

## Pumps with magnetic coupling

Many of the pumps in the SAWA pump range feature hermetically sealed magnetic couplings. These pumps are also designed and manufactured so that they can be used easily for hygienic and sterile applications.

### Advantages

Because of their hermetically sealed design, magnetically coupled pumps are ideal when used for crystallising, toxic, flammable and environmentally hazardous liquids. The containment shell between the two parts of the magnetic coupling seals off the pumped medium to the outside. A mechanical seal is thus not required. The magnetic coupling pumps are thus far more resistant to wear and consequently are generally entirely maintenance-free. A sealing-pressure system is therefore not necessary.

### Restrictions

Media containing solids and viscous media cannot be pumped owing to the narrow gaps in the area of the SSiC bearings and the containment shell. Eddy-current losses in the magnetic field of the magnetic coupling reduce the overall efficiency slightly.

### Possible applications

- In ATEX zones: thanks to the separation of the pump and motor by means of a magnetic coupling an additional flexible coupling is not necessary.
- TA-Luft (German Technical Guidelines on Air-Quality Control): use of the hermetically sealed magnetic coupling allows unproblematic pumping of toxic media relevant to TA-Luft. The pumps are also ideal for use with media with unpleasant odours, highly volatile, flammable and highly pure media and media which crystallise in contact with air.
- Hygienic and sterile applications: magnetic coupling pumps are suitable for CIP cleaning and SIP sterilisation.

### Pump monitoring options

- motor monitoring by means of PTC thermistor and/or safeguarding current consumption
- temperature monitoring, e.g. on the magnetic coupling containment shell by means of PT100
- protection against running dry by means of Liq-uiphant in the suction line or by means of level monitoring in the tank (inlet)
- monitoring the flow rate
- pressure monitoring
- vibration monitoring

### Pump types available with magnetic coupling

- Type HD: HDM160
- Type LE: LEM150, LEM170, LEM190
- Type LES: LESM170, LESM190
- Type ZA/ZAL: ZAM21, ZALMR18, ZALM21
- Type MP: all sizes
- Type ZR: ZRP3

### Optional forms

- including residual drainage in pump body or pump cover
- inducer on LE and ZA/ZAL
- temperature ranges from minus 30°C to 200°C
- system pressures up to max. PN 160
- viscosities up to max. 200 mPas

