

DG2

Dew-Point Generator



Technical Specifications

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

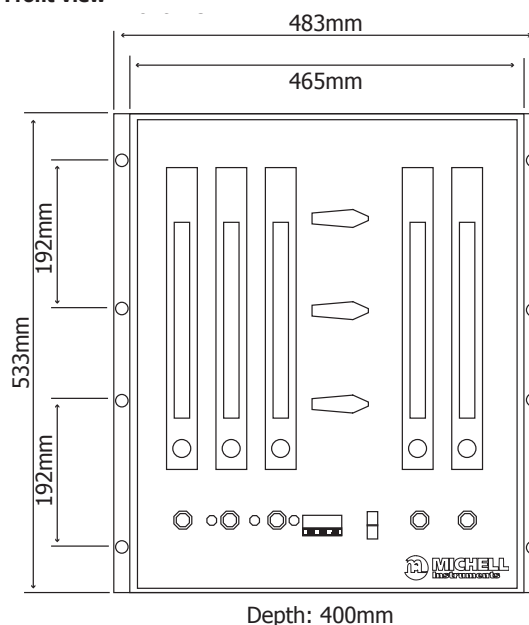
The DG2 has two stages of gas-flow mixing which allow it to generate dew points down to -75 °Cdp (-103 °Fdp). The great strengths of the DG2 are its ease of use and its flexibility in manually generating an accurate target dew point by fine tuning the gas mix via its flow metering valves. Infinite mixing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

Highlights

- Operation range of -75...+20 °Cdp (-103...+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

Dimensions

Front View



Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice.
Issue No: DG2_97333_V1_EN_0123

ADG400

Advanced Dew-Point Generator



The ADG400 is designed for use as part of a hygrometry calibration system. It is capable of repeatable generation of dew points across a range of -80 °C...+20 °C, when used in conjunction with the Michell Instruments PSD2 pressure-swing dryer.

The generation technique is based on the volumetric mixing of dry and wet gases. It gives the fastest response when changing between set points in comparison to other dew-point generator technologies (such as two-temperature, two-pressure or a combination of both).

Highlights

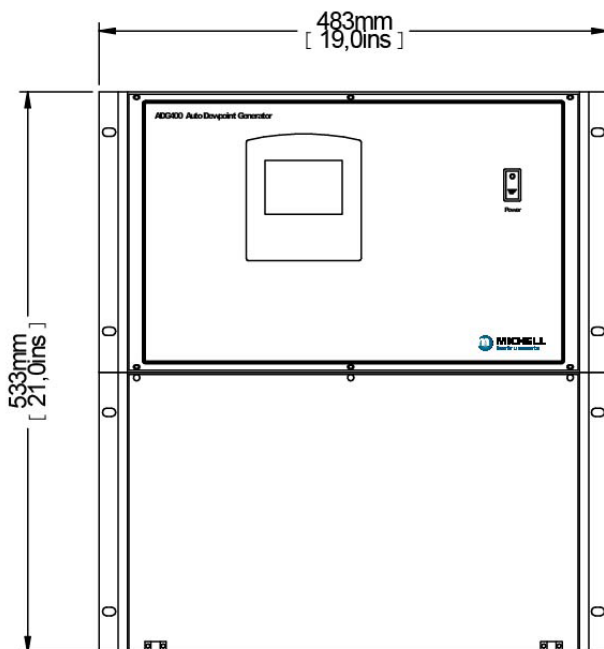
- Full-color touch-screen HMI
- 11-point factory programmed dew-point setpoint table from -80 °C to +20 °C at 10 °C intervals
- 13-point user programmable dew-point setpoint table
- 3 programmable 13-point automatic calibration profiles with customizable timings
- Change set points using serial commands via built-in USB port
- Remote Access mode allows HMI to be operated using a connected PC
- Temperature-controlled enclosure to ensure output stability and repeatability

