



Williams & Davis Boilers

Ohio Special

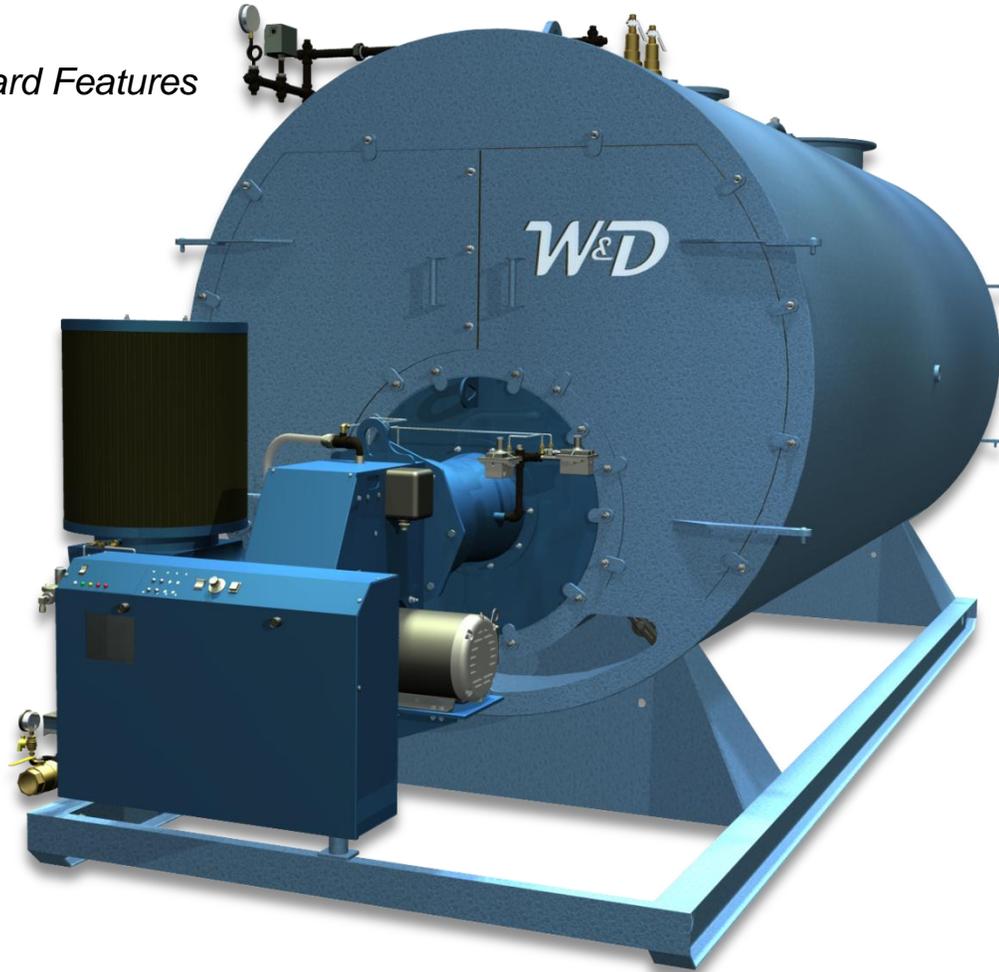


3-PASS WATER-BACK SCOTCH MARINE BOILER

**SIZES 100HP THROUGH 225HP
GAS, OIL OR COMBINATION BURNER
FIRETUBE HOT WATER & PRESSURE STEAM BOILERS**



30000H Standard Features



- Engineered and Built in Accordance With the Latest ASME Boiler Codes.
- McDonnell Miller Combination Pump Controller and Primary Low Water Cutoff.
- Completely Wired and Piped for Service Connections.
- Fully Modulating Burner Operation.
- Premium 2" Thick High-Density Insulation.
- "Off-the-Shelf" Industry Standard Parts Used Where Possible for Serviceability.
- Probe Type Auxiliary Low Water Cutoff.
- Epoxy Painted 20ga. Galvanized Steel Jacket.
- Solid State Honeywell Combination Pressure Control, Automatic Operating Control, and High Limit Manual Reset Control.

