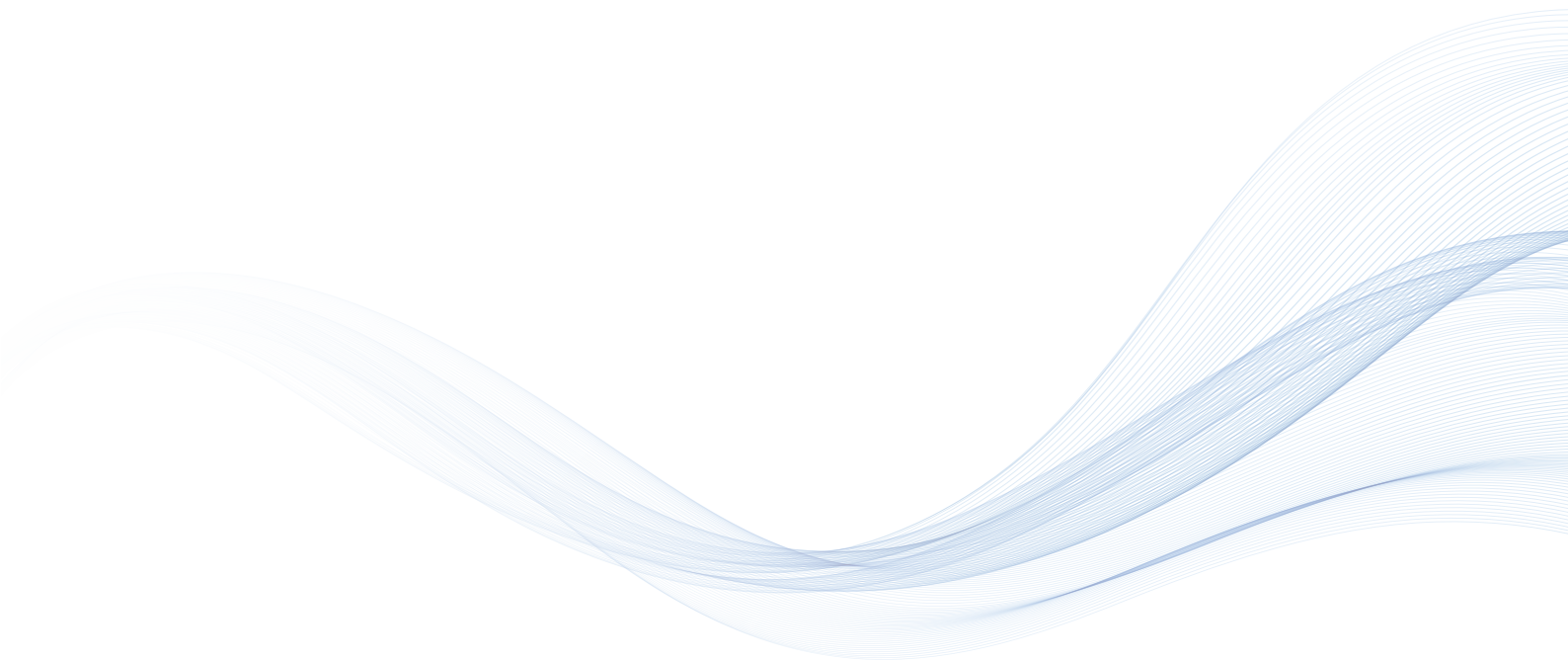


PFA Lined High Efficiency



TYMAG[®]

Magnetic Drive Pump





TYMAG LM Series

Fluonics' TYMAG LM Series pumps are magnetic drive pumps applied to chemical and semiconductor processes, and the best-in-class efficiency is achieved by using optimized design. In addition, we have manufactured and installed an integral structure impeller with our own technology of lining PFA material with excellent chemical resistance and heat resistance with a uniform thickness.



PFA Lined integral impeller with Fluonics' unique integral impeller molding design

One-piece structure to increase production efficiency and improve its durability.

Unrivaled lining technology

Uniform thickness and perfect lining quality enabling to have high corrosion resistance and heat resistance.

High-efficiency impeller design

Optimal impeller design technology using computational flow analysis.

New balancing hole structure to minimize efficiency degradation

Balancing hole structure developed to control the axial thrust as well as to maximize its performance.

Magnetic coupling optimization design technology

Optimal magnet coupling design technology in consideration of eddy current loss reduction magnet arrangement design technology, high efficiency structural design and analysis technology, and appropriate pullout torque of the pump.

