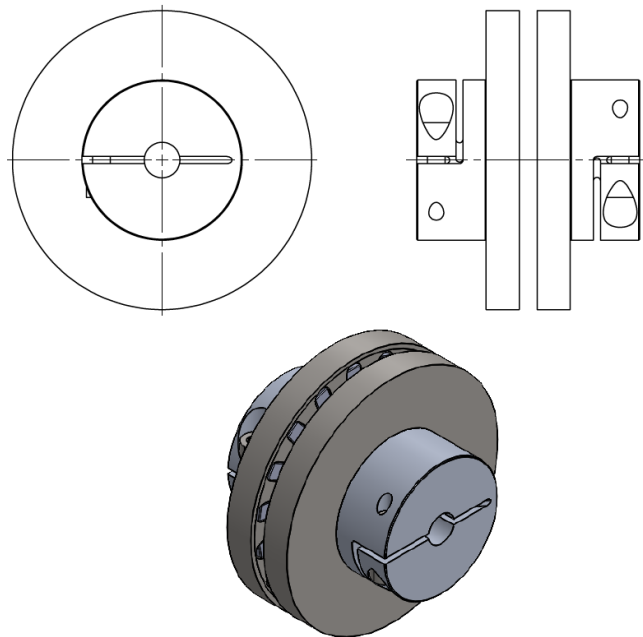


## Coupling Series AMK



### General Information

The installation and operation instructions are an essential factor of the KBK magnetic couplings. It indicates tips for proper assembly, operation and maintenance. Please read these instructions carefully and follow the directions. Non-observance may result in failure of the KBK magnetic coupling.

### Safety Instructions



**ATTENTION!**

- Installation may be performed by trained and specialized staff only.
- Rotating couplings are hazard areas. The user/operator has to ensure appropriate protective measures. Do not reach into the operation area of the coupling if it is still in operation. Secure the machine against unintentional power-up during assembly work.

### Manufacturer's Declaration

In accordance with directive 2006/42/EC annex IIB, shaft couplings are no machines as per the machinery directive, but components for installations in machines. Operation is not permitted unless the directives according to the machinery directives are complied with upon integration in the final product.

## Magnetic disc coupling with clamping hub: AMK

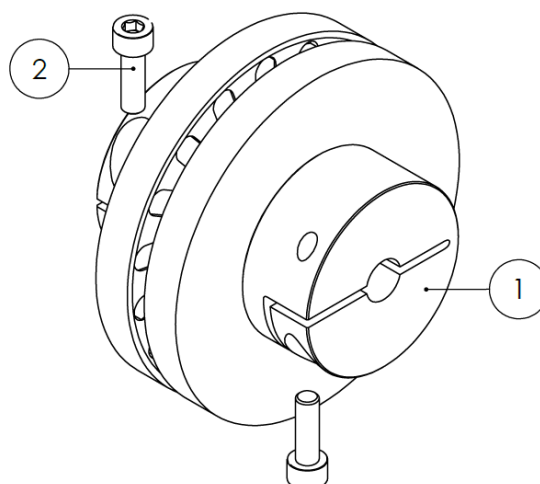


### Function

Magnetic couplings transmit torque by means of magnetic forces in a contactless and constant manner. Due to the two coupling halves, it is possible to compensate radial misalignment. If the torque is exceeded, the magnetic field lines to the opposite poles break off and the flange rotors can slip. When the overload torque is undershot, the magnetic field lines automatically cause their reset. This does not have to be done manually. The overload torque or the transmittable torque can be adjusted via the intermediate distance / air gap of the magnets.

**Permanent magnet couplings** consist of two rotors, which are fitted with permanent magnets. They achieve a relatively high torque transmission. In the event of an overload, there will be a slight jerking due to the restoring forces of the magnetic field lines.

