

SEALLESS MAGDRIVE CENTRIFUGAL PUMPS

WHERE LEAKAGE IS NOT AN OPTION



Daybreak Technologies
Liquid Engineering Solutions



Advanced Magnetic Technology:

State-of-the-art magnetic technology provides a safe and reliable pump for difficult applications. A magnetic coupling consists of two magnet assemblies. One is the outer assembly (the drive magnet) and other is the inner assembly (the driven magnet). The outer assembly is connected to a motor and the inner assembly is directly attached to a pump impeller. When load is applied, the coupling effects angularly and magnets create a force which is used to transfer torque from the motor to the impeller. This permanent magnet coupling creates neither slippage nor induction current during rotation. There is no energy loss in this permanent-permanent magnet coupling. 'Daybreak' pumps have an inner magnet assembly which is directly molded in to the impeller.

Engineered for Environment Safety:

Daybreak offers magnetic drive chemical pumps which safely handle hazardous, highly corrosive, explosive and toxic chemicals. They provide safe, leak-proof service because the magnetic coupling eliminates the need for traditional sealing methods, such as mechanical seals or gland packing, which is the main source of leakage problems on pumps. As a result, down time and maintenance cost are greatly reduced. And there are no worn seals to replace.

These pumps are available in **GRP-PP, PVDF** for maximum chemical resistance. **The latest range has been created in SS-316-L, Hastelloy-C and Alloy-20.**

'Daybreak' Magnetic drive chemical process pumps offer many benefits.

- Minimizes exposure of your personnel to hazardous chemicals.
- Eliminates contacting seal faces which are prone to wear and leakage.
- Provides superior corrosion resistance.
- Eliminates costly seal flush systems required on all pumps with double mechanical seals.
- Reduces downtime and maintenance costs through extended service intervals.
- Eliminates alignment problems inherent in direct-coupled units.
- They are ideal for vacuum service and transfer of expensive, toxic, radio active, hazardous and corrosive chemicals.

Application:

Seal-less features make these pumps perfect for environments subject to federal regulations.

Chemical, Pharmaceutical, Textile Processing & Dye Baths
Electroplating, Various Metal Recovery Systems, Metal Finishing, Color Photo Processing, T.V. Tube Processing, Food Processing: Dairies, Soft Drinks, Beverages, X-Ray Film, IC Photo Engraving Process/PCB Plants, Refrigeration & Chilling Plants, Water Treatment Plants, Galvanizing/Anodizing Plating Plants, Etching/Spark Erosion Machines & many more... **...where pump leakage must be avoided.**



DB-MG-300 PVDF



DB-MG-300 PP



DB-MG-520



DB-MG-15



DB-MG-30



DB-MG-50



DB-MG-85



DB-MG-115



DB-MG-300



DB-MG-SS-115



Pump Specifications

Pump Model	Connection		Max. Flow (Ltrs/Min)	Max. Head (Meter)	Std. Duty Point Q/H	Sq. Gr. Limit	Motor/Kw	Phase ϕ
	Suction	Discharge						
DB-MG-15	14mm Hose Type	14mm Connection	15	2.5	8 LPM/2 Mtr	1.1	34 Watt	1 ϕ
DB-MG-30	18mm Hose Type	18mm Hose Type	30	3.4	22 LPM/2 Mtr	1.1	46 Watt	1 ϕ
DB-MG-50	20mm Hose Type	20mm Hose Type	50	4.5	30 LPM/3 Mtr	1.2	65 Watt	1 ϕ
DB-MG-85	26mm Hose Type	26mm Hose Type	85	9.5	40 LPM/3 Mtr	1.2	195 Watt	1 ϕ -3 ϕ
DB-MG-115	26mm Hose Type	26mm Hose Type	100	11.5	50 LPM/7 Mtr	1.3	300 Watt	1 ϕ -3 ϕ
DB-MG-300	1½" BSP Female	1¼" BSP Male	280	20	12 M _j /hr.10 Mtr	1.4	1.1 KW	3 ϕ
DB-MG-520	2" NPT Male	1½" NPT Male	520	26	12 M _j /hr 20 Mtr	1.3	2.2 KW	3 ϕ

• The Specific gravity limit indicated above is the value at the max. shaft power level and the liquid viscosity of 1 mPa^s (1 cP) • Liquid temperature range: 0 to 120°C • Slurry: Inquire to your nearest Daybreak representative or dealer. • Flange type is available on request. • Pump Model 115 & 300 available in flame proof motor also.