Leak-free sealing structure

Line contact type sealing structure ensures no leakage of any dangerous chemicals. With a metal to metal sealing structure, the bolt requires no tightening even after a long term use, not allowing any leakage.

High durability and easy maintenance

Improved durability with the integrated impeller. Minimum maintenance costs with few components. High compatibility using universal components.

High-Efficiency Magnetic Drive Pump with PFA Lined Integral Impeller

Fluonics' TYMAG LM Series pumps are PFA Lined pumps that have been independently developed based on high technical independence. It has excellent compatibility between parts through standardized design, and flanges of various standards (ANSI, JIS, DIN) can be applied. In addition, it is a pump that can be installed in a narrow space by applying a direct coupling type and does not require a separate alignment work.

Front Casing

Optimal volute casing without flow separation and vortex generation lined with uniform thickness of PFA.



Thrust Ring

Thrust ring made of PFA Lined SSiC supports the axial thrust of the impeller during the initial start-up of the pump and helps stable operation.



Impeller

Close type, fully integrated PFA Lined impeller with driving magnet that is optimally designed based on the power required for the pump. Highest efficiency level in its class through optimal design of efficiency using CFD(Computational Fluid Dynamics) Application of Shroud Rounding & Extended Impeller Blade Reading Edge that effectively suppresses the occurrence of threatening cavitation in terms of durability of pump and impeller.



Rear Casing

Non-metal rear casing with dual structure combining PFA material with high strength and low deformation engineering plastic material. Enough to withstand the heat and pressure inside the pump without generating eddy currents and sealing it effectively.

