

General

Centrifugal chemical pumps are used for pumping acid and alkalis and other low-viscosity, aggressive liquids and neutral media.

The MB motor pump is a single-stage, normal-priming centrifugal pump in block design with horizontal axis. The MB pump has an open impeller for low-viscosity, acid and alkaline solutions with low solid matter content. The pump head assembly consists of high-quality plastic materials with hydraulically efficient spiral casing.

Description of mechanical seal

Mechanical seals basically consist of two perfectly plane surfaces. One surface rotates with the shaft, while the other is stationary. The sealing effect is achieved by the direct contact between the two plane surfaces. The stationary counter-ring is normally fixed in position. The sliding ring is able to move axially and radially in order to compensate the shaft deflections during operation. This axial mobility enables mechanical seals to be fitted within practicable manufacturing tolerances, the accuracy required being dependent on the design of the seal.



Drive

There is a choice of:

- three-phase motors with extended rotor shaft, 2900 min⁻¹, 230/400 V, 50 Hz, IP 55, insulation class F.
- a.c. motors with extended rotor shaft, 2900 min⁻¹, 230 V, 50 Hz, IP 55, insulation class F.

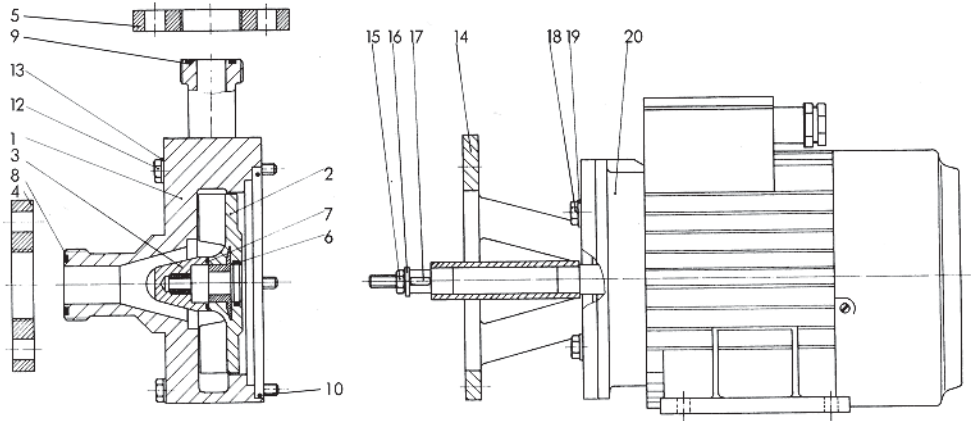
Connections

Standard version with male thread fitted on suction and pressure side for connection of standard unions.

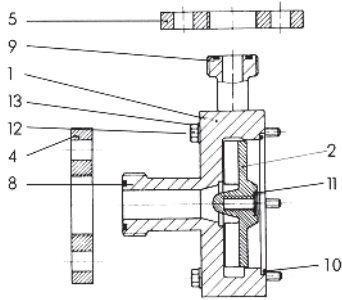
Materials	PP max. 80° C	PE max. 60° C	PVC max. 60° C	PVDF max. 120° C
Housing	PP	PE	PVC	PVDF
Impeller	PP	PVDF	PVDF	PVDF
O-rings	EPDM, FPM			
Mechanical seal	C2/Sic - EPDM, FPM - 1.4571, Hastelloy C4			
Shaft sleeve	Synthetic resin impregnated carbon			
Intermediate piece	Cast iron with chemically resistant coating			
Screws	A4			

Technical Features

Pump head MB 20-100/20-120/25-140 Drive



Pump head MB 15-85

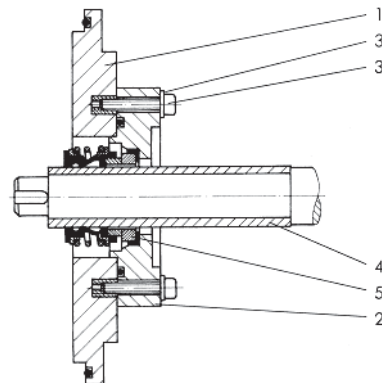


Pump head

Drive

- | | | | |
|----|-------------------------------|----|--------------------|
| 1 | Spiral casing with connection | 14 | Intermediate piece |
| 2 | Impeller | 15 | Hex. nut |
| 3 | Impeller cap | 16 | Washer |
| 4 | Flange suction side | 17 | Adjusting spring |
| 5 | Flange pressure side | 18 | Hex. screw |
| 6 | O-ring (impeller) | 19 | Washer |
| 7 | O-ring (impeller cap) | 20 | Electric motor |
| 8 | O-ring (suction connection) | | |
| 9 | O-ring (pressure connection) | | |
| 10 | O-ring (spiral casing) | | |
| 11 | Gasket | | |
| 12 | Hex. screw | | |
| 13 | Washer | | |

