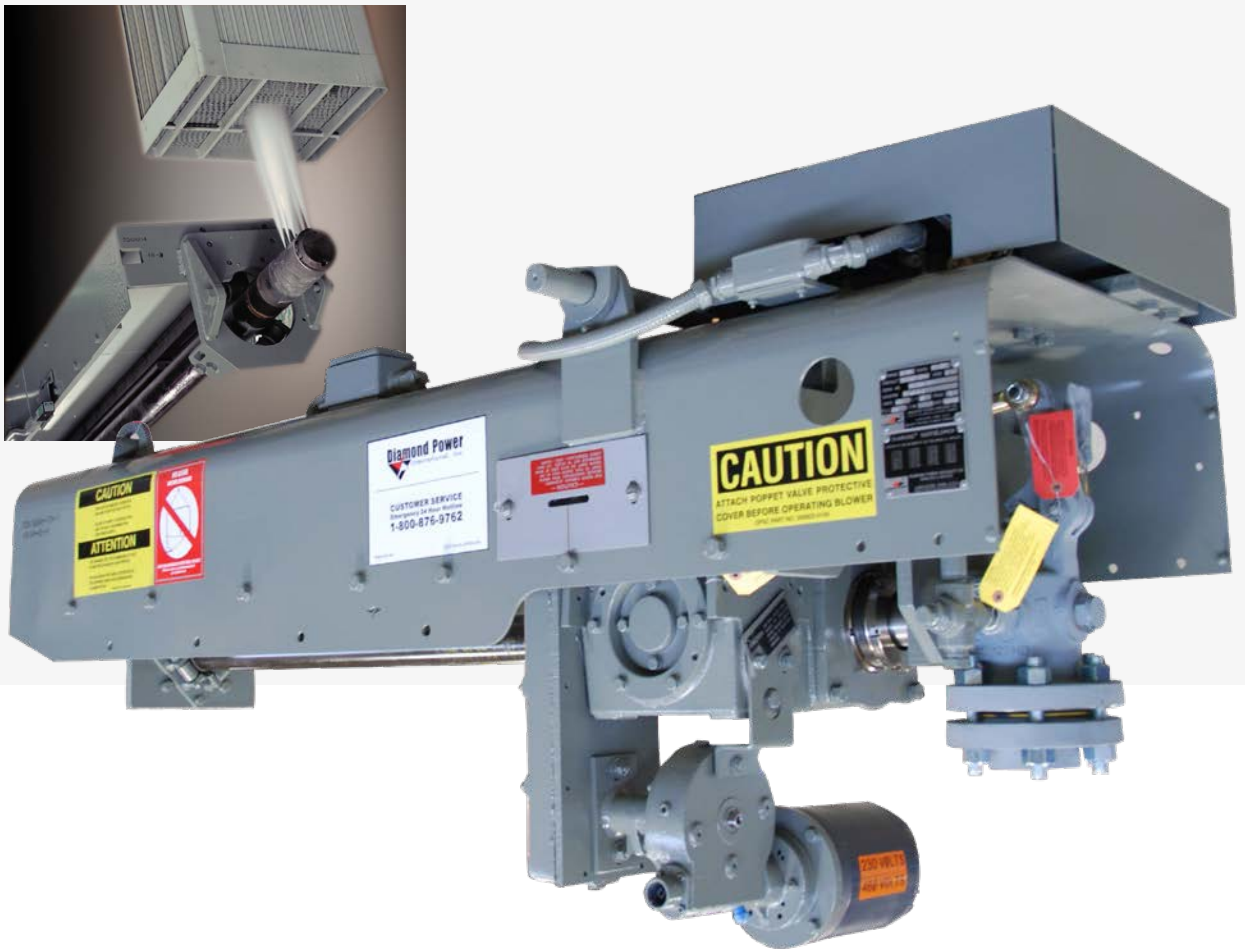


Diamond Power® Air Heater Sootblowers



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When choosing sootblowers to clean the world's largest boilers, owners and operators have come to rely on the Diamond Power® line of boiler cleaning technologies from Babcock & Wilcox (B&W). We lead the industry in providing advanced sootblower designs. Our extensive experience gives us a unique perspective on the optimal, most efficient and cost-effective way to clean boilers that burn a variety of fuels, in any operating condition.

An important component of a boiler system is the air heater. Keeping it properly cleaned helps to achieve the highest efficiency. B&W offers a variety of air heater sootblowers to meet your most demanding cleaning requirements.

■ IK-700®-AH

Based on our rugged IK-700 sootblower, the IK-700-AH is applied for cleaning most air heaters on all types of coals.

■ IK-700®-AH with "Step and Dwell"

Provides for more complete cleaning. The Step and Dwell control methodology enhances cleaning by advancing the IK-700-AH sootblower in 1 in. (25 mm) steps and pausing until the air heater has rotated 360 degrees.

