TEFLOW

Product Manual

TMC-P New generation of stainless steel magnetic pump

——— Professional quality, international standards

ANHUI TENGLONG PUMP AND VALVE MANUFACTURING CO.,LTD.

Warm reminder

Dear client:

In order to protect your safety and interests, before you choose to buy the st -ainless steel magnetic pump of Anhui Tenglong pump valve manufacturing co., Ltd., or have purchased and plan to install the open pump, please read the product manu -al carefully. If you do not follow the guidance of the manual to regulate the opera -tion, resulting in adverse consequences and losses, our company is not responsible.

If you have any doubts about any of the contents of the manual, please submit a written objection to our company within seven working days after ob -taining this manual, and we will provide you with consulting services in time. Otherwise, you will accept, understand and accept the full contents of this ma -nual by default.

About copyright

1.This manual copyright belongs to the tenlong company all rights, without the permission, may not copy, the reproduction printing.

2.Please be sure to keep all the information related to the product properly.

Blessing

Anhui Tenglong pump Valve Manufacturing Co., Ltd.

Directory

Summary

Pump material: Stainless steel(304、316、316L)

Flow:3.6~100 m^3/h,

Head: 20~80 m

Power:1.1-55 kW

Operating temperature:-20~100 ℃

Can customized ≤200 ℃ and steam Insulation type

Design Feature

All of Pump flow parts are made of stainless steel, Have good corrosion resistance For the organic acid, organic compounds,alkaline,Basic salt solution,

TMC—P stainless steel magnetic pump

Model significance

TMC 80 - 65 - 160 P B G

TMC	Magnetic Drive Pump
80	Inlet Size: 80 mm
65	Outlet Size: 65 mm
160	Impeller diameter 160 mm
P	Stainless steel Material
B	explosion proof
G	High temperature

Installation height calculation

In selecting the pump in our company, the instal -lation height should be considered. The vertical dist -ance between the suction level and the pump shaft should be less than the installation height specified by the pump. The following formula is used to calculate:

Hsz≤Ha-Hv-△Hs- (NPSH)r

Hsz—Fixed installation height(m)

Ha—Atmospheric pressure head on site

Hv— Vaporization pressure head of liquid temperature(m)

△Hs— Suction pipe loss head(m)

NPSH— Cavitation allowance specified on the performance parameter table(m)

Pump shaft power

Pump power refers to the input power of the pump, is N.

The output power is the effective power transferred by the pump to the liquid as it passes through the pump. is NE.

$$Ne = \rho \times g \times Q \times H$$

Ne=Shaft power(W)

ρ =Liquid density(m^3/kg)

g=Gravity acceleration(m/s)

