

## TUFTCAM

The only comprehensive system for automated surveillance of Tufting machines

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- Comprehensive system which allows to operate the machines without supervision
- Easy operation using a durable touch-screen

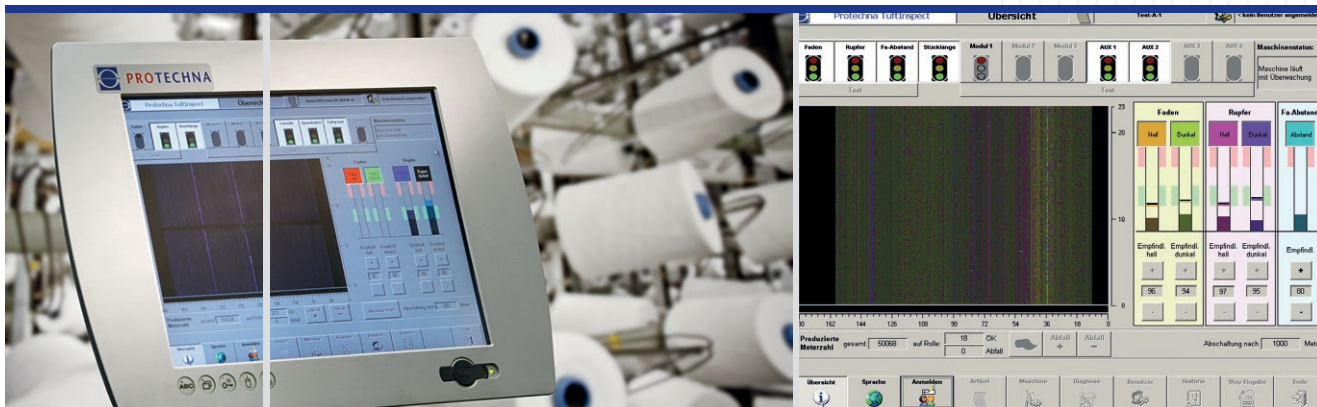
TUFTCAM is established as a robust and inexpensive camera system, suitable for industrial use on wide width fabrics and has been developed and adapted to meet the special needs for Tufting. It is suitable for monitoring machines producing cut pile as well as loop-pile carpets.

## 3 EXCELLENT TUFTCAM ADVANTAGES, WHICH MAKE IT WORTHWHILE

TUFTCAM allows a flexible and efficient round-the-clock production and opens the door to multiple machine operation by only one person.

TUFTCAM supports you to increase the quality of your production by avoiding faults or reducing substantially their length and consequences.

TUFTCAM creates a fault protocol by an objective measuring, which serves as a certificate for customers and suppliers.



### STAY IN CONTROL

TUFTCAM checks the raw carpet just a few stitches after the needles. The machine stops automatically as soon as a fault occurs. A flashing light alerts the operator and the large dot matrix display indicates the fault position. The current fault type is shown on the graphical user display and is stored in the electronic production protocol.

### EASY OPERATION

TUFTCAM displays the current signal for the raw carpet during the normal operation of the monitoring device. This makes it possible to set the optimal machine stop switching level for any produced article. These values can be stored.

If the width of the article is altered, the required monitoring area can be set accordingly (also with separating gap). The adjustable reaction time setting can optimise the fault recognition for a fault length as short as possible.