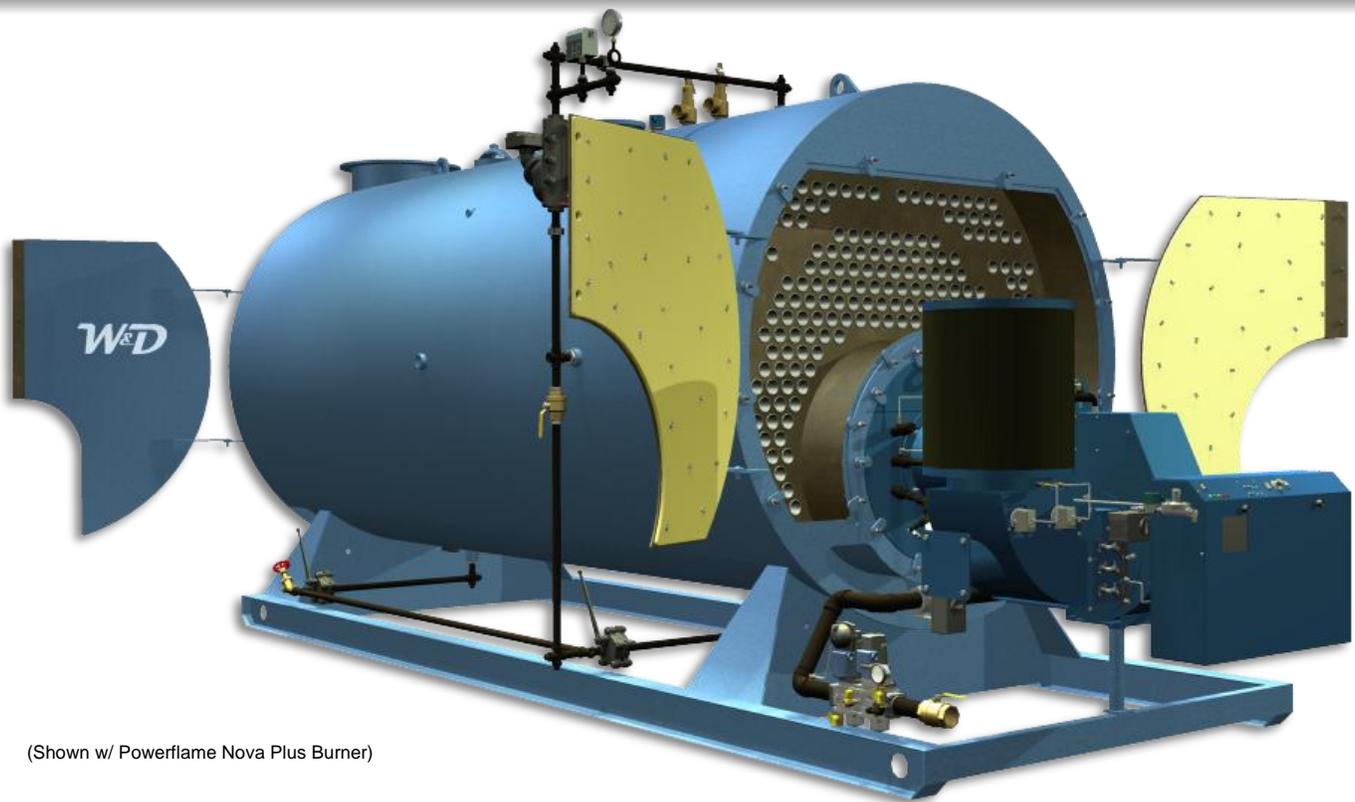
- Exceeds Industry Standards for Heating Surface Area for Exceptional Efficiency.
- Pressure Tested to 1.5X Operating Pressure. (225psi for 150psi Vessels)
- Flanged Exhaust Stack – Includes Additional Flange for Installation.
- Furnace Diameters and Combustion Area Volume Optimized For Lox NOx Operation.

