Loepfe

Operation Manual

YarnMaster® ZENIT+ P-Matrix

50521003 en

Original Manual

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Contents

1 General Information

1.1 Validity

This document is valid for:

YarnMaster ZENIT+ P-Matrix

1.2 Terms and abbreviations

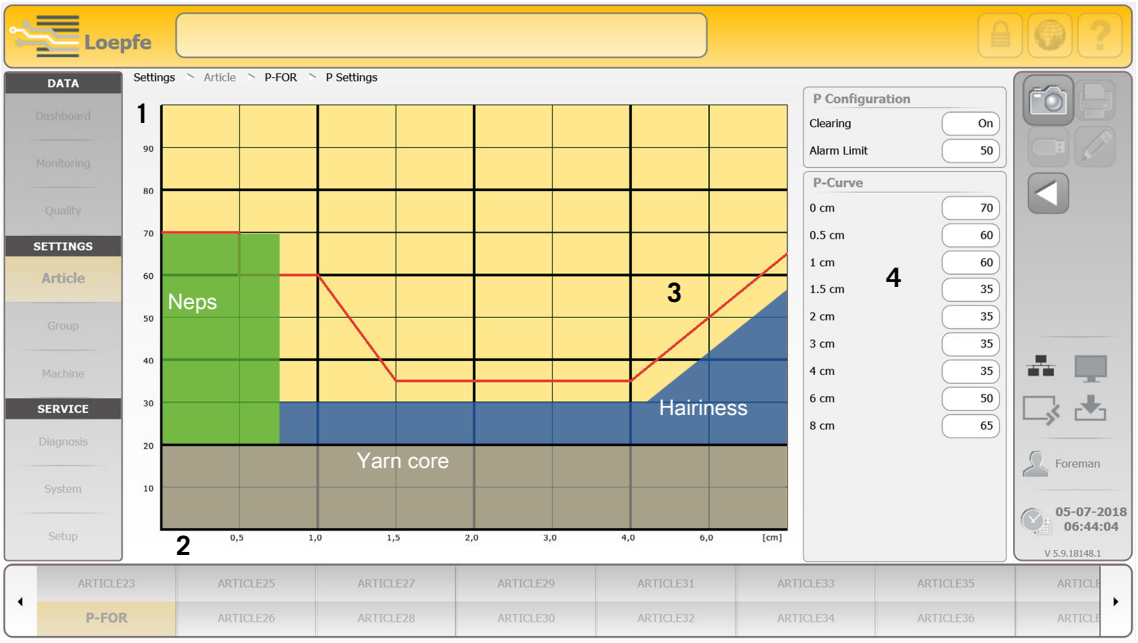
The following terms and abbreviations are used in this document:

	Definition
P Matrix	Synthetic foreign matter matrix
P Cutting Rate	Number of P Faults per length

1.3 Product Description

The P matrix is used to measure the «triboelectric» yarn signal. This enables the detection of all synthetic foreign matters (on the surface), regardless of the yarn thickness:

Graphical representation P matrix



Graphical representation P matrix

1	Vertical axis ■ Intensity of charge measurement	3	Clearing curve
2	Horizontal axis ■ Signal length of faults (cm)	4	Settings for P curve

1.3.1 Sensing head display (7-segment display)

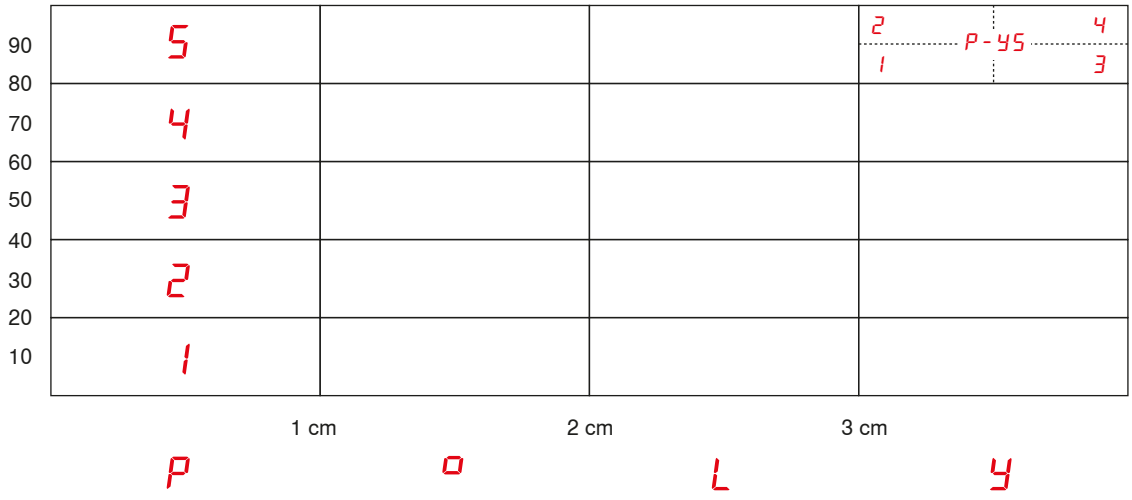
The sensing head display serves as setting aid for **«P Cuts»**.

Noting the classification, when mounting the yarn faults:

- Simplifies optimizing settings.
- Prevents every single fault having to be checked at the control center.

