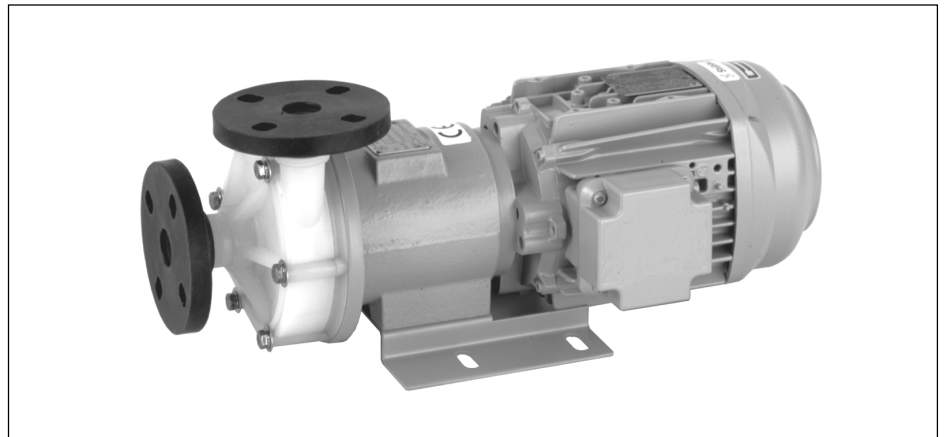


## Magnetic coupled Thermoplastic Centrifugal Pump Type SMB

compact,  
hermetically tight



### Sizes:

- SMB 30, SMB 50

### Capacity:

- up to 7.3 m<sup>3</sup>/h

### Head:

- up to 12.3 m

### Operating temperature:

- up to 80 °C

### Specific gravity of media:

- up to 1.9 kg/dm<sup>3</sup>

### High operational reliability:

- all components getting in contact with the fluid are made of PPGFR or PVDF
- injection-moulded magnets impervious to fluids
- long wearing sliding bearings made of silicon carbide, aluminium oxide 995 or Rulon

### Environmental protection:

- leakage and emission free
- no demagnetizing of the magnet coupling

### High efficiency:

- permanent magnets with high energy density
- no eddy current loss

### Application:

- transport of gasing liquids or fluids which crystallize when getting in contact with the atmosphere
- toxic or malodorous fluids
- acids, alkalines, solvents
- in the environmental and wastewater technology, chemical industry and surface refinement

### Connection:

- flange connection type F
- union connection type U
- spigot end for hose connection type H



## General

ASV magnetic pumps are horizontal, normally priming (non-selfpriming) centrifugal pumps without shaft seals. Liquids and atmosphere are safely separated by the stationary rear cover.

## Applicataion

The SMB pumps are specially designed for the transfer of solid-free corrosive, aggressive and low viscous liquids at low capacities.

Pumping of highly aggressive fluids is possible due to the materials used.

The pump material is PVDF, the pump shaft is made of aluminium oxide 995, the sliding bearings are made of silicon carbide.

## Design

For the magnetic coupled centrifugal pumps SMB the power transmission from the motor drive to the impeller is carried out by a magnetic coupling. The coupling halves are separated from each other by a rear cover made of thermoplastic. As this thermoplastic rear cover is non-conductive eddy current loss is avoided and high efficiency is granted.

## Materials

Spiral casing, impeller and rear cover:

- PP<sup>GFR</sup>  
Polypropylene, glass-fiber reinforced
- PVDF  
Polyvinylidenefluoride

## O-rings

- EPDM  
Ethylene-propylene-caoutchouc
- FPM  
Viton

## Bearing

- silicon carbide
- aluminium oxide 995
- Rulon

## Suction/pressure connection

- Flange connection type F, flange dimensions acc. to JIS. Dimensions see table.
- Spigot connection type H, with spigot end for hose connection. Dimensions see table.
- Union connection type U, with inserts acc. ISO/DIN. Dimensions see table.

