



## Modular Film Analyser (MFA)

The OCS Modular Film Analyser (MFA) is used for the continuous cooling, stripping and winding of extruded polymer film. In combination with a variety of different measuring instruments, a wide range of applications for the analysis of different sample materials is covered.

In addition to the Film Surface Analyser (FSA100V2/FSA200V2) for optical quality control of the polymer film, online spectroscopy, the measurement of haze and transmission as well as gloss and thickness can be integrated. This allows the combination of a tailor-made and yet economical solution.

### Features

- Modular architecture for customer-specific configuration with different measurement devices
- Homogeneous, yet fast tempering of the polymer melt
- Wide control range of film speed and tensile force for adaptation to a large variety of sample materials
- Intuitive operation via Touch Panel
- Simple winding change thanks to pneumatic winding mandrel
- Comprehensive alarm and status monitoring for autonomous operation

### Variants

- OCS Modular Film Analyser with one/two Chill Roll(s) (MFA-CR)
  - OCS Cast Film Line or OCS Tape Line (SSA)
- OCS Modular Film Analyser with Blown Film Tower (MFA-BFT)
  - OCS Blown Film Line
- OCS Modular Film Analyser with Calender (MFA-Calender)

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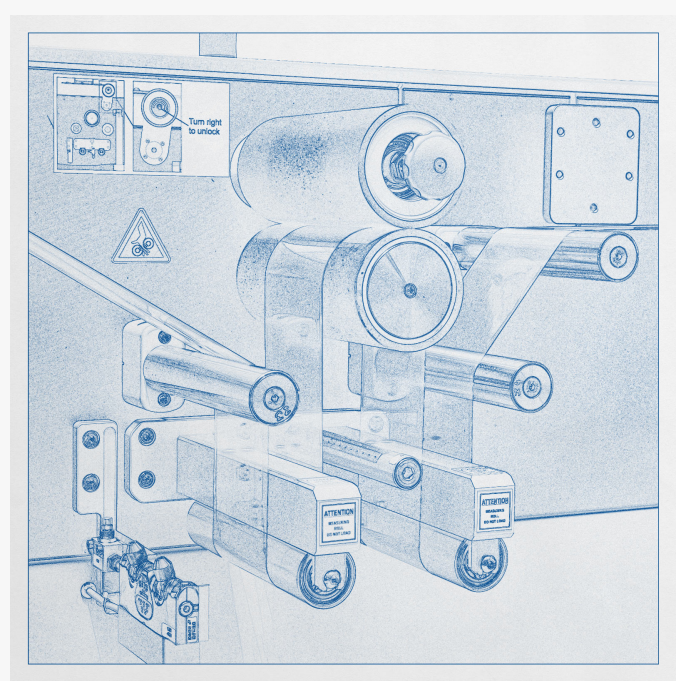
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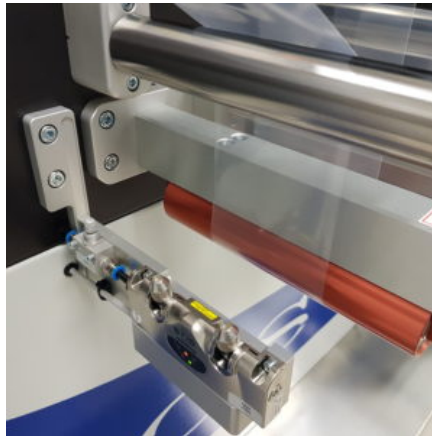
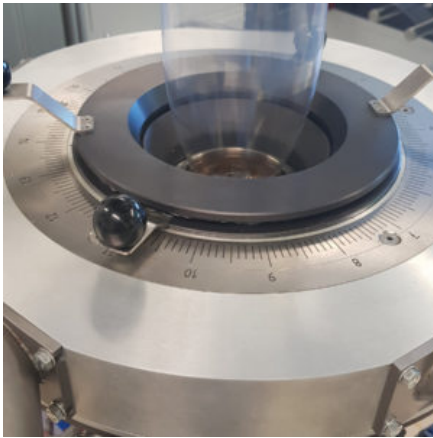
– OCS Tape Line (TQA)

