

# DG2

## Dew-Point Generator

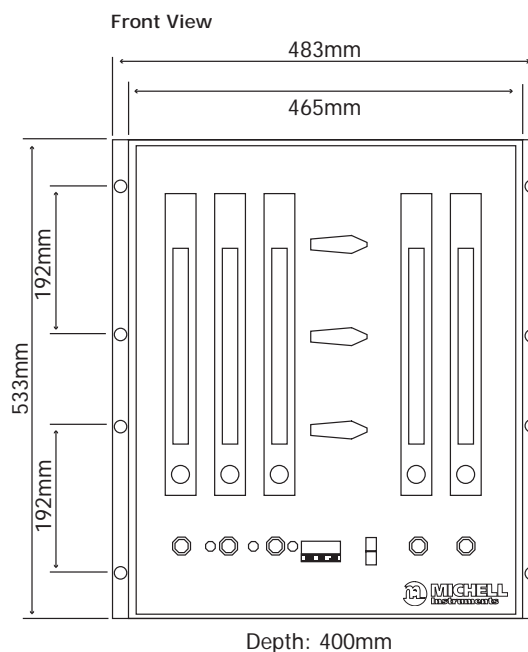


### Technical Specifications

Mixing stages	2 stage
Humidity range	-75 to +20°Cdp (-103 to +68°Fdp)
Gas supply	8 NI/min (17 scfh) -1 air @ 1 barg (11 psig) and -75°Cdp (-103°Fdp)
Gas output	1 to 5 NI/min (2.1 to 10.6 scfh) air @ 0.5 to 1 barg (7 to 14 psig)
Filter	Particulate filter
Saturator	Polycarbonate and porous polyethylene sinter
Heating	Finned heating elements, 500 watts, fan circulation
Power supply	220 to 240 V, 50Hz or 100 to 120 V; 60Hz
Storage temperature	+5 to +40°C (+41 to +104°F) (with saturators empty)
Operating temperature	+18 to +24°C (+64 to +75°F)
Enclosure size	19" sub-rack x 12U high x 400mm (15.8") deep
Weight	20kg (44lbs)

The DG2 has two stages of gas-flow mixing which allow it to generate dew points down to -75°Cdp (-103°Fdp). The great strengths of the DG2 are its ease of use and its flexibility in manually generating an accurate target dew point by fine tuning the gas mix via its flow metering valves. Infinite mixing is achievable within its working range.

### Dimensions



### Highlights

- Operation range of -75 to +20°Cdp (-103 to +68°Fdp) suiting the vast majority of calibration requirements
- Simple operation through manual flow mixing
- Flexibility in generating precise target dew-point temperature
- Generated output responds quickly to a change of set point
- Stable humidity generation

Michell Instruments, Inc 319 Newburyport Turnpike, Suite 207, Rowley, MA 01969  
 Tel: 978 484 0005, Fax: 978 843 7669, Email: [us.info@michell.com](mailto:us.info@michell.com), Web: [www.michell.com/us](http://www.michell.com/us)

Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version.  
 Issue No: DG2\_97333\_V1\_US\_0815

# DG3

## Dew-Point Generator



### Technical Specifications

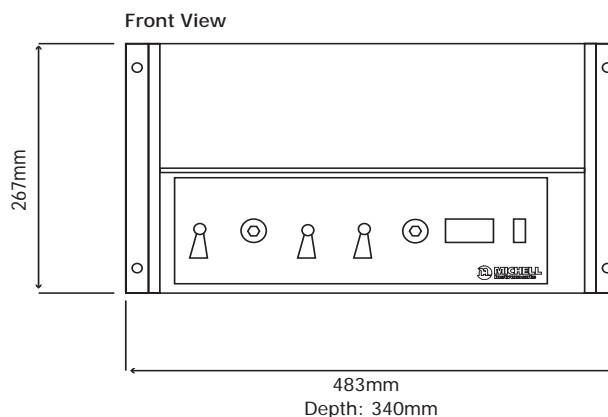
Mixing stages	1 stage
Humidity range	-40 to +20°Cdp (-40 to +68°Fdp)
Gas supply	6 NI/min (12.7 scfh) air @ 0.75 barg (11 psig) and -75°Cdp (-103°Fdp)
Gas output	1 to 5 NI/min (2.1 to 10.6 scfh) air @ 0.5 to 1 barg (7 to 15 psig)
Filter	Particulate filter
Saturator	Polycarbonate and porous polyethylene sinter
Heating	Finned heating elements, 500 watts, fan circulation
Power supply	220 to 240 V, 50Hz or 100 to 120 V; 60Hz
Storage temperature	+5 to +40°C (+41 to +104°F) (with saturators empty)
Operating temperature	+18 to +24°C (+64 to +75°F)
Enclosure size	19" sub-rack x 6U high x 340mm (13.4") deep
Weight	9kg (20lbs)

