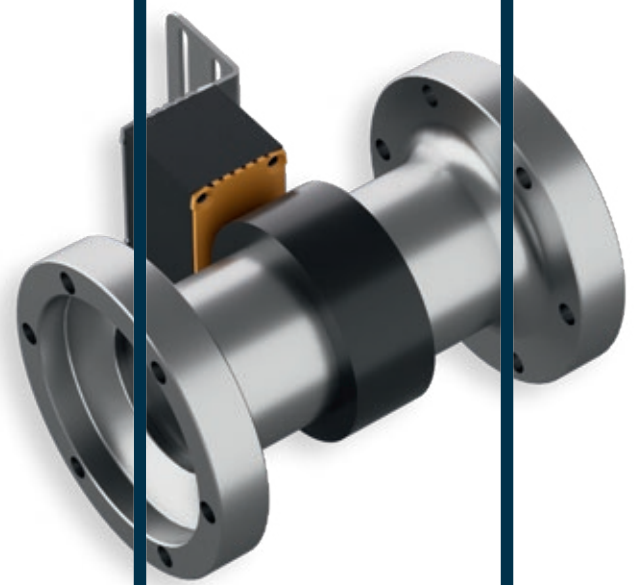
THE COUPLING.

R+W®
A POPPE + POTTHOFF COMPANY

iPK



Sensor-Integrated Precision Coupling

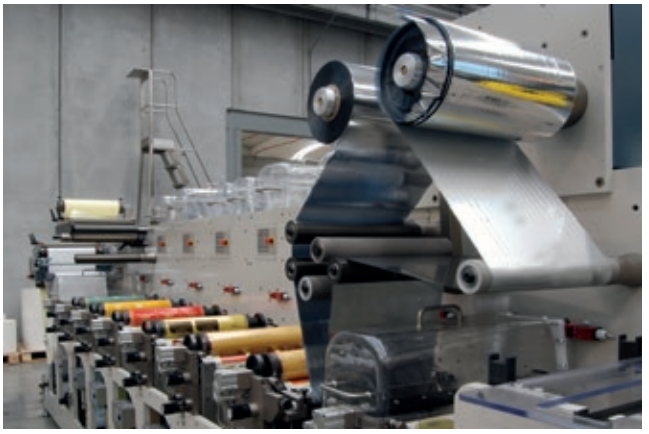
The New Era in Drive Technology

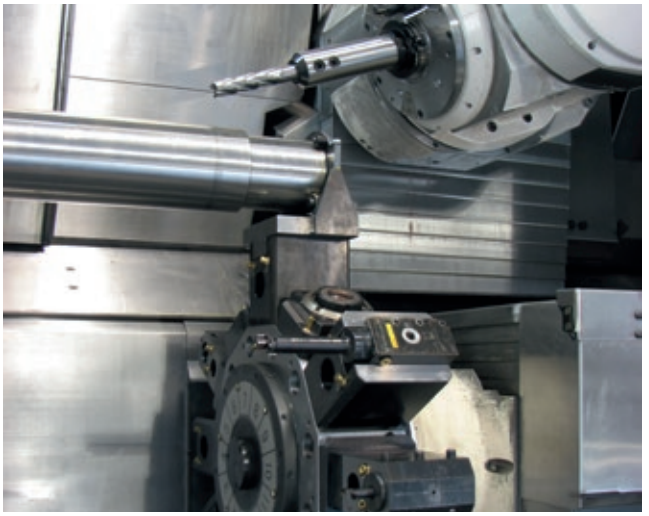
Couplings from R+W – Always the Right Choice

Sensor-Integrated Precision Couplings
iPK by R+W

The iPK enables precise measurement of variables such as torque at any position within the drive train. With intuitive mount-and-play commissioning and straightforward data transmission, measurement data becomes available in your system quickly and reliably.

Application Examples





Data acquisition in the drive train

- Precision system design
- Validation of simulations
- Process optimization
- Condition monitoring
- Predictive maintenance
- Sustainability

Learn more about
our sensor technology.

Combination Options

Metal Bellows Coupling

+ High misalignment compensation
+ High torsional stiffness
+ Easy to install / can be mounted radially

Elastomer Coupling

+ High misalignment compensation
+ Vibration damping
+ Easy to install / can be mounted radially

Disc Coupling

+ High misalignment c ompensation
+ High torsional stiffness
+ Easy to install / can be mounted radially

Metal Bellows Coupling and Rigid Hub

+ Maximum torsional stiffness
+ Misalignment compensation
+ Easy to install / can be mounted radially

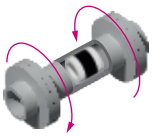
Safety Coupling and Metal Bellows Coupling

+ Overload protection and precise torque limitation
+ High torsional stiffness
+ Misalignment compensation

Safety Coupling and Elastomer Coupling

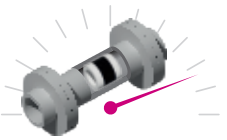
+ Overload protection and precise torque limitation
+ Vibration damping
+ Misalignment compensation

Measured Variables



+ Torque*

Sampling rates up to 1,000 Hz
* Measurement accuracy < 1%



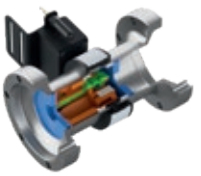
+ Speed

+ Temperature

Power Supply Options

Integrated Power Supply

+ Sensor powered by an integrated battery
+ Charging time 2–3 h
+ Depending on configuration, up to several thousand hours of operating time

