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TMV

Series

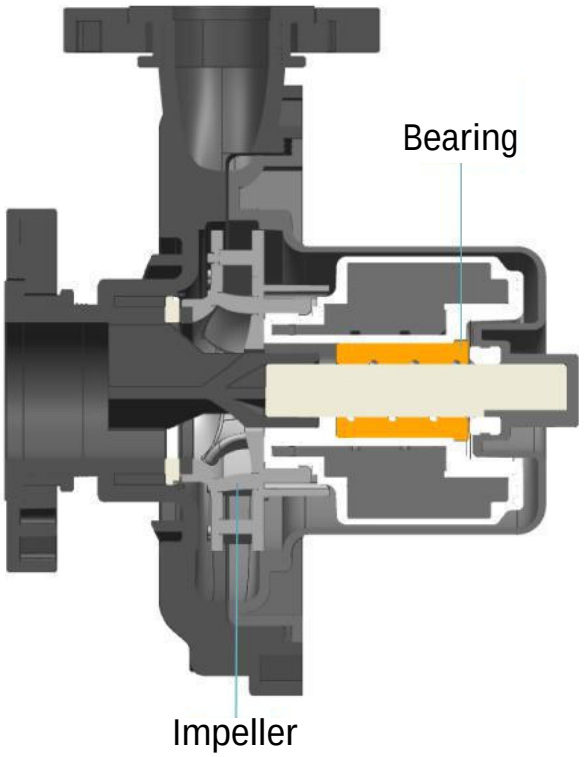
IE5 Permanent Magnetic Pump

TMV Series Permanent Magnet Pump

The TMV series permanent magnetic pump components mainly consist of various corrosion-resistant materials such as CFRPP/GFRPP/PVDF/CFRETFE. The TMV series permanent magnetic pump operates on the principle of a permanent magnetic motor, with an impeller added to its rotor, and the shell structure designed to form a cavity that allows the liquid to perform centrifugal motion. Its main features include: small size, high efficiency, low power consumption; energy efficiency level reaches IE5, and protection level reaches IP66; compared to conventional asynchronous motor magnetic pumps, it has a longer service life, lower noise, and less vibration. Various material selection allows for a wider range of applications, suitable for transporting various strong acid and strong alkali liquids in various chemical processes, as well as for transporting high-purity chemicals and ultra-pure water in the semiconductor industry.

01. Large Flow Impeller Channel Design

The impeller channel has been verified through fluid mechanics calculations, fully utilizing the pump's centrifugal force to achieve optimal efficiency, with a maximum flow rate of up to 1050 L/min.



02. Compact Size

Lightweight, small size, simple structure, modular components, easy to maintain.

03. High Efficiency and Energy Saving

IE5 energy-efficient motor, variable frequency control, energy-saving and efficiency-enhancing, reducing operating costs.

04. Protection Level

Protection level reaches IP66, ultra-high protection, dustproof and waterproof.

5. High lift

The TMV-4KW series has a maximum lift of up to 31M, expanding its application range.

