AGM
CONTAINER CONTROLS



NEPS1000® Pumped

Dry Gas Purging System

We prevent
Moisture Damage

The **NEPS 1000® Pumped** is the latest development for improving the effective and efficient use of dry gas purging for electronic optical, high voltage, laser systems and equipment requiring gas drying.

High humidity and water vapor can have a deleterious impact on the use, operation and long-term reliability of instruments and systems.

The Complete Purging System

The **NEPS 1000® Pumped** is designed to maximize the dry gas purging process for humidity removal, with a host of capabilities and functionality for effective and efficient control during the purging operation.

Easy Operation

The **NEPS 1000® Pumped** is fully self-contained.

WANT TO KNOW MORE? GET A FREE ENGINEERING CONSULTATION

Moisture Protection Technology

User-Friendly

The **NEPS 1000® Pumped** has easy-to-use selectable programming, which can be set to view process control values and display dew point measurements in °C or °F with pressure in Kpa or psi. Highly visible liquid crystal displays provide constant information and readouts during operation and use.

Equipment Leak Testing

The **NEPS 1000® Pumped** comes with a selection of three built-in leak testing capabilities to verify the sealing standard of the equipment to be purged. Pressure testing can be conducted in pressures of 10.3 Kpa (1.5 psi), 17.2 Kpa (2.5 psi), and 34.5 Kpa (5.0 psi). Pressure leak/rate display resolution is 0.01 psi.

Gas Quality Testing

The dryness of the gas is important to the effectiveness of the purging operation and the **NEPS 1000® Pumped** dew point monitor can be used to check the dryness of the gas prior to commencing the purging operation.

Universal Voltage

The **NEPS 1000® Pumped** can be operated globally. Voltages and frequencies range from 100 to 230 VAC at 50-60 Hz.

Single Connection Purging

Traditional conditioning with dry nitrogen, gas or air depends on the flow of gas from an entry connection to an outlet port. In this mode the gas will follow the simplest and easiest path to the outlet connection. This can often lead to "pockets" of unconditioned gas.

Using **NEPS 1000® Pumped** the mode of operation changes to a more efficient single connection purging process, which also uses a choice of three selectable pressure cycles to ensure the dry gas influences all the space volume within equipment.

There are two states in the purge cycle. In state one, the unit under test (UUT) is connected to the supply gas until the selected psi is reached. In state two, the unit is connected to the exhaust line until zero psi is reached. The **NEPS 1000® Pumped** cycles between these two states until the selected dew point is achieved.

AGM Container Controls offers a comprehensive range of purging instruments for moisture removal in equipment and systems to prevent condensation and humidity damage.

Key Features & Benefits

1. Fully Self-Contained for Portable Use
2. Easy-to-Use Single Connection Purging
3. Dewpoint and Pressure Readout
4. Remote Dewpoint Sensing Option
5. Robust
6. User-Programmable & Maintainable Online
7. Automatic Purging Operation
8. Dewpointstat Gas Control
9. Dewpoint Display from +20°C to -80°C
10. NATO Approved

What is Dewpoint?

The temperature to which air or gas must be cooled for the formation of condensation or frost. This means dew point is ideal for stating the quality control requirement for purging an instrument or enclosure.

Why Purge?

Modern systems that use printed circuit boards, wires, electronic components, rubbers and plastics in their construction will have potentially significant amounts of moisture. The amount of hygroscopic moisture can be significant in comparison to the moisture (water vapor) contained within the air.

Why Choose NEPS 1000® Pumped?

The **NEPS 1000® Pumped** is ideally suited if bottled dry gas is not available or cannot be handled or transported to the point of use. To maintain the flexibility and portability of the **NEPS 1000® Pumped** three models are available, which are fitted with a self-contained pump and moisture adsorbing molecular sieve. All the operating functions of the Standard **NEPS 1000® Advantage** are available with the **Pumped version** and no additional gas supply is required.

The molecular sieve can be readily exchanged when it is saturated and requires replacement. The **NEPS 1000® Pumped** contains one kilo of molecular sieve which is capable of adsorbing more than 20% of its own weight in moisture vapor before it is saturated.



