

# EDWARDS POLYCOLD® COOLING SOLUTIONS

Edwards Polycold® cooling solutions bring significant productivity improvement to material converting applications while minimising the environmental footprint.

## **Polycold® MaxCool Cryochillers**

Polycold® MaxCool Cryochillers are closed loop cryogenic refrigeration systems that provide up to 4000 watts of cooling. They can be used to capture water vapour at high-pumping speeds up to 400.000 l/sec and other condensable substances. When added to your vacuum system the MaxCool can reduce pumpdown to high vacuum by as much as 75% and is designed to enable fast cycling for demanding coating applications. MaxCool is also used to cool objects to temperatures as low as -145°C, such as electrostatic chucks for semiconductor wafer processing. The different models in our range offer 2000, 2500, or 4000 watts of cooling.



## **Polycold® PCC Compact Coolers**

The Polycold® PCC is a compact, high-performance, low vibration cooling system that brings efficiency and reliability for highly sensitive applications. Reaching temperatures as low as -203° C the PCC delivers proven, dependable cooling. Its compact design and remote cold end give you a robust, easy to maintain system with a minimal footprint.



## **Polycold® PGC-152 Gas Chiller**

Polycold® Gas Chillers use Polycold®'s auto-cascade refrigerant cycle with a mixed gas refrigerant, to provide ultra-low temperatures without the cost, risk or inconvenience of liquid nitrogen. Now you can cool your dry gas to temperatures between -90° C and -125° C without sacrificing high flow rates.



## **Polycold® P-102 Cryocooler**

Polycold® Cryocoolers provide compact, easy-to-use cold-trapping to protect roughing pumps or prevent backstreaming from diffusion pumps. The P-102 can also be used for water pumping down 10-8 Torr providing heat removal up to 120 Watts

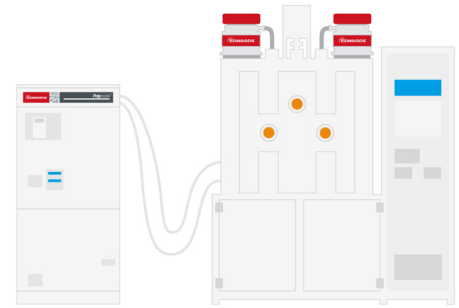


- Available CE, SEMI F47 & SEMI S2 compliance
- Refrigerant gases are US EPA-SNAP approved, CFC-Free, HCFC-Free, and meet European Union laws

## Polycold® MaxCool/STP Turbopump process solution

Edwards and Polycold have integrated into a single solution partner to deliver innovative vacuum and cooling systems. We strive to increase your productivity, enhance your final product quality and lower your cost of ownership while helping you to meet your carbon footprint targets.

Polycold® MaxCool Cryochiller working with Edwards STP Turbomolecular vacuum pumps as an integrated system offers a complete solution for most demanding high-quality coating applications.



## Features and benefits

- STP turbopumps reduce power consumption compared to a diffusion Pump by > 90%
- 100% uptime no yearly services or oil changes
- Increased pumping performance
- Extremely low ambient noise and vibration
- Any orientation mounting and reduced space requirements – ease of installation
- Ultra clean safe operation eliminating risk of contamination
- A 10” to 20” size diffusion pump can be easily replaced by a single turbopump

## Example of possible savings

	Edwards HT20 Diffusion Pump	STP-iXA4506 maglev turbopump	% Reduction	CO <sub>2</sub> Reduction per year (tonnes)
Power	12.6 kW	0.3 kW*	98%	57.9**
Water	960 l/hr	180 l/hr	81%	

\* at 300 sccm gas load power

\*\* energy source units vs kW/h

Kg CO<sub>2</sub> = kWh 0.537

Source: Department for Environment, Food, Rural Affairs, UK

© Edwards Limited 2023

All rights reserved Edwards and the Edwards logo are trademarks of Edwards Limited

Whilst we make every effort to ensure that we accurately describe our products and services, we give no guarantee as to the accuracy or completeness of any information provided in this datasheet.

Edwards Ltd, registered in England and Wales  
No. 6124750, registered Office: Innovation Drive,  
Burgess Hill, West Sussex RH15 9TW

Publication Ref: 2023-01-18 STP

## GLOBAL CONTACTS

### EMEA

UK	+44 (0) 1444 253 000 (local rate) 0845 921 2223
Belgium	+32 2 300 0730
France	+33 1 4121 1256
Germany	0800 000 1456
Italy	+39 02 48 4471
Israel	+972 8 681 0633

### ASIA PACIFIC

China	+86 400 111 9618
India	+91 20 4075 2222
Japan	+81 47 458 8836
Korea	+82 31 716 7070
Singapore	+65 6546 8408
Taiwan	+886 3758 1000

### AMERICAS

USA	+1 800 848 9800
Brazil	+55 11 3952 5000