Standard Available Options

- Customizable Controls and Connections
- Additional Hand Holes and Manway Access
- Davited Front and Rear Doors.
- Burner Make and Model
- O2 Trim System
- "Linkage-less" Modulation

The Williams & Davis 30000H fortifies our everlasting reputation for building the most rugged and serviceable scotch marine boiler in the industry. The 30000H further offers a high efficiency design built to maintain a balance between lower pressure drop and high gas velocities to transfer as much heat energy as possible to the process water instead of exhausting it through the stack or radiating heat into the boiler room. Through stringent and methodical building practices

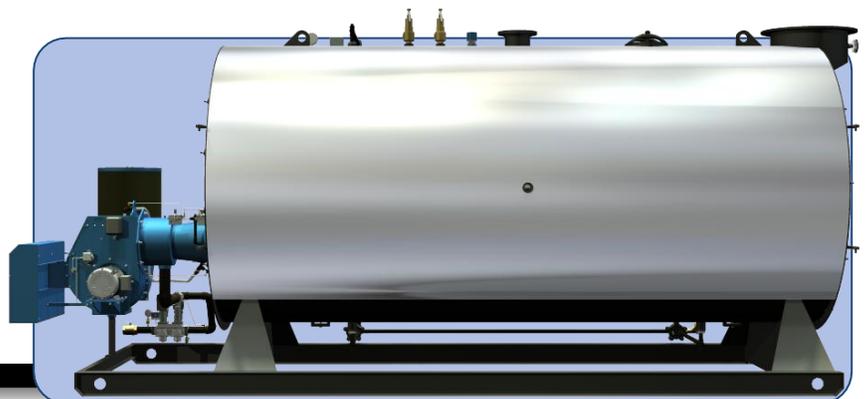
Williams & Davis guarantees each of our boilers will meet, and typically exceed, every ASME standard. All units are operationally tested and shipped as an integrated package when practical, ready for quick connection to utilities. As such, we demonstrate our confidence in our boilers by offering the industry's best pressure vessel warranty of 10 years (25 year available) with an approved water testing and treatment program.



(Shown w/ Powerflame Nova Plus Burner)

- *3 Pass Water-back*
- *Low Radiant Heat Losses*
- *Maximum 358 sqft. of Heating Surface*
- *High Efficiency*
- *Space Saving Design*

Stainless Steel Jacket Available >>





Flanged Exhaust Stack

All 3000OH boilers are equipped with a vertical flanged exhaust stack and are supplied with a matching installation flange. Flanges ease vent positioning during installation and provide more reliable exhaust seals during operation.

Burner

Burners are available to operate with natural gas, a variety of fuel oils, or a combination of gas and oil. NOx output levels may be specified as low as sub 7 PPM when burning natural gas and 70 PPM for burning #2 fuel oil when the fuel-bound nitrogen is at 0.02% or less. Control cabinet is typically mounted to the front of the burner. Side mounting or remote boiler room mounting is available upon request.

Safety Relief Valves

Wide hex on valve nozzle provides wrenching service clearance for easy installation and maintenance. Dual control rings offer easy adjustability for precise opening with minimum pre-open or simmer and exact blow-down control.

Tubes & Turbulators

All fire tubes are industry standard 2.5" outside diameter and 0.109" typ. wall thickness. The fire tubes are inserted with uniquely-shaped corrosion resistant alloy steel Turbulators designed to break up laminar flow and maximize heat transfer.

