



Checking diameter

The diameter of a roll or coil of material can be detected by an ultrasonic sensor with analogue output and the drive adjusted or brake applied accordingly. For small diameters this is a typical application for a **mic+35/IU/TC** and for diameters up to 2.5 m a **mic+130/IU/TC**.



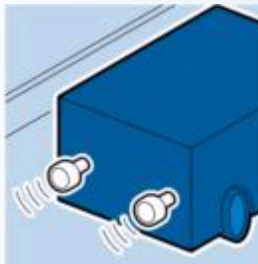
Double sheet control

identifies two or more sheets of material on top of each other. The **dbk+4** product range is ideal for use where paper is in use, such as sheet fed printing presses, printers, copiers or collating machines. For thicker materials, plastic sheets and coarse corrugated cardboard, the **dbk+5 ultrasonic double-sheet detection** is used.



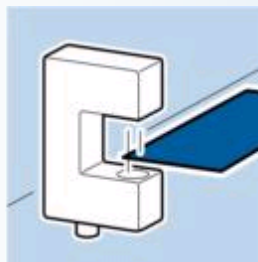
Installation for a foil extruder

The **mic+ ultrasonic sensors** with analogue output 0 – 10 V and 4 – 20 mA are ideally suited for controlling the diameter on a foil extruder.



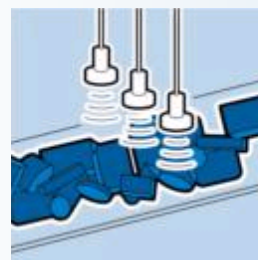
Detecting obstacles

Ultrasonic sensors of the **mic+ family** enable the contactless protection of automated guided vehicles in the driving direction. When using several sensors these can be synchronised with each other to avoid influencing each other. With a pre-alarm range and a stopping range, the vehicle can be halted smoothly before an obstacle without the impact bumper triggering the braking mechanism.



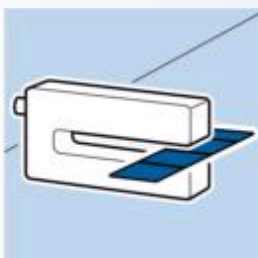
Path edge control

The **ultrasonic edge sensors bks** are designed as fork sensors and function as a one-way barrier. They are used for path control and emit an analogue signal of 0–10 V or 4–20 mA which is proportional to the orientation of the path edge.



Contour control

The contour of objects can be detected on a conveyor belt using several ultrasonic sensors synchronised with each other. The **mic+ ultrasonic sensors** and **pico+ ultrasonic sensors** have an integrated synchronisation and are thus especially suited for the design of a sensor line.



Label detection

The **esf-1 label sensor** reliably detects high-transparency, reflective materials as well as metallised labels and labels of any colour. The measurement cycle time automatically self-adjusts to the sound power required.