synergy
SYN·SYS·CO
systems corp

OMNI® Helium Compressors & Cryogenic Systems

- Locked into a single OEM's Cryogenic Pump and Compressor Technology?
- Upgrades Lacking Backward Compatibility?
- Break out of the Technology Silo!
- Upgrade and maintain with OMNI Cryogenic Systems.

OMNI® Helium Compressors drive Cryo-Torr®, On-Board®, Cryo-Plex®, Marathon®, and GENCRYO® pumps on the same tool at the same time.

OMNI® Helium Compressors replace your legacy compressors and give you the opportunity to upgrade legacy cryogenic pumps, one at a time, with superior performing products.

OMNI Cryogenic Systems interface with Networked and Non-Networked Tools and Cryo Pumps

OMNI® HELIUM COMPRESSORS:

- Run Standard and Auto Regen Pumps
- Run 2-phase or 3-phase Pumps
- Made in the USA
- Serviced in the USA
- Supported and Serviced Globally

OMNI® HELIUM COMPRESSORS REPLACE THE FOLLOWING COMPRESSOR MODELS

OMNI® 100WL	OMNI® 100AL	OMNI® 800WL	OMNI® 800AL	OMNI® 900WL	OMNI® 900AL	OMNI® 1000WL
Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled	Air Cooled	Water Cooled
REPLACES 8200 SCW M250	REPLACES 8200 SCA M125	REPLACES 8200 M350	REPLACES 8200	REPLACES 9600 / 8600 / 8500 8510 / 1020 / M600	REPLACES 1020R M600	REPLACES 9700 M700

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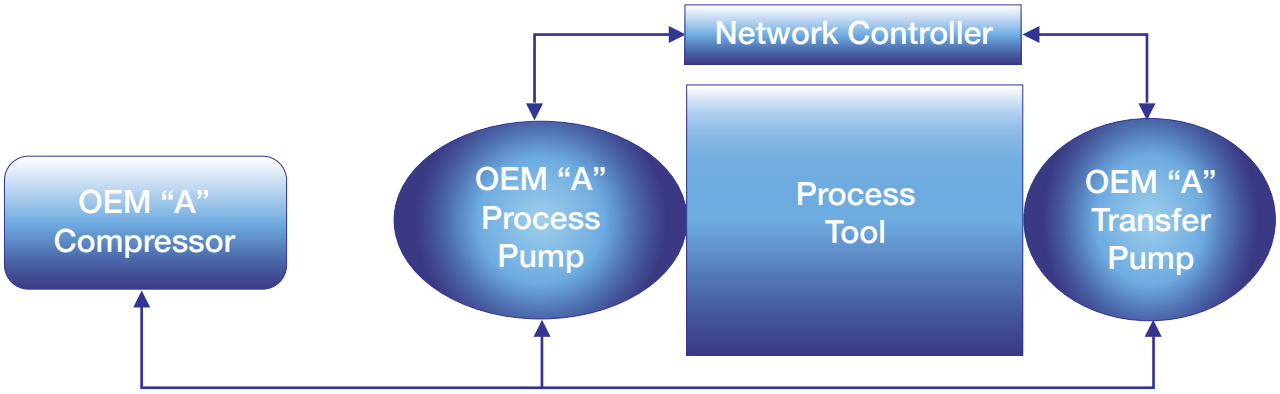
Access Pumps with World Class Specifications

A TRUE CUSTOMER STORY:

