



STATEWIDE
LINEAR BEARINGS

Product Range



Contents

Uhing-Linear Drive Systems®



Rolling Ring Drive KI/RGK/RG Page 4/5



Linear Drive Nut RS Page 6/7



Timing Belt Drive AZ Page 8/9

Winding accessories-options



Guide System GS Page 10/11



Non Contact Flange
Detecting System FA II Page 12/13

Clamping Systems



U-Clip, Magnet-Clip Page 14/15



Uhing-easylock® Page 16/17

Engineering

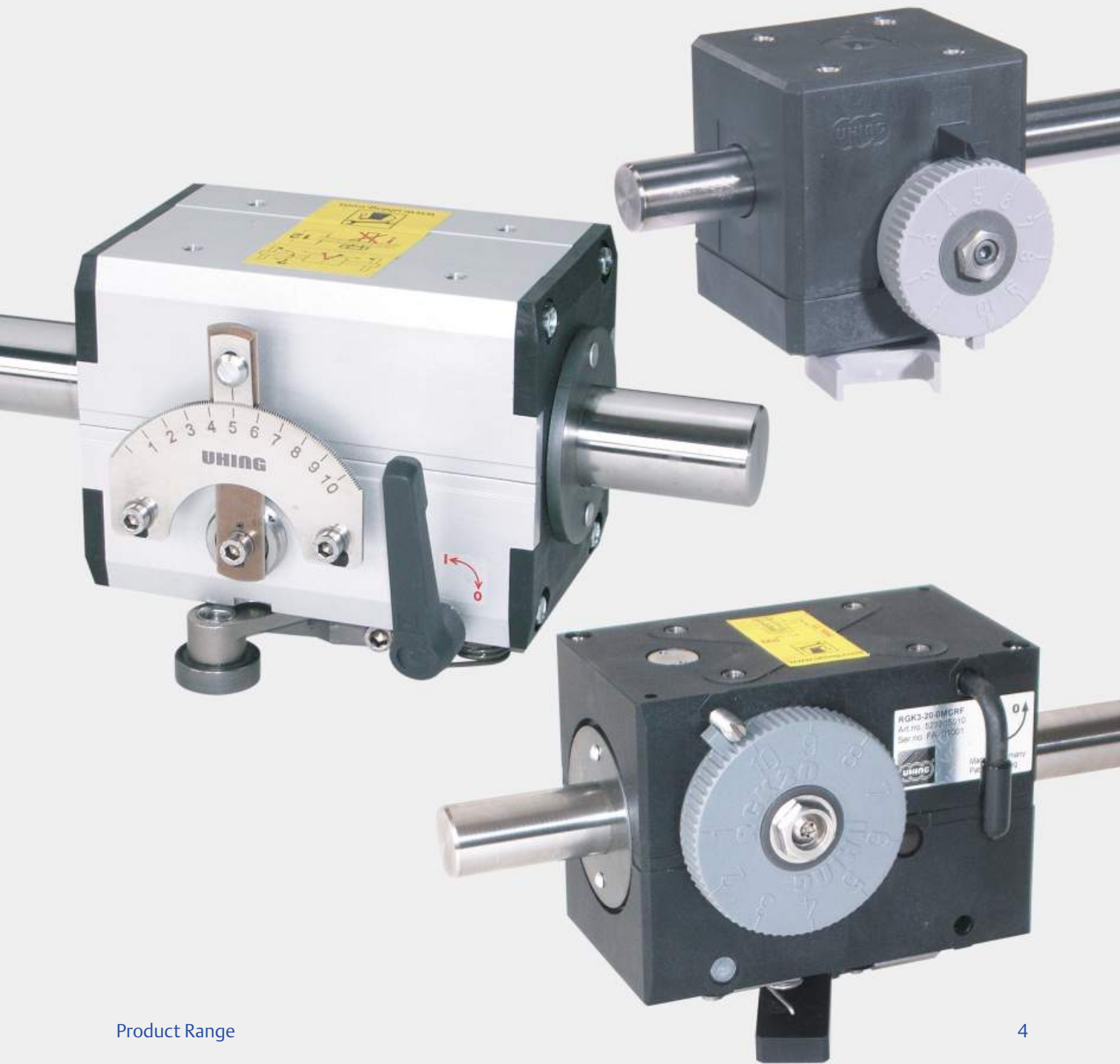


Engineering Page 18/19

Uhing



History Page 20/21



Rolling Ring Drives KI, RGK and RG

Features

These drives are mechanical friction drives which convert the constant rotation of a plain shaft in a single direction into two-way reciprocating motion.