■ IK-525-DM Dual Media Cleaners

Provides the most aggressive cleaning, typically applied downstream of a selective catalytic reduction (SCR) system where ammonia slip may occur. The IK-525-DM3/DM4 sootblower uses a PLC-controlled Step and Dwell process. The sootblower is used for online low pressure (steam or air) cleaning and is supplied with the necessary sootblower-mounted hardware and PLC control to operate in high pressure water wash mode.

Diamond Power IK-700-AH Partially Retractable Sootblowers

The IK-700-AH is a short-travel version of B&W's Diamond Power IK-700 sootblower, specially modified for use in cleaning regenerative air heaters of all sizes.

Compared to IK-700 sootblowers for boiler cleaning, these air heater sootblowers use extra gear reduction to achieve very slow travel (without lance rotation). The travel speed is set relative to the rotational speed of the air heater basket to provide complete coverage by the element and nozzle assembly. Thus, much better cleaning is expected than with original swing-arm-style cleaners still found on many air heaters.

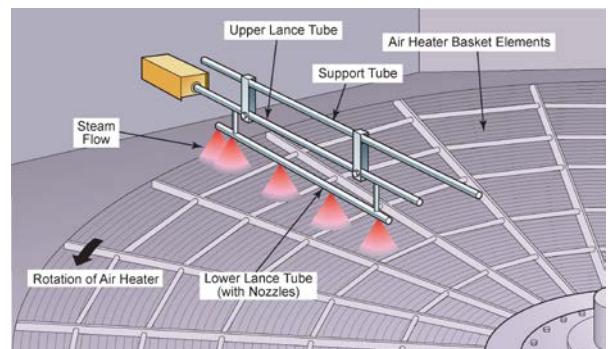
The typical travel distance is 3 to 5 ft (0.9 to 1.5 m), although a wider range is available. IK-700-AH sootblowers use an element assembly with the nozzle quantity and diameters set to obtain complete coverage of the air heater basket. Nozzle spacing and element design are selected by B&W engineers for each specific air heater. The IK-AH-700 is available for both horizontal and vertical shaft regenerative air heaters.

Diamond Power IK-700-AH with Step and Dwell

The cleaning coverage of IK-AH-700 sootblowers can be increased by adding "Step and Dwell" capability. A timer circuit is added to the blower-mounted controls so that the sootblower advances slightly, then stops while the air heater basket makes complete revolution. This repeats for the entire travel of the sootblower with each operation to increase dwell time and cleaning coverage.

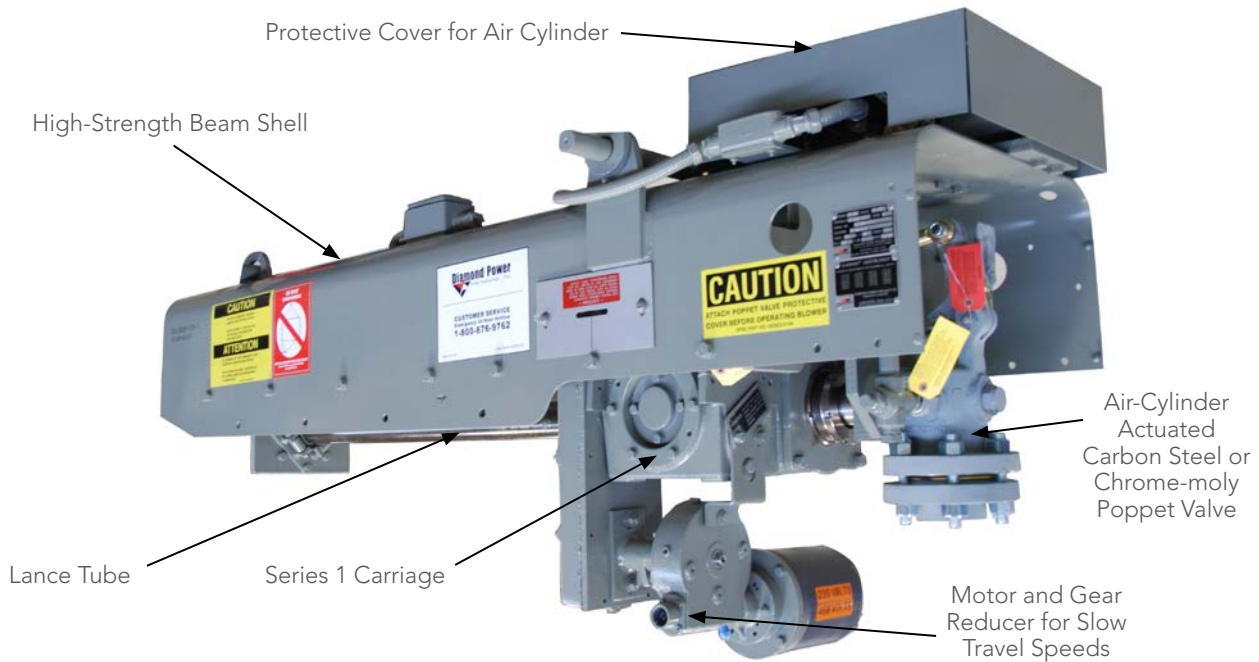


B&W's Diamond Power IK-700-AH retractable sootblowers feature complete coverage in timing with the rotational speed of the air heater for improved cleaning