Once upon a time an End User was stuck in a Cryo-Pump Technology Silo

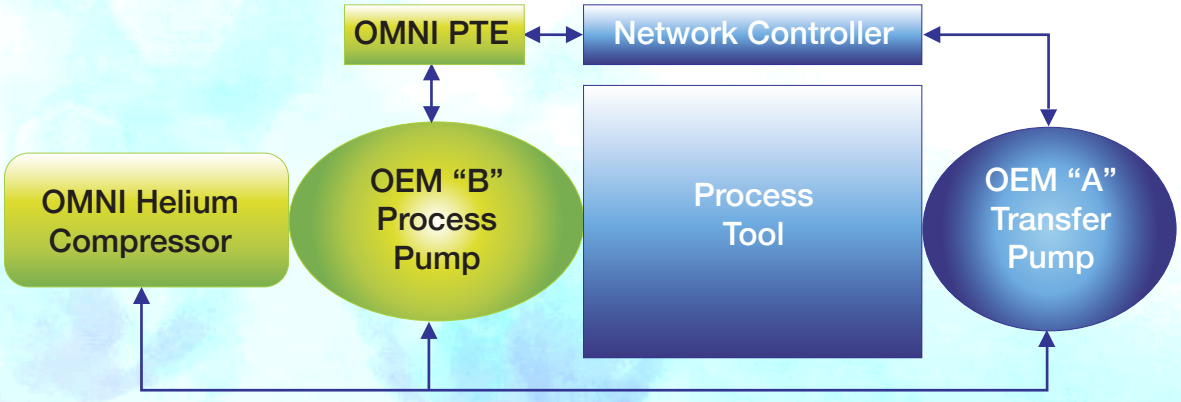
- Low carrying capacity caused frequent regens and production down time.
- New demanding processes further shortened time between regens.
- Higher Pumping speeds were needed for new processes and cooldown times were too long.
- OEM A did not have a higher performance pump for this Tool.
- OEM B did have a higher performance pump for the Tool.
    - However, OEM A's system could not drive OEM B's higher performance pump.
        - And OEM B's pump could not talk to OEM A's Network.



Then one day along came an OMNI Cryogenic System that solved the Problem

- An OMNI® Helium Compressor was installed
- It drove the higher performing OEM B pump and the OEM A pump
- The OMNI PTE module interfaced OEM B's pump with OEM A's Network Controller
- The manufacturing process now operated with improved performance due to:
    - Higher carrying capacity and longer times between regens
    - Higher pumping speeds and shorter cool-down times

And the End User enjoyed life outside the Silo.



Make your upgrade and resilient supply chain story a reality.
Contact SynSysCo to explore alternatives and start breaking out of the Technology Silo.

OMNI® HELIUM COMPRESSORS

- Perform excellently with On-Board®, Cryo-Torr®, Marathon® and GENCRYO® pumps
- Integrate with CTI-Networked & Non-Networked Tools and pumps
- Drive multiple cryogenic pumps, made by different manufacturers, at the same time, on the same tool
- Drive Standard Pumps & Auto-Regen pumps
- Drive 3-phase or 2-phase cryopump motors

FEATURES and BENEFITS

- Water cooled and air cooled versions
- 2 year warranty
- Two oil separators plus an adsorber
- 30,000+ hour adsorber exchange (42 months running 24/7)
- Drive standard and auto regen pumps simultaneously
- Drive 3-phase or 2-phase cryopumps
- Very quiet, smooth operation
- Simple controls and utility hook up
- Displays supply and return pressure
- Multiple service centers globally
- Small footprint vs. pumping capacity
- Simplicity of design provides for easy repair and maintenance
- Enables the selection and installation of Cryopumps based on their performance —not by their manufacturer

MODELS AND CAPACITIES

CryoPump	OMNI® 1000 Water Cooled	OMNI® 900 Water & Air Cooled	OMNI® 800 Water & Air Cooled	OMNI® 100 Water & Air Cooled
OnBoard and Cryo-Torr 8, 8F	3-4	3	2	1
OnBoard and Cryo-Torr 250F	2-3	1-2	1	1
OnBoard and Cryo-Torr 10, 10F	2-3	1-2	1	NA
OnBoard and Cryo-Torr 400	2	1	1	NA
OnBoard and Cryo-Torr 500	1	1	NA	NA
Cryo-Torr 20HP	1	1	NA	NA
Marathon CP8	3	2	1	1
Marathon CP250	3	2	1	1
Marathon CP12	2	1	1	NA
Marathon CP16	2	1	NA	NA
Marathon CP-20	1	1	NA	NA
Cryo-Plex 8	3	3	2	1
Cryo-Plex 10	2-3	1-2	1	NA
Cryo-Plex 16	2	1	NA	NA

