IWAKI

HSR
series

HSR-80
Reciprocating Diaphragm Liquid Pump

High Pressure Liquid Transfer Pump

HSR-80 Series are reciprocating diaphragm liquid pumps developed for OEM equipment. Despite its compact design, it has a maximum rotation speed of 3000 RPM and is capable of transferring liquid at high pressure. The discharge capacity is up to 1200 mL/min (discharge pressure at 0.5MPa), which covers wide capacity range.

Model with relief valve function

Transfer liquid at high pressure

Max. rotation speed 3000 RPM
Max. discharge pressure 0.6MPa
Capable of transferring liquid at high pressure.

Wide capacity range

Rotation speed 3000 RPM : Capacity 1200mL/min
Rotation speed 2000 RPM : Capacity 800mL/min
Rotation speed 1000 RPM : Capacity 400mL/min
*Discharge pressure at 0.5MPa

Protection mechanism for abnormal pressure

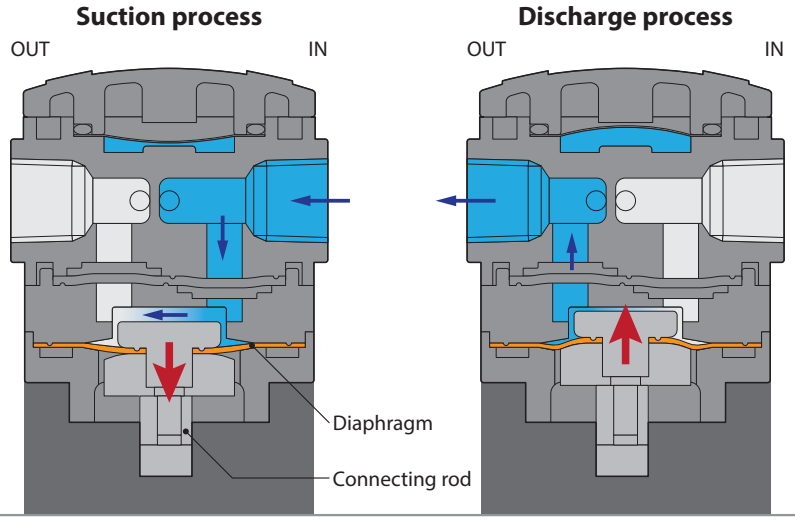
Optional relief valve is available.
Prevents damage to pump and pipes due to abnormal rise in discharge pressure.

Operating Principle

The rotary motion of the motor is converted through a connecting rod to the reciprocation of the diaphragm in the pump chamber, where liquid is transferred from the inlet to outlet.

Liquid flow

Diaphragm reciprocation



HSR series

Pump Identification

HSR - 80 P E R S B - D4 - 02

(1) (2) (3) (4) (5) (6) (7) (8)

(1) Series name

(2) Materials of wet end
P : GFRPP

(3) Materials of valve
V : FKM
E : EPDM

(4) Connection
R : Rc1/4
G : G1/4

(5) Relief valve
No symbol : Without relief valve function
S : With relief valve function

(6) Base
No symbol : Without base
B : With base

(7) Rated voltage
D4 : DC24V brushless motor (Variable speed control)

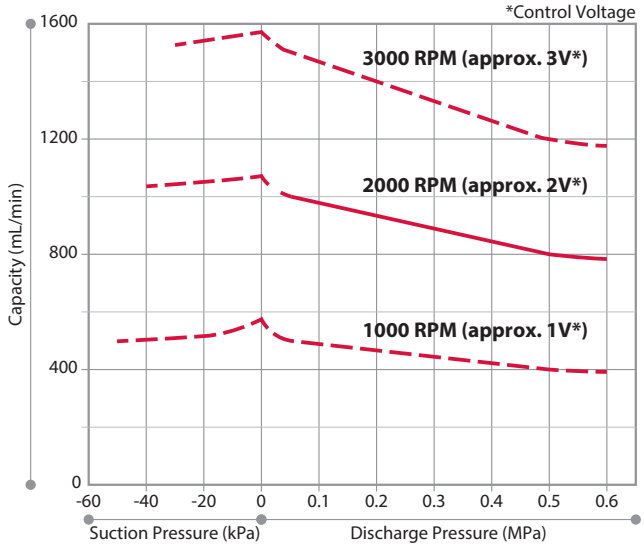
(8) Special specifications
No symbol : Standard specifications
01 - **99** : Special specifications