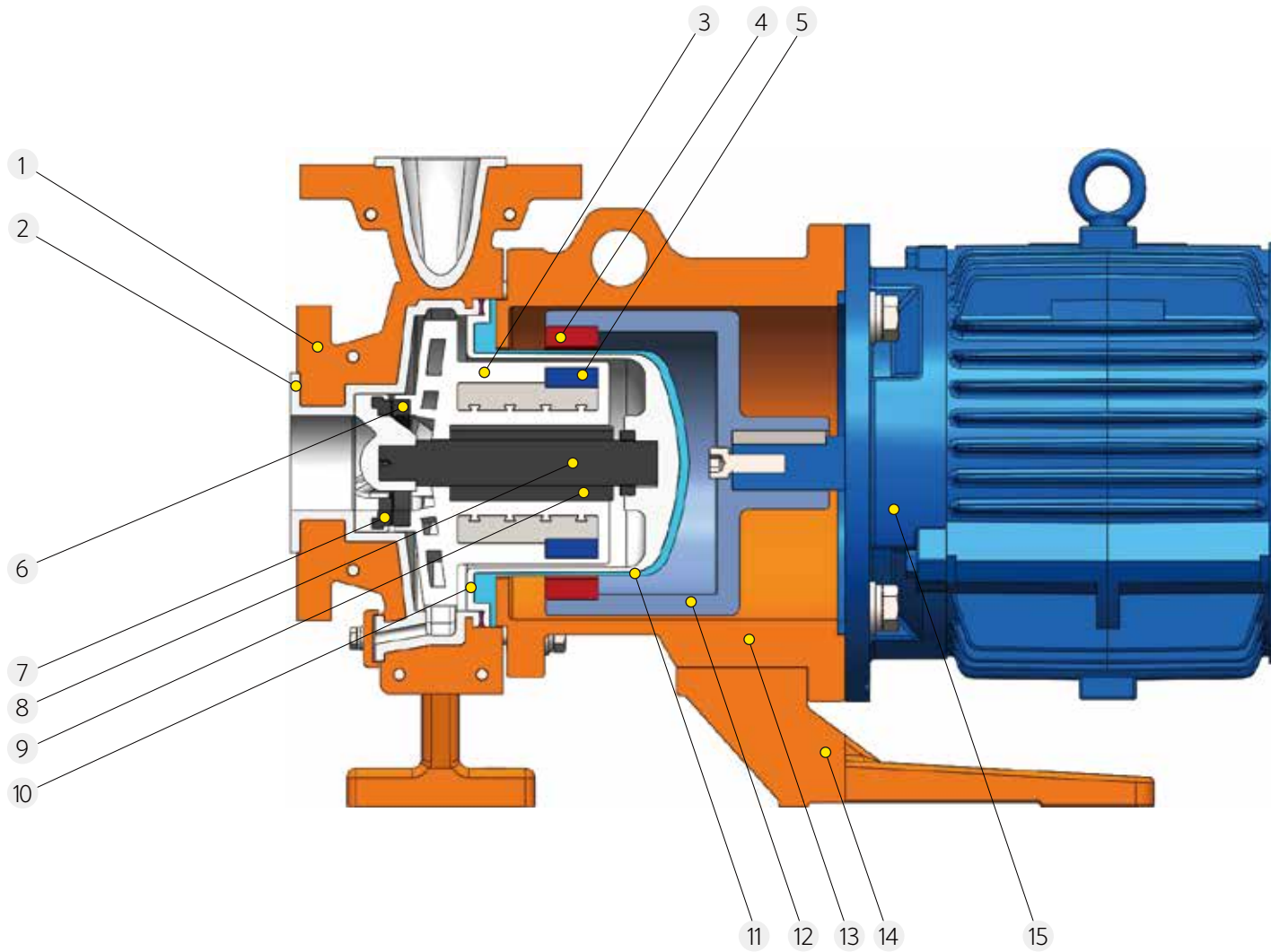


SSiC Shaft

SSiC material shaft with balancing hole structure that effectively controls axial thrust with minimal reduction in efficiency



● Construction and Material



Part No.	Part Name	Materials	Part No.	Part Name	Materials
1	Front Casing	WCB	9	Shaft Sleeve	SSIC
2	Casing Liner	PFA	10	Rear Casing	PFA
3	Impeller	PFA	11	Containment Shell	ENG-PLA
4	Outer Magnet	NdFe	12	Outer Rotor	S45C
5	Inner Magnet	SmCo	13	Adapter	WCB
6	Mouth Ring	SSIC	14	Adapter Supporter	WCB
7	Thrust Ring	SSIC	15	Motor	CI
8	Shaft	SSIC			



Design

- ISO2858 , ISO15783
- Direct Coupled
- Eddy Current Free
- Flange ANSI(150lbs), JIS(10K), DIN(PN 16bar)
- Material WCB
- Impeller Closed Type

Range

- Allowable Temperature : $-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$
- Pressure Range : 16 Bar(Maker Standard)
- Flow Range : Up to $130\text{m}^3/\text{h}$ (2167LPM)

Application

Chemical treatment process, nitric acid transfer process, metal plating process, hydrochloric acid transfer process, circuit board manufacturing process, chloride treatment process, sodium hydroxide transfer process, hypochlorous acid transfer process, food processing sulfuric acid application process, semiconductor cleaning process, heat exchanger application, chromium acid transfer process, scrubber system, chlorine-alkali process, etc.

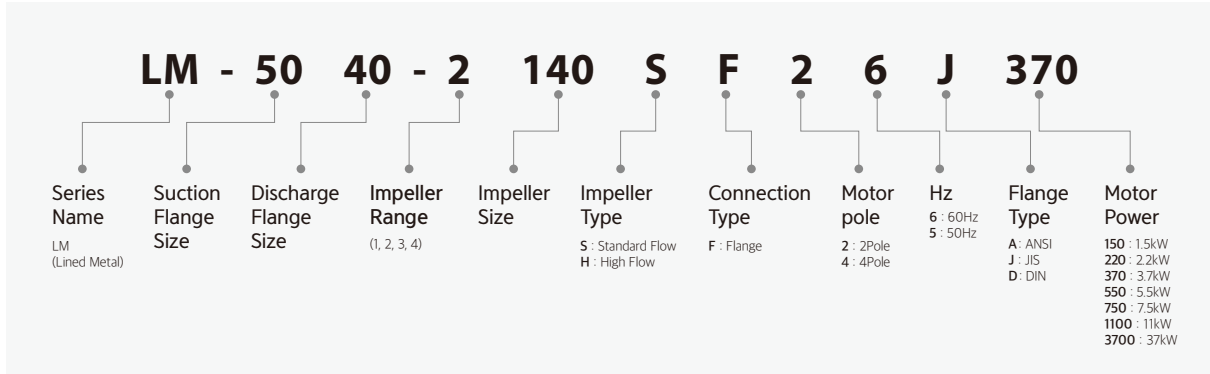
Liquid

Acetic acid, hydrofluoric acid, benzene, caustic soda, chlorosulfonic acid, chromic acid, hydrochloric acid, hydrogen peroxide, methyl ethyl ketone, nitric acid, phosphoric acid, sodium hypochlorite, sulfuric acid, etc.

