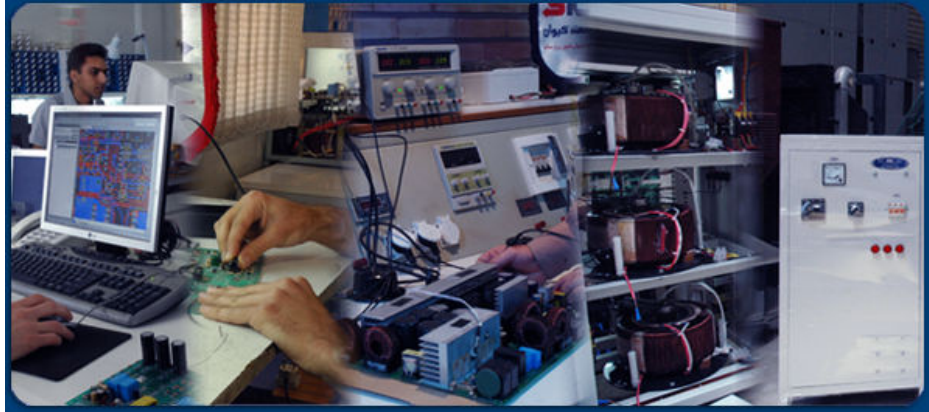
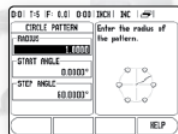


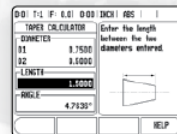
# SYSTEM CONTROL DIGITAL READ OUT (DRO)



**Milling Applications**  
 Bolt hole pattern calculations for full and partial circles with on screen graphics.



**Turning Applications**  
 Menu driven taper calculator provides machine to zero ease of use.



**Grinding Applications**  
 Increase the speed and accuracy of grinding and general purpose applications.



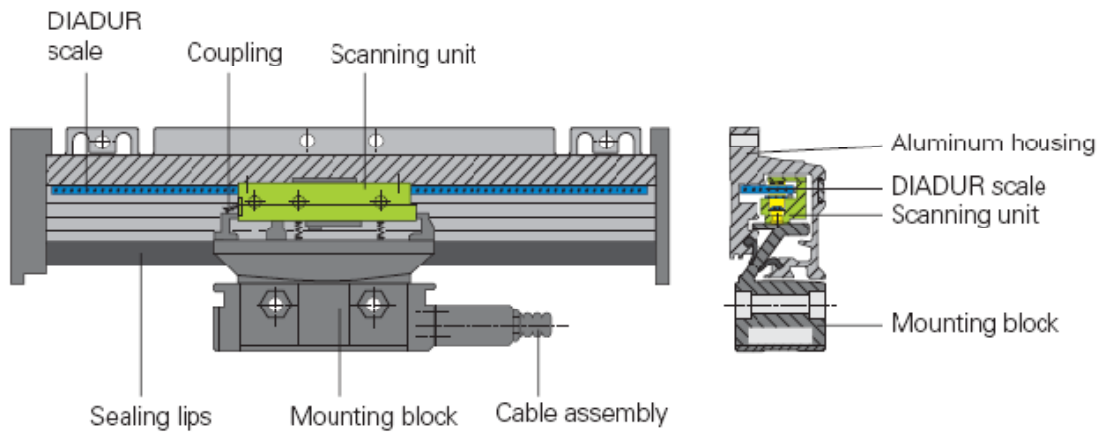
## HEIDENHAIN Digital Readouts

– for Manually Operated Machine Tools



HEIDENHAIN digital readouts have universal application: In addition to standard tasks on milling, drilling and boring machines and lathes, they also offer ideal solutions for many applications on machine tools, measuring and testing equipment, and special machines—in fact all machines where axis slides are traversed manually.







## Digital Readout Systems



## Company Profile

### NEWALL

Newall was founded in Peterborough, England in 1968 and is now a division of CST (Custom Sensors & Technologies), a business unit of Schneider Electric. During this time, Newall has dedicated itself to providing the automation, machine tool and other machinery and production industries with leading edge technologies that increase productivity and machine tool efficiency. Newall is BS EN ISO 9001:2000 accredited.

Over the years Newall has grown to be a well respected leader in Digital Readout (DRO) and Linear Encoder technology. The Linear Encoder range is available with a variety of outputs some of which are proprietary for use with the Newall range of DROs. Other ranges available include Absolute, Incremental or Distance-Coded versions, all of which are IP67 (NEMA 6) rated, withstanding dust, dirt, oil and other harsh environmental conditions. Refer to the Linear Encoder brochure for more information on this range.

