York - Shipley Global
Division of AESYS Technologies, LLC
®

Series 400L and 500L
Packaged Firetube Boilers

Low-Offset Furnace Design
Three- and Four-Pass Water-Back Construction
20 to 1,100 BHP (196 to 10,783 kW)

www.york-shipleyglobal.com

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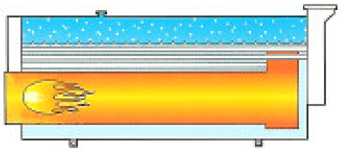
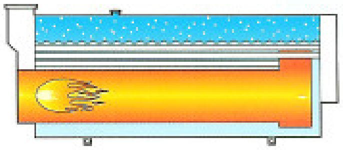
Series 400L and 500L Packaged Firetube Boilers

York-Shipley Global offers its packaged firetube boiler utilizing a low-offset furnace design. Series 400L comprising 4SF-FSHS/BHP and Series 500L comprising 5SF-FSHS/BHP are available as a three- and four-pass, water-back configuration. All steel fireside surfaces are completely water-backed. York-Shipley Global product is supported through an extensive worldwide network of sales, service and regional management representatives.

3W - 3-Pass

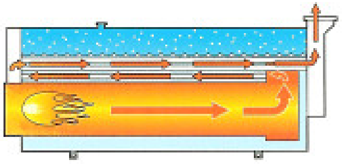
4W - 4-Pass

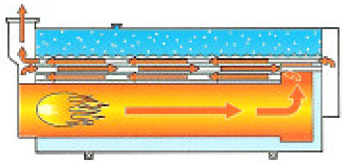




Liberal Steam Volume

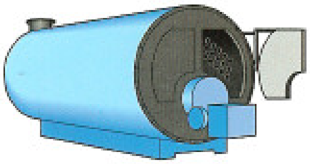
York-Shipley Global's water-back boiler maintains a larger water volume as well as a larger steam storage space and steam-water interface disengaging area allowing it to maintain performance during swing load operation.

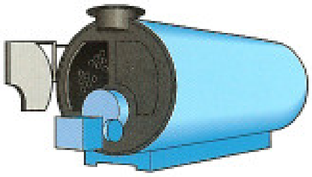




Low-Stress Design

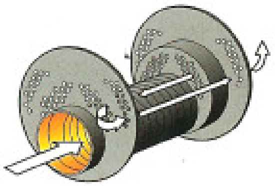
The offset furnace design reduces material stress and thermal NOx production through low heat release rates because of its larger furnace construction and an intermediate tube-sheet design which incorporates a fully submerged reversing chamber.

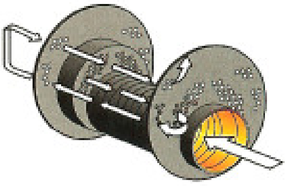




Easy Maintenance

Units include split front and rear doors with internal insulation supported by heavy duty pivoting hinge arrangements and protective steel covering. A level platform provided on top of boiler prevents casing damage during maintenance and inspection.





Water-Back Design

Completely submerged cylindrical rear combustion reversing chamber construction allows any scale formation from water-bound solids to drift to the bottom of the boiler, to be removed during blowdown maintenance procedures.

The Most Trusted Name in the Boiler Industry

York-Shipley Global provides one of the most diverse offering of packaged firetube boiler assemblies, together with ancillary boiler room equipment, for an integrated systems approach toward virtually any industrial process and comfort space heat application. In over 60 countries, York-Shipley Global products generate reliable steam and hot water service at sustained operating efficiencies, which meet or exceed established industry codes and standards, affording flexible solutions for your project specific application.

York-Shipley Global is recognized as a renowned world-class manufacturer of various packaged firetube boiler designs. Boiler capacities are available in numerous configurations from 20 to 2,200 BHP (196 to 21,566 kW), at standard design pressures of 15 to 300 PSIG (103 to 2,068 kPa), whether an application requires a packaged firetube boiler assembly in a dry-back or water-back configuration, employing 2-, 3- or 4-pass flue gas flow arrangements or a custom heat recovery steam generation assembly, in a single- to 4-pass design. York-Shipley Global versatility in design and manufacturing is respected and acknowledged as being of utmost quality, delivering high performance, efficiency and long life cycle service in industrial, commercial and institutional facilities worldwide.