Technical Specifications

Output Range	-80 °C...+20 °C dew point
Output Stability	< 0.05 °C
Repeatability	0.5 °C
HMI	Full-color touch screen
Set Points	11-point factory setup set-point table @ 10 °C intervals. 13-point user configurable set-point table
Operating Modes	Manual, Timed Profile, Remote Command
Digital Communications	USB (Virtual Serial Port) for remote operation of HMI via a PC, or changing set points via remote commands
Power supply	IEC Socket 80...264 V AC (47...63 Hz) or 113...370 V DC
Power Consumption	400 VA Max.
Operating Temperature	23 °C ±3 °C (73.4 °F ±5.4 °F)
Storage Temperature	5 °C...50 °C (41 °F...122 °F)
Gas Input Requirements	Compressed air from PSD2 Pressure Swing Dryer, set up with ADG400 as matched pair
Gas Input Pressure	2.0 barg (29.0 psig)
Gas Input Moisture Content	< 0.4 ppm _v
Gas Output Flow Rate	5 NI/min from -80 °C...-10 °C frost point, 4 NI/min at 1 °C decreasing to 1 NI/min at +20 °C dew point
Enclosure	Painted aluminum
Dimensions	19" Subrack, 12U Height, ~360 mm Depth
Filtration	Inlet particulate filter
Gas Connections	6 mm Swagelok® Tube
Weight	23 kg

Dimensions

Front View



Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice.
Issue No: ADG400_97622_V1_EN_0123

VDS3

Dew-Point Generator



The VDS3 is a sophisticated computer controlled dew-point generator that operates in the range of -100...+20 °Cdp (-148...+68 °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

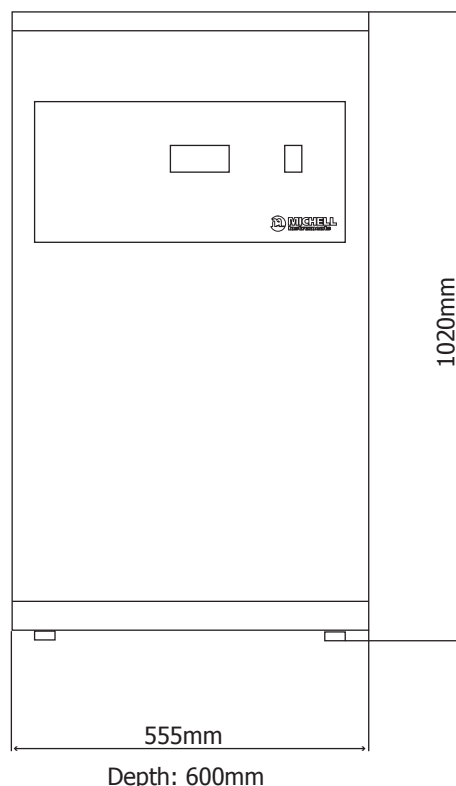
- Operation range of -100...+20 °Cdp (-148...+68 °Fdp) suiting the calibrated range of almost all dew-point sensors
- Fully automated remote control
- Mass flow controlled mixing of wet and dry flows ensures complete repeatability of set points
- Generated output responds quickly to a change of set point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

Technical Specifications

Dew-point range	-100...+20 °Cdp (-148...+68 °Fdp) (factory default preset values= -100, -90, -80, -70 -60, -50, -40, -30, -20, -10, 0, +10 and +20 °C (+68 °F))
Output stability	±0.5°C (±0.9°F)
Required gas supply	30 NI/min (63.6 scfh) @ 4.8 barg (70 psig) pressure and <13.8 ppb, (-100 °C / -148 °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...240 V AC or 100...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...+40 °C (+50...104 °F)
Construction	Painted diecast aluminum enclosure with smoked glass door. Overall dimensions = 1020 x 555 x 600 mm (40 x 22 x 24") h x w x d
Weight	65 kg (143 lbs) maximum

Dimensions

Front View



Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice.
Issue No: VDS3_97336_v1_EN_0123