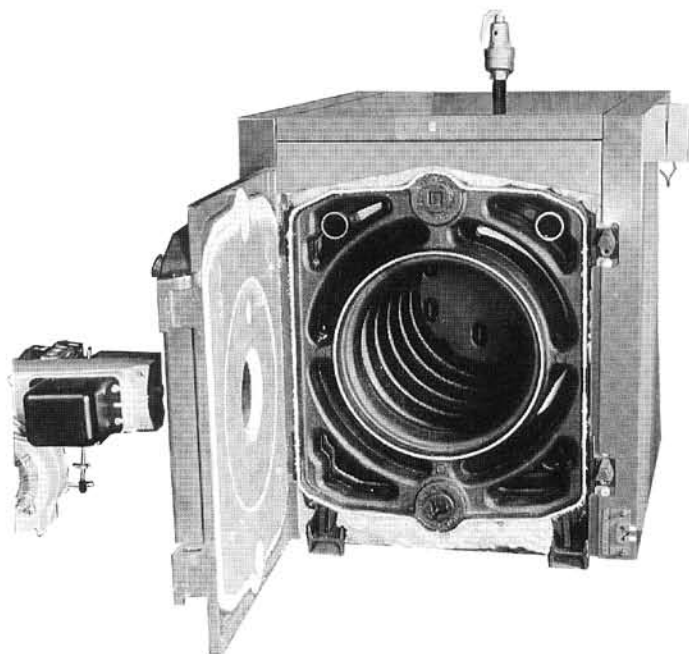
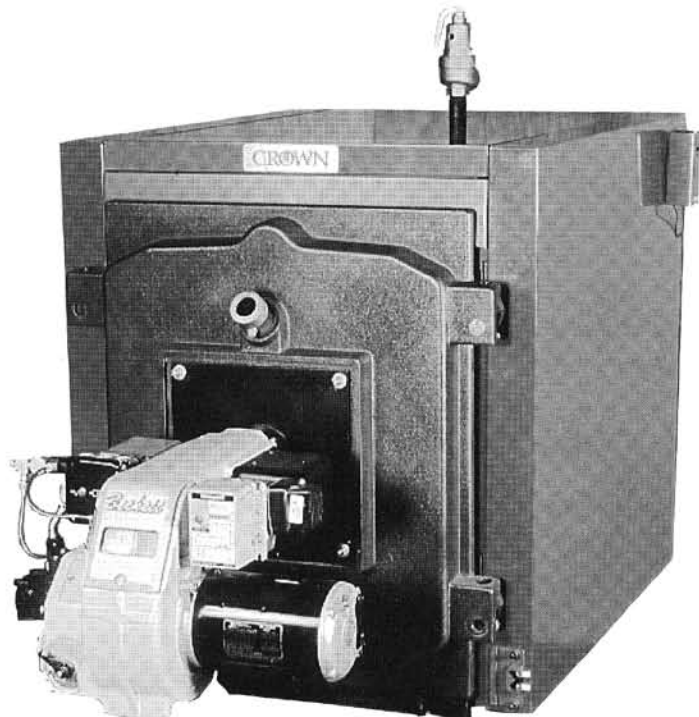


CROWN

THE CAST IRON 3 PASS SCOTCH MARINE BOILER



Complete Line of Cast Iron
3 Pass Scotch Marine Boilers

RESIDENTIAL • COMMERCIAL

FW

**SERIES
BOILER
BURNER UNITS**
For Light Oil
Gas - Light Oil
and Gas

PRESSURIZED FOR
FORCED DRAFT VENTING
OR CHIMNEY DRAFT

NET LOAD RANGE
HOT WATER:
309,000 TO 949,000
BTU/HR.

GROSS OUTPUT RANGE
HOT WATER:
10.6 BHP TO 32.6 BHP



Net Ratings are approved by
The Hydronics Institute



Built in accordance with the requirements of
the ASME Boiler and Pressure Vessel Code.

CROWN

“SCOTCH MARINE”

SERIES **FW**

HOT WATER BOILER

The Crown FW series is designed for applications requiring a high efficiency, compact, hydronic boiler. Cast iron sections are fully assembled. The rugged swing door exposes all heating surfaces for direct visual inspection and facilitates maintenance. Circular water backed furnace design requires no refractory combustion chamber. The supply manifold speeds installation and simplifies placement of controls.

The unique 3 pass scotch design delivers high operating efficiencies and its responsiveness is unmatched due to the relatively low mass and low water volume.