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OMNI® HELIUM COMPRESSORS

OMNI®–100AL

Electrical Supply	Single Phase- 20 AMP 208-230 VAC/60Hz 220-240VAC/50hz
Power Consumption	2.25 kW at 50 Hz 2.60 kW at 60 Hz
Ambient Temp	4-40 ºC (40-104 ºF)
Cooling Air	20 m³/min. (706 cfm)
Dimensions (HxWxD)	876 x 443 x 453 mm (34.5 x 17.8 x 17.8 in.)
Weight	102 kg (225 lbs.)
Adsorber	30,000 hrs. (~ 42 mo.)

OMNI®-100WL

Electrical Supply	Single Phase- 20 AMP 208-230 VAC/60Hz 220-240VAC/50hz
Power Consumption	2.25 kW at 50 Hz 2.6 kW at 60 Hz
Ambient Temp	4-40°C: (40 -104F)
Dimensions (HxWxD)	617 x 443 x 453 mm (24.3 x 17.5 x 17.8 in.)
Weight	73 kg (160 lbs.)
Adsorber	30,000 hrs. (~ 42 mo.)

OMNI®–800AL
OMNI®–800AH

Electrical Supply	3 Phase- 25 AMP 208-230: 380/400/415 VAC 50/60 Hz
Power Consumption	3.6-3.8 kW at 50 Hz 4.6-4.8 kW at 60 Hz
Ambient Temp	4-38 ºC (40-100 ºF)
Dimensions (HxWxD)	888 x 442 x 512 mm (34.9 x 17.4 x 20.2 in.)
Weight	110 kg (242 lbs.)
Adsorber	30,000 hrs. (~ 42 mo.)

OMNI®–800WL
OMNI®–800WH

Electrical Supply	3 Phase- 25 AMP 208-230: 380/400/415 VAC 50/60 Hz
Power Consumption	3.6-3.8 kW at 50 Hz 4.6-4.8 kW at 60 Hz
Ambient Temp	4-40 ºC (40-104 ºF)
Dimensions (HxWxD)	532 x 443 x 493 mm (20.9 x 17.4 x 19.4 in.)
Weight	96 kg (212 lbs.)
Adsorber	30,000 hrs. (~ 42 mo.)

OMNI®–900AL
OMNI®–900AH

Indoor/Outdoor Unit

Electrical Supply	3 Phase- 30 AMP 208-230: 380/400/415 VAC 50/60 Hz
Power Consumption	6.6-6.9 kW at 50 Hz 7.5-7.8 kW at 60 Hz
Ambient Temp	-30 ºC to 44 ºC (-22 ºF to 112 ºF)
Dimensions (HxWxD)	Outdoor Unit (mm) 948 x 928 x 335 (inch) 36.5 x 37.4 x 13.5
Dimensions (HxWxD)	Indoor Unit (mm) 547 x 637 x 262 (inch) 21.6 x 10.4 x 25
Adsorber	30,000 hrs. (~ 42 mo.)

OMNI®–900WL
OMNI®–900WH

Electrical Supply	3 Phase- 30 AMP 208-230: 380/400/415 VAC 50/60 Hz
Power Consumption	6.6-6.9 kW at 50 Hz 7.5-7.8 kW at 60 Hz
Ambient Temp	4-40 ºC (40-104 ºF)
Dimensions (HxWxD)	532 x 443 x 493 mm (20.9 x 17.4 x 19.4 in.)
Weight	100 kg (225 lbs.)
Adsorber	30,000 hrs. (~ 42 mo.)

OMNI®–1000WL
OMNI®–1000WH

Electrical Supply	3 Phase- 40 AMP 208-230: 380/400/415 VAC 50/60 Hz	Cooling Water (Inlet)	6-9 L/min. (1.6-2.4 gal./min.) 5-25 ºC (41-77 ºF)
Power Consumption	6.7-7.2 kW at 50Hz 7.5-8.5 kW at 60 Hz	Dimensions (HxWxD)	625 x 444.5 x 528.4 mm (24.6 x 17.5 x 20.8 in.)
Ambient Temp	4-40°C (40-104°F)	Adsorber	30,000 hrs. (~ 42 mo.)
Weight	101 kg (220 lbs)		

OMNI® Helium Compressors

Features and Benefits

All OMNI Compressors are designed and built with the unique ability to operate multiple manufacturers' cryogenic pumps. This provides an unmatched cross-platform hardware selection to support the cryogenic pump market.