Specifications

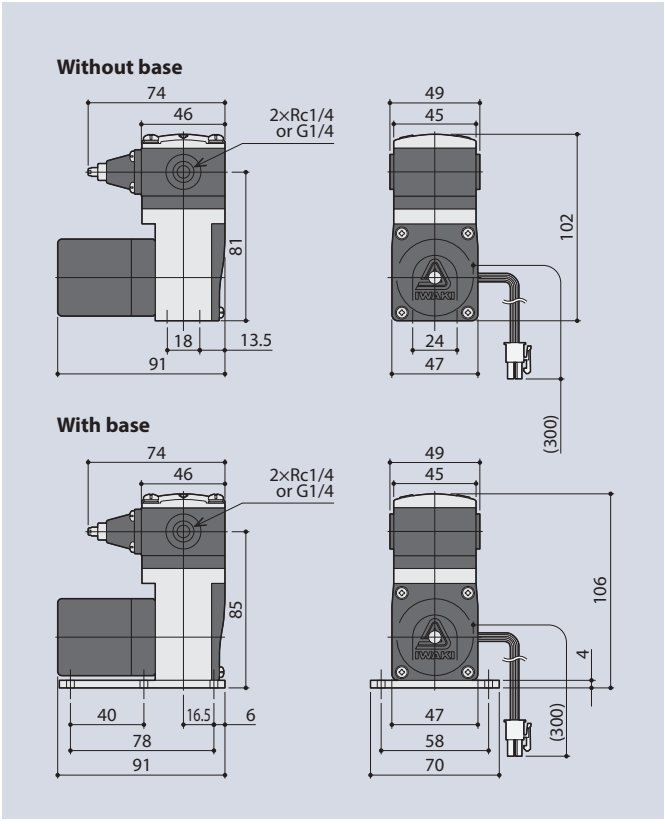
Model	Rated specification		Max. discharge capacity	Max. discharge pressure	Motor		Speed		Self-priming height	Connection	Mass	Noise
	Capacity	Pressure			Voltage	Current	Rated	Variable range				
	mL/min	MPa	mL/min	MPa	V	A	RPM	RPM	m		g	dB
HSR-80	800 (2000 RPM)	0.5	1400 (Reference)	0.6	DC24	1.4	2000	1000 - 3000	2	Rc1/4 or G1/4	700	50

*Set the discharge pressure below the specified value (0.6MPa or less).
*The discharge rate is the value when clean water at 20°C is transferred. Note that the discharge rate varies depending on the liquid temperature, viscosity, specific gravity, etc.
*The max. discharge capacity is at 3000 RPM 0MPa. However, this is a reference value because the discharge capacity is not stable due to overfeeding around 0MPa.
*The self-priming height is specified at 0m above sea level. Note that the self-priming height decreases at high altitudes.
*The fluid temperature range FKM : 5 to 45°C, EPDM : 0 to 45°C. (There will be no change in liquid property such as freezing and slurry generation.)
*The ambient temperature range 0 to 45°C.
*The maximum noise value at the rated value is 50dB or less when clean water at 20°C is transferred. (A scale, 1m)

Performance Curves



Dimensions in mm



Wet-end Materials

Material code	PV	PE
Pump head	GFRPP	
Valve seat	GFRPP	
Valve	FKM	EPDM
Diaphragm UNIT	SUS316+PTFE	
Camber diaphragm	PTFE	

*Both materials of the diaphragm unit are in contact with fluid.

IWAKI AMERICA

ISO 9001 registered company

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