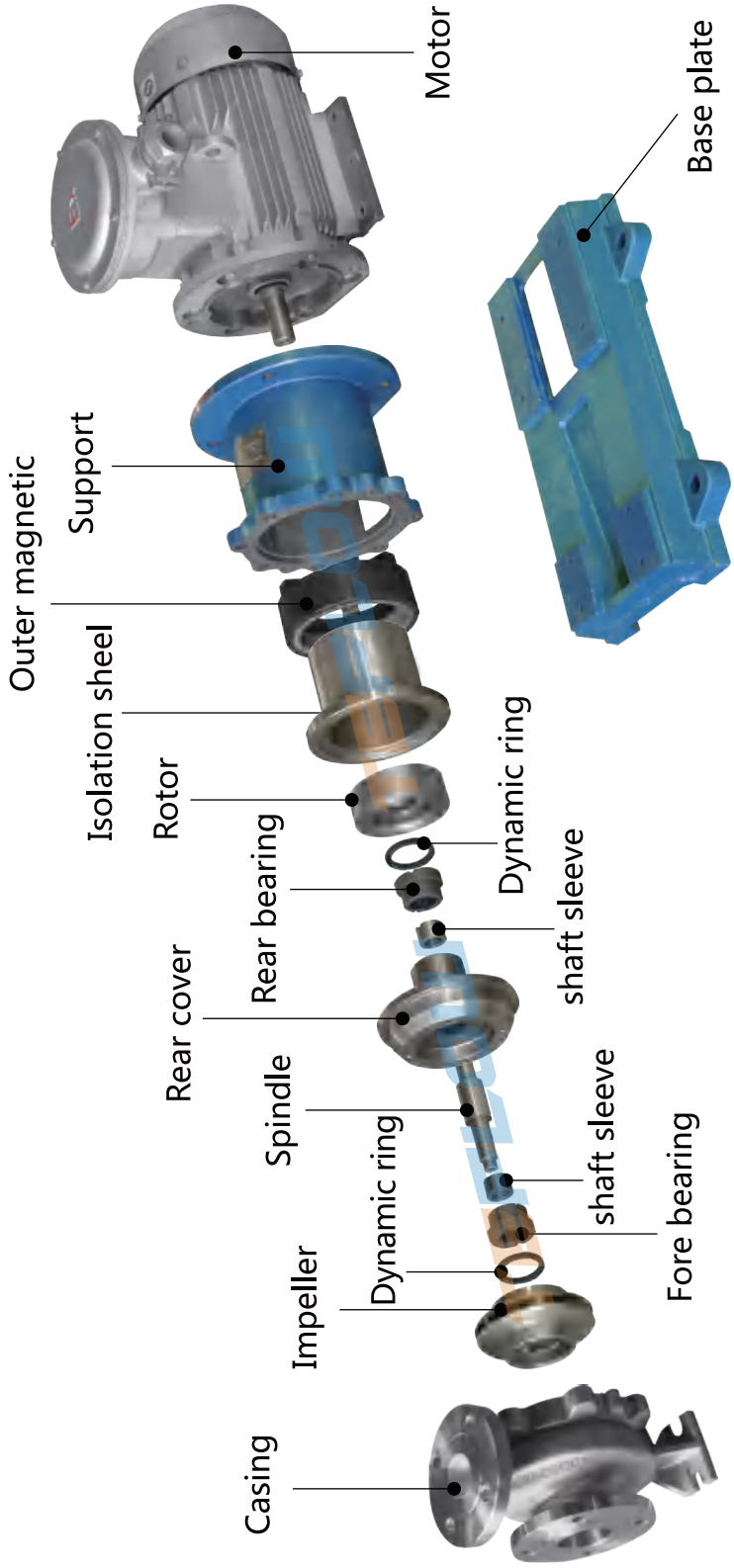
Q=Flow(m^3/h)

H=Head(m)

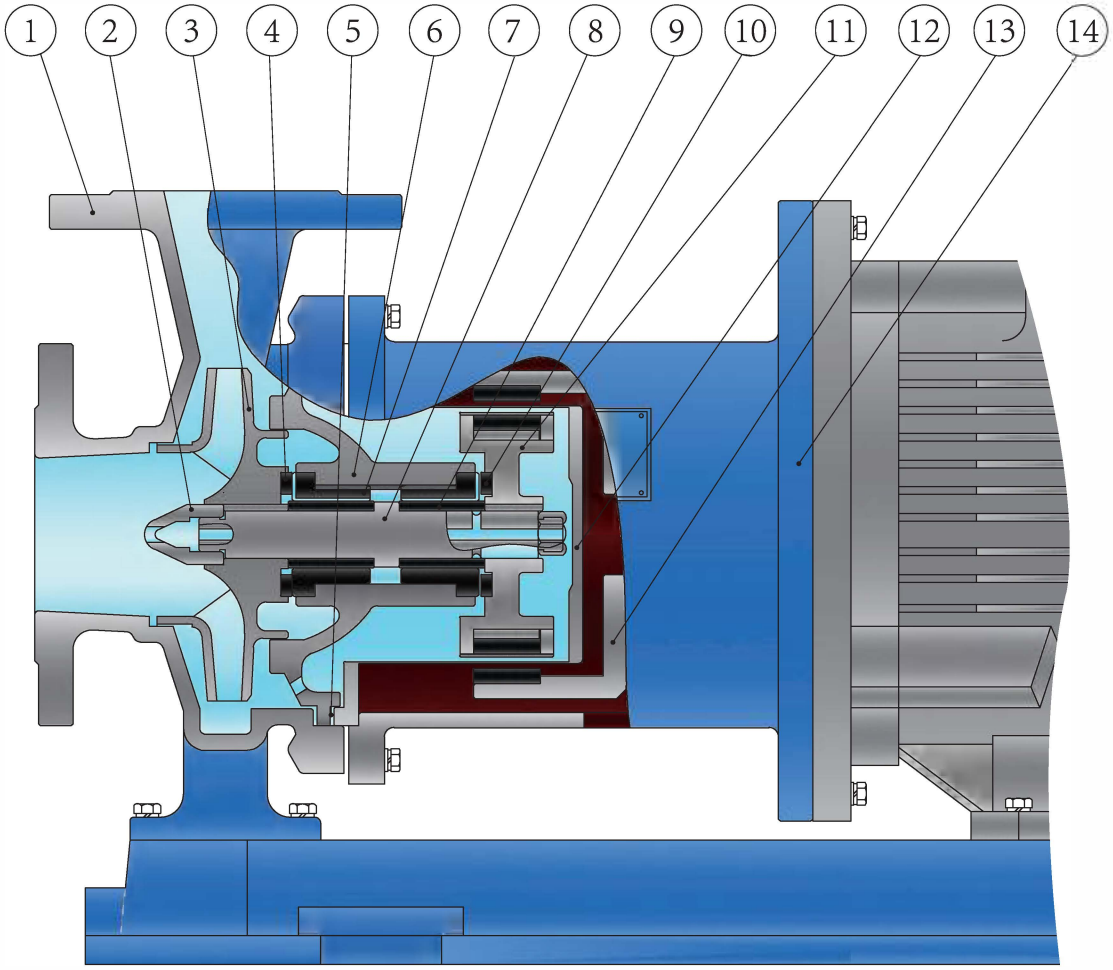
Input power and output power are not equal, bec -ause there is a loss of power in the pump, the size of the loss is commonly used to measure the efficiency of the pump. Efficiency is expressed by η . The efficiency of pump is the ratio of output power to input power.

