

## Using the DewGen Economical Dew Point Generator

The Edgetech Instruments Model DewGen Portable Dew Point Generator blends a known dry gas (supplied by the customer) with a humid gas stream (humidity generator within the DewGen) to create a desired flow of gas at a specific dewpoint. As a stand-alone device, you can blend a wide range of dew points or frost points using the concentration look-up tables given in the supplied User Manual. However, combined with the DewMaster Chilled Mirror Precision Hygrometer, the DewGen becomes a NIST Traceable, extremely accurate dewpoint generator at an attractive price.

Being portable, it can be easily setup wherever needed, in the laboratory or in the field.



A divided flow system, combined with a plane surface saturator, allows you to select any dew point from less than one ppm of water vapor to nearly saturation. The user provides a source of dry gas, such as a tank of nitrogen for the “dry” point. This gas is split into two separate streams, and one stream is saturated with water vapor that is generated by the internally mounted humidifier. By setting the three very precise flow meters to positions shown in a set of tables in the user manual, the operator can select the correct mixing ratio between the “wet” gas and the “dry” gas, resulting in a dew point output. Mixing ratios of up to 100,000 to 1 allow selection of frost points down to -80°C and dew points up to +15°C. The tables allow dew point selection in 1°C increments. A separate flow meter is included to set the output flow rate. The entire system runs at a positive pressure, so the output flow rate is not affected by the settings of the mixing flow meters.



**Edgetech Instruments Inc.**

An ISO 9001 Certified Company

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## Benefits

**Reduce Costs/ Save Money.** Economical Solution to create a wide range of dew/frost points

High repeatability

Constant regulated dew point output

**Improve Precision and NIST traceability** when used with EdgeTech chilled mirror hygrometer

No electric power required - can be used anywhere

Ideal for portable applications

Inherently explosion proof

Dew Point calibration standard for Cal Lab

**Minimize expensive floor space** occupied by Cal cylinders or humidity chambers in your CAL LAB

Portable standard for field use

Troubleshoot all types of dew point sensors

Dew Point experimentation for scientific applications

Product/Materials performance testing with on-site dew point generator

## SPECIFICATIONS

- Dew/Frost Point Generation Range: -80°C to +15°C at 25°C ambient  
(dependent on supplied dry gas dewpoint)
- Dew/Frost Point Adjustment: Via Flowmeter Needle Valves
- Accuracy: ±0.5°C typical
- Repeatability: ±0.25°C
- Stability: ±0.25°C
- Hysteresis: less than 0.25C
- Response Time: Less than 3 minutes for stability
- Output Flow Rate: 0 to 5 SCFH (0 to 2.5 liters/min) Adjustable
- Dimensions (HWD): 11-1/4 X 11-1/4 X 25-3/4 in.  
(28.6 X 28.6 X 65.4 cm)
- Weight (with water): 15 lbs. (6.8 kg)
- Storage Temperature: -40 to +50°C
- Power Requirements: None when used stand alone
- Input/ Output Gas Connections: ¼ in. (0.6cm) compression fittings
- Input Gas Requirement: Dry gas less than 115ppm  
(-40°C dew point), 13 SCFH (6 liters/min),  
30 to 100 psig
- **Note:** Input gas should be as dry as possible, since it determines the lowest dew/frost point that can be generated

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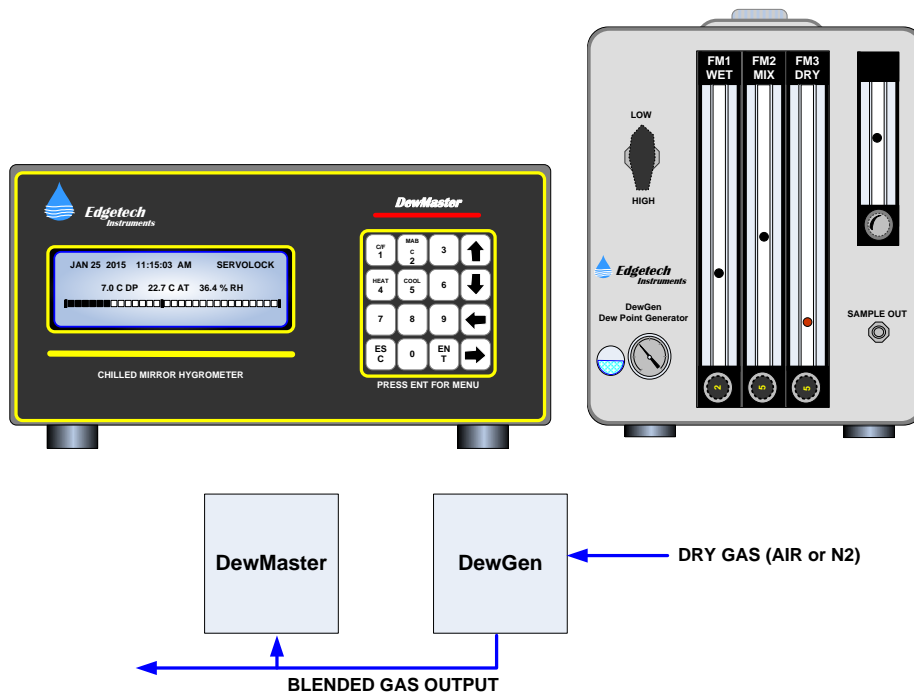
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## TO ORDER:

1. Determine the desired range of dew point and the accuracy/resolution of the generated gas stream. For less stringent requirements, just using a DewGen and the tables in the operator's manual may suffice. Many applications require more accurate knowledge or traceability, and so a DewMaster or another one of our Hygrometers can be used in conjunction with the DewGen.
2. If you have decided that you need to verify the DewGen output gas, decide the accuracy required. We offer several solutions depending on the range of Dew Point gas desired. This ranges from the popular DewMaster chilled mirror hygrometer that is NIST Traceable and has a wide range of measurement, to the PPM1 that measures only in the trace moisture range of 0-1250 PPMv. Another option is Model 6744 polymer sensor based transmitter with display. All hygrometers can be used to measure the generated gas stream and then you simply adjust the flow meters to generate the desired dew point gas stream.
3. **There are no options on the DewGen- just order "DewGen"** . special discounts on the hygrometer may apply when ordered in conjunction with the DewGen. Inquire with Sales. **List as a separate line item Extended Warranty, if desired.**



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