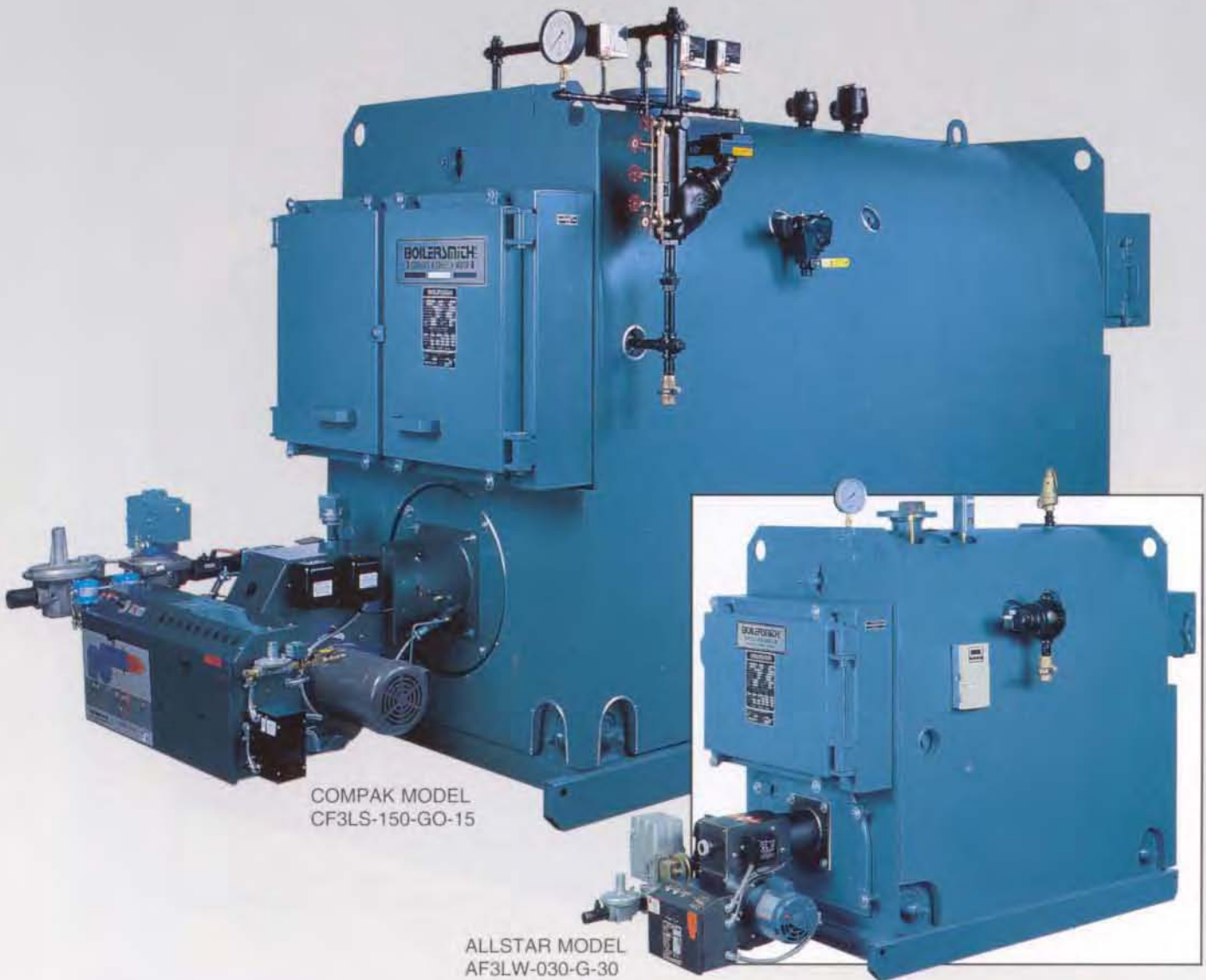


BOILERSMITH LTD

PREMIUM FIREBOX – FIRETUBE BOILERS BY
CANADA'S BOILER MAKER



COMPAK MODEL
CF3LS-150-GO-15

ALLSTAR MODEL
AF3LW-030-G-30

FEATURING

**AF3 ALLSTAR
SERIES**

**ADVANCED
NARROW DESIGN**

AND

**CF3 COMPAK
SERIES**

**PACKAGED
FIRETUBE DESIGN**

WITH GENERAL INFORMATION
ALSO PERTINENT TO EF3/BF3/VF3

EXCELLENT EFFICIENCY

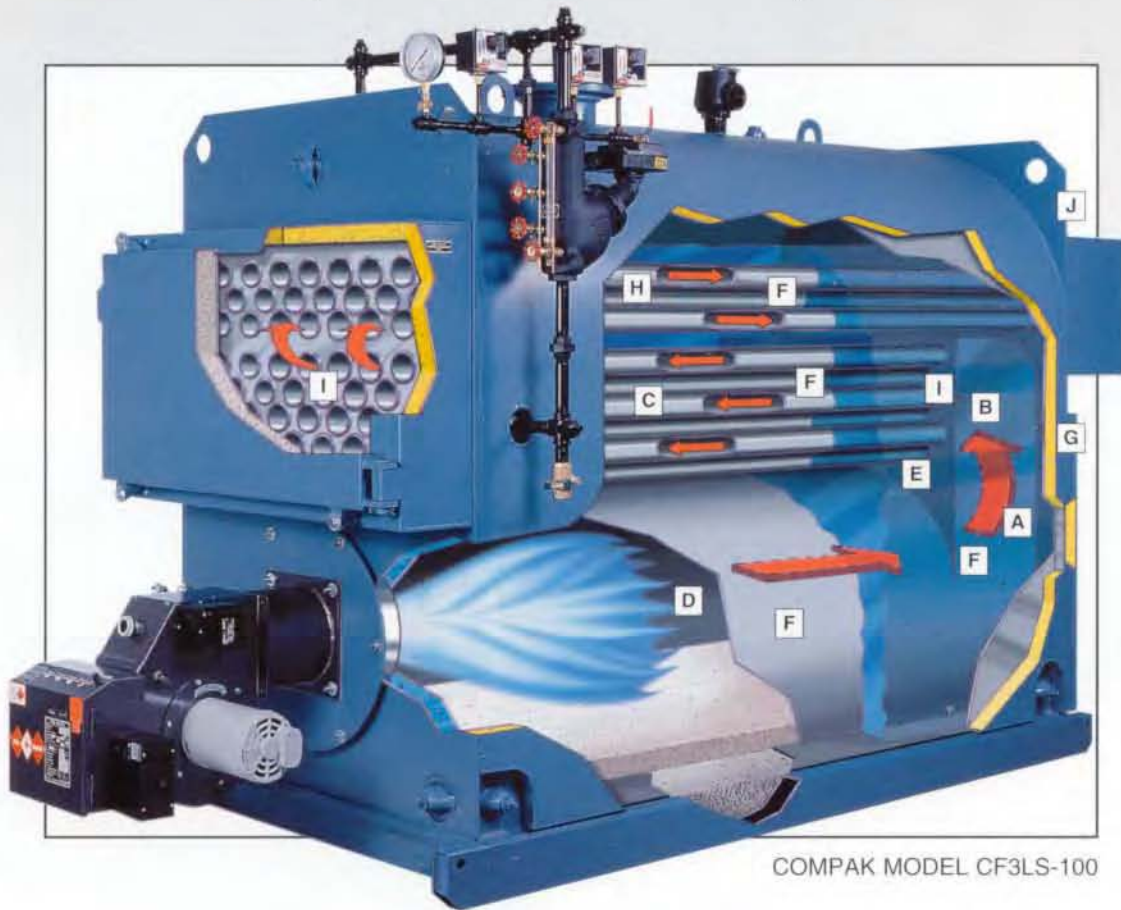
- Surpasses watertube/low volume/coiltube
- Surpasses cast iron/copper fin/vertical
- Matches all firetubes
- Ranges from 83 to 88%

ENGINEERED TO LAST

- Thicker, better steel and bigger stay-rod
- 100% water-cooled, no fins
- Refined by decades of field application
- PROVEN long life

GAS OR OIL FLEXIBILITY

- Forced draft firing yields higher efficiency
- Advanced world-class burners
- CF3 excels with oil fuel
- Adaptable to many makes
- Can reuse customer burners



