**GLYCOL DEHYDRATION SYSTEM**

**EFFECTIVE REMOVAL OF WATER VAPOR, BTEX AND VOC FROM NATURAL GAS**

*Tri-Point Glycol Dehydration Systems* are designed to remove water from natural gas applications. Our systems target a 7 lbs/MMSCFD gas outlet specifications but can accomplish down to less than 2 lbs/MMSCFD. We offer both trayed and structured packing style units. The more robust design of the Tri-Point system allows for a 30-50% faster start up that is also more adaptive to changes in application.
GLYCOL DEHYDRATION SYSTEMS
PREVENT HYDRATE CAUSED CORROSION & MAXIMIZE FACILITY EFFICIENCY

Tri-Point partners with our customers to deliver standard turnkey packages or complete “Engineered-to-Order” custom systems. We utilize our fabrication facilities to build and deliver optimized wellsie facility solutions. Our ASME code components and aftermarket service capabilities ensure both quality and uptime for your dehy system. We have a team of OEM service technicians to provide system start up, trouble shooting and maintenance.

We offer multiple Glycol Dehydration options including coalesing filters and BTEX EVAC (Emissions Volatiles Aromatics Control) systems to remove benzene, toluene, ethylbenzene, xylene and volatile organic compounds (VOCs) from natural gas.

PRESSURE VS. GAS RATE FOR 48” ID STRUCTURED PACKED CONTACTOR VS. 48” ID TRAY TYPE CONTACTOR

Graph based on the following conditions:
- Gas-specific gravity: 0.65
- Operating temperature: 120 F

ELECTRIC PUMP TYPICAL FLOW PATH

KIMRAY PUMP TYPICAL FLOW PATH

TRI-POINT DEHYDRATION SYSTEM
FIELD SERVICES
- Coalescer and charcoal adsorbers available (Tri-Point Aftermarket Service available for filter maintenance and/or replacement)
- Start up
- Commissioning
- Kimray Services (rebuilding)
- Trouble Shooting
- Cleaning Services
### Applications
- Natural gas dehydration in:
  - Compressor stations
  - Central gathering systems
  - Gas field storage
- Anywhere where natural gas is being moved and the possibility of present water could risk a system shut down

### Dehydration Benefits
- Prevents the formation of water hydrates/condensation during the processing and transportation of natural gas
- Pipeline corrosion prevention
- Allows operator to meet the target water concentration level of sales gas
- Downtime mitigation caused from high water vapor saturated natural gas streams
- Increased heating value of the natural gas stream
- Improves operational adaptability to the continuous variable properties of a natural gas stream
- The ability to cleanse the natural gas stream from a whole range of contaminants (BTEX, VOCs, etc.) in addition to water dew point control

### Contact Tower Standard Features
- Diameters from 12-3/4” OD up to 96” ID
- Minimum of 30” disengagement from top tray to bottom of mist extractor
- Unique Tri-Point bent bubble-tray design that we guarantee to seal and won’t blow out glycol
- ASME code stamped vessels 100% built and packaged in the USA
- Tray type (bubble and valve), structured packed and random packed systems available
- Structured packing for 20 to 1 turn down
- Integral scrubber for liquid removal in lower section of tower

### Standard TEG Regeneration Features
- Heat duty from 125,000 BTU/hr to 2,500,000 BTU/hr
- Heat source typically direct fire
- 3-phase flash separator (size will vary for retention time)
- Standard system controls are fully pneumatic
- Random packed still column

### System Options
- Tower access: walkways, platforms and safety ladders
- Tower clean out designed to ensure trays are 100% clean
- Coolers to control the temperature of the gas flow stream
- Kimray energy exchange or electric glycol pumps available
- Stainless available in stripping columns for more pure glycol
- Burner management and ignition systems
- Tray drains available on tray type applications
- System electrical controls optional (replaces standard pneumatic configuration)
- Full flow charcoal adsorbers available upon request
- Inlet separation, inlet filtration and coalescer available for upstream applications
Tri-Point is an oil and gas production and processing solutions provider with locations supporting each of the major onshore basins in the U.S. The company is dedicated to working with its customers to develop tailored products and services that address needs from the wellhead through the pipeline.

**TRI-POINT EVAC (BTEX) SYSTEM**

Our EVAC (Emissions, Volatiles, and Aromatics Control) unit is Tri-Point’s answer to the ever-increasing need for an environmentally safe way of disposing BTEX (benzene, toluene, ethylbenzene, xylene) and VOC (volatile organic compounds) from glycol regeneration units.

The basic Tri-Point EVAC System meets the requirements of CFR title 40, §63.771(d) (1)(ii) as a vapor recovery device (condenser) by reducing the mass content of total HAP by 95% or more. The type of condenser we incorporate is either natural draft, which is typically used on small- to medium-sized units, or a forced air unit for larger units.

An optional elevated flare or combustor can be included with the EVAC unit depending on the customer’s specifications to ensure 100% VOC and BTEX destruction via combustion. Our design can manage both flash gas and low pressure conditions.

**TRI-POINT BUBBLE CAP & CONTACTOR TRAY DESIGN**

Tri-Point’s unique “bent” contractor tray design and bubble cap assemblies maximize the natural gas and glycol interaction, targeting a 7 lbs/MMSCFD gas outlet specification. The “bent” tray design directs the glycol from upper contractor trays down downcomer pipes to an area on the next lower contractor tray that is over 4” lower than the bubble cap discharge. This design ensures a proper glycol seal between trays, while at the same time mitigating the potential for glycol blow out upon system start up.