

QualityOn

Measure quality online

Technologies

- QualityOn:Polyscan
- QualityOn:Colour
- QualityOn:MVR
- QualityOn:IV

CHOOSE THE NUMBER ONE.

QualityOn.

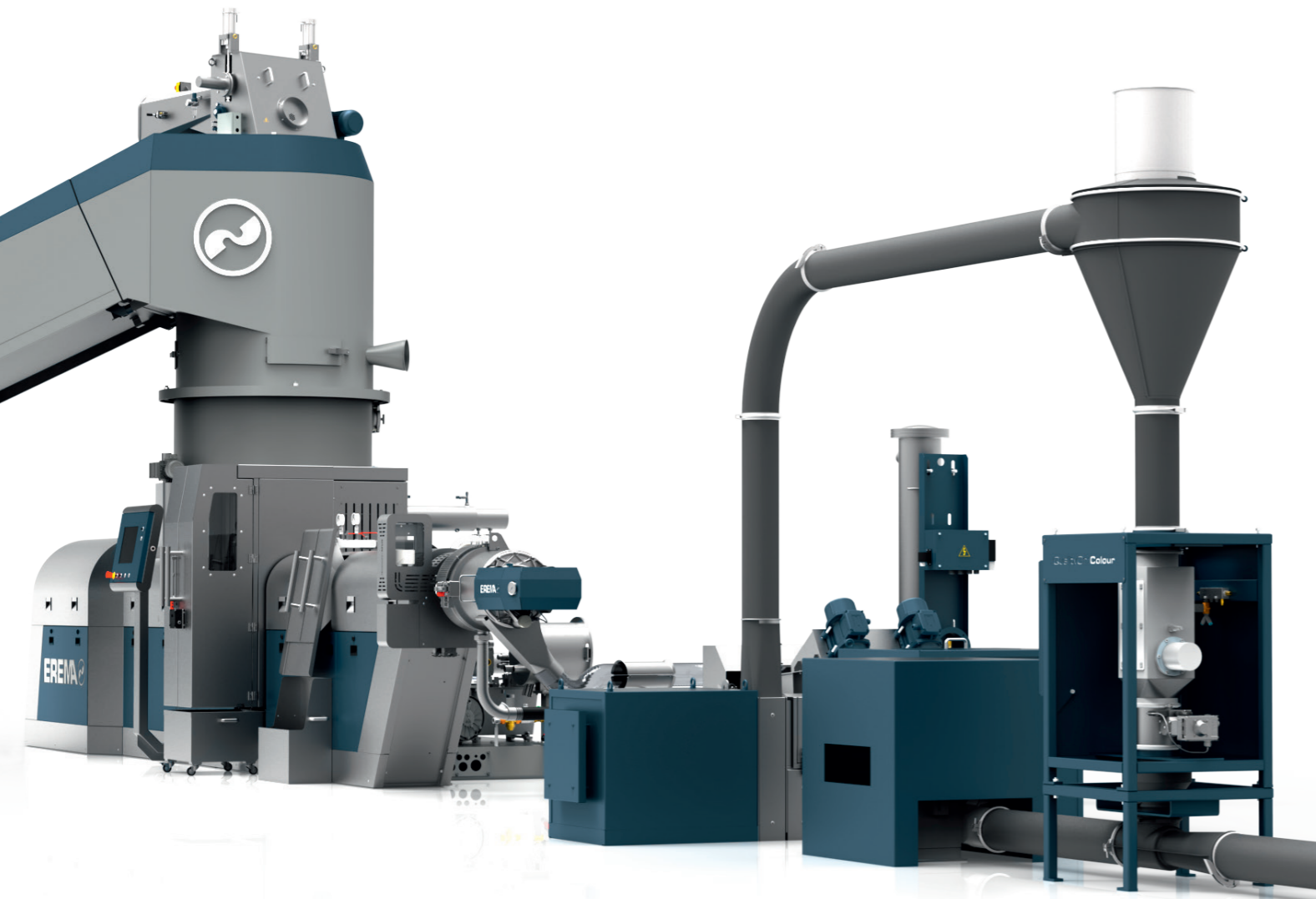
Measure online. In a new quality.

