



CRITICAL COMPONENTS  
GROUP

# Polycold® AquaTrap® AT-IC In Chamber

VACUUM PRODUCTS

## Benefits

- Improved throughput for higher yields
- Very low vibration
- Easy to integrate
- Compressor can be located remotely

The AquaTrap® is a highly economic means of upgrading your vacuum system by removing the extra water vapor that is present in a wide range of vacuum applications. At pressures above  $10^{-6}$  torr, water vapor constitutes almost 95% of the gas load experienced by your vacuum system. By increasing your system's water pumping capability, you can dramatically improve your pumpdown times and base vacuum performance. Operating at temperatures below 130 Kelvin assures you of maintaining water pumping to pressures below  $1 \times 10^{-9}$  torr.

## Simple Integration

The in-chamber AquaTrap® uses standard commercial flanges for customer interface. Installation can be made through any standard port on your system that has a bore of 38 mm (1.5 inches) or greater, and there is no need for adapters or spool pieces. Standard and custom pumping panels are available enabling you to tailor the pumping array to meet your system's requirements both in the area of pumping speed and system fit.

## Easy-to-Use

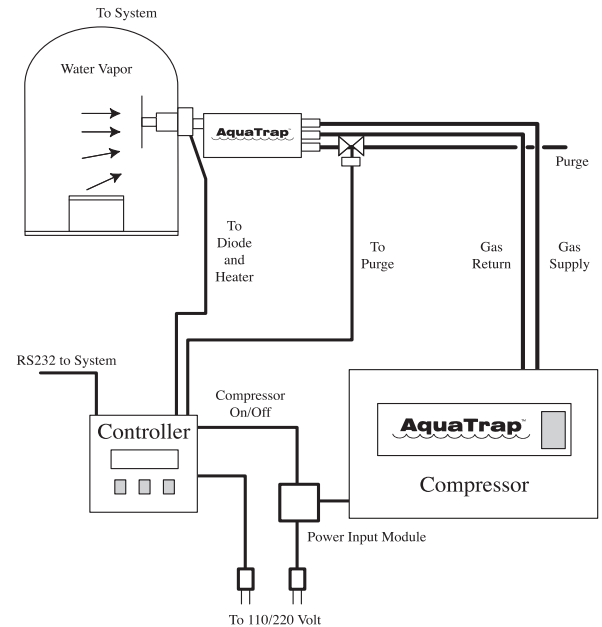
The AquaTrap® has no cumbersome cold refrigeration lines and the refrigerator can be remotely located up to 100 feet from the compressor. The system is configured with a specially designed AquaTrap® controller which heats and purges the unit for quick and easy regeneration. No complex electronics are required to maintain the optimum water pumping temperatures.

## Very Low Vibration

The AquaTrap® refrigerator contains no moving parts thereby minimizing any effect on the vacuum system's vibration signature. No moving parts also means less opportunity for mechanical failures and downtime!