## Technical Details

<b>Haul-off speed</b>	Up to 15 m/min (optional 30 m/min)
<b>Chill rolls</b>	Working width: 200, 300, 400 mm, material: stainless steel, chromium-plated or with non-stick coating
<b>Winder</b>	Sleeveless pneumatic mandrel, winding diameter of up to 600 mm
<b>Communication protocol</b>	MODBUS (RTU, TCP/IP), PROFIBUS, PROFINET, OPC (Server/Client), CSV file, customer-specific



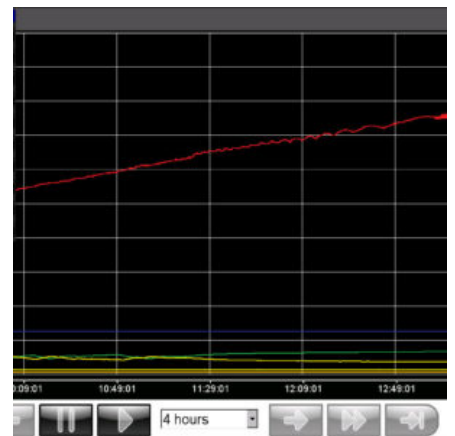
## More Product Pictures



Activation	Acknowledge	Message
2020 15:15:20	27.03.2020 15:17:48	Winder stop (maximum diameter)
2020 15:15:00	27.03.2020 15:17:48	Winder full
2020 11:08:09	26.03.2020 11:10:59	Film break
2020 13:13:23		Winder maximum tension force reached

3 Normal: 4 Disabled: 0 [4 / 4]

Reset Active Reset Selection Delete History



## Similar Products





### Blown Film Line

The OCS Blown Film Line is used to carry out optical and physical property measurements of polymers in the production of high-quality blown films (blowing, cooling, laying flat, haul-off and winding). All parameters of the line, e.g. extruder speed, temperature, haul-off speed, film width, film bubble ratio, are stored by a touch panel control system, which ensures that the film quality is reproducible at any time. This is an important parameter for optical and physical on-/offline measurements, for use with gels, impurities, fibres and other contaminants, as well as for turbidity, transmission, gloss, density and additive measurements. Possible testable ... [read more on our Website]



### Label Printer (LP100)

The OCS Label Printer (LP100) ensures the highest quality standards with regard to the labelling of, and repair of defects on, polymer films. Simple operation enables reliable and fast printing. [vc\_column width="1/2"] Labelable Materials Polymer films (tape) [vc\_column width="1/2"] Features Reliable and fast printing Precise impression Easy operation Compact design Meets the highest quality standards Compatible with OCS Tape Line OCS Modular Film Analyser (MFA) ... [read more on our Website]



### Film Thickness Measurement (FTM)

The OCS Film Thickness Measurement (FTM) allows the continuous measurement of the thickness of polymer film (flat film, blown film or tape). For measurement, the film is guided between two precision rollers. One of the rollers is deflected according to the film thickness. This deflection is measured by a digital probe and evaluated by microcontroller-based electronics. The measured value is shown on a display and can be evaluated via analogue or digital interfaces. [vc\_column width="1/2"] Measurable Materials Polymer films Features Continuous thickness measurement of the polymer film [vc\_column width="1/2"] Optional Customer-specific data preparation and transfer Remote control (via communication ... [read more on our Website]



### Film Surface Analyser (FSA100V2/FSA200V2)

The OCS Film Surface Analyser (FSA100V2/FSA200V2) is a modular optoelectronic inspection system for polymer films. It can be used in the laboratory as well as in the running production process. The film is inspected by means of a high-resolution CMOS line camera and a user-specific, high-power LED. This combination enables optimal defect detection in transparent, opaque and coloured polymer films. In the FSA100 software, the measurement results are analysed according to user-specific requirements, defects are classified and the film quality is determined. The FSA100V2 can be combined with other OCS film inspection systems, such as the X-Ray Tape Analyser ... [read more on our Website]



