

IK-545™

Long Retractable Sootblower

Diamond Power's IK-545™ retractable sootblower is designed specifically for low maintenance, reliability, versatility and maximum cleaning performance. Incredibly rugged, this sootblower stands up to the most severe environment and can be used in the pendant superheater of the boiler, in the convection section platens and economizer.

Effective cleaning is the most important aspect of a sootblower. The IK-545 uses a cast nozzle assembly with advanced design venturi nozzles to convert high-pressure air or steam into a high velocity jet.

This delivers the maximum impact energy to remove tenacious slag deposits.

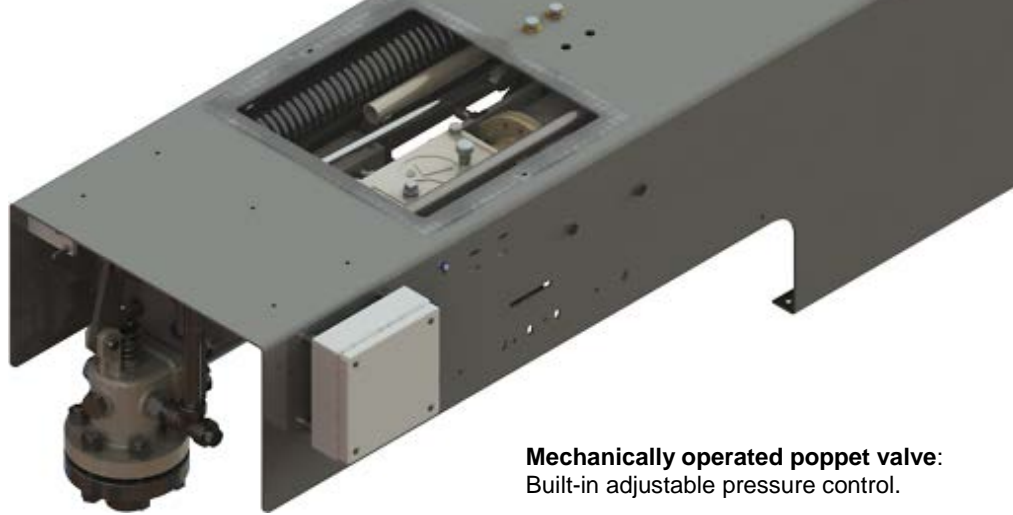
Utilizing Diamond's own double helix cleaning pattern, the lance enters the boiler. The blowing medium cuts a path through the deposits until the lance tube reaches full travel. It then reverses rotation and indexes so that, on the retraction path, it cleans surfaces not covered by the forward action. This technique maintains maximum coverage and cleaning.

Poppet Valve

The IK-545 retractable sootblower is equipped with a leak-proof, solid mount mechanically operated poppet valve, hydrostatically tested at 1.5 times the operating pressure. No other sootblower manufacturer in the world tests

Removable Covers:

EU Machinery Directive compliant guard design for protection against moving parts and hot surfaces.



Mechanically operated poppet valve:
Built-in adjustable pressure control.

and aligns each piece of equipment to the extent of our precision manufacturing process. The poppet valve mounting is separate from the feed tube mounting, allowing feed tube change in a matter of minutes without disconnecting the poppet valve. Not only does this reduce the labour involved to remove the feed tube, but it isolates the steam source to prevent detrimental effects to feed tube or packing.

Lance Tube

The IK-545™ engineered lance tube is designed 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. All sootblowers are outfitted with lance and feed tube articulated centre support, which maintains the lance and feed tube on the carriage centreline, increasing packing and feed tube life.

Indexing

The blowing medium cuts a path through the deposits until the lance tube reaches full travel. Indexing then changes the retraction path to clean surfaces not covered by the forward action. For further indexing, Diamond Power's



patented Progressive Helix Mechanism is the only one of its kind that 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.

High Performance Nozzle

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

Carriage

The IK-545 retractable sootblower is equipped with a severe duty gearbox to match

your application. No greasing points and no adjustment needed for indexing. A common lubrication reservoir for the drive gear and lance hub provides a full circulating bath during operation.

Dual Rack and Pinion Drives

The pinion gear is held at precisely the right position in the gear rack by a 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 roller support are welded to the sootblower beam to ensure correct alignment.

Health & Safety

All Diamond Power® sootblowers are provided with protective guard arrangements to provide personnel safety from moving parts and hot surfaces in full compliance with the EU Machinery Directive.



Specifications:

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| Blower Coverage | 7,600 to 13,700mm |
| Motor Data | Single Electric Motor: 1.1 kW, TEFC, IP55 |
| Travel Speed | 42.3mm/s with 100mm Helix at 50Hz. |
| Blowing medium valve | Diamond Power® mechanically operated poppet valve with integral pressure adjustment. |
| Blowing Medium | Steam or air up to 128barg at 500°C. |
| Feed tube material | 304 Stainless Steel, ground and polished OD |
| Lance Tube | Low alloy chromium molybdenum steel and high alloy stainless steel. |
| Drive arrangement | Dual Rack and pinion translation |
| Plus Pressure | Seal Air 0.54-1.8 Nm ³ /min 150mm W.G. above furnace pressure. |
| Protection | Fully guarded in compliance with EC Machinery Directives. |

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