

ICB

**Three-Pass Intercooled Back
Steam & Hot Water
Firetube Boiler
100-800 HP**



Model ICB

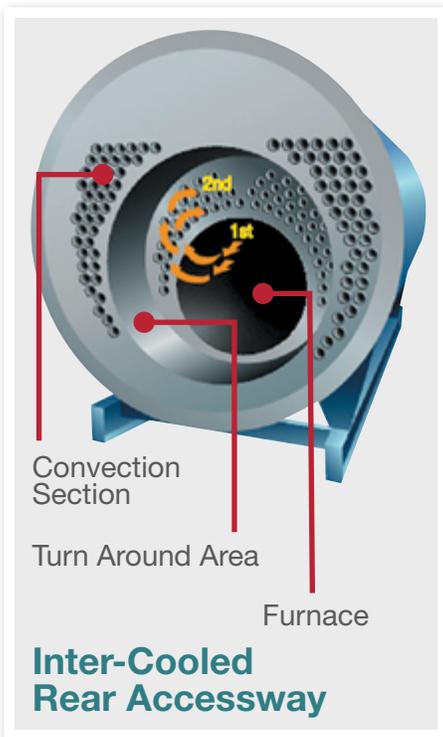
Design Flexibility and Ease of Maintenance

Our Model ICB firetube boiler is an intercooled back model firetube boiler available in a 3-pass design. It's a boiler package that offers flexible design, high fuel to steam/water efficiency, low emissions, unmatched ease of serviceability and maintenance.

100 – 800 HP

- ▶ 3-pass, intercooled back configuration
- ▶ High and low pressure steam and hot water
- ▶ Low NOx options (60 to 30 PPM*) precisely matching your requirements
- ▶ Optional upgrades such as Hawk, remote monitoring, parallel positioning, O₂ monitoring & trim, VSD and compliance to codes and insurance requirements are available.

*Based on 0.02% fuel bound nitrogen.



Intercooled Back Configuration

The Cleaver-Brooks ICB firetube boiler is a 3-pass, intercooled back design, which is offered in (12) sizes ranging from 100 – 800 HP, low- and high-pressure steam and hot water, burning natural gas, # 2 oil or combination. With the ProFire® packaged burner and larger furnace, the model ICB optimizes radiant heat transfer, maintaining high efficiencies, lowering emissions, easing maintenance, all while conserving valuable floor space.

Key Features Include:

Excellent Efficiency

High fuel to steam/water efficiencies are again attained with this model due to precise matching of the burner with the heat exchanging furnace and convection section within the pressure vessel and, the recuperating rear access way.

Lower Emissions

The ICB offers a NOx reduction package for 60 or 30 PPM when burning natural gas. Consult the factory for reductions below these levels.



Real Difference Is Found Inside

Burner and Furnace Compatibility

Optimum combustion and heat transfer begins with the fuel and air delivery system and progresses to the firing head where the proper amounts of fuel and air are united to form a combustible mix resulting in the highest combustion efficiency and lowest emissions. Compatibility of the burner and furnace is therefore critical.

Our Highly Engineered Boiler Offerings Start with CFD Modeling

- ▶ Highly efficient fuel burning packages with excellent turndown on gas and #2 oil
- ▶ Cam trim with 14 point adjustment range for accurate and consistent air/fuel ratios; parallel positioning option is available for optimal control.
- ▶ Low emission options ranging from 60 to 30 PPM on natural gas and 90 PPM on #2 oil
- ▶ Ease of setup and adjustment of the fuel/air and Flue Gas Recirculation when applicable
- ▶ Easy access to burner components with swing out burner assembly
- ▶ Optimum safety with state of the art burner management and limiting control schemes

Ease of Maintenance:

The ICB is unmatched when it comes to serviceability and ease of maintenance. The rear of the boiler includes a davited door which swings completely out of the way to expose a large rear access way (also davited) which swings out exposing the generous turnaround area and second pass tubes.

The result is FULL ACCESSIBILITY for inspecting, cleaning and repairing without concern for “confined space entry.” The C-B ProFire burner with hinged windbox also facilitates maintenance by not having to remove the burner from the boiler.



When specifying, buying or replacing your next boiler, remember the Cleaver-Brooks ICB advantages

- ▶ Highly engineered packages matching burner and boiler for optimum performance
- ▶ Provides application flexibility with multiple fuel firing
- ▶ Size range from 100 – 800 horsepower
- ▶ Hot water, low- or high-pressure steam
- ▶ Low emissions to down to 30 PPM NOx on natural gas and 90 PPM #2 oil
- ▶ Flexible options
- ▶ Maximum safety
- ▶ Single source, single responsibility and backed up by an extraordinary sales and service distribution network that provides 24/7 service and parts all around the world!

Every piece of Cleaver-Brooks equipment is developed and manufactured with these cornerstones in mind.



Safety



Efficiency



Reliability



Sustainability



The power of total integration.

- Boilers
- Burners
- Controls
- Heat Recovery
- Water Systems
- Exhaust
- Rental Boilers
- Modular Skids
- Remote Monitoring
- Preventive Maintenance
- Field Service and Projects
- Installation
- Spare Parts Programs
- Commissioning
- Service Agreements
- E-commerce
- Retrofit and Renewal
- Risk Management
- Operational Optimization
- Education and Training
- Design, Application Assistance
- Webinars, Virtual Learning
- Thought Leadership
- Data/Analysis/Insights
- Engineering Support
- Best Practices
- Certified Sales, Service Professionals

Cleaver-Brooks is the only company able to deliver integrated equipment, full lifecycle services, and expert consultation to all our customers. These three competencies work together as one integrated solution, the sum of which is greater than its parts.

To find a Cleaver-Brooks representative near you, visit cleaverbrooks.com/rebs.



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