

# Die-Hard Cableless Tube Cleaner

Spend your time cleaning the vessel, not hassling with the cleaner!

## ***Introduction***

Most contractors and maintenance personnel agree – the current method of tube cleaning using a rotary flexible cable to clean chillers is a hassle. The cable is problematic – it breaks, the feeding mechanism jams and the feeder needs frequent and costly repairs. Substantial downtime is encountered to repair cables and units. This lost productivity is a significant cost to contractors and institutions.

A Cableless Tube Cleaner is a much better way. The troublesome cable has been eliminated and replaced with a water-driven actuator. The unit is ruggedly designed to run trouble free. It is ready when you are.

Elliott Tool Technologies has introduced the Die-Hard – the first Cableless Tube Cleaner for use on chillers, condensers, and heat exchangers.

## ***Die-Hard Tube Cleaner Overview***

Water pressure is utilized instead of a spinning cable to provide the power for the brushing action. The brush and hose is transported through the tube by means of an auto-feed system that is activated by the operator via a dual-action trigger switch. The travel speed is 3 feet (.9m) per second.

What good is speed if the tube is not being properly cleaned? The Die-Hard's Quad Cleaning Action provided 4 forms of cleaning:

- Patented Pulse-Jet actuator propels brush linearly 10 times per second.
- 3 radial water blasts of approximately 200 PSI at 10 times per second helps clean into depths of rifling and tube enhancements.
- Water flushes debris from tube enhancements and out the ends of the tubes.
- The brush is free to follow rifling or other helix patterns in the tube in order to get to the root of deposits.



***Die-Hard is designed and manufactured by Elliott Tool Technologies. It is the first Cableless Tube Cleaner for use on chillers, condensers, and heat exchangers.***

**Rugged engineering and construction are employed to ensure that users spend their time cleaning the vessel rather than hassling with their cleaner!** It starts with a lightweight feeding gun that virtually will not jam when the operator reverses the hose. Elliott's auto-feed is more reliable than common competitors' due to better water channeling and less electronics. We even looked at the smaller details like improved seals.

The features and benefits are:

- The twisting, flexible shaft is eliminated – this saves time, hassle, and consumable cost.
- A robust design ensures increased unit uptime and less maintenance and repair costs.
- 3' per second auto feed for high productivity.
- The operator stays drier as less water is required and excess water is channeled away from the operator.
- Quad Cleaning Action for better cleaning and productivity. Cleans 25% better than current rotary shaft method on conventional enhanced tubes.



## Scope of Supply

The Die-Hard Package includes:

- Power unit
  - ½ hp electric motor 115/1/60 – 8.5 amps.
  - 15' power cord GFCI protected.
  - .51 GPM pump, 10 pulses per second.
  - 14 gauge steel housing, dual lifting handles.
- Auto-Feed
  - 3' per second travel speed.
  - "No-jam" feed gun with:
    - ¾" and 1" OD gun nozzles.
    - 15' auto-feed casing.
  - Dual direction, watertight, rocker style trigger switch with 15' cord.
  - Standard 45' (14 meters) ½" diameter reinforced feed hose.
- Actuator
  - 600 PSI hydro powered linear motion, exhausts at approximately 200 PSI.
  - One size actuator (.520" dia. x 6" long) for both ¾" and 1" OD tubes.
- Operator's Manual.

## Spares & Accessories:

- Contractor Dolly for easy transportation.
  - Pneumatic wheels.
  - Telescoping handle.
- Spares Kit: (5) nylon brushes in 12 different sizes, actuator, and antifreeze ... all organized in a toolbox.
- Brushes:
  - Uniquely designed for 4 simultaneous cleaning actions.
  - 3" long, available in various diameters.
- Feed hoses:
  - Standard 45' (14 meters) length.
  - Optional 35' (10.7 meters) length.
- Actuator for both ¾" and 1" OD tubes.
- Dual direction, watertight, rocker style foot switch with 15' cord.
- Gun nozzles for ¾" and 1" OD tubes.

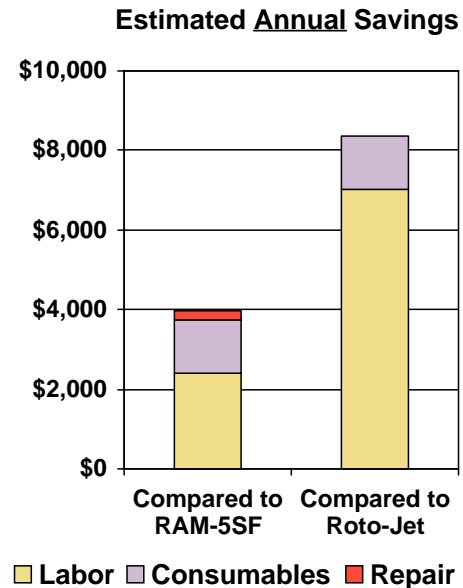
## Specifications

- Input power: 115/1/60 – 10 amps.
- Input water: 30-50 PSI, ¾" hose fitting.
- Dimensions: 23.25" x 13.25" x 9.25".  
(58 cm x 34 cm x 24 cm).
- Weight: 101 pounds (45.8 kg).

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## Return on Investment

The Elliott ROI calculator is a cost-effective way to help justify the purchase of an Elliott Die-Hard unit. Just as the chart below indicates, the Elliott ROI calculator shows how the savings in consumables like cable repair and labor savings from more unit uptime usually provide substantial savings in the first year alone.



Elliott can help you determine if these or other savings are possible. Together we can review particulars in your operation and use an ROI tool to accurately determine your financial return.

## Contact Us

To learn more about Die-Hard™ contact your local representative or Elliott Tool Technologies.

[www.elliott-tool.com/die-hard.htm](http://www.elliott-tool.com/die-hard.htm)

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