Optical Control Systems



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 µm. In addition, the base diameter and the diameter at half the height of the surface defects are measured with a resolution of 10 µm. The analysis software provided allows the user to define height and diameter classes and to classify the measured pips based on these definitions.

The pips can then be marked with the LASER Marking System (LM100) or the Label Printer (LP100). The polymer film is then cut into strips using the OCS Film Cutter and Sorter (OFC100) and sorted into containers. The entire system can be easily managed via the control unit with software-based touch panel, for example to set device parameters, film tension and speed.

Testable Raw Materials

- Pellets/non-transparent polymer films (tape), powder and flakes

Module I + II (included)

- Measuring Extruder (ME20/ME25/ME30) with pip die of 50 mm
- Modular Film Analyser with one Chill Roll (MFA-CR)
- Surface Quality Analyser (SQA100) – optionally with Film Thickness Measurement

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Features

- Measuring Extruder (ME) comes with flexible height adjustment (infusion position)
- Maintenance and cleaning positions of the Measuring Extruder (ME) can be approached via electric motor
- Modular architecture of the Modular Film Analyser (MFA) to facilitate customisation of additional measuring devices
- Operation via touch panel with data trend as well as optical and acoustic alarm functions
- All system parameters are monitored and saved in the touch panel control system
- Several options for data communication available





Technical Details

Pip die	50 mm
Communication protocol	MODBUS (RTU, TCP/IP), PROFIBUS, PROFINET, OPC (Server/Client), CSV file, customer-specific

More Product Pictures







Similar Products



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 returns ... [read more on our Website]



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. [vc_column width="1/2"] Features Modular architecture for customer-specific configuration with different measurement devices Homogeneous, yet ... [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 to ... [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



Label Printer (LP100)

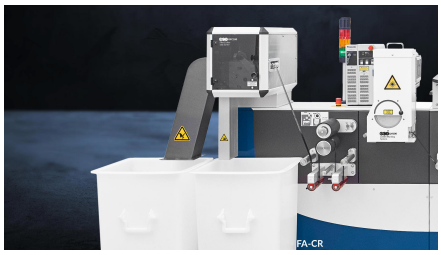
The OCS Label Printer (LP100) ensures the highest quality standards with regard to the labelling of, and repair of defects on, polymer films. Simple operation enables reliable and fast printing. [vc_column width="1/2"] Labelable Materials Polymer films (tape) [vc_column width="1/2"] Features Reliable 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]



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 accumulates ... [read more on our Website]

of the Modular Film Analyser (MFA) Security door (including sensor) for monitoring ... [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 consistant 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 Polymer ... [read more on our Website]



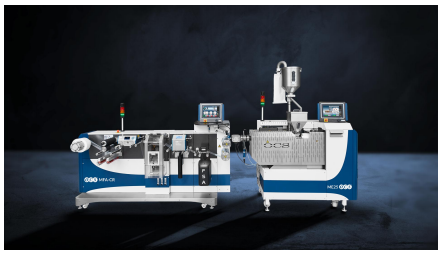
Pellet Transport System (PTS)

The OCS Pellet Transport System (PTS) is a control system that ensures the continuous and automatic transport of plastic granules (pellets) between production lines and measuring systems. The pellets from the production line are removed by pneumatic samplers. The samples are transported through special conveyor pipes, distributed and fed to the corresponding measuring system. This ensures a gentle transport of the pellets to avoid dust and streamers. Features Individual and fully automated transport system for supplying the measuring systems Enables timely readjustment in case of parameter variations (minimisation of scrap) Simple operation via touch panel with optical and acoustic ... [read more on our Website]



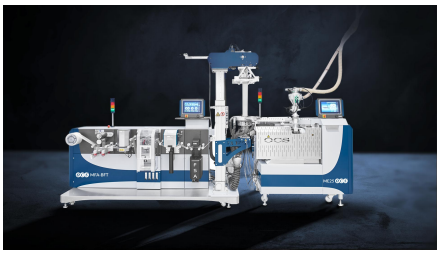
Tape Line (TCA®)

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 anlysis. 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 the ... [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, PP, ... [read more on our Website]



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 polymers ... [read more on our Website]

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