Horizontal travel IK-700-AH for cleaning a vertical shaft air heater

Diamond Power IK-700®-AH Retractable Air Heater Sootblower



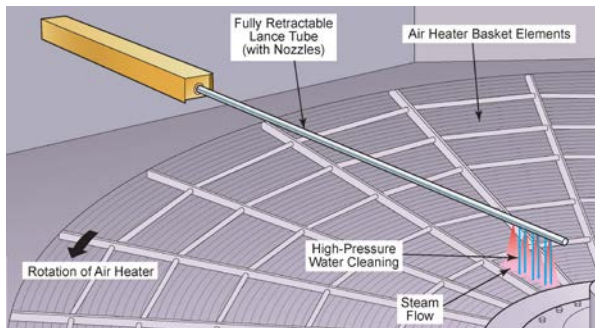
IK-525-DM Dual Media Air Heater Cleaners

The IK-525-DM (dual media) air heater cleaner was developed in response to SCR-induced ammonia slip on air heaters. This device provides the ability to clean with steam or air when the unit is online and the additional ability to clean with high pressure water (up to 4000 psig [27.6 MPa]) when the unit is offline (online water wash capability is available pending approval from the air heater basket manufacturer). This provides maximum cleaning capability, especially on units which may see ammonia salt deposits associated with SCR installations upstream of the air heater.

We offer both full-travel (IK-525-DM) and partial travel (IK-525-DM3 or DM4) designs. The lance tube is fully retractable on the full-travel DM model. The DM3 (1/3 travel length with 3 sets of nozzles) and DM4 (1/4 travel with 4 sets of nozzles) partial-travel dual-media cleaners more easily fit where there is a lack of external clearance.

Dual-media air heater cleaners are fully programmable. When commanded to operate from the control room, the IK-525-DM3 or DM4 will travel from rest to its fully inserted position at full speed. Then, the PLC cabinet controls the cleaning process. The blower will open its poppet valve and allow the air heater basket to complete one revolution. A preset step moves the nozzles to achieve complete coverage with no cleaning overlap and the sequence of steps/dwells continues until the entire air heater basket is cleaned.

High pressure water wash cleaning is similar, although the step size is finer due to the coherent high pressure water jet.



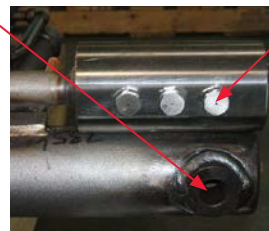
IK-525-DM full-travel steam and water nozzle assembly



Low pressure (steam or air) nozzles

IK-525-DM

High pressure water nozzles



IK-525-DM3/DM4

IK-700®-AH Air Heater Sootblower Specifications

Blower Travel	As required by the application 2 to 10 ft (0.6 to 3 m)
Handling and Orientation	Left or right hand; horizontal or vertical orientation
Carriage	Series 1, grease lubricated, non-rotating
Travel Speeds	3 in. (76 mm) per minute; up to 8 in. (203 mm) per minute in 0.25 in. (6.4 mm) per minute increments
Lance Tube and Element Assembly	2.88 in. (73.15 mm) Croloy or 304SS lance tube with carbon steel, custom-designed element assembly with roller supports
Feed Tube	2.38 in. (60.45 mm) stainless steel
Steam Turn-On Assembly	Solid-mount poppet valve, integral to sootblower
Element Assembly	Custom-designed to meet the cleaning requirements and internal and external obstruction requirements

IK-525-DM Dual-Media Air Heater Sootblower Specifications

Blower Travel	Up to 24 ft (7.3 m)
Handling and Orientation	IK-525-DM: left or right hand; IK-525-DM3/DM4: left hand only; horizontal or vertical orientation
Carriage	Series 1, grease lubricated, non-rotating
Power Control Design	Internal Powerlink cable and water hose carrier with three magnetic, dual-proximity limit switches
Lance Tube and Nozzle Assembly (Full-travel IK-525-DM Version)	5 in. (127 mm) high-strength lance tube with 5 steam nozzles and 6 water nozzles supplied by internal stainless tubing
Lance Tube and Element Assembly (IK-525-DM3 or DM4 Version)	2.88 in. (73.15 mm) Croloy or 304SS lance tube with carbon steel; custom-designed steam cleaning element assembly with roller supports and adjacent, water cleaning assembly
Feed Tube	2.38 in. (60.45 mm) stainless steel
Steam Turn-On Assembly	Air-cylinder actuated poppet valve, integral to sootblower, bottom inlet or side inlet as required
Feed Tube Packing Gland	Live-loaded gland or solid gland
Control Cabinet	NEMA 4 enclosure for control of up to four dual-media cleaners; includes variable frequency drive and Allen-Bradley MicroLoix PLC

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