The DG3 is our entry-level, single-stage mixing humidity generator. It is operated by manually mixing the two gas streams using flow control valves. The DG3 provides flows up to 5 NI/min (10.6 scfh) and generates dew points ranging from -40 to +20°Cdp (-40 to +68°Fdp). Infinite mixing is achievable within its working range.

### Highlights

- Consistently dry output over long time periods
- Full analog control of generated dew points across -40 to +20°Cdp (-40 to +68°Fdp) operating range
- Generated output responds quickly to a change of set point
- Stable humidity generation
- Compact packaging

### Dimensions



Michell Instruments, Inc 319 Newburyport Turnpike, Suite 207, Rowley, MA 01969  
 Tel: 978 484 0005, Fax: 978 843 7669, Email: [us.info@michell.com](mailto:us.info@michell.com), Web: [www.michell.com/us](http://www.michell.com/us)

Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version.  
 Issue No: DG3\_97334\_V1\_US\_0815

# DG4

## Dew-Point Generator



### Technical Specifications

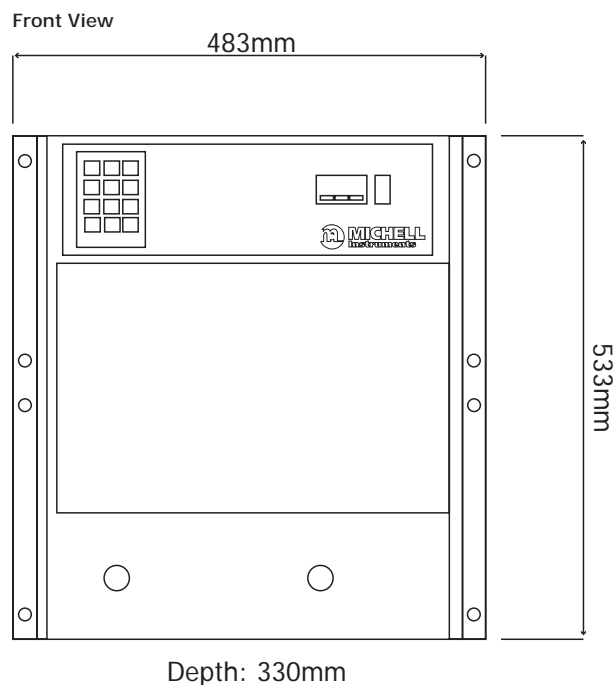
Mixing stages	2 stage
Humidity range	-75 to +20°Cdp (-103 to +68°Fdp)
Gas supply	8 NI/min (16 scfh) (max) @ 0.7 barg / 11 psig and -75°Cdp (-103°Fdp)
Gas output	1 to 5 NI/min (2.1 to 10.6 scfh) (air @ 0.5 to 1 barg (7 to 14 psig))
Filter	Particulate filter
Saturator	Polycarbonate and porous polyethylene sinter
Heating	Finned heating elements, 300 watts, fan circulation
Power supply	220/240V, 50Hz or 100/120V; 60Hz
Storage temperature	+5 to +40°C (+41 to +104°F) (with saturators empty)
Operating temperature	+18 to +24°C (+64 to +75°F)
Enclosure size	19" sub-rack x 6U high x 330mm (13.4") deep
Weight	25kg (55lbs)

The DG4 is a two-stage push-button dew-point generator which operates in the range of -75 to +20°Cdp (-103 to +68°Fdp). It can be delivered with between 3 and 10 factory-set dew point settings, selectable from the front panel keypad. Its RS232 communication port enables further automation, particularly when used in conjunction with a UKAS certified hygrometer. The DG4 offers maximum flexibility via its pre-set values combined with optional manual mixing above -40°C (-40°F) dew point.