COMPAK MODEL CF3LS-100

FOR THE ENVIRONMENT

- Inherently low NOx and CO
- Extra low NOx models available
- NOT designed as throw-away
- Draft hoods avoided
- Many sizes to match loads and cut fuel use
- Two-stage or fully modulated firing lowers stack losses

EXCEPTIONAL DESIGN

- **A** Wetback runs cooler and enhances efficiency
- **B** Maintenance-free wetback
- **C** Less costly straight tubes
- **D** Large, water-cooled furnace for higher efficiency and cleaner combustion
- **E** Cooler, long-life tubesheets

ADDITIONAL FEATURES

- **F** Ample heating surface
- **G** No dry back radiant loss or flue gas short circuit leakage
- **H** Optimal number of passes, three
- **I** Rolled and BEADED tubes
- **J** Smaller vents – no barometric heat loss

15 # STEAM ◀ **VERSATILITY** ▶ **WATER 30 #**
WITH GENEROUS STEAM SPACE HIGHER PRESSURE AVAILABLE

UNEQUALLED EXPERIENCE

- 100-year heritage
- Engineering ability to custom design
- Hundreds of designs, thousands of models
- Experienced designers

BUILT WITH PRIDE

- High quality materials
- Excellence in design
- Crafted with care
- Skilled service technicians and knowledgeable product reps
- Carefully tested

LOWER PARTS COSTS

- Standard frame motor
- Standard flame safeguard controls
- North American components
- Minimal routine parts consumption



COMPAK MODEL CF3LW-060-GO-30

EASIER TO SERVICE

- 1 Complete accessibility to fireside and waterside
- 2 Large handhole cleanouts
- 3 Hinged front door(s)
- 4 Long-life gaskets
- 5 Fuel and power lines don't interfere

SIMPLER TO REPAIR

- 6 No welded tubes
- 7 No special watertubes or cast iron sections
- 8 Easily repaired steel construction
- 9 No special refractory components
- 10 Quickly dismantled

COMPLETE INFORMATION

- Comprehensive descriptive literature
- Individual dimensional arrangement drawings available
- Detailed specifications
- Plant tours and demo units
- User lists and display units
- Web site

THE AF3 ALLSTAR SERIES FEATURES AN ADVANCED SPACE-SAVING NARROW WIDTH DESIGN USING OUR EXTRA EFFICIENT HIGH OUTPUT FIRETUBE CONFIGURATION



ALLSTAR MODEL AF3LS-060-GO-15 with gas train and trim removed.

In general, firebox boilers use much less floor space than packaged scotch (round) boilers. Boilersmith's unique Allstar Series boiler was designed to allow access through narrow doors and to take up even less floor space in the boiler room. All of the strengths of the firebox design are retained and with the use of extra efficient 1.5 inch diameter tubes, no performance compromise is made.

The Allstar is a superior alternative to the cast iron sectional boilers, breakdown kit water tube boilers and finned water tube boilers sometimes used in tight quarters. Our steel fire tube construction maximizes serviceability and repairability. Hard to source special cast sections and expensive serpentine tubes are not used by Boilersmith Ltd., nor is the throwaway construction of finned water tube boilers.

Our Allstar Series boiler is better built, more fuel efficient, easier to service and much easier to fix. This exceptional design has now been proven in the field for over 10 years.

(See bulletin 1AF2 for extra narrow models up to 35 HP.)

OPTIONS AND ALTERNATIVES

- We specialize in customizing your boiler. The Compak or Allstar can be equipped to suit a wide variety of installations and specifications. We will help direct you to the most cost-effective models and features.
- Low NOx and CO₂ generation models are available.



Above: Rear flue gas boxes are provided with flue gas thermometers and easily removed tube inspection ports. (See bulletin 1CF3 for an illustration of the inspection port used on smaller boilers. Also see front cover.)



Above: To aid fire side inspection and service, a 3 bolt quick-access door is standard on all models over 35 HP. All hot water models over 100 HP use the split hot water return shown here for superior circulation. Smaller models have a single return. (See back cover.)



Above: Boiler shells are insulated with 2 inches of high R-value mineral wool insulation. The unique jacket material is attractive, embossed, cold rolled steel. Our two-step paint process includes a true high temperature colour coat and a true high temperature clearcoat.

The upper handhole shown is located and oriented to give a better view of the second pass tubesheet.

