KnitVision

AI-Powered and Real-Time Detection of Fabric Defects

Description

Reducing waste is always one of the major concerns in every phase of fabric manufacturing, including the knitting process. Smart and online detection of fabric defects in early phases is highly valuable to increase production quality. In addition to saving production costs, it also reduces the loss of raw materials and energy and consequently does less damage to natural resources and the environment.

Using AI to inspect fabrics precisely

Equipped with the most innovative AI solutions and cutting-edge technologies, Joula KnitVision can inspect fabric during the knitting process and stop the machine in case of any fabric defect.

Enabling Faster Quality Control and Traceability

Joula KnitVision can now be connected to the **Joula KnitNet**, which is an advanced online monitoring solution for knitting factories. They work independently, but when they come together, new features and capabilities are achieved. Every fabric defect in the roll is detected, clustered, recorded, and tagged. Therefore, any man-powered visual fabric quality control can be eliminated.

Easy Installation on Most Types of Circular Knitting Machines

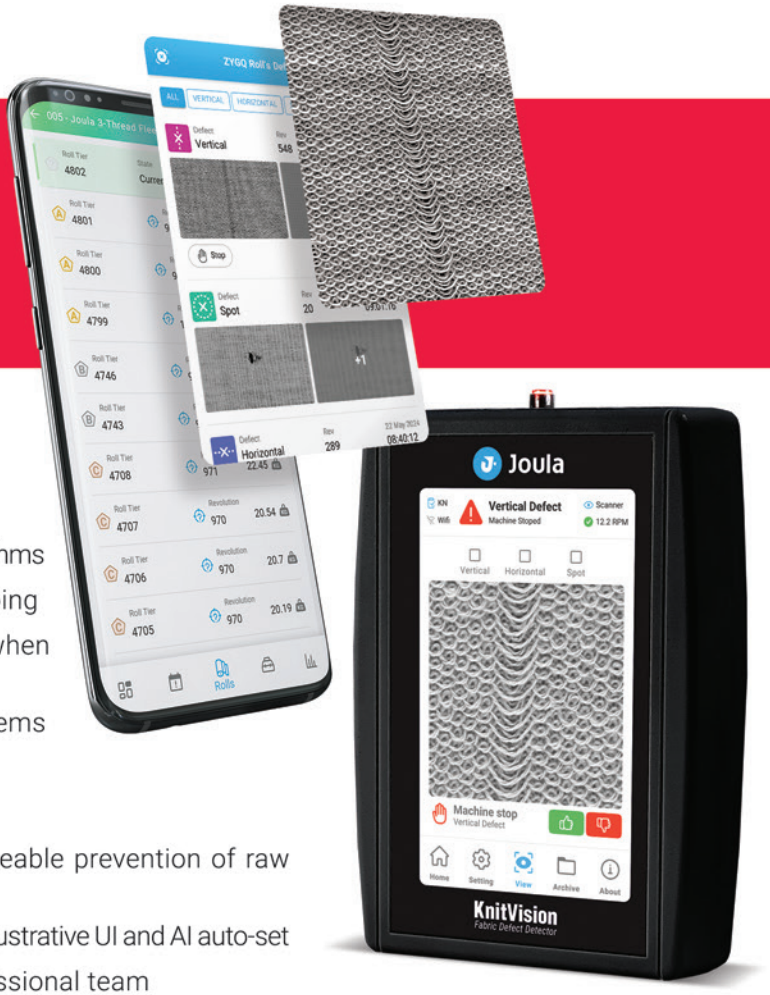
Joula KnitVision can work on any kind of circular knitting machine. It is easily installed on a large variety of circular machines using an innovative spider fixture.

How it works

Joula KnitVision consists of two main parts: the imaging unit and the touchscreen control panel. The imaging unit takes continuous online fabric images and transfers them to the control panel. In case of any defect in the produced fabric, the control panel detects that through its AI algorithms and stops the machine. If the machine is equipped with **Joula KnitNet**, all defects are recorded in the KnitNet database for each roll, which can then be used for quality control reports.

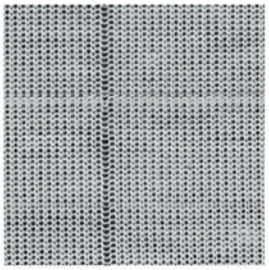
KnitVision categorizes defects as vertical, horizontal, and randomly shaped. Any needle or sinker fault usually results in a vertical defect, Spandex or yarn mismatch causes a horizontal defect, and any other mechanical or operational errors can make a hole in different shapes and sizes. Also, the user can set the sensitivity for each kind of defect, and **KnitVision** will smartly complete the subsequent settings that are required.

KNITVISION
EAGLE EYE ON KNITTING

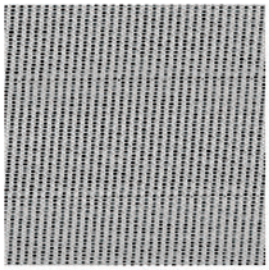


Advantages

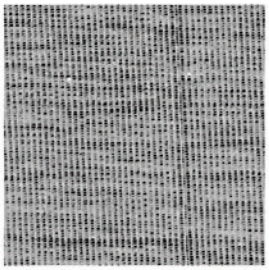
- Precise fabric faults detection using AI algorithms
- Online updates to keep the good work going
- Automated fabric quality control report when connected to the Joula KnitNet
- Automatic detection of installation problems
- Can work offline
- Can be used for colored fabrics
- Quick return on investment due to noticeable prevention of raw material waste
- Easy install and use with the spider fixture, illustrative UI and AI auto-set
- Great customer support by Joula's professional team



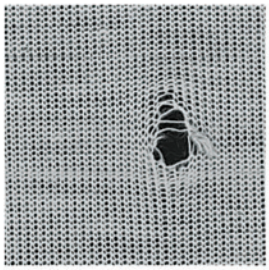
Compound (Hybrid) Defect



Horizontal Defect



Vertical defect



Hole Defect

+90 541 149 7938
+90 541 172 9183

sales@joulatech.com
www.joulatech.com

Tekstilkent Ticaret Merkezi, A4 Blok KAPI NO: 104 (10 AR)
Teksilkent Cad. Oruçreis Mah. 34235 / İSTANBUL / TURKEY