

ADVANTAGE  GUARANTEED

**GRESHAM'S**

    THE ENERGY-ENVIRO SPECIALISTS

# **AQUATHERM**



**HOT WATER BOILERS**

## THE GRESHAM'S STORY

**Gresham's** started boiler manufacturing in 1971 in an association with Karachi Shipyard & Engineering Works Limited as a pioneering project for Pakistan. Today, we have manufactured over 1200 boilers of various designs for customers ranging from food processors to power plant boilers. We have been the first in CoGeneration and EPC Projects. Notable installations include the Finance & Trade Centre at Karachi, The MCB Towers, the SNGPL Head Office Building and many others.

**Gresham's** Boilers exported to France, Italy, Algeria, Iraq, UAE, Saudi Arabia, Sri Lanka, Bangladesh, Myanmar and Afghanistan are a testimony of our quality.

## Quality Inspiration.

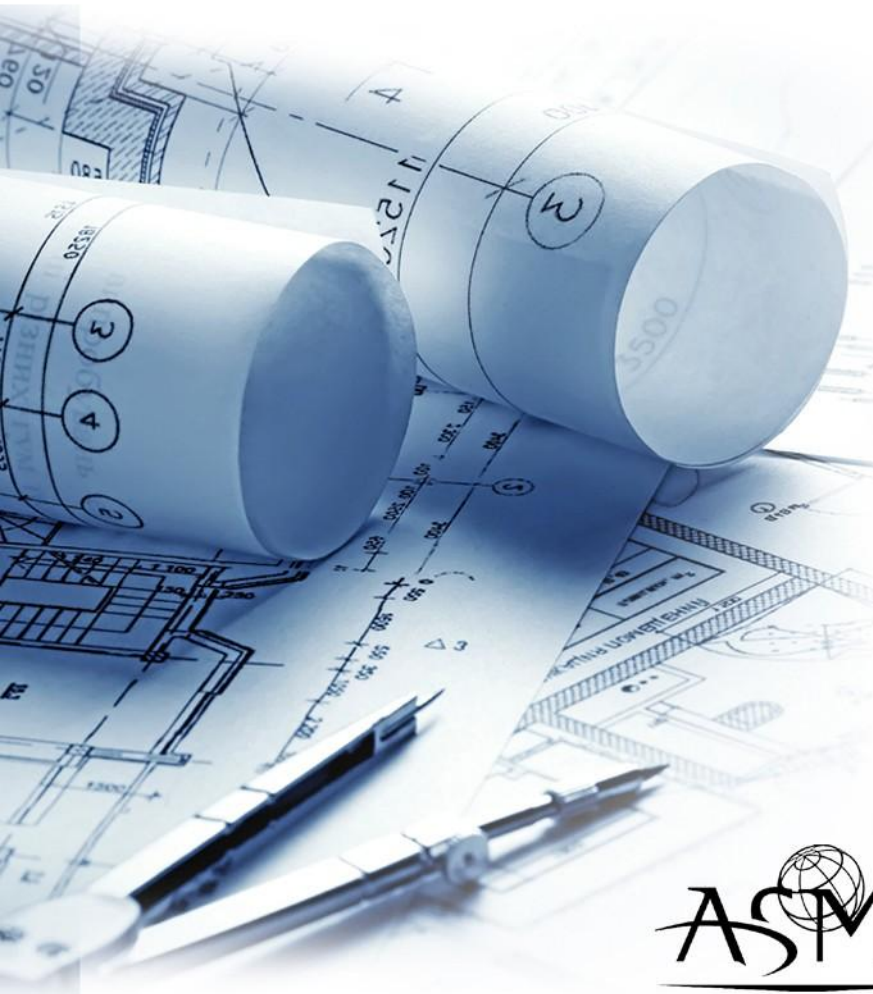


William Edwards Deming was an American engineer, statistician, professor, author, lecturer, Quality Expert. Mr. Deming inspired Toyota to quality manufacture in 1954.

