



We Measure What Matters: Success Story



The DUK: From OEM Plant Design to Contractor Retrofits

Whether you're engineering tomorrow's asphalt plants, operating today's production facilities, or maintaining equipment across multiple sites, KOBOLD understands your unique flow measurement challenges when it comes to burner operation. Our DUK ultrasonic flow meters have become the industry standard through proven performance for fuel measurements in a variety of asphalt applications - from portable pugmills to state-of-the-art continuous mix facilities.

Proven Across All Asphalt Plant Types:

Batch Plants: Precise fuel totalization for each batch cycle with automatic reset capabilities.

Drum Mix Plants: Continuous flow monitoring with real-time display, enabling operators to optimize burner settings during production runs.

Continuous Mix Facilities: Integration with plant SCADA systems for automated fuel tracking and efficiency trending across multiple production lines.

Portable Plants: Robust construction withstands transport vibration while maintaining calibration - critical for operations that move between job sites.

Counter-Flow & Parallel-Flow Drums: Proven compatibility with various drum designs and burner configurations, from single burner to multi-fuel systems.

Accurate and reliable fuel consumption data across all these applications is crucial for:

- Production cost calculations
- Energy efficiency monitoring
- Burner performance optimization
- Environmental and emissions reporting

The DUK enables asphalt producers to gain control of their process and drive continuous improvement through real-time data and process feedback.

The DUK Features that Enable it to Excel in Fuel Measurement Applications

Fuel Flexibility:

- Measures #2 diesel, recycled fuel oil, PFO, and biodiesel blends among others using a media database to adapt the flowmeter to the desired fuel type.
- Handles varying viscosities - up to 68 cSt
- Temperature measurement via integrated PT1000

Environmental Durability:

- -4 to 194°F process temperature range
- IP65 protection against dust and water ingress
- Vibration resistance per DIN EN 60068-2-6:2008:5g
- 230 PSIG pressure rating

Measurement Performance:

- Accuracy: $\pm 0.7\%$ of reading, $\pm 0.7\%$ of full scale
- Six models from 0.16...240 GPH to 0.6...160 GPM
- 250:1 turndown ratio for variable rates
- Bidirectional flow measurement
- Integrated batching capabilities



The DUK's Array of Output Options Enable Integration for Every Control System

Modern Digital Plants:

- IO-Link for seamless automation integration via a variety of IO-Link masters
- Compatible with multiple control systems
- Real-time data for production management software

Legacy Installations:

- 4-20mA output for basic control systems
- Pulse output for totalizer applications
- Local display for manual reading

Mixed Environments:

- Dual configurable outputs for flexible installation options
- Analog and digital communication options in one device to handle future upgrades

Why the DUK is the Preferred Solution Over Other Technologies

The other technologies typically considered for flow measurement in burner applications consist of positive displacement, differential pressure, and Coriolis. The DUK, with its ultrasonic technology, offers better overall value than the others through a combination of:

- Lower initial cost compared to expensive Coriolis flowmeters
- Lower maintenance costs compared to positive displacement flowmeters with mechanical wear parts
- Easier installation compared to differential pressure meters requiring impulse lines, precise orifice sizing, and manifold valves
- Lower lifetime energy costs compared to positive displacement and differential pressure flow meters with higher pressure losses

Comprehensive Industry Experience Through Worldwide Applications of the DUK

KOBOLD supports the complete asphalt production ecosystem:

Plant Designers & OEMs:

Major equipment builders specify DUK meters as standard components, knowing our ultrasonic technology simplifies global equipment standardization.

- Single specification works for diesel, PFO, and other fuel types
- Simplified process with no other components or complex piping configurations required
- Detailed technical data and specification support
- IO-Link ready for Industry 4.0 implementations

Asphalt Producers:

From major interstate contractors to county road departments, plant operators rely on DUK meters for accurate fuel measurement that directly impacts their cost per ton calculations.

- Real-time fuel cost per batch visibility
- Easy to operate interface for plant personnel
- Fuel savings through burner optimization
- Low maintenance and high reliability

Service Contractors and Retrofitters:

Burner service companies and plant upgrade specialists choose DUK for its installation simplicity and intuitive operation.

- No moving parts means no wear to mechanical components
- Compact design fits existing piping layouts
- Simple set-up and automation integration
- Fault indication for troubleshooting assistance

Partner with the Industry Leader for Proven Reliability and Support

When you choose KOBOLD, you're selecting a partner who understands asphalt production from aggregate heating through final mix delivery. Our global experience and local presence means:

Proven Reliability: Years of successful operation in demanding asphalt environments have proven the DUK's ability to deliver consistent performance through entire paving seasons without maintenance interruption.

- Proven solutions for your specific application
- Confidence in long-term support
- Access to industry-specific expertise

Local Support: The US-based manufacturing and support staff are here to help you meet your manufacturing goals and to help solve your operational challenges with instrumentation.

- Pittsburgh manufacturing ensures quick delivery
- Technical support from in-house, readily accessible engineers

Ready to Talk About Your Application?

What Sets Us Apart

- Direct engineer access for any project size. No gatekeepers, no minimum order
- Free consultations that deliver tailored, application-specific recommendations
- Work with us directly or in tandem with your local KOBOLD distributor
- Expert cross-over guidance and replacement solutions when needed
- Decades of real-world expertise to avoid costly mistakes and downtime
- Old-fashioned personal service backed by modern video scheduling



Ready to talk through your application? Scan the QR code on this page (or visit koboldusa.com/schedule-consultation) to book a convenient video consultation with one of our engineers.