PP			Synthetic foreign matter
P1	-	P5	P classes P1 – P5
o1	-	o5	P classes o1 – o5
L1	-	L5	P classes L1 – L5
y1	-	y5	P classes y1 – y5

*Sensing head display **«P Cuts»***



P Matrix representation (PoLY)

Fine subdivision of the matrix:

- The P matrix can be divided into 4 further fields (see Y5) for an even more detailed analysis.
  - Visible in menu **«Quality»**: For each spindle, the last cut in the P matrix is marked in color.

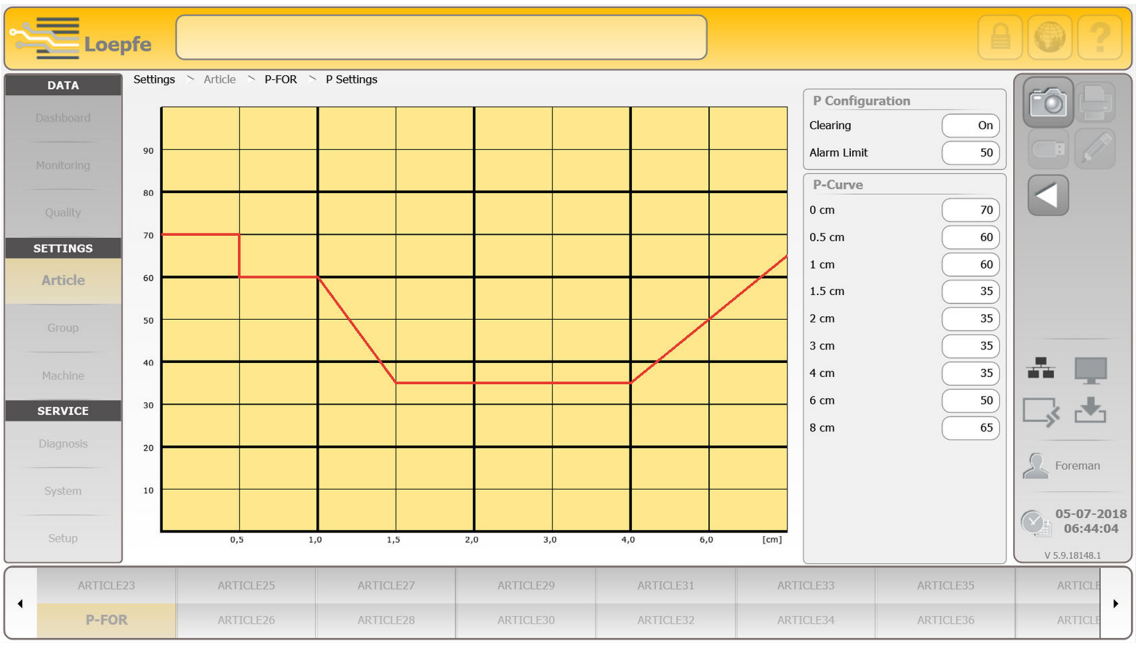
2 Operation

2.1 Finding the Optimum Setting

2.1.1 Selecting P default settings

✓ Menu ***SETTINGS / Articles / P Settings*** is displayed.

1. Press to make changes.
2. Activate **«P Configuration»«Clearing»**.
3. **«P Curve»** Accept proposed setting (see Fig.: Template P settings).



Template P settings

4. Press.
   ⇨ Menu ***SETTINGS / Articles / Overview*** is displayed.
5. Press to save the article.

⇨ The article is saved with the P default settings.

> The intensity of the generated P Signal is not given by the thickness / magnitude of the P Faults, but is registered due to charge changes.

2.1.2 Activating Test mode

✓ Menu ***SERVICE/ Diagnosis/ Test Mode*** is displayed.

1.  Press to make changes.
2. Determine the timeout (Off, 30, 60, 90 or 120 min).
3. Select checkbox **«P»**.
4.  Confirm.
5. Select the spindle range.
6.  Confirm.
   ⇨ The selected spindles are underlined in the spindle selection list.

⇨ **«Test mode settings successfully transferred.»**

Deactivating Test mode:

- Test mode is automatically deactivated after the set timeout time has elapsed.
- Test mode can be terminated prematurely by timeout **«Off»** as required.

2.1.3 Optimizing P settings

✓ **«Test mode»** is activated.

1. Wind the yarn.
   ⇨ As soon as a P Fault is cut, the spindle is blocked.
2. The fault must be mounted on the yarn fault chart and analyzed (see Sensing head display (7-segment display) [▷ 9]).

The following measures apply to all segments:

- If too many cuts are made, the clearing curve must be set higher.
- If there is no cutting at all, the clearing curve must be set lower.

✓ If the number of P Faults per length is not known.

1. Set the clearing curve lower until only the number of unauthorized cuts increases.
   ⇨ The number of P Faults per length is known.
2. Set the clearing curve higher to increase clearing efficiency (fewer unauthorized cuts).
   ⇨ The number of authorized P Cuts must remain constant.
3. Deactivate Test mode.
4. Check the cutting rate.
5. If necessary, make changes to the clearing curve.
   ⇨ In practice, the number of authorized cuts should correspond to approx. 70–95 %.

⇨ The clearing curve is optimally defined.

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