

The correct nip load for safe and reliable operation

Nip load measurement



Your benefits

- + Even nip loads for best profiles
- + Increase of operational safety by avoiding overloads
- + Maximum utilization of press load
- + Savings in energy



The importance of uniform press force profiles

An important factor for the optimum functionality of your equipment, such as press section, size press and calender, is the uniform force distribution in the press nip.

Furthermore, maximum energy efficiency and optimum paper quality can only be achieved if the permissible press force is utilized – and this evenly across the machine width.

Skewed nip force profiles also lead to unnecessary wear of roll covers and clothing. Correct press force profiles are particularly important for tissue machines, since there is no dryer section to compensate for profile errors.

We recommend checking the effective press force especially after major overhauls, rebuilds and visible aging of the equipment.

Why Voith?

Our worldwide active service specialists not only provide you with precise measurement results. They also have the long-term experience in interpreting the results in order to find the root causes of the error. Cooperation with our design departments ensures correct recommendations for corrections according to Voith standards.

Actual line loads and force distribution in the press nip

Press force measurements can be carried out on all conventionally pressed rolls with lever arm – press section, size press and calender. To measure the press forces, one sensor each is positioned on the machine front side and drive side with the press nip open between the bearing housing and machine frame. Individually manufactured adapters are required for positioning the load cells, which allow the full pressing force to be absorbed. If there are no detailed machine drawings available, we recommend taking measurements by means of 3D scanning.

A useful supplement to the press force measurements are nip impressions by using special strain gauges measuring static or dynamic.

Our scope of service

- Press load measurement with load cells incl. sketch of adapters
- Detailed report with recommendations

Optional

- Nip impressions – dynamic (Fuji-film, blue strains)
 - NipSense measurement – static
 - Detailed adapter drawing
 - 3 D-scanning
 - Paper moisture profile analysis
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- 1 Calibrated sensor (force and pressure)
- 2 Example for adapter
- 3 3D scan to design appropriate adapter

Nip load measurement is part of the comprehensive Servolution portfolio



Equipment services

Installation & commissioning services

- Installation service
- Commissioning service

Maintenance

- Inspection
- Preventive maintenance
- Corrective maintenance
- Equipment improvement
- Repair & refurbishment

Materials

- Spare parts
- Wear parts & consumables



Process services

Audits

- Production line
- Maintenance
- Digitalization
- Energy
- Safety
- IT-Security

Expert support / consulting

- Smart monitoring
- Data analytics
- Condition monitoring
- Technology
- Maintenance
- Engineering
- Automation

Training

- Equipment
- Operation / Technology
- Safety
- Methodology

Measuring & diagnostics

- 3D scan
- Alignment service
- MobiLab
- Paper moisture profile analysis
- Paper profile analysis (Tapio)
- Nip load measurement
- SpeedUp certificate
- Vibration analysis
- Wet end process analysis



Remote tools

- Telephone support
- VPN support
- Video support
- Cloud service

Please click on this [link](#) or scan the QR code to visit our Process Services website:



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