

### Maxi Draw wire mechanics



- with the shaft encoders of Series 58**  
**Your benefit:**
- Direct length measurement
  - Long measuring lengths up to 40 m
  - High repeatability
  - Easy assembly
  - No additional guidance system
  - Wire guidance possible using guide pulleys
  - Distance and angle measurement are standard tasks in machine-building and

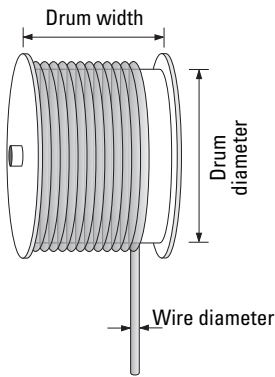
engineering industries. Kübler wire-actuated transducers are an economical and easy to handle solution. Wire-actuated transducers transform linear movements into rotary motion by winding/unwinding a wire. The rotary motion is transmitted to an incremental or absolute encoder. Remote display units or controls can be used to display/process the measured values. Please ask about the Kübler range of displays and counters!

#### Mechanical characteristics of the draw-wire encoder:

Measuring range:	13 000, 27 000 or 40 000 mm
Required force:	min. 25 N, on wire
Travel speed:	max. 4 m/s
Working temperature:	-20 ... + 85 °C
Material:	Housing: AL, wire: steel, wire output: plastic
Resolution:	depends on the used encoder: drum diameter = 400 mm. By an encoder with 4096 pulses per resolution: $i = 400/4000 = 0.1 \text{ mm}$
Wire diameter:	1.0 mm
Weight:	at 40000 mm length approx. 9 kg

**Note:**  
 If the maximum extension length is exceeded, the wire and transducer will be damaged.

#### Operating principle:

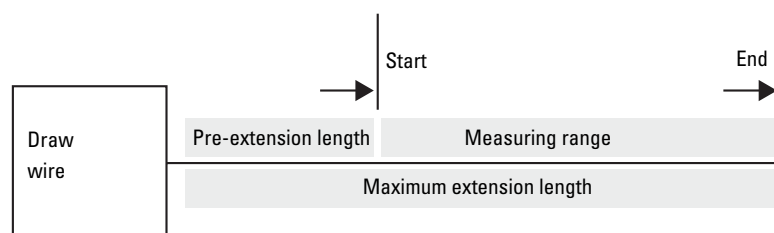


**Construction:**  
 At the core of a wire draw encoder is a drum mounted on bearings, onto which a wire is wound. The winding takes place via a spring-loaded device.

**Accuracy/Measuring range:**  
 The mechanical construction ensures that the wire is evenly wound onto the drum. The dimensions of the drum (diameter and width) and the diameter of the wire determine the maximum length of the wire.

**Ordering information:**  
 Please choose the measuring range suitable for your application, taking into consideration the possible wire variants. Please supply the pre-extension length for your application. When adding the two values 'measuring range' and 'pre-extension length', the maximum extension length must not be exceeded.

#### Definition of the terms 'measuring range' and 'pre-extension length'



## Displacement measuring device



- Complete measuring system as kit or as single parts
- Holding device for encoder for perfect pressure
- With rack and pinion
- 1 turn around of the pinion is exact 50 mm easy to use

### Description and application:

The holding device for the encoder (8.0010.7000.0004) is a movable support for encoders, to the shaft of which, for instance, a measuring wheel or pinion can be attached. Due to the fact that it is movable, optimum contact pressure is ensured and overload on the bearings of the encoder prevented. When used in conjunction with a pulse generating unit, the rack and pinion combination (8.0010.7000.0001 and ...0002)

serves as a simple length and displacement measuring system. One rotation of the pinion on the rack corresponds to a displacement of 50 mm. Moreover the racks are designed in such a way that they can be butt-mounted without pitch error. The absolute accuracy is 0.5 mm per meter. The resolution / repetition accuracy is 0.1 mm. Holding device, rack and pinion are available as a set for the purpose of displacement measurement (8.0010.7000.0005).

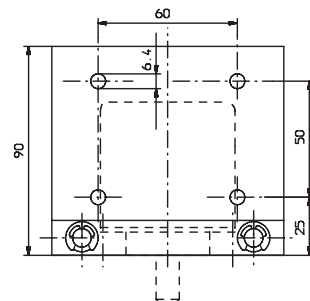
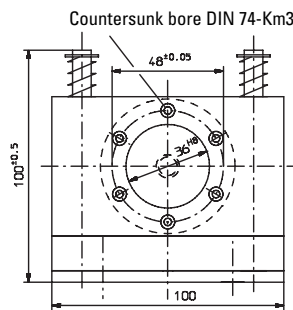
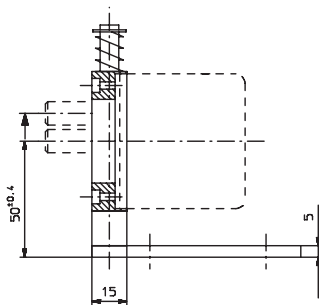
The installation aid (8.0010.7000.0003) is required to maintain exact pitch when buttmounting racks.

Typical areas of application are:

- Wood working industry
- Textile industry
- Handling and automation technology
- Mechanical engineering / Special machines

### Holding device for encoders:

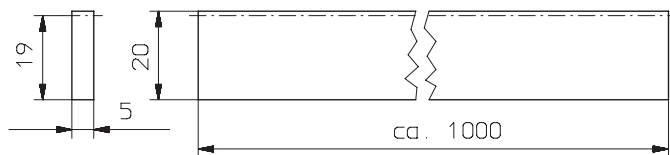
Material:  
Guide rods: stainless steel  
Bracket: Al



Ord.-No.  
8.0010.7000.0004

### Rack

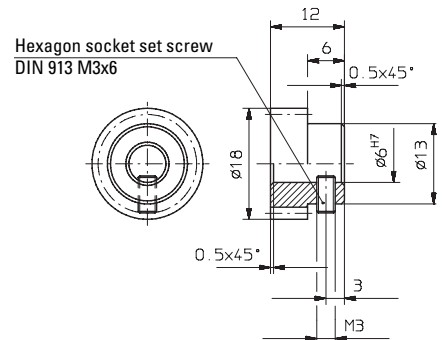
Material: St 37  
Surface: uncoated  
Module pitch: approx. 1



Ord.-No.  
8.0010.7000.0001

### Pinion

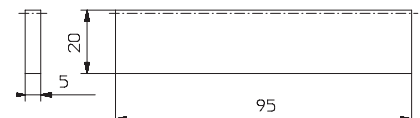
Material: free-cutting steel  
Surface: burnished  
Module pitch: approx. 1  
No of teeth: 16



Ord.-No.  
With bore diameter  $\varnothing$  6 mm  
8.0010.7000.0002  
With bore diameter  $\varnothing$  10 mm  
8.0010.7000.0006

### Installation aid

Material: St 37  
Surface: uncoated  
Module pitch: approx. 1



Ord.-No.  
8.0010.7000.0003