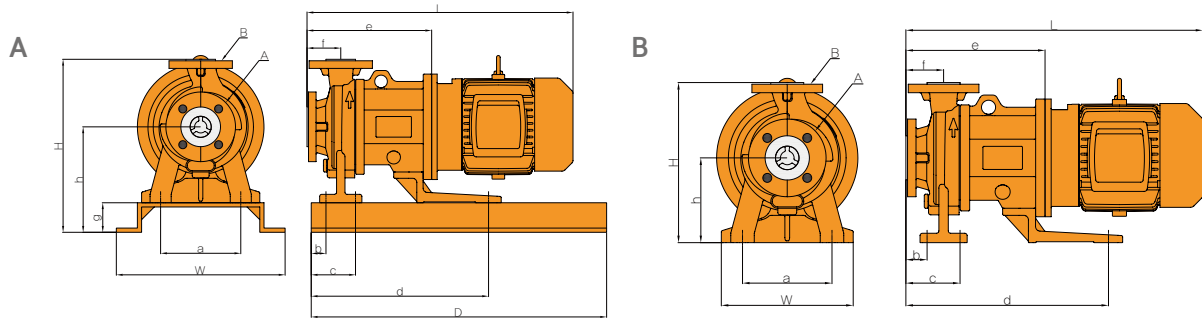
Option

- Drain Connection with Flange
- Leak Sensor
- Temperature Monitoring

Pump Identification



Pump Dimensions



A With Base

(mm)

Model	Motor kW	W	H	L	D	a	b	c	d	e	f	g	h	A	B	Mass kg
LM-4025-150S	2.2	400	410	625	700	190	35	105	420	311	80	70	250	40	25	140
	3.7			295						145						
	5.5			315						165						
LM-4025-150H	3.7	400	410	630	700	190	35	105	420	295	80	70	250	40	25	145
	5.5			315						165						
	7.5			315						165						
LM-5040-150S	2.2	400	410	625	700	190	35	105	420	311	80	70	250	50	40	140
	3.7			295						145						
	5.5			315						165						
LM-5040-150H	3.7	400	410	630	700	190	35	105	420	295	80	70	250	50	40	145
	5.5			315						165						
	7.5			315						165						
LM-8065-170	11	440	500	890	900	220	63	158	648	415	100	90	320	80	65	250
LM-10080-200	37	500	620	1135	1200	250	43	138	775	475	100	120	400	100	80	500

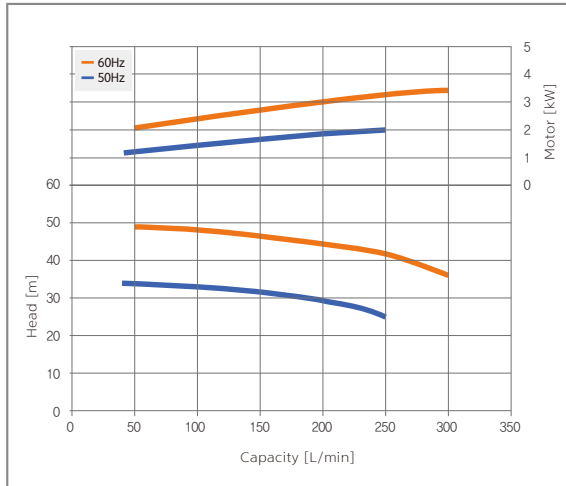
B Without Base

(mm)

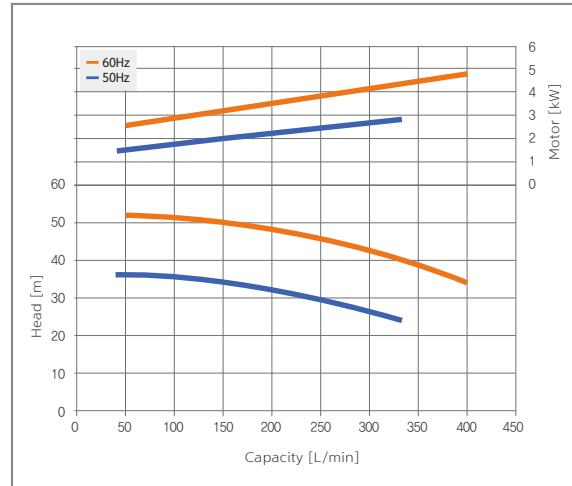
Model	Motor kW	W	H	L	a	b	c	d	e	f	h	A	B	Mass kg
LM-4025-150S	2.2	280	340	625	190	45	115	430	311	80	180	40	25	115
	3.7			295					120					
	5.5			315					140					
LM-4025-150H	3.7	280	340	630	190	45	115	430	295	80	180	50	40	120
	5.5			315					140					
	7.5			315					140					
LM-5040-150S	2.2	280	340	625	190	45	115	430	311	80	180	40	25	115
	3.7			295					120					
	5.5			315					140					
LM-5040-150H	3.7	280	340	630	190	45	115	430	295	80	180	50	40	120
	5.5			315					140					
	7.5			315					140					
LM-8065-170	11	280	410	890	220	53	148	638	415	100	230	80	65	210
LM-10080-200	37	380	500	1135	250	53	148	785	475	100	280	100	80	430

