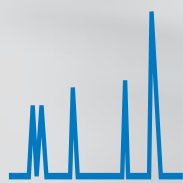




Analyzer Grade Gas

OPTIMIZE QUALITY, OPTIMIZE PROFIT

WELKER™



Quality Sample

Supplying a quality sample is critical for analyzers to accurately measure natural gas components and prevent unexpected maintenance. Our array of probes help achieve an optimal sample location in the pipeline to provide a quality stream for analysis and maximize profit.

Welker Solution: SP-2, PP-2, LE-2SSKO, IRD, IRA, SCHS



Liquid-Free

Liquid particles flowing inside pipelines can contaminate sample streams and cause unexpected analyzer flooding. Welker® liquid eliminating products drain and block liquids to boost analyzer uptime and increase longevity.

Welker Solution: LE-2, LE-2SSKO, ALS-1, ALSLE, SCHS



Acceptable Pressure

Pipeline pressure is high enough to damage delicate analyzer parts and cause expensive maintenance. Welker® regulators safely reduce sample stream pressure to an acceptable level so that analyzers stay operational.

Welker Solution: IR, IRD, IRA, SCHS

What is analyzer grade gas conditioning?

The wide variety of gas types in production create unpredictable pipeline conditions that put analyzers at risk. For example, unconventional gas is often heavily entrenched with liquid particles that can damage analyzer columns. Providing analyzers with a liquid-free, regulated sample stream is vital to prevent expensive maintenance, costly gas pricing errors, and long pipeline shutdowns. Since analyzers measure quality to determine price, supplying a quality sample stream is critical to successful operations. The probe location in a pipeline can potentially affect sample stream quality. To get a representative gas sample and prevent analyzer flooding, probes should be inserted into the center 1/3 of the pipeline. Although some liquids can be avoided with optimal probe placement, harmful free liquid particles that can hinder analyzer performance and damage sensitive internal components also exist inside most pipelines. With online analyzers, there isn't a second chance to read a sample. If a malfunctioning analyzer misses changes in quality, the price for the gas will be impacted. A monetary error in measurement can quickly add up to expensive losses with a large capacity pipeline. Most pipelines operate at pressures that are dangerous to delicate analyzer parts. Reducing the pressure to an acceptable range prevents costly repairs and keeps analyzers successfully measuring gas composition. Any unscheduled downtime reduces gas measurement accuracy and ultimately results in lost profit. Supplying a well-conditioned gas stream with Welker® products boosts analyzer uptime and ensures you can determine the right gas price when every bit of value matters.

QUALITY SAMPLE OF NATURAL GAS AT FLOWING CONDITIONS

A quality sample for online analyzers consists of three key rules:

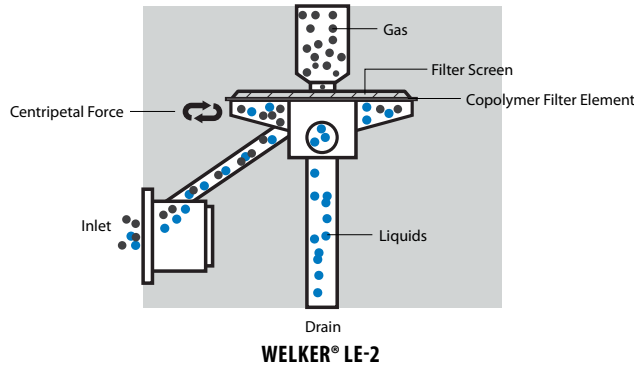
- Probes should be inserted into the center 1/3 of the pipeline to improve sample stream quality and supply representative gas for analysis.
- Liquids and particulates should be removed from the flowing gas stream to save analyzers from flooding and malfunctions.
- Pipeline pressure should be regulated to an acceptable level to prevent damage to analyzer components.

