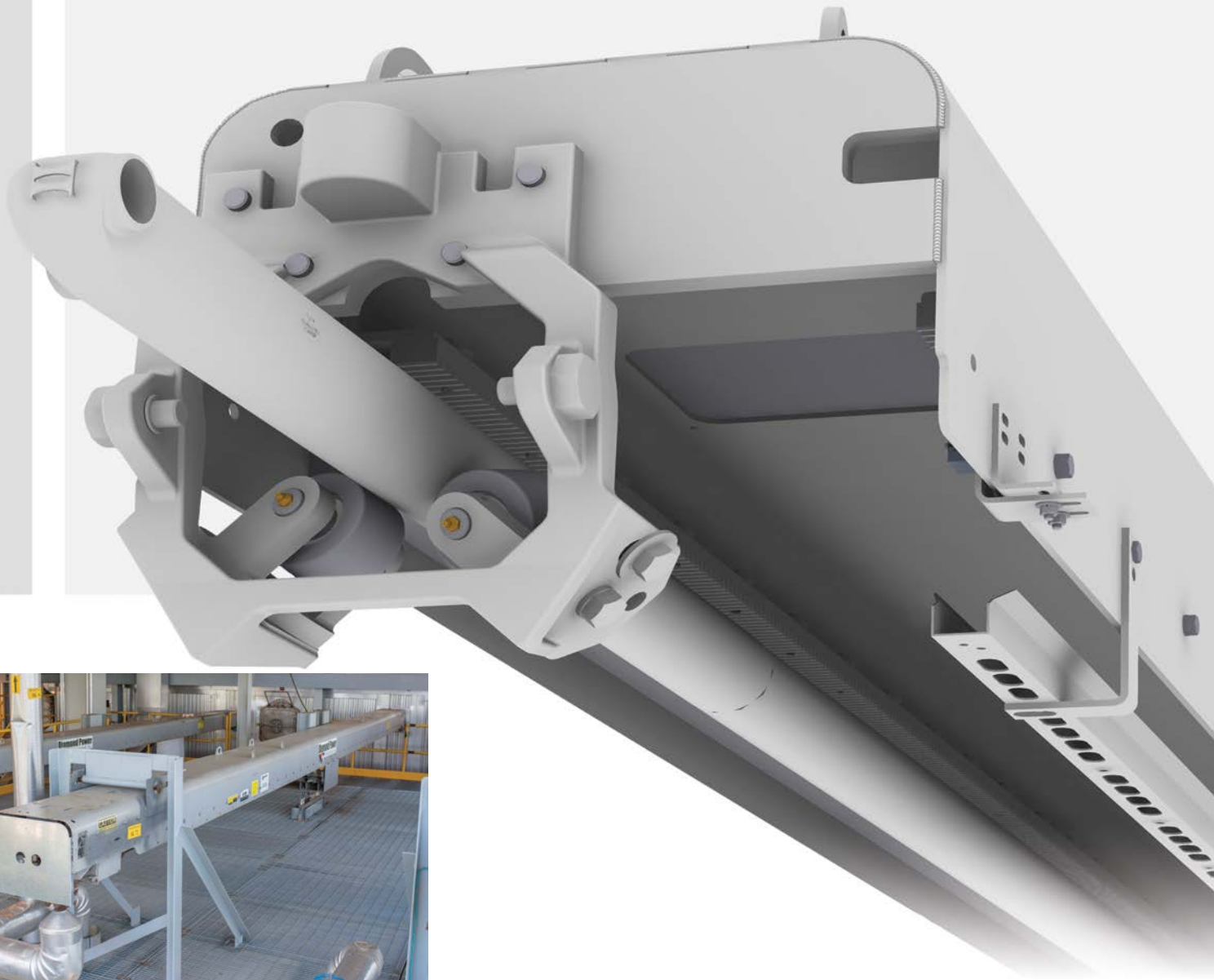


Diamond Power® IK-700®

Retractable sootblower



ENERGY | ENVIRONMENTAL

IK-700[®] retractable sootblower

The Diamond Power[®] IK-700[®] retractable sootblower from Babcock & Wilcox (B&W) is designed specifically for low maintenance, reliability, versatility and maximum cleaning performance.