They operate on the principle of pivotable ball bearing based Rolling Rings, the specially crowned running surfaces of which are pressed against a shaft. By addressing them to the shaft at an offset angle (pitch) they operate like nuts on a threaded bar, however, because of their ability to swivel, they have alternating left-hand and right-hand pitch (providing reciprocating motion). By varying the pitch angle, the speed of travel can be set at finely stepped increments (with different speeds in the two directions of travel if required) or can be set at zero (standstill).

Reversal is effected via a reversal mechanism, which is connected to the Rolling Rings and which makes contact with adjustable endstops.

Special features on request.

Application areas

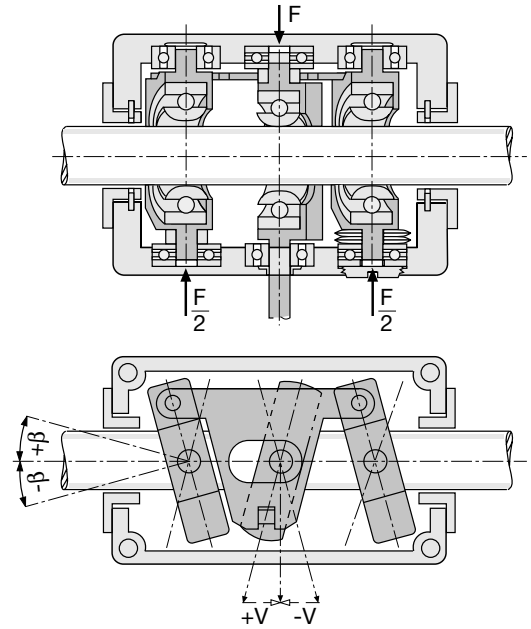
- Winding
- Special drives

Your benefit

- Automatic reciprocating motion with constant direction of shaft rotation
- Side thrust up to 3600 N
- Width of stroke up to 5m
- Speed up to 4.2m/sec.
- Suitable for horizontal and vertical application
- Variable linear output speed from constant shaft input speed

- Rapid or speeded down reversal
- High reversal position dynamics
- Can be disengaged on the shaft
- Good sealing possibilities (plain shaft)
- High efficiency
- Low operating costs
- High corrosion protection, on request

For detailed information: Catalogue RG





Linear Drive Nut RS

Features

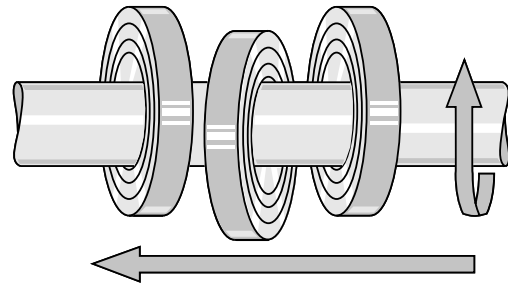
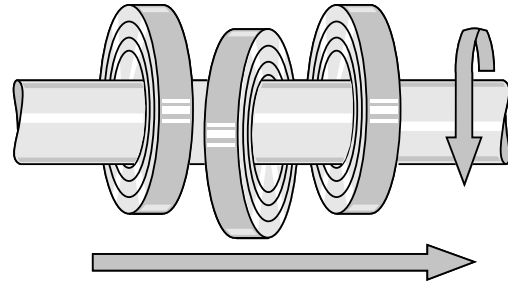
Uhing Linear Drive Nuts are non-positive drives which convert the rotation of a plain shaft into linear motion. In contrast to Rolling Ring Drives, the Rolling Rings are not arranged to swivel but are fitted at a fixed angle of pitch, the speed being varied by varying the speed of the shaft. The change of direction is achieved by reversing the direction of rotation of the shaft.

Backlash-free, low noise, rolling-friction giving high-efficiency, combined drive and carrier, release mechanism (option) enables unit to be manually positioned on the shaft, compact design, small space requirement, safe as it will slip when overloaded, thrust can be multiplied by ganging-up units, available with a variety of pitches, left- and right-hand pitch on the same shaft possible, good sealing possibilities e.g. for use in dusty, dirty or humid environments.

Wherever linear motion is required, the Uhing Linear Drive Nut is a modern alternative to hydraulics and pneumatics, chain drives and lead screws.