$$\eta = \frac{Ne}{N}$$

Parts disassembly drawing



Structure and materials

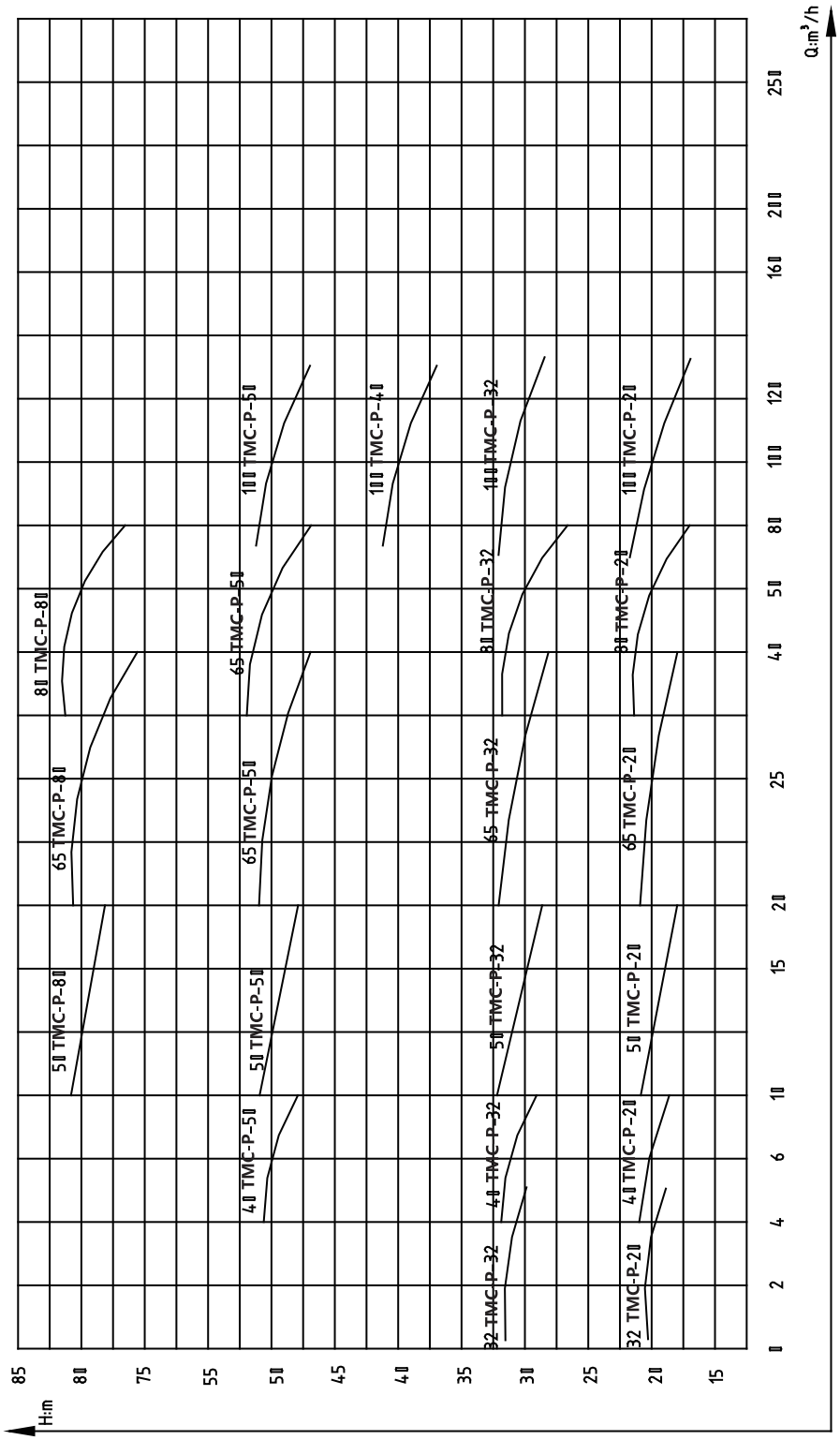


NO.	Name	Material	NO.	Name	Material
1	Pump Casing	Stainless steel	8	Pump Shaft	Stainless steel
2	Impeller nut	Stainless steel	9	Shaft Sleeve	Hard Alloy
3	Impeller	Stainless steel	10	Thrust ring	Hard Alloy
4	Rotating ring	Hard Alloy	11	Inner Rotor	NdFeB
5	Seal Ring	PTFE	12	Isolation sheel	Stainless steel
6	Pump Cover	Stainless steel	13	External inagnetisin	NdFeB/HT200
7	Bearing	Carbon graphite/SIC	14	Connector	HT200

