

SYSTEC® High Flow Degassers Prototype Design

Description

SYSTEC's High Flow Degasser module includes a high efficiency, non-porous membrane and controlled vacuum pump for liquid vacuum degassing applications.

Features and Benefits

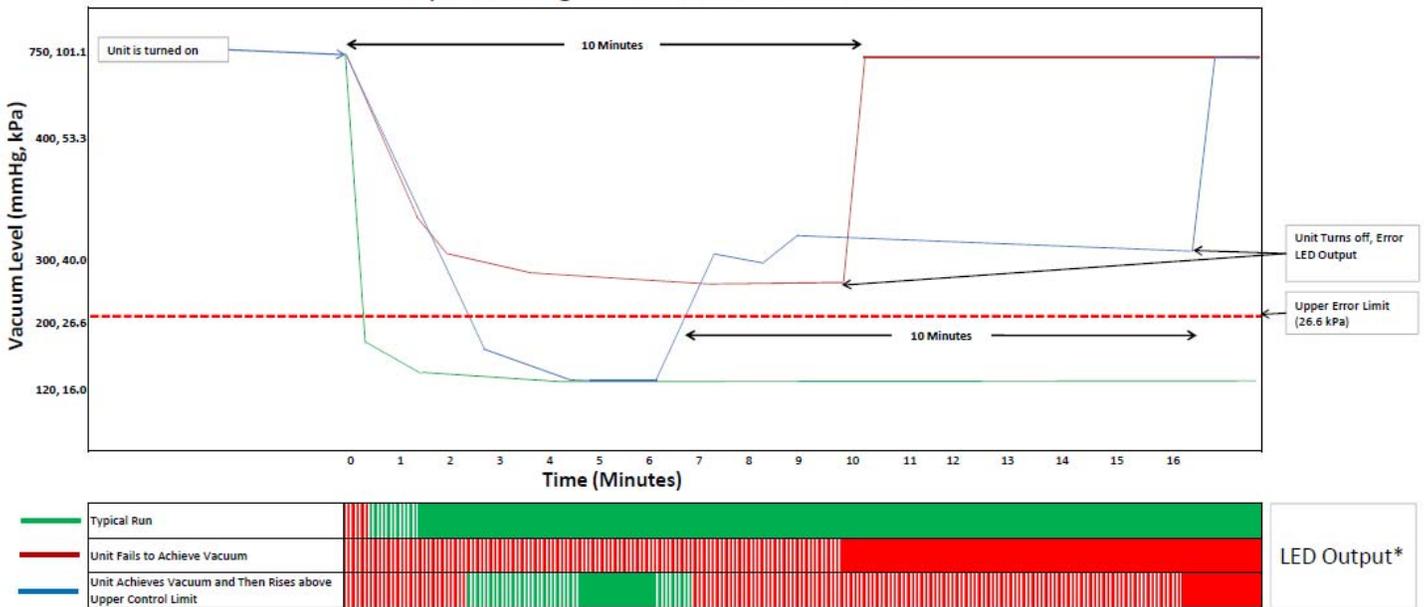
- Removes dissolved gasses and bubbles from fluidic lines to improve dispense precision
- Longest lifetime pump and membrane materials are selected to reduce maintenance and provide best TCO
- Compatible with broad range of fluids including aqueous salts, organics, detergents and sterilizing agents (pH range: 2 to 13)
- Highest efficiency membrane reduces unit size to increase lab space
- Tested and calibrated assembly is ready for installation

TECHNICAL DATA		
Part Number	0001-6673	0001-6676
Operational flow rate (mL/min)	0 - 500	0 - 1,000
Pressure Drop (@ 20 °C & Max Flow)	< 1 kPa	< 12 kPa
Internal Volume	45 mL	30 mL
Degassing Efficiency (Removed O ₂ % in DI Water @ Max Flow)	> 60%	
Number of Channels	1	
Wetted Materials	Polysulfone, silicone rubber, polypropylene, Tygon S-50-HL, medical grade adhesives	
External Fluidic Ports	3/16 inch (4.8 mm) ID Barb Fittings	
Maximum Operating Pressure:	1 Bar (15 psi)	
Maximum Temperature	40 °C	

VACUUM PUMP TECHNICAL DATA

Air Flow (no vacuum): 580 SCCM @ 250 RPM; 140 SCCM @ 60 RPM
 Vacuum Performance Specification: <150 mmHg (20kPa) @ 120 RPM & 1 SCCM air flow (Test Criteria)
 Pump Head Continuous Purge Air Flow Rate: 11 SCCM
 Materials in Fluid Path: Stainless Steel, Polypropylene, PTFE, EPDM Rubber, PPS
 Expected Lifetime: >6 years (continuous run @ 100 RPM 12 hours/day 365 days/year)

Proposed Degasser Run Characteristics



*Red and green blinking @ 0.125 sec rate, with typical red and green LED configuration.