### Film Cutter and Sorter (OFC100)

The OCS Film Cutter and Sorter (OFC100) performs two tasks in one system. First, it continuously shreds the polymer film into sections of constant length (specified value) and ejects them. The ejected film cuttings are then collected in a collection container. The OFC100 automatically sorts out the marked and contaminated film sections with the help of the software. These marked sections are significantly longer for purposes of further analysis and are ejected separately via the sorting ejector into another collection container. Here, too, the length of the marked film sections can be defined. [vc\_column width="1/2"] Cuttable and Sortable Materials ... [read more on our Website]



### Cast Film Line

The OCS Cast Film Line is used to perform optical and physical property measurements of polymers in the production of high-quality cast (flat) films (extrusion, cooling, stripping and winding). All settings and parameters, e.g. extruder speed, temperature, film tension, winding force, winder diameter, are stored by a touch panel control system which guarantees that the film quality can be reproduced at any time. This is an important parameter for optical and physical on-/offline measurements, for example in detecting gels, contaminations, degradations and other impurities as well as haze, gloss, density and additive measurement. Possible testable polymers include, for example, ... [read more on our Website]



### Gloss Measurement (OGM)

The OCS Gloss Measurement (OGM) is designed for the constant and precise control of film gloss properties. The measuring device is integrated into the Modular Film Analyser (MFA). It enables a continuous measurement of the gloss value on polymer film. The gloss properties of films are analysed based on their different ability to reflect light. A special LED lighting unit illuminates the continuous film while a photo diode measures the strength of the reflected light. The measured amount of gloss, from matt to glossy, is given in GU (Gloss Units). [vc\_column width="1/2"] Measurable Materials Polymer films Features Robust, precise ... [read more on our Website]



### LASER Marking System (LM100)

The OCS LASER Marking System is designed and manufactured using state-of-the-art technology. The LM100 can be used to mark or label defects on polymer films (tape). The labelling and marking settings as well as the power of the laser can be configured with the operator software to the corresponding product requirements. The LASER Marking System consists of laser, control and suction unit. The laser unit essentially consists of a class 4 air-cooled laser, a two-part protective cover, a viewing window and a pneumatically swivelling film guide. The laser unit has two air filters so that neither dirt nor dust ... [read more on our Website]



### Measuring Extruder (ME20/ME25/ME30/ME40/ME45)

The OCS Measuring Extruder (ME) is used for the production of polymer films for laboratory and small series production. The extruder is equipped with a flat film die and, if necessary, a downstream OCS Modular Film Analyser to enable further quality measurements. The system is controlled via a touch panel to set up device parameters and recipes. In addition, the optional Remote Control Function allows the Measuring Extruder (ME) to be displayed and controlled from various locations. Another feature is the automatic turning system, which allows easy cleaning of the extruder barrel, die and screw. The extruder then automatically ... [read more on our Website]



### Surface Quality Analyser (SQA100)

The OCS Surface Quality Analyser (SQA100) is specially designed to detect irregularities on the surface (pips) of polymer films (tape) in the wire and cable industry. The high-resolution CMOS camera system measures the height of the pips with a resolution of 1 µm using a special measuring method. Additionally, the base diameter and the diameter at half the height of the pips are measured with a resolution of 10 µm. The SQA100 software allows the user to define height and diameter classes and classify the measured pips accordingly. All relevant measurement results are clearly displayed and can be exported ... [read more on our Website]



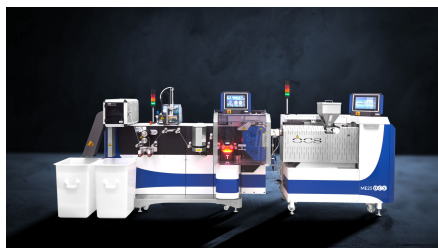
### Spectroscopical Measurement APLAIRS®

