

## UPSTREAM AND MIDSTREAM NATURAL GAS FREEZE PROTECTION

*Freeze Protection and Condensation Prevention for Wellheads, Compressor Stations, and Gas Processing Facilities*

### Application

The process of gathering and harvesting natural gas from conventional deposits involves drilling a hole straight down through the impermeable matter and accessing the reservoir directly. This allows gas to escape through the hole so that the natural gas can be collected. Natural gas withdrawn from natural gas or crude oil wells is called wet natural gas, because along with methane, it usually contains water vapor.

Hydraulic fracturing, or fracking, is a method used to extract natural gas and oil from deep rock formations known as shale. Using this method, drilling operators force water, sand, and a mix of chemicals into horizontally drilled wells, causing the shale to crack and release natural gas or oil. Natural gas extracted through fracking includes water vapor, but the process requires pipelines for water injection and dump lines. Heat trace is required by both types of production to prevent water vapor from condensing as well as preventing liquids from freezing. Often the areas requiring heat trace are hazardous rated as Class I, Division 2. Heat trace and insulation is also needed for freeze protection of exposed lines at compressor stations and gas processing facilities.

### Solution

SLCBL Self-regulating heat trace cable is cCSAus approved for Class I, Division 2 hazardous areas and cULus approved for ordinary locations when used with approved connection kits. Self-regulating cable automatically adjusts wattage output to match the ambient temperature conditions and is capable of heating to a maximum temperature of 150°F (65°C). These temperatures are perfect for both condensation prevention and freeze protection. Circuit lengths for a single cable can be up to several hundred feet long. It can be wrapped around valves and flanges in addition to pipes. The cable can be overlapped to ensure sufficient heat to larger components. Low-profile connection kits for splices and tees are "quick-connect" style for faster installation. The PTBS-GET connection kit can provide input power for up to 3 heating cables in one junction box. BriskHeat's End of Circuit Monitor Light Kit includes an end-seal termination in addition to an easily visible 2 in (51 mm) diameter, 10 lumens red or green LED light. This allows a service technician to have visible confirmation of operation from greater distances than possible with unidirectional lights.

Add energy efficiency to your system with cloth insulators and a temperature controller. Insulators decrease heat loss, meaning reduced wattage requirements. A temperature controller cuts power to the heating cable once the temperature reaches setpoint. This maximizes energy savings because the heating cable is running only when needed. Both also extend cable life which can be guaranteed for 10 years.



#### Gas Processing Plant Users

Electrical & Instrumentation (I&E) Techs Engineers	Maintenance Managers Plant Managers
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#### Wellhead/Compressor Station Users

Electrical & Instrumentation (I&E) Techs	Electrical Contractors Site & Area Managers
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#### Industries

Gas & Oil  
Gas Handling