



Pan World

Quality is our Priority

**SEALLESS MAGNETIC
DRIVEN PUMP**

PI-Z-D series

Glass fiber-reinforced PP / ETFE Teflon

Compact Magnetic Drive Pump with DC brushless motor



Carbon deduction design & environmental friendly.

PI-Z-D series : Glass fiber filled polypropylene.
PI-Z-D-F series : ETFE - Teflon & Ceramic or Sic.
Hazard chemical application.



Sealless construction

Special shaft and Bearing support structure.
By employing ceramic bearings zero wear can be obtained.



Compact

1/2~1/3 compactness to compare conventional magnet pump with AC motor.



Safety

Bearing, Thrust pad, shaft are molded into plastic body to prevent wrong alignment during cavitation and erratic operation.



Maintenance free

There is usually no need for preventative maintenance.



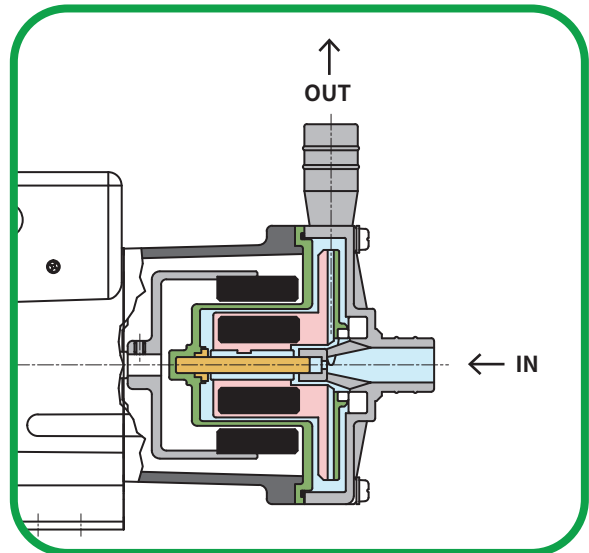
Pipe connection

Hose, Flange, G thread are standard.
Union is optional.



Seless and long life of Bearing

10,000 hours life.
By applying magnetic coupling the extension of motor shaft is eliminated.



Required power supply

DC 12V-24/28V depend on Model.
AC-DC converter with built in transformer.
AC 110V-DC 24/26V with JIS pin.
AC 230V-DC 24/26V with Euro pin.
Many series are available to reply to market demand and application.



High performance High efficiency motor

1.5~3 times T.H.D (total head) and flow to compare conventional magnet pump with AC motor.
5~7 times motor efficiency and low consumption.
Therefore heat radiation is extremely reduced.

PI-Z-D Series

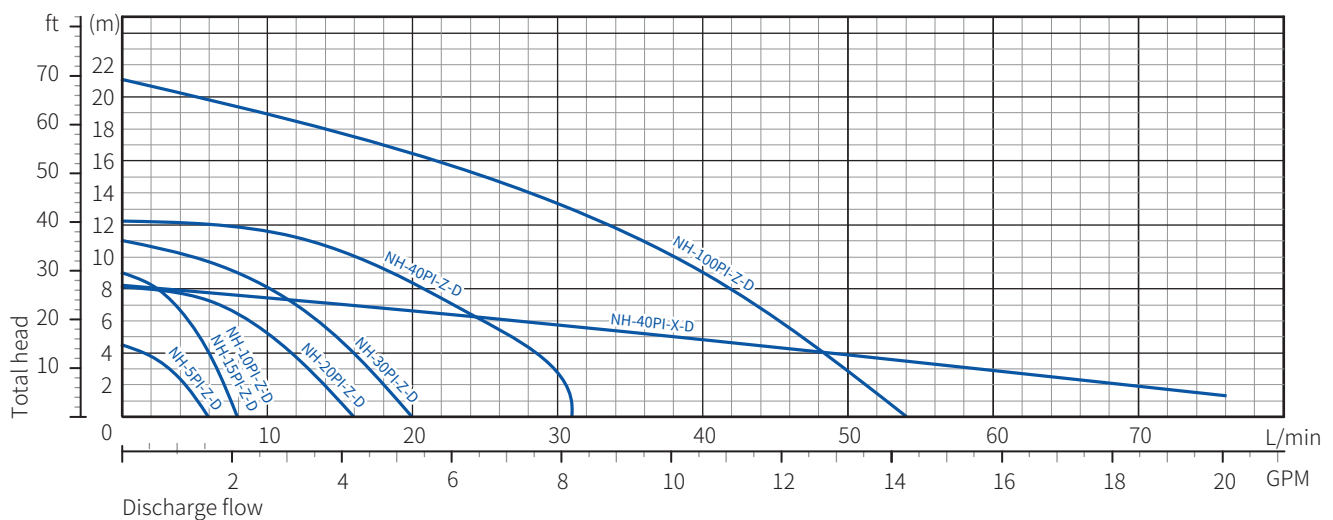
Magnetic Drive Pump with computer-controlled DC brushless motor, available in fixed-speed and variable-speed options.