End Users and OEMs can operate with a highly resilient global supply chain for new equipment, replacement of existing equipment, and the repair and rebuild of system components.

OMNI® Helium Compressors are designed to operate On-Board® Cryopumps, On-Board® Water Pumps, Cryo-Torr® Cryopumps, Marathon® Cryopumps and GENCRYO® Cryopumps.

The OMNI-100 Series is excellent for R&D, Academic and small chamber applications involving 8 inch pumps.

The larger OMNI 800, 900 and 1000 Series use an integrated frequency converter, assuring excellent cryopump performance for both 50Hz and 60 Hz installations. These units support multi-pump platforms and provide robust performance for device manufacturing, space simulation, industrial and coating applications.

OMNI-100 Series Compressors:

The OMNI 100 Air Cooled and Water Cooled versions are designed to operate cryopumps up to 8 inches in size. The 100 Series is flexible in its use and installation needing only 220 VAC Single Phase power. They are excellent for replacing legacy compressor such as the 8200 single phase, or the discontinued SC air and water cooled units.

OMNI-800 Series Compressors:

The OMNI 800 Air Cooled and Water Cooled versions are designed to operate cryopumps up to 2 8-inch pumps or 1 10-inch pump. The 800 Series is a 3 Phase, nominal 208 VAC unit with high voltage configurations available. They are excellent for replacing 8200 3 Phase and 9600 3 Phase compressors

OMNI-900 Series Compressors:

The OMNI 900 Air Cooled and Water Cooled versions are designed to operate cryopumps up to 3 8-inch pumps, 2 10-inch, 1 16-inch, or 1 20-inch pump. They are designed for rugged longevity, high performance and ease of use. The 900 Series is a 3 Phase, nominal 208 VAC unit with high voltage configurations available. The unique OMNI-900 Air Cooled employs a split system that enables remote inside or outside location of the heat generating compression unit, while the control unit is indoors near your pump site. The OMNI-900 is an excellent alternative to the 9600.

OMNI-1000 Series Compressor:

The OMNI-1000 water cooled unit provides increased helium output and is an excellent choice for operating multiple large cryopumps, offering a single compressor solution. The OMNI-1000 reduces power consumption, water distribution and footprint when compared to using multiple compressors. It easily supports On-Board Cryopumps, On-Board Water pumps and Cryo-Torr Cryopumps, as well as CRYO H&I GENCRYO pumps and Sumitomo Marathon pumps; up to 4 8-inch pumps, 3 10- inch, 2 16- inch, or 1 20-inch or 22-inch pump.

OMNI Cryogeninc Systems use world class products from CRYO H&I of S. Korea, and Sumitomo Corporation of America to support and incrementally upgrade an installed base of legacy cryogenic equipment. This interchangeability provides exceptional supply chain resilience and offers the broadest equipment set available in the Market to support your business.

Specialized Features and System Configuration:

1. Automatic Regen:

OMNI systems with Auto Regen pumps use the CRYO H&I GEN Series Controller, or the Sumitomo MCC Controller to manage the pump. Equipment configurations can be 1 pump to 1 compressor, or multiple cryopumps to 1 compressor.

An HMI Pad assists with convenient set up of Fast Regen or Full Regen configurations.

Certain OMNI systems enable maintenance of optimal temperatures via the Cryopump's motor automatically shifting within a certain range depending on the temperature condition. The system enables variable motor RPM settings to meet customer needs regarding temperature, vibration characteristics and durability.

2. Systems optimized for customer conditions:

SynSysCo provides technical consulting to reduce electrical consumption, optimize space utilization, and implement maximum pumping speed, carrying capacity and cool down time.