Welker offers an array of probes to help achieve a quality sample stream. Simple fixed probes can be cut to a specific insertion depth as a cost-effective solution. Our probe regulators safely reduce pipeline pressure while supplying a representative sample stream. If liquids are a concern, probes integrated with liquid-removing technology safely drain unwanted particles back into the pipeline. Welker® probes with AI Control™ feature fully adjustable insertion and retraction at full pipeline pressure. If a probe is already installed at your site, a stand-alone regulator will work with existing equipment.

LIQUID FREE

Removing liquids from your gas stream prolongs analyzer lifespan and prevents unexpected maintenance or downtime from flooding. The Welker® LE drains free liquids away from the analyzer with a copolymer filter element and centripetal force as a first line of defense. Each unit can be integrated with a probe or installed as a stand-alone component. With either configuration, liquid particles are removed from the sample stream before they become a threat to the analyzer.

For locations with large liquid slugs, a strong last line of defense can catch the unexpected bursts. The Welker® ALS is designed to shut off gas flow when liquids try to pass. With the shutoff seal acting as a final barrier, liquids are blocked until the analyzer supply line can be safely purged. If small particles and large slugs are bombarding your analyzer, both products can be combined into the Welker® ALSLE to prevent liquid damage and keep your system running safely.

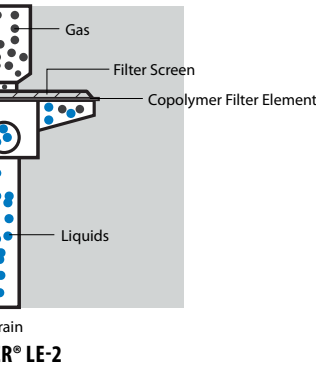
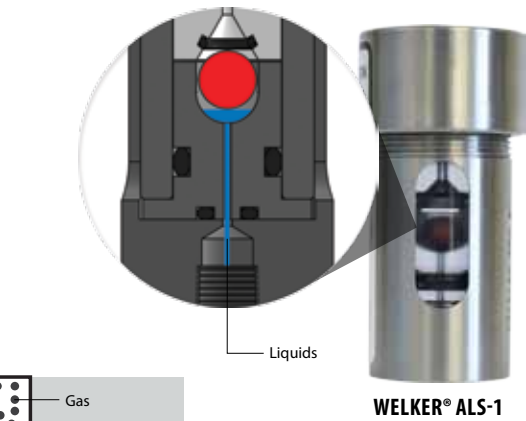


ACCEPTABLE PRESSURE

Reducing high pipeline pressure to an acceptable level avoids analyzer component damage that could lead to costly repairs. The Welker® IR series of stand-alone pressure regulators effectively reduces pipeline pressure to a functional range for analyzer sites that already have a probe installed. Both the Welker® IRD and IRA combine our regulator with a probe to supply a representative gas stream at an acceptable pressure to an analyzer. With the point of regulation located at the probe tip, thermal fins on the probe shaft mitigate the Joule-Thomson effect. The IRA features industry-recognized AI Control™ that allows the probe to insert or retract at full pipeline pressure to prevent expensive pipeline shutdowns. Welker® regulator products safely reduce pressure to an acceptable level and allow continuous analyzer operation.

SYSTEM SOLUTION

The Welker® SCHS completely prepares analyzer grade gas by integrating liquid protection and regulator products into a dependable package. Each probe-mounted unit includes the analyzer defense of the LE and ALS to drain and block liquids. If any moisture remains, a built-in heated regulator warms up the gas and mitigates liquid formation from the Joule-Thomson effect. The modular system components are integrated into an insulated enclosure for a conveniently packaged solution. Pulling a single pin removes the enclosure to allow access to the entire system. Most maintenance can be completed at full pipeline pressure by using the built-in isolation valves to shut off gas flow to the system. The SCHS is our total solution to protect analyzers from costly damage and make life easier.



SYSTEM SOLUTION 3 LINES OF DEFENSE



Liquid Eliminator



Heated Regulator



Automatic Liquid Shut-Off

For more Welker product information,
please contact our Sales department:
281.491.2331

For installation, operation, and maintenance inquiries,
please contact our Service department:
281.207.1879