## Operating temperature

Depends on the operating conditions (system pressure, load etc.). Taking creep strength into account, the following approximate temperatures apply:

- PP<sup>GFR</sup> up to +80 °C
- PVDF up to +80 °C

## Viscosity

Media up to 160 mPas (160 cP)

## Drive

Type: IEC three-phase motor  
Design: IM 34/35  
Voltage: 230 / 400 V (3 Ph) or 230 V (1 Ph)  
Speed: 2900/3500 rpm, 50/60 Hz  
Protection: IP 55  
Iso class: F  
Ex-protection and special voltage on request.

## Protection coat

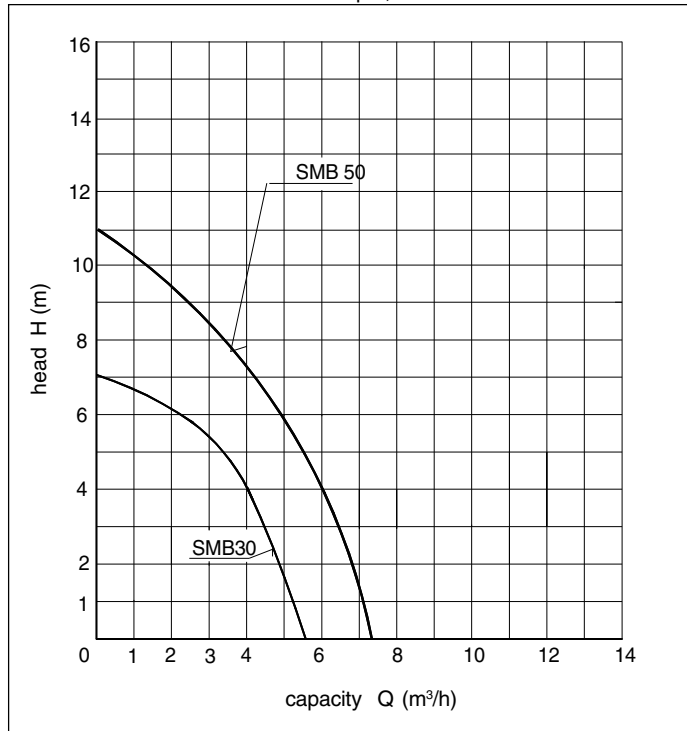
Motor and metal parts are coated with a 2-component protection coat.

## Operating instructions

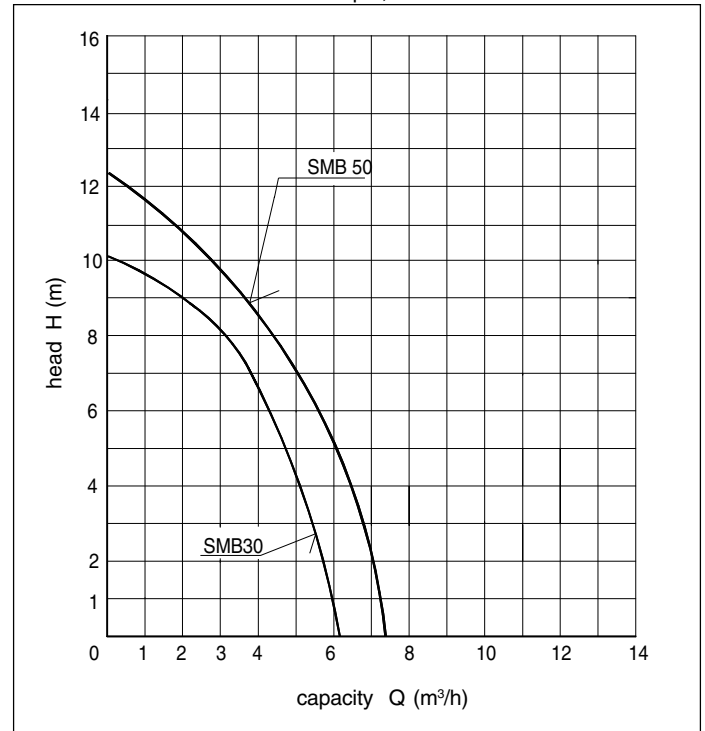
For trouble-free operation of the magnetic coupled centrifugal pumps type SMB adhere to the installation and maintenance instructions, print 340 296.

