



# PredictOn

Intelligent assistance systems for predictive maintenance

- **PredictOn:Drive**  
Monitoring main drive trains and vacuum pumps
- **PredictOn:Plastification Unit**  
Monitoring the plastification unit

# Stay productive! PredictOn

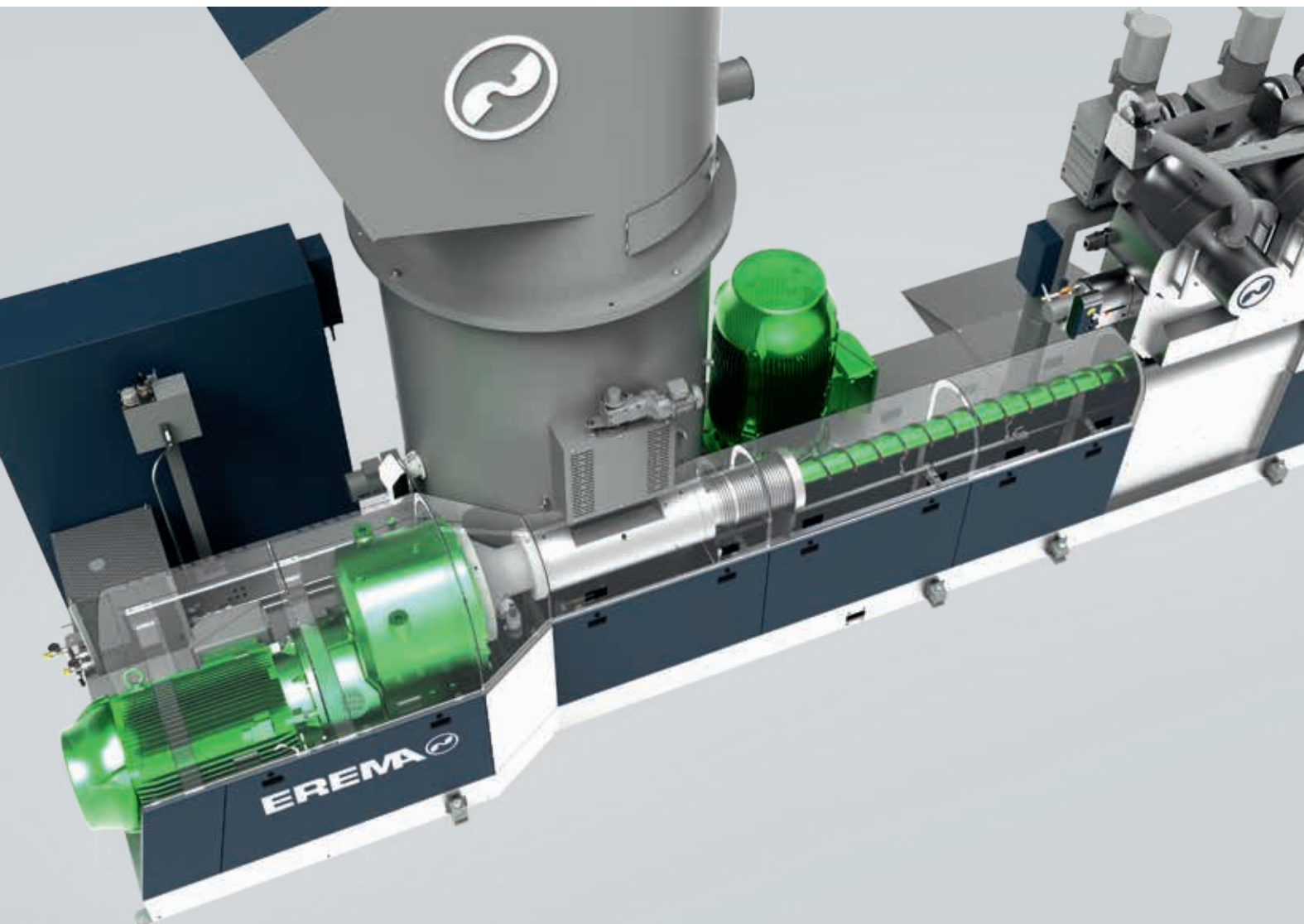
## Intelligent assistance systems for predictive maintenance

Act today to avoid downtime tomorrow and get maximum machine uptime and productivity. PredictOn makes you invulnerable. The EREMA predictive maintenance tool provides you with precise data on the status of the system to enable predictive maintenance work.