### Digital Readout Systems

Newall's world renowned range of Digital Readout Systems (DROs) are specifically designed and dedicated to increasing machine productivity. Together with the Spherosyn™, Microsyn™ and DSG Linear Encoder and Scales, they have developed to become some of the most advanced and reliable market-leading DRO systems available today. Whether you are looking for single or multi-axis, lathe or mill specific, constant surface speed or advanced options, Newall will have the DRO package which is right for you and your organisation.

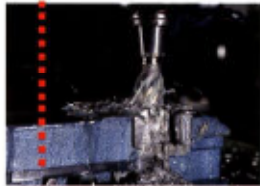
### Research, development & service

Pushing the boundaries, Newall's research and development team continue to enhance product design and specification. This, together with a continuous program of introducing new technologies to its range, aims to meet the demands of ever increasing productivity and application evolution.

Newall has distribution and service outlets in over 63 countries, fully supported by trained sales and service personnel and subsidiary offices.



# SONY



**Digital  
Readout Systems**

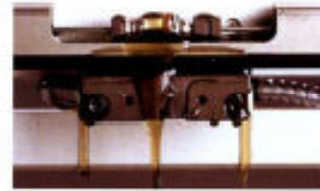
**Reliable measuring systems =  
higher quality + more profit**



Our concept is simple: The utmost reliability and effectiveness for the user combined with easy operating, results in increased quality, higher productivity and a decrease in defects.

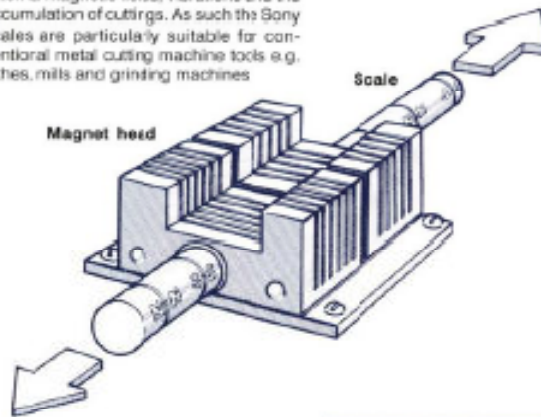
**The advantages of magnetics scales:**

- High accuracy level
- Resistant against dirt and oil
- Compact design
- Easy installation



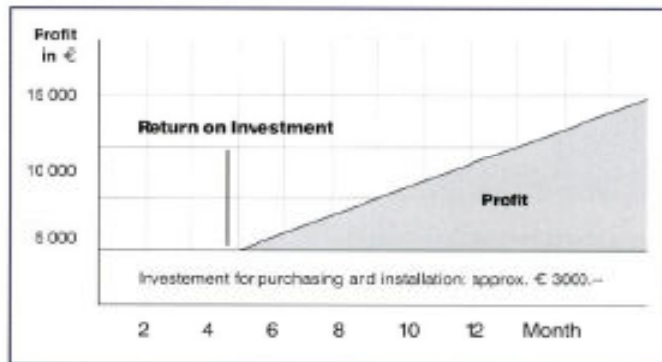
**Sony magnetic technology**

Sony magnetic scales fulfill the highest expectations for precision and reliability. The Magnescale® principle is resistant against external magnetic fields, vibrations and the accumulation of cuttings. As such the Sony scales are particularly suitable for conventional metal cutting machine tools e.g. lathes, mills and grinding machines



**The range of applications for machine tools is very broad:**

- Lathes
- Milling machines
- Grinding machines
- Drilling machines
- Horizontal and vertical borers
- Special machine applications



Sony displays and scales pay back within a short period. The high manufacturing quality ensures a long life span and easy use.



PRECISION MEASURING EQUIPMENT  
GENERAL CATALOG

**Digital Readout**

## Reliable measuring systems – higher quality and increased profit

Sony magnetic scales fulfil the highest expectations for precision and reliability. The Magnescale™ principle ensures the system's resistance against typical workshop conditions, external magnetic fields and vibration, resulting in the Sony scales being ideal for conventional metal cutting machine tools like lathes, mills and grinding machines ...

More than 40 years experience demonstrates that the high manufacturing quality of Sony scales and displays increases the quality of your production output and the productivity of your machine tools. Thereby a fast return on investment is guaranteed so maximising your profit!



**SHOKA**