gases. The capacities and surface loads of the combustion chamber and other heating surfaces are well within the safety limits set by current thermal efficiency and environmental requirements.

The normal design pressure of the boiler is 1.6 MPa and design temperature 120 C – 204 C. The boiler can also be designed for higher pressures and temperatures.

Output range of Noviter WT W boiler type goes from 20 MW to 150 MW.



Example of boiler plant delivery:  
**Vantaan Energia,** Vantaa, Finland  
 5 x 40 MW  
 Hot water boilers 204 C, 16 bar





Our 11,000 professionals around the world work close to our customers and are committed to moving our customers' performance forward – every day.



[LinkedIn.com/company/valmet](https://www.linkedin.com/company/valmet)



[Twitter.com/valmetglobal](https://twitter.com/valmetglobal)



[Youtube.com/valmetglobal](https://www.youtube.com/valmetglobal)



[Facebook.com/valmetcorporation](https://www.facebook.com/valmetcorporation)



[www.valmet.com](http://www.valmet.com)

For more information, contact your local Valmet office. [www.valmet.com](http://www.valmet.com)

Specifications in this document are subject to change without notice.  
Product names in this publication are all trademarks of Valmet Corporation.