APLAIRS® (Analysis of Plastics by InfraRed Spectroscopy) is a spectroscopic method for measuring additives, (co-)monomer compositions and chemical and physical properties in the production of polyolefins. This concept allows the automation of the daily continuous measurement requirements for quality control. For this purpose, the polymer film runs through the APLAIRS® system, which is equipped with an FTIR spectrometer and specially developed software. The measurement takes place in real time. The spectra are recorded and properties are predicted, documented and graphically processed. The results can also be transferred to superordinate systems. This ensures continuous quality control and documentation and the ... [read more on our Website]



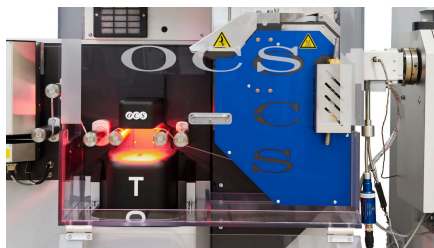
### Tape Line (SSA®)

The OCS Tape Line type SSA® is used specifically to detect surface irregularities (pips) on non-transparent polymer films (tape) in the wire and cable industry. The SSA® Line consists of a Measuring Extruder (ME) and a Modular Film Analyser with a Chill Roll (MFA-CR). During the measurement of the surfaces, the extruded polymer film (tape) passes over a chill roll, which leads the tape to the Surface Quality Analyser (SQA). This high-resolution CMOS camera system uses a specially developed measuring roll to measure the height of the surface defects (so-called pips or agglomerates) with a resolution of 1 ... [read more on our Website]



### Tape Line (TCA®)

The OCS Tape Line Type TCA® is used for testing transparent polymer films (tape). It consists of the OCS Measuring Extruder (ME) and the OCS Modular Film Analyser with Calender (MFA-Calender). Our calendaring system has been specially developed for the wire and cable industry. It presses and cools the extruded polymer film (tape) from both sides, thus ensuring a smooth and consistent surface thickness for optical analysis. The Tape Quality Analyser (TQA100) contains a high-resolution camera system that detects contaminants, gels, black specks, fibres and metal particles. The detected errors are marked by the LASER Marking System (LM100) or ... [read more on our Website]



### Tape Quality Analyser (TQA100)

The OCS Tape Quality Analyser (TQA100) is used for testing transparent materials (tape) in the wire and cable industry. The high-resolution camera system with a resolution of up to 5 µm and OCS-developed LED illumination with MCE technology (Multi Channel Evaluation) detects impurities such as black specks, fibres and metal particles. With the use of the MCE technology, the system can be adapted to customer-specific requirements and thus further optimise the quality of contamination detection. In the TQA100 software, the measurement results are analysed according to customer-specific presentation of results and defects are classified. All relevant measurement results ... [read more on our Website]



### Haze and Transmission Measurement (OHM)

The OCS Haze and Transmission Measurement (OHM) is used for the automated and continuous measurement of the haze properties on polymer film. It additionally determines the transmission average. The measuring instrument is integrated into the Modular Film Analyser (MFA) or can be used as a stand-alone version (tabletop unit). [vc\_column width="1/2"] Features Continuous haze and transmission measurement according to ASTM D 1003 Simple multi-point calibration [vc\_column width="1/2"] Compatible with OCS Cast Film Line OCS Blown Film Line OCS Modular Film Analyser (MFA) ... [read more on our Website]



### Volumetric Resistance Measurement (VRM)

The Volumetric Resistance Measurement (VRM) is an optional measurement system for the Modular Film Analyser (MFA). It enables the inline determination of the specific electrical resistance of conductive polymer films. The measurement is performed by means of a movable measuring head in which measuring and compensation electrodes are integrated. Another feature is the easy operation of the Volumetric Resistance Measurement via the touch panel of the MFA. [vc\_column width="1/2"] Testable Materials Conductive polymer films (tape) Features Measuring head with several compensation electrodes Easy operation via the touch panel of the Modular Film Analyser (MFA) Security door (including sensor) for ... [read more on our Website]