**QUICKER ACCESS
SIMPLER SERVICE**

**BOILERSMITH FIREBOX BOILERS
HAVE MANY DESIGN ADVANTAGES**



Top left: A 12" x 16" manhole is provided on the top of boilers, on standard models over 250 HP. This photo shows the manhole cover, bridges, bolts and gasket in place.



Below: This photo showing the top of a 400 HP model before the insulation and jacket are installed illustrates the forged steel outlet flange, manhole, relief valve connections, other top connections and the heavy lifting lugs welded to the top of the boiler.

Also note that the connections for hot water controls are placed where they belong, directly adjacent to the hot water supply/outlet nozzle.



Above: The manhole cover is shown here removed, providing an excellent view of the third pass tubes.

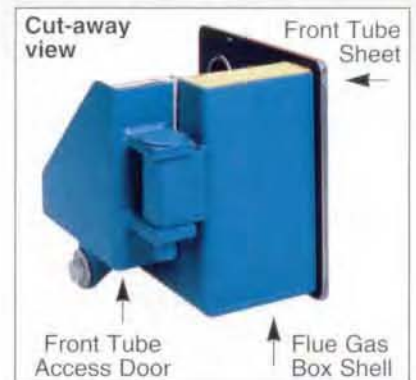
All threaded connections are heavy walled, 3000 #, forged steel couplings welded into the boiler shell.



Above: The front flue gas box door carries 3 inches of insulation. The gasket is held in a convenient channel. The gasket is selected for repeated use and rare replacement.

Below: The front flue gas box shell is of double walled construction with 2 inches of insulation sandwiched between the two heavy gauge shells. The use of these stiff flue gas box shells and equally stiff door construction, combined with heavy duty 5/8 NC bolts, reduces the number of closure fasteners, speeding service and inspection. Male studs with their unprotected threads are avoided.

An ingeniously designed floating hinge eliminates the possibility of the hinge interfering with the proper sealing of the door gasket. The door cannot become "hinge-bound."



Right: This 150 HP CF3 is shown open for fireside and waterside inspection. Models 150 HP and over have double front tube access doors, a larger rear flue gas box inspection port, and insulation on the boiler front below the flue gas box.

The provision of waterside handholes on Boilersmith boilers far exceeds ASME Code requirements in both size and number. Also shown here is our optional bright jacket trim.

COMPAK MODEL
CF3LW-150-GO-30





COMPAK MODEL CF3LW-150-GO-30

Above: On models so equipped, the double front tube access doors seal against a reinforced bar at the centre of the flue gas box. The centre bar can be conveniently removed as shown here.

It is not necessary to disconnect power or fuel lines to open the doors.



MODEL CF3/EF3-100

Bottom left: On models over 80 HP the burner is mounted through a water cooled front furnace wall. Smaller sizes have a dry front (see page 3) and a refractory lined burner plate with long life, 6 inch twin layer refractory. (Bulletin 1CF3 has illustrative photos.)

The firebox boiler is of strong, single component construction. The multitude of waterside and fireside gaskets found in cast iron boilers are totally absent. Such gaskets can leak water or combustion products.

The breakdown kit construction of serpentine water tube boilers is also avoided. With a Boilersmith firebox boiler there is no need to remove piping, controls, jacket, outer insulation, inner shroud, gaskets and inner insulation in order to accomplish tube service or replacement – just flip open our handy access doors.

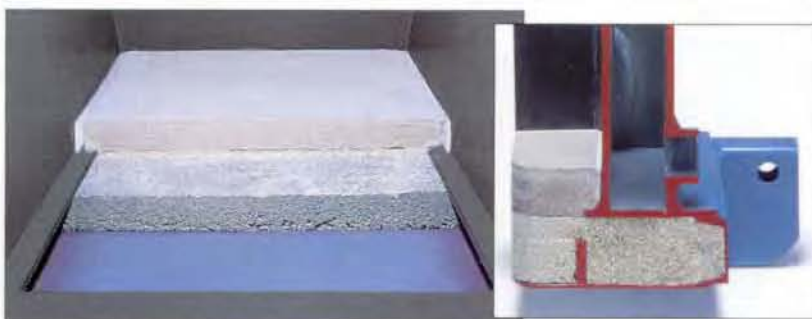
During delivery, unloading and installation, our firebox boilers can be lifted by the top lugs (eyes on smaller units) or via the heavy skid. This can be done without fear of damage to delicate internal gaskets and seals found in less robust boiler types.



