

# **Solutions for Fluid Technology**



**PERMANENT MAGNETIC COUPLINGS** 







Magnet systems and permanent magnetic couplings in specific, are an important step to environmentally compatible magnet technology. In cases where highly toxic or aggressive media is used, hermetically sealed drives are inevitable. DST permanent magnetic couplings (standard series, conversion kits and special solutions) offer a reliable alternative to conventional dynamic seals due to their leakage-free transmission in pumps and agitators.

The Type Examination Certificate according to ATEX II2GcIICTX confirms that all basic safety and health requirements concerning design and production of components for the intended use in hazardous areas are fulfilled.

#### **APPLICATIONS**

Process engineering Water management
Chemical industry Compressors
Pharmaceutical industry Measurement
Food industry Dosing technology
Biotechnology Hydraulics
Industrial furnaces Petrochemistry

# OPTIMALLY MATCHED TO THE VARIOUS MEDIA, THE WETTED PARTS OF THE MAGNETIC COUPLING ARE MADE OF DIFFERENT MATERIALS

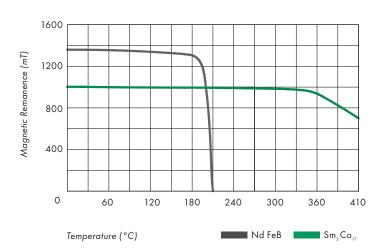
1.4571	1.4539
Hastelloy	1.4301
Titan	1.4462
1.4435	Plastics

# **ADVANTAGES OF SM2CO17 VS. NDFEB**

Very high energy product High coercivity (resistance to demagnetization) Operation temperature up to +350°C Very corrosion resistant

Please contact us for detailed information and technical specifications.

# **DEMAGNETIZATION CURVE**



## STANDARD CONSTRUCTION RANGES



The broad spectrum of the DST standard construction range covers centrifugal pumps, rotating piston pumps, liquid ring pumps as well as agitators. Individual intermediate and customer specific solutions are possible.

Construction of DST permanent magnetic coupling:

- Outer ring
- Canister (from size 75/10 the shell is in Hastelloy)
- Inner rotor completely encapsulated in AISI 316 Ti stainless steel
- Magnet material Sm2Co17

Other materials available upon request.

# **TABLE STANDARD CONSTRUCTION RANGES**

Туре	Power	Drawing No.
DST 27/1	1 Nm	D055M0017
DST 27/2	2 Nm	D055M0018
DST 45/4	4 Nm	D055M0013
DST 45/6	6 Nm	D055M0062
DST 45/8	8 Nm	D055M0015
DST 60/7	7 Nm	D055M0075
DST 60/10	10 Nm	D055M0136
DST 60/14	14 Nm	D055M0076
DST 60/22	22 Nm	D055M0077
DST 75/10	10 Nm	D055M0022
DST 75/20	20 Nm	D055M0028
DST 75/30	30 Nm	D055M0036
DST 75/40	40 Nm	D055M0044
DST 75/60	60 Nm	D055M0061
DST 110/22	22 Nm	D055M0024
DST 110/50	50 Nm	D055M0031
DST 110/80	80 Nm	D055M0039
DST 110/100	100 Nm	D055M0083

Туре	Power	Drawing No.
DST 135/85	85 Nm	D055M0026
DST 135/100	100 Nm	D055M0063
DST 135/135	135 Nm	D055M0033
DST 135/180	180 Nm	D055M0041
DST 135/220	220 Nm	D055M0010
DST 165/140	140 Nm	D055M0027
DST 165/200	200 Nm	D055M0034
DST 165/275	275 Nm	D055M0042
DST 165/365	365 Nm	D055M0047
DST 200/550	550 Nm	D055M0112
DST 200/700	700 Nm	D055M0113
DST 200/850	850 Nm	D055M0114
DST 200/1000	1000 Nm	D055M0115

Technical drawings with specifications for each construction range are available for download on our website www.dst-magnetic-coupling.com



DST designs and manufactures canisters of highest quality. The large range of products is available in various materials and hereby covers a wide spectrum of applications. DST canisters can be applied even at high temperatures and pressures, along with an outstanding chemical resistance. Additionally, several canisters are based on materials that are not producing any eddy current losses. The electrically conductive canisters can be applied particularly versatile.

Other canister materials avilable on request.



#### **TITANIUM CANISTER**

Medium Titanium GR 5

Chemical resistance good

**Pressure range** vacuum up to 100 bar (As a special solution possible up to 300 bar)

Temperature range -190°C up to +350°C

Pressure and heat resistance average resistance

**Advantages** Customised solutions very easy to realize, very solid



#### PEEK CANISTER CARBON FIBRE REINFORCED

Material PEEK, 30% carbon fibre reinforced

Chemical resistance good

**Pressure range** vacuum up to 16 bar (16 bar only at the temperature 20°C)

Temperature range -20°C up to +120°C

Pressure and heat resistance high expansion

Advantages no eddy current losses, very solid



#### **CERAMIC CANISTER ZR2MGO**

Material ZR2MG0

Chemical resistance very good

Pressure range vacuum up to 17 bar

Temperature range -190°C up to +350°C

Pressure and heat resistance very good

Advantages no eddy current losses



#### STANDARD METALLIC CANISTER

**Medium** Hastelloy (1.4571/2.4610)

Chemical resistance good

**Pressure range** vacuum up to 25 bar (As a special solution possible up to 300 bar)

Temperature range -190°C up to +350°C

Pressure and heat resistance average resistance

**Advantages** Customised solutions very easy to realise, very solid, different materials

## **CUSTOMER-SPECIFIC SOLUTIONS**



Over the course of more than 20 years, DST has become a market leader in the development and manufacture of permanent magnetic couplings for the leakage-free transmission of energy. As well as standard designs, DST also develops and manufactures custom designs according to clients requirements. The products more than comply with the ever-increasing environmental and safety requirements – a big advantage compared to conventional mechanical seals. In order to continuously develop and improve its product range, DST has an in-house development and design department that is professionally equipped and staffed.

In direct cooperation with our clients, the requirements for practical and specific coupling systems are individually evaluated. Using a computer-aided design (CAD), DST produces a ready-to-install magnetic coupling system as an optimum of performance and economic efficiency.

We would be pleased to advise you depending on your individual requirements.



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DUT KOREA Co.,Ltd.
Solution for Polyurethane
914-4 Jangrim-Dong, Saha-Gu, Busan, Korea

Phone 82-51-202-0586-7 Fax 82-51-202-0647 webmaster@dutkorea.com www.dutkorea.com



DST Dauermagnet-SystemTechnik GmbH Hönnestraße 45 58809 Neuenrade/Germany

Phone +49 (0) 23 94/616-80 Fax +49 (0) 23 94/616-81 info@dst-magnetic-couplings.com www.dst-magnetic-couplings.com