An intelligent measuring and sensor system detects, saves and evaluates the status data of your machine in real time and analyses any damage and possible countermeasures.

### More efficient maintenance, lower costs

Perfect planning of personnel and spare parts procurement. Unlike routine maintenance and preventive maintenance, predictive maintenance boosts availability while reducing costs, because it only intervenes when actually required.



## PredictOn:

### All the advantages at a glance:

-  **Higher machine availability, avoid unplanned stoppages:** less downtime and lower costs
-  **Early detection of critical conditions, abnormal statuses, damage to key components** without affecting the process
-  **Improved planning reliability for replacing components,** carrying out maintenance, and scheduling technicians
-  **Time advantage for spare parts procurement** and more continuity in production
-  **Reduced storage costs** thanks to selective spare parts inventory
-  **Enables planned replacement.** This saves time, reduces downtime and increases efficiency in the maintenance process.
-  **Everything under control:** display on the machine HMI and in detail using the EREMA BluPort® digital customer platform
-  **Retrofit to existing machines possible**





# PredictOn:Drive

## Condition monitoring of main drive train and vacuum pumps

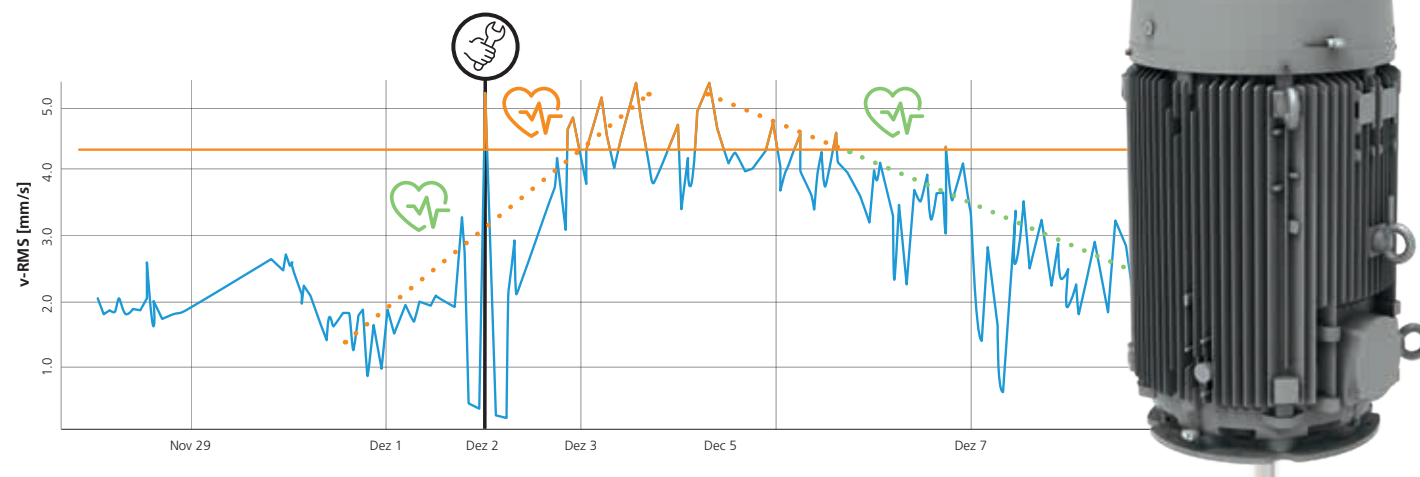


Regardless of whether you want to check the drive bearings, gear teeth or oil temperature, PredictOn:Drive offers you a comprehensive solution for the monitoring and predictive maintenance of all main drive trains and, on PET recycling machines, also the status of the vacuum pumps on the machine. In addition to the intuitive traffic light display directly on the machine HMI, BluPort® offers you extensive insights into historical data, limit values and trends of relevant vibration parameters at component and sensor level. This means you can detect changes in machine behaviour at an early stage as the basis for predictive maintenance, higher availability and maximum efficiency.

Alarms and warnings are displayed at component level at the HMI. Additional information, such as trend data (see the example in figure 1), is provided by the BluPort Maintenance App, which is included as part of the Smart Service Package. PredictOn:Drive is available for new and existing machines.

