

# CRYOPUMP ICP 300



The ICP 300 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 300 is available in two designs which can both be furnished with ConFlat, ANSI-10 or ISO-320 flanges. The ICP 300 is an upright configuration, and the ICP 300L is a low profile configuration. The ICP 300 can be fitted with a baffle for most applications or with a fixed throttle plate for sputtering applications, while the reduced height in the ICP 300L eases installation and minimizes the space required for the cryopump. For added flexibility, the expander in the ICP 300L pump can be oriented right, left, or in line with the pump body.

## Higher Capacity, Smaller Size

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  $2 \times 10^{-9}$  Torr. The ICP 300 and ICP 300L pumps can be ordered 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 two ICP 300 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 300 and ICP 300L pump capacity allows longer intervals between the regenerations, and the smaller size makes the ICP 300 pumps easier to handle, install and maintain.

# ICP 300 CRYOPUMP

## TECHNICAL DATA

MODEL		ICP 300	ICP 300L
Weight	Kg	34	21
Space Envelope	inches (mm): W x D x H	10.39" x 16.00" x 22.00" (264mm x 406mm x 559mm)	22.65" x 12.00" x 8.38" (575mm x 305mm x 213mm)
Pumping Speed (Liters/sec)	Nitrogen Hydrogen Argon Water	3000 4900 2500 10000	3000 4900 2500 10000
Reachable Pressure	Torr	<10 <sup>-9</sup>	
Maximum Flow Rate for Argon	Torr L/sec	10	
Pumping Capacity (Std Liters)	Argon Hydrogen	2100 30	2100 30
Crossover	Torr L	300	
Standard Cooldown Time	min.	120	120
Standard Regeneration Time	Full Regeneration (minutes)	160	160
	Quick Regeneration (minutes)	60	
Flange Options		SI ASA, ANSI ASA Rotatable, ISO Clamp, ISO Bolted, ConFlat, ConFlat Rotatable	



## ORDERING INFORMATION *Please specify the following:*

DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
ICP 300 High Vacuum with ConFlat flange	525-1201	ICP 300 High Vacuum with ANSI-10 flange	525-1101
ICP 300 High Vacuum with ConFlat Flange Quick Regen	525-1202	ICP 300 High Vacuum With Quick Regen & ANSI- 10 flange	525-1102
ICP 300 Quick Regen with ConFlat Flange	525-2202	ICP 300 High Vacuum with Quick Regen CE Mark & ANSI- 10 flange	625-1102
ICP 300 High Vacuum with Quick Regen, CE Mark ConFlat Flange	625-1202	ICP 300 High Vacuum with Quick Regen & ISO-320 flange	623-1321
ICP 300 Low Profile, High Vacuum Expander Right, ConFlat flange	525-1203	ICP 300 Low Profile, High Vacuum with Quick Regen, Expander Right, ISO-320 flange	525-432
ICP 300 Low Profile, High Vacuum with Quick Regen, Expander Right, ConFlat flange	525-422	ICP 300 Low Profile, High Vacuum with Quick Regen, Expander Right, ISO-320 Flange CE Mark	625-1306
ICP 300 Low Profile, High Vacuum with Quick Regen, Expander Right, ANSI-10	525-412	ICP 300 Low Profile, High Vacuum with ANSI-10 Flange, CE Mark	625-1106

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