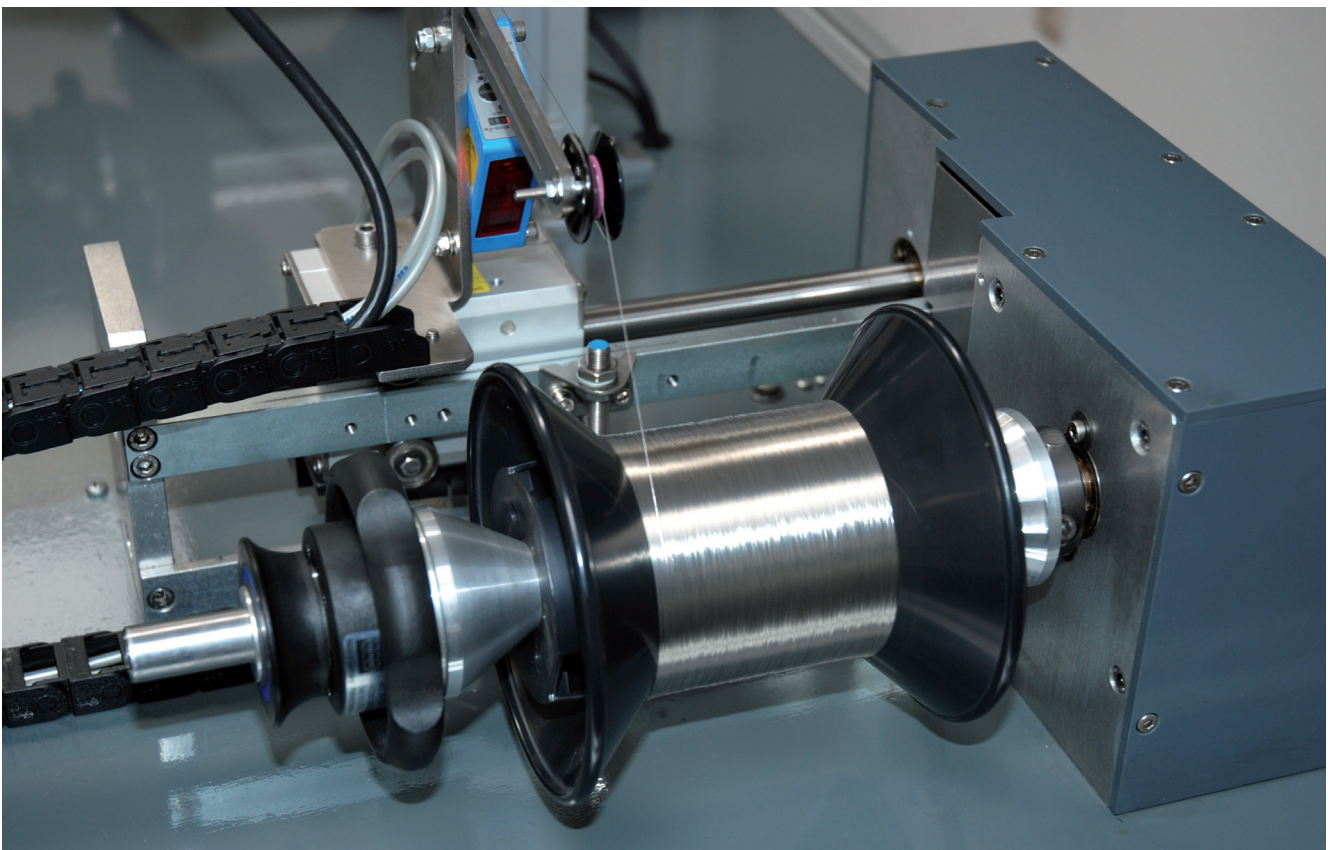


Contents	Page
Introduction	40
System Overview	41
Technical Data	42



Uhing Measuring System®

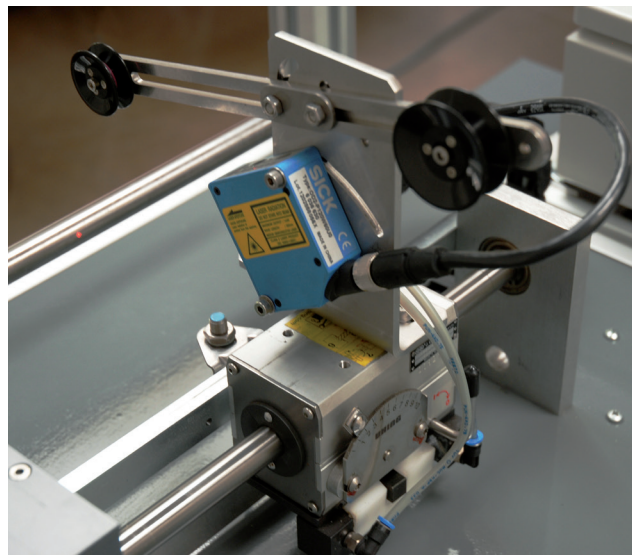
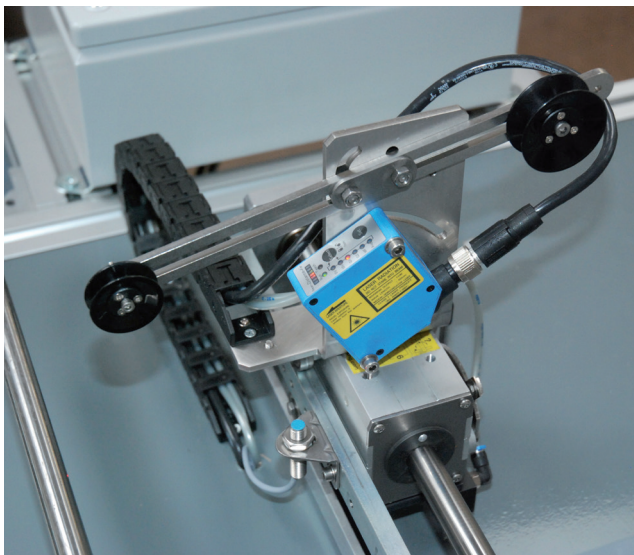


The Uhing Measuring System® detects the position of flanges on spools, regardless of the spool used. After a spool change, the system automatically adjusts to the new spool position and, where necessary, the new spool shape.

The Uhing Measuring System® was specially designed for application with pneumatically reversible Rolling Ring Drives.

As this is a customised product please contact us for a quotation.

Tel: +44 (0) 1923 222227 Email: sales@techna.co.uk



1 - Function

A sensor detecting the flange is mounted on the traversing system. At a defined point between the flanges of the spool, the distance to the spool is measured and saved as reference for each layer.

While the traversing system moves, the reference distance is continuously compared to the current measured value.