Your benefit

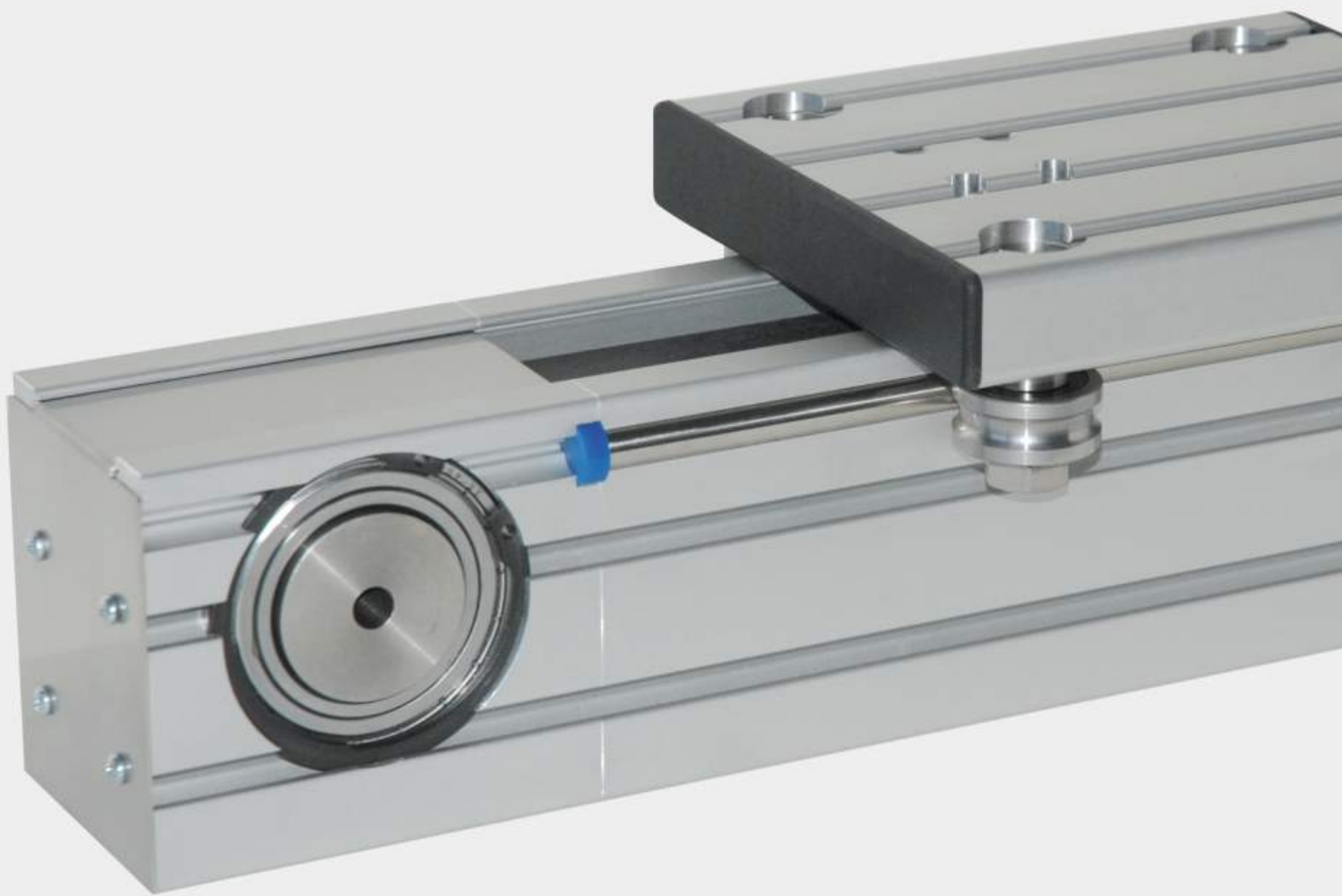
- Converts rotary motion into linear motion
- Backlash free
- Low noise
- Low maintenance
- Compact
- Good sealing possibilities (plain shaft)
- Drive can be disengaged on the shaft
- Low operating costs
- Comprehensive range of sizes
- Resistant against vibration
- High corrosion protection, on request



Application areas

- Co-ordinate measuring machines
- Inspection technology
- Materials handling
- Conveyor systems
- Engine controls
- Food industry
- Medical apparatus

For detailed information: Catalogue RS



Timing Belt Drive AZ

Features

The basis of the Uhing Z-Drive is a bending and torsion resistant rigid aluminium profile.

