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ONLINE VISCOSITY RHEOMETER

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CHECK THE VISCOSITY OF PET ON YOUR EXTRUDER ONLINE

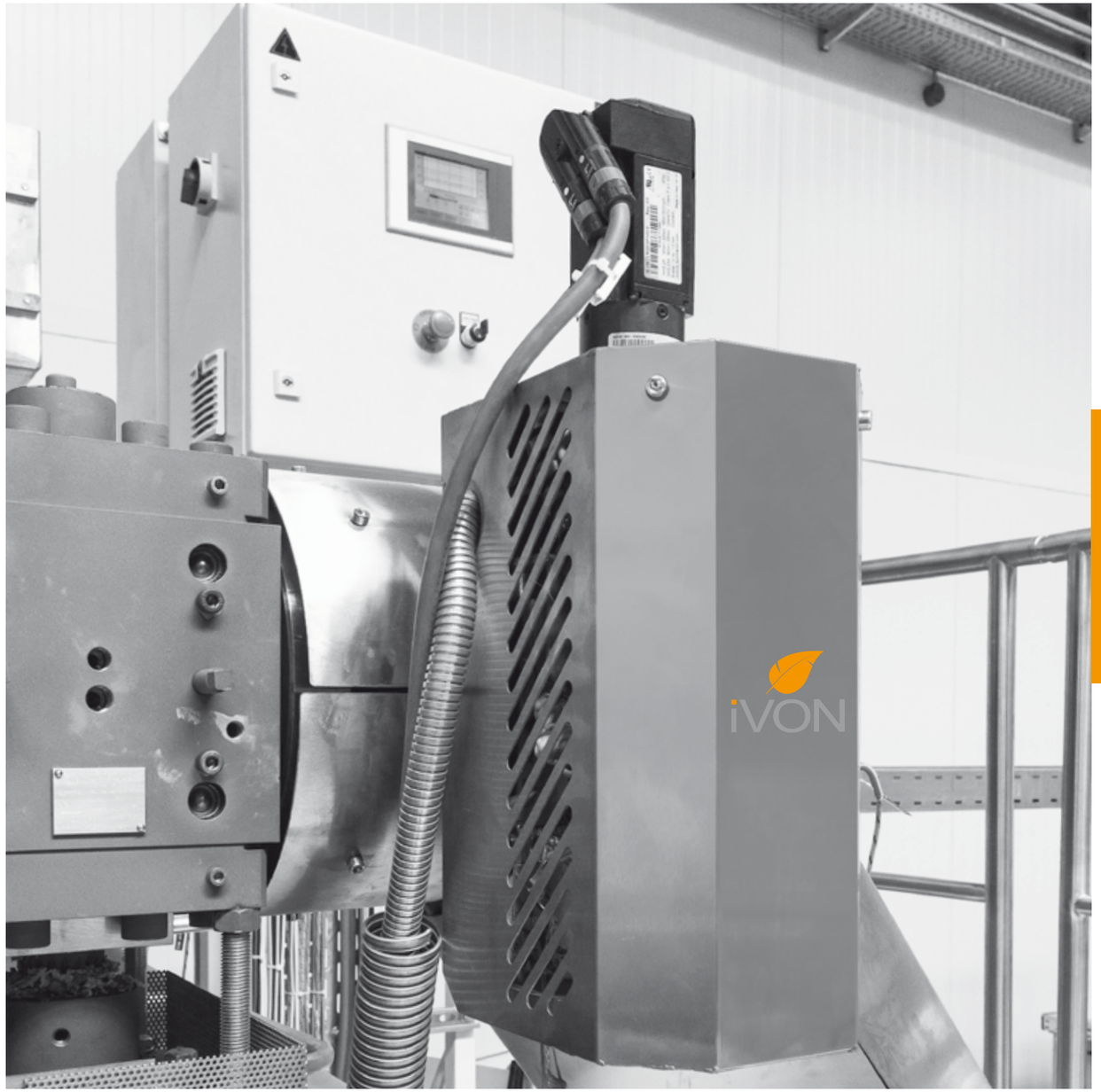
The intrinsic viscosity (iV) of PET is one oft the main parameters influencing the strength, elongation and other properties of the final PET product such as bottles, sheet, fibres, strapping tapes and even can affect the results of decontamination with some recycling processes.

