

PURGE ECONOMIZER CONTROL\$



THE ORIGINAL "PEC" CONTROLS

- 🍏 PLC control for all timing and functions
- 🍏 Precision hygrometer board complete with:
 - Highly visible LED display
 - 9 (+15 C) to -40 C(F) dew point range
 - Easily adjustable dew point set level
 - 4-20 mA or 0-5VDC analogue output
 - Economical dew point sensor can be replaced without the need for calibration.
- 🍏 4-Line Tex Display interface Panel complete with:
 - Tower Status Display for functions
 - User interface for adjustment of time settings
 - Password protected for changing of presets
 - Display of Total Operating Hours
 - Display of "Purgeless" hours
 - Display of total cubic feet of air savings

NEW OPTIONS FOR IMPROVED CONTROL

- 🍏 High resolution 7" colour touch screen complete with:
 - Status window with tower status, valve switching valve status, dew point, mode operation, and cycle status
 - Data window for "Total Operating Hours", "Purgeless Hours", and "Total Cubic Feet of Air Saved" (to 99,999,999)
 - Setting window allow adjustment of time cycle values and dew point set levels. Password protected for use by authorized personnel only.
 - Operator instruction window covering alarm details or maintenance information.
 - Alarm screen (when alarms are ordered) with time and date-stamped alarm history
- 🍏 Aluminum Oxide dew point transmitter with +20°F (18°C) to -80°C (112°F) dew point range. Analogue data is input to the PLC and displayed on the touch screen.



FIND OUT HOW YOU CAN SAVE MORE

Saving compressed air is saving electrical power consumption at the source. There are government programs available in many provinces (such as SaveOnEnergy in Ontario) and states which will allow energy saving rebates for the purchase of "Purge Economizer Control\$". Check the following web sites to find out if you can qualify under one of these programs:

In Canada - <http://www.nrcan.gc.ca/energy/funding/efficiency/4947>
(Click on "Modify Search Criteria", enter your province, "Industry", "Financial Incentives", "Retrofit", and key words "Compressed Air".
In the USA start at - <https://energy.gov/savings>

MAKE EVERY KILOWATT COUNT

TWO WAYS TO SAVE \$

- 1) Order your “Purge Economizer Control\$” with your new APPL twintower dryer.
- 2) Retrofit your existing APPL dryer or your competitive make twintower air dryer.

Contact APPL or your local distributor for retrofit information and a detailed quotation. Provide us with your dryer make, model and air flow schematic (if available). We have retrofit most competitive models over the past 20+ years and can help with yours.



HOW “PURGE ECONOMIZER CONTROL\$ WORKS

- 1) At the beginning of each half cycle, one tower depressurizes and begins to purge, while the other remains on line drying air.
- 2) At the end of the purging period, the tower repressurizes slowly with air entering from the top of the tower. The tower will be fully repressurized between 5 to 10 seconds prior to being ready for on-line switching for drying service.
- 3) Without “PEC”, the tower would switch to on-line drying service at the end of the 5 minute half cycle. With “PEC”, at 1 second prior to tower switch over, the outlet dew point is considered within the PLC program. If the outlet dew point is higher than the hygrometer set point (normally -39 C), the tower will switch to on-line drying service. If the dew point is lower than the hygrometer set point (meaning the on-line tower is providing a suitable dew point level), the regenerated tower will remain isolated in the “Purgeless/Standby” position. We refer to this as a “Purgeless” period, as it is a period which extends the fixed time cycle, which would otherwise represent purging time on fixed time cycle operation. The position is maintained until the outlet dew point from the on-line tower deteriorates to a higher level than the hygrometer set point. When the dew point deteriorates to the set level, the time cycle continues, and the tower will switch to on-line drying service. At this point, the other tower will depressurize and go through the same process.
- 4) During the “Purgeless/Standby” period, the PLC logs the minutes and hours. The “Total Purgeless Hours” are displayed in the “DATA” window. A comparison with the “Total Operating Hours” will provide the user with an approximation of proportional savings. For heatless dryers, the PLC also automatically performs a mathematical function of multiplying the total “Purgeless” minutes, times the purge air flow rate. This “Total Saving in Cubic Feet” of compressed is displayed in the “DATA” window, and can be used by the owner to calculate dollar savings based on his cost to produce compressed air.
- 5) For heated blower purge dryers, the “Purgeless” period actually represents the time during which the heater and blower would have otherwise been in operation, had there been no extension to the time cycle. For heated blower purge dryers, the total “Purgeless” hours can be multiplied by the combined heater and blower operational kW ratings to determine the approximate kW-hour savings.

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