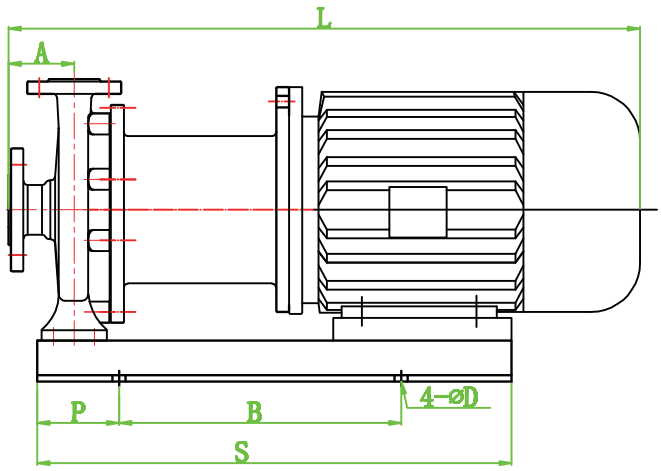
Performance parameter

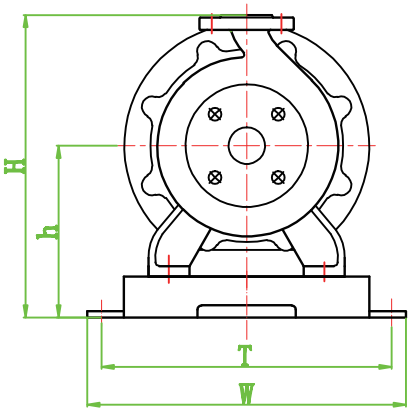
NO.	Type	Flow	Head	Inlet	Outlet	Power	Speed	EFF
NO.	Type	m^3/h	m	mm	mm	kW	r/min	%
1	TMC32-25-125P	3.2	20	32	25	2.2	2900	22
2	TMC32-25-160P	3.2	32	32	25	3	2900	19
3	TMC32-25-200P	3.2	50	32	25	5.5	2900	19
4	TMC40-25-125P	6	20	40	25	2.2	2900	27
5	TMC40-25-160P	6	32	40	25	3	2900	28
6	TMC40-25-200P	6	50	40	25	5.5	2900	19
7	TMC50-32-125P	12.5	20	50	32	3	2900	42
8	TMC50-32-160P	12.5	32	50	32	4	2900	48
9	TMC50-32-200P	12.5	50	50	32	7.5	2900	29
10	TMC50-32-250P	12.5	80	50	32	15	2900	23
11	TMC65-50-125P	25	20	65	50	4	2900	45
12	TMC65-50-160P	25	32	65	50	7.5	2900	42
13	TMC65-40-200P	25	50	65	40	15	2900	34
14	TMC65-40-250P	25	80	65	40	18.5	2900	37
15	TMC80-65-125P	50	20	80	65	7.5	2900	50
16	TMC80-65-160P	50	32	80	65	15	2900	47
17	TMC80-50-200P	50	50	80	50	18.5	2900	44
18	TMC80-50-250P	50	80	80	50	30	2900	45
19	TMC100-80-125P	100	20	100	80	15	2900	53
20	TMC100-80-160P	100	32	100	80	18.5	2900	51
21	TMC100-65-200P	100	50	100	65	37	2900	50
22	TMC100-65-250P	100	80	100	65	55	2900	46

Performance curve

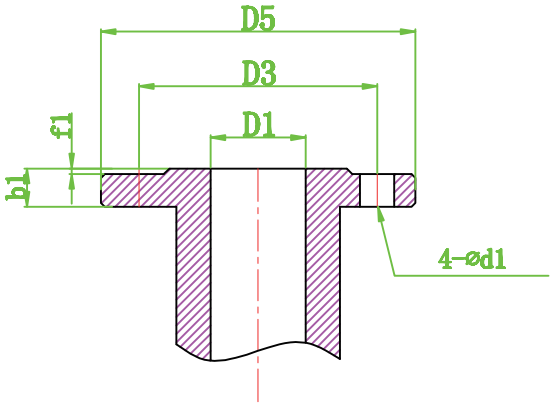


Installation dimension

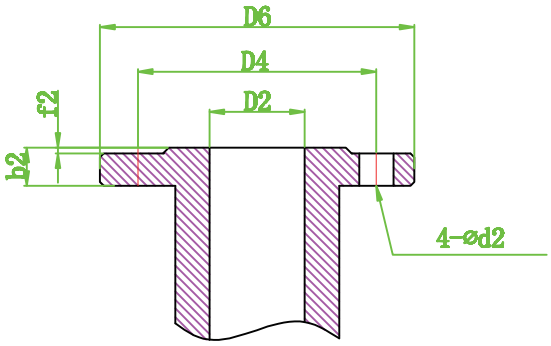




NO.	Type	Mounting size									
		L	B	S	P	A	W	T	H	h	4 -ød
1	TMC32-25-125P	640	300	510	100	80	320	270	150	280	4-Ø16
2	TMC40-25-125P	640	300	510	100	80	320	270	150	280	4-Ø16
3	TMC32-25-160P	665	300	510	100	80	320	270	160	302	4-Ø16
4	TMC40-25-160P	665	300	510	100	80	320	270	160	302	4-Ø16
5	TMC32-25-200P	760	345	580	100	80	390	355	210	370	4-Ø16
6	TMC40-25-200P	760	345	580	100	80	390	355	210	370	4-Ø16
7	TMC50-32-125P	690	315	540	105	80	365	315	162	302	4-Ø16
8	TMC50-32-160P	749	315	540	105	82	365	315	182	342	4-Ø16
9	TMC50-32-200P	790	345	580	100	80	390	355	210	390	4-Ø16
10	TMC50-32-250P	970	500	780	140	100	445	395	240	465	4-Ø16
11	TMC65-50-125P	750	315	540	105	80	365	315	162	302	4-Ø16
12	TMC65-50-160P	790	345	580	100	82	390	355	182	342	4-Ø16
13	TMC65-40-200P	970	500	750	140	100	430	380	210	390	4-Ø16
14	TMC65-40-250P	1010	500	780	140	100	445	395	240	456	4-Ø16
15	TMC80-65-125P	795	345	580	100	100	390	355	342	182	4-Ø16
16	TMC80-65-160P	970	500	780	140	100	445	395	400	220	4-Ø16
17	TMC80-50-200P	1010	500	780	140	100	445	395	420	220	4-Ø16
18	TMC80-50-250P	1120	500	890	200	125	520	465	485	260	4-Ø16
19	TMC100-80-125P	970	500	780	140	100	445	395	400	220	4-Ø16
20	TMC100-80-160P	1015	500	780	140	100	445	395	420	220	4-Ø16