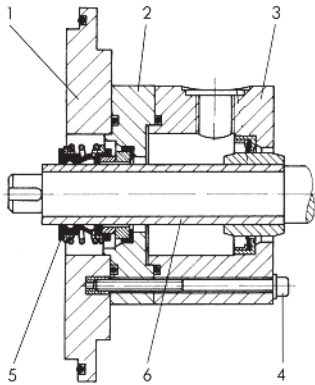
Shaft seal



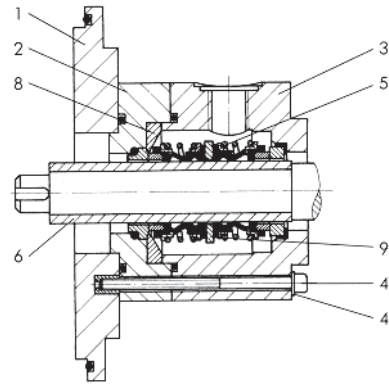
Mechanical seal type B21, single acting, internal

- | | |
|---|-------------------------------|
| 1 | Back plate |
| 2 | Counter-ring flange |
| 3 | J-hex. screw ring with washer |
| 4 | Shaft sleeve |
| 5 | Mechanical seal set |

Shaft seal



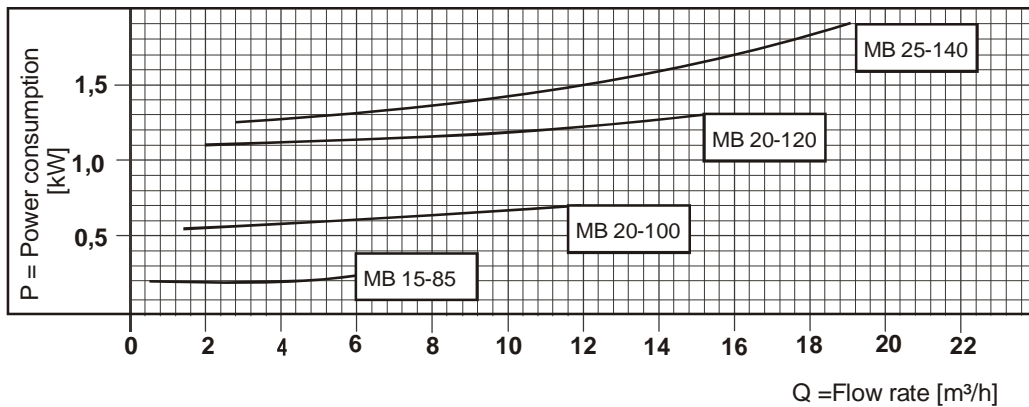
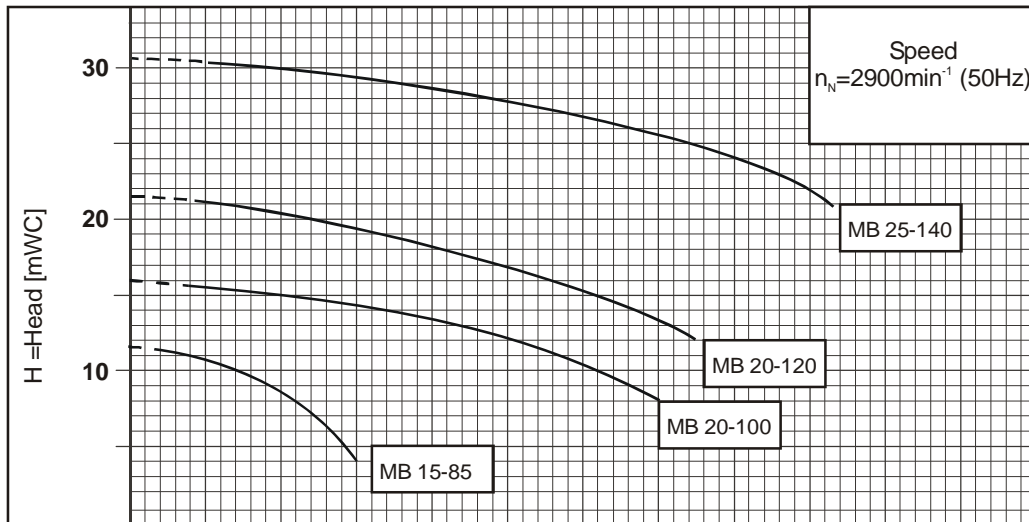
Mechanical seal type B2Q,
single acting, with quenching chamber