Boilers of Firetube, Watertube, Forced circulation Steam Generators, Waste Heat Recovery Units, Power plant boilers, Thermic oil Boilers, Hot air generators, RO & Water Treatment Plants, Heat Exchangers, Equipment for oil and gas industries, Portable accommodation systems, Filtration Plants are manufactured under licence agreements from world renowned brands such as Powermaster Keeler, Wanson, Ygnis, Alpha boilers..... to give you a highly engineered, safe & efficient products built to ASME Standards and Inspected by Germanischer Lloyds, TUV, SGS....

In 1982 we originated the idea of energy conservation and were behind the Boilers in Pakistan study done by the Ministry of Production which study led to the creation of ENERCON.

**Gresham's** – dedicated to boiler manufacture since 1971. – commitment to energy conservation. – commitment to deliver a safe reliable product.



ASME Codes used for manufacturing all Boilers.



The AQUATHERM hot water boiler is a unique three pass, horizontal fire tube, water-backed boiler design developed and perfected in Switzerland and now Internationally acclaimed as the only design that burns fuel twice.

The shell design overcomes thermal shock problems common to other multi-pass boilers. Thermal stress is greatly reduced because of two unique features of the furnace.

Firstly, the larger diameter, shorter furnace produces less thermal expansion than a furnace of an ordinary boiler.

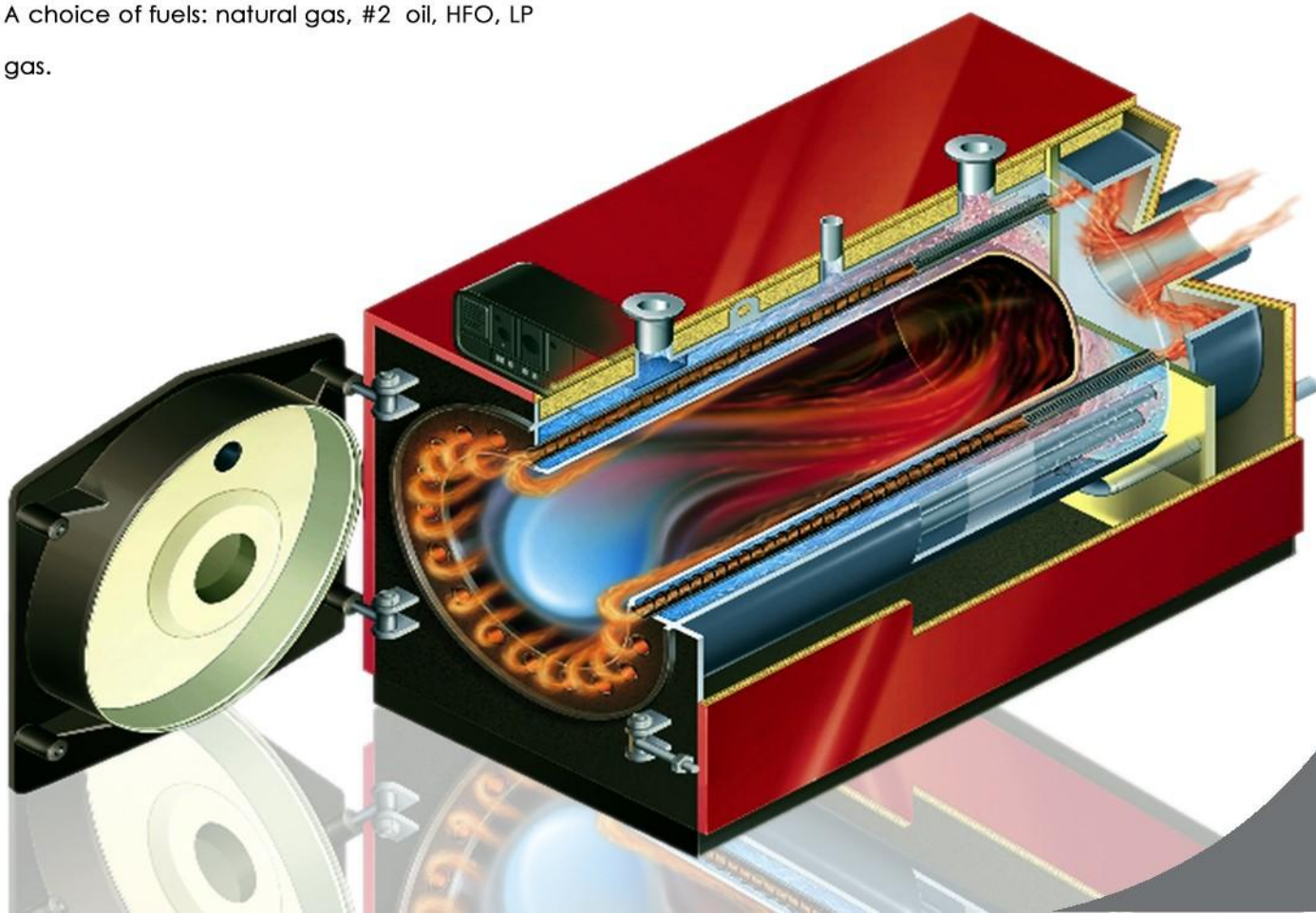
Secondly, the furnace end is supported by stays which are attached to the rear tube sheet. Tube sheet fatigue failures are eliminated because shear stress between the furnace and the rear tube sheet is substantially reduced. Efficiency Up to 93% efficiency, with water outlet at 60C and a Three-pass design captures additional flue gas heat after heating primary surface.

