

IK-4M Retractable Sootblower

DIAMOND POWER (AUST) IS A MEMBER OF HALLEY & MELLOWES GROUP OF COMPANIES

Diamond Power
(Australia) Pty. Ltd.

The logo for Diamond Power (Australia) Pty. Ltd. features a stylized diamond shape with a red and white color scheme, positioned to the left of the company name.

Diamond Power

IK-4M Sootblower

Boiler Cleaning Technology

Our clients are the experts

The real authorities on sootblowers are the people who operate industrial boilers – oil heaters, waste heat and package boilers and heat exchangers. They know that only a highly efficient retractable sootblower that conserves blowing medium while delivering powerful cleaning energy can cut it in their boiler environment. That's why, after 12 years on the market, a large percentage of this industrial market segment has come to depend on Diamond Power Specialty Company's IK-4M for economical, reliable, effective cleaning.

Proven cleaning performance

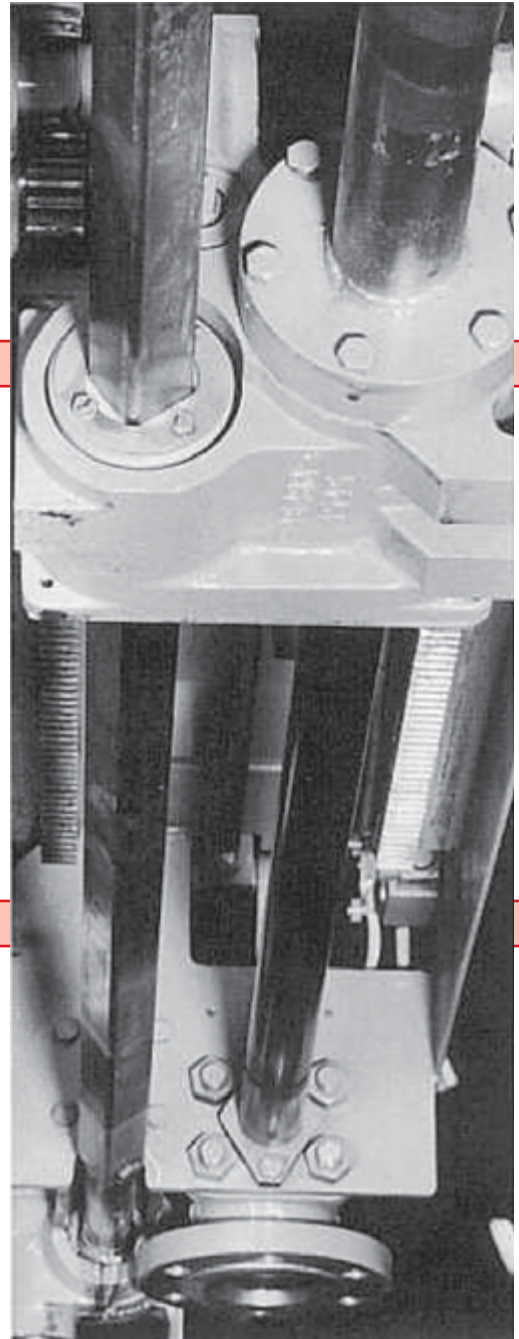
Like all the sootblowers in the Diamond Power Specialty line, the IK-4M features the optional Progressive Helix Mechanism (PHM). The PHM creates a 47.4-degree shift in the nozzle pattern every cleaning cycle with its patented reverse rotation and indexing action. As the lance enters the unit, the blowing medium cuts a path through the deposits until the lance is fully extended. The lance tube then reverses rotation and index, so on the retraction path the

IK – 4M cleans surfaces not covered on insertion. In other words, cleaning is accomplished on a different path and in a different direction with closely spaced helixes. This reverse rotation and indexing enables the sootblower to peel and strip more deposits, better, and with decreased chance of tube erosion.

Cutting costs through controlled cleaning

As with all Diamond Power Specialty sootblowers, the IK-4M is designed to deliver its blowing medium in a highly efficient manner to help keep your operating costs and cleaning time down.

In addition to the effective double helix cleaning pattern, the IK-4M conserves expensive blowing medium in a number of other ways. First the IK-4M gets in and out of the area to be cleaned quicker. With a maximum travel length of 20 feet, the IK-4M posts a travel speed of 120 inches per minute. At 30 RPM, the fast rotation of the carbon steel lance tube significantly reduces dwell time and potential erosion on the tube surface. Flexibility in available blowing pressure further reduces blowing medium consumption, so the IK-4M packs up to 250 PSIG for effective cleaning.



Pressure control precision

Our externally adjustable poppet valve allows pressure control adjustment while the blower is operating. An operator simply turns an adjustment disc external to the valve. This design innovation gives you more precise pressure control adjustment during initial start up, as well as desired pressure setting with the first operation of the blower. Valve access is easier so that adjustments can be made based on cleaning performance.

