



**SNC • LAVALIN**

Building what matters

# JT Skids

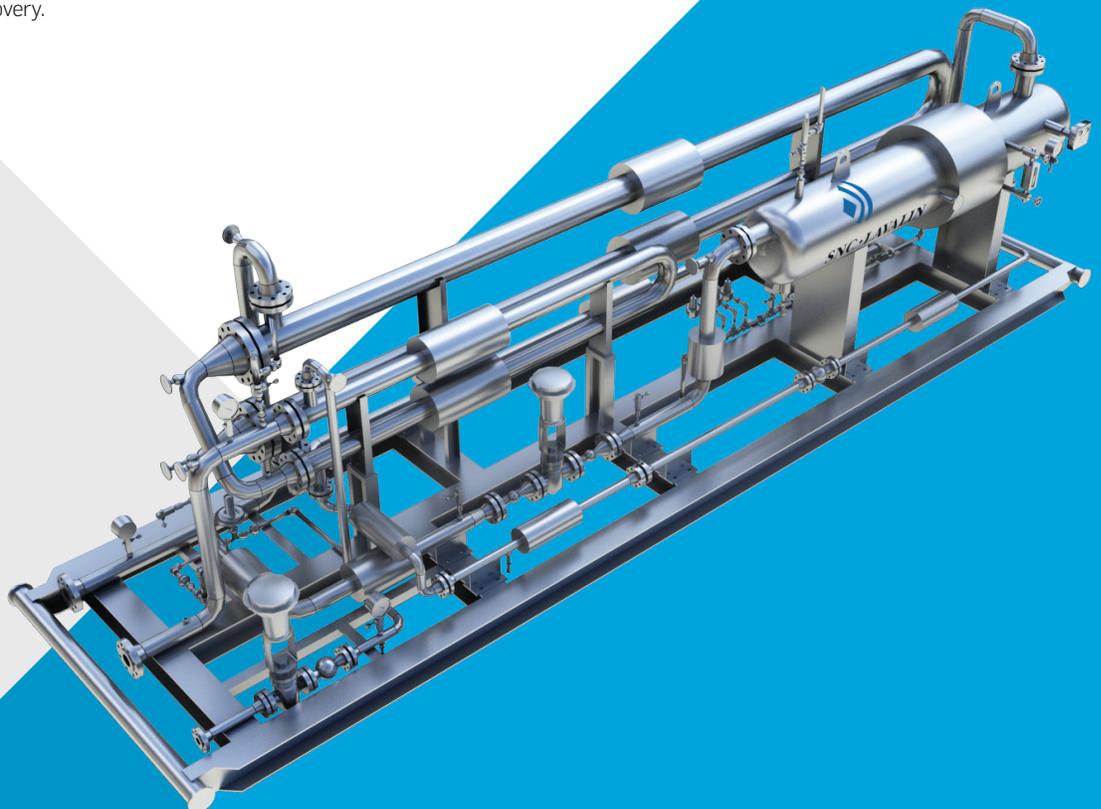
## Production & Processing Solutions

Seamless process flow solutions to deliver maximum recovery and speed to market.

Natural gas is composed of a wide range of hydrocarbon compounds that will condense to form liquids at a particular temperature. The more energydense, or “heavier,” components can condense at operating temperatures and can cause operational problems within pipelines, compressors and other midstream equipment. These natural gas liquids (NGLs) also have a high market value that provides an incentive for maximum recovery.

SNC-Lavalin JT plants, named for the Joule-Thompson effect, cool natural gas by expanding it across a pressure reduction valve. The heavier hydrocarbons condense and, with product stabilization, can be distilled to meet precise product specifications. The resulting residue gas is pipeline quality, and the NGLs are safely transported or stored. SNC-Lavalin standard JT skids are efficient and economical at “dew-pointing” natural gas — meaning to marginally lower its heating value to meet a pipeline specification.

Refrigerated JTs are used in applications requiring “deep cut” liquid hydrocarbon recovery. Typically reserved for rich gas applications, refrigerated JTs use a mechanical refrigeration unit (MRU) to precool the gas prior to JT valve expansion. This results in a considerably lower chiller temperature and allows for significantly higher NGL recovery.



## Customer Challenge

*Maximize liquid hydrocarbon recovery without the high capital expense.*

In an economy that places a much higher value on NGLs than on natural gas, producers can greatly benefit from maximizing NGL recovery. Also, if natural gas is not processed, then heavy hydrocarbons can condense in pipelines and midstream equipment, causing a variety of operational and safety problems. Between the high market value for NGLs and the decreased operational risk, gas processing is an essential consideration.

SNC-Lavalin JTs are compelling options for customers looking to meet pipeline specifications or wanting to maximize liquid hydrocarbon recovery without the high capital expense of installing a cryogenic processing facility.

## SNC-Lavalin Solution

SNC-Lavalin's standard JT skids are efficient and economical at "dew-pointing" natural gas — meaning to marginally lower its heating value to meet a pipeline specification.

SNC-Lavalin also provides NGL product stabilization equipment to meet liquid product specifications for safe storage and transportation. However, SNC-Lavalin's expertise extends beyond equipment design.

SNC-Lavalin works closely with our customers throughout the project development process to better understand their needs. One recurring need is rapid equipment availability. SNC-Lavalin proactively stocks long-lead components to reduce delivery times. Furthermore, based on the extensive experience of our subjectmatter experts, SNC-Lavalin has proven standard designs that minimize time spent in the equipment design phase.

Additionally, SNC-Lavalin provides customers with greater value through a turnkey integrated services agreement. By manufacturing, installing and commissioning the facility, we can provide accelerated startup and a process guarantee. This seamless process flow solution is SNC-Lavalin's commitment to making the project successful.

## Features and Benefits

**Pneumatic controls (JT skids only):** Eliminate need for electricity on site.

**Skid-mounted design:** Time-efficient and cost-effective installation.

## How it Works

**JT:** After inlet separation and sweetening, the customer's gas flows through a gas/gas exchanger for pre-cooling. Prior to this exchanger, methanol is injected to inhibit hydrate formation. After pre-cooling, the gas flows to the JT pressure-reduction valve for expansion. This expansion process cools the gas and causes heavy hydrocarbons to condense. The gas, NGLs, and methanol then flow to a cold separator vessel for separation. Finally, the liquids flow to product stabilization and the gas flows to the sales pipeline or recompression.

## Specifications

SNC-Lavalin provides JT skids in the following standard nominal configurations. Additional sizes may become available at any time.

- > 0.5 MMscf/d (for fuel gas conditioning)
- > 3 MMscf/d
- > 10 MMscf/d



SNC • LAVALIN



[www.snclavalin.com/en/oil-gas/processing-treating](http://www.snclavalin.com/en/oil-gas/processing-treating)