Inlet



Outlet

NO.	Type	Inlet						Outlet					
		D1	D3	D5	b1	f1	4-⌀d1	D2	D4	D6	b2	f2	4-⌀d2
1	TMC32-25-125P	⌀32	⌀100	⌀140	20	3	4-ø18	⌀25	⌀85	⌀115	18	3	4-ø14
2	TMC40-25-125P	⌀32	⌀100	⌀140	20	3	4-ø18	⌀25	⌀85	⌀115	18	3	4-ø14
3	TMC32-25-160P	⌀32	⌀100	⌀140	20	3	4-ø18	⌀25	⌀85	⌀115	18	3	4-ø14
4	TMC40-25-160P	⌀40	⌀110	⌀150	20	3	4-ø18	⌀25	⌀85	⌀115	18	3	4-ø14
5	TMC32-25-200P	⌀32	⌀100	⌀140	20	3	4-ø18	⌀25	⌀85	⌀115	18	3	4-ø14
6	TMC40-25-200P	⌀40	⌀100	⌀150	20	3	4-ø18	⌀25	⌀85	⌀115	18	3	4-ø14
7	TMC50-32-125P	⌀50	⌀125	⌀165	20	3	4-ø18	⌀32	⌀100	⌀140	18	3	4-ø18
8	TMC50-32-160P	⌀50	⌀125	⌀165	20	3	4-ø18	⌀32	⌀100	⌀140	18	3	4-ø18
9	TMC50-32-200P	⌀50	⌀125	⌀165	20	3	4-ø18	⌀32	⌀100	⌀140	18	3	4-ø18
10	TMC50-32-250P	⌀50	⌀125	⌀165	20	3	4-ø18	⌀32	⌀100	⌀140	18	3	4-ø18
11	TMC65-50-125P	⌀65	⌀145	⌀185	20	3	4-ø18	⌀50	⌀125	⌀160	18	3	4-ø18
12	TMC65-50-160P	⌀65	⌀145	⌀185	20	3	4-ø18	⌀50	⌀125	⌀160	18	3	4-ø18
13	TMC65-40-200P	⌀65	⌀145	⌀185	22	3	4-ø18	⌀40	⌀110	⌀150	20	3	4-ø18
14	TMC65-40-250P	⌀65	⌀145	⌀185	22	3	4-ø18	⌀40	⌀110	⌀150	20	3	4-ø18
15	TMC80-65-125P	⌀80	⌀160	⌀200	22	3	8-ø18	⌀65	⌀145	⌀185	22	3	4-ø18
16	TMC80-65-160P	⌀80	⌀160	⌀200	22	3	8-ø18	⌀65	⌀145	⌀185	22	3	4-ø18
17	TMC80-50-200P	⌀80	⌀160	⌀200	22	3	8-ø18	⌀50	⌀125	⌀165	20	3	4-ø18
18	TMC80-50-250P	⌀80	⌀160	⌀200	22	3	8-ø18	⌀50	⌀125	⌀165	20	3	4-ø18
19	TMC100-80-125P	⌀100	⌀180	⌀220	22	3	8-ø18	⌀80	⌀160	⌀200	22	3	8-ø18
20	TMC100-80-160P	⌀100	⌀180	⌀220	22	3	8-ø18	⌀80	⌀160	⌀200	22	3	8-ø18

Technical feature

Inner and outer magnetic steel:

Under normal operating conditions,There is no aging demagnetization with time,Demagnetization occurs when the pump overloads, jams, slippages, or operating temperature is higher than the allowable temperature of the -magnetic steel.Therefore, the magnetic pump must operate under normal operating conditions.

Isolation sheel:

Adopt argon arc welding process, appearance and strength are perfect.

The pressure tolerance limit of the isolation sleeve is 1.6 Mpa.

Pump Shaft:

Glow nitriding was used,The surface of 304 pump shaft is formed a stable ionic membrane,Greatly improve the surface finish,corrosion resistance.

