

MARATHON[®] CP-12 CRYOPUMP



The versatile Marathon[®] CP-12 Cryopump was specifically designed to meet the needs of high vacuum applications. Its innovative design assures that users achieve the highest performance possible, while keeping it competitively priced.

Depending upon the users electrical requirements, the CP-12 can be driven by either the HC-8E4 or F-70 compressor. Each compressor is specifically designed for helium service and offers a unique 30,000-hour service interval.

Additionally, the optional Marathon Cryopump Controller (MCC) enables fully automatic operation of the cryopump using commands from a host computer using standard cryopump protocol. The result is greatly reduced downtime between production cycles, improved process times and better

overall efficiency of the user's process. Most importantly, by utilizing the MCC system, users can achieve rapid "cold-to-cold" times.

The CP-12's compact and robust design fits easily onto new and existing systems. The ability to service the CP-12 "in-situ" saves the user maintenance costs and downtime, and does not require removing a large cryopump or breaking chamber vacuum for return or replacement. The result is maximum uptime and minimum cost of ownership. Like all SHI Cryogenics Group products, it is supported by a worldwide sales and support network.

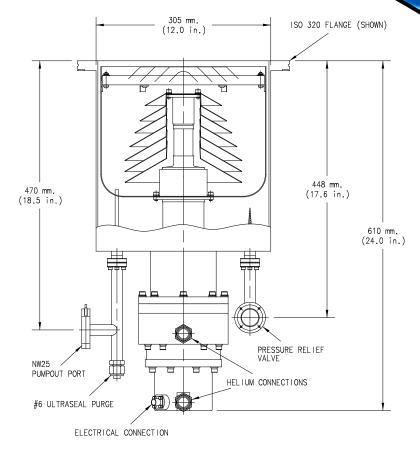
Features

- Patented, pneumatically-driven cold head with limited moving parts for reliable operation and on-site, "in-situ" maintenance
- High capacity for longer operation
- High crossover pressure and pumping speeds for faster pumpdowns
- Drop-in replacement for existing systems
- Option for fully automatic operation and fast regeneration (i.e. superior "cold-to cold" time)

Specifications

| Air Water | 3,600 L/sec 9,560 L/sec | Crossover Rating: | 650 torr-liters |
|-------------------|-------------------------------------|---|--|
| Argon Hydrogen | 3,100 L/sec 7,300 L/sec | Cooldown: | 90 minutes |
| Argon | 12.6 torr-liters/sec (1000 sccm) | Inlet Flange: | ANSI 10 inch, ISO 320 mm or Conflat 14 inch |
| Argon | 3,100 standard liters | Weight: | 41 kg (90 lbs.) |
| | Water Argon Hydrogen Argon | Water9,560 L/secArgon3,100 L/secHydrogen7,300 L/secArgon12.6 torr-liters/sec (1000 sccm)Argon3,100 standard liters | Water 9,560 L/sec Argon 3,100 L/sec Cooldown: Hydrogen 7,300 L/sec Argon 12.6 torr-liters/sec (1000 sccm) Weight: Argon 3,100 standard liters |





52 mm. (2.0 in.) (4.6 in.) (4.6 in.) PRESSURE RELIEF VALVE VALVE 49 mm. (1.9 in.) THERMOCOUPLE GAUGE PORT TEMPERATURE SENSOR

For Information in:

Asia

Sumitomo Heavy Industries, Ltd.

ThinkPark Tower Cryogenics Division, Sales Department 1-1, Osaki 2-Chome, Shinagawa-Ku Tokyo 141-6025, Japan Phone: +81-3-6737-2550 Fax: +81-3-6866-5114 E-mail: cryo@shi.co.jp

Sumitomo Heavy Industries (Shanghai), Ltd.

Room 1301, Xingdi Business Building 1698 Yishan Road, Minhang District Shanghai 201103, P.R. China Phone: +86-21-3462-7660 Fax: +86-21-3462-7661 E-mail: Jin-Lin_Gao@shi.co.jp

SHI Cryogenics of Korea Co., Ltd.

Room 619-620, Venture Valley #958 Goseck-Dong, Kwonsun-Gu Suwon-City, Gyeonggi-Do, South Korea Phone: +82-31-278-3050 Fax: +82-31-278-3053 E-mail: Won_Bum_Lee@shi.co.jp

Europe

Sumitomo (SHI) Cryogenics of Europe, Ltd. 3 Hamilton Close, Houndmills Industrial Estate Basingstoke, Hampshire RG21 6YT United Kingdom Phone: +44 (0) 1256 853333 Fax: +44 (0) 1256 471507 E-mail: uksales@shicryogenics.com

Sumitomo (SHI) Cryogenics of Europe, GmbH

Daimlerweg 5a Darmstadt D-64293, Germany Phone: +49 (0) 6151 860 610 Fax: +49 (0) 6151 800 252 E-mail: contact@sumitomocryo.de

World Wide Web: www.shicryogenics.com

United States

Sumitomo (SHI) Cryogenics of America, Inc. 1833 Vultee Street Allentown, PA 18103 Phone: +1 610-791-6700 Fax: +1 610-791-0440 E-mail: sales@shicryogenics.com

Sumitomo (SHI) Cryogenics of America, Inc. 456 Oakmead Parkway Sunnyvale, CA 94085 Phone: +1 408-736-4406 Fax: +1 408-736-7325

Sumitomo (SHI) Cryogenics of America, Inc. 1500-C Higgins Road Elk Grove Village, IL 60007 Phone: +1 847-290-5801 Fax: +1 847-290-1984

© SHI Cryogenics Group 10/09