

Varian, Inc.
Vacuum Technologies

The New SH-110
High Performance
Dry Scroll Pump



NOTICE: This document contains references to Varian. Please note that Varian, Inc. is now part of Agilent Technologies. For more information, go to www.agilent.com/chem.

Inspiring Excellence

 **Agilent Technologies**

The New SH-110 High Performance Dry Scroll Pump

SH-110 Dry Primary Pump

- The SH-110 is a Dry Hermetic Scroll Pump that provides Industry leading features designed for easy integration into original equipment manufacturer (OEM) systems.
- The single-stage design produces 110 l/m (60 hz) pumping speed and an ultimate pressure of 50 mTorr/.07 mbar in a compact package that is ideally suited for end-user applications.

Designed for System Integration

The SH-110 offers the designer of portable systems key features for easy integration:

- Low temperature and power consumption
- Quiet operation
- Moveable exhaust ports
- Quick tip seal replacement



Applications

- SH-110 is ideal for any application where oil contamination is unacceptable and for non-corrosive applications where portable, high performance dry pumping is required.

Typical applications include:

- Analytical instruments - backing turbo pumps and pumping chambers on small surface analysis and mass spectrometry systems, and electron microscopes
- Semiconductor - pumpdown of small loadlock, transfer systems, vacuum chucks, and backing small turbo pumps
- Industrial and R&D Labs - backing turbo pumps and pumping chambers on test stands, mini-stations, dry boxes, and small vacuum furnaces

Integrated Support

- Toll free hotlines provide the easiest live front-end support
- Native language representatives assist you with technical support and order processing
- Comprehensive service programs can be tailored to meet your most demanding needs

Supply Chain & Logistics

- Parts availability at the right time and place is assured by effective organization and planning
- Effective turn around of all items in the supply chain allows minimal local inventories
- Our service organization is supported by a worldwide SAP® system

Features and Benefits

For Easy System Integration



New Cowling

- Provides high cooling air flow for low temperature operation inside system enclosures.
- Easily removable for quick tip seal replacement



Flexible Exhaust System

- Built-in exhaust valve provides quiet operation for scientific environments
- **Moveable exhaust port** allows installation flexibility



Flexible Power System

- High efficiency motor provides low power consumption for smaller system circuits
- True Universal 100 – 230 VAC power supply for easy installation worldwide

Flexible Features For End-user Applications



Low weight with convenient carrying handle

- Allows easy transportation between applications
- Provides easy installation in tight places



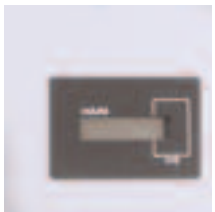
Fully integrated fail-safe isolation valve

- Prevents accidental contamination of the vacuum system
- Saves the cost and space required of a separate valve



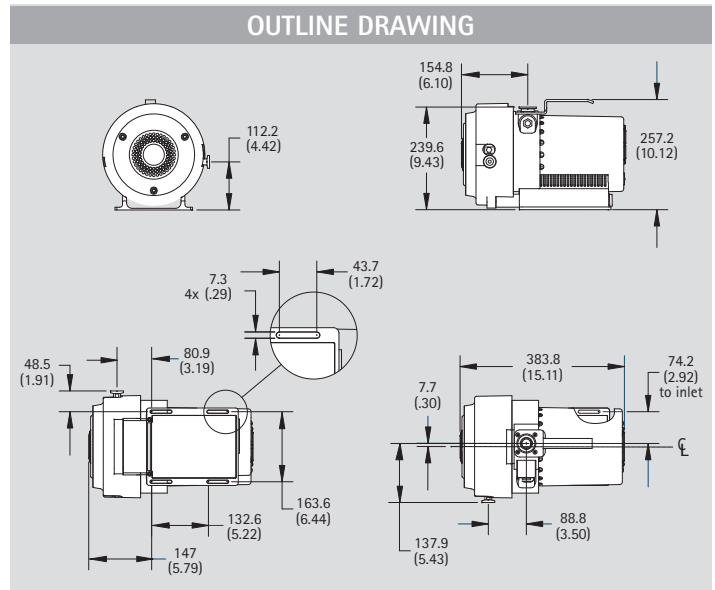
Automatic air ballast

- Provides effective moisture handling without reducing base pressure
- Pump is supplied with a blank plug when the ballast is not needed