The demand for quality in plastics recycling is increasing constantly. The driving forces behind this are the increasing requirements of the circular economy and the necessity to use higher proportions of recycled pellets in new products - even if the quality of the input material is poorer. The demand is for recycled pellets with a quality that is not only high, but consistently high.

With this in mind, QualityOn redefines the **standard for monitoring quality**. Thanks to innovative EREMA online measuring systems, you are immediately informed during the actual process about the MVR, IV and colour values as well as the polymer composition of the input material, and not afterwards in the laboratory.

Quick recognition, quick reaction

You are notified automatically as soon as the values measured leave the defined tolerance range and can then take remedial action in the process at an early stage – or remove any defective material immediately from the current process. This ensures that you and your customers have recycled pellets with consistent properties. **For more quality and higher process stability.** Another bonus: QualityOn saves a great deal of time and work compared to conventional laboratory methods.



QualityOn.

Redefining measurement standards.

- **Continuous quality monitoring** during the process at the machine - and not later in the laboratory
 - Polymer and filler composition of input material
 - MVR value (Melt Volume Rate)
 - Colour value
 - IV value (Intrinsic Viscosity)
- **Quality under control:** consistent regranulate properties, controlled process quality
 - Permanent quality control, fast detection of deviations from the target specification and fast reaction
 - **Notification** when leaving the defined tolerance range
 - Option: Integration of a **diverter for immediate removal** of faulty material or for sorting into various quality grades
- **Saves time and personnel:** Compared to the manual laboratory method, QualityOn saves a considerable amount of time and work
- **Robust, simple** and reliable operation of the measuring units
- Matched to the **increased requirements in recycling**