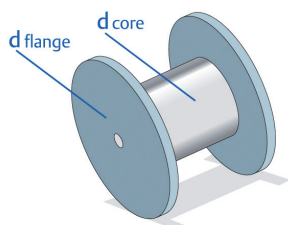
A reversal is triggered as soon as the adjustable height deviation limit is exceeded. Such a height deviation occurs when the flange is detected or there is an accumulation of material on the spool.

A display indicates either the current measured height or the permissible height deviation.

2 - Areas of Application

The system has been designed for laying round material with diameters of 0.1 to 2.0 mm on cylindrical spools. Other dimensions are possible after consultation.

Spools of different sizes can be wound without readjustment. In this context, the diameters of the spool core (d_{core}) and the flanges (d_{flange}) must be heeded. The difference must not exceed 220mm ($d_{\text{flange}} - d_{\text{core}} < 220\text{mm}$).

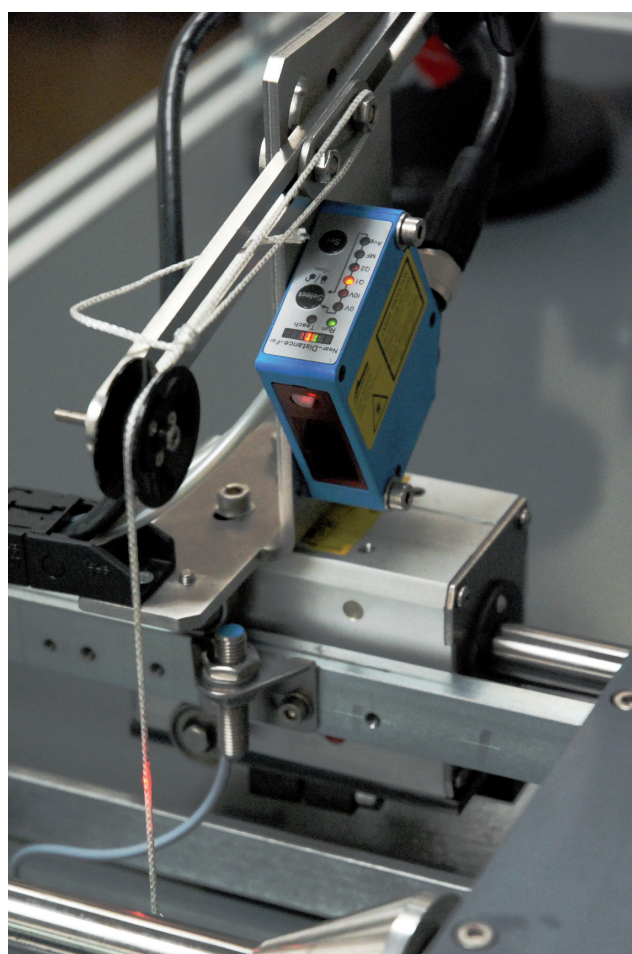


When using several spools, the difference between the smallest core diameter and largest flange diameter applies.