The FW series is designed for large residential, business and apartment applications requiring an efficient and responsive hydronic heating boiler. The compact size permits multi-boiler modular installation for larger heating loads.

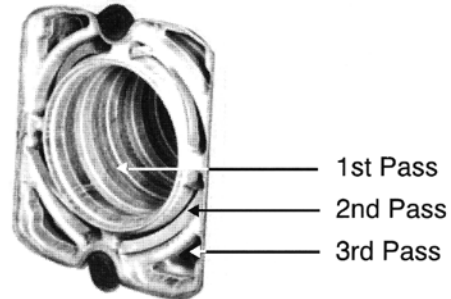
DESIGN FEATURES

- Cast Iron Boiler Sections — fully assembled.
- Cast Iron Push Nipples and woven glass rope between sections.
- Three-Pass Scotch Marine design: the flame travels through three passes which are under positive pressure, maximizing the heat transfer to boiler water and allowing very little chimney heat loss.
- Rear Flue Outlet with quadrant locking damper.
- Hinged Front Door: instant access to burner and firebox to minimize maintenance time.
- Stainless Steel Baffles are easily removed via front door.
- Exclusively designed for forced hot water circulation, which minimizes thermal shock.
- Powder Coated Textured Insulated Jacket.
- Forced Drafting requires only stub stack but may be chimney vented.
- 5 year Limited Warranty.

TECHNICAL DATA

The FW Series is constructed of three different types of sections: front, intermediate, and rear. The number of intermediate sections varies from 2 to 7, dependent on the boiler rating.

FW boilers are suitable for use with water working pressures up to 75 psi. and maximum operating temperature of 250° F.



Front Section

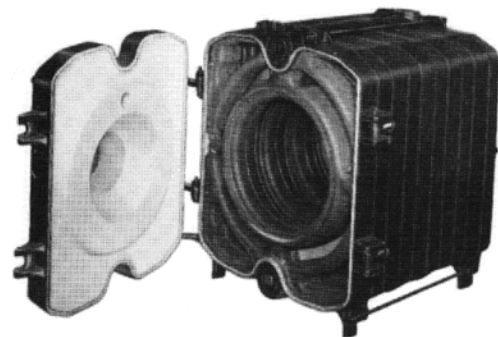
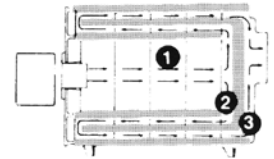
BOILER DESIGN

This unique and dependable 3-pass wet base principle is built on the “Scotch Marine” design.

Fuel economy is optimized by the completely cylindrical combustion chamber (1st pass).

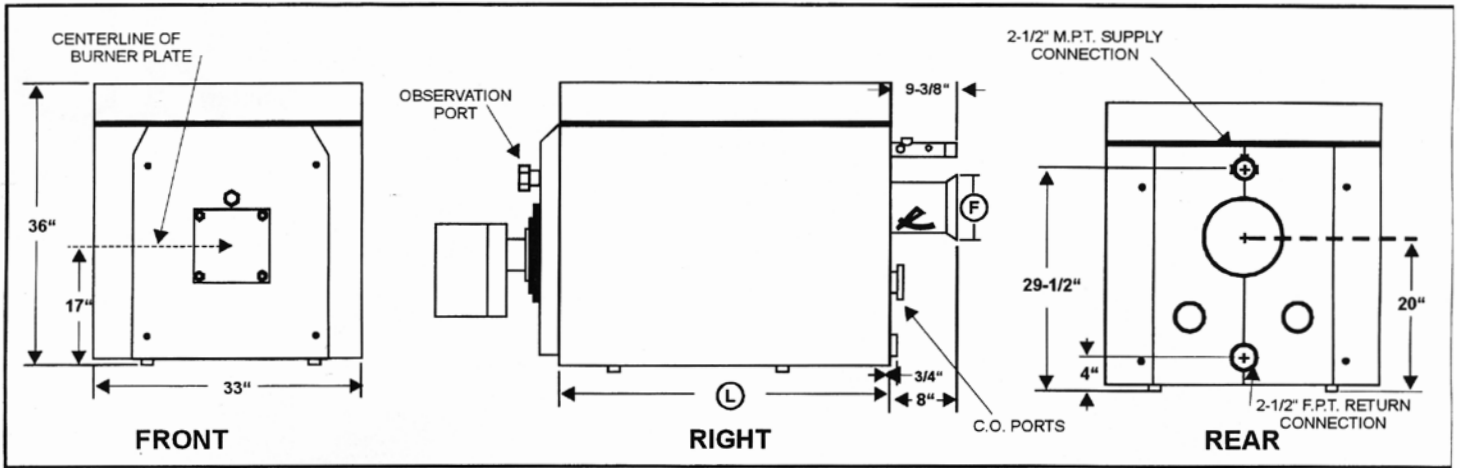
Flue gases are directed into four of the concentric annular passageways (2nd pass).