- + Equipped with a DC brushless motor, printed circuit board, and variable speed controller.
- + Accepts external 1-10V for maintaining constant flow and pressure.
- + Offers double the motor efficiency compared to AC motors with a compact design.



Model	PI-Z-D	PI-Z-D-F
Materials in Contact	: Glass fiber-reinforced PP	Carbon Fiber-filled ETFE
Max Flow	: 76 L/min	76 L/min
Max Head	: 21.1 m	21.1 m
Liquid Temp.	: 0°C~60°C	0°C~90°C
Motor Power	: DC12V, DC24V	DC12V, DC24V

■ Pump performance curve



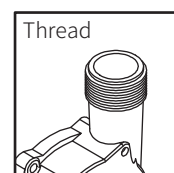
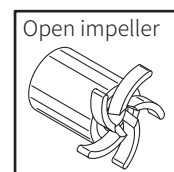
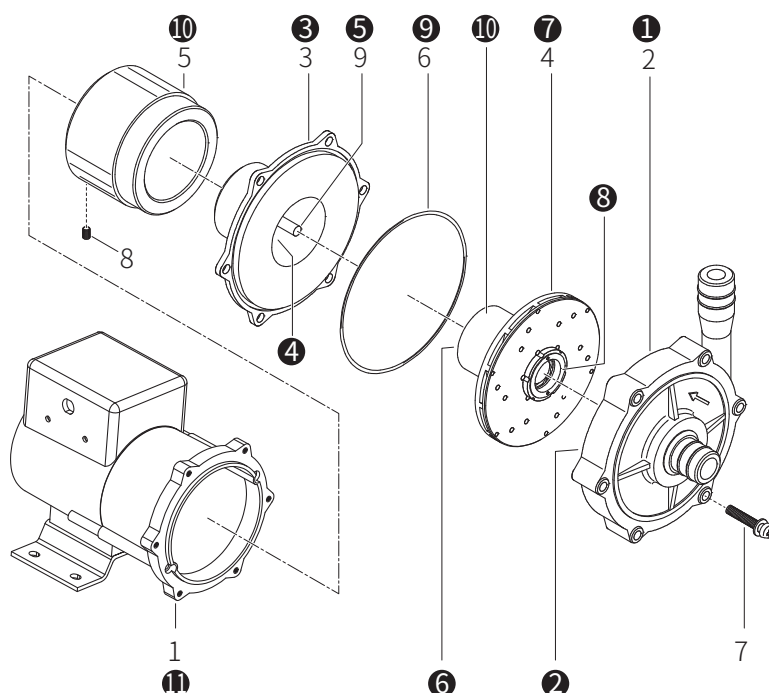
■ Specification table

