

## 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 min<sup>-1</sup> 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 3000min<sup>-1</sup>  
Max. discharge pressure 0.6MPa  
Capable of transferring liquid at high pressure.

#### Wide capacity range



Rotation speed 3000min<sup>-1</sup> : Capacity 1200mL/min  
Rotation speed 2000min<sup>-1</sup> : Capacity 800mL/min  
Rotation speed 1000min<sup>-1</sup> : Capacity 400mL/min  
\*Discharge pressure at 0.5MPa

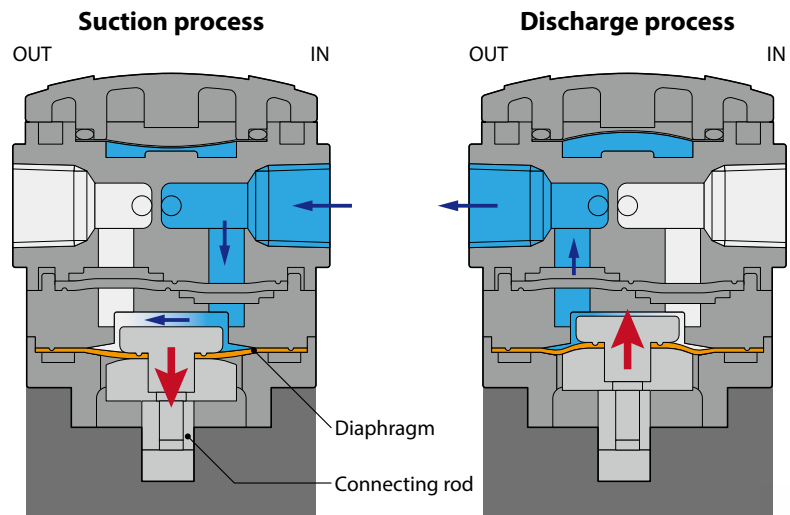
#### Protection mechanism for abnormal pressure

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



## Pump Identification

<b>HSR - 80 P E R S B - D4 - 02</b>							
①	②	③	④	⑤	⑥	⑦	⑧

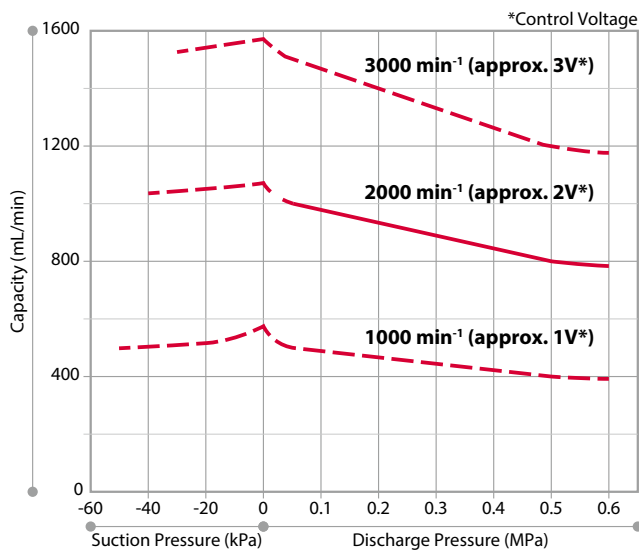
- ① Series name
- ② Materials of wet end  
P : GFRPP
- ③ Materials of valve  
V : FKM  
E : EPDM
- ④ Connection  
R : Rc1/4  
G : G1/4
- ⑤ Relief valve  
No symbol : Without relief valve function  
S : With relief valve function
- ⑥ Base  
No symbol : Without base  
B : With base
- ⑦ Rated voltage  
D4 : DC24V brushless motor  
(Variable speed control)
- ⑧ Special specifications  
No symbol : Standard specifications  
01 - 99 : Special specifications

## Specifications

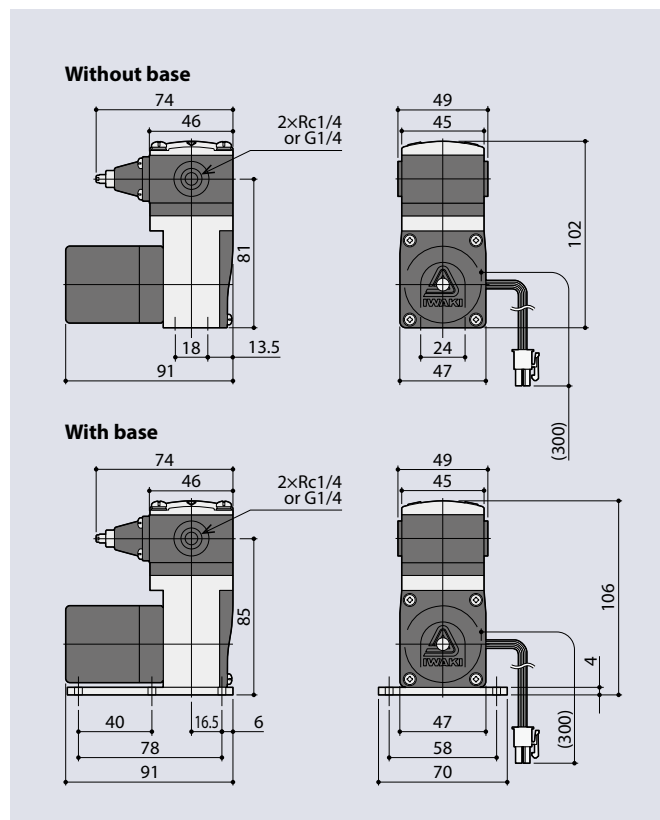
Model	Rated specification		Max. discharge capacity mL/min	Max. discharge pressure MPa	Motor		Speed		Self-priming height m	Connection	Mass g	Noise dB
	Capacity mL/min	Pressure MPa			Voltage V	Current A	Rated min <sup>-1</sup>	Variable range min <sup>-1</sup>				
HSR-80	800 (2000min <sup>-1</sup> )	0.5	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 min<sup>-1</sup> OMPa. However, this is a reference value because the discharge capacity is not stable due to overfeeding around OMPa.  
 \*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.