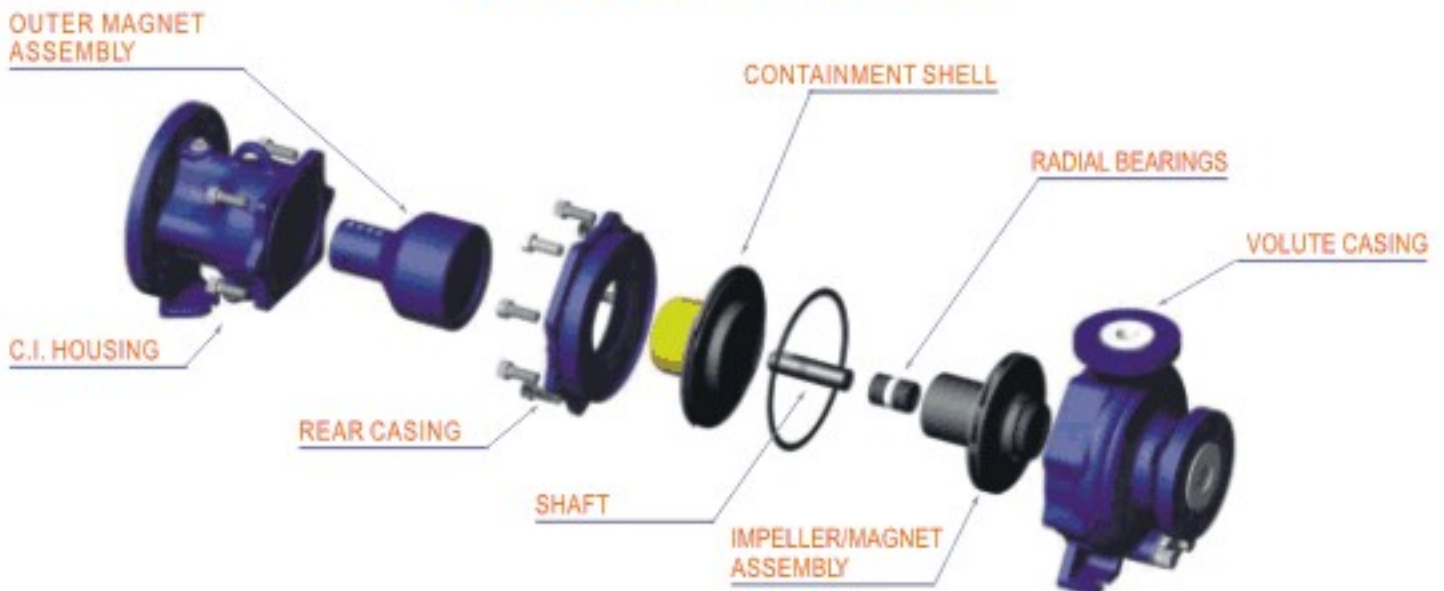
Construction:

PUMPS PARTS	GF	VF
Volute Casing	GFR-PP	PVDF
Impeller	GFR-PP	PVDF
Rear Casing	GFR-PP	PVDF
'O' Ring	FKM	FKM
Shaft	Al ₂ O ₃ , 99, 7%	Al ₂ O ₃ , 99, 7%
Guide Bushing	GFR-PTFE	CFR-PTFE
Mouth Ring	GFR-PTFE	CFR-PTFE
Front Thrust Washer	Al ₂ O ₃ , 99, 7%	Al ₂ O ₃ , 99, 7%
Bust-Thrust Bearing	Al ₂ O ₃ , 99, 7%	Al ₂ O ₃ , 99, 7%

Material Label in this catalog:

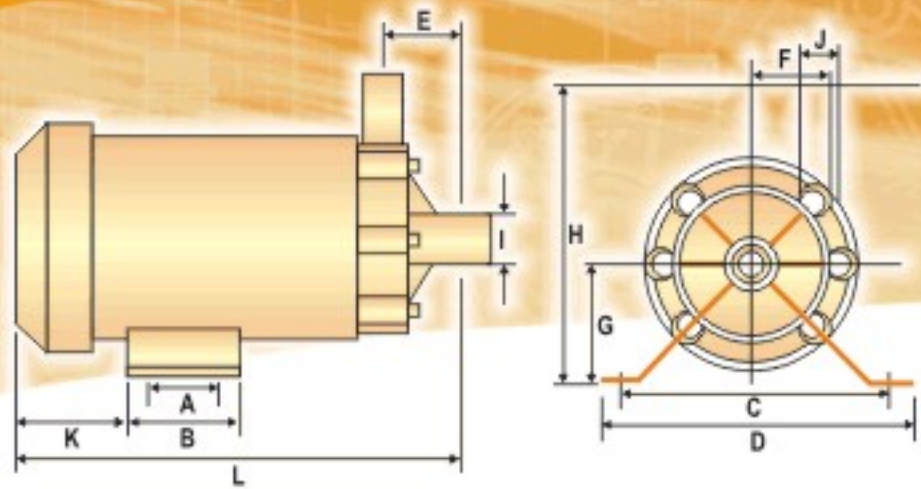
GFR-PP	: Glass fibre reinforced Polypropylene
PVDF	: Polyvinilidene fluoride
GFR-PTFE	: Glass fibre reinforced Polytetrafluoroethylene
CFR-PTFE	: Carbon fibre filled Polytetrafluoroethylene
Al ₂ O ₃ , 99, 7%	: Alumina Ceramic at 99, 7% (high purity)
FKM	: Fluorinated elastomer (p.e: VITON®)
EPDM	: Ethylene - Propylene rubber
FEP	: Fluorinated, Ethylene - Propylene copolymer