Caution

1、Magnetic pump transport medium is not allowed to contain ferromagnetic impurities and hard impurities.If have Ferromagnetic particles,

2、Magnetic pump is not allowed to operate under the rated flow of less than 30%.

3、For the liquid with medium density greater than 1400kg/m^3,Please inform our sales department,Magnetic cou -pling shall be designed separately.

4、Conveying suction pressure shall not be greater than 0.2mpa, The maximum working pressure is 1.0Mpa.

5、Prevent electrostatic damage:Transfer of liquid with low conductivity, Such as ultra-pure water or inert liquids containing fluorine,There's static electricity in the pump,This causes discharge and pump damage,Should adopt anti-static generation,Draw out static electricity or other measures.

Installation notice

1、Build the concrete foundation according to the size,At the same time embedded anchor bolts,

2、The pump group equipment should be carefully inspected before installation,All parts shall be intact,No sundries in pump cavity,

3、The downpump unit is placed on the foundation,Put a pair of wedges between the base plate and the foundation, Find the level by adjusting the wedge pad.

4、The inlet and outlet pipelines of the pump shall be provided with another support

5、After installation,Turn the coupling by hand,Check for collision,Movement, etc,Easy and free rotation.

6、To prevent sundries entering the pump,Tenglong Pump advise Set the filter at the entrance,The filtration area should be 2-3 times larger than the pipeline cross-sectional area.

7、The pump with high head should install a check valve on the outlet pipe,Prevent sudden downtime from causing damage.

8、The installation height of the pump must be ensured to meet the cavitation allowance of the pump,And consider the loss of pipeline and medium temperature.

Start operation

1.Before opening the equipment, fill the pump chamber with the liquid to be transported to close the outlet valve and connect to the power supply.

2.Turn on the power and check the steering of the pump in the direction of the sign.

3.Pump unit trial operation 5-10 minutes, if there is no abnormal phenomenon can be put into operation.

4.When stopping, the outlet valve should be closed first, and then cut off the power supply.

Equipment disassembly

1.Wash the pump body with clear water first when disassembling until the corrosive medium inside the pump shell is completely clean.

2.when replacing pump machine fittings, may not use sharp object, hard object to hit the pump parts, the removed pa -rts should be light, sealing face facing up.

Maintenance

1.Periodic inspection of pumps and motors, replacement of vulnerable parts.

2.When the long-term stop is not needed, clean the flow channel inside the pump and cut off the power supply, and cover the dust cover.

3.Turn on the machine in the direction of the sign. Reverse and idling are strictly prohibited.

After-sale service

Provision of spare parts： Tenglong is able to quickly and reliably supply vulnerable parts and spare parts needed in the production phase to ensure that production does not stagnate.

Equipment maintenance:Tenglong will help customers to maintain and maintain equipment, timely detection of weak links, careful management to reduce or even avoid repair costs.

Timely service:Equipment downtime or malfunction, customers can contact Teng long Company at any time, we will make a quick response for you.

Technical support:Teng long service, dedicated and meticulous. We will provide consultation for customers, elite after-sales team, advanced service awareness, expert technical guidance, throughout the product design, selection, sales, use of the entire process.

Simple problem solving

Problem description	Cause analysis	Solution
Unextractable medium	1.Air in inlet piping 2.Inlet pipe leakage 3.Liquid shortage in pump cavity 4.Foreign body in inlet pipe 5.Pump equipment steering marking is inconsistent 6.The suction height is too high	1.Recharge/exhaust 2.Is the inlet pipe damaged 3.Increased injection of liquid 4.Check the pipeline for foreign bodies 5.Adjusting the steering of pump equipment 6.Lower installation height
Flow, head insufficiency	1.There is foreign body in the pipeline 2.Motor speed insufficiency 3.Impeller damage	1.Clean up foreign bodies 2.Check motor and circuit 3.Replacement of impeller
Excessive power	1.Medium density is too large 2.The error between pump axis and motor axis is large 3.Mechanical friction	1.Reducing the specific gravity of medium 2.Adjust axis position 3.Carry out overhaul
Pump equipment vibration	1.Big error between pump axis and motor axis 2.High suction, cavitation 3.Mechanical friction	1.Adjust axis position 2.Lower installation height 3.Inspection of wear and tear

Special performance

Optional name	Description
Heat preservation casing	Heat pump cavity,Prevent damage to isolation sleeve and rotor after crystallization
Insulation sleeve	Insulation sleeve,Prevent internal crystallization of spacer,Damage to the rotor
Heat-resisting material	Suitable temperature at 100℃-250℃
Motor protector	Motor overload、default phase、Low load etc,Power can be cut off instantly
Non-standard motor	Used for special occasions、special working condition、special requirements
Non-international flange	Can be customized according to the requirements of any standard flange

If you have other technical requirements,Please contact our sales department.