### Characteristic curves: SMB 30 and SMB 50

n = 2900 rpm, 50 Hz



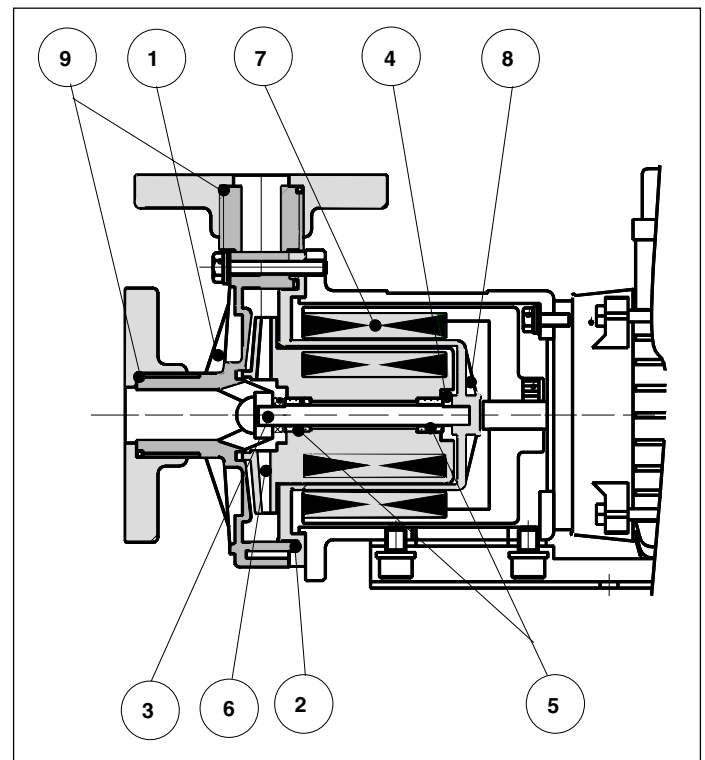
n = 3500 rpm, 60 Hz



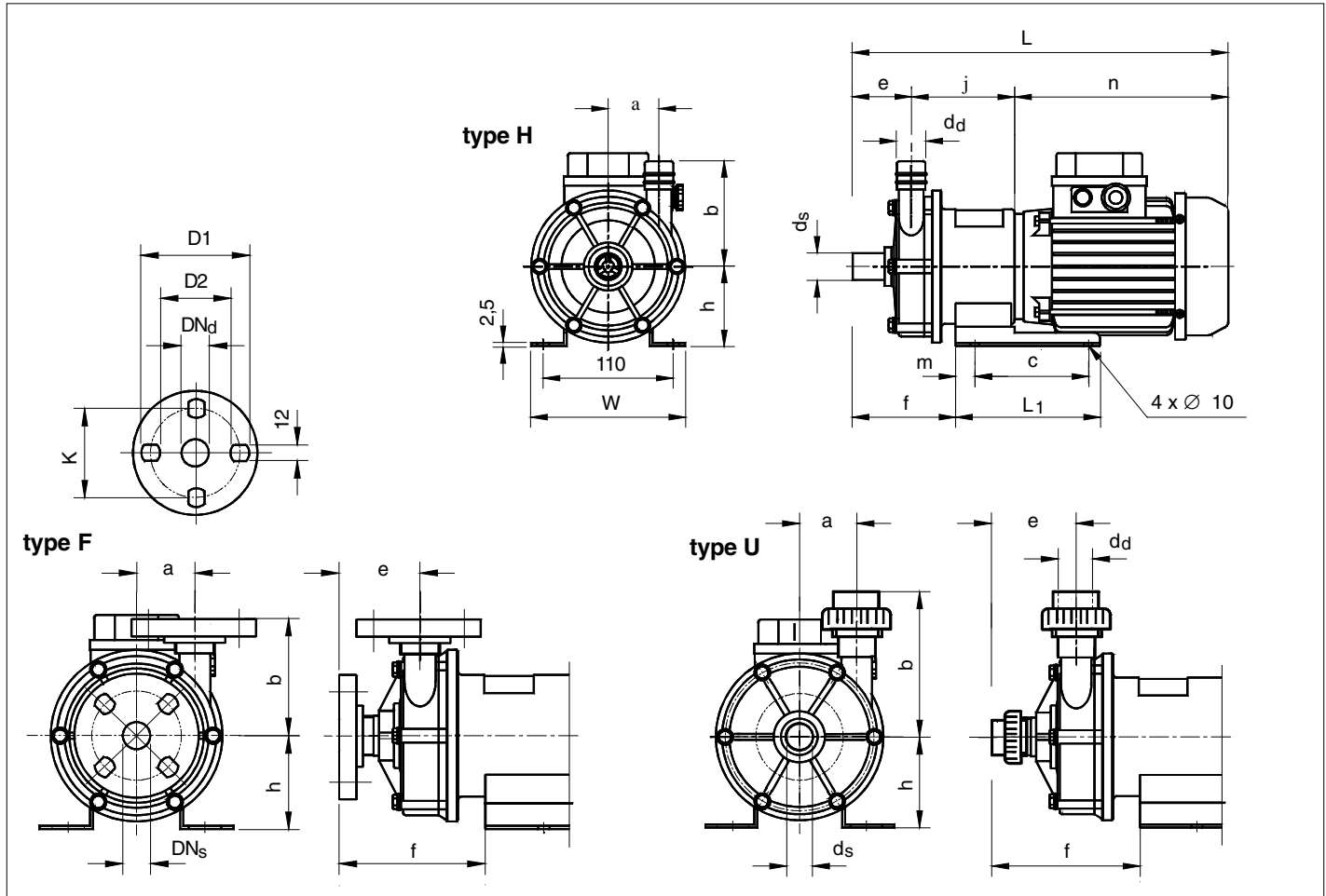
characteristic curves valid for H<sub>2</sub>O, 20 °C, specific gravity 1.0 kg/dm<sup>3</sup>

