



TESCORP VENTMASTER VRU PRODUCT LINE

The Solution to Your EPA Quad "0" Regulations & Methane Emissions Issues Self-contained and Complete Modular Systems





Designed for compliance to EPA "New Source Performance Standards" (40 CFR 60 Subpart 0000a) for capturing vented gas emissions

TESCORP Clean Energy Legacy

For over 35 years, TESCORP has been a leader in specialized engineered solutions for vent gas emissions for both the oilfield and process industries. These have been mostly unique applications, requiring unique solutions to solve various emission problems. Our designs have been specific to the application, the type of gases to be recovered, and the specific environmental conditions or specifications. Our solutions have covered applications ranging from high-vacuum systems with pressures below 10 torr to very high pressure wet and corrosive gases in the pressure ranges in excess of 5000 psi. Our systems have been utilized in extreme environments from the hot and humid jungles of South America to -40 degree artic temperatures and conditions of North Dakota and Alaska. TESCORP has always been able to provide a solution for the most demanding applications and will continue to do so. However, we are now pleased to expand our services and expertise to a standard line of products specifically designed to meet the needs of the oilfield, for economical and efficient vapor emission systems.



WHEN DEPENDABLE PERFORMANCE IS CRITICAL

TESCORP VENTMASTER VRU PRODUCT LINE

TESCORP "VentMaster" Product Line - Dry Gas & Wet Gas

- 1. Specifically designed for saturated "wet" gases that have been problematic for many compressor applications, the VentMaster line of compression systems are all designed to accept saturated gases and to add "super heat" in the compression cycle to maintain temperature in excess of dew point and therefore eliminate any chance of condensation within the compression process. H2S sour gas options available.
- 2. Specifically designed for easy installation and operation in all oilfield environments, the TESCORP VentMaster series is designed and constructed to be a standardized modular system, utilizing commonality of parts and systems for quick deliveries and a low cost purchase and installation.

Design features are:

- All gas condensation is accomplished in the inter-cooler or after-cooler sections of the system with post, 2-phase separation, specifically designed for these gases and liquid content
- Designed for all existing oilfield environments, from extreme hot to extreme cold applications. All VentMaster Vapor Recovery Units are constructed with environmental equipment enclosures to protect the equipment from the elements and to provide acoustic noise dampening for better environmental and personnel protection
- The units are all constructed per applicable code, i.e. ASME, ANSI, and NEC for safe field installation and operation
- All maintenance items are designed to be easily accessible to the operator through enclosure doors or removable panels
- The TESCORP-constructed PLC control panel with pre-programmed logic algorithms allows the VentMaster systems to be easily configured to operate at various pressures and flows as may be needed to meet various emission applications

The TESCORP BVR-M "VentMaster"



The TESCORP "VentMaster" Series BVR-M Vapor Recovery Units are totally self-contained, 1- & 2-stage systems, designed for low volume and moderate to high discharge pressure recovery requirements. The BVR-M systems are robust units for harsh gases and environments.

 Air cooled, oil-free, single-stage & two-stage reciprocating compressors, environmentally sealed utilizing double shaft packing box arrangement designed for saturated gas applications and zero leakage



- System designs from 3 to 30 horsepower (13 model sizes available)
- VRU flows from 15 to 50 Mscfd @ atmos.
- Flash gas booster flows to 400 Mscfd
- Inlet pressures from atmospheric (VRU) to 80 psig
- Discharge pressures...up to 260 psig



The TESCORP CVR-M "VentMaster"

The TESCORP "VentMaster" Series CVR-M Vapor Recovery Units are compact, 1- & 2-stage, Rotary Vane compressor units with fully automatic systems designed for medium to large quantity flows of saturated gases with variable flow rates and pressure requirements.

- Liquid-cooled, oil-lubricated, single-stage & two-staged rotary vane compressor utilizing mechanical seals and vapor recovery heads designed for saturated gas applications and zero leakage.
- System designs from 15 to 75 Horsepower (8 model sizes available).
- Flows from 70 to 400 Mscfd (@ inlet=atmos.
- Discharge pressures...up to 140 psig



TESCORP ERU EMISSIONS RECOVERY
UNIT LINE

The EPA has recognized the issue of fugitive emissions emitted from compressor packing boxes, gas-operated control valves and pumps contributes up to 72.4 BCF of methane per year into the atmosphere. All packing systems leak under normal conditions. Continued servicing, packing replacement or flaring of these gas emissions is costly and not a total solution. TESCORP VentMaster ERU recovers and returns these gases back to the process.



TESCORP has designed, tested, and is manufacturing a standard "vapor emissions recovery system" for use with existing pipeline natural gas compressor systems.

The unit addresses the issue of leaking piston rod packing systems by:

- 1. Recovering the gas from the compressor packing box by utilizing a back-pressure regulator to maintain a positive pressure in the packing case. The vapors are then evacuated by the TESCORP ERU that produces a slight vacuum as necessary to capture and transport all leaking emissions.
- 2. The recovered gas is then pressurized to meet the existing pressures necessary to re-enter either the first stage of compression or the compressor fuel gas system for utilization in the current process.
- 3. The TESCORP "ERU" system is capable of capacities of 1250 scfh and discharge pressures of up to 150 psig.

This system allows existing dry gas pipeline compressor systems to meet the requirements for compliance to EPA "New Source Performance Standards" (40 CFR 60 Subpart 0000a).

Designed and constructed as a complete system for ease of installation and operation, systems are complete with:

- Encapsulated 15 horsepower compressor unit without packing or seals to leak
- 3-Phase/460VAC VFD with controller for totally automatic operation and capacity control
- NEC Class I, Division II controls with customer interface and local fault annunciation
- Vacuum receiver with condensate blow-case for removal and elimination of produced condensates
- Compact design with only a 4' x 4' footprint for ease of installation & utilization of space
- Gas after-cooling of discharge gas for reinjection into either 1st stage of compression or into the compressor fuel gas system
- Weather-proof enclosure available as option

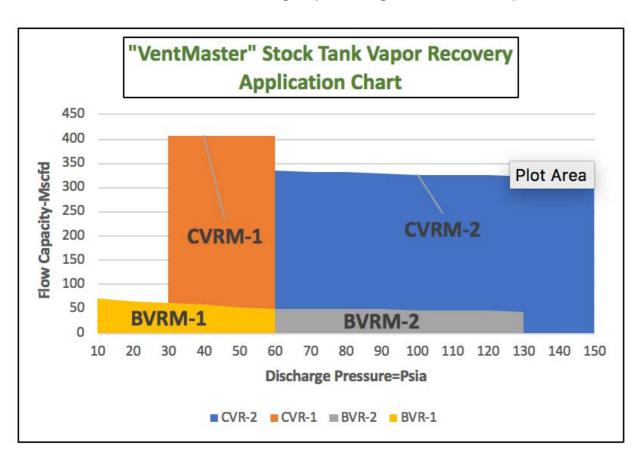


WHEN DEPENDABLE PERFORMANCE IS CRITICAL

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Standard accessories include:

- Matching motor control centers with all properly sized and programmed VFD's, accessory motor starters and logic
- Optional "artic" cold weather heaters and heat tracing
- Optional capacity control valves and logic
- Optional unit paralleling and lead/lag controls for multiple unit operations
- Optional downstream gas accessories are designed to complement the gas system
- Air-cooled convection gas condensers
- Gas/condensate demisters for final gas polishing of entrained liquids



For more in-depth information, please see dedicated webpages and brochures for our extensive Vapor Recovery product lines.