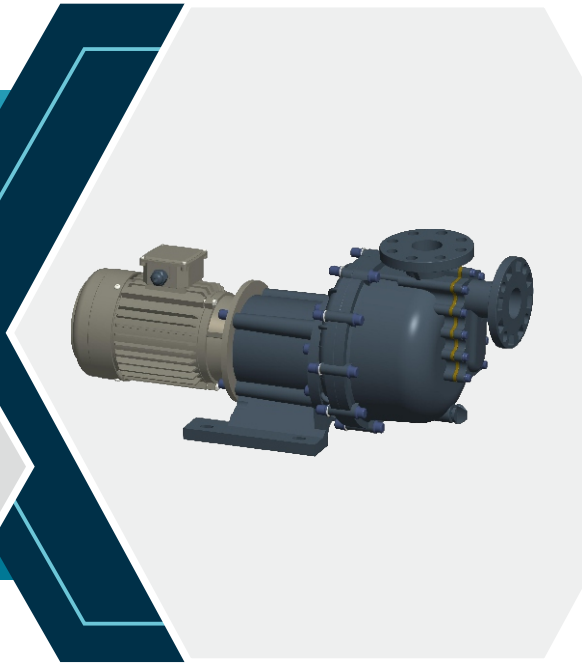
Eicen

Bold in Innovation Stable & reliable
Energy-saving & Environmental Friendly



EGL SERIES GAS-LIQUID MAGNETIC PUMP

DURABLE MAGNETIC PUMP NEW BENCHMARKS

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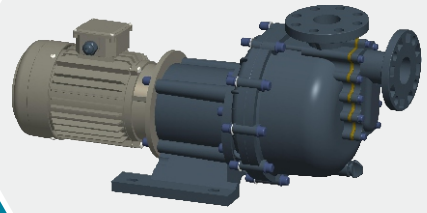
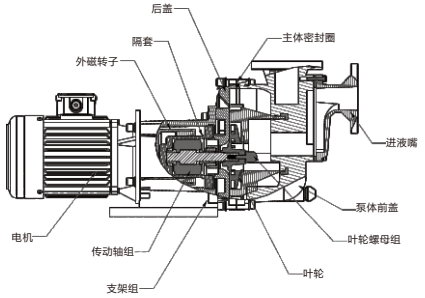
Gas-liquid magnetic pump

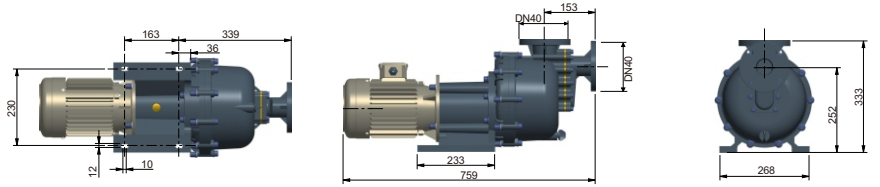
EGL-12 >>>



>> Cross section view



>> Envelop dimensions figure



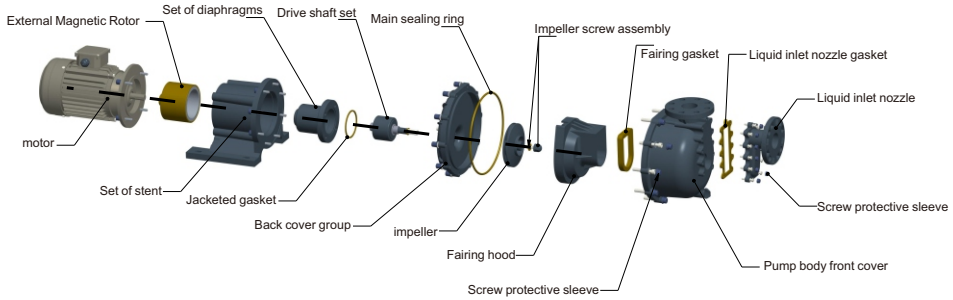
Features: This series of magnetic pump can transport gas-liquid mixed liquid, as long as the pump cavity into the liquid, sustainable pumping mixed liquid, allowing pumping diameter of less than 2mm 2% mass Content of solid particles. For details, contact engineers.