### Drive your maintenance – successful customer use case

Timely detection and correction of excessive drive belt tension on the reactor motor



On the 2nd of December the customer receives a first warning about the reactor motor from the HMI and in BluPort® (heart symbol turns orange). There is also a noticeable increase in the trend data. The customer responds three days later by carrying out checks and implementing specific maintenance measures. They discover that a belt tightener is too tight and correct it accordingly. The values stabilise again, the warning messages relating to the reactor motor disappear, and the motor continues running normally. Early interventions like this can prevent subsequent damage, such as damage to the motor, as a result of the drive belt being too tight for an extended period. This is where the PredictOn:Drive service, available as an option, can carry out in-depth analysis to pinpoint the cause as soon as the warning messages appear, and recommend a specific remedy.

## OPTION:

# PredictOn:Drive with optional deep-data AI analysis

Get even more precise diagnostics and recommendations for action by adding the optional deep-data AI analysis service to the PredictOn:Drive predictive maintenance tool.

If need be, expert technicians can remotely access the data history of your machine, which covers up to the past three months. Assisted by intelligent AI-based algorithms, a detailed analysis is carried out that pinpoints any anomalous values and patterns indicating potential damage. Based on this analysis, they then provide specific recommendations for action. This enables more precise planning and increases productivity, because spare parts procurement and maintenance measures can be implemented efficiently at the optimum time. This flexible and demand-focused service is available at a per day rate.



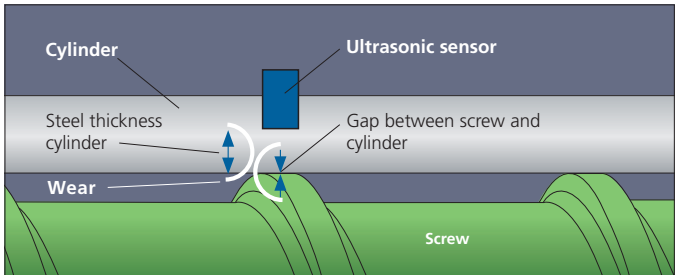
### Perfect combination of AI and technical expertise for maximum machine availability

- Technicians provide specific recommendations for action
- AI support for analysing and interpreting the data
- Assessment based on historical data covering up to 3 months
- Invoiced at per day rate – flexible when required

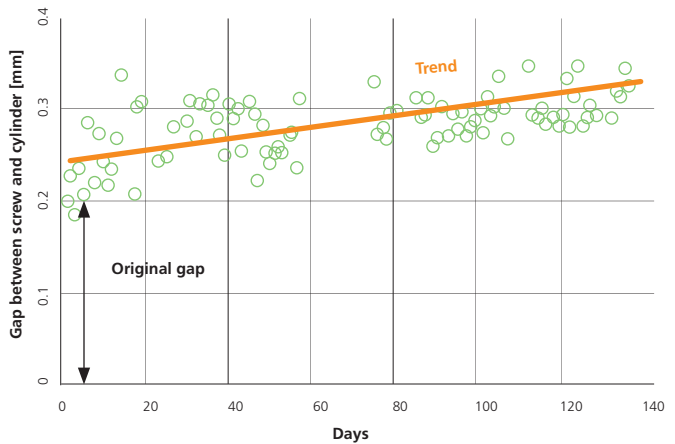
# PredictOn:Plastification Unit

## Condition monitoring the plastification unit

With PredictOn:Plastification Unit, you can monitor the status of your plastification unit continuously and in real time. Ultrasonic sensors measure the wear of the screw and cylinder precisely without direct contact with the melt. The intelligent assistance system detects critical conditions at an early stage in order to avoid unplanned downtimes.



The sensors are located at predefined positions on the extruder. They emit ultrasonic waves and receive the reflected signals. This provides decisive measurement data to determine the current status of the unit. The special design of the sensors means they are compact, robust and temperature-resistant up to 300° C.