Offline laboratory measurements of the iV require manpower and equipment, and in all cases time and delay.

The brand new developed online iV rheometer iVON changes this. It is mounted directly on the extruder.

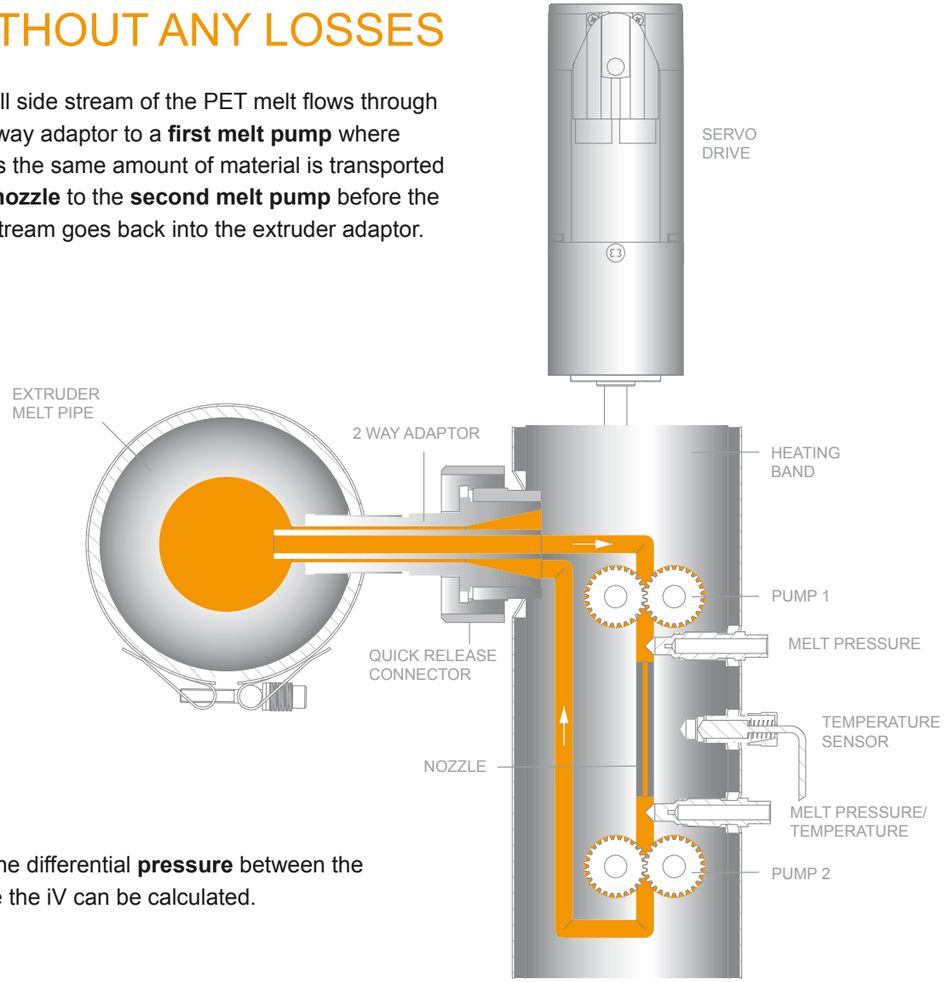
WITHOUT ANY DELAY YOU CAN

- immediately see the influence of changes on the extruder parameters such as temperatures, throughputs in your products iV
- immediately react to variance in the input material such as different starting iVs; changes in moisture content in the input materials or drying parameters
- develop online the ideal recipe for your application



WITHOUT ANY LOSSES

A small side stream of the PET melt flows through the 2 way adaptor to a **first melt pump** where always the same amount of material is transported via a **nozzle** to the **second melt pump** before the melt stream goes back into the extruder adaptor.