Other spool sizes are possible by changing the sensor, contact Techna to check your application.

Flanges can be rectangular or conical up to an angle of 40°; the bulging of flanges due to accumulation of wire on the spool is compensated for. Scanning of spools with collapsed flanges is not possible.

The traversing system must be mounted parallel to the spool axis. For very slow winding speeds, the axial run-out of the shaft carrying the spool should not be greater than smallest diameter of the material to wind.



Advantages

- No manual adjustment of reversal points
- Significant time savings when spools of different type and dimension are used, because adjustment is not required
- Very easy operation
- No prior experience required
- Perfect winding patterns
- Robust sensor technology
- Modular system.

3 - Installation and Integration

The Uhing Measuring System® does not require any signals from your machine but can process the reference point detection to reset the measurement after a spool change.

Resetting is also possible with a pushbutton on the controller. Valves for pneumatic reversal can be connected and/or the signals "flange detected", "counter clockwise", "clockwise", and "error" can be provided to the machine controller.

The sensor of the Uhing Measuring System® is mounted below or above the material guide and aligned to the spool centre once.



4 - Contents of Delivery

The system uses tried and tested industrial components only, ensuring a high quality and long term spare parts availability.

- 1 sensor for flange detection, with 3.5m connecting cable, pluggable
- Holder for flange detecting sensor to which a guide system adapted to the rolling ring drive can be mounted, universally applicable
- Flexible cable tray for hoses and cables
- 1 sensor for reference point detection with 2m connecting cable
- Universal holder for reference point detection sensor
- 1 switch box with controller, display, reset button, and adjuster control for permissible height deviation
- Comprehensive Operating and Installation Instructions.

5 - Technical Data

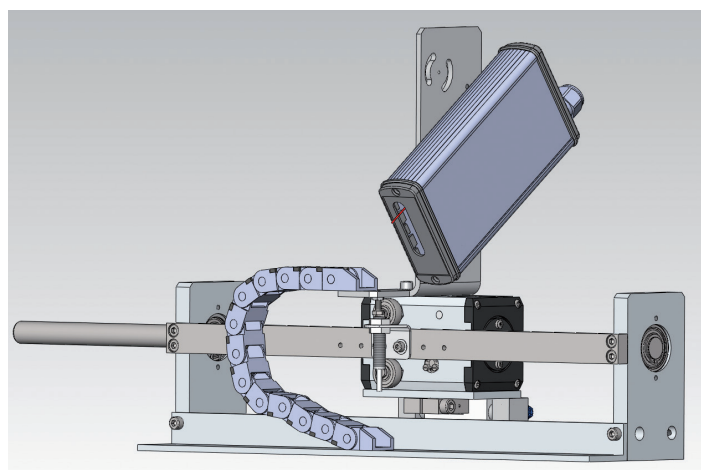
- Supply voltage: 24 Vdc, 2 A
- Ambient temperature range -10° to 40°C Max. humidity 95%, noncondensing
- Flange detection sensor rated IP 65
- Control Panel dimensions: 300 mm(w) x 200 mm(h) x 120 mm(d), cable exit at bottom, d+30 mm for controls; vertical installation; IP54 protection (IP65 upon request)
- Pneumatic kit can be connected, see options
- Signals for machine control and alarm indication: flange pulse detected, counter clockwise, clockwise, error
- Flange detecting sensor: Laser Class II acc. to IEC 60825-1

6 - Maintenance

The system is maintenance free; in dust laden atmospheres, the aperture of the flange detecting sensor should be cleaned from time to time, or a protective enclosure should be used.

7 - Options

- Protective sensor enclosure with compressed air connection as cleaning device and pressure governor unit
- Pneumatic kit, consisting of fast-action valve, mounting bracket, connecting cables and hoses (for connecting the Uhing Measuring System® to a traverse with pneumatic reversal)
- Guide system from our GS range
- Installation and commissioning support



System with optional protective sensor enclosure