OMNI systems use pumps from CRYO H&I of S. Korea, and Sumitomo Corporation of America to replace and upgrade from legacy pumps of other suppliers.
This provides supply chain resiliency and the opportunity to improve process performance on Tools on a case by case basis.

3. Maintenance of your OMNI class pumps and compressors:

SynSysCo provides service and support of all OMNI System equipment while also rebuilding cryopumps and compressors of legacy equipment suppliers. This unique rebuild capability benefits End Users with comprehensive support of installed legacy equipment and OMNI system upgrades.

GEN® Standard Series

GEN20SH

Performance Specifications

Pumping Speed	N_2 (l/s)	1,700
	H_2 (l/s)	3,200
	Ar (l/s)	1,400
	Water (l/s)	4,000
Pumping Capacity	Ar (Std.l)	1,500
	H_2 (Std.l)	15
Max Throughput	Ar (Torr • l/s)	9
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	60
Weight	kg	21
Inner Dia.	mm	200
Inlet Flange	ISO/JIS	

GEN25SH

Performance Specifications

Pumping Speed	N_2 (l/s)	2,500
	H_2 (l/s)	3,900
	Ar (l/s)	2,000
	Water (l/s)	7,000
Pumping Capacity	Ar (Std.l)	1,700
	H_2 (Std.l)	20
Max Throughput	Ar (Torr • l/s)	10
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	75
Weight	kg	25
Inner Dia.	mm	250
Inlet Flange	ISO/JIS	

GEN32SH

Performance Specifications

Pumping Speed	N_2 (l/s)	4,000
	H_2 (l/s)	8,000
	Ar (l/s)	3,600
	Water (l/s)	11,000
Pumping Capacity	Ar (Std.l)	3,000
	H_2 (Std.l)	38
Max Throughput	Ar (Torr • l/s)	13
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	80
Weight	kg	40
Inner Dia.	mm	320
Inlet Flange	ISO	

GEN40PH

Performance Specifications

Pumping Speed	N_2 (l/s)	5,000
	H_2 (l/s)	10,000
	Ar (l/s)	4,500
	Water (l/s)	16,000
Pumping Capacity	Ar (Std.l)	5,000
	H_2 (Std.l)	44
Max Throughput	Ar (Torr • l/s)	13
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	130
Weight	kg	60
Inner Dia.	mm	400
Inlet Flange	ISO(B) /JIS	

GEN50PH

Performance Specifications

Pumping Speed	N_2 (l/s)	10,000
	H_2 (l/s)	19,000
	Ar (l/s)	8,400
	Water (l/s)	30,000
Pumping Capacity	Ar (Std.l)	6,000
	H_2 (Std.l)	46
Max Throughput	Ar (Torr • l/s)	18
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	150
Weight	kg	105
Inner Dia.	mm	500
Inlet Flange	ISO(B) /JIS	

GEN55SH

Performance Specifications

Pumping Speed	N_2 (l/s)	14,000
	H_2 (l/s)	22,000
	Ar (l/s)	10,000
	Water (l/s)	36,000
Pumping Capacity	Ar (Std.l)	4,500
	H_2 (Std.l)	50
Max Throughput	Ar (Torr • l/s)	16
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	190
Weight	kg	115
Inner Dia.	mm	550
Inlet Flange	ISO(B) /JIS	

GEN15S

Performance Specifications

Pumping Speed	N_2 (l/s)	660
	H_2 (l/s)	1,300
	Ar (l/s)	550
	Water (l/s)	2,200
Pumping Capacity	Ar (Std.l)	860
	H_2 (Std.l)	10
Max Throughput	Ar (Torr • l/s)	6
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	80
Weight	kg	11
Inner Dia.	mm	150
Inlet Flange	ISO/CF	

GEN20S

Performance Specifications

Pumping Speed	N_2 (l/s)	1,700
	H_2 (l/s)	3,200
	Ar (l/s)	1,400
	Water (l/s)	4,000
Pumping Capacity	Ar (Std.l)	2,500
	H_2 (Std.l)	18
Max Throughput	Ar (Torr • l/s)	9
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	60
Weight	kg	25
Inner Dia.	mm	200
Inlet Flange	ISO/JIS	