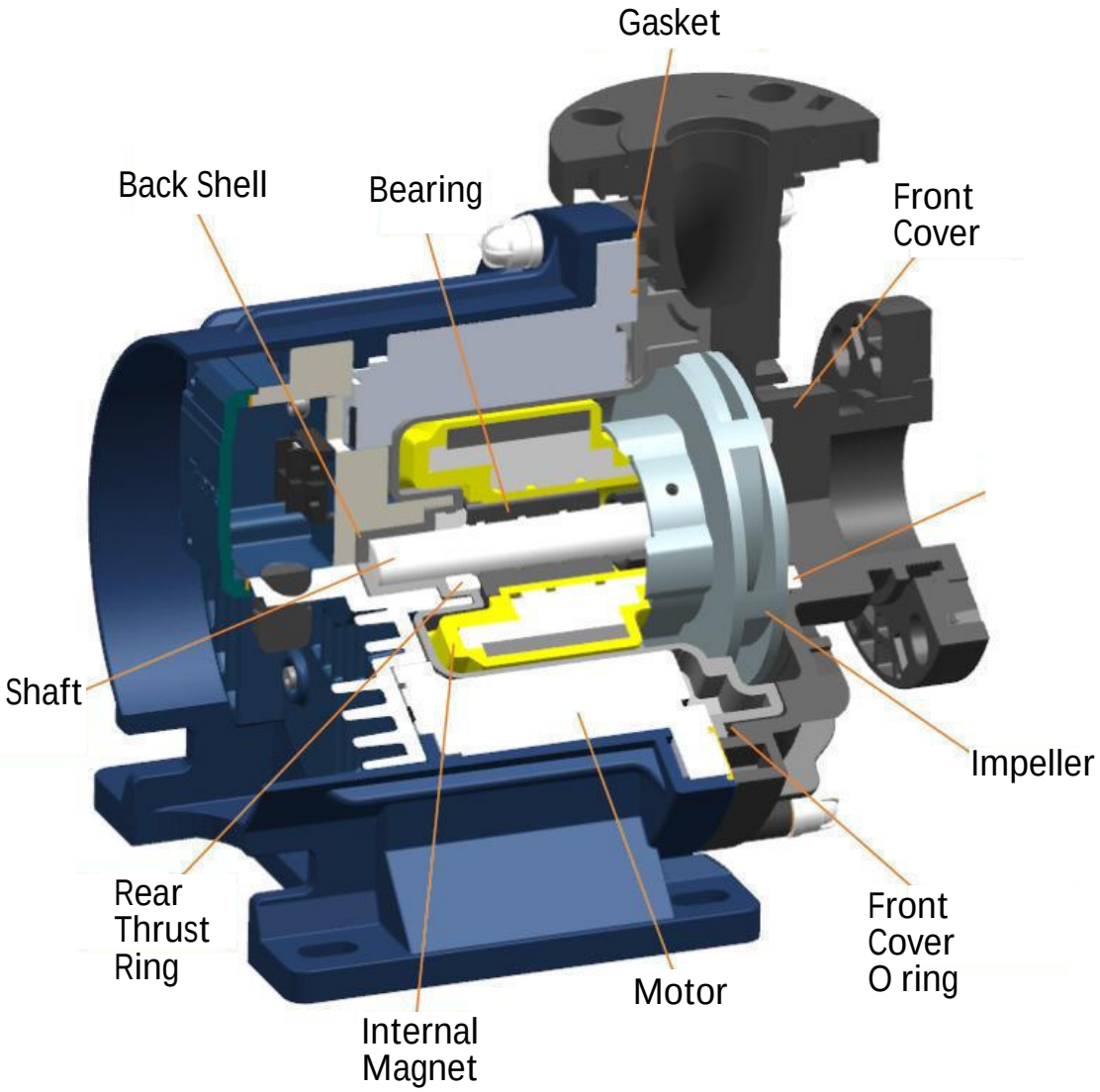
7. Complies with JIS standards

The pump has a universal pipeline interface that complies with JIS standards.

06. Ultra-quiet

No cooling fan, low temperature rise, low noise, low vibration value.

Structural Diagram



Pump Material

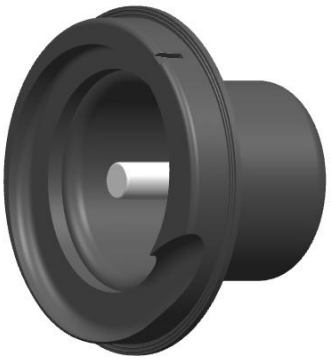
	Back Cover	Back Shell	Impeller	Magnetic Capsule	Front cover O ring	Bearing	Shaft	Front static ring	Rear thrust ring	Rotating ring
1	CFRPP				EPDM	Ceramic		Ceramic		PTFE
2	GFRPP									
3	PVDF				VT			SSIC		PTFE
4	CFRETFE				FKMA	SSIC		SSIC		SSIC

Pump End

The unique pump end reinforcement design provides strong mechanical strength and excellent corrosion resistance. Different materials are suitable for different chemical compatibility.

Rear Shell

The unique vortex design of the rear shell maximizes pump efficiency.
The rear shell seal is secured together by bolts passing through the front shell, making it easy for disassembly and not prone to leakage.



Magnetic Capsule

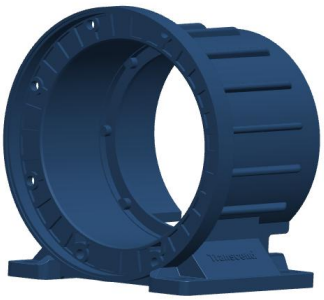
Powerful rare earth magnets are molded in one piece, ensuring no demagnetization and high corrosion resistance. This new compact and lightweight design improves the pump's efficiency. The anti-dry running heat dissipation structure prevents abnormal operation and extends service life.

Rear End Cap

The new cast aluminum rear cover is integrally formed, enhanced with special processes for corrosion resistance, and features a high corrosion-resistant paint finish that is wear-resistant, does not peel, and is lightweight.

Pump Outer Shell

This new design reduces weight without compromising strength, while also being more compact.