### Highlights

- Operation range of -75 to 20°Cdp (-103 to +68°Fdp) suiting the vast majority of calibration requirements
- Simple operation through push-button switching of set points
- Remote control via RS232 comms
- Generated output responds quickly to a change of set point
- Stable humidity generation

### Dimensions



Michell Instruments, Inc 319 Newburyport Turnpike, Suite 207, Rowley, MA 01969  
Tel: 978 484 0005, Fax: 978 843 7669, Email: [us.info@michell.com](mailto:us.info@michell.com), Web: [www.michell.com/us](http://www.michell.com/us)

Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version.  
Issue No: DG4\_97335\_V1\_US\_0815

# VDS3

## Dew-Point Generator

Air Source

Dryer

Generator

Reference



The VDS3 is a sophisticated computer controlled dew-point generator that operates in the range of  $-100$  to  $+20^{\circ}\text{Cdp}$  ( $-148$  to  $+68^{\circ}\text{Fdp}$ ). Individual three stage mass flow controllers select precise proportions of wet and pre-mixed air. Humidity injection is achieved by a liquid mass flow controller and controlled evaporation system. The Vapor Delivery System (VDS) gives repeatable and flexible control of the generated dew point and can be programmed with up to 13 presets that can be activated manually or as part of an automatic calibration program.

### Highlights

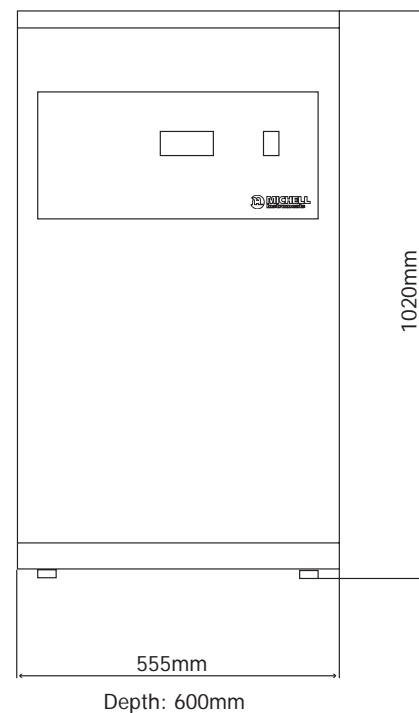
- Operation range of  $-100$  to  $+20^{\circ}\text{Cdp}$  ( $-148$  to  $+68^{\circ}\text{Fdp}$ ) suiting the calibrated range of almost all dew-point sensors
- Fully automated remote control
- Mass flow controlled mixing of wet and dry flows ensures complete repeatability of set points
- Generated output responds quickly to a change of set point
- System optimised for excellent output stability ( $\pm 0.5^{\circ}\text{C}$  /  $\pm 0.9^{\circ}\text{F}$ )

### Technical Specifications

Dew-point range	$-100$ to $+20^{\circ}\text{Cdp}$ ( $-148$ to $+68^{\circ}\text{Fdp}$ ) (factory default preset values = $-100$ , $-90$ , $-80$ , $-70$ , $-60$ , $-50$ , $-40$ , $-30$ , $-20$ , $-10$ , $0$ , $+10$ and $+20^{\circ}\text{C}$ ( $+68^{\circ}\text{F}$ ))
Output Stability	$\pm 0.5^{\circ}\text{C}$ ( $\pm 0.9^{\circ}\text{F}$ )
Required gas supply	30 NI/min (63.6 scfh) @ 4.8 barg (70 psig) pressure and $< 13.8$ ppb <sub>v</sub> ( $-100^{\circ}\text{C}$ / $-148^{\circ}\text{F}$ atmospheric dew point) moisture content
Gas output	10 NI/min (21.2 scfh) @ 0.5 barg (7.3 psig)
Cable connection	USB (type B) for PC Control RS485 (9 way D plug) for Setup
Water reservoir	Material = ABS Capacity = 1 litre
Power supply	220 to 240 V AC or 100 to 120 V AC 50/60 Hz
Power consumption	500 Watt maximum
Power connector	3 pin IEC
Power supply fuse	3A (F) quick blow
Operating temperature	$+10$ to $+40^{\circ}\text{C}$ ( $+50$ to $104^{\circ}\text{F}$ )
Construction	Painted diecast aluminum enclosure with smoked glass door. Overall dimensions = $1020 \times 555 \times 600\text{mm}$ ( $40 \times 22 \times 24$ ) h x w x d
Weight	65kg (143lbs) maximum

### Dimensions

Front View



Michell Instruments, Inc 319 Newburyport Turnpike, Suite 207, Rowley, MA 01969

Tel: 978 484 0005, Fax: 978 843 7669, Email: [us.info@michell.com](mailto:us.info@michell.com), Web: [www.michell.com/us](http://www.michell.com/us)

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

Issue No: VDS3\_97336\_V1.2\_US\_0716