

CTI-Cryogenics® Cryo-Torr 20HP Cryopump

Extremely high pumping speeds insure faster pump down times – and more production uptime

New cryogenic refrigerator design allows for high temperature operation and greater vacuum reliability

Clean, dependable vacuum

Oil-free operation eliminates high LN2 costs while providing better vacuum quality

Fast and easy maintenance with low overall operating cost

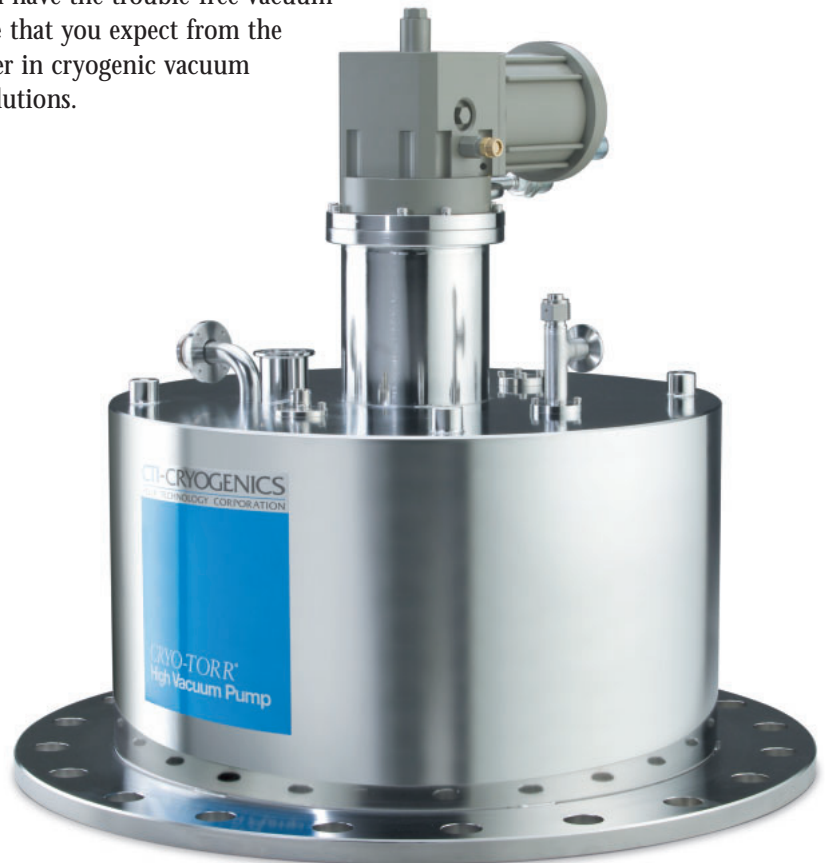
*Backed by GUTS®
(Guaranteed Up-Time Support)*

The Cryo-Torr 20HP Cryopump, from Helix Technology Corporation's CTI-Cryogenics Division, delivers a new level of vacuum performance and reliability to applications that demand extremely high pumping speeds.

This Cryo-Torr 20HP High Performance Cryopump is the perfect solution for metal deposition, optical coating, space simulation and other applications – such as flat panel display manufacturing – where the speed, cleanliness and reliability offered by a large diameter cryopump is essential to achieving optimum performance and throughput. As with all vacuum solutions from CTI-Cryogenics, the Cryo-Torr 20HP is ideal for all processes that demand the highest level of vacuum quality.

Key to the Cryo-Torr 20HP's extraordinary performance is an all-new refrigerator that produces significantly higher refrigeration capacity, vacuum performance and reliability. This extended refrigeration capacity allows the Cryo-Torr 20HP cryopump to handle high heat and gas loads – assuring more reliable vacuum performance at the boundaries of your process or application.

CTI-Cryogenics Cryo-Torr 20HP cryopump, coupled with Helix Technology Corporation's global applications and customer support infrastructure, assures that you will have the trouble-free vacuum performance that you expect from the world's leader in cryogenic vacuum pumping solutions.



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Performance and Features

Performance		
Gas Pumping Speeds	Water	31,500 Liters/Sec
	Air	10,000 Liters/Sec
	Hydrogen	15,000 Liters/Sec
	Argon	8,400 Liters/Sec
Gas Capacities	Hydrogen	46 Standard Liters
	Argon	5,700 Standard Liters
Throughput	Argon	1,500 Sccm (19 Torr-Liters/Sec)
Crossover		300 Torr-Liters
Cooldown Time		150 Minutes @ 50Hz Power
		140 Minutes @ 60Hz Power

Physical Features and Facilities Requirements		
Cryopump Mounting Flange	20 inch ANSI (27.5 inch / 699 mm OD)	
Cryopump Weight	160 lbs / 72 kg	
System Electrical Requirements	Nominal Voltage:	200/220 VAC 3-Phase @ 50/60 Hz
	Nominal Input Power:	7.5 kW @ 60 Hz
		5.7 kW @ 50 Hz
	Operating Range:	200 – 230 @ 60 Hz
		190 – 220 @ 50 Hz
System Cooling Requirements	Water Flow:	1.3 – 4.0 gpm
Complete Dimensions	Contact Helix for complete Interface/Installation drawings	

Note: Accessories to support the full-featured integration of Cryo-Torr cryopumps are available. Please contact Helix Technology Corporation for a complete list.

Backed by GUTS®

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

HELIX

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