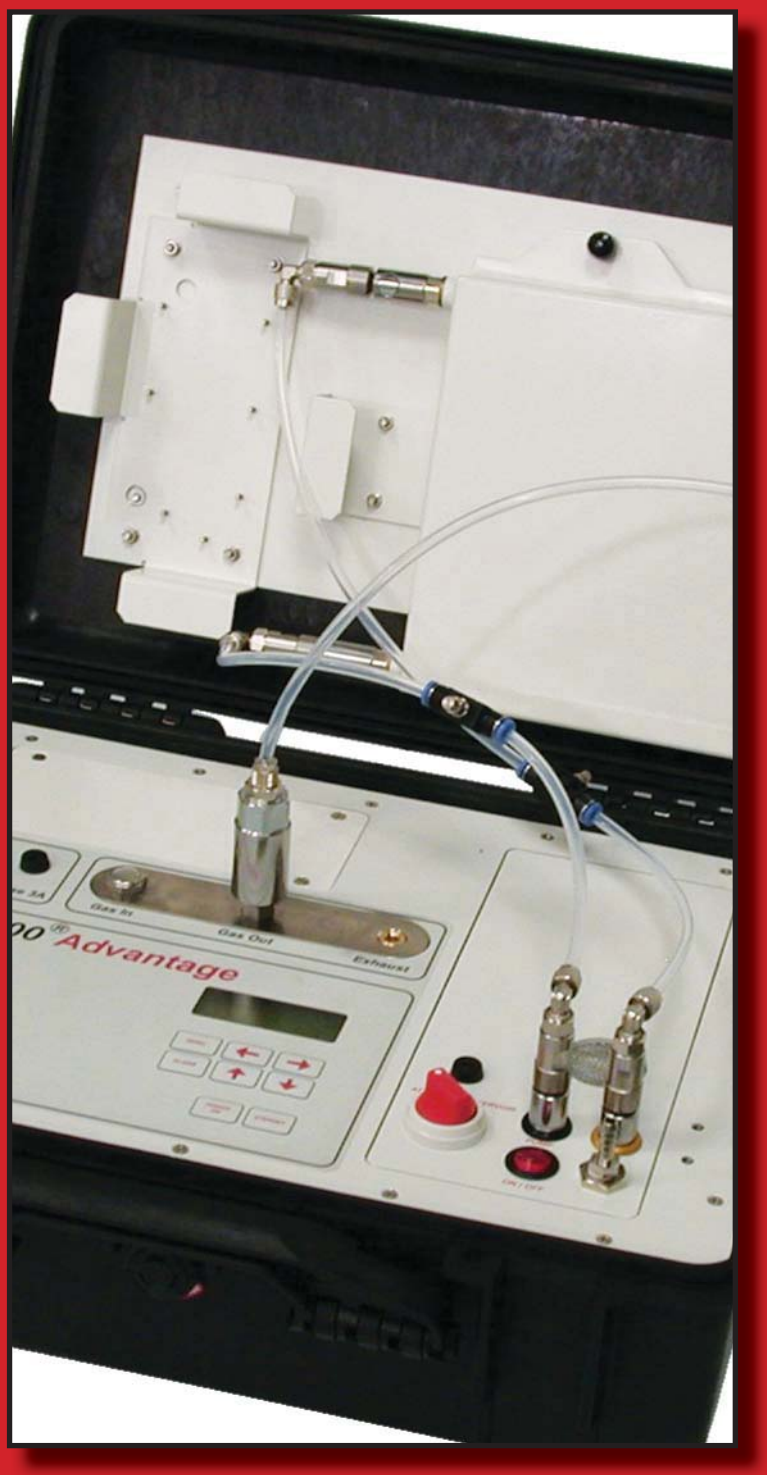
NEPS1000 PUMPED
Dry Gas Purging System

The **NEPS1000 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.



AGM Container Controls, Inc. • 3526 E Fort Lowell Rd • Tucson AZ 85716
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Moisture Protection Technology

The Complete Purging System
The NEPS1000 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
NEPS1000 PUMPED is fully self-contained. Simply connect a dry gas source to the inlet connection and the equipment port. The NEPS1000 PUMPED is ready to operate.

Economic Gas Use
One of the NEPS1000 PUMPED benefits is its use of the purge gas used for purging. By using a single pipe connection the purge gas is controlled and dispersed throughout the instrument or system being purged. During the depressurization phase of purging the purge gas is isolated.