Long on work, short on maintenance

Because operators shouldn't have to think about the availability of their cleaning devices, our sootblowers are designed to work long and hard with a minimum of maintenance downtime. Rugged construction and attention to design to details make the IK-4M virtually worry free.

An enclosed, all gear driven carriage design reduces equipment stress and maintenance with low friction movement and evenly distributed loads. In addition, all shafts run on anti friction ball bearings and worm gear reduction for smoother operation to further lessen wear and maintenance.

A one horsepower motor delivers power through a square shaft to the carriage. The all gear driven carriage rotates the lance and drives the blower through a dual rack and pinion to provide consistent operation, unlike chain driven models, which are subject to chain stretch and inconsistent performance. Two important optional features for the IK-4M are protective covers for safety requirements, and the electrical controls necessary under the industry's hazardous environment specifications.

Responsive service comes standard with every sootblower

By choosing Diamond Power Specialty Company's IK-4M, you tap into the most comprehensive service network available for sootblower repairs and maintenance. We view service as an integral, "value added" feature that comes standard with every piece of equipment we sell. Our five point service strategy is designed to keep your boiler cleaning systems operating efficiently and cost effectively.

Strategically located service people can be quickly dispatched to dispense skilled operations, maintenance and boiler cleaning assistance.

On-site repairs bring the manufacturer to you, reducing expensive downtime.

Rebuild exchange program enhances our complete rebuilding capabilities by providing and inventory of ready to use components for immediate exchange for a customer's worn out equipment. This program, in conjunction with our factory-trained personnel located in service centres worldwide, enables us to stand ready for comprehensive sootblower maintenance.

Field maintenance agreements are an option for additional service protection. At regular intervals, we will inspect and service all Diamond Power Specialty cleaning equipment and control systems.

PartnerShip Stocking Program is another option for additional service protection. By analyzing your past parts usage, inventory levels and forecasts needs, we carry an inventory specifically for you. We get improved parts stocking, planning and scheduling while you realise a real inventory reduction. You get the parts you need when you want them with our guarantee next day delivery of parts in the program. We both decrease our cost of doing business.

visit our website: www.halmel.com.au

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IK-4M, Another Diamond Retractable Sootblower that cleans a efficiently and economically

Here is the retractable sootblower that offers dual economies while assuring maximum boiler cleaning efficiency.

The IK-4M is competitively priced for use in industrial applications, such as oil-fired heaters, waste heat and package boilers which demand are tractable rather than a fixed-position blower. It's also an ideal substitute for some rotary blowers, since it offers improved cleaning efficiency at an economical cost.

Because of operating innovations built in by Diamond's experienced design engineers, the IK-4M conserves on expensive blowing media and reduces cleaning cycle time.

From the standpoint of initial investment, on-going operating expenses, and improved cleaning efficiency, the IK-4M offers substantial cost savings. With a travel up to 6.5 metres the IK-4M also features many metric parts that are completely compatible with standard metric tools. The simplified design of this sootblower has limited the total number of parts needed, cutting replacement costs and maintenance downtime. Parts, whether metric or conventional, are readily available through the international network of Diamond Service Centres. The IK-4M's venturi nozzles, combined with a controlled double helix nozzle pattern, deliver maximum blowing medium impact. Also, the cleaning pattern is predetermined, with a consistent cleaning path in both directions. The drive reverses rotation and "indexes", so that the retraction path completes the cleaning of the surfaces not covered on insertion. Cleaning is accomplished on a different path and in a different direction with closely spaced helixes. This proven approach to low-cost cleaning provides for efficient use of the blowing medium while decreasing the chance of tube erosion.

The IK-4M has also been designed so that two important optional features can be added. Protective covers for "full enclosure" requirements, and the electrical controls necessary to meet industry specifications for a hazardous environment are available.

General specifications for the IK-4M

The following is a suggested statement for specifying this sootblower:

