

Rapid Purger

Data Sheet

Type: V300

Purpose:

The V300 rapid purger from Parker is designed to safely and efficiently remove non-condensable gases from ammonia refrigeration systems. The V300 is an improvement over the successful V200 series and offers several new features and benefits.

The V300 is equipped with a RS-485 communication port for easy interface to controller data transmission. All of the parameters accessible via the HMI cable are now accessible via the serial channel. Further advancements include extended data logging time and password protection for factory calibration settings.

Like its predecessor the V300 can be used with 120 or 240 VAC and can handle from 4 to 20 purge points.



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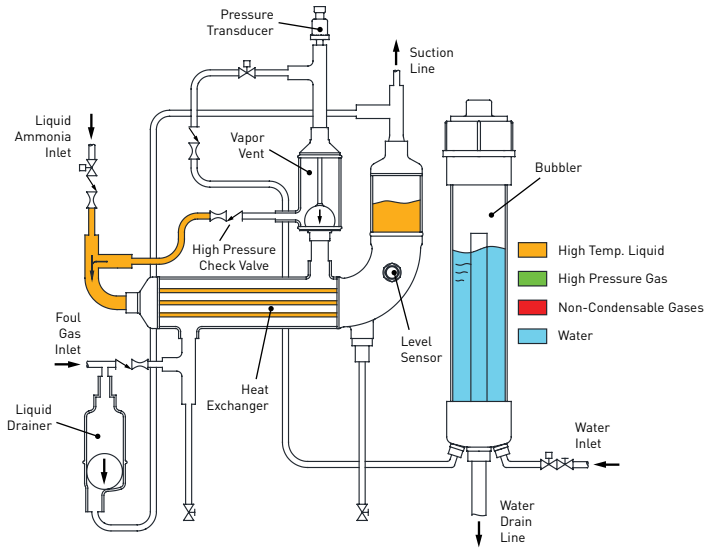
www.parker.com/refspec



Product Features:

- Compact design with equivalent capacity of our V200 model
- Made from 100% corrosion free components
- RS-485 communication capability
- Records purge cycles and purge time up to 12 weeks
- Password protected prevents tampering
- Multiple language display
- Factory calibrated for plug and play functionality
- Automatically adjusts vent pressures based on system conditions
- Energy saving sleep mode will activate with the lack of non-condensables
- Proprietary microprocessor control for all sensing and control functions
- Records ammonia lost up to 12 weeks

ENGINEERING YOUR SUCCESS.



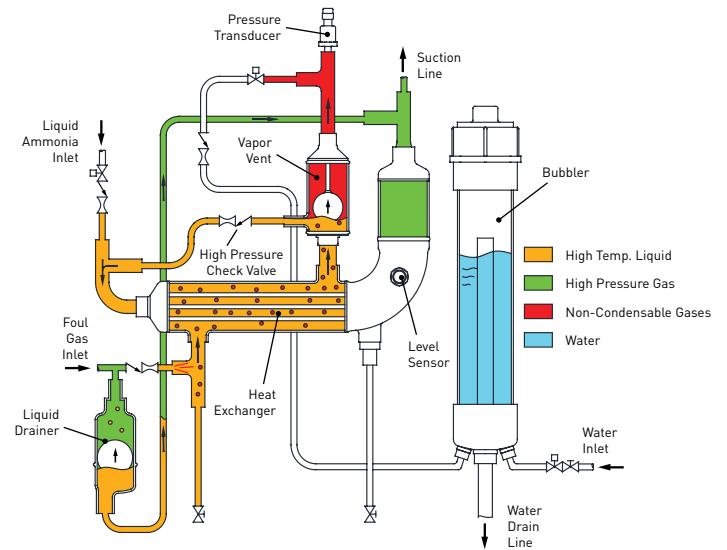
1. Fill & Pre-Cool

This cycle begins with high pressure liquid ammonia feeding through the liquid solenoid, check valve and orifice (causing expansion) into the V300's heat exchanger. The liquid solenoid stays energized until the level of ammonia in the heat exchanger is sensed by the level sensor. The level sensor is strategically located so that all of the tubes in the heat exchanger are filled with liquid ammonia. This guarantees the highest level of performance.

The V300 Rapid Purger will stay in the "Pre-Cool" mode until the shell of the heat exchanger reaches 4.4°C (40°F) or lower (-20°F min. controlled by A2B EPR). This is determined by the temperature of the suction the purger is tied into. Once the purger is in this operating temperature range it will transfer to the "Active" state.

2. Separation of Non-Condensable Gases & Refrigerant

With a purge point active, foul gas and ammonia enters the heat exchanger through a liquid drainer, check valve and a flow control orifice. (Any liquid that has condensed in the purge lines will be returned safely back to the outlet of the heat exchanger through the liquid drainer). The ammonia in the mixture condenses immediately and is returned through the differential check valve and orifice back to the liquid makeup side of the heat exchanger. This "Recycling" of ammonia reduces the need for makeup refrigerant.



3. Release of Non-Condensable Gases

Non-condensable gases will start to collect in the "Vapor Vent Float" as they are separated. Once the volume of these gases in the float chamber rises past the target pressures, the vent and water solenoids will open releasing them to the water bubbler for safe disposal.

The start of a purge cycle can commence automatically, manually, or time based. The Rapid Purger V300 can only purge one point at any given time. Each purge point goes through each phase in the purge cycle. In automatic mode each purge point is sampled for a minimum of five minutes. If the purge conditions are not met within the time limit, the V300 continues to the next purge point. When the purger cycles through all the purge points and no purge conditions are met after two cycles the purger will go into sleep mode for two hours.