User-Friendly
The NEPS1000 PUMPED has easy-to-use selectable programming, which can be set to view process control values and display dew point measurements in ºC or ºF with pressure in Kpa or psi. Highly visible liquid crystal displays provide constant information and readouts during operation and use.

Equipment Leak Testing
The NEPS1000 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 NEPS1000 PUMPED dew point monitor can be used to check the dryness of the gas prior to commencing the purging operation.

Universal Voltage
The NEPS1000 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 NEPS1000 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 PUMPED cycles between these two states until the selected dew point is achieved.

KEY FEATURES & BENEFITS

- Fully Self-Contained for Portable Use
- Easy-to-Use Single Connection Purging
- Dew Point and Pressure Readout
- Remote Dew Point Sensing Option
- Robust
- User-Programmable
- Automatic Purging Operation
- Dewpointstat Gas Control
- Dew Point Display from +20ºC to -80ºC
- Maintainable Online
- NATO Approved

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AGM CONTAINER CONTROLS, INC. OFFERS A COMPREHENSIVE RANGE OF PURGING INSTRUMENTS FOR MOISTURE REMOVAL IN EQUIPMENT AND SYSTEMS TO PREVENT CONDENSATION AND HUMIDITY DAMAGE

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

What is Dew Point?

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 NEPS1000 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 NEPS1000 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 NEPS1000 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 NEPS1000 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.

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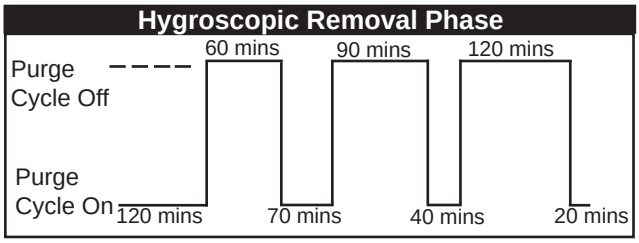
NEPS1000 PUMPED DEWPOINTSTAT

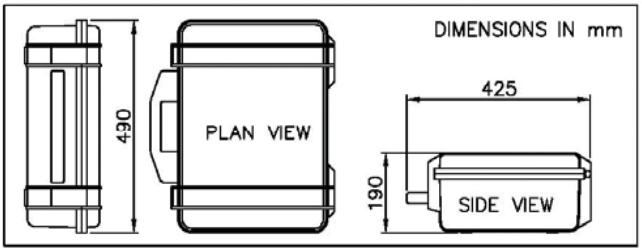
The Dewpointstat function of the NEPS1000 PUMPED allows you to monitor and control the removal of built-in hygroscopic moisture within a system or equipment.

The Dewpointstat feature of NEPS1000 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 NEPS1000 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 on right.)





NEPS1000 PUMPED being used to single point purge a telescopic sight to a dew point of –40ºC as part of a routine maintenance schedule.

TECHNICAL SPECIFICATIONS

Selectable Pressure Ranges	10.3 Kpa (1.5 psi)	Power	100-230 volt 50 hz - 60 hz
	17.2 Kpa (2.5 psi)	Power Consumption	3 amps
	34.4 Kpa (5.0 psi)	Dimensions (mm)	490W x 425D x 190H (closed)
Display Range Pressure	0 to 34.4 Kpa (0-5.0 psi)	Weight	15 kg (33 lbs)
Display Range Dew Point	(Selectable)	Ingress Protection	IP54 (closed case)
	+20ºC to –80ºC dew point	Operating Temp	-10ºC to +50ºC (14ºF to 122ºF)
	+68ºF to –94ºF dew point	Storage Temp	-50ºC to + 65ºC (-58ºF to 149ºF)
Resolution	0.1ºC dew point	Flow Rate (typical)	20 liters per minute (0.71 CFM)
Accuracy	± 2ºC dew point	Optional Extras	See NEPS Accessories
Data Output Pressure	0 - 5 Volts		
Data Output Dew Point	0 - 5 Volts		
Nato Stock NSN			
NP240	**4440-99-912-6628**	**Order Code**	**NP240-AGM**
NP110	**4440-99-404-2677**		**NP110-AGM**
NP24	**6625-99-821-5023**		**NP24-AGM**

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