GEN25S

Performance Specifications

Pumping Speed	N_2 (l/s)	2,500
	H_2 (l/s)	3,900
	Ar (l/s)	2,000
	Water (l/s)	7,000
Pumping Capacity	Ar (Std.l)	2,500
	H_2 (Std.l)	20
Max Throughput	Ar (Torr • l/s)	10
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	60
Weight	kg	30
Inner Dia.	mm	250
Inlet Flange	ISO/JIS	

GEN30S

Performance Specifications

Pumping Speed	N_2 (l/s)	4,000
	H_2 (l/s)	7,000
	Ar (l/s)	3,500
	Water (l/s)	10,000
Pumping Capacity	Ar (Std.l)	4,000
	H_2 (Std.l)	30
Max Throughput	Ar (Torr • l/s)	10
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	75
Weight	kg	33
Inner Dia.	mm	300
Inlet Flange	ISO/JIS	

GEN40P

Performance Specifications

Pumping Speed	N_2 (l/s)	6,000
	H_2 (l/s)	12,000
	Ar (l/s)	5,400
	Water (l/s)	18,000
Pumping Capacity	Ar (Std.l)	5,000
	H_2 (Std.l)	44
Max Throughput	Ar (Torr • l/s)	13
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	130
Weight	kg	60
Inner Dia.	mm	400
Inlet Flange	ISO(B)/JIS	

GEN50P

Performance Specifications

Pumping Speed	N_2 (l/s)	12,000
	H_2 (l/s)	20,000
	Ar (l/s)	10,000
	Water (l/s)	29,000
Pumping Capacity	Ar (Std.l)	6,000
	H_2 (Std.l)	46
Max Throughput	Ar (Torr • l/s)	18
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	150
Weight	kg	95
Inner Dia.	mm	500
Inlet Flange	ISO(B)/JIS	

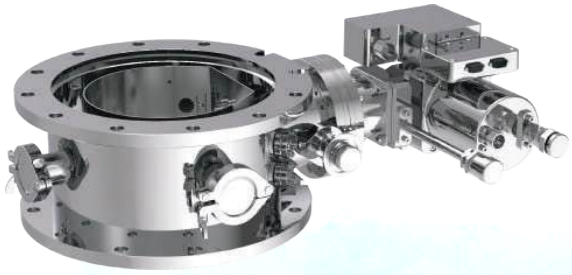
GEN55P

Performance Specifications

Pumping Speed	N_2 (l/s)	17,000
	H_2 (l/s)	25,000
	Ar (l/s)	14,000
	Water (l/s)	40,000
Pumping Capacity	Ar (Std.l)	7,500
	H_2 (Std.l)	80
Max Throughput	Ar (Torr • l/s)	28
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	160
Weight	kg	120
Inner Dia.	mm	550
Inlet Flange	ISO/JIS	

GEN® Trap Series

GENW25IL



Performance Specifications

Pumping Speed	Water (l/s)	7,000
Cooldown Time (130K)	Minute	30 or less (under Isolation Condition)
Weight	kg	38
Inlet Flange Size	mm	250
Mounting Flange	-	JIS/ISO
Feature	(Hybrid) products used with high vacuum pumps (TMPs) etc. In-line pump There are two mounting flanges on the chamber side and the high vacuum pump side	

GEN® Smart Series

GEN20SHG

Performance Specifications

Pumping Capacity	N_2 (l/s)	1,700
	H_2 (l/s)	3,200
	Ar (l/s)	1,400
	Water (l/s)	4,000
Pumping Capacity	Ar (Std.l/s)	1,500
	H_2 (Std.l/s)	15
Max Throughput	Ar (Torr • l/s)	9
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	60
Weight	kg	30
Inner Dia.	mm	200
Inlet Flange	CF/ISO	