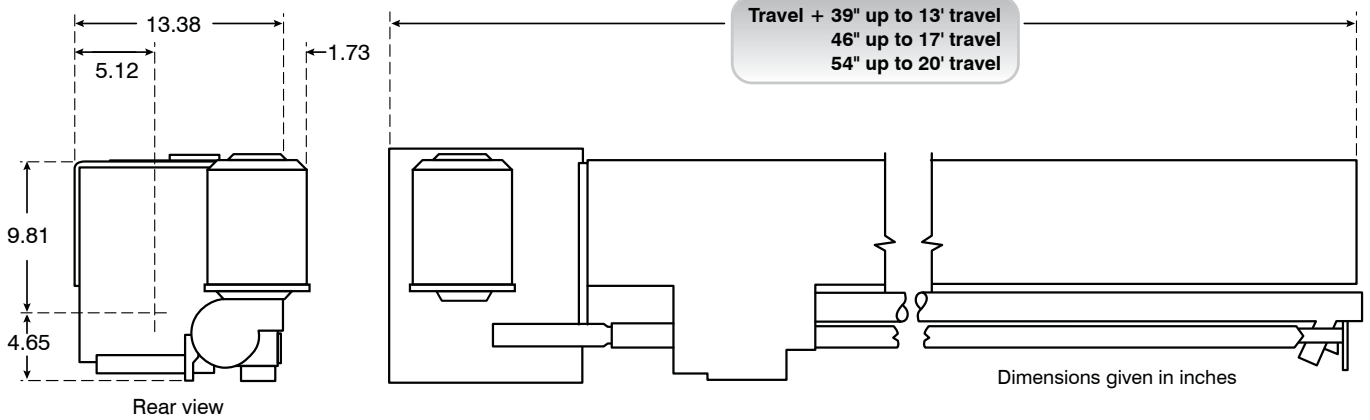
"The automatic retractable type sootblower(s) shall be Diamond Model IK-4M (or approved equal) designed for covergages up to and including 6.5 metres. The sootblower(s) shall be equipped with a single-motor driven, totally enclosed main drive carriage and dual rack and pinion drive. Main support shall be 4.5mm steel box-beam construction of sufficient depth to support lance tube in extended position. Pinion gears on the drive carriage assembly shall engage rack-gears on both sides of box beam. Blower travel shall be 2500mm per mintue, with 100mm helix. Blowing medium flow shall be controlled by a positive mechanically actuated Diamond poppet valve which has a replaceable flexible seat and self-aligning disc and is regulated by an internal micrometer type adjustment. Blowing medium flow shall not be controlled by restricting valve opening. Feed tube and lance tube shall be removable without disturbing piping to the sootblower valve. Front lance tube support rollers shall provide true-rolling contact. Lance tube material and number, size and angle of venturi nozzles shall be selected to meet the application."

General	Industrial blower with hazardous environment and full enclosure options.
Blower Coverage	Up to and including 6.5 metres
Motor Data	Single 0.75 kW TEFC IP55 415 volt 3 ph 50 Hz 4 Pole motor with Class F insulation (special electric motor or air motor optional)
Electrical equipment	Suitable for indoor or outdoor service (hazardous environment optional)
Blowing medium valve (steam or air)	Diamond Power poppet valve with removable, flexible seat and disc and integral adjustment pressure control. Valve internals have Stellite trim
Feed tube material	304 Stainless Steel, ground and polished OD
Lance tube material	Carbon steel standard (low alloy chromium molybdenum steel and high alloy stainless steel available)
Blowing medium valve actuator	Positive direct mechanical actuation providing full opening and closing
Drive arrangement	Rack and pinion translation, using chrome plated square shaft
Nozzles	Balanced venturi type
Carriage and reducer	Totally enclosed, all-gear design, lubricated for life
Travel speed and helix	2500mm per minute travel speed with 100mm helix
Front support	Permanently lubricated ball bearing dual rollers, with true-rolling contact with lance tube
Emergency retract mechanism	Stationary at rear of blower
Handling of blower	Nearly symmetrical design with only 40mm offset from centre eliminates need for right and left hand designs
Mounting arrangement	Rigid mounting (swivel mounting optional), negative pressure wallbox (positive pressure optional)
Push buttons	Blower mounted push buttons. Optional except on hazardous environment blowers