Incredibly rugged, this sootblower stands up to the most severe environments and can be used in the boiler's pendant superheater, the convection section platens and the economizer.

Standard features of the IK-700 retractable sootblower are engineered with an emphasis on ROI, long-wearing durability and minimum maintenance. Backed by industry-leading service, the IK-700 sootblower is the solution for today's boiler cleaning demands.

■ Benefits

- Reliable low maintenance design with minimal lubrication points
- Unparalleled maintenance access with low side height and no bottom straps
- Parts migration and interchangeability with Diamond Power IK-525 and IK-545 models
- Proven to have excellent ROI and long service life
- Mechanical reverse indexing without the need of a clutch

- **Low maintenance**
- **Reliability**
- **Return on investment**
- **Safety**
- **Interchangeable parts**

Components

A. Lance Tube

The IK-700 lance tube is engineered with a forged lance flange to minimize stress. Lance tubes are available in a variety of materials to match strength, temperature and corrosion requirements for each unique region of your boiler. Sootblowers over 25 ft (7.6 m) are equipped with lance and feed tube articulated center support. This maintains the lance and feed tube on the carriage centerline, increasing packing and feed tube life. Lance tube runout or "bowing" from heat set is prevented which reduces load on the traveling carriage.

B. Indexing Mechanism

The blowing medium cuts a path through the deposits until the lance tube reaches full travel. It then changes the retraction path to clean surfaces not covered by the forward action. This technique maintains maximum cleaning coverage. For further indexing, the Diamond Power patented Progressive Helix Mechanism will index the lance tube an exact, predictable amount at the start of each cycle. This improves cleaning and reduces boiler tube erosion caused by excessive sootblowing.

C. High Performance Nozzle (not shown)

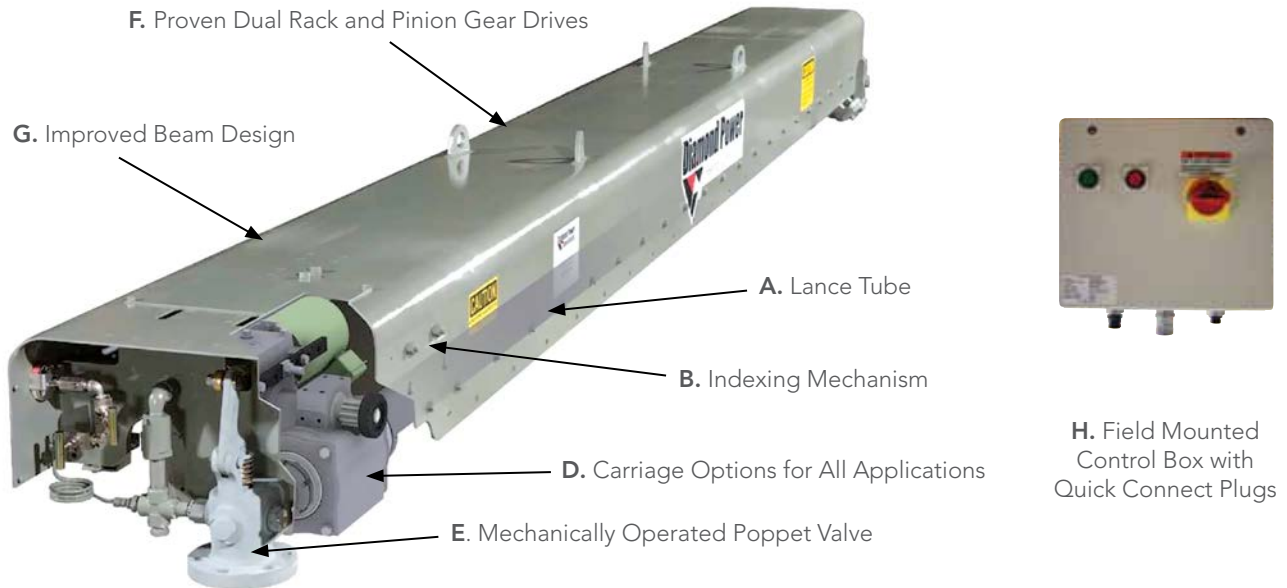
The cleaning medium is delivered through a high performance venturi nozzle. The investment cast stainless steel nozzle assembly converts high pressure air or steam into a high velocity jet – conveying maximum energy to remove tenacious slag deposits. The helix pattern ensures an even cleaning path.

