

# Dual Media Air Heater Cleaner

## Cleaning Advantages

- Improved heat rates
- Improved cleaning while on-line resulting in reduction in waterwashing efforts
- Tremendous reduction in set-up time to begin waterwashing
- Reduction in water usage due to our focused water cleaning multi-nozzle design and One Way Cleaning™ technology.
- Extended lance life due to full retraction from air heater
- Ability to waterwash during unscheduled outages with a push of a button
- Better cleaning results compared to subcontractor waterwashing efforts

The IK-525 Dual Media (DM) air heater cleaner provides the ability to steam (or air) clean high density air heater baskets while a unit is on-line and high pressure wash while the unit is off-line.

The IK-525-DM responds to increased cleaning needs caused by fuel changes and ammonia salt deposits associated with selective catalytic reduction (SCR) installations.

The lance tube is fully retractable to maximize operational life and is fitted with a unique nozzle configuration. This design allows three modes of operation: steam and/or air for day-to-day improved element cleaning; low pressure water, for water soluble cleaning action, and high pressure water, for tougher cleaning applications.

With the push of a button, the IK-525-DM can switch from efficient daily cleaning mode to a highly effective in-place, high-pressure wash (up to 4000 psig) mode during scheduled and unscheduled outages.

The IK-525-DM achieves **complete** cleaning coverage while minimizing cleaning media consumption due to the unique nozzle design and One Way Cleaning™ technology.

Introduced in 1967, the original IK-525 sootblower has long demonstrated its effectiveness and reliability in multiple-cleaning applications. The IK-525 is the platform for the IK-525-DM Air Heater Cleaner. Today's IK-525 design is a product of more than 30 years of proven success.



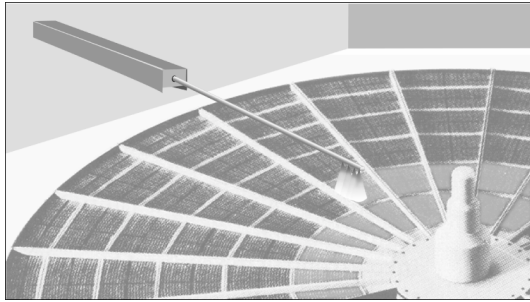
**IK-525-DM** in high pressure waterwash mode. The air heater cleaner can be mounted vertically (for blowing left or right) or horizontally (for blowing up or down).

## Ease of Maintenance

IK-525-DM air heater cleaner design allows carriage and lance assembly retraction beyond the carriage rest position for online inspection of water nozzles. Nozzles can be maintained *without* lance removal.

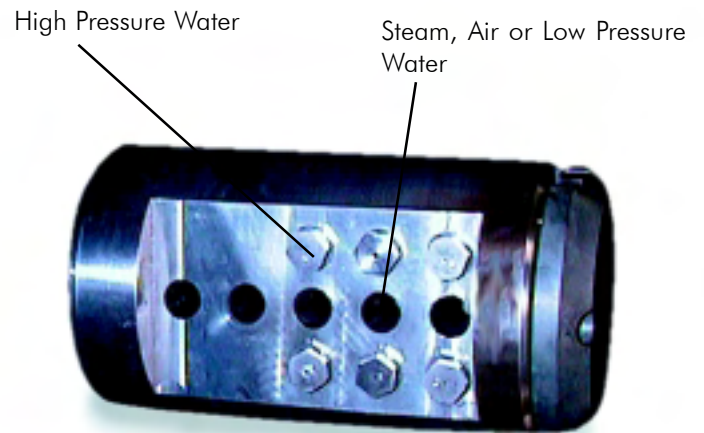
## Safety

IK-525-DM air heater cleaner does not have any exposed pinch points. The beam canopy covers the majority of the carriage and encompasses all moving parts, i.e. drive pinions, rollers, PowerLink™ Cable Carrier.



## Flexible Operation

The IK-525-DM is capable of delivering multiple cleaning mediums through one unique nozzle configuration, with built in programmable zone control multiple pass cleaning.



**Figure 1**  
IK-525-DM Nozzle  
(Detail)

## Product Specifications

|                                  |   |
|----------------------------------|---|
| <b>Beam</b>                      | 3/16 in. carbon steel, gray primer and enamel paint                   |
| <b>Carriage</b>                  | Series One™ with segregated chamber                                   |
| <b>Lance Tube</b>                | 5.0 in. OD high strength/high temperature BW6330, replaceable on-line |
| <b>Feed Tube</b>                 | 2.375 in. OD polished stainless steel                                 |
| <b>Hi-Pressure Water Tube</b>    | Dual 5/8 in. stainless steel tubing                                   |
| <b>Steam/Air Nozzles</b>         | 5 x 9/16 in. ID   |
| <b>Hi-Pressure Water Nozzles</b> | 6 x 0 degree fan, replaceable on-line                                 |
| <b>Poppet Valve</b>              | Diaphragm operated, 600# carbon steel (std.)                          |
| <b>Motor</b>                     | 2 HP, 3 phase, 230/460 V, inverter duty, TENV                         |
| <b>Power Cord</b>                | PowerLink™ Cable Carrier  |
| <b>Limit Switches</b>            | "GO" single-magnet dual proximity                                     |
| <b>Controls</b>                  | Allen Bradley Micro Logix 1500™                                       |

### To Specify the Dual Media Air Heater Cleaner:

The fully retractable dual media air heater cleaner shall be Diamond Power Model IK-525-DM complete with a totally enclosed all gear driven carriage, integrally mounted inverter duty motor, programmable logic controller (PLC) and totally enclosed PowerLink™ Cable Carrier. The cleaner shall be capable of cleaning in a minimum of three modes upon command: steam/air, low pressure water or high pressure water with One-Way Cleaning™ and with built in programming for zone control multiple pass cleaning. Lance tube deflection shall be controlled to maintain nozzle position within a predetermined range above the cleaning surface. The high pressure water nozzles shall be replaceable from outside the air heater and without removing the lance tube. The cleaner shall feature a poppet valve with separate elements for pressure control and sealing to minimize pressure drift and valve seat erosion. Dual proximity limit switches shall be used to remotely monitor the cleaner at forward, intermediate and rear positions.

For engineered solutions to your specific boiler cleaning needs, contact your local Diamond Power representative or call our main office at:  
P.O. Box 415 • Lancaster, OH 43130 • Phone: (740) 687-6500 • Fax: (740) 687-4304



[www.diamondpower.com](http://www.diamondpower.com)

©2002 Diamond Power International, Inc.  
All rights reserved.

DP-9616 1/02