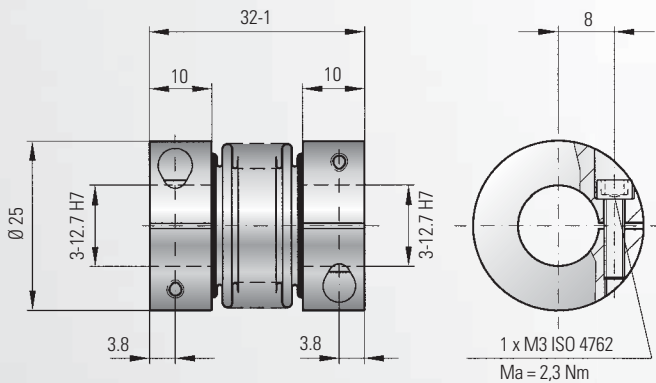




# MODEL BKL 003

## TECHNICAL SPECIFICATIONS



### Ordering example

BKL/003 / 3 / 5 / XX

Model  
Series/Nm  
Bore Ø D1 H7  
Bore Ø D2 H7  
Non standard



## ECOFLEX®

### Properties:

- low cost
- backlash-free and torsionally rigid
- compensates for 3-axis of misalignment

### Material:

Bellows are made of highly flexible high-grade stainless steel, hubs of aluminium.

### Design:

With a single radial clamping screw per hub ISO 4762

Available design split hub (option H): Both clamping hubs completely removable

### Temperature range:

-40 to +200° C (-3.6 to 392 F)

### Torque:

3 Nm

### Speed:

Up to 10,000 rpm, in excess of 10,000 rpm with balanced version.

### Compensation of misalignment:

Lateral misalignment up to 0,2 mm  
Axial misalignment up to 1 mm  
Angular misalignment up to 2° degree

**ECOFLEX®:** The low cost alternative for shaft encoders, potentiometer, stepper motors and small servo drives.

### Possible bore diameter

3	4	4.76	5	6	6.35	7	8	9	9.53	10	11	12	12.7
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Bore size up to 16 mm available with special hub.

## Assembly instructions

### Assembly preparation:

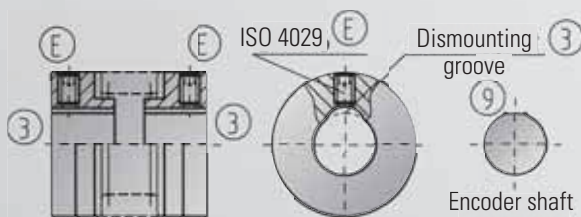
During assembly and disassembly the bellows can only be stretched or deformed by 1.5 times the stated catalog values. The shafts and couplings bores must be clean and free of burrs, nicks, and deformations. Double check the shaft and bore dimensions and tolerances to ensure a proper fit. R+W couplings are bored to an ISO H7 tolerance. The clearance between hub and the bore should be no more than 0.01

to 0.05 mm to ensure a proper fit and clamping strength.

A slight film of oil on the shaft will aid in the assembly and disassembly of the coupling without compromising the strength of the coupling.

**Important!** "Oil and grease with molybdenum disulfide or other high pressure additives, as well as sliding greases, should not be used."

## Set Screw mounting instructions models MK 1 and MK 4



### Assembly:

Slide the coupling onto the shaft of the drive element and position it in place. Tighten the set screw (E) using a torque wrench to the proper torque value listed in the table above. Slide the shaft of the driven element (an encoder for example) into the coupling bore to its proper position. Tighten the second set screw (E) using a torque wrench to the proper torque value.

Series 1 - 10: 1 set screw per hub

Series 15 - 100: 2 set screws per hub set 120 degree apart

### Disassembly:

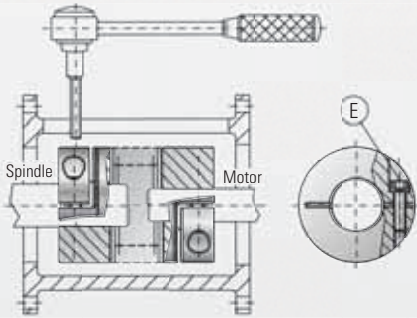
Disassembly is very easy with R+W coupling. Simply loosen the set screw (E) and slide the coupling off the shaft. R+W has incorporated a disassembly groove (3) into the coupling design so that clearance is provided for the set screw "burr" (9).

A mounting groove or flattening of the shaft is not required



# ASSEMBLY INSTRUCTIONS

## SINGLE SCREW CLAMPING HUB DESIGN, MODEL MK 2 / MK 5 / BKL 003



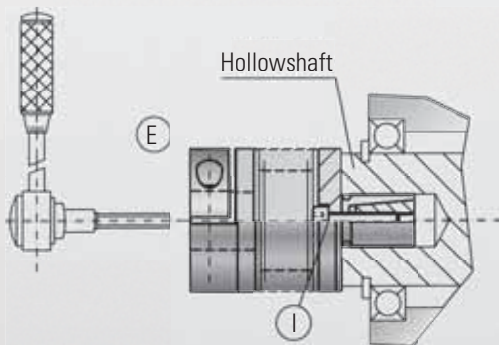
### Assembly:

Slide the coupling onto the drive element (a motor for example) to the proper axial position. Using a torque wrench tighten the mounting screw (E) to the proper tightening torque listed in the table on the previous page. Slide the driven element (a spindle or encoder for example) into the coupling to its proper axial position and tighten the mounting screw by doing the same as before.