A number of T-slots in the carrier section offer variable extension possibilities and simplify assembly. Slide connection blocks can be easily inserted. The transmission of power from the drive belt to the load carrier is via belt fastener fitted to the carrier.

Uhing-Z-Drives are characterized by the use of high grade materials including corrosion resistant hardened guide rails and robust timing belts which retain their shape. They are precise, positionally exact, reach high acceleration rates and speeds and are built for long life.

Application area

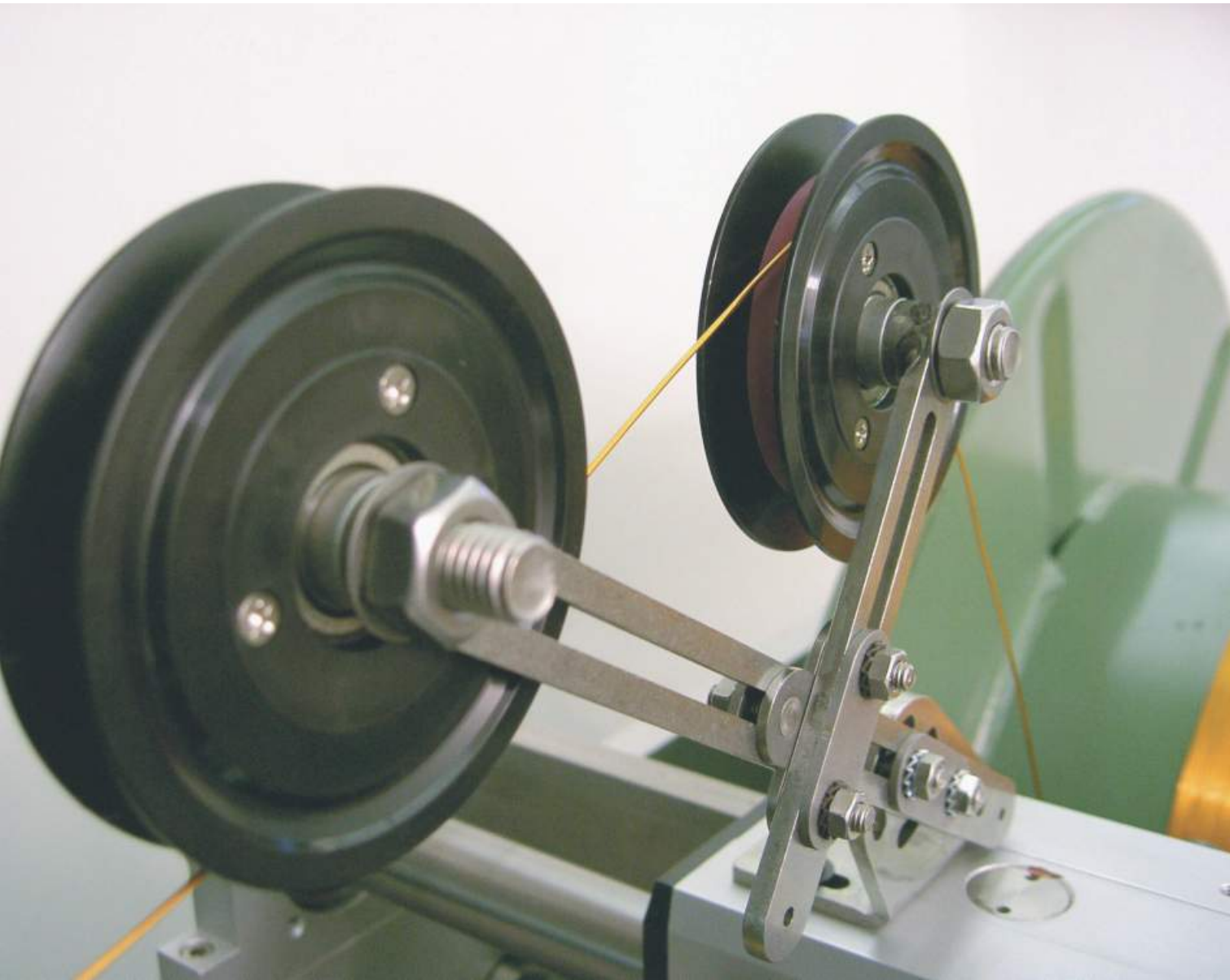
- Drive technologies

Your benefit

- Easy to fit
- Precise guiding
- High linear speeds and rates of acceleration
- Comprehensive range of types and accessoires

For detailed information: Catalogue AZ





Guide System GS

Features

The Uhing Guide System GS transfers the movement of the traverse to the guide roller and the material to be wound. It can be universally adapted to the winding tasks using additional modules.

