

CRYOPUMP ICP 150



The ICP 150 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.

Faster Regeneration

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 150 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 150 can be furnished with a ConFlat or an ISO-160 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 150 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 150 pump capacity allows longer intervals between the regenerations, and the smaller size makes the ICP 150 easier to handle, install and maintain.

ICP 150 CRYOPUMP

TECHNICAL DATA

MODEL	ICP 150	
Weight	Kg	11
Space Envelope	inches (mm): W x D x H	7.97" x 8.97" x 17.67" (202mm x 228mm x 449mm)
Pumping Speed (Liters/sec)	Nitrogen Hydrogen Argon Water	660 1300 550 2200
Reachable Pressure	Torr	<10 ⁻⁹
Maximum Flow Rate for Argon	Torr L/sec	6.0
Pumping Capacity (Std Liters)	Argon Hydrogen	860 10
Crossover	Torr L	150
Standard Cooldown Time	min.	80
Standard Regeneration Time	Full Regeneration (minutes) Quick Regeneration (minutes)	100 45
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 150 High Vacuum with ConFlat flange	522-023	ICP 150 Ultra High Vacuum with ConFlat flange	522-123
ICP 150 High Vacuum, Quick Regen with ConFlat Flange	522-026	ICP 150 Fixed Sputter With ConFlat flange	522-223
ICP 150 Fixed Sputter with Quick Regen, ConFlat Flange	522-226	ICP 150 High Vacuum with Quick Regen ConFlat Flange, CE Mark	622-1202
ICP 150 Ultra High Vacuum, with Quick Regen, CE Mark ConFlat Flange	622-2202	ICP 150 High Vacuum with Quick Regen, CE Mark & ISO-160 flange	622-1302
ICP 150 High Vacuum, with ISO-160 Flange	522-033	ICP 150 High Vacuum With CE Mark & ISO-160 flange	622-1301
ICP 150 High Vacuum, with Quick Regen, ISO-160 Flange	522-036		

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