

# Pressure Swing Dryers

Pressure Swing dryers provide a source of very dry compressed air for use as a zero gas in humidity calibration systems, or for general laboratory applications.

## PSD2 & PSD4 Pressure Swing Dryers



The Michell PSD Series Pressure Swing Dryers use two columns filled with 4Å molecular sieve desiccant, which are used alternately on a switching cycle. The PSD dryers are designed to operate continuously, using a small proportion of the dried air to regenerate the offline column - generally giving desiccant life in excess of five years. This type of heatless regeneration uses significantly less energy than a 'heated' dryer.

The PSD2 is fitted with inlet and outlet pressure regulation, and delivers up to 7 NI/min (14.8 scfh) of dry air with a moisture content of 1 ppm<sub>v</sub> or better.

The PSD4 is supplied with stainless steel internals and larger volume desiccant columns. These factors, combined with high integrity VCR couplings deliver an output of up to 90 NI/min (optional) with a moisture content better than 14 ppb<sub>v</sub>.

### Highlights

- Excellent long term stability
- Maintenance free except for a desiccant change once every 5 years
- Completely self-contained
- Low power consumption

Issue No: PSD2 and PSD4\_97160\_V4.1\_US\_0918

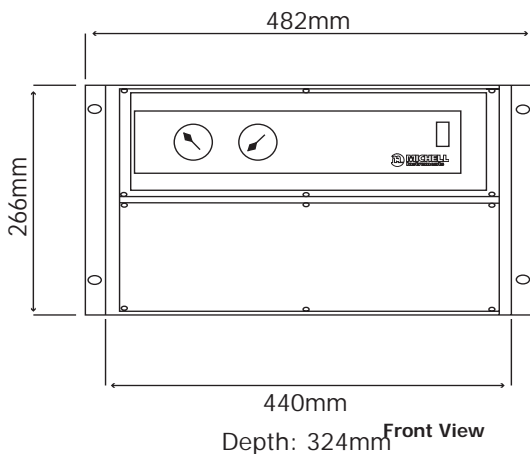
Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version.

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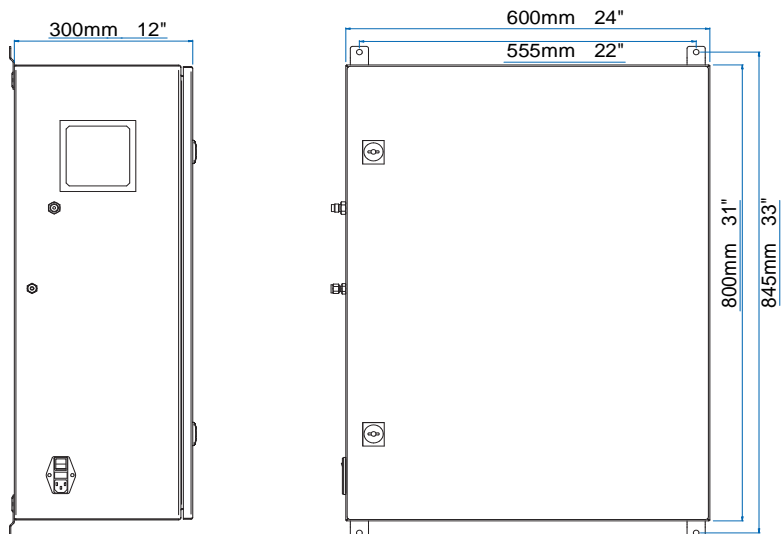
## Technical Specifications

Model	PSD2	PSD4-STD (Standard)	PSD4-HFV (High flow volume)	PSD4-HPO (High pressure output)
<b>Performance</b>				
<b>Gas output</b>				
Flow	7 NI/min (14.8 scfh)	30 NI/min (63.6 scfh)	90 NI/min (109.7 scfh)	30 NI/min (63.6 scfh)
Pressure		0.5 barg (7 psig)		User-settable up 8 barg (116 psig)
Moisture content	<1ppm <sub>v</sub>	<13.8 ppb <sub>v</sub>		
<b>Input Requirements</b>				
<b>Gas supply</b>				
Flow	10 NI/min (21.2 scfh)	30 NI/min (63.6 scfh)	90 NI/min (109.7 scfh)	30 NI/min (63.6 scfh)
Pressure	5 to 7 barg (70 to 100 psig)	6 to 10 barg (87 to 145 psig)		
Moisture content	Oil and liquid water-free	<16ppm <sub>v</sub>		
<b>Electrical Input</b>				
Power	100 to 115 OR 220 to 240 VAC, 50/60Hz	100 to 240VAC 50/60Hz		
Power Connection		IEC socket		
<b>Environmental Conditions</b>				
Operating temperature	+5 to +35°C (+41 to +95°F)	+10 to +40°C (+50 to +104°F)		
Storage temperature	-40 to +35°C (-40 to +95°F)	-40 to +50°C (-40 to +122°F)		
<b>Mechanical Specifications</b>				
Type		Twin column desiccant, pressure swing		
Desiccant		4 Ångström Molecular sieve bead (4-8 mesh)		
Amount required (approx.)	2 kg	3.5 kg		
Timer	Mechanical cam	Programmable relay		
<b>Gas connections</b>				
Inlet	Swagelok® ¼"	¼" VCR Swagelok®		
Outlet	Swagelok® ¼"	¼" VCR Swagelok®	½" VCR Swagelok®	¼" VCR Swagelok®
<b>Filters</b>				
Outlet	None	Millipore Wafergard IIF Micro Inline (sealed type) with PTFE membrane element rated at >99.999% retention of 0.003µm particles		
Vent	None	Bonded glass microfiber rated at >99.999% retention of 0.1µm particles		
Construction	Rack mount: 19" x 6U x 324mm (12.8")	304 stainless steel wall mounting enclosure: 800x600x300mm (31.5x24x12")		
Weight	12.5kg (27.5lbs)	30Kg (66lb)	35Kg (77lb)	32Kg (70lb)

**Dimensions - PSD2**



**Dimensions - PSD4**



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