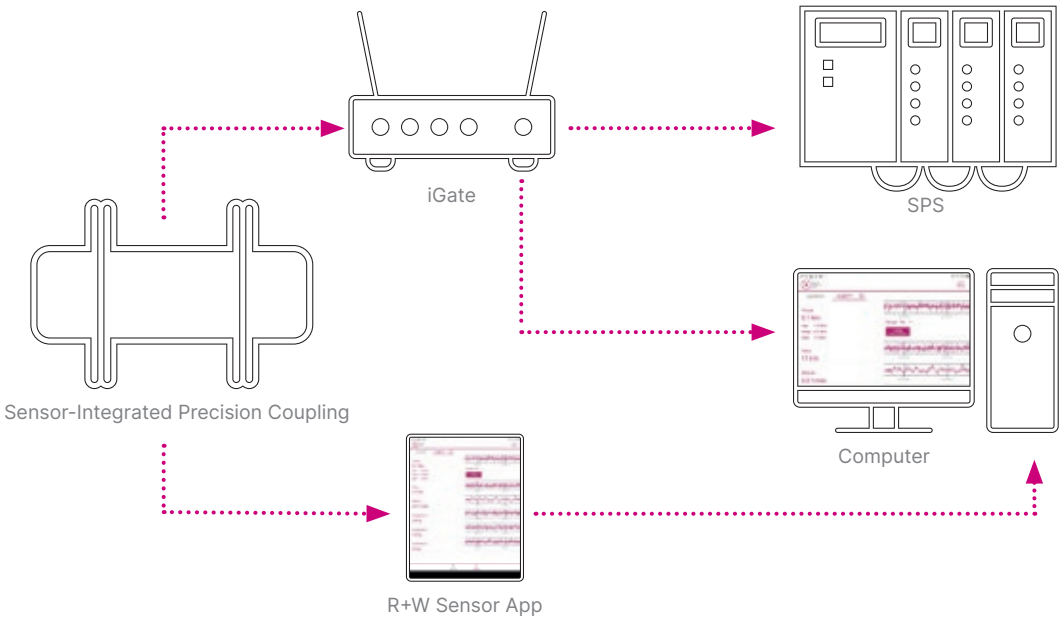


Inductive Power Supply

+ Power supply via induction through pick-up
+ Pick-up powered by the gate-way or a separate 12 V supply
+ Ideal for continuous measure-ments with high sampling rates

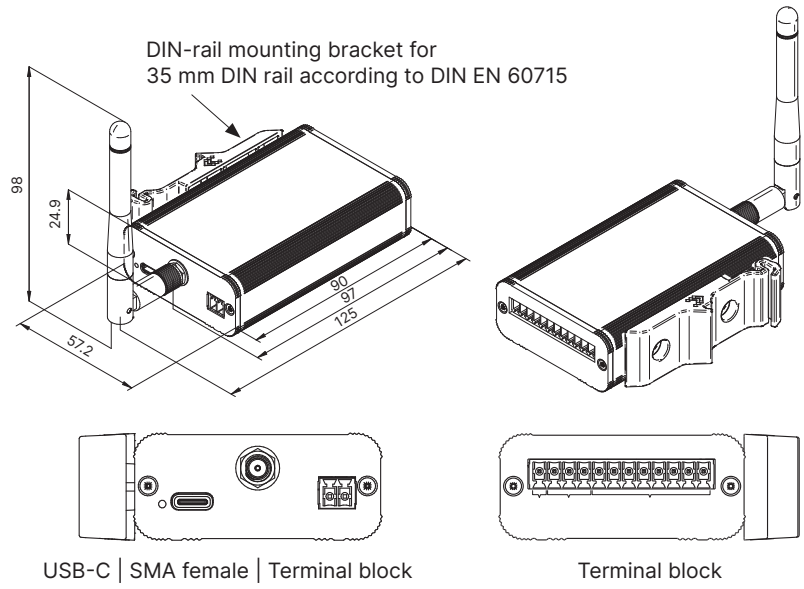
Measurement Chain

R+W Antriebselemente GmbH | **Customer**



iGate – R+W Gateway

The R+W gateway transmits the data via analog outputs directly to the customer's machine control system (SPS/PLC) or via the USB-C port using a virtual COM port (UART) to a PC or another evaluation unit.



R+W Sensor App

The R+W Sensor App makes it possible to store data directly on the mobile device or on the measurement amplifier itself. In addition, the data can be exported in CSV format and evaluated on a PC.

The Plus for Your Processes
Flexible. Modular. User-Friendly.

Mount & Play – Ready to Measure Immediately

Install and measure without any wiring effort – no base, no complex alignment required.

Coupling and Sensor in One

Torque sensor and shaft coupling combined in a single unit – measurement and misalignment compensation in one compact solution.

Versatile Integration

Can be installed at any position in the drivetrain and can also be combined with multiple measurement nodes or couplings.

Flexible Power Supply

Inductive power for continuous operation or a battery option for time-limited, mobile measurements.

Dynamically Balanced

The sensor-integrated measuring flange is balanced to quality grade G 2.5 as standard – ensuring precise running smoothness.

Durable and Reusable

Robust, corrosion-resistant stainless-steel design for long-term use and easy reuse.

Flexible System Integration

Compatible with the R+W coupling modular system – torsionally rigid, vibration-damping, rigid, or torque-limiting.

Multiple Interfaces

Communication via app, analog (0–10 V), or serial (UART) – ensuring maximum flexibility in data acquisition.

Compact Integration Design

The compact sensor element is integrated directly into the drivetrain without any additional bearing support.

Precise Torque Measurement

High-resolution strain gauge technology with an accuracy class of <1% for reproducible measurement results in operation.

Patented Press-Fit Process

Sensor integration is carried out using the proven press-fit method, ensuring maximum stability and precision.

Easy Installation

Installation identical to a standard shaft coupling – precise and secure in the drivetrain, with no additional effort required.

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