>> Optional Materials & Temperature Range of Overcurrent Components

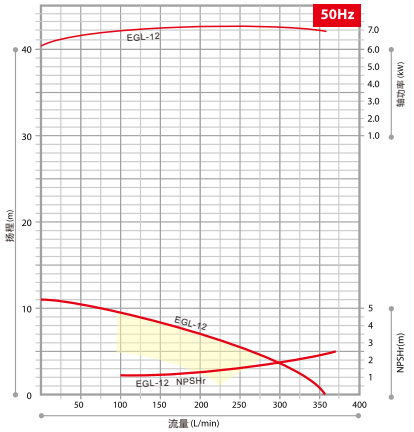
Pump Body		Sealing Element		Wear Parts	
GF+PP	0℃~90℃	EPDM	0℃~60℃	Carbon Graphite	-10℃~80℃
PVDF	-20℃~100℃	VITON	-25℃~80℃	High Purity Silicon Oxide	-60℃~150℃
PPS	-60℃~120℃	FKM	-70℃~120℃	Engineering Compound Silicon Carbide	-80℃~280℃
ETFE	-85℃~120℃	PTFE	-180℃~250℃		℃~℃

Note: The above temperature is for different materials' tolerance. The product operating temperature depends on the medium and environment. Please consult our engineer for more information.

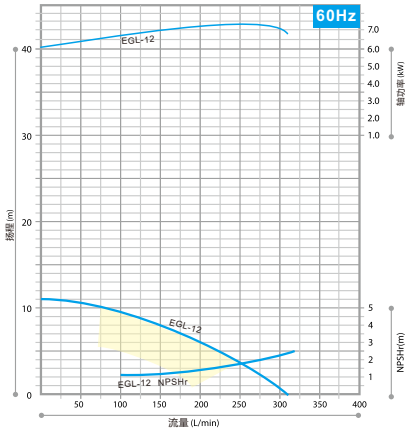
>> series decomposition figure



>> 50Hz Performance Curve



>> 60Hz Performance Curve



Note: The above is the standard electric motor curve.

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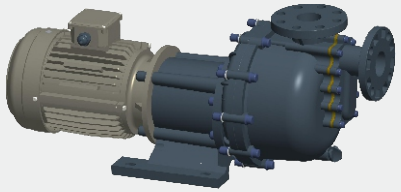
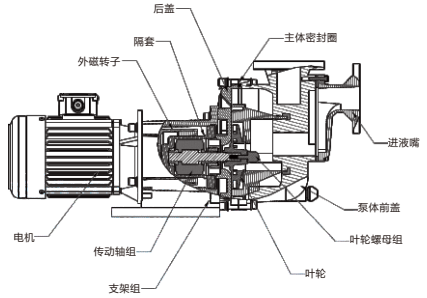
Gas-liquid magnetic pump

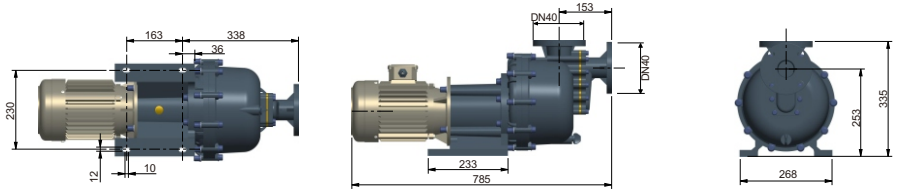
EGL-18 >>>



>> Cross section view



>> Envelop dimensions figure



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>> Optional Materials & Temperature Range of Overcurrent Components

