

## Technical Information

# Compression and Ring Force Sensors

### Safety and Handling

The equipment is basically maintenance-free and can be installed in difficult to reach places. The units do not contain any spare parts or parts subject to wear. During the transportation and mounting careful handling is important, that means shocks and dropping should be avoided at all time. Otherwise equipment could be permanently damaged. Even under normal operation protection should be provided against excessive shocks and impacts. For critical applications we recommend to keep spares of sensors and electronic units in stock.

The mounting and safety notes in the "Practice Guide Web Tension Measurement and Control" should be observed.

### Mounting

The sensors should be carefully handled.

In case of heavy load cells use suitable lifting devices.



#### Mounting Notes

The application of force should be plane parallel.

The mounting surfaces must be free of dust and grease.

The base respectively mounting plates must remain flat under all load conditions within an evenness of 0.02 mm.



Force sensors should never be overloaded!

In case of danger of breakage additional safety measures should be considered. The guidelines for personal safety must be strictly observed.

### Installation guidelines

The forces should be acting exactly at the measurement direction.

Torsion and transversal forces as well as bending moments and eccentric loads result in measuring errors and could destroy the sensor when exceeding the permissible limit values. If the sensor is mounted on a plane parallel surface of sufficient size and hardness (e.g. a hardened plate HRC42...46) and at the right angle to the roll then eccentric of forces should not come into play. Heat expansion between several points of support in conjunction with fixed installation of the sensors can create transversal forces. This should be taken into consideration in the design phase.

### Application

Each application requires an appropriate design and calculation of the mounting environment, e.g. the thickness of the mounting plate or the diameter, tensile strengths etc. of mounting bolts .

Thickness of mounting plate at HRC42 ...46	>30	>40	>50	>70	>90	>120
Nominal force of the sensors [MN]	0,2	0,5	1	2	5	10



Maximum tightening torques of the mounting bolts have to be strictly observed!