

PRODUCT DATA SHEET: AUTO-PURGER PLUS (APP) Automatic Air & Water Purger

INTRODUCTION

The AUTO-PURGER PLUS (APP) is a totally automatic, electronically controlled non-condensable gas (air) and water purger for reducing the energy costs of operating an ammonia refrigeration system. The AUTO-PURGER PLUS is shipped preassembled, prewired, insulated, and includes an automatic water bubbler, a relief valve, and an isolation service valve package. All AUTO-PURGER's are factory tested.

Air and water are detrimental to the operation of ammonia refrigeration systems. Air in the system collects in the condenser and obstructs heat transfer resulting in higher than necessary condensing pressures. Water in ammonia raises the boiling point of the refrigerant requiring lower suction pressures than otherwise necessary to maintain the correct refrigerant liquid temperature. Both of these conditions require excess energy to maintain correct refrigeration capacity and temperature. *See Graphs 1 and 2 on page 2.*

The Hansen AUTO-PURGER PLUS efficiently and automatically helps maintain condensing and suction temperatures at nearly optimum operating conditions. Because both air and water removal functions are incorporated into one compact unit, floor space, maintenance, and energy are minimized. Additionally, the operation of the AUTO-PURGER PLUS is very similar to the Hansen standard AUTO-PURGER so those familiar with the AUTO-PURGER will find it very easy to use and maintain.



AUTO-PURGER PLUS (APP)

FEATURES

- Compact wall mounting saves floor space
- High capacity water separation – up to 7 gallons per day
- High capacity air separation – up to 20 times the capacity of competitor units
- Requires less energy to operate– single phase, 115V, 20A circuit
- LCD console displays purger data
- On-board diagnostics

INSTALLATION

Installation requires piping the foul gas line, pumped liquid line, liquid return line, suction line, water bubbler fill and drain lines, relief valve vent line, and water purge line to a customer supplied container. Installation also requires wiring the power connection, and wiring the remote purge point solenoid valves, which must be purchased separately.

OPERATION

The AUTO-PURGER PLUS collects non-condensable gases (air) from the refrigeration system and releases the air to a water bubbler; the APP also collects and releases water from the refrigeration system. The water is first concentrated in the evaporator section of the AUTO-PURGER PLUS using the foul gas from the condenser purge points as part of the normal operation of a non-condensable gas purger. The evaporator is supplied by pumped, water-contaminated, refrigerant liquid from the lowest temperature recirculator vessel. As the refrigerant boils off in the AUTO-PURGER evaporator, the water is left behind. At about 20% water concentration the purger then isolates the mixture of water and ammonia and further concentrates the water with hot gas and electric heat. At approximately 90% water concentration the liquid is drained to a customer supplied container. The AUTO-PURGER PLUS then repeats the cycle of separating air and concentrating water.

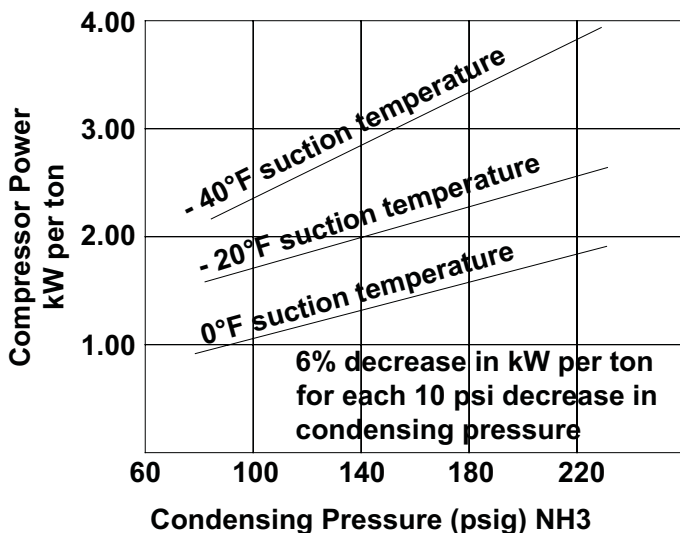
SELECTION

Model	Description
APP08	8 purge points
APP16	16 purge points
APP24	24 purge points
APPC	for computerized plants

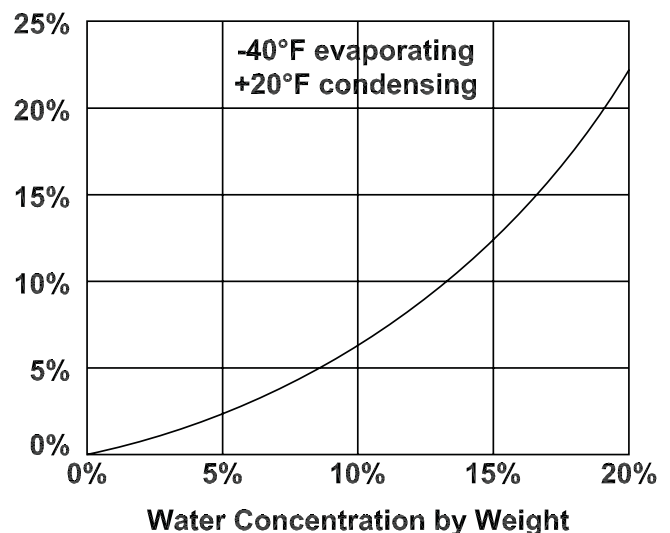
All models are suitable for ammonia only. Standard electrical supply is single phase, 20A, 115V, 50/60 Hz. Optional single phase, 15A, 230V, 50/60 Hz is also available.

To order, specify model and voltage.

GRAPH 1: ENERGY SAVINGS, AIR REMOVAL



GRAPH 2: ENERGY SAVINGS, WATER REMOVAL



For more information, visit:

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