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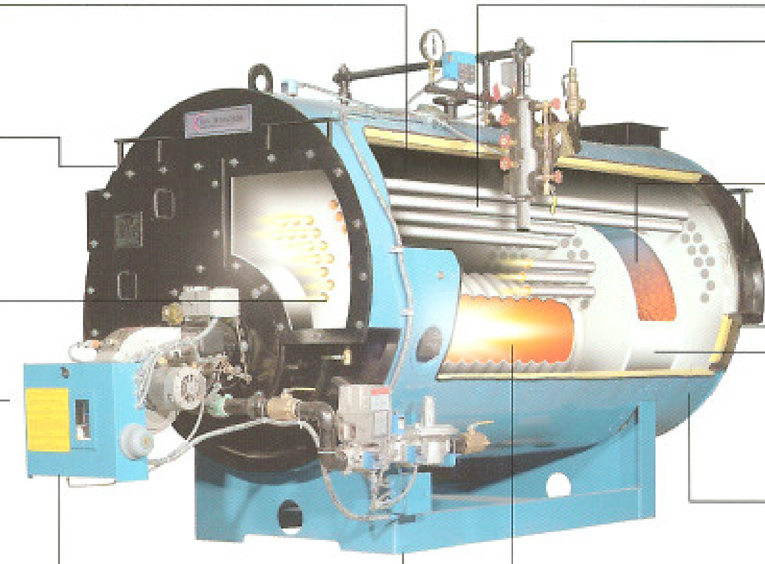
Low-Offset Furnace 3- and 4-Pass Water-Back Design



Low-Offset Design Features

Standard fuel burning equipment utilizes forced draft Natural Gas, LPG, Digester Gas and CS #2 - #6 Fuel Oil, available in combination fuel input arrangements and can be configured for high elevation and low emission performance applications.

Self cleaning cylindrical water-backed furnace flue gas reversing chamber decreases expansion capabilities virtually eliminating tube-sheet thermal stress conditions. Material utilized in refractory backed furnace access is minimized. Top longitudinal perpendicularly level service platform ensures safe and secure access, while bottom longitudinal inspection trough ensures unencumbered visual access.

York-Shipley Global packaged firetube boiler assemblies are designed and constructed in strict accordance with the most current accepted edition, quality control and material specification requirements of the ASME B&PV Code and registered with NBBPVI.

In addition to being available as a cULus Listed packaged boiler assembly, other available compliance standards include FM Global, GAP, ASME CSD-AFB, NFPA and construction suitable for use in NEMA classified indoor or outdoor non-hazardous locations.

Series 400L and 500L Standard Safety, Operation and Level Control Devices	**S3W/S4W S050 to S300**	**H3W/H4W S015**	**H3W/H4W W030 to W160**
Pressure Gauge	•	•	•
Temperature Gauge	N/A	N/A	•
Float-Type LWCO - Pump Control w/ Gauge Glass Assembly	•	•	N/A
Probe-Type LWCO - Manual Reset	•	•	•
High-Pressure Limit Control - Manual Reset	•	•	•†
Operating Pressure Limit Control	•	•	•†
Firing Rate Pressure Control	•	•	•†
Low-Fire Hold Pressure Control	•	•†	•†
Minimum Water Temperature Control	N/A	N/A	•†
ASME Safety Valve(s)	•	•	N/A
ASME Safety Relief Valve(s)	N/A	N/A	•
Single-Point Spring-Loaded Furnace Pressure Relief Device	•	•	•

† Temperature Limit Control

Series 400L
4SF-FSHS/BHP (.037m² - FSHS/kW)

Series 400L

Packaged firetube boiler assemblies incorporating three- and four-pass, low-offset furnace, water-back technology and rated at nominal 4SF-FSHS/BHP (.037m² - FSHS/kW). Capacities available from 25 to 1,100 BHP (245 to 10,783 kW) at standard design pressures of 15 to 300 PSIG (103 to 2,068 kPa).

Due to its economical and compact profile, the Y-SG Series 400L is particularly suited for continuous operation where stable process and space heating load demands are available. Moderate furnace heat release rates assure reduced vessel stress and thermal NOx production.

Y-SG Model 446L-S3W-35-S150
Utilizing Y-SG Model NV LP Fuel Burner

Project:
HOSPITAL de UPALA
San Jose, Costa Rica

Nomenclature

476L- — S3W- — 200- — S — 150- — ***

General Description:
Series 400, 76" Nominal Shell Diameter, Low-Offset Furnace, ASME SC I, 3-Pass Water-Back Construction, 200 BHP, Steam Boiler designed at 150 PSIG

Series 400L Nominal Diameter	Water-Back Construction 3-Pass	4-Pass	Nominal BHP	Generated Medium	MAWP PSIG	***
446L-	*3W	-	25, 35			
454L-	*3W	-	50, 60	ASME SC I / S= Steam	-050 to -300	
458L-	*3W	-	80, 90, 100			
463L-	*3W	*4W	110, 125, 150	ASME SC IV / S= Steam	-015	
476L-	*3W	*4W	175, 200, 225, 250			
484L-	*3W	*4W	300, 350, 400, 500			
4102L-	*3W	*4W	500, 550, 600, 700	ASME SC IV / W= Hot Water	-030 to -160 / 250°F Max	
4112L-	*3W	*4W	800, 900, 1000, 1100			