Model	Connection method		Performance		Motor		
	Hose (mm)	Thread (")	Max flow	Max head	Power(V)	Output × Input(W)	Speed(r.p.m)
	In x Outlet	In x Outlet	L/min(GPM)	m(ft)			
NH-5PI-Z-D	14 X 8	--	6 (1.6)	4.5 (14.8)	DC24V, DC12V	8 × 13	3,700
NH-10PI-Z-D	14 X 8	--	8 (2.2)	9 (29)	DC24V, DC12V	17 × 30	5,500
NH-15PI-Z-D, 15PI-Z-D-F	18 x 8	G3/4 x G3/4	8 (2.2)	9 (29)	DC24V, DC12V	20 × 45	3,200
NH-20PI-Z-D, 20PI-Z-D-F	18 X 18	G3/4 x G3/4	16 (4.2)	8.2 (27)	DC24V, DC12V	30 × 55	3,000
NH-30PI-Z-D, 30PI-Z-D-F	18 X 18	G3/4 x G3/4	20 (5.4)	11 (36)	DC24V, DC12V	45 × 65	3,300
NH-40PI-Z-D, 40PI-Z-D-F	20 X 20	G3/4 x G3/4	31 (8.2)	12.4 (40.7)	DC24V	72 × 85	3,500
NH-40PI-X-D, 40PI-X-D-F	26 x 26	G1 x G1	76 (20.1)	8.2 (26.9)	DC24V	72 × 85	3,500
NH-100PI-Z-D, 100PI-Z-D-F	20 x 16	--	54 (14.3)	21.1 (69.2)	DC24V	220 × 331	3,500



Z: Closed impeller

■ Parts list



Position	Description
1	Motor
2	Front casing
3	Rear casing
4	Impeller ass'y
5	Outer drive ring

Position	Description
6	O. Ring
7	Screw, cross recess head w/t plain washer (x6)
8	Set screw (x2)
9	Spindle

■ Material of the structure

Part name	NH-5PI-Z-D	NH-10PI-Z-D	NH-15PI-Z-D NH-20PI-Z-D NH-30PI-Z-D	NH-40PI-X-D NH-40PI-Z-D	NH-100PI-Z-D	NH-15PI-Z-D-F NH-20PI-Z-D-F NH-30PI-Z-D-F	NH-40PI-X-D-F NH-40PI-Z-D-F NH-100PI-Z-D-F
① Front Casing	PPO			PPG	PPG	ETFE	
② Front Thrust pad	Ceramic			Ceramic / Rulon	Ceramic	SIC / Ceramic	
③ Rear Casing	PPG		PPO	PPG		ETFE	
④ Rear Thrust pad	--	Ceramic				ETFE	
⑤ Spindle	Ceramic					SIC / Ceramic	
⑥ Bearing	Carbon			Ceramic		SIC / Ceramic	
⑦ Impeller ass'y	PPG					ETFE	
⑧ Mouth pad	--	Rulon				Rulon	
⑨ O Ring	FKM						
⑩ Magnet	Ferrite						
⑪ Housing	Al cast						