Built-in hour meter

- Facilitates maintenance planning



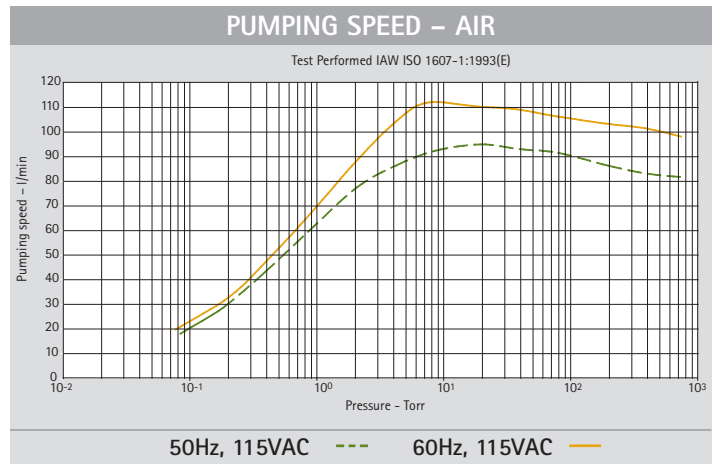
TECHNICAL SPECIFICATIONS

Peak pumping speed	60 Hz: 110 lpm, 6.6 m ³ /hr, 4.0 cfm, 50 Hz: 90 lpm, 5.4 m ³ /hr, 3.3 cfm
Ultimate pressure	5.0 x 10 ⁻² Torr (6.6 x 10 ⁻² mbar)
Maximum inlet pressure	1.0 atmosphere (0 psig)
Maximum outlet pressure	1.5 atmosphere (7.5 psig)
Inlet connection	NW25
Exhaust connection	1/4" Female National Pipe Thread (NW16 adapter provided)
Gas ballast	1/8" Female National Pipe Thread (20 micron sintered and solid plugs provided)
Ambient operating temperature	5°C to 40°C (41°F to 104°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)
Motor rating (1 phase)	0.25 HP (0.19 kW) 100/115: 200/230 VAC, 50-60 Hz
Motor thermal protection	Automatic thermal protection
Operating speed	1725 RPM – 60 Hz, 1425 RPM – 50 Hz
Cooling system	Air-cooled
Weight	19.5 kg (43 lbs)
Media	No corrosive, explosive or particulate forming gases
Leak rate (with exhaust sealed)	<1 x 10 ⁻⁷ sccs helium
Compliance to norms	Conforms with CE, CSA and Semi S2-2000

Ordering Information and Outline Drawing

ORDERING INFORMATION

Description	Part Number
Single Scroll Pump	SH01101UNIV
Tip Seal Replacement Kit	SH0110TS
Exhaust Silencer Kit	SH0110EXSLR
Power Cord Selection	
Europe, 10A/220-230 VAC, 2.5 Meter	656494220
Denmark, 10A/220-230 VAC, 2.5 Meter	656494225
Switzerland, 10A/230 VAC, 2.5 Meter	656494235
UK/Ireland, 13A/230 VAC, 2.5 Meter	656494250
India, 10A/220-250 VAC, 2.5 Meter	656494245
Israel, 10A/230 VAC, 2.5 Meter	656494230
Japan, 12A/100 VAC, 2.3 Meter	656494240
North America, 15A/125 VAC, 2.0 Meter	656458203
North America, 10A/230 VAC, 2.5 Meter	656494255



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