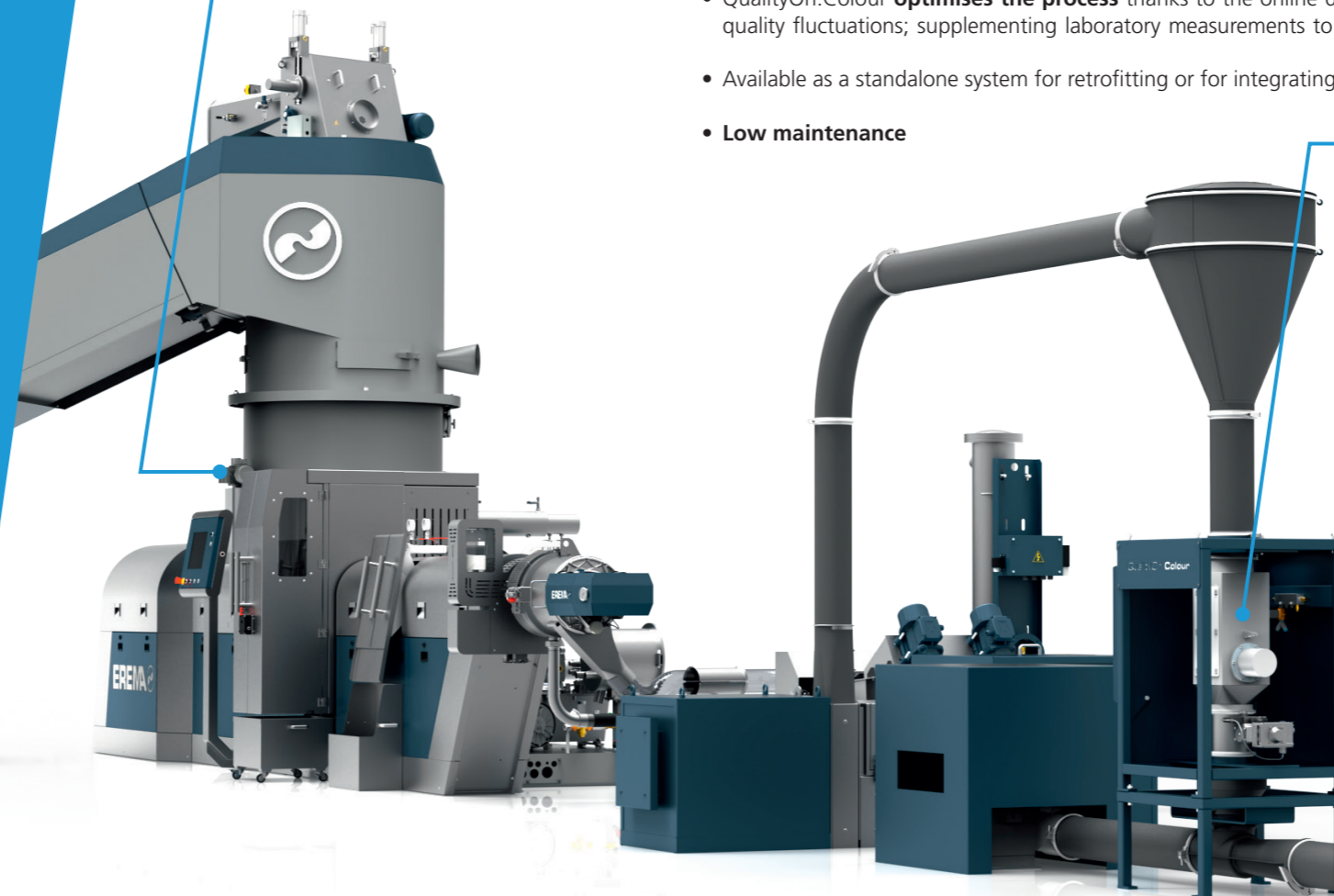
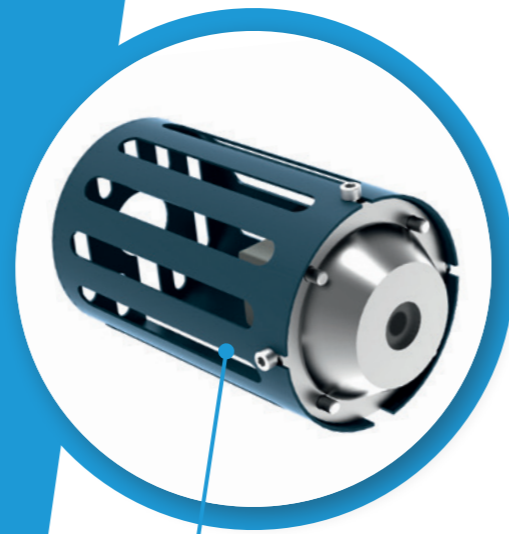
QualityOn & re360 – a strong team

Get more out of your QualityOn data – with re360, the EREMA Manufacturing Execution System (optional). This system gives you a clear overview of quality data, prepares them in a structured way for later data analysis and enables the necessary long-term data storage for quality documentation (see re360 brochure for more details).



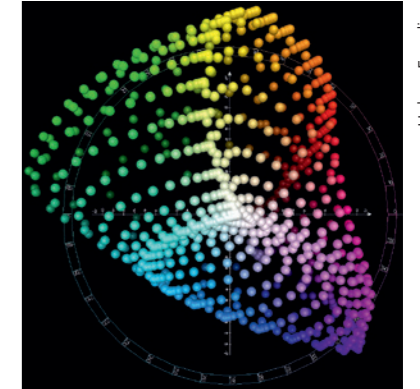
QualityOn:Polyscan

- **Precise online measurement of the polymer and filler composition of the input material** in real-time directly at the Preconditioning Unit (PCU)
- **Stable input for stable output:** The patented concept enables early detection and reaction to an input material composition that does not meet the required specifications
- **RAMAN spectroscopy** is used to record material information periodically. The interaction between laser light and material reliably determines the composition of the material in the PCU
- **Suitable for all thermoplastics and fillers;** excluding very dark and black input materials
- Permanent quality control: **Visualisation at the EREMA machine** and a message is generated when leaving the adjustable polymer composition tolerance range
- **Sorting qualities** possible due to downstream regranulate diverter (optional)
- **Ideally adapted to the PCU,** thanks to patented EREMA technology
- **Reliable system** based on long-lasting laser technology
- QualityOn:Polyscan **optimises the process** thanks to the online detection of relative quality fluctuations; supplementing laboratory measurements to a great advantage
- Available as a standalone system (incl. visualisation) for retrofitting or for integration in a new machine.
- Option: the EREMA MES re360 offers even more transparency, overview and analysis possibilities, including long-term data storage