### Components





parts	number of pieces	naming
1	2	magnetic disc with clamping hub
2	see catalogue	screw DIN EN ISO 4762

## Shaft- hub connections

KBK magnetic couplings may only be used in accordance with the technical data stated in the catalog. A subsequent processing of the coupling is not permitted.

## Preparation for assembly

 <b>Information!</b>	Contaminated or used shaft-hub-connections must be disassembled and cleaned prior to installation. Then apply a thin layer of a low viscosity oil (e.g. Castrol 4 in 1 or Klüber Quietsch Ex).
 <b>ATTENTION!</b>	Any oils and fats including molybdenum disulfide or any other high-pressure additives as well as lubricating pastes may not be used.

The shafts and bores of the hubs to be connected must be free of dirt and burrs. Check the shaft connection dimensions (also dimensions relating to key) and check the tolerances. KBK magnetic couplings have an H7 fit. This fit clearance and oiling of the shaft pins facilitates assembly and disassembly. The recommended fit clearance is 0.02mm - 0.05mm.

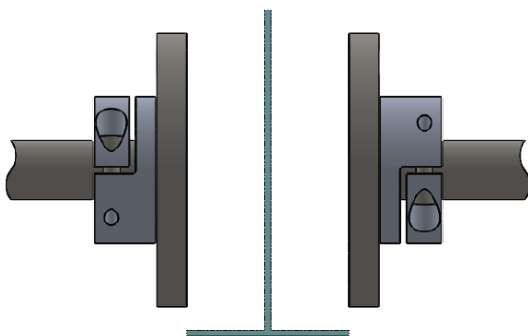
## Assembly and adjustment of the overload torque

- Slide the clamping hubs of the magnetic disc onto the shafts to be connected and fasten them with the clamping screw (G) provided. These must be tightened using a torque wrench. Please refer to the table regarding the tightening torque (T<sub>A</sub>).
- The overload torque is adjusted by the intermediate distance / air gap between the opposing magnets in the axial direction.

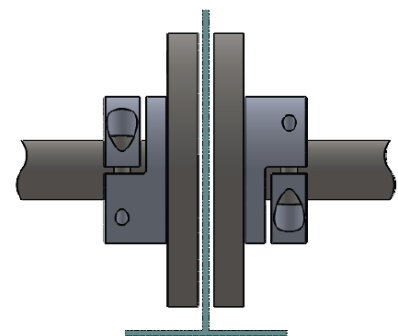
Move both rotors axially to each other to set the requested release torque.

With an air gap of 5mm between the magnets, the torque specified in the catalogue is transmitted.

As the distance increases (> 5mm), the torque transmission decreases. With a smaller gap (< 5mm), the torque transmission is increased.



Anziehen der Schrauben auf Wellenabsatz /  
*tightening the screws on the shaft shoulder*





Axiale Ausrichtung der Magnetflanche /  
*axial alignment of the magnetic flanges*

Tabel 1 - Torque

AMK -	2	10	15	25
Thread (G)	M5	M5	M6	M6
T <sub>A</sub> (Nm)	8	8	15	15

### **Disassembly**

 <b>Danger!</b>	Loosened or falling drive components can cause personal injury or machine damages. Secure the drive components prior to disassembly.
---	--

 <b>Attention!</b>	Non-compliance with these instructions as well as disregarded operating conditions dimensioning the shaft-hub-connection can influence the function of the coupling.
--	--

The KBK magnetic coupling is disassembled in reverse order to assembly.

### **Maintenance**

KBK magnetic couplings are maintenance-free. A visual inspection of the KBK magnetic coupling should be carried out at the same time as the regular inspection intervals. When used as intended, KBK magnetic couplings are fatigue resistant.

### **Transportation**

KBK magnetic couplings are supplied ready for installation. After the incoming goods inspection, the magnetic coupling should be stored again in its original packaging and made available for assembly later. The installation and operating instructions should always be available at the place of installation.

### **Disposal**

Defective shaft-hub-connections must be cleaned and disposed.