The gasses return to the front of the boiler, and enter the remaining passageways (3rd pass), which lead to rear flue outlet.



BARE BOILER

SERIES "FW" SPECIFICATIONS



RATINGS SPECIFICATIONS

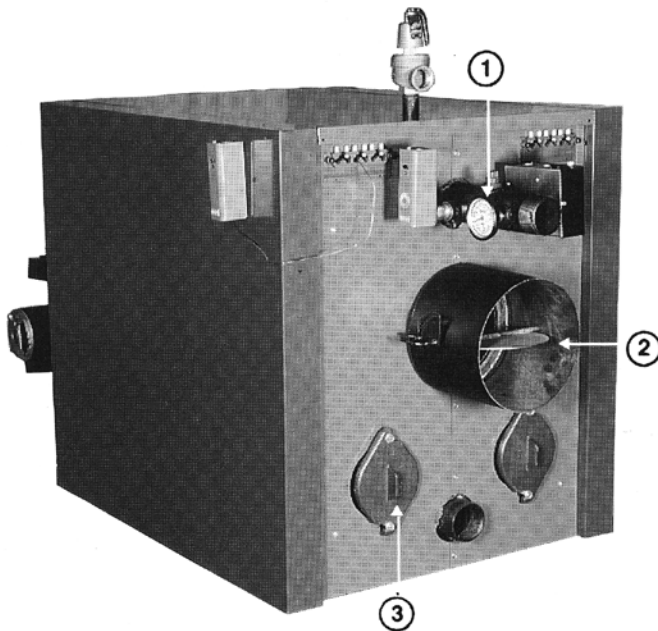
BOILER MODEL	I=B=R BURNER INPUT		I=B=R *GROSS OUTPUT		I=B=R **NET RATING WATER MBH	APPROX. DRY WEIGHT LBS.	VENT CONNECT. DIA. INCHES (F)	I=B=R VENT DIA. INCHES ***	DIM. INCHES (L)	WATER CONTENT GAL.	DRAFT LOSS INC. W.C.
	OIL GPH	GAS MBH	MBH	BHP							
FW-4	3.0	433	355	10.6	309	948	8	7	32	15.8	.16
FW-5	4.0	577	478	14.2	416	1124	8	7	37	19.0	.27
FW-6	5.0	722	600	17.9	522	1301	10	8	42	22.2	.39
FW-7	6.0	866	723	21.6	629	1477	10	9	47	25.4	.51
FW-8	7.5	1082	907	27.1	789	1654	10	10	52	28.5	.62
FW-9	9.0	1299	1091	32.6	949	1831	10	10	57	31.7	.75

- * Gross I=B=R ratings have been determined under the I=B=R provisions governing forced draft conditions. (0.10 inch W.C. positive pressure at the boiler flue gas outlet.)
- ** Net ratings are based on piping and pick-up allowance of 1.15.
- *** I=B=R Vent Diameter size is the pipe size used from boiler vent connector (F) to termination of stub stack; Max. Height 15' (for forced draft firing only).
For chimney venting consult National Fuel Gas Code.

BURNER DATA OPTIONS

BOILER MODEL	BURNER MOTOR			BURNER MODEL LIGHT OIL	BURNER MODEL GAS	BURNER MODEL GAS/OIL COMB.	GAS TRAIN SIZE	MIN. GAS PRESS. REQ. @ BURNER IN. W.C.
	MFG.	HP	VOLTAGE					
FW-4	BECKETT	1/3	120-1	CF-500	-	-	-	-
	POWER FLAME	1/3	120-1	C1-0	C1-G-10	C1-GO-10	1-1/4	5.5
FW-5	BECKETT	1/3	120-1	CF-800	-	-	-	-
	POWER FLAME	1/3	120-1	C1-0	C1-G-10	C1-GO-10	1-1/4	5.5
FW-6	BECKETT	1/3	120-1	CF-800	-	-	-	-
	POWER FLAME	1/3	120-1	C1-0	C1-G-10	C1-GO-10	1-1/4	5.5
FW-7	BECKETT	1/2	120-1	CF-1400	-	-	-	-
	POWER FLAME	1/3	120-1	C1-0	C-G-10	C1-GO-10	1-1/4	5.5
FW-8	BECKETT	1/2	120-1	CF-1400	-	-	-	-
	POWER FLAME	3/4	230-1	C2-OA	C2-G-15	C2-GO-15	1-1/2	7.0
FW-9	BECKETT	1/2	120-1	CF-2300	-	-	-	-
	POWER FLAME	3/4	230-1	C2-OA	C2-G-15	C2-GO-15	1-1/2	7.0