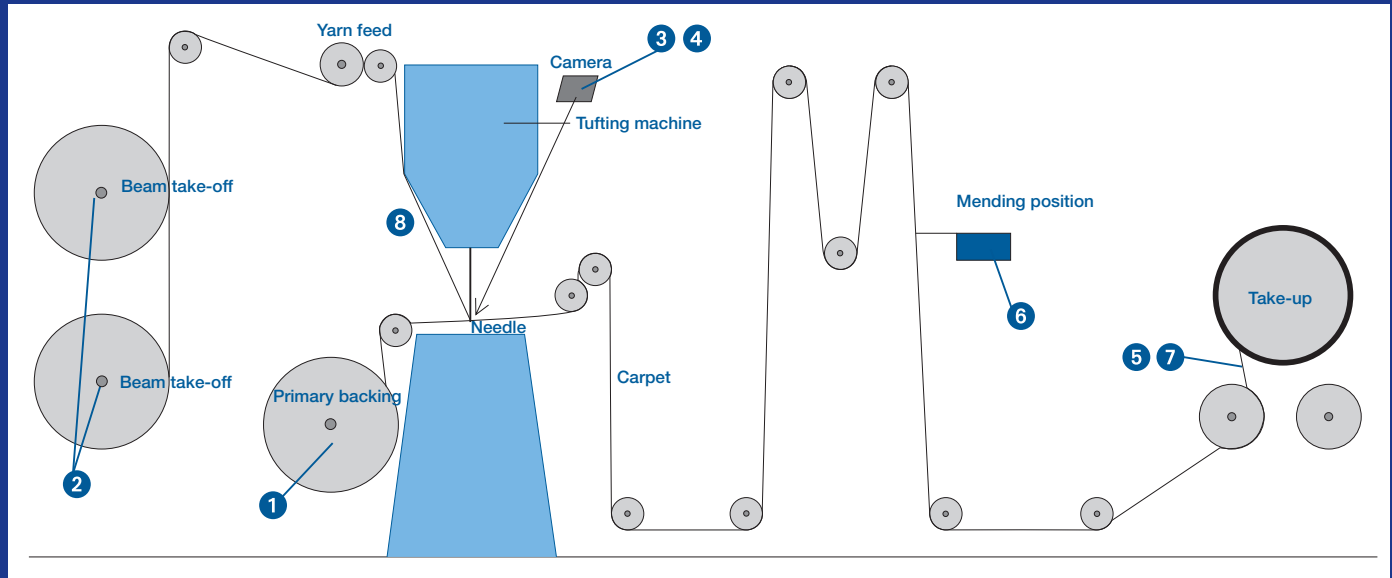
### FAULT DETECTION

#### Missing thread

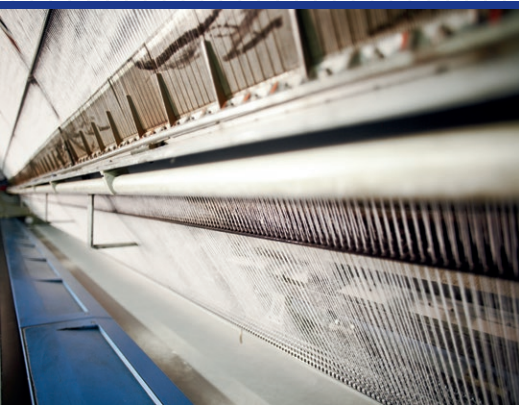
TUFTCAM detects the missing row of tufts in the carpet after a thread break has occurred. The thread break can sometimes be recognised by TUFTCAM even before the thread end has run out of the needle due to the reduced thread tension.

#### Double threads

Stop of the machine, when a thread has jumped into a neighbouring needle.



- 1 End of primary backing surveillance
- 2 End of beam surveillance (optional)
- 3 Surveillance for pull-downs
- 4 Thread surveillance
- 5 Piece length surveillance
- 6 Stop at repairing position
- 7 Stop at cutting position
- 8 Yarn break detection with laser light barriers (optional)



### Needle deviations

An adjustable sensitivity makes it possible to recognise needles that are out of alignment. TUFTCAM can learn an accepted needle image and only deviations from this image will lead to a machine stop. Therefore, the visual inspection will still work, when the machine is not perfectly adjusted.

### Pull-down and plucking at cut pile

The control for pull-downs, caused by wear or damage of the cutting blades, is carried out on the back of the raw carpet.

### Stopping at end of primary backing

An additional sensor prevents primary backing from running empty.

### Piece length and repair stop

TUFTCAM stops also automatically the take-up unit when the predefined piece length or the position for repairing a fault is reached.



CARPET WEAVING MACHINES

VELVET WEAVING MACHINES

TUFTING SYSTEMS

ADVANCED KNITTING TECHNOLOGY

YARN EXTRUSION LINES

ADVANCED HEAT-SETTING SOLUTIONS

SHEDDING SYSTEMS

HARNESSES

WEFT INSERTION SYSTEMS

FINISHING MACHINES

YARN TRADING

QUALITY ASSURANCE FOR TEXTILES

PRODUCTION MANAGEMENT SOLUTIONS

MOTORS & DRIVES

HIGH PRECISION IRON FOUNDRY

BULK HANDLING

Formed in 1956, PROTECHNA has been part of the Belgian VANDEWIELE Group since 2011. As a leading supplier of high-quality thread and fabric control systems for use in many textile manufacturing processes, we have continuously expanded our product range for the textile processing and textile machinery construction industries over the years. Together with a global network of more than 60 sales partners, we offer our customers a comprehensive portfolio of services and made-to-measure support.

Our Technical Department is responsible for the continuous improvement and enhancement of our high-tech products. Designing and developing individual solutions for the textile industry and working closely with leading textile machine producers creates a strong foundation for our innovative approach to business and the superior performance of our products.

Our quality assurance department uses in-depth controls to ensure that only first-class goods are shipped out to our customers. The resulting reliability and outstanding longevity of our products enjoy a well-earned reputation throughout our markets.

The quality of our work and the success of our company is measured by one all-important metric: customer satisfaction.



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