A choice of fuels: natural gas, #2 oil, HFO, LP gas.

Simplicity of Design with No complex controls requiring intensive training, fewer moving parts reduces incidence of failure and required re-tuning.

Compact Design Greatly reduces footprint, as compared to industry 3 and 4 pass fire tube boilers, given relatively large diameter and short furnace design.

<b>Range</b>	<b>150-15000 kWth</b>
<b>Efficiency</b>	<b>upto 93% with 60C Outlet</b>
<b>Max Working Pressure</b>	<b>10 Bar(g)</b>
<b>Maximum Water Temperature</b>	<b>185 C</b>
<b>Available in</b>	<b>Natural Gas, Dual Fuel</b>





Aquatherm Hot Water Boilers transfer over 98% of the energy consumed transferred directly to the water.

The Aquatherm VHW Packaged Vertical Hot Water Boiler is designed for use in water heating applications where there is space limitation. water for showers/sinks and for heating swimming pools. These boilers are ideal for use in dual energy systems: electric-oil or electric-gas.

Aquatherm SSHW is a Condensing Design constructed entirely of Stainless Steel grades and features:

Typical applications of Aquatherm Hot Water Boilers include process heating, heat transfer loops, comfort heating (institutional and commercial), freeze protection, industrial and commercial standby equipment, commercial dishwashers, radiant floor heating, commercial swimming pools, domestic hot water heating, car washes, laundromats and more.

Ease of Operation & Maintenance of the Aquatherm Boilers is achieved with simple PLC Controls mounted on the front and Larger panels remotely located.

Front & Rear Doors swing left or Right with 2/3 bolts to be opened only.

Direct access to Boiler Tubes facilitates quick cleaning with minimum downtime.

A unique feature of the Aquatherm is the internal sludge vacuuming system. Whatever sludge is produced and accumulated at the boiler shell base is quickly siphoned off with the water .

Cathodic Protection can be installed enabling normal tap water to be used without damaging the boiler internals.

<b>Range</b>	<b>450-2100kW</b>
<b>Gross Efficiency</b>	<b>95%</b>



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**GRESHAM'S**  
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1947-2047  
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Innovation | Integrity | Value

BS EN ISO 9001  
 QUALITY ASSURED

**GRESHAM'S EASTERN (PRIVATE) LIMITED**

Business Center | Suite 702, 7th Floor Plot 19/1-A |  
 P.E.C.H.S, Block-6 Main Shahrah-e-Faisal Karachi 75400 |  
 Pakistan Tel: +92 21 343 24530 (06 Lines)  
 Mobile: +92 301 829 3472 Fax: +92 21 343 24080  
 boilers@gel1947.com | www.gel1947.com