

# FELTEST

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## equipment

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## RealSpeed

Feltest Equipment BV, professional instruments for paper machine clothing

### 3 good reasons to measure the real speed:

1. Unexpected speed differences cause quality and runnability problems.
2. Identify slipping rolls that cause extreme clothing wear.
3. It's very easy, quick and reliable!

### Why measure the speed of clothing and rolls?

Each individual piece of paper machine clothing must run at precisely controlled speeds. The actual speed however is not measured but calculated by multiplying the revs with the roll circumference. In reality, wrongly set roll diameters or slipping drive rolls can result in serious deviations between the actual speed and the calculated speed that is presented by the control system. The Feltest RealSpeed identifies these speed differences and helps to analyze several paper quality and machine runnability problems.

### An accurate speed measurement within 2 minutes!

Sometimes laser Doppler systems are used to measure the speed of rolls or fabrics in paper machines. In extensive comparative trials the Feltest RealSpeed has demonstrated to be equally accurate as such a system. But the RealSpeed has many other advantages as well: assembly takes only a minute and then the instrument can immediately be used on almost any position: wet or dry, cold or hot, stable or vibrating! The RealSpeed is very easy to use and requires only a moderate investment.



On back ground: RealSpeed wireless, fore ground basic version



**RealSpeed wireless with optical sensor**



**2 types of measuring wheels**

### Measure the exact fabric length on a running machine

As an option, the RealSpeed can be extended with an optical sensor. The guide line on the fabric or felt will trigger the optical sensor and the length measurement is started. When the guide line passes the optical sensor again, the measurement is stopped and the exact length is automatically calculated. The high quality optical sensor and signal amplifier make sure that even the slightest contrast change will be fetched. Automatic signal conditioning balances distance variations and counter noise, for example caused by stains on the fabric.

The optical sensor and signal amplifier can also be used as a stand-alone unit that can act as a trigger for vibration analysis at for example the press section of a paper machine.

### The RealSpeed versions and options

The Feltest RealSpeed is standard supplied in a rugged aluminum flight case and comes with 2 measuring wheels and a battery operated signal amplifier. The available versions and options are described below:

#### RealSpeed versions

The RealSpeed hand grip with measuring wheel can be connected to the battery operated amplifier in two ways: by cable (RealSpeed basic) and through a wireless connection (RealSpeed wireless). Both sets come with 2 types of wheels; one especially for use on wet press felts and the other for use on forming fabrics, dryer screens and rolls.

#### RealSpeed options

The signal amplifier can be extended with a serial (RS232) output, to connect it to a computer. For speed and length measurements, the RealSpeed set can be extended with an optical sensor and accordingly adapted amplifier.

#### Only the optical sensor and signal amplifier

For vibration analysis, the highly sensitive optical sensor and signal amplifier can be ordered as a separate set, without the hand grip and the measuring wheels. This set comes standard with serial (RS232) output.

### Specifications

### RealSpeed

Speed range	0.1 – 3000 m/min ± 0.01 mm
Accuracy	0.05% ± 1 digit.
Read-out units	m/s, m/min, m/h
To be used on	Forming fabrics, press felts, dryer screens, rolls
Measuring wheels	Ø 100 mm; one wheel for rolls, forming and dryer fabrics; one wheel for press felts
Temperature range	0 - 60° C (long term measurements) 0 - 90° C (short term measurements)
Weight	Approx. 0.75 kg
Versions	basic and wireless
Options	- Serial (RS232) output at the amplifier - Optical sensor and adjustable sensitivity for length measurements - Only the optical sensor and amplifier w/h hand grip and wheels



Performing measurements of any kind on running paper machines is potentially dangerous and requires alertness, concentration and common sense. The products of Feltest Equipment BV are designed and constructed to be as safe as possible for their intended use. Feltest Equipment BV cannot be held responsible or liable in any way for injuries or damages that occurred using Feltest Equipment BV's products.

The Feltest RealSpeed is designed by Mr. Jörg Pichler.