Front Casing



Rear Casing



Impeller vane



O Ring



Front Thrust Pad & Thrust Pad



Spindle



Bearing

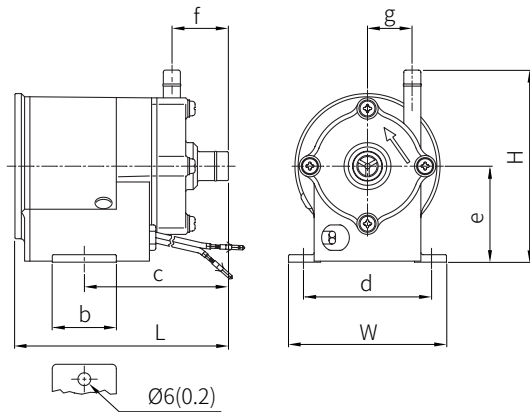


Magnet

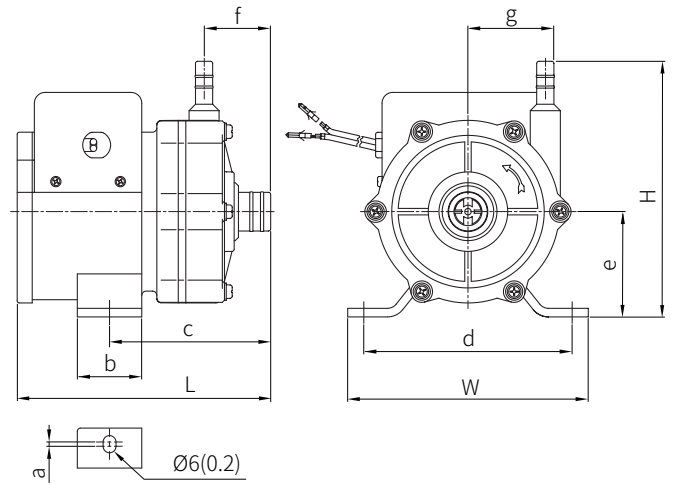


■ Installation dimension

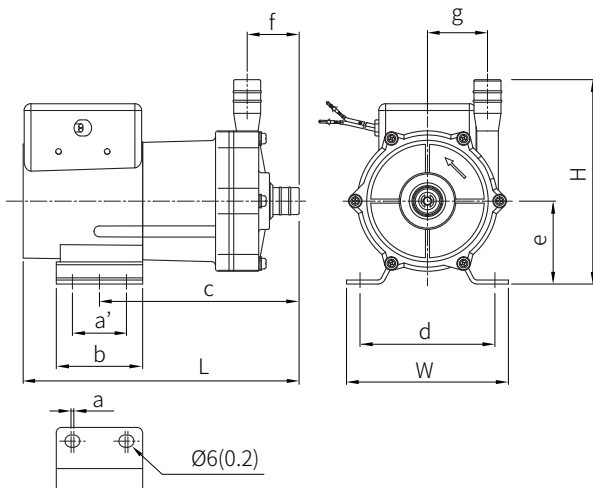
NH-5PI-Z-D / NH-10PI-Z-D



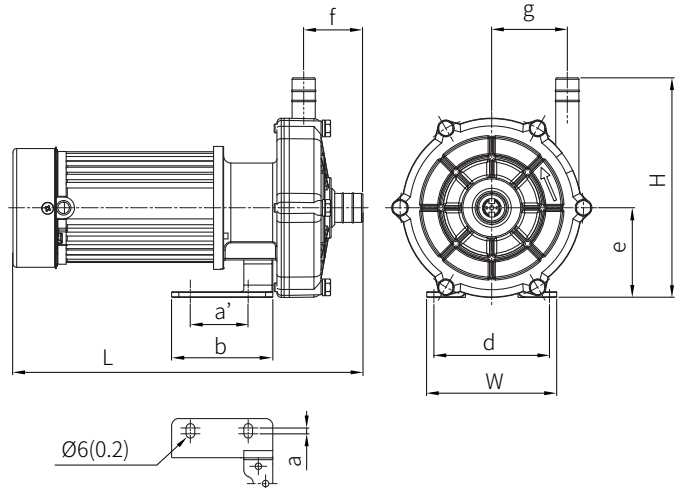
**NH-15PI-Z-D / NH-15PI-Z-D-F
NH-20PI-Z-D / NH-20PI-Z-D-F
NH-30PI-Z-D / NH-30PI-Z-D-F**



