

# NEPS1900R Nitrogen purging system

설치용 고순도 가스 제습기

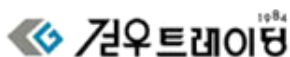


The **NEPS1900 RACK MOUNTED** is the latest development for improving the effective and efficient use of dry nitrogen purging for electronic, optical, high voltage, laser systems and equipment requiring gas drying and inhibiting of oxygen.

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



SPECIALIST PURGING TECHNOLOGY



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# NEPS1900R Nitrogen purging system

## 설치용 고순도 가스 제습기

### KEY FEATURES & BENEFITS

- Fits Standard 19 inch Racking
- Easy to Use Single Connection Purging
- Dewpoint and Pressure Readout
- Remote Dewpoint Sensing Option
- Portable and Robust
- User Programmable
- Automatic Purging Operation
- Dewpointstat Gas Control
- Dewpoint Display from +20°C to -80°C
- Maintainable Online
- NATO Approved

## Specialist Purging Technology

### The Complete Purging System

The NEPS1900 RACK MOUNTED is designed to maximise the dry gas purging process for humidity removal and oxygen inhibition with a host of capabilities and functionality for effective and efficient control during the purging operation.

### Easy Operation

The NEPS1900 RACK MOUNTED is fully self-contained. Simply connect a dry gas source to the inlet connection and the equipment to be processed to the purge connection and the NEPS1900 RACK MOUNTED is ready to operate.

### Economic Gas Use

One of the NEPS1900 RACK MOUNTED 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 depressurisation phase of purging the purge gas is isolated.

### User Friendly

The NEPS1900 RACK MOUNTED has easy to use selectable programming which can be set to view process control values and display dewpoint measurements in °C or °F with pressure in Kpa or psi. Highly visible liquid displays provide constant information and readouts during the operation and use of the NEPS1900 RACK MOUNTED.

### Equipment Leak Testing

The NEPS1900 RACK MOUNTED comes with a selection of four in built leak testing capabilities to verify the sealing standard of the equipment to be purged. Pressure testing can be conducted at pressures from 10.3 Kpa (1.5 psi) to 34.4 Kpa (5.0 psi). Pressure leakrate 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 NEPS1900 RACK MOUNTED dewpoint monitor can be used to check the dryness of the gas prior to commencing the purging operation.

### Universal Voltage

The NEPS1900 RACK MOUNTED can be operated from global country voltages and frequencies ranging from 100 to 230 VAC at 50-60 Hz.

### Single Point 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 NEPS1900 RACK MOUNTED 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 an equipment.

During the purge process the NEPS1900 RACK MOUNTED monitors the pressure. When the pre-selected setting is achieved the supply gas is isolated and an internal control valve allows the gas to flow to the exhaust port where the dewpoint of the mixed air/gas is measured. The purging process then continues until the desired dewpoint protection has been achieved.

**BROWNELL OFFERS A COMPREHENSIVE RANGE OF PURGING INSTRUMENTS FOR MOISTURE REMOVAL IN EQUIPMENTS AND SYSTEMS TO PREVENT CONDENSATION AND HUMIDITY DAMAGE.**

## **NEPS1900 RACK MOUNTED 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 dewpoint?**

**The temperature to which air or gas must be cooled for the formation of condensation or frost.**

**This means dewpoint 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 in built moisture often described as "hygroscopic moisture" can be significant in comparison to the moisture (water vapour) contained within the air.

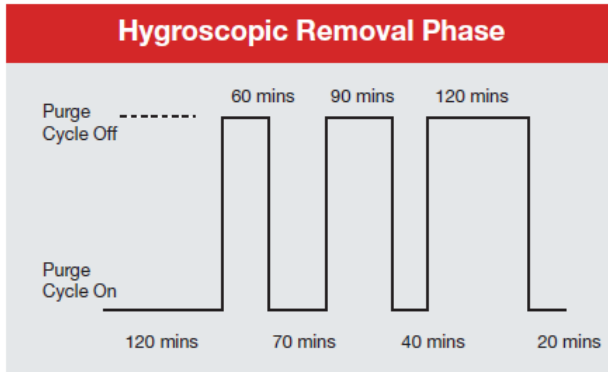


### **NEPS 1900 RACK MOUNTED**

- For industries that require a fixed installation the NEPS1900 RACK MOUNTED enables the purging system to be used in standard 19inch U Racks.
- NEPS1900 RACK MOUNTED instruments are supplied with power lead, connecting tubes and full function capability including automatic gas control.
- NEPS1900 RACK MOUNTED can be retro-fitted with the remote sensor adaptor..

# What is the Dewpointstat function?

The Dewpointstat function of the NEPS1900 RACK MOUNTED is able to monitor and control the removal of in built hygroscopic moisture within a system or equipment.



## NEPS1900 RACK MOUNTED Dewpointstat

The Dewpointstat feature of the NEPS1900 RACK MOUNTED enables users to determine the amount of moisture contained within equipment and to implement an optimised gas and purging procedure for production control.

Using the remote dewpoint sensor option the NEPS1900 RACK MOUNTED monitors the progress of the dewpoint dryness within the equipment being purged and switches off and isolates the dry gas when the selected dewpoint is achieved. A data logger can be used to monitor the dewpoint degradation time, which allows the water vapour transmission rate (WVTR) to be calculated. The rate of water removal (hygroscopic loading) can also be determined during the initial purging phase.



## TECHNICAL SPECIFICATIONS

Useable Gases	Air, Nitrogen, SF6, Helium, Argon
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°C to -80°C dewpoint +68°F to -94°F dewpoint
Resolution	0.1°C dewpoint
Accuracy	+/- 2°C dewpoint
Data Output Pressure	0 - 5 Volts
Data Output Dewpoint	0 - 5 Volts
Nato Stock NSN:	TBC

Power	100-230 volt 50 hz - 60 hz
Power Consumption	3 amps
Dimensions	To fit standard 19 inch Racking
Weight	6 kilograms
Operating Temp	-10°C to +50°C
Storage Temp	-50°C to + 65°C
Proof Pressure	input 136 Kpa (20 PSI)
Flowrate (typical)	20 litres per minute
Optional extras	See NEPS Accessories

Order Code:

**N1900**