

Characteristics

- Built according to PED 2014/68/EU
- Applicable in natural gas grids up to 180 barg
- Compact and mobile skid mounted with twist locks
- Complies to ADR guide lines
- Filling monitoring with visual and acoustic alarm
- Separation of condensate of natural gas and demister avoiding droplets to exit the system
- N₂-supply for inertisation purposes and forced condensate discharge from the vessel to pressurized condensate storage tank
- Power supply by battery. Battery loading by power supply towing vehicle
- 2 Adjustable chokes for flow and pressure control with Interlock
- Inlet—and outlet valve with interlock to avoid incorrect opening or closing of valves
- Movable vent pipe from horizontal position (transportation position) to vertical position with swivel
- All piping and the vessel are executed in stainless steel AISI316 (1.4404)
- Condensate storage capacity 312 ltr
- Overpressure safety for the vessel by PRV and break disc (range 20 barg)
- High pressure hose 1" on a Reel, l=25 m, for connection Of vessel to condensate drain point

MOBILE CONDENSATE REMOVAL UNIT FOR NATURAL GAS APPLICATIONS



Draining of condensate from natural gas grid systems

However natural gas is generally dry in some cases condensation of moisture in the system may occur. This condensate should periodically be removed from the system. For draining condensate in a controlled and safe way the mobile condensate removal unit is a solution.

Characteristics of natural gas condensate

Natural gas condensate contains amongst others fixed particles, carcinogenic components like benzene, toluene, mercury and glycol. The condensate may also have pyrophoric characteristics. The target is to drain condensate and vent natural gas at an elevation height, without droplets or mist, protecting operators being exposed to these components during venting. The capacity of the vessel is based on the ADR guidelines regarding transport of these type of liquid without need for a special license. The unit will be built according to the piping equipment directive (PED).

Function of installation

After connecting the 1" flexible hose to the condensate drainpoint the vent has to be moved into a vertical position. The outlet valve will be opened and the interlock key of this valve will be used for the interlock of the inlet valve enabling opening of the valve. The 2 chokes are set in a pre-defined position by interlocks where choke 1 is 50 % open and choke 2 in a 100 % position. In case choke 1 is clogged choke 1 can be opened to 100 % and choke 2 to 50 % and the obstacle can be flushed into the vessel.



Filling proces

The filling proces can visually be checked by a level indicator. The level indicator has a level switch detection. When reaching max. filling level of the storage vessel an acoustic- and visual alarm will be initiated, as a warning signal to the operator, draining of condensate should be stopped.

Draining of condensate from the vessel

When the condensate storage vessel is full, condensate from the vessel, can be drained by opening the drain valve. In case the condensate has to be drained to a level, higher than the storage vessel or to an storage tank with an overpressure nitrogen will be used. The nitrogen pressure applied to the vessel can be increased up to 10 barg, to flush the condensate outof the storage vessel.



Static electricity

To eliminate potential negative influences of static electricity, the whole system has been grounded to a central earthing point. Correct earthing of the system is guarded by an earth control system indicating correct earthing potential.

Electrical control

The electrical control cabinet is powered by a 12VDC system with an on-board 12VDC battery. The control has signal lamps for indication of the status. The battery will be charged by the towing vehicle during transportation of the unit.



Storage of parts

For storage of accessories a stainless steel storage box is mounted on the skid unit. The box has separated compartments for the battery, manual and accessories.

Nitrogen supply

The nitrogen supply system consists out of 3 cilinders with a pressure reducer and hose connection to the system. Nitrogen is used for flushing