Full service

1.Pre-sale services:Help customers select and design.

2.After-sales service:The warranty is one year.

3.Availability of spare parts.

Easily damaged parts

Name	Remarks
Impeller mouth ring	Wear and tear parts are friction parts, good maintenance and maintenance can improve the service life. Full day boot, suggest 1500 hours of inspection, often used, it is recommended to check once a month, long-term downtime, it is recommended that before the boot check once.
Rotor	
Sliding bearing	
Isolation sleeve	
Static ring	
Pump cover bearing	

Corrosion resistance table

Chemical resistance ratings:		Chemical resistance ratings:	
A	Excel lent	1	20℃
B	Good	2	40℃
C	Fair	3	60℃
X	Not recommended	4	80℃
-	Date not aval lable	5	100℃
		6	120℃

CHEMICAL		PP	PVDF	PTFE	Stainless steel	FKM	NBR	99 Ceramic	High density carbon
Sul furica Acid	0~10%	A4	A6	A6	B1	A6	B2	A5	A6
	10~75%	A3	A3	A6	X	A4	X	A5	A6
	75~100%	B2	B1	A4	C1	A4	-	A5	A4
Nitric Acid	10%	A3	A3	A5	A5	A5	X	A5	A6
	30%	A2	A3	A6	A5	A6	X	A5	A6
	50%	B2	A3	A3	A5	A1	X	A5	A5
Hydrochloric Acid	0~25%	A4	A6	A6	X	A3	B1	A5	A6
	15~40%	A4	A6	A6	X	B2	X	A5	A6
Hydrofluoric Acid	10%	B2	A6	A6	X	A3	X	-	A3
	30%	C2	A6	A6	X	A4	-	-	A3
	60%	X	A5	A6	X	A4	-	-	A2
Acetic Acid	20%	A2	A3	A6	B5	B1	B2	A5	A4
	80%	B1	A3	A6	B1	X	-	A5	A4
Souium Hydroxide	20%	A3	A3	A6	B1	B1	B2	-	A3
	50%	A3	A3	A6	B1	X	B1	-	A3
Bromine Water		C1	A4	A3	C1	A2	-	A1	A2
Ethyl Alcohol		A2	A6	A3	B5	A3	X	A3	A5
Acetone		A2	X	A6	A5	X	-	A3	A5
Freon12		X	A4	A6	B5	A1	X	A4	A4
Aluminum Chloride		A4	A6	A6	X	A5	B4	A4	A5
Ammonia Liquid		A1	A4	A6	A5	C1	B1	A3	A5
Aqua reria		C2	A1	A5	X	B2	-	A4	-
Fornaldehyde		A4	A4	A6	A4	A4	X	A4	A5
Gasoline		X	A6	A6	A5	B3	B3	A4	A6
Kerosene		A1	A6	A6	A5	A1	B1	A4	A6
Methyl alcohol		A3	A6	A6	A5	B2	B4	A5	A6
Toluene		C1	A3	A4	A5	B1	-	A5	A4
Trichloroethylene		C1	A6	A6	B5	A1	-	A4	A6
Xylene		X	A3	A6	A5	B1	-	A5	A5
Nitric acid anhydrous		C1	A3	A3	-	A1	-	A5	A2
Oleum		X	X	A6	X	A4	-	A5	A2
Potassium hydroxide		A4	A3	A6	A1	B1	C2	-	A6

No leakage Maintenance free Super corrosion resistance

ANHUI TENGLONG PUMP AND VALVE MANUFACTURING CO.,LTD.

No. 30, fortune east road, Jingxian economic and technological development zone, Xuancheng, Anhui province, China

teflowpumps@tlpumps.com

242500

www.tlpumps.com