Application area:

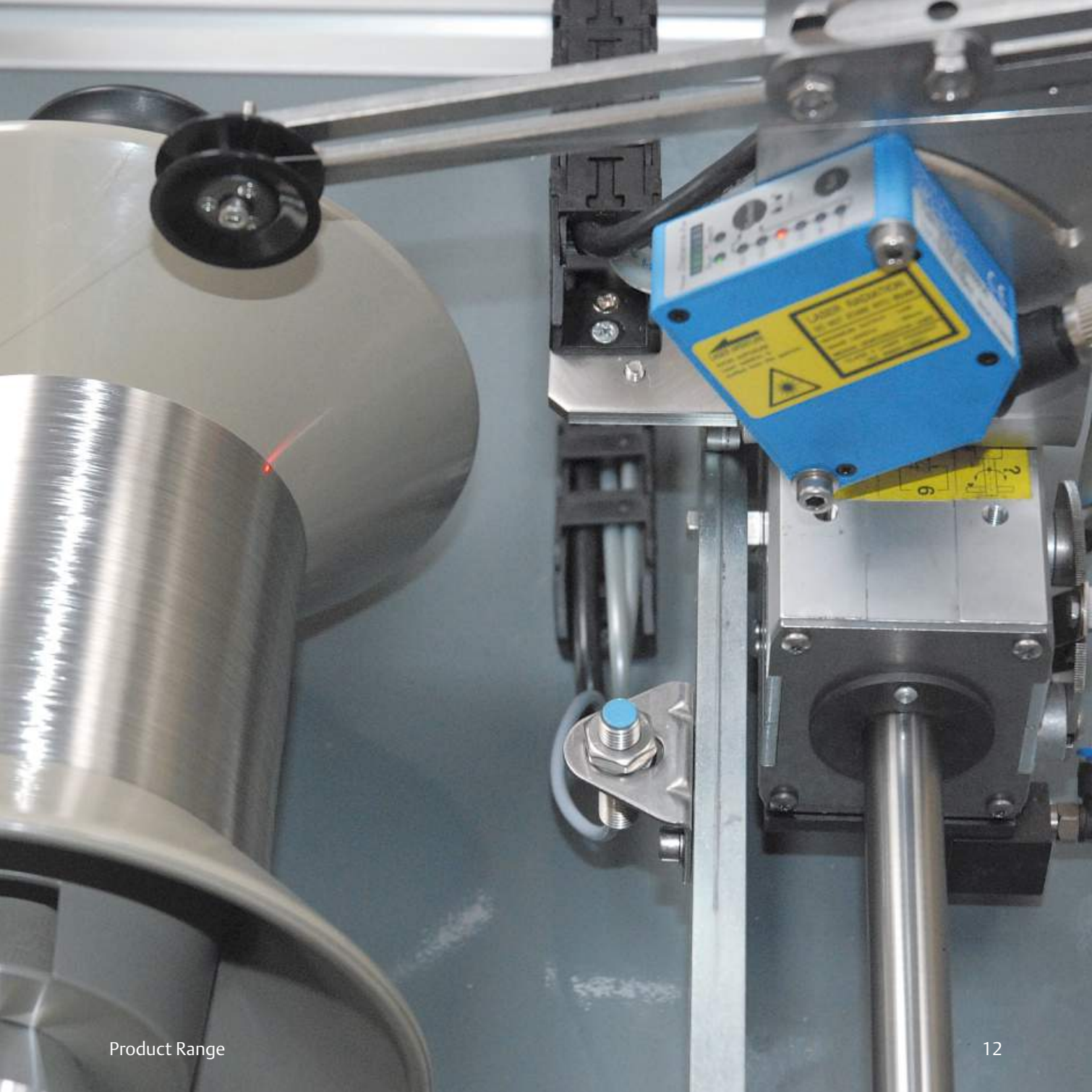
- Winding

Your benefit

- Modular design for easy adaption to the winding task
- Continuously adjustable
- High rigidity
- Adapter for assembly on Uhing Rolling Ring Drives KI, RGK15/20 and RG15, RG20, RG22, RG30
- Made entirely of stainless steel
- Versatile attachment
- Options for guide rollers
- Suited for all traversing systems

For detailed information: Catalogue GS





Non Contact Flange Detecting System FA II

Application

The flange detecting 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 flange detecting system was specially designed for application with pneumatically reversible rolling ring drives but can also be fitted on other traversing systems after testing.

