

# CTI-CRYOGENICS® ON-BOARD® LOWPROFILE™ WATERPUMP

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CTI-Cryogenics®' LowProfile Waterpumps add significant water vapor pumping speed to turbopumped systems, while maintaining a small package and easy integration.

The "heart" of the waterpump is a highly reliable, long-life, closed loop refrigeration system. This cryogenic system uses safe, inert, easily available helium gas as the refrigerant.

## Faster Pumpdowns

LowProfile Waterpumps are configured for applications where high water vapor pumping speed is required while maintaining a compact footprint. LowProfile Waterpumps increase water vapor pumping performance by nearly 500%.

During vacuum pumpdown, the light gases: nitrogen, oxygen, and hydrogen are pumped quickly regardless of the pumping scheme. Water vapor becomes the dominant gas load. Increasing water vapor pumping speed has a direct effect on pumpdown times and the ability to achieve ultimate base pressures.

## Small Footprint

LowProfile Waterpump systems consist of a thin profile inline waterpump with a helium compressor, which can be conveniently removed. The pump mounting flange is only 1" thick (25 mm) for ISO configurations, and 1.55" (39 mm) for metal seal, for easy installation into the pumping stack.

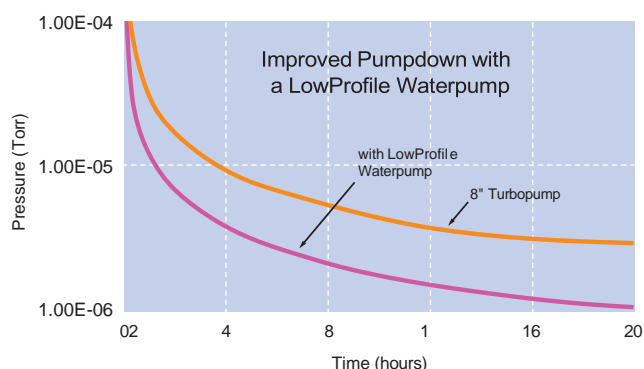
Low Profile Waterpumps, along with other CTI-Cryogenics® high vacuum pumps, can be operated simultaneously from CTI-Cryogenics® helium compressors. This assures cost effective retrofits and low cost of ownership. This simple, compact package is ideal for turbopumped applications such as loadlocks, transfer module or process chambers where fast pumpdowns and low water vapor backgrounds are required.



## Features and Benefits

- Dramatic Increase in System Water Speed
- Up to 70% Faster Pumpdowns Increased Throughput
- Lower Base Pressures
- Higher Yields
- High Conductance to Turbopump
- On-Board® Platform for Communication, Control and Diagnostics
- Thin Profile, Small Footprint
- Standard Mounting Flanges
- Low Cost Installation and Operation
- Backed by GUTS® (Guaranteed Uptime Support)

## Low Profile Waterpump Performance



## Low Profile Waterpump Specification:

| Pump Size  | 4"      | 6"       | 8"       |
|--|---------|----------|----------|
| ISO Flange   | 100 mm  | 160 mm   | 200 mm   |
| Metal Seal Flange  | 6" O.D. | 8" O.D.  | 10" O.D. |
| Low Profile Waterpump Water Vapor Pumping Speed          | 800 l/s | 1900 l/s | 3800 l/s |
| Total Water Vapor Pumping Speed (with typical Turbopump) | 900 l/s | 2100 l/s | 4000 l/s |
| Air (N <sub>2</sub> ) Conductance                        | 500 l/s | 1150 l/s | 2000 l/s |

## On-Board® Capabilities

Ease of use- Comprehensive monitoring and control is easy, from a keypad mounted on the pump or on an accessory rack, a Network Interface Terminal or by On-Board® Central Control, an intuitive, PC-based graphical user interface.

Consistent vacuum, with process monitoring and control- Continuous, real-time monitoring and control of critical parameters give stable base pressures, and provide data readout for correlation with process lots. Programmable alarms allow you to respond quickly to any unexpected process variations.

More efficient process operations- The On-Board® platform networks all types of On-Board® pumps, allowing uniform, centralized monitoring, control, and maintenance of all pumps in the process area via On-Board® Central Control software.

Within the network, pumps associated with multi-pump process tools can be controlled as groups by On-Board® Central Control software, as well as by each process tool's controller. Modem access capability allows remote operation and maintenance.

## Backed by GUTS®

All CTI-Cryogenics® products are backed by the GUTS rapid response network, our unique, comprehensive customer support program. When you call a GUTS service center, you are guaranteed immediate, competent response and action by a vacuum expert from our world-wide technical support staff. We're at work for you 24 hours a day, 365 days a year. 1-800-FOR-GUTS (800-367-4887).

## Official Distributor in Australia



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