Typical Magdrive Pump Construction



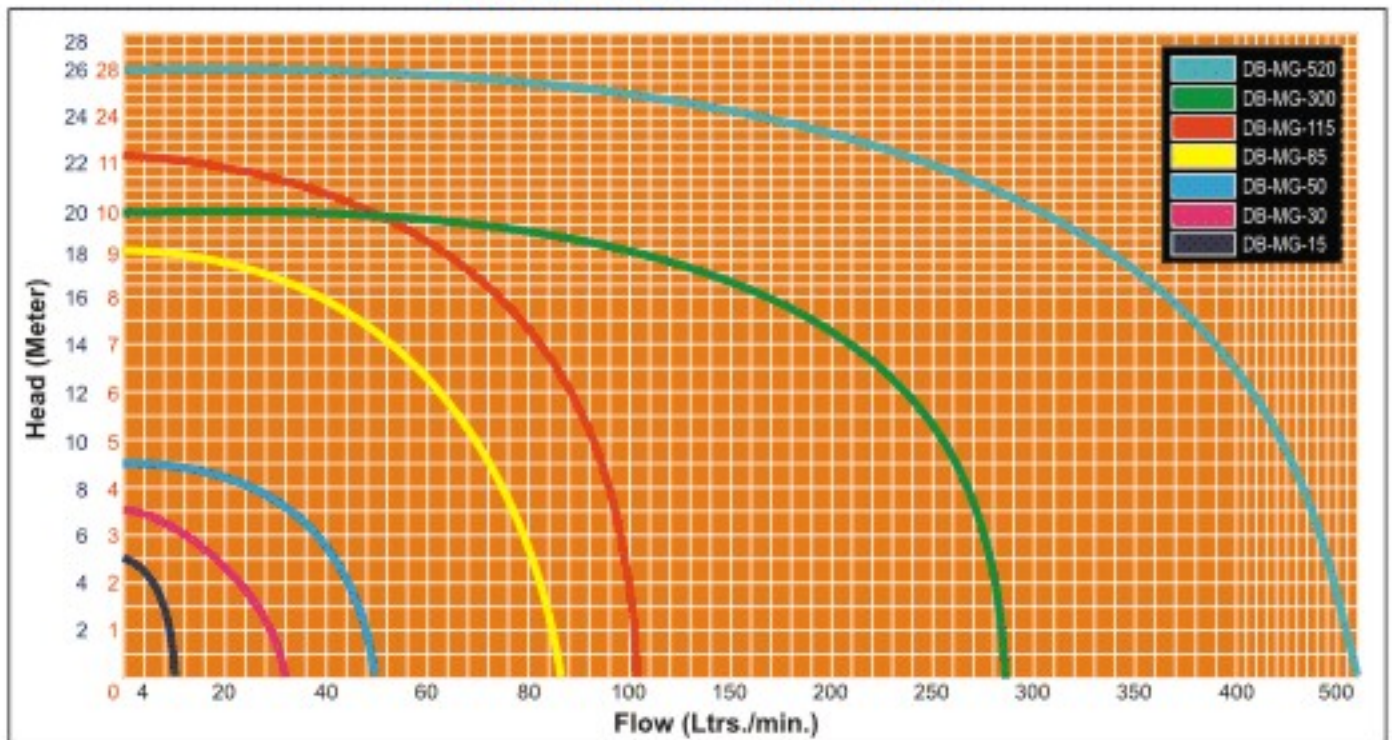


Dimensions in mm:



MODEL NO.	A	B	C	D	E	F	G	H	I	J	K	L
DB-MG-15	40	60	96	116	40	28	55	110	14	14	45	225
DB-MG-30	40	60	96	116	38	30	56	115	18	18	45	235
DB-MG-50	40	60	96	116	54	44	56	124	20	20	60	290
DB-MG-85	55	65	115	142	54	58	81	170	26	26	85	302
DB-MG-115	55	65	115	142	64	58	81	170	26	26	102	350
DB-MG-300	0	60	100	144	80	58	114	250	1½"BSP	1¼"BSP	215	490
DB-MG-520	90	105	202	245	95	61	120	270	2"NPT	1½"NPT	230	610

General Performance Curves



Daybreak Technologies

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