## Problem Free Operation

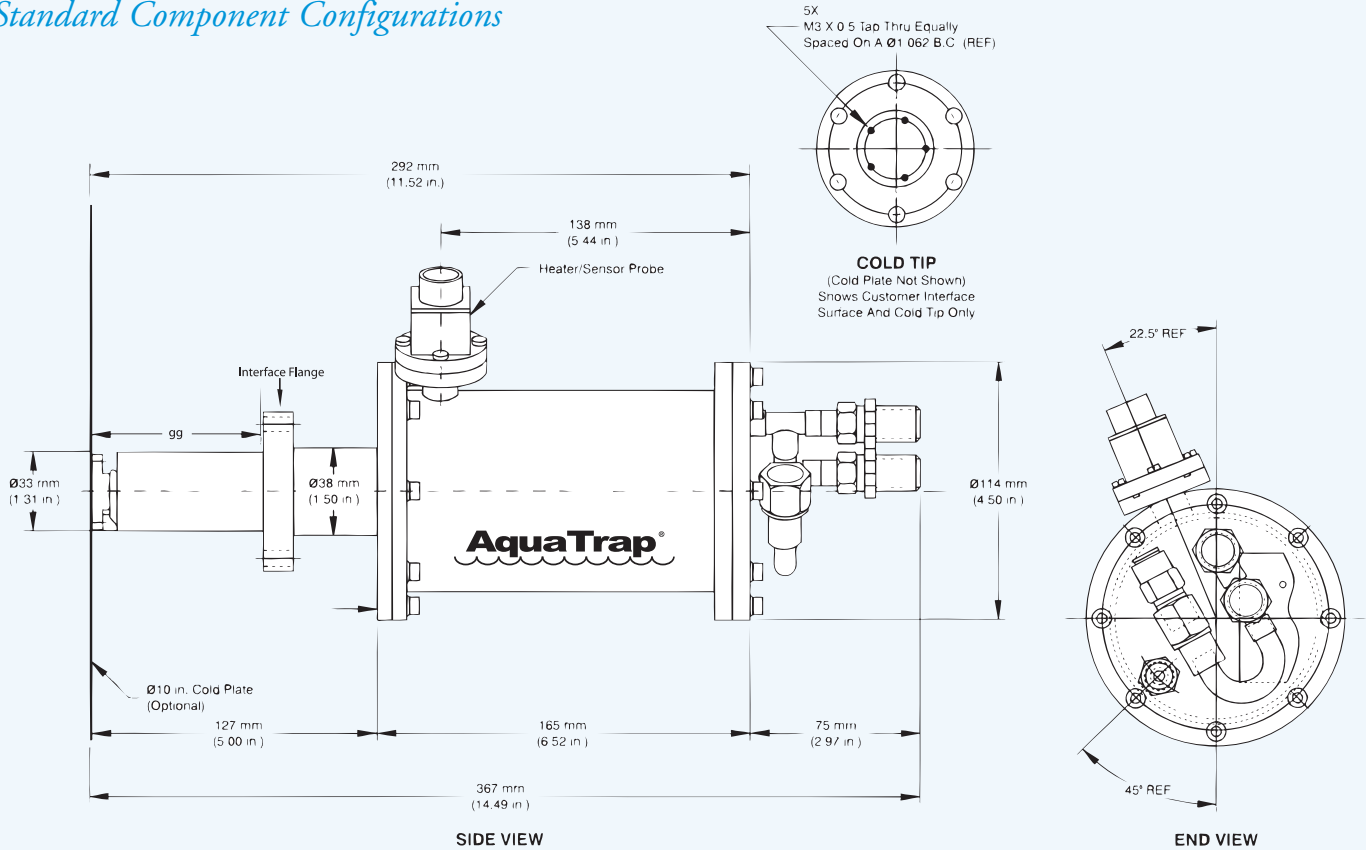
Brooks Automation's world renowned, superior manufacturing standards are evident in the attention to detail given to the AquaTrap® design. For example, the refrigerator is nickel plated to provide maximum corrosion resistance. The entire system is designed for problem free operation.



**Water Pumping Speed (actual) (with 250mm diameter cold plate):**  
10,000 liters/second  
**Cold-to-Cold Time:**  
90 Minutes  
**Chamber Port:**  
38 mm (1.5 in) Minimal

**Standard Nickel Plated Cold Plates:**  
Round, 250mm (9.8 in) diameter  
Rectangle, 150 x 225mm (5.9 in. x 8.9 in.)  
Note: Custom cold plates can be designed upon request  
**Weight of Pump (without interface flange):**  
4 kg (9 lbs.)

Standard Component Configurations



**Water Pump:**  
Equipped with both a heater and a diode

**Compressor:**  
Power Requirements:  
- 550 W nominal,  
100/120/220/240 Volts  
- 60/50Hz single phase  
Weight = 31.8 kg (70 lbs.)

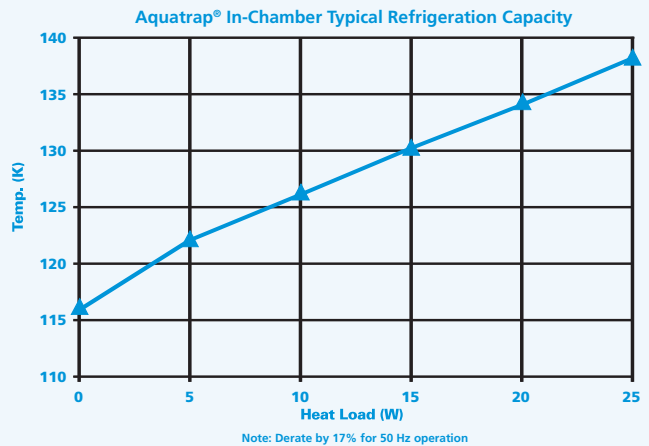
**Dimensions:**  
- 44.5 cm (17.5") width  
- 35.6 cm (14.0") height  
- 27.9 cm (11.0") depth

**Gas Lines:**  
Standard 10 ft. flexible lines  
Alternate line and cable lengths also available

**Controller AT-RC**  
Designed for 110/220V, single phase, 50/60 Hz  
Purge Solenoid 1/4" NPT user connection  
10 Ft. trap controller cables  
25 Ft. compressor control cable nominal  
(see AT-RC Regen Controller brochure for details)

**Custom Interface Flanges:**  
CF, OD (in) : 2.75, 3.375, 4.50, 4.625, 6.00, 6.75, 8.00  
ISO/NW, OD (mm): 63, 80, 100, 160, 200, 250  
ISO/NW blank, OD (mm): 40, 50

**Interface Flange to Cold Tip Distance (gg):**  
Customer specified 10-99mm



For more information, please contact your local Brooks Automation sales representative or visit [www.brooks.com](http://www.brooks.com).