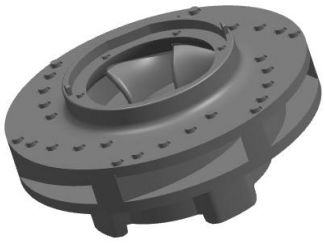


Shaft

The two ends of the shaft core are supported by the front shell and the rear shell. Made of silicon carbide SSIC material, it has strong corrosion resistance, heat and wear resistance, impact resistance, and a long lifespan.

Impeller

The TMV series adopts a high-efficiency closed impeller design.
To securely fix the impeller to the magnetic capsule, a snap connection is used to prevent axial movement of the impeller away from the magnetic capsule and to prevent slipping.



Seal gasket

The gasket is covered with EPDM rubber,which has strong corrosion resistance and excellent sealing properties, providing effective multiple protection to safeguard the motor contact surface and prevent motor erosion.

Bearing

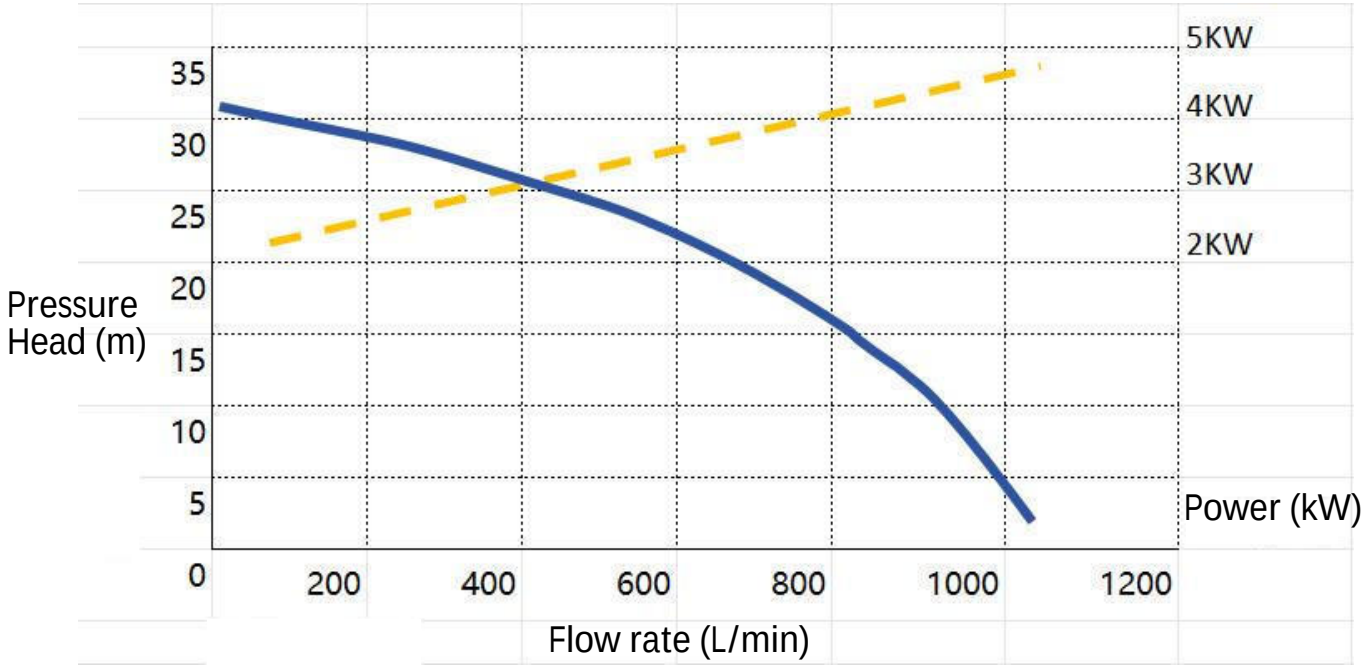
The bearing is made of silicon carbide SSIC material. The unique heat dissipation channel design offers strong corrosion resistance, heat and wear resistance, impact resistance, and a long lifespan.