Above: The large 3" x 4" handhole plates used for waterside inspection and cleaning have offset studs. This makes installation and removal much easier.



Above: The skid has recently been upgraded to 6 inch high rectangular tubing. This tubing is extended at both ends to allow the inclusion of jacking holes that facilitate placement in the boiler room.



Above and right: Our energy conserving floor construction. The lower refractory layer is a highly effective insulating material. In the above photo the floor pan is tinted blue for illustrative purposes.

The top refractory layer provides a hard protective covering that has excellent resistance to both heat and wear. Also shown are the thick bars that reinforce the heavy gauge floor pan.

**OUR FIREBOX BOILERS
EXCEL WITH ALL FUELS**

EF3 / BF3 / VF3 SERIES

FOR SOLID FUEL FIRING



ENVOY MODEL EF3LS-0750SF-XW-15

Above and right: This EF3 Envoy Series boiler is set up for mating to an automatically fired wood waste firing system.

Hinged furnace access doors are available, shown open above and closed to the right. A double pivot design assures a tight seal. Typically, such a boiler has an open bottom and sits on top of a combustion cell.

Right: A view looking in through a rear access door. The internal edges of the mud ring are visible along with the boiler's open bottom.



AUTOMATICALLY FIRED

Our firebox boilers are used in automatically fired wood waste systems all over North America.

Special features for these solid fuel systems include:

- Open furnace bottom (no base or refractory floor)
- Hinged furnace access door; front, rear or side; 16- or 20-inch diameter
- Custom rear flue gas box outlet
- Models with 2-1/2 or 3 inch tubes (2 inch tubes are also available)
- A variety of other customer-specified options are available

SELECTION GUIDE:

LOW PRESSURE STEAM OR HOT WATER

- EF3 Envoy, 2" tubes, 77 to 992 sq. ft. H.S.
- EF3 Envoy, 2-1/2" tubes, 1000 to 4500 sq. ft. H.S.
- BF3 Baron, 2-1/2" tubes, 82 to 1000 sq. ft., H.S.
- VF3 Victor, 3" tubes, 100 to 4000 sq. ft., H.S.

*Custom models available to suit customer.
HF3 High Pressure Models also available.*



BARON MODEL BF3LW-25/7-HW-30

HAND FIRED

Above: Where local regulations permit, the Baron or Victor Series can be equipped with a refractory lined base, grates, fire door and I.D. fan, all suitable for firing with slab or cord wood. Our custom-built DUK II series is also available for smaller jobs.

OUR PRODUCTS ARE CONTINUALLY IMPROVED

COMPAK MODEL
CF3LW-040-G-30



MATERIAL SPECIFICATIONS

- SA285-C boiler plate (alternate SA516-70)
- To ASME, CSA B51, ULC
- 1-1/2 inch tubes, SA178A, AF3 Series
- 2 inch tubes, SA178A, CF3 Series
- 2-1/2 inch tubes, SA178A, CF3 Series over 250 HP
- 3000# forged threaded NPT connections up to 3 inch
- 150# RFS flanges over 3 inch
- 1 inch minimum diameter stay rods
- 3 x 4 handhole openings
- 5 sq. ft. heating surface per boiler HP, on CF3
- High output heating surface, on AF3
- Heavy 10 GA and 3/16 flue boxes

MODEL DESIGNATION

CF	3	LW	- 050	- G	- 30
CF - Compak Series	3 - Pass	LW - Low Pressure Water	Boiler Horsepower	G - Oil Fuel G - Gas Fuel GO - Gas/Oil P - Propane	Design Pressure
AF - Allstar Series		LS - Low Pressure Steam			

EXTRA HEAVY-DUTY CONSTRUCTION

FACTORY TEST-FIRED

- Report included in manual

FACTORY WIRED

- As shown above
- Strip for door entry
- Trim can face either side

EASY REAR ENTRY

- 16 inch access door standard over 35 HP

FROM CANADA'S MOST COMPLETE BOILER LINE



COMPAK MODEL
CF3LS-100-G-15

COMPARE THEN SELECT BOILERSMITH

BOILERSMITH
CANADA'S BOILER MAKER

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