● Performance Curve

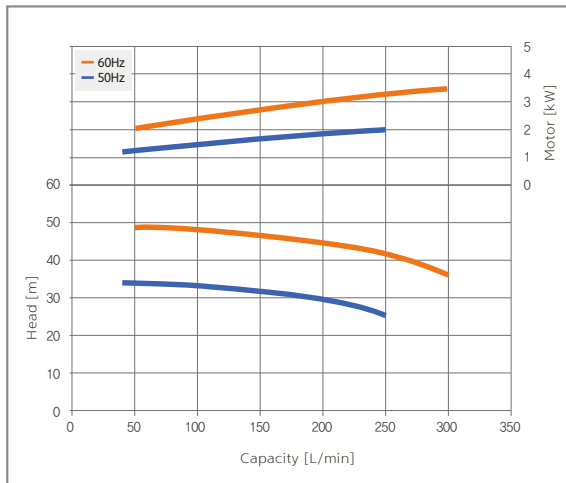
LM-4025-150S



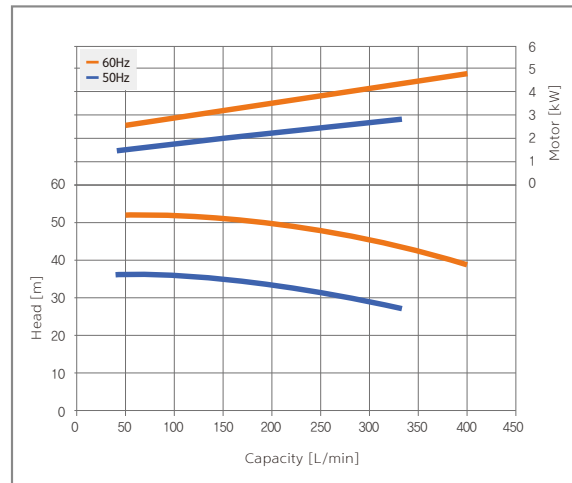
LM-4025-150H



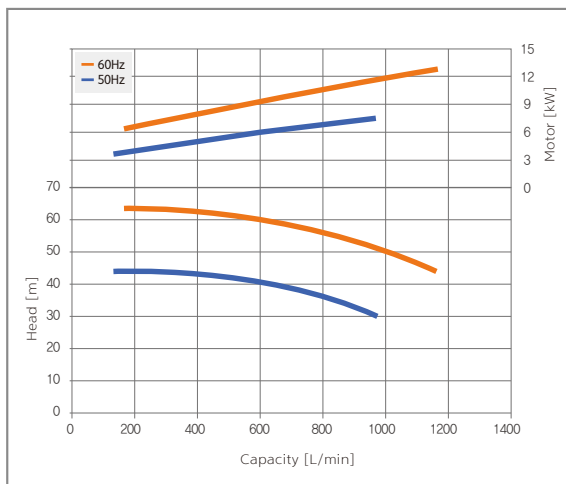
LM-5040-150S



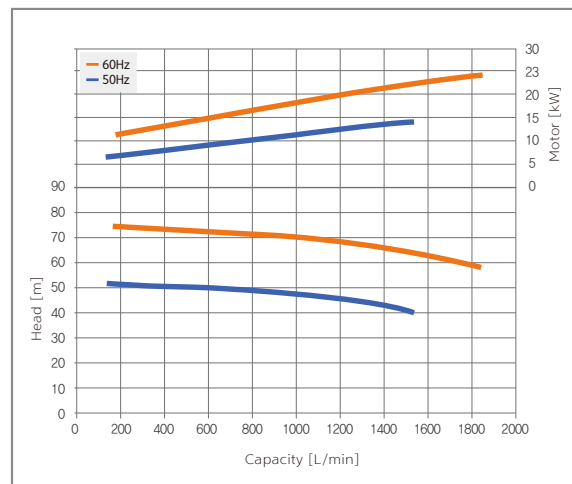
LM-5040-150H



LM-8065-170



LM-10080-200





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