Pump Body		Sealing Element		Wear Parts	
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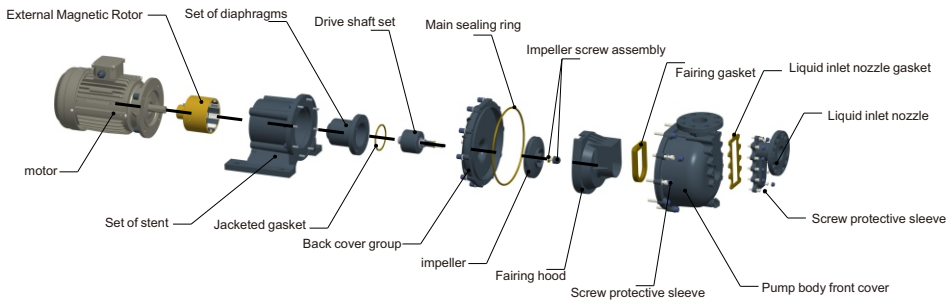
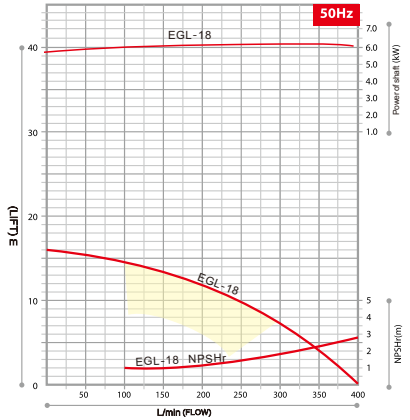
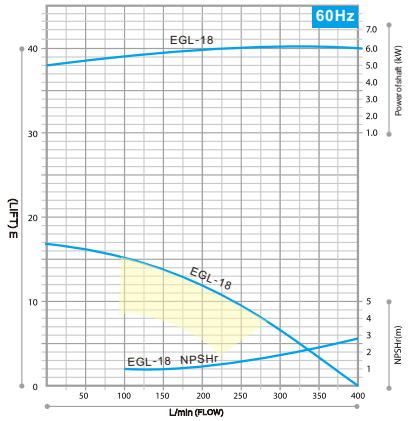
>> series decomposition figure



>> 50Hz Performance Curve



>> 60Hz Performance Curve

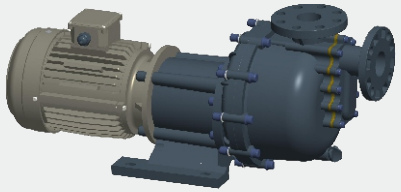


Note: The above is the standard electric motor curve.