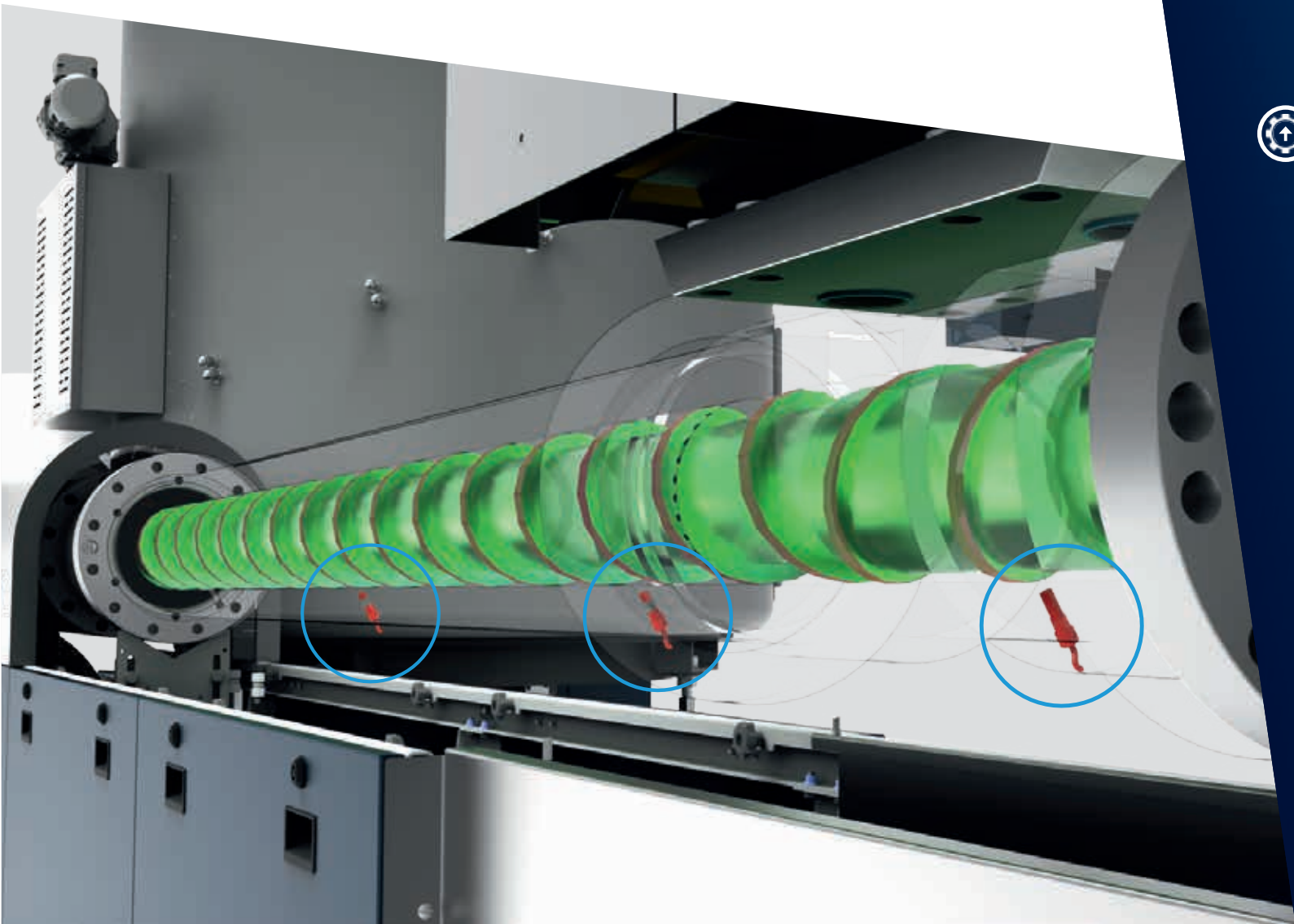


### Everything under control: Display on machine HMI and BluPort®



Dimensional changes are displayed on the machine HMI using a traffic light colour system, while detailed long-term data can be viewed online on the BluPort® platform. This enables you to detect critical wear conditions at an early stage and eliminate unplanned machine downtimes.

### Wear limits can be adjusted individually.

A really practical feature with PredictOn is that you can set the wear limits for the screw and barrel individually. That is how you can decide the optimum time to replace components and make sure you get the most out of component service life. This improves your planning reliability when replacing components and maximises the efficiency of your production processes.



## Advantages

-  **Continuous monitoring of the** plastification unit status in real time
-  **Precision detection of wear to the extruder screw and cylinder using ultrasonic** sensors without direct contact with the melt
-  **Detect critical conditions at an early stage** in order to avoid unplanned downtimes.
-  **Enables planned replacement.** This saves time, reduces downtime and increases efficiency in the maintenance process.
-  **Wear limits can be adjusted individually**

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