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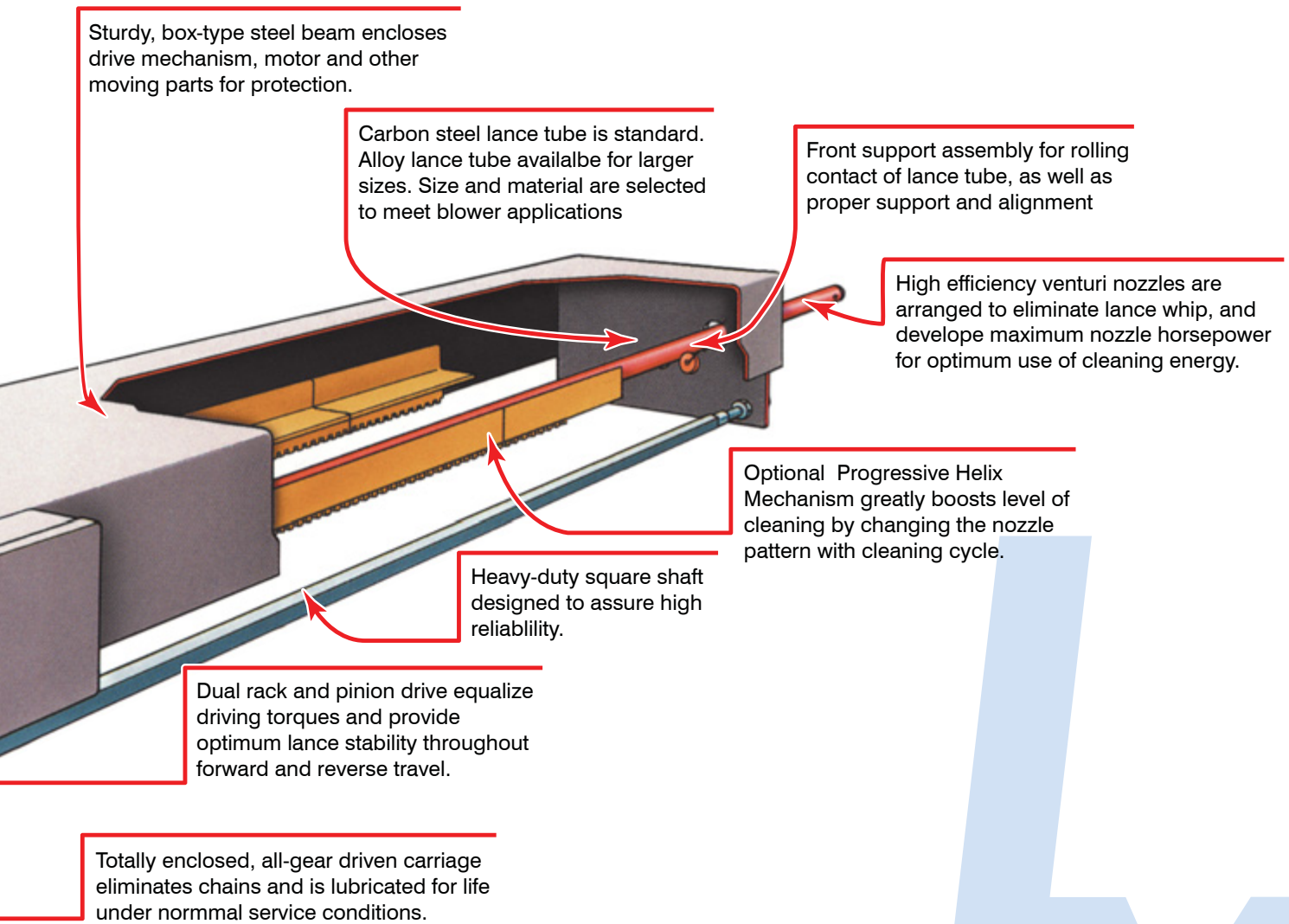


Leak resistant, externally adjustable poppet valve has a flexible seat and disc design that prevents thermal distortion during header warm-up; makes blowing pressure control adjustment easier and more stable.

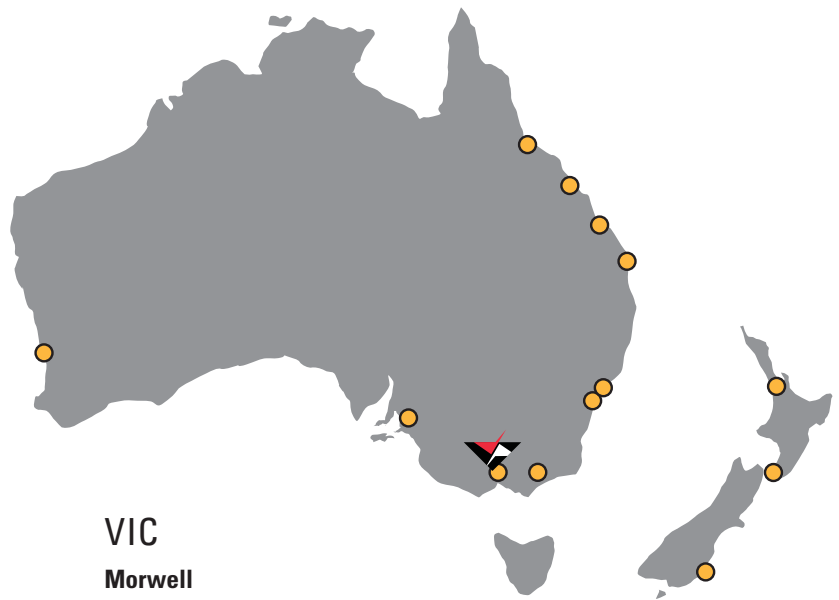
Stainless steel feed tube resists corrosion, while polished surface extends packing life.

Totally enclosed single drive motor assures reliable lance tube translation and rotation every operation.

Worm-type gear reducer contributes to smoother operation to help lessen wear and maintenance.



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