

CRYOPUMP ICP 100



The ICP 100 from Genesis Vacuum Technologies is a CE and SEMI compliant high performance cryopump, semiconductor production, disk drive, optical coating, demanding medical diagnostics, surface analysis, and high vacuum research applications. A variable speed motor allows the customer to regenerate the pump much faster for reduced downtime, and a lower base pressure delivers better process results.



Customers interested in upgrading their existing cryopump system with a Genesis Vacuum Technologies cryopump or compressor should contact Genesis for specific interfacing requirements.

Reduced Downtime

The pump may be ordered as either a High Vacuum (HV) pump or an Ultra-High Vacuum (UHV) pump. All UHV pumps use metal seals and are tested to 2×10^{-9} Torr. The ICP 100 is also available with a quick regeneration option that includes all the auxiliary hardware required to perform automatic and quick regeneration, including heaters on the first and second stages, a roughing valve, a purge valve, and a pressure sensor. The ICP 100 can be furnished with a ConFlat or an ISO-100 flange, and can be fitted with a baffle for most applications, or with a fixed throttle plate for sputtering applications.

All Genesis cryopumps require the following components:

- Compressor: Either a Genesis 2.1 single-pump compressor or HC 70 multi-pump compressor
- Helium Hoses: Available in pairs, in lengths of up to 60'
- Electrical Cables: An expander power cable, and pump I/O cable when the Gen2 is utilized for quick regeneration

The Genesis 2.1 Compressor is a low form factor compressor designed for single-pump applications, while the powerful Genesis HC 70 can drive up to four ICP 100 cryopumps. The following options are useful for multiple pump operation, automatic regeneration, roughing arbitration (to insure only one pump is regenerated at a time during group regeneration), and network hook-up:

- Gen2 Controller: Required when automatic and quick regeneration is desired for each pump
- Cryoboss Network Controller: Links up to 24 pumps together via RS-485 bus connections

The ICP 100 pump capacity allows longer intervals between the regenerations, and the smaller size makes the ICP 100 easier to handle, install and maintain.

ICP 100 CRYOPUMP

TECHNICAL DATA

MODEL	ICP 100	
Weight	Kg	10
Space Envelope	inches (mm): W x D x H	5.97" x 8.68" x 17.86" (153mm x 220mm x 454mm)
Pumping Speed (Liters/sec)	Nitrogen Hydrogen Argon Water	600 750 500 1100
Reachable Pressure	Torr	<10 ⁻⁹
Maximum Flow Rate for Argon	Torr L/sec	5.0
Pumping Capacity (Std Liters)	Argon Hydrogen	90 2
Crossover	Torr L	55
Standard Cooldown Time	min.	50
Standard Regeneration Time	Full Regeneration (minutes) Quick Regeneration (minutes)	70 35
Flange Options	ANSI ASA, ANSI ASA Rotatable, ISO Clamp, ISO Bolted, ConFlat, ConFlat Rotatable	



ORDERING INFORMATION *Please specify the following:*

DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
ICP 100 High Vacuum, Long Body with ConFlat flange	521-023	ICP 100 Ultra High Vacuum, Short Body with ConFlat flange	521-121
ICP 100 Fixed Sputter, Long Body with ConFlat Flange	521-3201	ICP 100 High Vacuum With Quick Regen & ISO-100 flange	521-1302
ICP 100 High Vacuum with Quick Regen, CE Mark, ISO-100 Flange	621-1302	ICP 100 High Vacuum with ISO-100 Flange	521-1301

ACCESSORIES	PART NUMBER	NOTES
Helium Compressor 2.1: Single Cryopump HC 70: Up to 3 Cryopumps	631-1300 634-2800	The 2.1 is a small form factor, single pump compressor. The HC 70 compressor can power up to 3-ICP 200 pumps.
Gen 2 Controller (for up to three Cryopumps)	642-1010	For each additional pump add "1" to next to last digit of part number.
Cryoboss Network Controller	645-3000	Standalone "half rack" or available as module for Gen 2 Controller
Helium Hoses, Set	Contact Genesis	For multiple pumps on the same compressor, add manifold
Helium Manifold Set	565-003 565-004	2:1, 3/4", set: for 2 cryopumps 4:1, 3/4", set: for up to 4 cryopumps
Pump I/O Cable	Contact Genesis	One per pump required. Lengths up to 100'
Expander Power Cable	Contact Genesis	One per pump required. Lengths up to 100'
Communication Cable	Contact Genesis	To connect modules within Gen 2 and between Gen 2 and Cryoboss