**NH-40PI-X-D / NH-40PI-X-D-F
NH-40PI-Z-D / NH-40PI-Z-D-F**



NH-100PI-Z-D / NH-100PI-Z-D-F



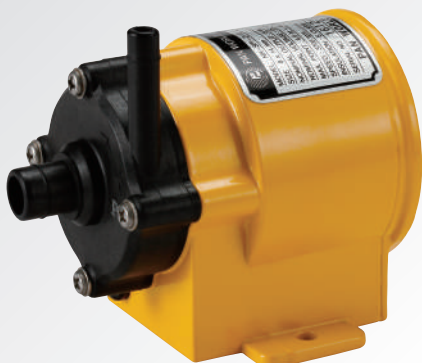
Model	W	H	L	a	a'	b	c	d	e	f	g
NH-5PI-Z-D	74 (2.91)	90 (3.54)	100 (3.94)	-	-	30 (1.2)	67.5 (2.66)	60 (2.36)	45 (1.77)	26.5 (1.04)	21 (0.83)
NH-10PI-Z-D	74 (2.91)	90 (3.54)	100 (3.94)	-	-	30 (1.2)	67.5 (2.66)	60 (2.36)	45 (1.77)	26.5 (1.04)	21 (0.83)
NH-15PI-Z-D, 15PI-Z-D-F	112 (4.41)	119 (4.69)	118 (4.65)	2 (0.08)	-	30 (1.2)	75 (2.95)	97 (3.82)	49 (1.93)	31 (1.22)	36 (1.42)
NH-20PI-Z-D, 20PI-Z-D-F	112 (4.41)	119 (4.69)	118 (4.65)	2 (0.08)	-	30 (1.2)	75 (2.95)	97 (3.82)	49 (1.93)	31 (1.22)	36 (1.42)
NH-30PI-Z-D, 30PI-Z-D-F	112 (4.41)	119 (4.69)	123 (4.84)	2 (0.08)	-	30 (1.2)	75 (2.95)	97 (3.82)	49 (1.93)	31 (1.22)	36 (1.42)
NH-40PI-Z-D, 40PI-Z-D-F	120 (4.72)	150 (5.91)	204.5 (8.05)	2 (0.08)	40 (1.57)	64 (2.52)	148 (5.83)	100 (3.94)	60 (2.36)	38.5 (1.52)	44.5 (1.75)
NH-40PI-X-D, 40PI-X-D-F	120 (4.72)	140.5 (5.53)	221 (8.7)	2 (0.08)	40 (1.57)	64 (2.52)	164.5 (6.48)	100 (3.94)	60 (2.36)	50 (1.97)	30 (1.18)
NH-100PI-Z-D, 100PI-Z-D-F	90 (3.54)	152 (5.98)	242.2 (9.54)	4 (0.16)	32 (1.26)	70 (2.76)	-	73 (2.87)	62 (2.44)	41 (1.61)	52.3 (2.06)

Note : Over all size & construction may be changed without notice.

Unit : mm (inch)