GEN25SHG

Performance Specifications

Pumping Capacity	N_2 (l/s)	2,500
	H_2 (l/s)	7,400
	Ar (l/s)	2,000
	Water (l/s)	7,000
Pumping Capacity	Ar (Std.l/s)	2,500
	H_2 (Std.l/s)	32
Max Throughput	Ar (Torr • l/s)	10
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	75
Weight	kg	30
Inner Dia.	mm	250
Inlet Flange	ISO	

GEN32SHG

Performance Specifications

Pumping Capacity	N_2 (l/s)	3,600
	H_2 (l/s)	15,000
	Ar (l/s)	3,000
	Water (l/s)	11,000
Pumping Capacity	Ar (Std.l/s)	3,000
	H_2 (Std.l/s)	50
Max Throughput	Ar (Torr • l/s)	13
	H_2 (Torr • l/s)	-
Base Pressure	(Torr)	$<10^{-09}$
Cooldown Time	Minute	110
Weight	kg	40
Inner Dia.	mm	320
Inlet Flange	ISO	

MARATHON® CRYOPUMPS

MARATHON® CP-8

Available Configurations

- ANSI 6", ISO 200 or CF 10" Flange Options
- Standard Manual Operation
- Optional Fully-Automated Operation with Marathon® Cryopump Controller
- Displex® Technology

Performance Specifications

Air (liters/second)	1,500
Water (liters/second)	4,200
Argon (liters/second)	1,250
Hydrogen (liters/second)	2,300
Argon Throughput (liters/second)	11.0
Argon Capacity (standard liters)	1,200
Hydrogen Capacity (standard liters)	25
Crossover Rating (torr-liters)	220
Cooldown Time (minutes)	75
Weight (kg/lbs.)	16.8 (35)
Dimensions (mm/in.)	516 (20.3)

MARATHON® CP-8LP

Available Configurations

- Standard Low Profile Design in Left or Right Hand Configurations
- ANSI 6", ISO 200 or CF 10" Flange Options
- Standard Manual Operation
- Optional Fully-Automated Operation with Marathon® Cryopump Controller
- Displex® Technology

Performance Specifications

Air (liters/second)	1,800
Water (liters/second)	4,200
Argon (liters/second)	1,500
Hydrogen (liters/second)	3,000
Argon Throughput (liters/second)	11.0
Argon Capacity (standard liters)	1,600
Hydrogen Capacity (standard liters)	25
Crossover Rating (torr-liters)	220
Cooldown Time (minutes)	110
Weight (kg/lbs.)	17.9 (39.5)
Dimensions (mm/in.)	186 x 565 (7.3 x 22.3)

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MARATHON® CRYOPUMPS

MARATHON® CP-250LP

Available Configurations

- Standard Low Profile Design in Left or Right Hand Configurations
- ISO 250 Flange
- Standard Manual Operation
- Optional Fully-Automated Operation with Marathon® Cryopump Controller
- Displex® Technology

Performance Specifications

Air (liters/second)	3,060
Water (liters/second)	6,300
Argon (liters/second)	2,500
Hydrogen (liters/second)	5,000
Argon Throughput (liters/second)	11.0
Argon Capacity (standard liters)	1,600
Hydrogen Capacity (standard liters)	30
Crossover Rating (torr-liters)	300
Cooldown Time (minutes)	110
Weight (kg/lbs.)	20 (44)
Dimensions (mm/in.)	181 x 591 (7.2 x 23.2)

MARATHON® CP-12

Available Configurations

- ANSI 10", ISO 320 or CF 14" Flange Options
- Standard Manual Operation
- Optional Fully-Automated Operation with Marathon® Cryopump Controller
- Displex® and Whisper® Technology

Performance Specifications

Air (liters/second)	3,600
Water (liters/second)	9,560
Argon (liters/second)	3,100
Hydrogen (liters/second)	7,300
Argon Throughput (liters/second)	12.6
Argon Capacity (standard liters)	2,000
Hydrogen Capacity (standard liters)	50
Crossover Rating (torr-liters)	650
Cooldown Time (minutes)	90
Weight (kg/lbs.)	41 (90)
Dimensions (mm/in.)	600 (23.5)