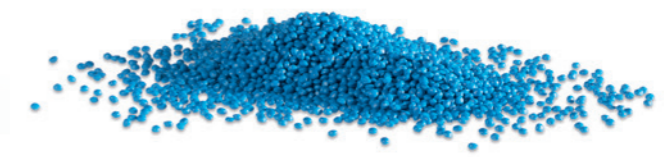
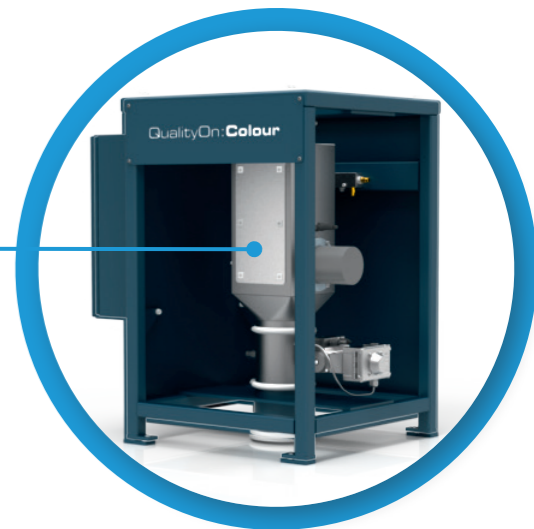
QualityOn:Colour

- **Precise online measurement of pellet colour** in real time, directly at the machine
- **Online spectrophotometer detects the slightest differences in colour:** High-resolution grid spectrometer ensures reliable detection of the smallest differences in colour that are not visible to the human eye – this means the information is available long before limit values are reached.
- **Reliable and stable system** based on long-lasting LED technology
- **Practical teach function** enables easy and quick learning of the desired production in line with the current colour
- A signal is given if the colour is not within the **defined tolerance range**
- **Perfect deflector setting:** recycled pallets with the "wrong colour" are deflected out until production has become stable again – this means that a light production colour is not contaminated with darker material
- **Visualisation of colour values:**
 - Standard: the **practical trend display on the machine** gives you a quick picture of time-dependent colour deviations
 - Option: the EREMA MES re360 offers even more transparency, overview and analysis possibilities, including long-term data storage
- QualityOn:Colour **optimises the process** thanks to the online detection of relative quality fluctuations; supplementing laboratory measurements to a great advantage
- Available as a standalone system for retrofitting or for integrating in a new machine
- **Low maintenance**



