

# PLANOWAVE 6000

Innovative millimeter wave measuring system for quality assurance in sheet extrusion lines

The PLANOWAVE 6000 is a non-contact measuring system that is used for a non-destructive measurement at the extrusion of plastic sheets for thickness measurement. The system is designed for measuring all plastic materials such as PE, HDPE, PP, PA6, PVC as well as glass fiber reinforced plastics.

## Precise online thickness measurement of plastic sheets

Innovative millimeter wave technology offers a precise thickness measurement with no need for any coupling media and independent from material and temperature of the plastic sheet. A calibration is not needed. The PLANOWAVE 6000 is directly integrated into the production line or it is used for final inspection. The measurement of the sheet is accomplished by using millimeter waves according to the FMCW\* runtime method. A linear movable transceiver continuously sends and receives frequency modulated millimeter waves. From the runtime difference the thickness of the sheet is precisely determined. The visualization of measuring values is processed in real time. The processor system ECOCONTROL offers a numeric display of the measuring values, a graphic visualization and extensive trend and statistical data. The PLANOWAVE 6000 contributes to repeatable processes, highest quality and productivity at the sheet extrusion.

### Your Benefits

- Non-contact measurement of the sheet thickness with innovative millimeter wave technology
- All-in-one measuring system for integration into the extrusion line
- Easy operation without presetting the product parameters
- Measurements independent from material and temperature, without the need for coupling media
- Precise measuring values immediately after starting the line
- Reliable without any calibration
- Assurance of sheet quality
- Repeatable processes and highest productivity

### Specifications

<b>Measuring Principle</b>	Non-contact on the basis of FMCW* millimeter wave technology
<b>Application</b>	Sheet extrusion, thickness measurement of sheets
<b>Material</b>	Any kinds of plastics (e.g. PE, HDPE, PP, PA6, PVC, glass fiber reinforced plastics), ceramic, glass
<b>Measuring Range</b>	Solid boards from 1.6 mm Foam boards from 2.2 mm
<b>Sheet Width</b>	The PLANOWAVE 6000 is available for a line width of 1,500 mm and 2,500 mm**
<b>Accuracy</b>	50 µm
<b>Repeatability</b>	10 µm
<b>Interfaces</b>	RS232, USB optional: industrial field busses such as CANopen, EtherNet/IP, DeviceNet, Profinet IO, Profibus-DP; LAN (Ethernet), OPC DA/UA
<b>Power Supply</b>	100 - 240 V AC ± 10 %, 50/60 Hz
<b>Measuring Frequency</b>	80 to 300 GHz, max. 10mW
<b>Measuring Rate</b>	370 Hz

\*Frequency Modulated Continuous Wave

\*\*Larger sheet widths on request