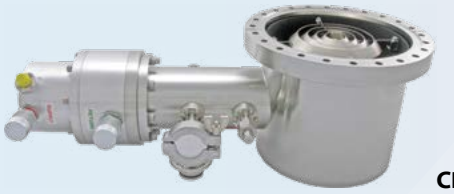
MARATHON® CP SERIES CRYOPUMPS



CP-8LP



CP-250LP



CP-8



CP-12



CP-16



CP-20

Performance Specifications

	CP-8	CP-8LP	CP-250LP	CP-12	CP-16	CP-20
Air (liters/second)	1,500	1,800	3,000	3,600	4,800	9,700
Water (liters/second)	4,200	4,200	6,300	9,560	17,300	29,100
Argon (liters/second)	1,250	1,500	2,500	3,100	4,100	8,300
Hydrogen (liters/second)	2,300	3,000	5,000	7,300	12,000	14,000
Argon Throughput (torr liters/second)	11.0	11.0	11.0	12.6	11.4	11.3
Argon Capacity (standard liters)	1,200	1,600	1,600	3,100	5,500	6,000
Hydrogen Capacity (standard liters)	25	23	30	50	50	33
Crossover Rating (torr-liters)	220	220	300	650	500	400

Marathon® CP Series Cryopumps from SHI Cryogenics Group are specifically designed to meet the needs of high vacuum processes. Applications for these versatile systems range from custom laboratory equipment to industrial-scale tools. Manufacturers of semiconductor devices, flat panel displays, test equipment, solar manufacturing and a wide variety of coating and thermal vacuum systems require efficient, reliable and robust systems that offer a low cost of ownership. The Marathon CP Series Cryopumps from SHI Cryogenics Group deliver on all fronts.

A range of standard and low profile enclosures, ANSI, ISO and CF flanges, as well as manual and fully automatic features, ensure that users have modularity and flexibility to choose from when designing their systems.

All Marathon CP Series Cryopumps are driven by highly-efficient and reliable helium compressors. These compressors boast an industry leading 30,000 hour maintenance interval. Compressors are available in single-phase and three-phase, low and high voltage versions.

For those users requiring the latest in efficient, fully-automated operation, SHI Cryogenics Group offers our Marathon Cryopump Controller (MCC). The MCC enables fully automatic operation of the cryopump using commands from a host computer and industry standard cryopump protocol. If you do not utilize a host computer, optional software is available to interface the MCC to a standard Windows-based computer. The result of utilizing the Marathon CP Cryopump with MCC is greatly reduced downtime between production cycles, improved process times and better overall efficiency of the user's process.

All Marathon CP Series Cryopumps are supported by a worldwide sales and support network. They can be readily maintained without breaking vacuum or removing the cryopump from the chamber for return or replacement. As a result, serviceability maximizes production uptime and lowers the total cost of ownership.

Visit us anytime, worldwide: shicryogenics.com

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