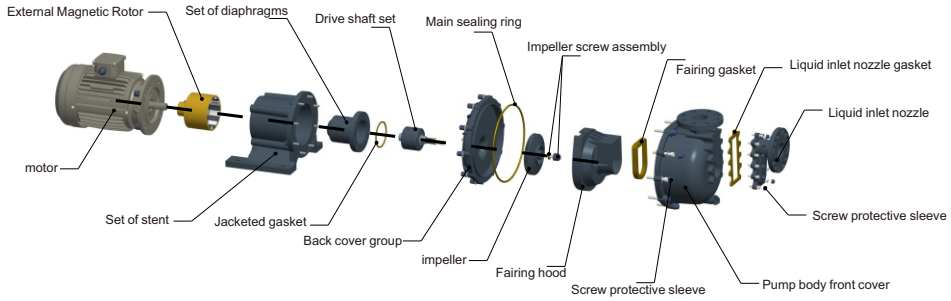
Eicen

Gas-liquid magnetic pump

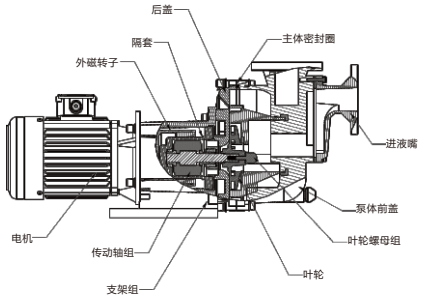
EGL-25 >>>



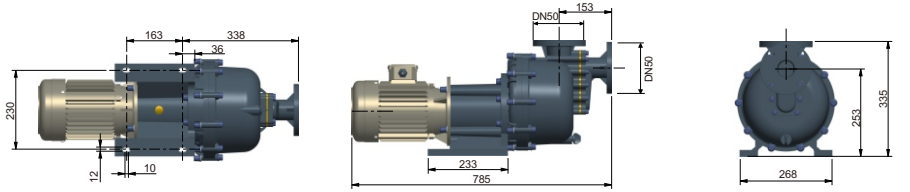
>> series decomposition figure



>> Cross section view



>> Envelop dimensions figure



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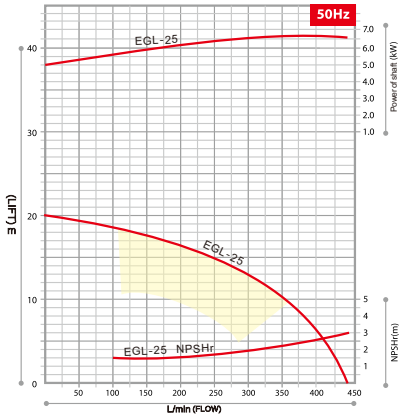
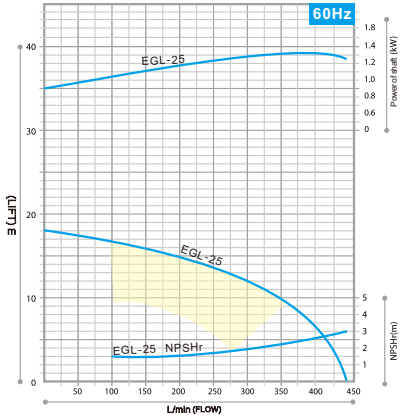


>> 60Hz Performance Curve



Note: The above is the standard electric motor curve.

型号识别代码说明

EGL 12 / P0 / 111 / FF
(1) (2) (3) (4)

1、Series Model

12，18，.....

2、材质代码

常规：P0,K0,S0,E0

选配：PF,KF,SF,EF

（P：PP+GF玻纤增强聚丙烯，K：PVDF，S：PPS，E：ETFE、0：常规、F：选配）

3、马达代码

代码	电压
1	单项220V
2	三项220V
3	三相380V
4	三相415V
5	三相380V
X	客户选配

代码	频率
1	50Hz
2	60Hz
X	客户选配

代码	极数
1	4极
2	2极
X	客户选配

4、接口形式

F：法兰，H：活接，L：螺纹，Q：其它

备注：高洁净等级要求型号尾缀加H。

选型数据表
CHOOSE MODEL DATA TABLES

为了帮您选出合适的泵，请协助尽可能详细提供以下数据。
In order to help you choose the proper pump, please help provide the following data as much detail as possible.

操作条件(OPERATING CONDITIONS)：

所需流量（正常）REQUIRED FLOW (NORMAL)			L/min
所需流量（最大）REQUIRED FLOW (MAXIMUM)			L/min
总扬程 TOTAL HEAD			m
吐出扬程 SPIT OUT THE HEAD			m
吸入扬程 INHALED HEAD			m
NPSHa			m
安装位置 INSTALLATION POSITION	□ 室内 INDOOR	□ 室外 OUTDOOR	
操作状态 OPERATION STATE	□ 连续 CONTINUOUS	□ 间歇 INTERMITTENT	
环境温度 ENVIRONMENT TEMPERATURE	设计 DESIGN ℃	冬 WINTER ℃	
		夏 SUMMER ℃	

介质属性(MEDIA PROPERTIES)：

介质名称 MEDIUM NAME			温度 TEMPERATURE	℃
浓度 CONCENTRATION		%	粘度 VISCOSITY	CP
饱和蒸气压 SATURATED STEAM PRESSURE		MPa	比重 PROPORTION	
固体含量(有) SOLID CONTENT (CONTAIN)	μ	%	硬度 HARDNESS	HB