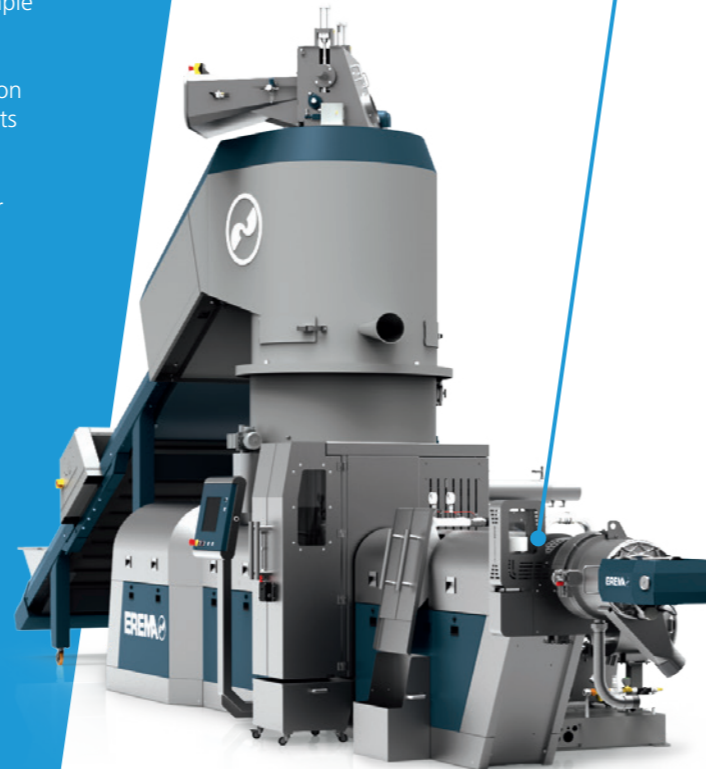
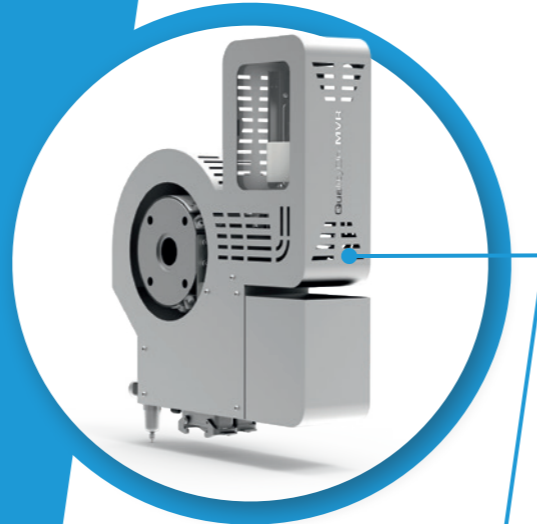
Holger Everding

The function of the QualityOn:Colour spectral photometer is based on the worldwide uniform L*a*b* colour space.



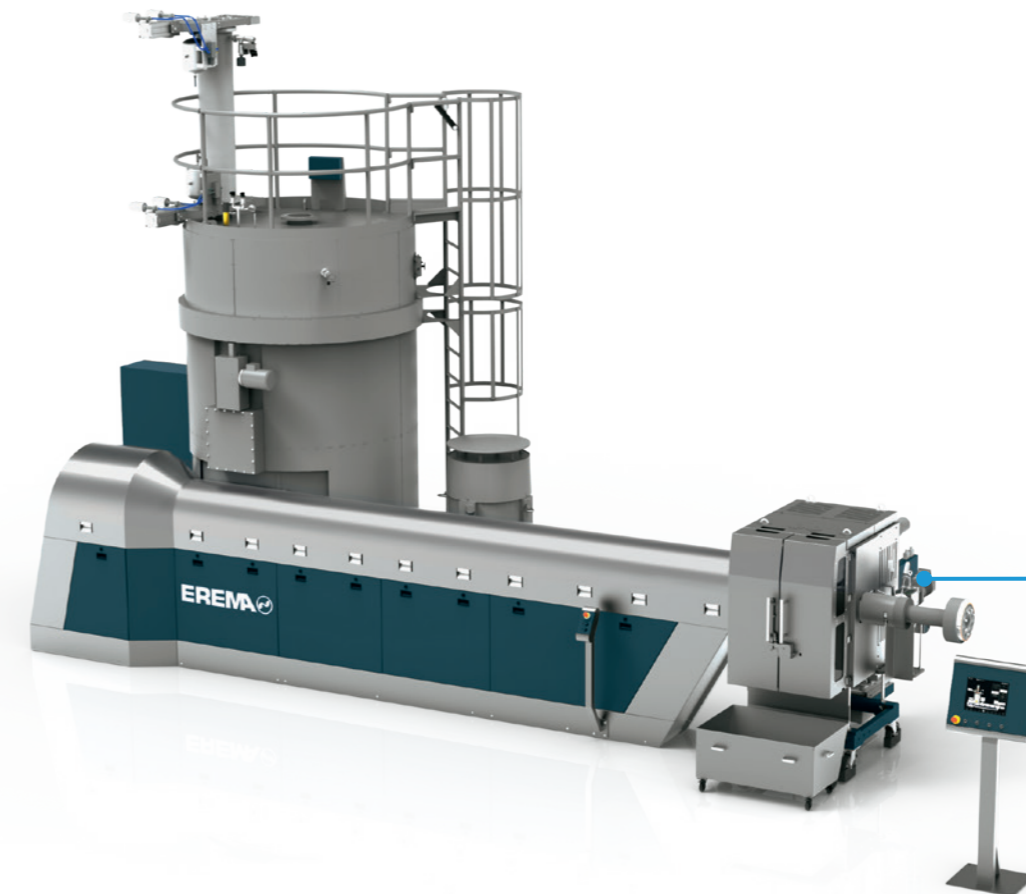
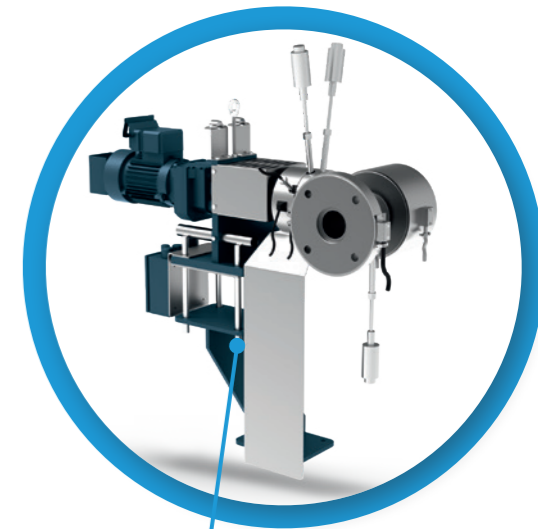
QualityOn:MVR