D. Carriage Options for All Applications

The IK-700 retractable sootblower is equipped with a severe duty gearbox to match your application. No chains, greasing points or adjustments are needed for indexing. A common lubrication reservoir for the drive gear and lance hub provides a full circulating bath during operation. All Diamond Power carriages undergo final fit tests with gear rack alignment, assuring proper gear alignment and maximum service life.

E. Mechanically Operated Poppet Valve

The IK-700 retractable sootblower is equipped with a solid mount poppet valve, hydrostatically tested at 1.5 times the operating pressure. The poppet valve mounting is separate from the feed tube mounting. A 2-bolt attachment allows quick removal of the feed tube without disconnecting the poppet valve. Not only does this reduce the labor involved to remove the feed tube, but it isolates the steam source to prevent detrimental effects to the feed tube or packing. This unique design gives IK-700 sootblowers the industry's highest steam piping load capacity.



F. Dual Rack and Pinion Gear Drives

The pinion gear is held at precisely the right position in the gear rack by a solid square bar roller support. This allows the full involute gear drive set to achieve smooth rolling contact between the rack and gear faces, even after years of service. Because of the extreme nature of boiler environments, both the gear rack and lower square bar roller support are bolted to the sootblower beam shell so segments are easily replaceable. All fasteners are lubricated for easy maintenance.

G. Improved Beam Design

Customized lengths can suit specifications up to 45 ft - 6 in. (13.9 m) of travel. The IK-700 beam is backwards compatible with spare-part interchangeability from Diamond Power IK-525B and IK-545B sootblower components. Shorter sides allow easier access for maintenance or inspection, with no tie bar. Optional top access is available for simple carriage removal.

H. Field Mounted Control Box

The IK-700 sootblower can meet NFPA standards for arc-flash protection. Water and dust tight – and fully compliant with OSHA electrical shock avoidance standards – the control box can be mounted at any point along the beam or at an alternate location for convenience and safety. The simple bracket and quick connect power supply system allow the control box to be shipped and mounted separately, which reduces shipping costs and risk of damage.



Optional top access panel



Solid mount poppet valve for convenient feed tube replacement



Lance tube / feed tube articulated center support

Specifications

Blower coverage	Up to and including 45 ft - 6 in. (13.9 m)
Carriage configurations	Available in a variety of speeds, rotation and configurations to meet customer requirements
Motor configuration	Available in a variety of horsepower, insulation, enclosure, voltage and frequencies to meet customer requirements
Feed tube material	304 stainless steel (Diamonized® feed tubes are optional)
Lance tube material	Available in a variety of materials and sizes to meet specific applications
Power supply	Standard PowerLink cable system with traveling limit switches (Optional Expanda cable with beam mounted limit switches)
Blowing medium valve (steam or air)	Diamond Power® poppet valve with removable flexible seat and disc and integral adjustable pressure control; valve seats are hard faced
Limit switches	Proximity and mechanical limit switches are available
Mounting arrangements	Pivot mounting standard; wallboxes available for either pressurized or balanced draft firing



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