NEPS1000® Pumped Applications

- Optical Instruments
- LASER Systems
- SF6 Switch Gear
- Printed Circuit Board Conditioning
- Double Glazing Cavities
- Electronic Housings
- Workstations
- Storage Containers
- Surveillance Instruments
- Underwater Equipment
- Thermal Imaging
- Image Intensifiers

NEPS 1000® Pumped enables better operation and long-term reliability of moisture-sensitive instruments and systems.

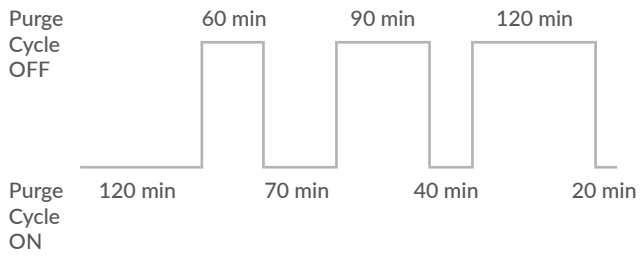
NEPS 1000® Pumped Dewpointstat

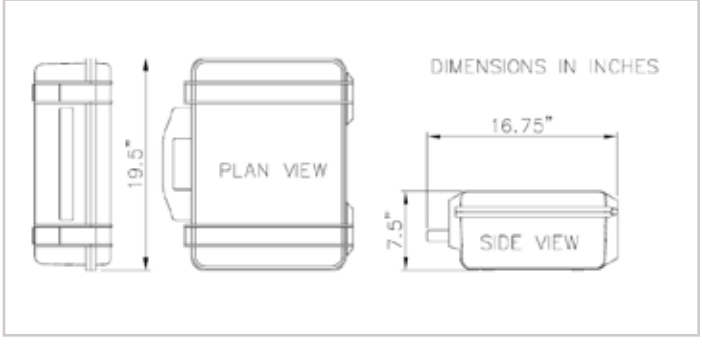
The Dewpointstat function of the **NEPS 1000® Pumped** allows you to monitor and control the removal of built-in hygroscopic moisture within a system or equipment. The Dewpointstat feature of **NEPS 1000® Pumped** enables users to determine the amount of moisture contained within equipment and to implement an optimized gas and purging procedure for production control.

Using the remote dew point sensor option the **NEPS 1000® Pumped** monitors the progress of the dew point dryness within the equipment being purged. It then switches off and isolates the dry gas when the selected dew point is achieved.

A data logger can be used to monitor the dew point degradation time, which allows the water vapor transmission rate (WVTR) to be calculated. The rate of water removal (hygroscopic loading) can also be determined during the initial purging phase. *(See graph below)*

HYGROSCOPIC REMOVAL PHASE





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NEPS 1000® Pumped being used to single point purge a telescopic sight to a dew point of –40°C as part of a routine maintenance schedule.



Technical Specifications

Selectable Pressure Ranges	10.3 Kpa (1.5 psi) 17.2 Kpa (2.5 psi) 34.4 Kpa (5.0 psi)
Display Range Pressure	0 to 34.4 Kpa (0-5.0 psi)
Display Range Dewpoint	(Selectable) +20^{0}C to -80^{0}C dewpoint +68^{0}F to -94^{0}F dewpoint
Resolution	0.1^{0}C dewpoint
Accuracy	± 2^{0}C dewpoint
Data Output Pressure	0 - 5 volts
Data Output Dewpoint	0 - 5 volts
NATO Stock NSN NP 240	4440-99-912-6628
NATO Stock NSN NP 110	4440-99-404-2677
NATO Stock NSN NP 24	6625-99-821-5023

Power	100 - 230 volt | 50 - 60 Hz
Power Consumption	3 amps
Dimensions (mm)	490W x 425D x 190H (closed)
Weight	15 kg (33 lbs)
Ingress Protection	IP54 (closed case)
Operating Temp	-10^{0}C to +50^{0}C (14^{0}F to 122^{0}F)
Storage Temp	-50^{0}C to +65^{0}C (-58^{0}F to 149^{0}F)
Flow Rate (typical)	20 liters per minute (0.71CFM)
Optional Extras	See NEPS Accessories
Order Code	NP240-AGM
	NP110-AGM
	NP24-AGM

Form 7.2.68B

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