Principle of function

The sensor detecting the flange is mounted on the traversing system. At a defined point, the current distance is captured and saved as reference distance for each single layer.

While the traversing system moves, the reference distance is continuously compared to the measured value. A reversal is triggered as soon as the permissible, adjustable height deviation is exceeded. Such a height deviation occurs when the flange or an accumulation of material on the spool is detected.

Areas of application

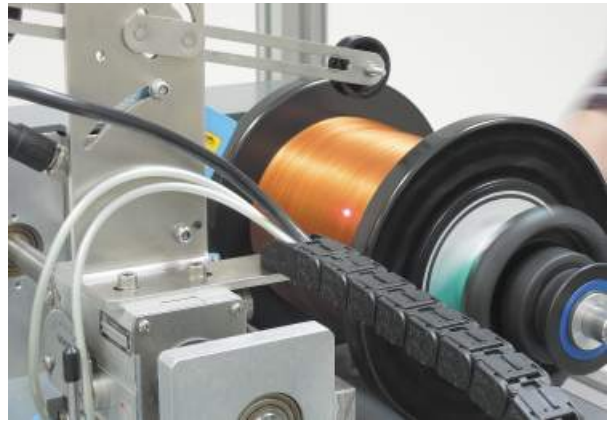
The system has been designed for laying round material with diameters of 0.1 to 2.0 mm on cylindrical and conical spools. Other dimensions are possible after consultation.

Your advantage

- No manual adjustment of reversal points
- Significant time savings when spools of different type and dimension are used

- Very easy operation
- No prior experience required
- Perfect winding patterns

For detailed information: Catalogue FAII, User Manual FAII and video at www.uhing.com



For different types of spools.



Clamping System U-Clip

Features

U-Clip is using a clamping ring which is off-set to the shaft and therefore clamping forces are provided. Like a bushing the U-Clip is pushed forward against the to be fixed component and it automatically locks into position. To release, just pull the clamping ring towards the user.

Application areas

- Positioning on rotating and non-rotating shafts, e.g. wind-up and pay-off
- Tube to shaft (or tube) connection, e.g. tripods
- Fixing components on shafts, e.g. dumb-bell weights
- Quick adjustment for material guiding, e.g. packaging machines

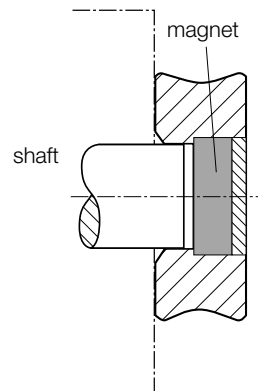
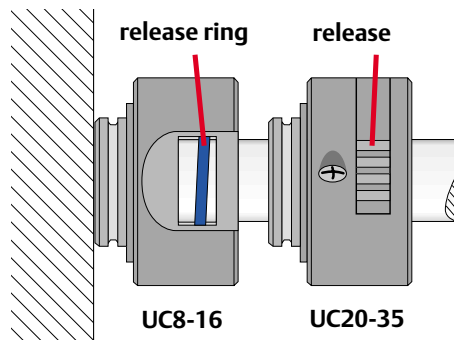
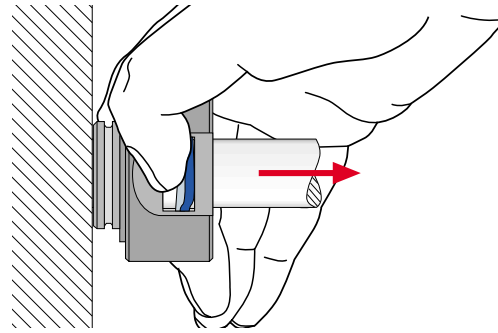
Your benefit

- Usage on hardened and soft surfaces
- Self locking
- One hand operation
- Symmetrical design
- High self locking force compared to ball systems with inclined level
- Corrosion protected
- Resistent against vibration

Magnet Clip

The Magnetic Clip is specially suited for applications requiring little holding forces and easy cleaning. The holding force is depending on the dimension s (length of the protruding shaft journal, $s=0$ max. tensioning force).

For detailed information: Catalogue UE





Fast Action Clamping System Uhing-easylock®

Features

The Uhing-easylock® System is characterized by ease of handling and its clamping/tensioning function on smooth shafts.