MARATHON® CRYOPUMPS

MARATHON® CP-16

Available Configurations

- ISO 400 or CVC 10” or Wire Seal Flange Options
- Standard Manual Operation
- Optional Fully-Automated Operation with Marathon® Cryopump Controller
- Displex® and Whisper® Technology

Performance Specifications

Air (liters/second)	4,800
Water (liters/second)	17,300
Argon (liters/second)	4,100
Hydrogen (liters/second)	12,000
Argon Throughput (liters/second)	11.4
Argon Capacity (standard liters)	5,500
Hydrogen Capacity (standard liters)	50
Crossover Rating (torr-liters)	500
Cooldown Time (minutes)	135
Weight (kg/lbs.)	50 (110)
Dimensions (mm/in.)	633 (24.9)

MARATHON® CP-20

Available Configurations

- ISO 500 or ANSI 20” or Wire Seal Flange Options
- Standard Manual Operation
- Optional Fully-Automated Operation with Marathon® Cryopump Controller
- Displex® and Whisper® Technology

Performance Specifications

Air (liters/second)	9,700
Water (liters/second)	29,100
Argon (liters/second)	8,300
Hydrogen (liters/second)	14,000
Argon Throughput (liters/second)	11.3
Argon Capacity (standard liters)	6,000
Hydrogen Capacity (standard liters)	33
Crossover Rating (torr-liters)	400
Cooldown Time (minutes)	190
Weight (kg/lbs.)	77 (170)
Dimensions (mm/in.)	569 (22.4)

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CRYOPUMP ACCESSORIES

Auxillary Devices

HMI displays, Compressor and Pump Remote Start/Stop Modules, are available to create the specific OMNI® cryogenic system required for your application.

Temperature Indicators

Temperature Indicators are designed to display and communicate cryopump temperatures. Single, dual, and four channel temperature indicators are available. All have alarm set points, RS-232 interface and analog output.

Kashiyama NeoDry Pumps

Full line of mutilobe vacuum pumps. Excellent for support of Semiconductor, High Tech Manufacturing, Space Simulation, Labs & Research, and Industrial Process. Global Support, Excellent Warranties.

OMNI PTE Module

The patented OMNI PTE integrates any manufacturer's semiconductor class cryopump onto a tool that is using a CTI® Network Controller. The PTE manages the interface between the pump, the Network Controller and the tool's host computer. Contact SynSysCo to define the specific PTE integration configuration needed for your tool.

Flexible Gas Lines

Cryopumps come standard with flexible helium gas lines in lengths from 10 feet to 66 feet (20 meters). Custom lengths and configurations are available upon request.

Purge Gas Heater

Purge Gas Heaters can shorten regeneration time ~30% by increasing the temperature of the gas injected during regeneration.

REBUILD OF HELIUM COMPRESSORS AND CRYOGENIC PUMPS

Support and Maintain Legacy Cryogenic Equipment

At SynSysCo we fully appreciate the value of an installed base of well-maintained legacy cryogenic equipment which is critical to production up-time and financial performance. We rebuild and sustain most manufacturers' makes and models of legacy cryogenic equipment.

Replace Legacy Cryogenic Equipment

As we rebuild and sustain your existing cryogenic equipment, we can also replace end-of-life equipment with OMNI® Helium Compressors and superior performing cryopumps in an incremental approach as determined by your operational needs.

Upgrade Equipment Incrementally

Since the OMNI® Helium compressor can drive a mix of different manufacturer's pumps on the same tool at the same time, you can incrementally upgrade one pump at a time. There is no need to replace a multiple cryo-pump set all at once with a new multiple cryo-pump set. When you need to upgrade equipment you can replace 1 pump at a time.

Exceptional Warranties

The OMNI® Helium Compressor line of equipment comes with a standard 2 year warranty and a scheduled 30,000 hour (42 month) Adsorber change.

Contact Us

We will be happy to discuss the advantages of OMNI® Helium Compressors and our superior line of cryogenic pumps.

SynSysCo
866-DRY-PUMP | 866-379-7867
Sales@SynSysCo.com

NOTES

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