

PureGuard LVP Gas Temperature Control System

The **PureGuard** gas temperature controller coupled with the PureGuard cylinder jacket is a reliable system to control the temperature of your critical high purity process gases.

The PureGuard temperature control system is capable of controlling to +/- 0.05* Celsius; using a compressor free solid state cooling system in an energy efficient, compact package.

Typical applications are for low vapor pressure gases as those used commonly in CVD and Etch.

The PureGuard gas temperature control system has a built in recirculation pump that pumps fluid through a heat exchange jacket. The controller maintains fluid temperature either cooling or heating depending on the need using a completely solid state technology.

System Attributes

- Compact Control Module (~12" square)-No CFC's or Compressor Maintenance
- Solid State Thermal Technology-Lower Power Consumption
- Heat resistant Kevlar Jacket with Polyester Outer Provides the Ability For One Jacket to be Used on Many Cylinder Sizes
- Full Surface Insulated Contact for Maximum Efficiency
- Power: 115-230VAC, 50/60Hz, 7/5A

Order Part #NVT-PGX-X-X

- X 1= Single Jacket 2= Dual Jacket 3= Triple Jacket
- X A= 4' Primary Fluid Connection B= 6' Primary Fluid Connection C= 8' Primary Fluid Connection D= 10' Primary Fluid Connection
- X 1= 50' Tall 8' Diameter Nominal Bottle
4= 18' Tall 7' Diameter Nominal Bottle



Compare PureGuard to the Competition

Feature	PureGuard	Competition	Decision	Key Differentiator
Price	\$11,700	Accurate Gass	PureGuard	PureGuard is less costly
Power Consumption	typical <200 watts	2875 watts	PureGuard	PureGuard more efficient from cooling technology & heat exchanger
Maintenance	Maintenance Free	Compressor Maintenance	PureGuard	Thermoelectric lifetime exceeds 200,000 hours, recirculation pump 25,000 hours
Accuracy	0.05° C	0.1° C	PureGuard	PID and Variable power output allow for more accurate control
Temperature Controller	PID with Variable output	PID Controller, On/Off cycling	PureGuard	System can control power output for fine control, not just on and off
Temp Control Technology	Solid State Thermoelectric Technology	Compressor Based	PureGuard	Solid State technology doesn't require maintenance, has no refrigerants for disposal or ozone depletion, uses only energy required to control temperature, not typical full on then completely off type thermostat
Refrigerant	None	R-134a	PureGuard	Thermoelectric design does not use compressor or refrigerant
Jacket Design	Soft Nomex outer shell, stainless vertical coils	Stainless Hard jacket with fluid channels	PureGuard	PureGuard soft design allows for same jacket to be used in multiple applications, also heat exchanger has much more contact area with bottle for better heat transfer.
Jacket Ease of use	Soft Nomex outer shell, stainless vertical coils	Stainless Hard jacket with fluid channels	PureGuard	PureGuard will fit securely around any similar sized bottle with straps allowing to snug the jacket. AGT's hard jacket not compliant with bottle that might have surface features and will allow for air gaps.
Communications	RS232 Standard	RS232 or 485 Optional	PureGuard	PureGuard comes standard with communication package
Power Requirements	90 to 250 VAC	115 VAC or 230 VAC	PureGuard	AGT must be ordered for correct power region, PureGuard is Universal
Size of Controller	12.75" x 11" x 12.75" & 28lbs	28.5" x 16.5" x 16.5" & 127 lbs	PureGuard	More Compact design, less space requirements, can be moved easily
Noise	49dba to 63 dba @ 3 feet	Not Published	PureGuard	PureGuard has variable speed fan, normal running 49dba, will increase speed as needed to meet set point.

Trust the Team at Invatech for your Industrial Process Solutions

Call 480-782-6033 or email sales@invatecheng.com