电动机(MOTOR)：

电源 POWER			
转速 SPEED			
防护等级(IP) PROTECTION GRADE (IP)			
绝缘等级 INSULATION CLASS			
防爆等级 EXPLOSIVE-PROOF GRADE	V	相(PHASE)	Hz

注意事项(NOTE)：

1、大头马提供性能曲线图为室温下输送清水时的表现；
DATTO provide performance curve at room temperature water for conveying the performance;

2、按所输送比重而选择合适的叶轮。选择时，给电机输出功率加上5~10%的余量，即：

功率(SP)×介质比量×余量比率(1.05~1.1)≤电机输出功率

注：功率(SP)按介质比重成立正比增大。如果粘度增加，不但功率升高，而且扬程和流量均会改变。因此，泵性能所需功率均会有所变化，必需进行补正计算。详情内容请与我们联系。

According to transport and choose appropriate proportion of impeller. When the choice, motor output power add 5 to 10% of the surplus, namely:

POWER (SP) × MEDIUM PROPORTION × ALLOWANCE RATE (1.05 ~ 1.1)≤ MOTOR OUTPUT POWER

Note: power (SP) was established according to the proportion of medium is increased. If the viscosity increases, not only increased power, and where the head and the flow all can change. Therefore, the pump's performance variation are needed for power, making up necessary calculations. Content for details, please contact us.

3、对于磁力驱动泵，不允许在关闭排放口的情况下作连续性运转，需保持最小的流量。各类泵的所需最小流量请参照“性能参数表”及“性能曲线图”。

For magnetic drive pumps, to not allow the vent closed under the continuity operation, the minimum required to keep the flow. all kinds of pump of the required minimum flow please Refer to "performance parameter table" and "performance curve".

4、为避免泵体内产生气蚀，请必需满足下式；
To avoid the body produces pump cavitation, please must meet next type;

$$NPSHa \geq NPSHr + 0.5$$

NPSHa的计算方法
NPSHa calculation method

$$NPSHa = \frac{10^6(Pa-Pv)}{\rho g} \pm hs - hf$$

Pa：作用于输送介质表面的压力（MPa）
In the role of the surface of the transfer medium pressure (MPa)

ρ：介质密度（Kg/m^3）
Medium density (Kg/m^3)

g：重力加速度（m/s）
Gravity acceleration (m/s)

NPSHa：可利用气蚀余量（米）
Available cavitation residue (m)

NPSHr：必需的气蚀余量（米）
The necessary cavitation residue (m)

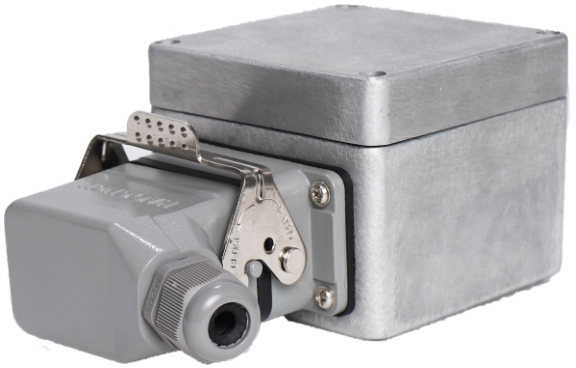
（注：根据性能曲线图选择NPSHr）
(Note: according to performance curve choice NPSHr)

Pv：介质的蒸气压力（MPa）
The medium of the vapor pressure (MPa)

hs：吸升高度（m）
Suck up height (m)

hf：吸入管阻力（m）
Suction pipe resistance (m)