- **Continuous online measuring of melt volume-flow rate (MVR)** in real time directly at the machine.
- Automated measuring process **based on standardised laboratory method.**
- **Straightforward and robust** system
- **Designed especially for recycling:** unlike well-known online viscosity measuring systems which use gear pump technology and are designed primarily for clean polymers in the virgin material sector, the QualityOn:MVR measuring unit is designed especially for the higher requirements of recycling processes. It is, for example, insensitive to extremely small contaminant particles of 100-1,000 µm, which are common in post-consumer recycling.
- **Possible to sort quality** according to different viscosity grades by means of a downstream recycled pellet deflector
- **Exact and pertinent measured values**
 - **Representative measurement:** ingenious design ensures lowest possible influence of removed measuring charge on residence time
 - **"Clean" data:** thanks to the innovative ContiFlush flushing mechanism the measuring system is cleaned quickly and efficiently after every measurement; this means that results are not influenced by residues from previous measuring processes or contaminants in the sample measured
- QualityOn:MVR **optimises the process** thanks to the online detection of relative quality fluctuations; supplementing laboratory measurements to a great advantage
- **Option: re360,** the EREMA Manufacturing Execution System, for transparent and clear visualisation, processing, analysis and longterm storage of the MVR data
- Available as a standalone system for retrofitting or for integrating in a new machine.



QualityOn:IV

- **Continuous online measuring** of intrinsic viscosity (IV) in real time directly at the machine. The measured value is already the **final IV value which the finished pellets will also have.**
- **Permanent quality control** – visualisation of final IV value on the EREMA machine. If the value is outside the IV tolerance range a message can be generated/grade can be **sorted according to different viscosity grades** by means of a downstream recycled pellet deflector (optional).
- Process quality assured – QualityOn:IV **enabled by the fully automatic control system, allows you to optimise a number of important processing parameters such as throughput, processing temperatures, filling levels, etc.**
- Optimised design for **extremely easy start-up and maintenance.**
- QualityOn:IV **optimises the process** thanks to the online detection of relative quality fluctuations; supplementing laboratory measurements to a great advantage
- Available as a standalone system (incl. visualisation) for retrofitting or for integration in a new machine.
- Required minimum filtration fineness 60 µm



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