Model Identification

TMV - 6 5 5 P V S S F - 3_	
1 2 3 4 5 6 7 8 9	
1. Model Number Type: TMV	5. O-RING material E - EPDM V -VITON F - FKM A - FKMA
2. Suction Nozzle 8 -3.0 inches (φ80) 6 -2.5 inches (φ65) 5 -2.0 inches (φ50) 4 -1.5 inches (φ40)	6. Axis material A-ceramic S-SSIC R-PTFE
2. Discharge Nozzle 8 -3.0 inches (φ80) 6 -2.5 inches (φ65) 5 -2.0 inches (φ50) 4 -1.5 inches (φ40)	7. Bearing material A-955 ceramic C-carbon S-SSIC R-PTFE
3. Power 1 -1.1KW 2 -1.5KW 3 -2.2KW 5 -4KW 6 -5.5KW 7 -7.5KW	8. Piping form F-flanged M-threaded
4. Pump body material C-CFRPP E-ETFE P-GFRPP K-PVDF	9. Voltage 2: 220V-240V 3: 380V-480V

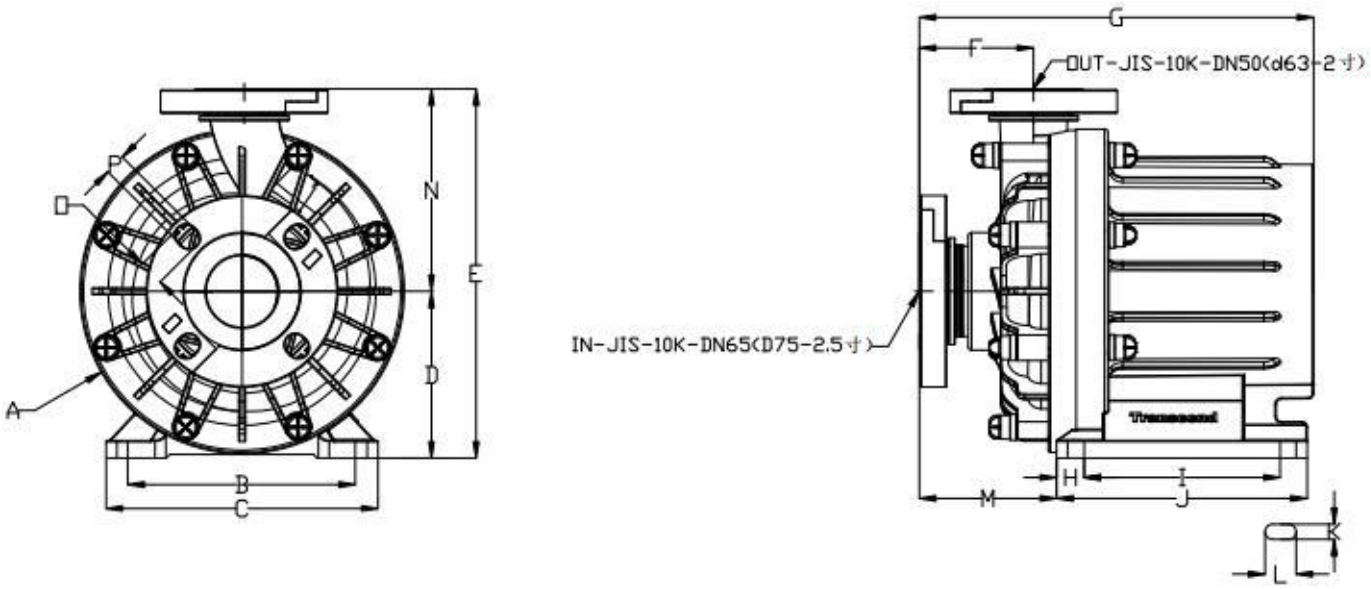
Specification Table

Model	Suction/ Discharge	Flow Rate (L/min)	Pressure head (m)	Maximum flowrate (L/min)	Maximum pressure head (m)	Motor output power (KW)
TMV-655PESSF-3	65A X 50A	625	23.5	1050	31	4



Exploded View

Number	Part Name	EAR	VAR	EAA	VAA	ESS	VSS
1	Front Cover	GFRPP/ CFRPP/ PVDF/ CFRETFE					
2	Front Thrust Washer	Ceramic				S-SIS	
3	Shaft	Ceramic				S-SIS	
4	Interface Ring	PTFE				S-SIS	
5	Impeller	GFRPP/ CFRPP/ PVDF/ CFRETFE					
6	Bearing	PTFE		Ceramic		S-SIC	
7	O-ring	EPDM	VITON	EPDM	VITON	EPDM	VITON
8	Back cover	GFRPP/ CFRPP/ PVDF/ CFRETFE					
9	Suction/Discharge	GFRPP/ CFRPP/ PVDF/ CFRETFE					
10	Motor	/					
11	Outer Shell	PP					
12	Rear cover	Aluminum					



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	重量kg
TMV-4KW	298	209	250	153	338	105	362	25	180	230	14	29	126	186	23	19	27