Mechanical seal type B2D,
double acting, with sealing chamber

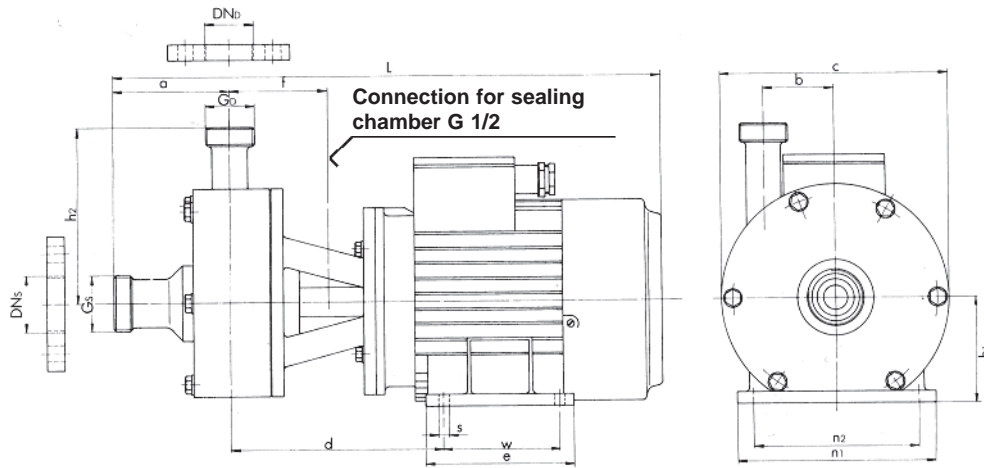
- | | |
|---------------------------------|---------------------------------------|
| 1 Back plate | 6 Shaft sleeve (at B2Q with impeller) |
| 2 Counter-ring flange | 8 Disengagement lock |
| 3 Quenching/Sealing chamber | 9 Spacer ring |
| 4 J-hex. screw ring with washer | |
| 5 Mechanical seal set | |

Performance curves



Chemical Motor Pump Unit MB

Dimensions



Pump type	Thread-connection*		Flange** PN 10 DIN 2501		Pump dimensions													Sealing chamber f	Quenching chamber f	Motor Power (kW)
	G_D	G_S	DN_D	DN_S	a	h_1	h_2	w	e	$\emptyset s$	b	n_1	n_2	c	d	~ L				
MB 15-85	G 1	G 1 1/4	15	20	75	71	100	90	106	7	40	132	112	125	137	373	60	60	0,37	
MB 20-100	G 1 1/4	G 1 1/2	20	25	100	80	150	100	126	10	60	150	125	195	174	452	87	83,5	1,1	
MB 20-120	G 1 1/4	G 1 1/2	20	25	100	90	150	100	127	10	60	167	140	195	180	476	87	83,5	1,5	
MB 25-140	G 1 1/2	G 2	25	32	100	90	150	125	145	10	60	167	140	195	180	486	87	83,5	2,2	

* Standard version

** Special version

Part number		80					
Series MB			Mechanical seal				
Size	Material Pump Head	Material Elastomers	B2I		B2Q		B2D
			G**	M***	G**	M***	
MB 15-85	PP	EPDM	000 000	000 002	000 006	000 008	000 010
		FPM	000 001	000 003	000 007	000 009	000 011
	PE*	EPDM	000 012	000 014	000 018	000 020	000 022
		FPM	000 013	000 015	000 019	000 021	000 023
	PVC*	EPDM	000 024	000 026	000 030	000 032	000 034
		FPM	000 025	000 027	000 031	000 033	000 035
	PVDF	EPDM	000 036	000 039	000 045	000 048	000 051
		FPM	000 037	000 040	000 046	000 049	000 052
MB 20-100	PP	EPDM	000 100	000 102	000 106	000 108	000 110
		FPM	000 101	000 103	000 107	000 109	000 111
	PE*	EPDM	000 112	000 114	000 118	000 120	000 122
		FPM	000 113	000 115	000 119	000 121	000 123
	PVC*	EPDM	000 124	000 126	000 130	000 132	000 134
		FPM	000 125	000 127	000 131	000 133	000 135
	PVDF	EPDM	000 136	000 139	000 145	000 148	000 151
		FBM	000 137	000 140	000 146	000 149	000 152
MB 20-120	PP	EPDM	000 200	000 202	000 206	000 208	000 210
		FPM	000 201	000 203	000 207	000 209	000 211
	PE*	EPDM	000 212	000 214	000 218	000 220	000 222
		FPM	000 213	000 215	000 219	000 221	000 223
	PVC*	EPDM	000 224	000 226	000 230	000 232	000 234
		FPM	000 225	000 227	000 231	000 233	000 235
	PVDF	EPDM	000 236	000 239	000 245	000 248	000 251
		FBM	000 237	000 240	000 246	000 249	000 252
MB 25-140	PP	EPDM	000 300	000 302	000 306	000 308	000 310
		FPM	000 301	000 303	000 307	000 309	000 311
	PE*	EPDM	000 312	000 314	000 318	000 320	000 322
		FPM	000 313	000 315	000 319	000 321	000 323
	PVC*	EPDM	000 324	000 326	000 330	000 332	000 334
		FPM	000 325	000 327	000 331	000 333	000 335
	PVDF	EPDM	000 336	000 339	000 345	000 348	000 351
		FPM	000 337	000 340	000 346	000 349	000 352

* Impeller in PVDF
 ** Metal components of stainless steel 1.4571
 *** Metal components of Hastelloy C4