- 1) All burners are LO-HI-OFF except Beckett CF-500 and CF-800 which are ON-OFF operation.
- 2) Standard burner certification is U.L. special high risk insurance package. Available IRI, FIA, FM.
- 3) Burners are shipped in a separate crate. (When ordered).
- 4) Burner Blast Tube Insertion 4-3/4".

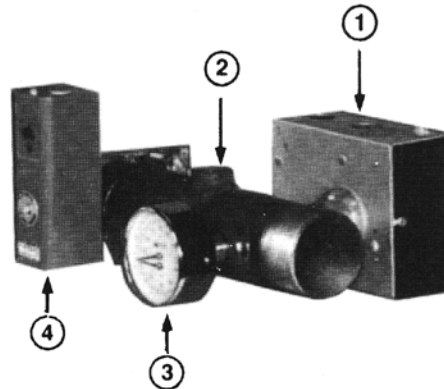


1. Supply Manifold
2. Quad Locking Damper
3. Clean Out Ports

SUPPLY MANIFOLD KEY

1. Probe Type LWCO
2. Modulating Aquastat Tapping
- * 3. Press./Temp Gauge
4. Manual Reset Limit

* Furnished with Boiler



Supply Manifold Speeds Installation and Allows Convenient Maintenance.

SUGGESTED SPECIFICATION FOR CROWN FW SERIES BOILERS

The contractor shall furnish and install, as indicated on plans, complete and ready for operation: () Crown 3 pass, wet back, scotch marine, cast iron sectional boilers with a gross IBR output _____ BTU/HR. All boiler sections shall be water cooled. Water section thickness shall be computer controlled and checked by ultrasonic measuring equipment techniques during manufacture. The boiler shall be constructed in accordance with the provisions of Section IV of the ASME boiler and Pressure Vessel Code and shall be stamped with the required ASME Symbol. Cast iron conical nipples MUST be used to assemble boiler, the use of composition gaskets to seal waterways between boiler sections is prohibited. Boilers shall be ASME approved for operation at _____ pounds water working pressure. Boiler sections shall be individually tested at the manufacturer's plant. Boiler assembly shall be in strict accordance with the manufacturer's installation instructions using sealing rope between the sections to insure against flue gas leakage. Boiler shall be assembled with draw rods. Boiler shall have a pressurized furnace and flue gas passage design for forced draft firing and forced draft venting. Boiler shall be complete with insulated jacket. Boilers shall be complete with 2 1/2" discharge manifold assembly which shall contain the following: (1) Manual reset high limit control Honeywell L4006E, (1) Low Water Cutoff, (1) Combination Temperature Pressure Gauge, Pressure Relief Valve and L4008A high limit control.

The front door of the boiler shall be hinged with hold down lugs provided by the boiler manufacturer. The boiler shall be capable of being hinged from either side and be capable of being changed in the field by the installing contractor. When the front door is opened it shall expose all heating surfaces of the boiler for inspection and cleaning. Front door shall be fully gasketed with non-asbestos type fiber rope. Boiler shall be supplied with stainless steel baffles designed by the boiler manufacturer.

Boiler shall be covered by manufacturer's 5 year limited warranty: During the first year all components of the boiler shall be fully warranted, during the 2nd through 5th years the cast iron sections shall be covered by the manufacturer's limited warranty.

STANDARD EQUIPMENT

- Boiler Sections Shipped, Fully Assembled
- Refractory Insulated Hinged Front Door with Sight Glass
- Powder Coated Textured Insulated Jacket
- Combination Temperature-Pressure Gauge
- ASME Relief Valve
- High Limit Control (L4008A with remote capillary)
- Smoke Outlet Transition Piece/Quad. Locking Damper
- Supply Manifold (For Mounting Controls)

OPTIONAL EQUIPMENT

- Beckett Burners
- Power Flame Burners
- LWCO M-M No. 63 Float Type
- LWCO Probe Type
- L4006E Manual Reset H.L.

CROWN Boiler

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