The result is rapid roll changing combined with high but sensitively applied retaining pressures for spools and rolls of flexible width and with varying core diameters in a modular system suitable for a variety of applications. Its main component parts are a fixed pintle and a clamping section comprising a tensioning unit and an interchangeable pintle point.

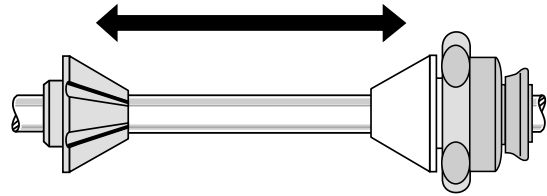
Its function relates to a clamping ring which is located in the tensioning unit and which is brought into pressure contact with the shaft. The greater the tensioning force, the greater is the clamping effect of the ring.

The spool or roll is retained and fixed by pushing the tensioning unit up against it and turning the tensioning wheel until the required clamping force has been achieved. To release, the clamping force is cancelled via the tensioning wheel and the clamping pintle is pulled off the shaft.

Also suitable for driven shafts.

Your benefit

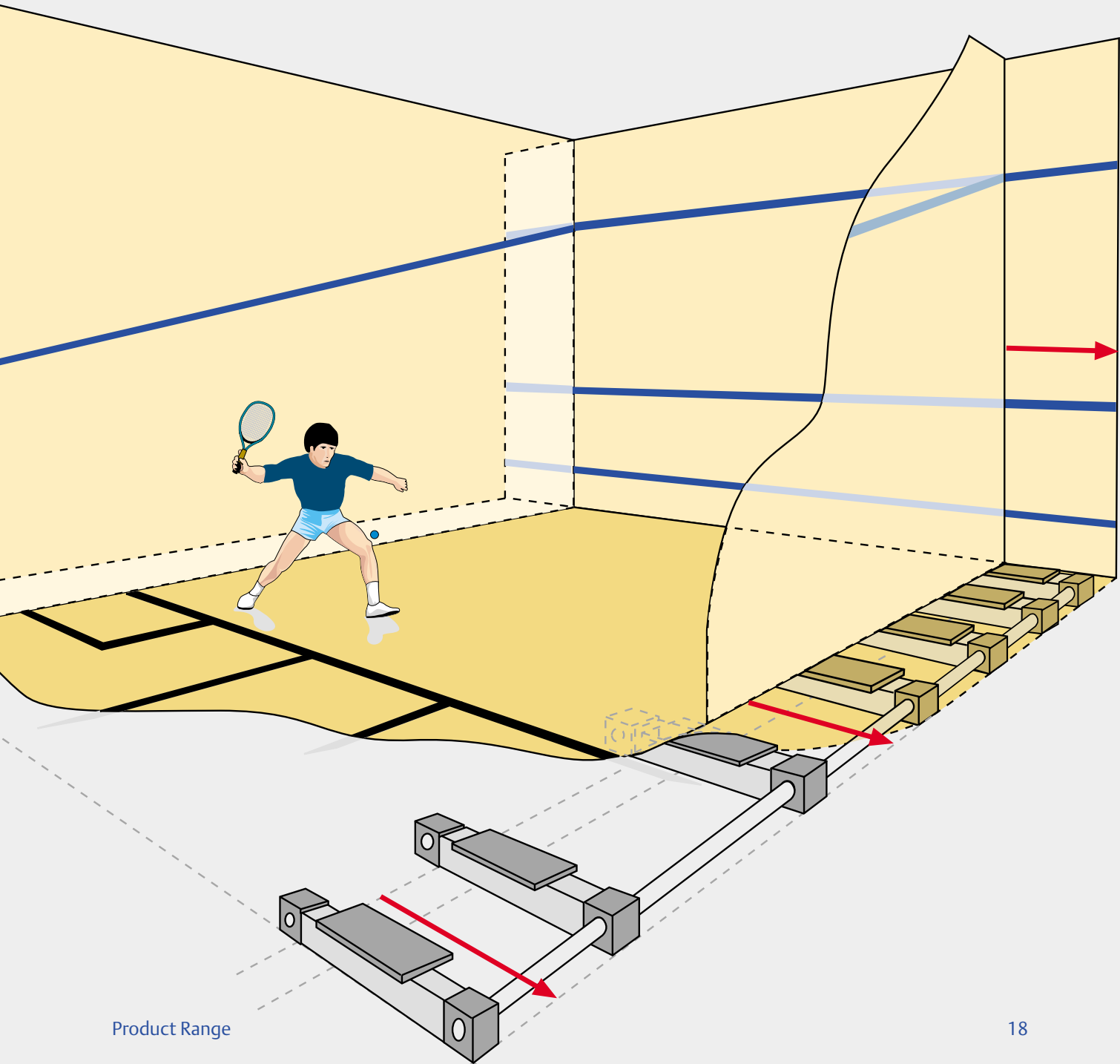
- Shortest possible roll change-over times
- High but sensitively controlled clamping pressure
- Single handed operation
- Extremely flexible in operation
- Plain shaft
- Maintenance free
- Safe in case of emergency stop
- Resistant against vibration