可选电机接线盒接口



使用须知和注意事项

关于泵的选型、安装、调试、运行、故障判断

一、规范总则

为了让泵在寿命周期内安全运行，在设计、施工、维护过程中，都应该遵循科学的技术规范。在设计时根据泵工作点的流量、扬程、比重、管路长度、介质成份、介质浓度、温度、固体含量、液体粘度等参数，确定具体选型，以工作点的流量、扬程、比重、管路长度确定泵的型号、功率、接口尺寸，管路口径。以介质成份、介质浓度、温度确定泵的过流部件材料是否耐介质腐蚀。如有固体含量，应该与供应商确定允许的范围和颗粒直径、硬度等特殊要求，如液体粘度过大，应提供具体参数给供应商确定。施工过程中，应严格遵守管道工程技术和安全性要求，管路口径要与泵的标称一致，可以加大管径，不要减小管径，泵的进出口管路要保留一段直线距离，不要在进出口立即安装弯头，泵属于旋转设备，要固定牢固的底座。日常维护要注意定期清洗，定期监测振动值，熟练管道阀门的常开、常闭设置，演练开机、关机程序。

二、安装注意要点

1、泵的进口管路长度应小于2米，90度弯头小于3个，入口出口管路应保持一段直线，长度为泵的5倍法兰直径，如果进口管路确实需要大于2米、弯头过多，请酌情加大管路口径。
2、进出口管路口径要与泵的要求一致，尤其不能减小，可以加大，如果进口管路直径太小，会产生气蚀现象，叶轮会产生大量空气，带来震动，进口不要有倒U型安装情况，倒U型管路会藏气体。
3、进口管路如需要过滤保护，应安装与管路型号一致带网底阀，并且要规定定期清洗，如果是选择Y型过滤器，应该加大至管路口径的1.5-2倍型号。
4、泵在全流量时，进液口液面不能有漩涡，安装调试时要确定液位高度，最好有低液位限位开关保护。建议1寸（DN25）接口的泵，液位高度不低于20CM，1.5寸（DN40）接口泵，液位高度不低于25CM，2寸(DN50)接口泵，液位高度不低于30CM，2.5寸接口泵，液位高度不低于35CM，以现场液体的最大流量运行不产生旋涡为标准，因为每一种液体的密度、温度、张力不同，会有差异。
5、泵的底座安装要牢固，由于泵是旋转设备，底座安装一定要稳固，防止共振和产生挠性振动。
6、检查液体槽是否密闭，如果密闭太严，进口会有负压，如果有，应该加排气孔。

三、调试

1、进入调试前，清洁所有过流管道。
2、打开所有管道阀门。
3、加入需要的液体量。
4、将进口管路气体排完，检查管路是否通畅。
5、检查电源连接是否适配，接通马达电源，点动3次，确定运转方向。
6、开机运行，观察液位变化，出口是否有气泡。

四、运行监测

1、严禁缺液运行，发现异常噪音、电机表面温度异常升高立刻停机检查。
2、每周定时监测电机前端盖轴承位置正上方的振动值，应小于4.5mm/S，超标即停机检查。
3、检查进口管口液体中不能含有气泡，液体中的溶解性气泡不能进入泵内，需要将气泡析出液面。
4、每天开机前，检查进口管路入口（槽体开孔处）到液面的高度，运行时不能产生旋涡。

五、停机保护

先关闭出口阀门至泵的最小流量，再关闭电源，防止回流液体冲击损坏泵体，在关闭进口阀门和出口阀门。

六、维修保养

1、拆开泵后，先观察外磁转子（主动磁转子）是否有氧化现象，不能有任何液体接触磁体部分，每次拆机维修可以喷快干油漆保护外磁转子。
2、轻拿轻放，保护陶瓷件，泵盖和隔套的装配角度正确，保证零件的洁净。

七、故障判断

1、缺液运行，缺液是现象统称，分完全缺液干运转，半缺液湿运转，进液量不充分运行。完全缺液干运转，陶瓷件会立刻炸裂；半缺液湿运转，液体不会正常流动，温度升高，陶瓷件周围的塑料会产生热熔；进液量不充分运行，泵会产生气蚀，振动变大，轴套松动。
2、超出材料使用范围，超出材料的耐受范围，过流部件会腐蚀、分解、开裂