Note: * Designates ASME Code Construction:
S=ASME Section I
H=ASME Section IV

Note: *** May be additionally suffixed for option and/or specification identification

S
ASME

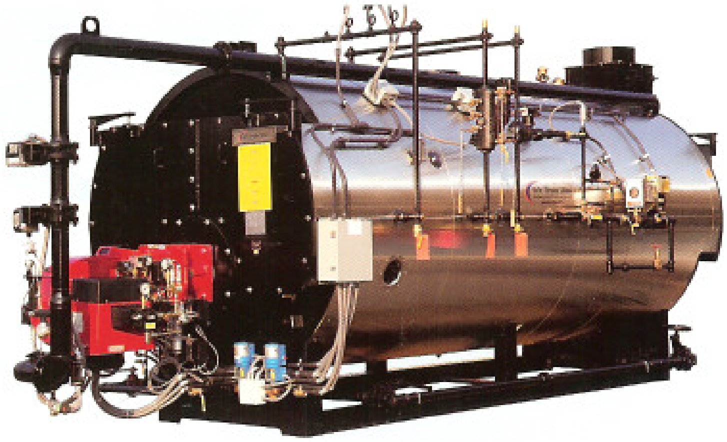
High pressure steam boilers are constructed in accordance with ASME Section I 'Rules for Construction of Power Boilers' at standard design pressures of 50 to 300 PSIG (344 to 2,068 kPa). For design pressure beyond standard offering, please consult factory.

Series 500L
5SF-FSHS/BHP (.046m² - FSHS/kW)

Series 500L

Packaged firetube boiler assemblies incorporating three- and four-pass, low-offset furnace, water-back technology and rated at nominal 5SF-FSHS/BHP (.046m² - FSHS/kW). Capacities available from 20 to 1,000 BHP (196 to 9,803 kW) at standard design pressures of 15 to 300 PSIG (103 to 2,068 kPa).

Due to large water content, liberal steam volume and water to steam interface disengaging area, the Y-SG Series 500L is particularly suited for continuous or intermittent process and space heating load demand operation. Low furnace heat release rates assure reduced vessel stress and thermal NOx production.



Y-SG Model 576L-H3W-200-S015
Utilizing FGR Low NOx Reduction System

Project:
NYC-DEP NORTH RIVER WPCP
New York, NY USA

Nomenclature

576L-	S3W-	200-	S	150-	***

General Description:
Series 500, 76" Nominal Shell Diameter, Low-Offset Furnace, ASME SC I, 3-Pass Water-Back Construction, 200 BHP, Steam Boiler designed at 150 PSIG

Series 500L Nominal Diameter	Water-Back Construction 3-Pass	4-Pass	Nominal BHP	Generated Medium	MAWP PSIG	***
546L-	*3W	-	20, 30			
554L-	*3W	-	40, 50	ASME SC I / S= Steam	-050 to -300	
558L-	*3W	-	60, 70, 80			
563L-	*3W	*4W	90, 100, 125	ASME SC IV / S= Steam	-015	
576L-	*3W	*4W	125, 150, 175, 200			
584L-	*3W	*4W	250, 300, 350, 400			
5102L-	*3W	*4W	400, 450, 500, 600	ASME SC IV / W= Hot Water	-030 to -160 / 250°F Max	
5112L-	*3W	*4W	700, 800, 900, 1000			

Note: * Designates ASME Code Construction:
S=ASME Section I
H=ASME Section IV

Note: *** May be additionally suffixed for option and/or specification identification

ASME

Low pressure steam and hot water boilers are constructed in accordance with ASME Section IV 'Rules for Construction of Heating Boilers' limited to design steam pressure of 15 PSIG (103 kPa) and hot water service of 30 to 160 PSIG (206 to 1,103 kPa) – maximum 250°F (121°C).

AESYS

Engineered Systems for Your World ®

Committed to delivering the highest level of product quality, customer service and satisfaction.

AESYS Technologies, LLC serves North American and International markets with York-Shipley Global packaged firetube boiler assemblies, ancillary boiler room equipment and pressure vessel products. The company also offers Jackson & Church HVAC Global heating, ventilating and air conditioning equipment, along with Custom Fabrication capabilities and Educational Services comprising boiler and welder training programs.

York-Shipley Global and Jackson & Church HVAC Global product brands are recognized for high performance, dependability and utmost quality, providing for long life-cycle service in industrial, commercial and institutional facilities worldwide.

AESYS' strength resides in its commitment and ability to deliver the highest level of product quality, customer service and satisfaction through its product brand offerings and extensive worldwide network of sales, service and regional management representatives.

Corporate headquarters and primary manufacturing facility is strategically located in South Central Pennsylvania, USA - at the crossroads of major highways, rail transportation systems and international shipping ports.

Visit AESYS at www.aesystech.com for more information.

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