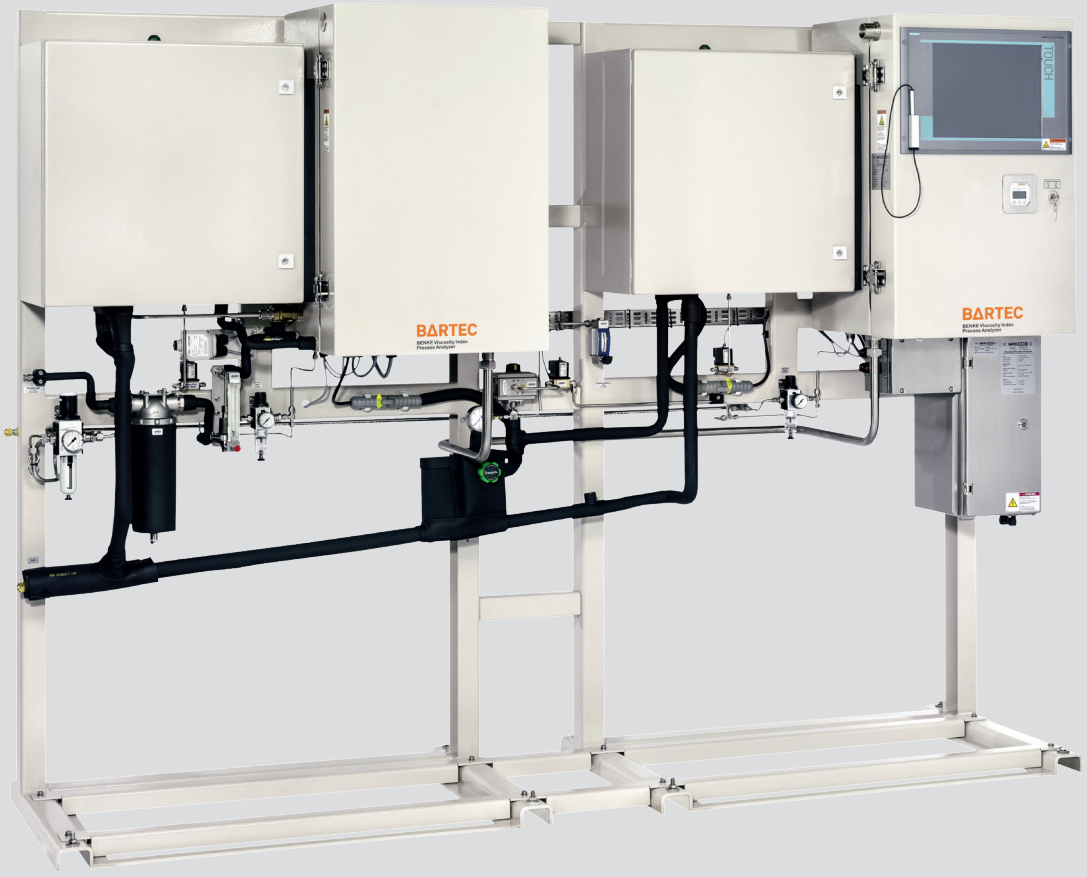
BARTEC

BENKE Viscosity Index Process Analyzer VI-4

Credible Solutions for the Oil and Gas Industry



Viscosity Index Process Analyzer

To remain competitive, today's refiners must employ all optimization and product control techniques available. The use of online physical property analyzers is one of the key features to reach those objectives because they measure important quality properties in the process directly.

All fluids that fulfil the conditions of Newton's friction law are referred to as Newtonian fluids. Their viscosity is a material constant, which is only dependent on pressure and temperature. The viscosity index is a widely used and accepted measure of the variation in kinematic viscosity due to changes in the temperature of a petroleum product between 40 and 100°C. A higher viscosity index indicates a smaller decrease in kinematic viscosity with increasing temperature of the product.

- The only ASTM compliant viscosity index analyzer
- Kinematic viscosities directly and continuously measured
- Integral measurement of density
- Integral calculation of viscosity index
- Unparalleled temperature stability of ± 0.02 K
- Hagenbach correction not necessary
- No maintenance approach (no oil baths, no pumps)
- Network and fieldbus communication

Application

The BARTEC BENKE Viscosity Index Process Analyzer VI-4 consists of two viscosity process analyzer units. One analyzer unit measures the kinematic viscosity at a temperature of 40°C and the other at a temperature of typically 100°C. These two values are used to calculate the VI according to ASTM D2270.

Due to the outstanding performance and sample temperature stability of ± 0.02 K the VI-4 is the best choice for highly accurate viscosity index measurements e.g. lube oil production and fuel oil blending. This high level of accuracy results in cost reduction while improving product quality. The VI-4 is suitable to handle samples with a viscosity of up to 800 cSt at measurement temperatures of up to 100°C.

Special Features

Direct and continuous measurement of kinematic viscosity therefore direct comparison with laboratory results without any need for conversion

Integral measurement of the density therefore calculation and display of the dynamic viscosity

Minimized maintenance requirements due to temperature control and insulating system without oil bath/pumps

Compliance of the temperature stability (±0.02 K) as defined in standard ASTM D445

Necessity of Hagenbach correction is eliminated

Multi-stream capability

Automatic rinsing and draining option

Integrated failure diagnosis and self monitoring

No atmospheric drain required, backpressure at analyzer outlet permitted (depends on application)

Available communication interfaces:
- Modbus/RTU, Modbus/TCP (bidirectional)
- Remote access via Ethernet (VDSL or FOC is)

Validation report for quality assurance

Freely programmable digital and analog inputs

Norms and Standards

Compliant with:
- ASTM D2270
- ASTM D341

Make your decision for a strong partner!
Choose BARTEC also for:

- Fast Loop Systems
- Sample Conditioning Systems
- Validation Systems
- Recovery Systems
- Chillers
- Air Conditioning Systems/HVAC
- Pre Commissioned Analyzer Shelters/Turn-Key Solutions

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