With the differential **pressure** between the nozzle the iV can be calculated.

SAVE MONEY

- by the optimization of your drying process in front of the extruder, to the required moisture and product iV
- by adding lower iV or recycle content up to maximum content to reduce your material costs
- by the reduction of your off spec product due to too low iVs by immediate action

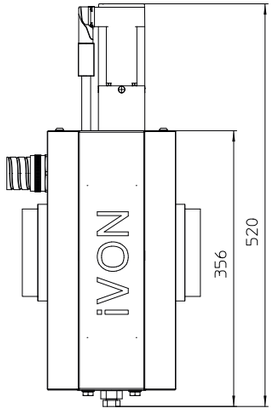
IDEAL FOR

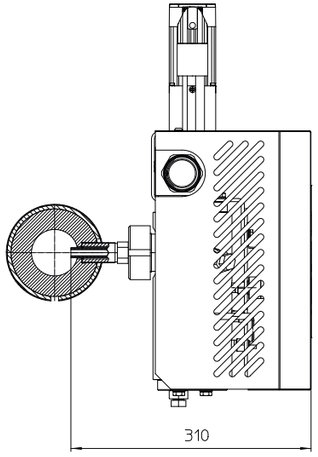
- recycling processes such as pelletizing, sheet production, strapping, tapes or fibre production with diversified input materials due to moisture and iV
- recently developed extrusion machines
- documentation for full traceability of quality during production process

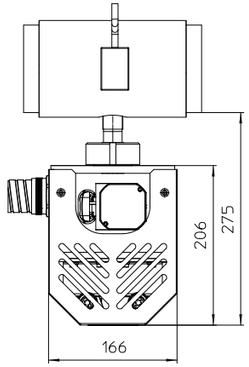
SIMPLE TO OPERATE

iV values are directly shown on the display between 0,5 dl/g to 1 dl/g via standardized calibration. With each individual production recipe you use the correlation between pressure, melt temperature and pump RPM. These values can be stored and further correlated with internal or external iV measuring methods.

Optional:
iVON can be connected to the extruder control unit with ‘start’ and ‘stop’, ‘fault signal’ as well as the measured iV-value.







PLUG & PLAY SYSTEM

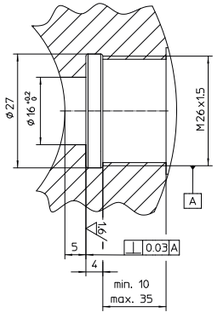
iVON is delivered with a full electric control panel and can be either operated as a completely independent unit from the extruder control or can be easily interlocked via binary signals and an analogue output of the iV with the extruder control.

Mechanically only one threaded hole has to be drilled in the extruder adaptor, where the iVON is mounted. This hole allows melt to be extracted and returned.

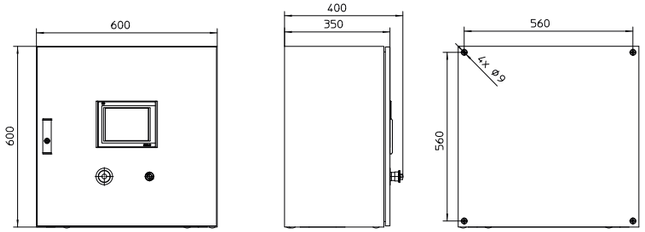
TECHNICAL DATA

Supply voltage: 3 x 400 - 480 V / 50/60 Hz
Pump drive: 1,3 Nm MAX, DC Servo Drive
Heating: 1600 W
Pumps: 0,206 cm³ / RPM / 50 RPM MAX

connection to extruder



electrical cabinet



YOUR BENEFITS

- Immediate display of iV values, alarms on changes
- Savings due to optimizing your input material mix and pre-drying times
- Constant documentation of quality parameters
- Immediate reaction to off spec production

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