■ Connection method

NH-5PI-Z-D
NH-10PI-Z-D



Hose



Thread

NH-15PI-Z-D / NH-15PI-Z-D-F
NH-20PI-Z-D / NH-20PI-Z-D-F
NH-30PI-Z-D / NH-30PI-Z-D-F

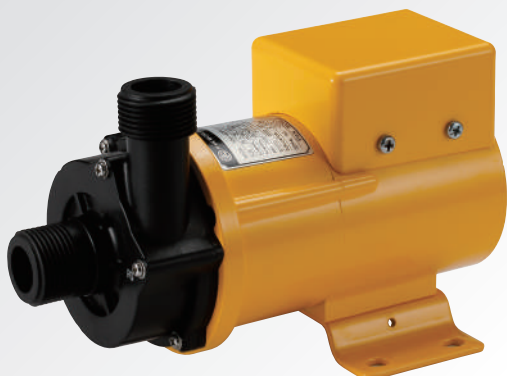


Hose



Thread

NH-40PI-Z-D / NH-40PI-Z-D-F
NH-40PI-X-D / NH-40PI-X-D-F



Hose



Thread

NH-100PI-Z-D / NH-100PI-Z-D-F

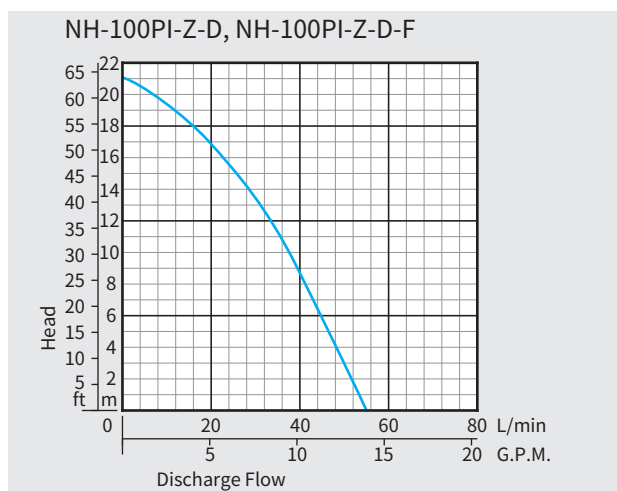
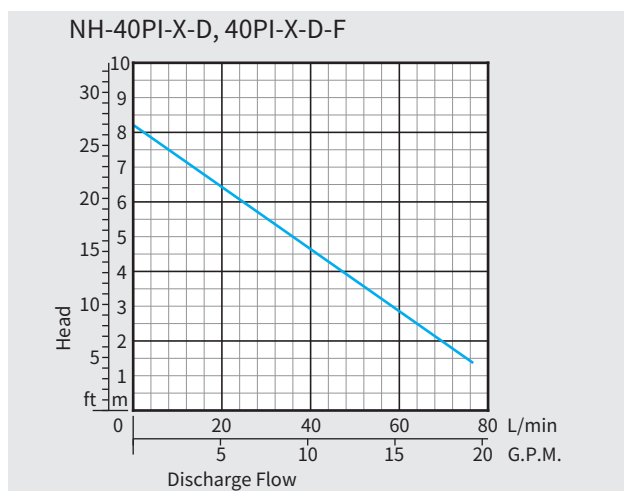
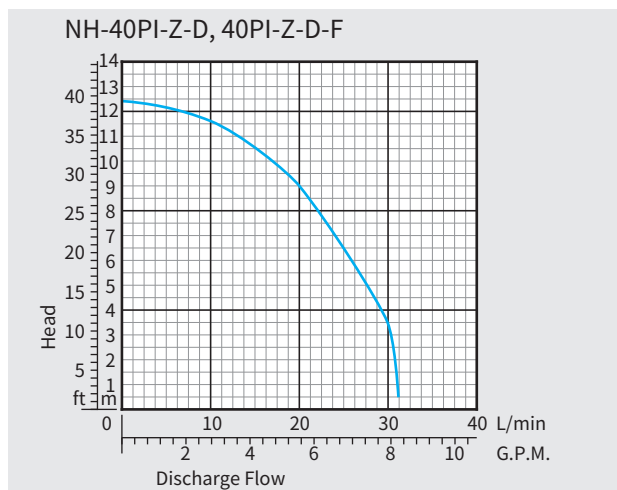
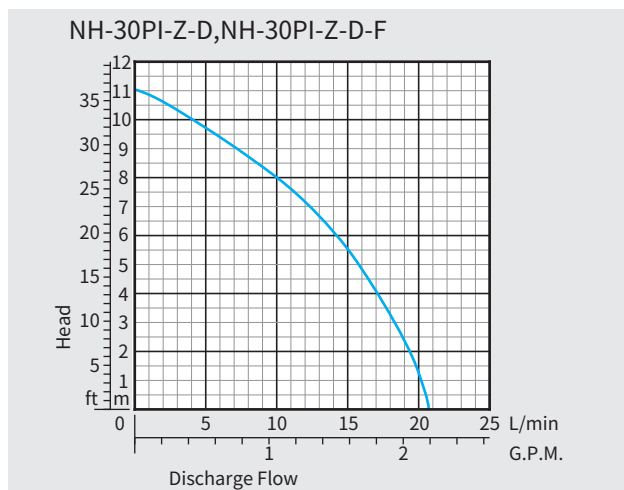
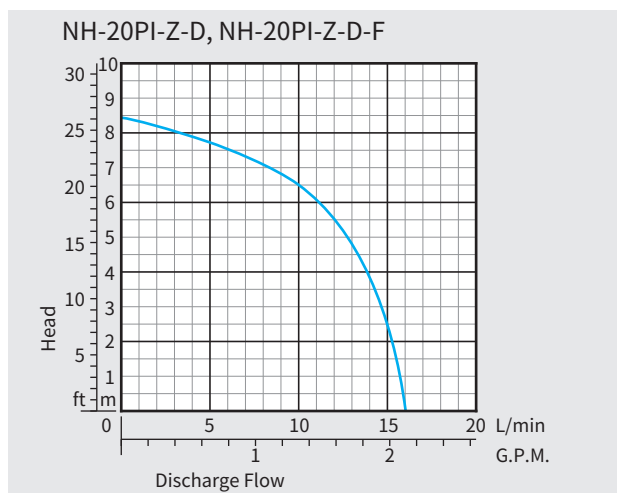
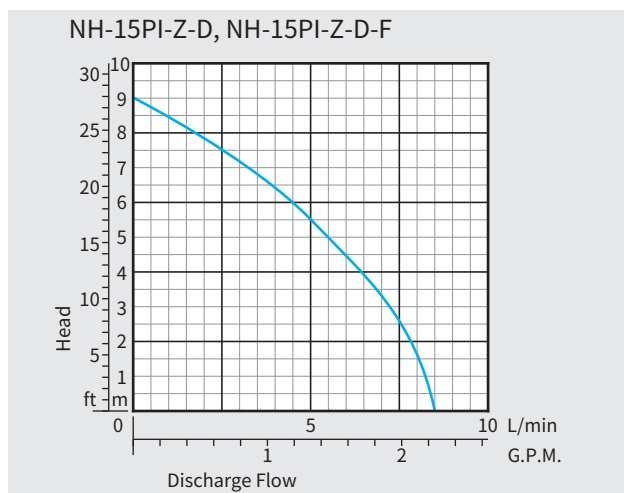
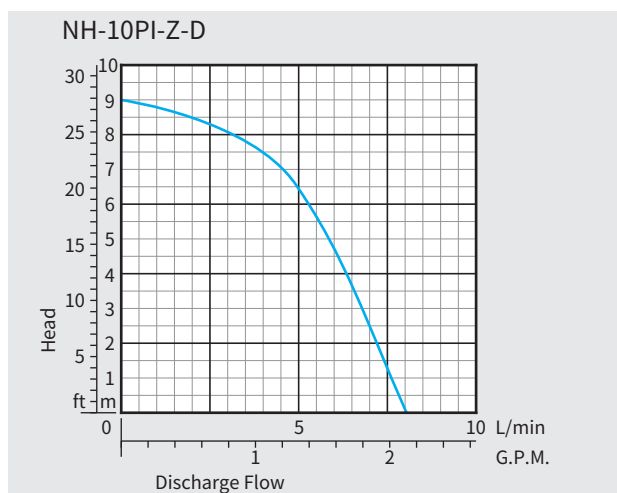
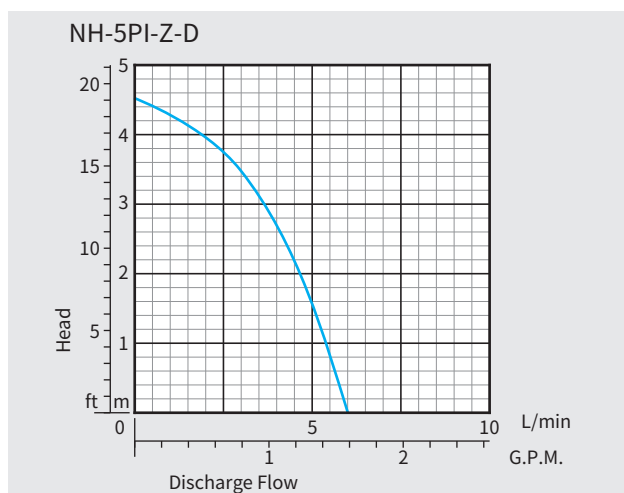


Hose



Thread

■ Performance curve (for reference) 50Hz



■ Chemical resistance table

Series	PI-Z-D / PI-X-D	PI-Z-D-F PI-X-D-F
Filtration	*	
P.C.B. machine		
Etching machine	*	*
Chemical, Electric plating	*	*
Scrubber		
Waste water treatment		
Chemical transfer	*	*
Chemical refine process		
Pharmaceutical	*	*
Shadow mask machine		
C.R.T.producing		
Metal degreasing		
Glass etching		
Paper industry		
Laboratory application	*	*
Vending machine	*	
Food process		
Deionizing equipment	*	*
Semi-conductor		*

Series	PI-Z-D / PI-X-D	PI-Z-D-F PI-X-D-F
Ice machine	*	
Juice server	*	
Power station		
Salt industry		
Battery industry	*	
Waste chemical transfer	*	*
Chemical controller	*	*
MC/CNC machinery	*	



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Specifications are subjected to changes without prior notice.

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