Pressure Controller

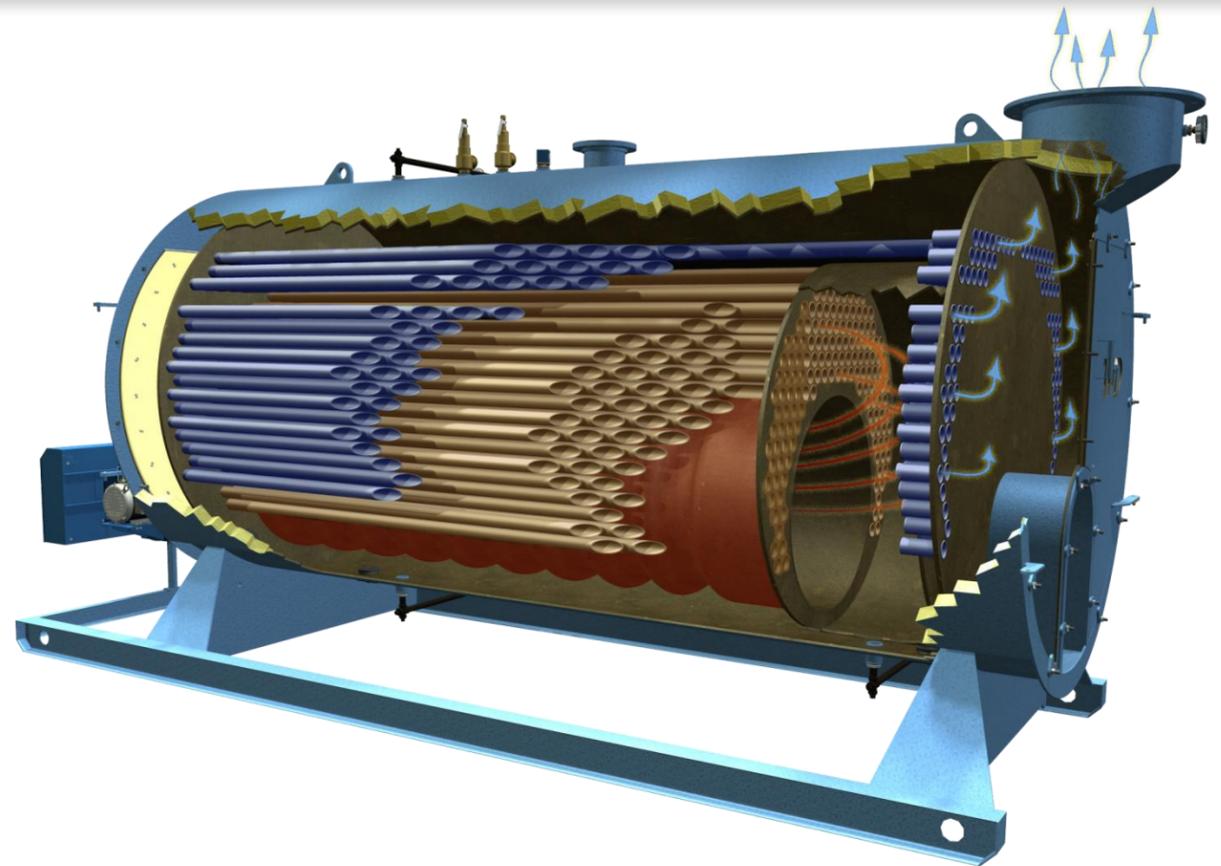
Standard Honeywell P7810 Pressuretrol provides solid state automatic operating control, automatic limit protection, manual reset limit protection, and 4-20ma modulating firing rate control for pressure systems up to 300 psi. Other pressure and temperature controllers are available upon request.

Structural Skid

The 3000OH's rugged structural steel skid provides stability during transport and installation. Wide beam flanges distribute weight evenly across the boiler room floor during flooded operation.

Low Water Controls

McDonnell Miller 157S float level system provides reliable feedwater pump control and primary low-level shut down. Probe type sensor and Warrick relay are used for reliable secondary shutdown and to provide code-required manual reset.



3000OH Heating Passes

First Pass - The burner fires at the entrance of the furnace, transferring up to 70% of the available heat energy into the water.