### Disassembly:

Simply loosen the mounting screws (E) and remove the coupling.

## Expanding shaft design, Model MK 3 / MK 6



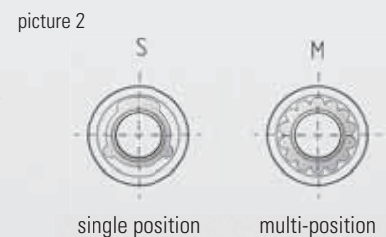
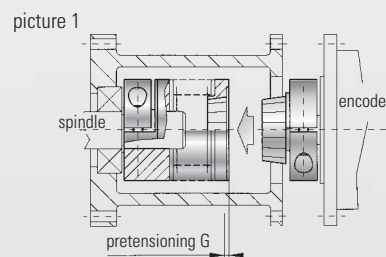
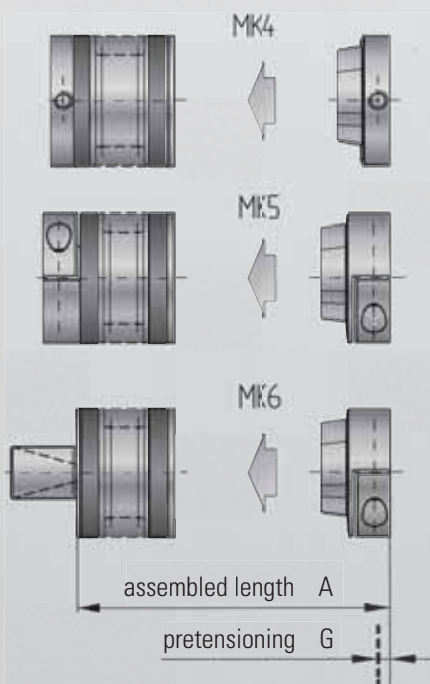
### Assembly:

Completely insert the expanding shaft of the coupling into the hollow bore until it fits. Using a torque wrench tighten the mounting screw (I) to the proper torque value listed in the table on the previous page. Insert the shaft into the other end of the coupling to its proper position. Tighten mounting screw (a) to the proper torque value with a torque wrench.

### Disassembly:

Simply loosen the mounting screws (E) and (I) and remove the coupling. The expanding shaft connection can be loosened by partially unscrewing the mounting screw (I) and applying axial pressure to it.

## Pretensioning of the press-fit coupling design, Model MK 4 / MK 5 / MK 6



### Assembly:

**Important!** It is extremely important that the overall length of the assembled coupling is noted and taken into consideration of the assembly process. Models MK 4, MK 5 and MK 6 are blind mate press-fit couplings. They will provide absolute backlash free operation only if they are properly pretensioned. Mount the female segment of the coupling onto the driven element. Next loosely mount the male segment onto the drive element so that it slides with friction on the shaft. Mount the drive element onto the coupling flange (picture 1). Remove the drive element from the flange and note the position of the male coupling segment. Slide the male coupling segment towards into the female segment till distance (G) (Pre-tension distance) and tighten the mounting screws. Proper torque values are given in the table on the previous page. Two versions of the blind mate coupling are available, the single position and the multi position (picture 2).

**Experience and  
Know-how  
for your special  
requirements.**

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## THE R+W-PRODUCT RANGE



### **TORQUE LIMITERS** **Series SK/ST**

From 0.1 – 160,000 Nm, Bore diameters 3 – 290 mm  
Available as a single position, multi-position, load holding, or full disengagement version  
Single piece or press-fit design



### **BELLOWS COUPLINGS** **Series BK**

From 2 – 10,000 Nm  
Bore diameters 10 – 180 mm  
Single piece or press-fit design



### **LINE SHAFTS** **Series ZA/ZAE**

From 10 – 4,000 Nm  
Bore diameters 10 – 100 mm  
Available up to 6 mtr. length



### **MINIATURE BELLOWS COUPLINGS** **Series MK**

From 0.05 – 10 Nm  
Bore diameters 1 – 28 mm  
Single piece or press-fit design



### **SERVOMAX<sup>®</sup>** **ELASTOMER COUPLINGS** **Series EK**

From 2 – 2,000 Nm, Shaft diameters 3 – 80 mm  
backlash-free, press-fit design



### **ECOLIGHT<sup>®</sup>** **ELASTOMER COUPLINGS** **Series TX 1**

From 2 – 810 Nm  
Shaft diameters 3 – 45 mm



### **LINEAR COUPLINGS** **Series LK**

From 70 – 2,000 N  
Thread M5 – M16



### **POLYAMID COUPLINGS** **MICROFLEX** **Series FK 1**

Rated torque 1 Ncm  
Bore diameters 1 – 1.5 mm