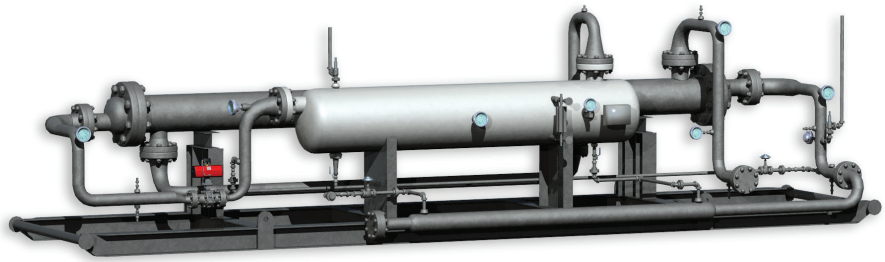
JOULE-THOMSON (JT) ASSEMBLY

Hydrocarbon Dew Point Control & NGL Recovery



Key Benefits

Maximize Production

- Startup fast and save space with our compact, integrated design and quick delivery.
- Recover valuable natural gas liquids from the gas stream.

Lower Costs

- Leverage flexibility by either leasing or owning the package.
- Obtain fast, professional service, support and spare parts from local technicians in every major oil & gas producing area.

Manage Risks

- Safeguard investment with 12-month warranty from startup date or 18-month warranty from delivery date.
- Optimize safety with the latest ASME standards code stamped on each unit and ensuring consist design and construction.

Standard Features

- JT valve with pressure pilot controller
- NGL/gas exchanger
- ASME code gas/gas exchanger
- ASME code -20 °F cold separator
- Temperature controller
- Instrument gas/air manifold
- Sight glass assembly
- Methanol pump and delivery system
- Cold thermal insulation
- Hot gas bypass system for startup
- Thermal relief valves
- Heavy-duty steel skid with lifting lugs

OVERVIEW

The Exterran Production Solutions™ Joule-Thomson (JT) Assembly is a compact, integrated, skid-mounted system designed for hydrocarbon dew point control and increased recovery of valuable natural gas liquids (NGL) in the wellstream following upstream dehydration.

Ideally suited for quick installation and short-term operating environments, our JT assembly saves you startup time and space, recovering valuable NGL and reducing hydrocarbon dew point to pipeline specifications. The package also reduces BTU content of fuel gas proportional to inlet BTU.

OPERATION

The assembly consists of a gas/gas exchanger with hot gas bypass, JT valve, cold separator, methanol injection system and control system.

Following gas/liquid separation and gas dehydration, high-pressure gas enters the assembly through the gas/gas exchanger and chiller for pre-cooling. Methanol is injected to prevent formation of hydrates, and the raw natural gas passes through a JT valve. The resulting pressure drop causes expansion of the gas and a significant temperature reduction due to the Joule-Thompson effect.

The cooled gas is routed to the cold separator to remove the condensed NGL. The outlet gas from the cold separator is routed through the gas/gas exchanger for inlet cooling. The NGL from the cold separator is routed through the inlet NGL/gas exchanger and then to a separate optional pressurized NGL storage tank.

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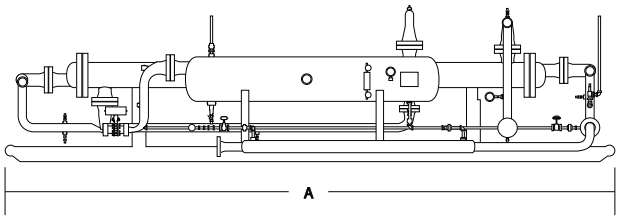
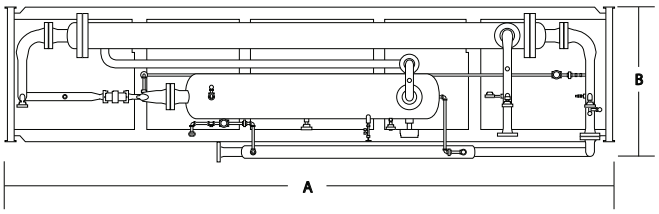
DIMENSIONS

Top View



Side View



Precise dimensions should be confirmed prior to shipping.

Standard Specifications

Nominal Gas Rate (MMscfd)	Estimated Gas/Gas Exchanger Area (sq ft)	Cold Separator Size OD x Length (in x ft)	Skid Dimensions Length A x Width B (ft)	Shipping Weight (lbs)
2	170	16 x 7.5	6 x 15	3,400
5	457	24 x 10	6 x 27	7,500
10	914	24 x 10	6 x 27	10,000
15	1178	42 x 15	8.5 x 36	34,000

Standard unit is typically about seven feet in height. Larger size and custom engineered packages are available.

Options Checklist

- ❑ Upstream dehydration
- ❑ Hairpin exchangers
- ❑ Control isolation valves
- ❑ Ethylene glycol injection system
- ❑ NGL bullet tank
- ❑ 3-phase separator
- ❑ Unit leasing

Notes

Sizing Requirements

Inlet Flow	Pressure (psig)	
	Temp. (°F)	
	Rate (MMscfd)	
	C-10 Gas Analysis (check)	
Outlet	Pressure (psig)	
	BTU	
	Hydrocarbon Dewpoint (°F)	
Sour Service	Yes / No	
	CO_2 (mol%)	
	H_2S (ppm)	

Contact an Exterran sales representative or email PEQ.Proposals@exterran.com to submit sizing information and obtain a quote.

EXTERRAN

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