Regulatory Compliance Information

As of the date of publication, this product is compliant with current RoHS and WEEE regulations.

Country of Origin

Assembled in USA

PUMP CONTROL SPECIFICATIONS

Power Requirements

24 VDC @ 0.75 Amp max.
(<5 Watt typical)

Vacuum Sensor Calibration Accuracy

(NIST Traceable)
 ± 5 mmHg absolute over an ambient
operating temperature range of 10-35°C.

Closed-Loop Control Setpoint

120 mmHg (16kPa) absolute (pump runs at high RPM until
near setpoint, then speed is varied to maintain a value of
120 mmHg (16kPa) absolute – load independent).

LED Indicators

Single Bi-Color

Power on, vacuum above control range: Amber– Blinking

Vacuum reaches upper control range: Green-Blinking

Vacuum reaches control set point: Green—Solid

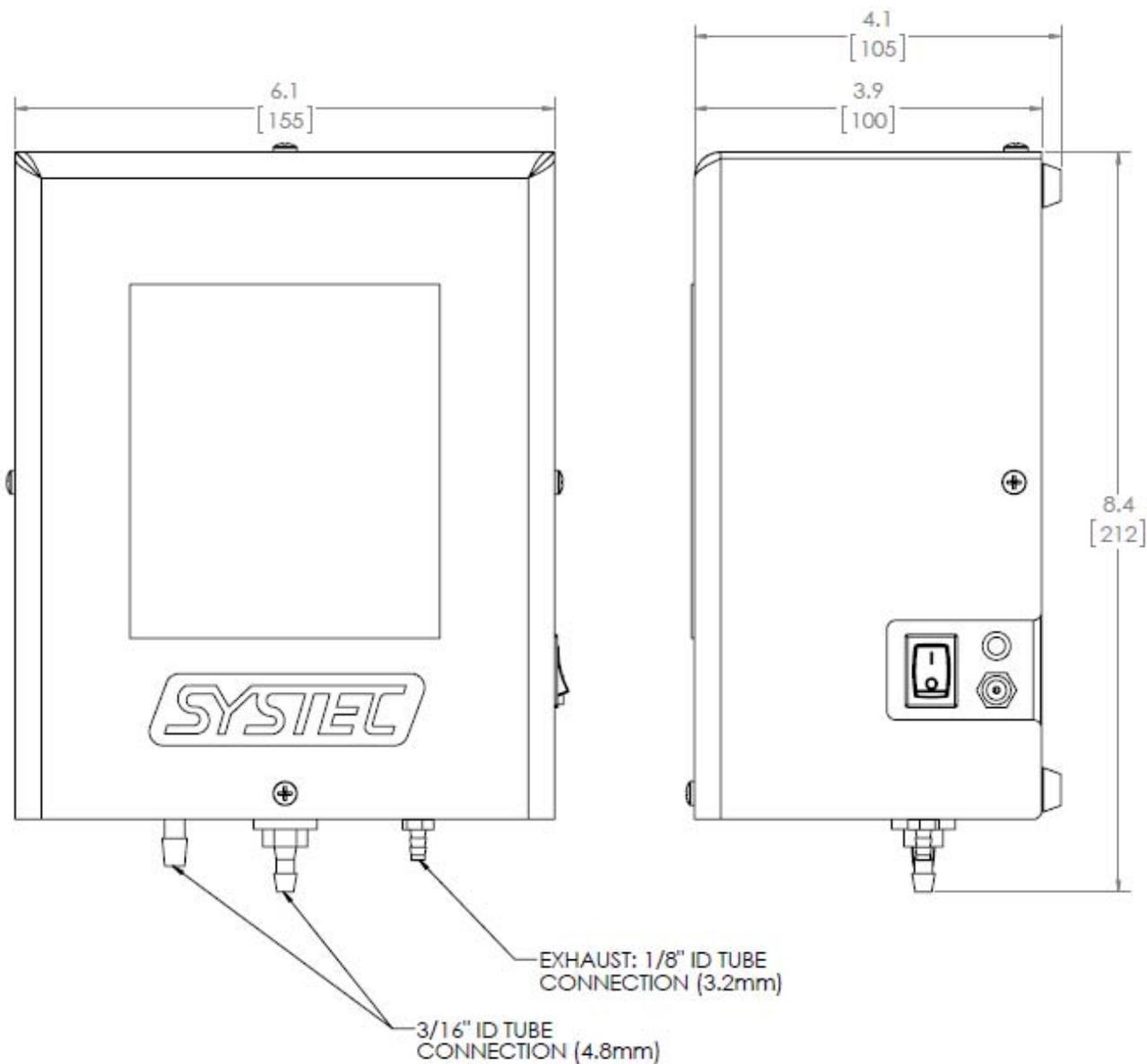
Error Condition, Shutdown: Amber—Solid

Errors Detected

- 1 – Pumpdown: Unable to reach 120 mmHg (16kPa) in 10 minutes.
- 2 – High Vacuum: Vacuum > 200 mmHg (26.7kPa) for > 10 min.
- 3 – Sensor Signal: Sensor > 800 mmHg (106.7kPa) or < 10 mmHg (1.3kPa).

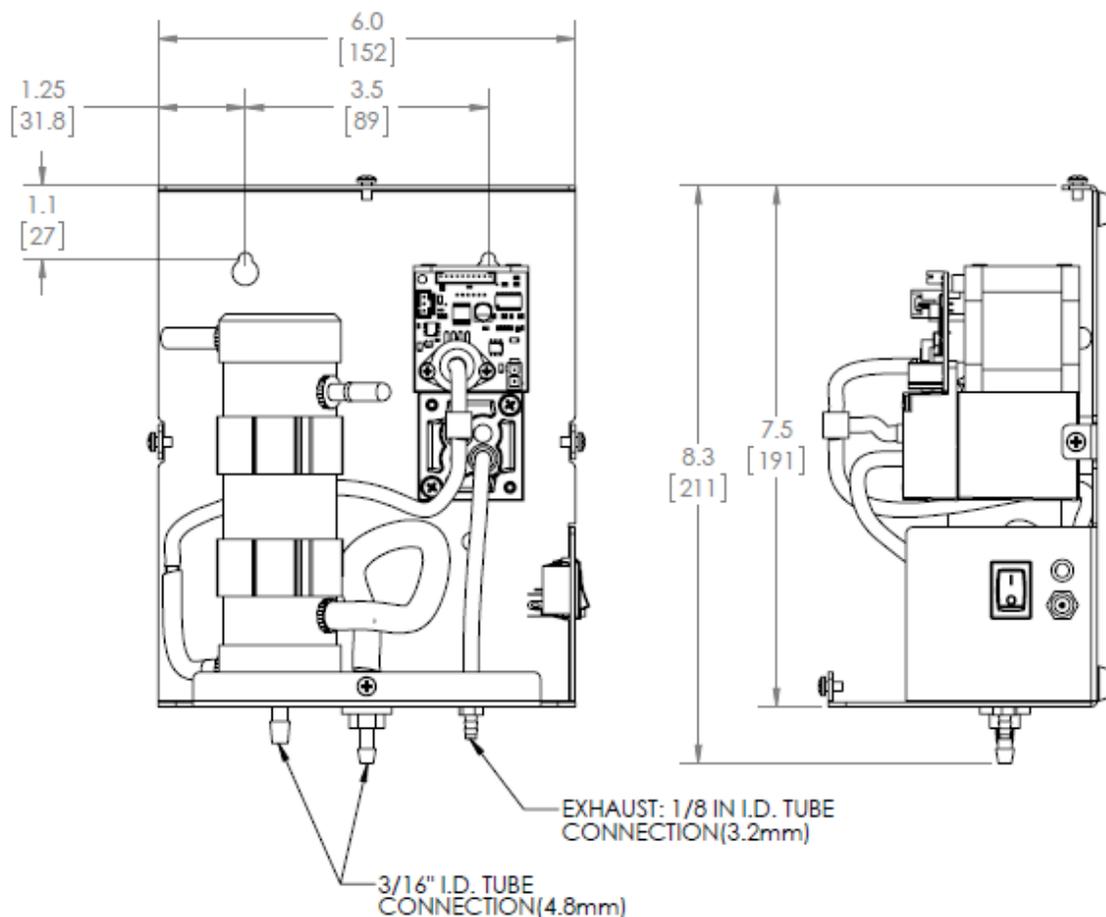
Dimensional Drawing

Dimensions are in inches [millimeters]



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International Power Adapter Included

AC adapter: 100-240V AC, 1A, 50-60Hz

(includes adapters for North America, Japan, UK, Continental Europe, Australia)