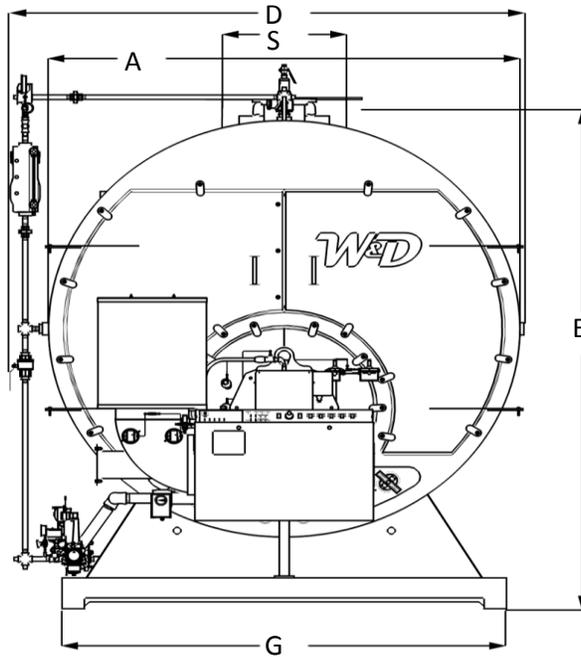
Second Pass - Hot flue gas travels from the water-backed turnaround chamber through the central tubes to the boilers heavily-insulated front turnaround chamber.

Third Pass - The flue gas is directed outward into the outermost tubes by the front turnaround chamber. The flue gas then travels the entire length of the pressure-vessel in its third pass, exiting the system through the rear-mounted exhaust stack.

