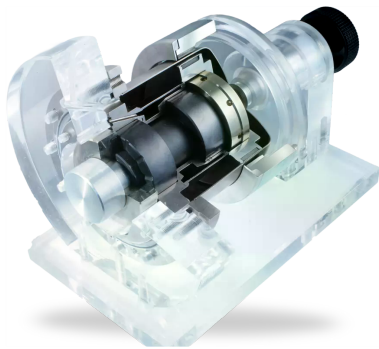


RELY ON EXCELLENCE

## MAK685

### Magnetic Couplings | Couplings



#### Features

Magnetic couplings (MAK) are a hermetic sealing solution for pumps and agitators. Dangerous or precious media remain isolated in the closed system circuit.

#### Functional description

The power transmission occurs contact-free through magnets from the drive shaft to the product wetted output shaft. Between the two rotating parts is the can which is bolted to the container.

#### Notes

Different variants are available to meet specific requirements:

- High temperature variant
- High pressure can
- PEEK carbon fiber can

#### Advantages

- Magnetic coupling for applications acc. to API 685 (similar to API610)
- Hermetically sealed
- No contact of torque transmitting elements
- No maintenance necessary
- Hastelloy® can available
- High efficiency can optional
- Product-lubricated sliding bearings included

#### Operating range

Shaft diameter:  $d = \dots 40 \text{ mm (1,57")}$

Pressure:  $p = 40 \text{ bar (580 PSI)}$

Temperature:  $t = -40 \text{ °C } \dots +250 \text{ °C } (-40 \text{ °F } \dots$

$+482 \text{ °F})$  (SmCo),

$+120 \text{ °C } (+248 \text{ °F})$  (NdFeB)

Speed:  $n = 3,600 \text{ min}^{-1}$

Chemical resistance: pH 0 ... 14

Viscosity: 0.3 ... 5,000 mPas (SiC)

Torque: 434 Nm

Solids: max. 0.1 mm; max. 5 % by weight; grain

hardness max. 700 HV

#### Materials

Sliding faces: Silicon carbide SiC (Q1), Carbon silicon impregnated SiC-C-Si (Q3), Carbon graphite resin impregnated (B)  
Magnets: Samarium Cobalt (MA3), Neodymium-Iron-Boron (MA8)  
Metal parts: CrNiMo steel 1.4571 (G), CrNiMo steel 1.4462 (G1), Hastelloy® C-4 2.4610 (M)

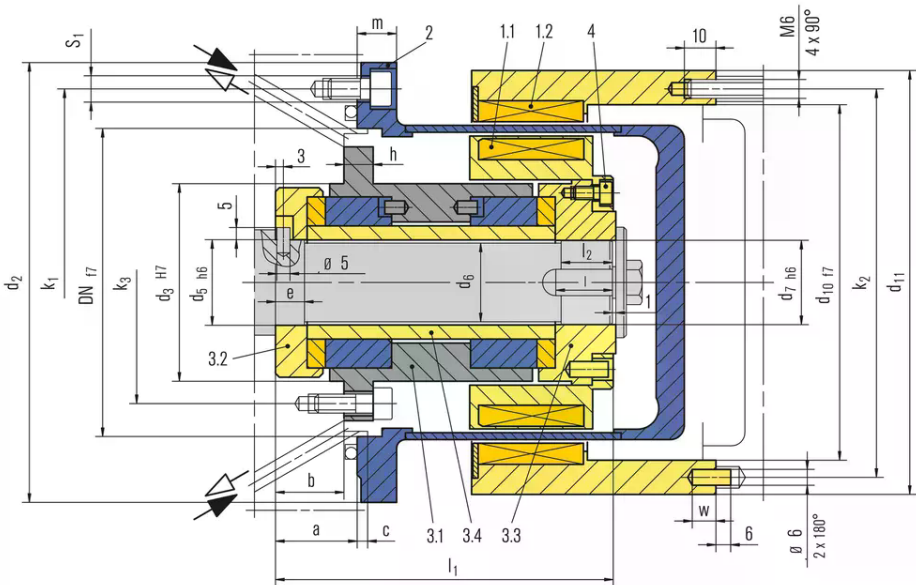
#### Standards and approvals

- API 685
- Compliant to TA Luft (German Clean Air Act)

#### Recommended applications

- Oil and gas industry
- Refining technology
- CCUS
- Centrifugal pumps

**RELY ON EXCELLENCE**



Item	Description
1	Coupling
1.1	Inner rotor
1.2	Outer rotor
2	Can
3	Bearing assembly
3.1	Radial journal bearing
3.2	Axial journal bearing
3.3	Axial journal bearing
3.4	Shaft sleeve
4	HSH cap screw

**Product variants**



PEEK carbon fiber can variant

## RELY ON EXCELLENCE

### Dimensions

d <sub>10</sub>	d <sub>11</sub>	V	W	k <sub>2</sub>
90	110	0	5	100
125	145	4	5	135
150	170	4	5	160
178	198	5	8	188

**\*\*Outer rotor\*\*** - Dimensions in millimeter

DN	DNL	d3	d5	d6	b	e	l1	l2	h	k3	d7	l	t	u
75	22	44	16.5	15.8	21	8	103	29	7	55	16	16	18	5
110	43	75	32.5	31.5	26	11	128.5	20	8	87	32	22	35	10
135	43	75	32.5	31.5	26	11	138.5	20	8	87	32	22	35	10
165	55	92	40.5	39.5	27	12	169.5	30	10	103	40	32	46	12

**\*\*Bearing arrangement\*\*** - Dimensions in millimeter

DN	LK	L	d1	d2	a	c	m	k1	s1
75	2-6	119	75	118	17	4	13	100	9
110	2-6	156	110	168	31	4	22	133	13.5
135	4-8	156	135	188	17	4	20	158	11
165	4-10	198.5	163.5	218	17	5	22	192	11

**\*\*Can\*\*** - Dimensions in millimeter