Application areas

- Winding
- Spools / supply rolls
- Packing machines
- Static applications

For detailed information: Catalogue EL



Engineering

The Joachim Uhing GmbH & Co. KG has a long lasting experience in development and handling of exacting engineering projects.

Some 10% of our employees are working in the R&D departments. To handle complex tasks, they have access to state-of-the-art 3D-CAD systems, a company-wide computer network and specially developed calculation programs.

We have particularly extensive experience in the sectors of winding technology and periphery, and general drive technology. Apart from design, development and authoring of manufacturing documentation we also offer the supply of partial or complete supply of special-purpose plants.

UHING Analysis

We determine the status quo on site, discuss possibilities in co-operation with all persons concerned, and define the objectives of the plant in question.

UHING Conception

We turn the information gathered during analysis, paired with customer suggestions and in line with existing technical possibilities and qualifications, into a project concept, present it and synchronize with the customer.

UHING Development

Using cutting edge CAD systems we design machine components, subsystems and special-purpose devices down to the component level and build prototypes if required.

UHING Production

Production of products as single element or in an over-all package. Depending on the requirements, we also employ 2nd tier manufacturers. The next step are test runs.

UHING Installation

Uhing full-service quality. Uhing employees install the special-purpose machines, perform the test runs and accompany their implementation until production.

UHING Service

Regular maintenance by an expert and genuine spare parts ensure trouble free system operation. Upon conclusion of a maintenance contract, we define the maintenance parameters for your machine (time, scope).



History

The beginnings of the company date back to 1943 when electrical engineer Joachim Uhing founded an engineering bureau. In this bureau, 35-mm cameras, wall clocks and a forerunner of today's 4 axes for machining clamped items from various sides were developed.



Joachim Uhing had close connections to the knitting machine manufacturers, and in 1952, their enquiries for means to automate the traversing movements of the knitting carriage brought about the most important product developed by the house of Uhing: the rolling ring drive.

Being able to mechanically convert the constant rotary movement of a smooth shaft into permanent traversing movements, the rolling ring drive has made the name of Uhing a syn-onym for this type of products all over the world.

Based on the worldwide patented rolling ring drive, the linear drive nut, a non-positive helical gear without internal switch-over mechanism, was developed in 1983. Featuring zero backlash, the linear drive nut soon became a coveted drive element, in particular for measuring machine manufacturers.

The Uhing-easylock® fast-action clamping system, introduced in 1992, is a comprehensive series of non-tool clamping and fastening systems for plain shafts supplemented by the U-Clip clamping element in late 2002.

Although being a renowned manufacturer of purely mechanical products, Uhing started producing electronic peripherals for its rolling ring drives in 1998.

Continuous innovation, cutting-edge production facilities and high-performance CAD and IT equipment ensure Uhing can expand the technological lead while at the same time meeting the customer's desire for economically priced products.





Worldwide

The addresses of our agencies are available in the internet: www.uhing.com



National Head Office

7 Hargreaves Street
Belmont, WA 6109
Ph: (08) 9475 5000
linear@statewidebearings.com.au

902 Beaudesert Road
Coopers Plains QLD 4108
Ph: (07) 3717 4452
linearqld@statewidebearings.com.au

9-11 Kilkenny Court,
Dandenong South, Vic 3175
Ph: (03) 9755 6044
linearvic@statewidebearings.com.au

Unit 4, 8 Cooper Street
Smithfield, NSW 2164
Ph: (02) 9616 0066
linearnsw@statewidebearings.com.au

13 Streiff Road
Wingfield, SA 5013
Ph: (08) 8260 6299
linearsa@statewidebearings.com.au



Joachim Uhing GmbH & Co. KG

Kieler Straße 23
24247 Mielkendorf, Germany
Telefon +49 (0) 4347 - 906-0
Telefax +49 (0) 4347 - 906-40
e-mail: sales@uhing.com
Internet: www.uhing.com