PRICO-C2®
YOUR COST-EFFECTIVE ETHANE RECOVERY SOLUTION
HIGH ETHANE RECOVERY
PRICO-C2® directly cools the feed gas to achieve high ethane recovery levels. A mixed refrigerant can deliver chiller temperatures much lower than conventional propane or ethane-propane cascade refrigeration cycles. It also makes it possible to operate with much lower feed gas pressures to reduce or eliminate feed gas compression, along with the associated capital and operating costs.

Like other straight refrigeration processes, pressure drop across the facility is minimized. This system delivers more than 10% total power savings when compared to conventional technology — savings that will continue to increase for richer feed gases.

BETTER EFFICIENCY
PRICO-C2® requires less total compression and for certain gas compositions, turboexpander use can be eliminated, further reducing capital cost and providing the highest life-cycle value.

The entire gathering and compression scheme can be optimized to yield further cost savings.

The refrigerant system is designed to contain the refrigerant during extended shutdown periods. Rapid restart is made possible by designing the low pressure portion of the system for settle-out pressure even though it normally operates at low pressure.

COMPOSITIONAL IMPACT ON TOTAL HORSEPOWER AT 90% ETHANE RECOVERY

With 40 years of proven industry experience, Black & Veatch delivers a cost-effective way to overcome the project recovery limitations of conventional refrigerant processes.

Black & Veatch pioneered the use of mixed refrigerant for demanding natural gas liquefaction (<260°F) applications. Simplicity, ease of operation, flexibility and low equipment count are hallmarks of the well-proven PRICO® process. Today, Black & Veatch’s patent-pending PRICO-C2® process combines the simplicity of refrigeration processes with the flexibility of colder operating temperatures to deliver more value compared to conventional technologies.
FLEXIBILITY
PRICO-C2® delivers consistently high performance without overspending on compression. The reason for this advantage is PRICO-C2® is less affected by variations in feed composition or flow rate — making it ideal when composition is not yet well-defined or is expected to change over time.

PRICO-C2® is also ideally suited to handle feed gas flow variations. When flow is reduced, conventional expander technology is less efficient, resulting in lower recovery levels. The PRICO-C2® refrigeration system makes increased recovery levels possible. A single control valve adjusts the refrigerant circulation from 0 to 100%.

CLOSED LOOP REFRIGERATION
A closed-loop system helps PRICO-C2® avoid impacts related to variations in the feed gas composition or operating parameters within the process. Refrigerant “recipe” can be independently adjusted as needed to meet process requirements. Unlike open-loop cycles using an internal process stream as the refrigerant, PRICO-C2® mixed refrigerant does not vary with feed gas fluctuations or process unit upsets.

ETHANE REJECTION CAPABILITY
PRICO-C2® is easily adjusted to reject ethane into the sales gas as dictated by economic parameters. High propane recovery levels are maintained during this operating mode.

PROVEN EXPERIENCE
With more than 40 years of experience designing and operating mixed refrigerant systems, Black & Veatch’s PRICO® process is extensively used worldwide for natural gas liquefaction in small-scale, mid-scale and large base load applications.

PRICO® and PRICO-C2® use a single mixed refrigerant circuit with conventional equipment that is well-proven in the gas processing industry.
Cover photo: This refrigerant compressor used by PRICO-C2® is a simple, single body centrifugal unit. An easy-to-operate, brazed aluminum heat exchanger ensures a simple main gas cooling process.