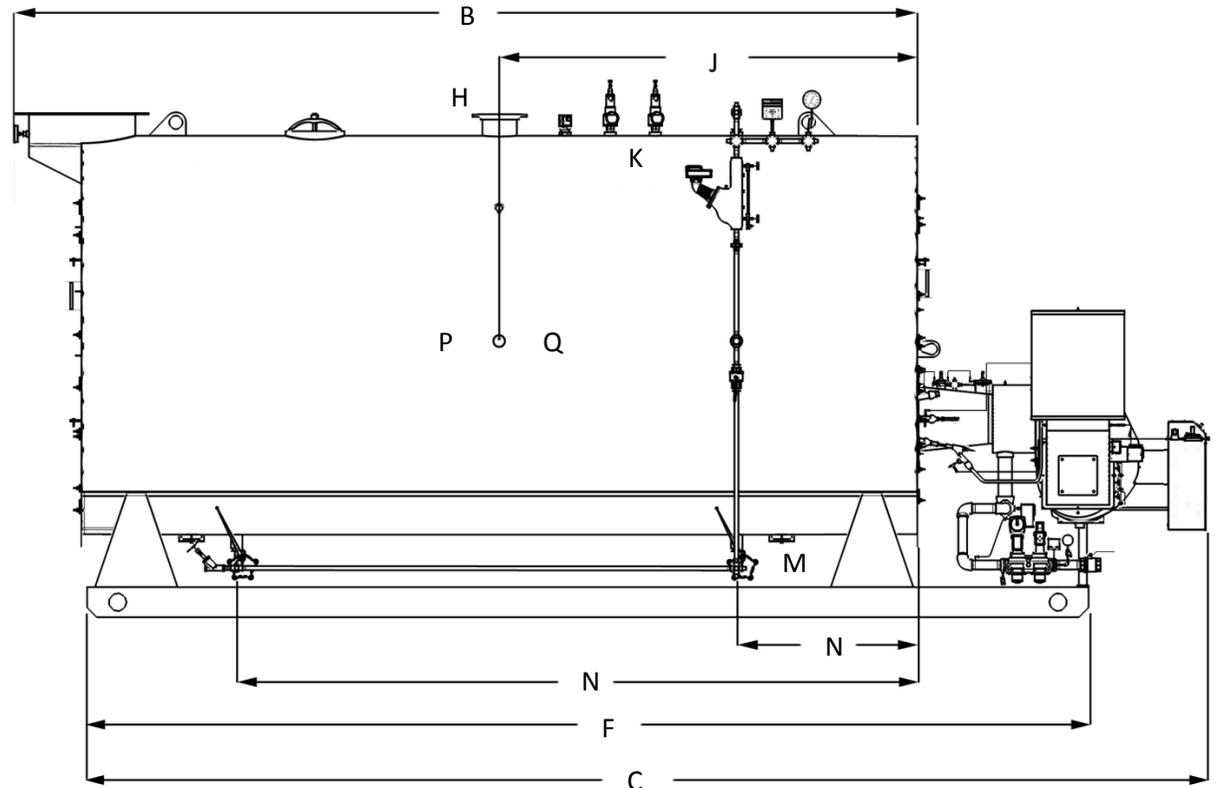


Series 30000H

100 - 225HP



(Front Side)



(Right Side)

A.S.M.E., stamped and inspected. Welded construction for pressure to 350 psig steam or 160 psig water. Inspected and registered with the National Board of Boiler & Pressure Vessel Inspector. All burners are UL & ULC listed



SPECIFICATIONS

MODEL		3100OH	3125OH	3150OH	3175OH	3200OH	3225OH
	BOILER HP	100	125	150	175	200	250
	HEATING SURFACE	ft ²	358	358	358	358	358
	STEAM OUTPUT (@212°F)	lbs/hr	3450	4312	5175	6037	8625
	GROSS OUTPUT	MBH	3348	4184	5021	5858	8369
	ENERGY INPUT	MBTU	4200	5250	6300	7350	10500
	BLOWER MOTOR	HP	3	3	5	5	10
	FIRING RATE - NATURAL GAS	CFH	4200	5250	6300	7350	10500
	FIRING RATE - LP GAS	GPH	45.9	57.3	68.8	80.3	114.7
	FIRING RATE - NO.2 FUEL OIL	GPH	30	37.5	45	53	75
	FIRING RATE - NO.5/6 OIL	GPH	28	35	42	49	70
A	DIAMETER - OUTER	in.	68	68	68	73	73
B	LENGTH - BOILER	in.	162	162	162	183	183
C	LENGTH - OVERALL	in.	205	205	205	234	234
D	WIDTH - OVERALL	in.	81	81	81	84	84
E	HEIGHT	in.	85	85	85	91	91
F	SKID LENGTH	in.	153	153	153	205	205
G	SKID WIDTH	in.	65	65	65	70	70
H	OUTLET SIZE - 150PSI	in.	2 1/2	3	3	4	4
	OUTLET SIZE - 15/30PSI	in.	8	8	8	8	8
J	OUTLET LOCATION	in.	69	69	72	82	75
K	RELIEF VALVE CONNECTION	NPT	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
M	BLOWDOWN CONNECTION	NPT	2	2	2	2	2
N	BLOWDOWN LOCATION	in.	21-108	29-109	31-109	31-132	31-151
P	FEEDWATER CONNECTION	NPT	1	1	1 1/2	1 1/2	2
Q	FEEDWATER LOCATION	in.	39	42	42	44	44
S	EXHAUST DIAMETER	in.	16	18	20	20	20
	TUBE REMOVAL DIST. - FRONT	in.	126	126	126	128	128
	TUBE REMOVAL DIST. - REAR	in.	123	123	123	126	126
	CRATE VOLUME	ft ³	905	905	905	1331	1331
	WATER CAPACITY - OPERATING	gal	681	681	681	915	915
	WATER CAPACITY - FLOODED	gal	793	793	793	1410	1410
	APP. SHIPPING WT. - 150PSI	lbs	10400	10400	12175	12175	12175
	APP. SHIPPING WT. - 15/30PSI	lbs	10400	10400	12175	12175	12175
MODEL		3100OH	3125OH	3150OH	3175OH	3200OH	3250OH





Your Authorized Williams & Davis Representative

P.O. Box 539
2044 S. I-45
Hutchins, Texas 75141

(800) 8-BOILER
(800) 826-4531

(972) 225-2356
(972) 225-5739 FAX

www.wdboiler.com
info@wdboiler.com