

CRYOPUMP ICP 250L



The ICP 250L from Genesis Vacuum Technologies is a CE and SEMI compliant high performance cryopump for demanding semiconductor production, 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.

The ICP 250L can be furnished with a ConFlat or a ISO-250 flange, and the reduced height in the low profile pump eases installation and minimizes the space required for the cryopump. The ICP 250L can be fitted with a baffle for most applications or with a fixed throttle plate for sputtering applications, and the expander in the ICP 250L pump can be oriented right, left, or in line with the pump body.

Easy to Install and Maintain

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 250L 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.

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 three ICP 250L 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:

- A Gen2 controller is required when automatic and quick regeneration is desired for each pump
- A Cryoboss network controller links up to 24 pumps together via RS-485 bus connections

The ICP 250L pump capacity allows longer intervals between the regenerations, and the smaller size makes the ICP 250L easier to handle, install and maintain.

ICP 250L CRYOPUMP

TECHNICAL DATA

MODEL	ICP 250L	
Weight	Kg	26
Space Envelope	inches (mm): W x D x H	20.53" x 11.42" x 7.44" (521mm x 290mm x 189mm)
Pumping Speed (Liters/sec)	Nitrogen Hydrogen Argon Water	2500 5200 2000 6500
Reachable Pressure	Torr	<10 ⁻⁹
Maximum Flow Rate for Argon	Torr L/sec	10
Pumping Capacity (Std Liters)	Argon Hydrogen	2000 30
Crossover	Torr L	300
Standard Cooldown Time	min.	120
Standard Regeneration Time	Full Regeneration (minutes) Quick Regeneration (minutes)	150 60
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 250 Low Profile, High Vacuum with ConFlat flange, Expander Right	524-421	ICP 250 Low Profile High Vacuum, CE Mark with Quick Regen ISO-250 flange, Expander Right	624-1306
ICP 250 Low Profile, High Vacuum with Quick Regen with Conflat flange, Expander Right	524-422	ICP 250 Low Profile High Vacuum with ISO-250 flange, Expander Right	524-1303
ICP 250 Low Profile, High Vacuum, with Quick Regen ISO-250 flange, Expander Right	524-432		

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