The proven magnetic coupling MAK with high-efficiency containment shells

Magnetic couplings (MAK) are currently the most economical and reliable sealing solution for applications in the chemical and refinery industry – and many more.

For applications in pumps, agitators and blowers that are sensitive to temperature increase associated with eddy current (EC) losses, EagleBurgmann can offer a variety of high-efficiency containment shells (cans):

- MAK series (...-A95) with ceramic can (zirconium oxide ZrO), zero EC losses.
- MAK series (...-A96) with carbon fiber reinforced PEEK can, extremely low EC loss
- NovaMagnetics high-efficiency couplings with laminated metallic can, very low EC losses.

The advantages of non-metallic cans are:

- Zero eddy current, hence no temperature increase in the product resulting in energy savings and improved safety
- High resistance against numerous aggressive liquids based on the corrosion resistance of PEEK/ZrO
- Excellent durability due to ductile material properties (PEEK)
- High pressure and temperature limits for the PEEK can due to carbon fibers
- Highest possible temperature limits for the ceramic can in MAK applications with best possible efficiency

The advantage of zero eddy current loss is enormous:

With a pump running at 3,000 rpm, 8,000 hours per year, the operating company can save 4,470 €* on energy costs (motor power: 45 kW; 0.12 €/kWh; 4.66 kW EC losses).

*compared to Hastelloy can

MAK is a mature modular system based on the latest magnetic coupling technology, which can fulfill all customer requirements.

Operating limits PEEK can:
- Pressure (p): -1 to 40 bar g at 120 °C (acc. to API685)
- Pressure (p): -1 to 20 bar g at 150 °C max. differential pressure (outside) +10 bar above internal pressure

Operating limits ceramic cans:
- Pressure (p): 1 to 40 bar g at 350 °C (acc. to API685)
- Pressure (p): 1 to 16 bar g at 350 °C (Standard) max. differential pressure (outside) +10 bar above internal pressure
- Break-away torque at 20°C: up to 2,300 Nm

All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications, however, means that they can serve only as guide values. We must be notified of the exact conditions of application before we can provide any guarantee for a specific case. This is subject to change.

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