### Sectional drawing and description: SMB 30, SMB 50

Pos.	Materials and Executions	
1	spiral casing	PP <sup>GFR</sup> or PVDF
2	O-rings	EPDM or FPM
3	pump shaft	ceramics
4	thrust bearing	ceramics
5	sliding bearing	SiC or Rulon
6	impeller SMB 30 (half open) with encapsulated impeller magnets, impervious to fluids	PP <sup>GFR</sup> or PVDF
	impeller SMB 60 (closed) with encapsulated impeller magnets, impervious to fluids	
7	driver magnet	PP <sup>GFR</sup> or PVDF
8	rear cover	PP <sup>GFR</sup> or PVDF
9	O-ring or gasket	EPDM or FPM



## Dimensional drawings



## Connection dimensions

type	$DN_s$	$DN_d$	$d_s$	$d_d$	L	W	H	a	b	c	e	f	h	j	k	$D_1$	$D_2$	m	n	$L_1$
SMB 30H	-	-	26	26	324	130	160	44	90	40	50	87	70	87.5	-	-	-	72.5	183	122
SMB 30F	20	20	-	-	328	130	164	44	94	40	54	91	70	87.5	75	86	57	72.5	183	122
SMB 30U	-	-	32	32	363	130	198	44	128	40	89	126	70	87.5	-	-	-	72.5	183	122
SMB 50H	-	-	26	26	341	156	163	48	90	70	65	118	74	122.0	-	-	-	47.0	183	132
SMB 50F	20	20	-	-	346	156	168	48	94	70	70	123	74	122.0	75	86	57	47.0	183	132
SMB 50U	-	-	32	32	383	156	205	48	131	70	107	160	74	122.0	-	-	-	47.0	183	132

Threaded nozzle or flange dimensions do not correspond to ISO/DIN.  
Insert acc. to ISO/DIN.

## Technical data

type	connection			flow dates 50/60 Hz			motor output (watt)	number of motor poles	weight appr. (kg)
	spigot end da	union	flange	max. capacity Q (m³/h)	max. head H (m)	media temperature			
SMB 30	26	DN 25	DN 20	5.4 / 6.0	7.2 / 10.0	0-80°C	180	2	7.0
SMB 50	26	DN 25	DN 20	7.0 / 7.4	11.0 / 12.3	0-80°C	250	2	7.5

Technical alteration excepted