



The HRP hermetically sealed pumps are intended to deliver liquid refrigerant (including ammonia, R22, and CO₂) to evaporators at saturated conditions. These pumps are not intended for intermittent duty, such as liquid transfer operation.

All of the HRP pumps may be mounted by either of two methods:

- Conventionally using the mounting feet, or
- Suspended by threaded rods to better accommodate normal, thermal pipe expansion/contraction as well as pump maintenance

Pump Capacity

The following table summarizes the operating capabilities of the HRP series pumps. For details of how to select a pump for a specific application, refer to the HRP Pump Service and Operation Manual, HRP-00.

MODEL	HP	Max Flow (GPM)	Max Head (FEET)
HRP-3232	1.3	23	145
HRP-5040	2.5	61	160
HRP-5050	5.4	72	230
HRP-8050	5.4	135	245
HRP-10080	11.4	285	213

Standard Pump Configuration

HRP series pumps are supplied standard with bolt-on inlet and discharge flanges that may be welded directly to the customer's existing piping.

Pump Connection Sizes

MODEL	Inlet Connection	Discharge Connection
HRP-3232	1-1/2"	1-1/2"
HRP-5040	1-1/2"	1-1/2"
HRP-5050	2"	2"
HRP-8050	2"	2"
HRP-10080	4"	3"

All pumps are protected with an internal conical strainer at the inlet connection. A flow sensor is also required to shut down the pump in low-flow or no-flow situations. In addition, each pump motor is protected with a thermal relay. A Turk Flow Switch with signal processor (part number 206960) is also available, which measures the GPM the pump generates and shuts the pump off should low flow conditions occur.

Available Options

The following items may be ordered separately to better integrate the pumps into the refrigeration system and to optimize pump performance and reliability.

- Low-pressure-drop inlet stop valve
- Low-pressure-drop discharge stop-check valve
- External inlet strainer
- Flow bypass valve
- Three-way valve with pressure gauge to monitor operation

Admissible Pressure Ranges

- 180 psi at -76°F to +14°F (12.5 bar at -60°C to -10°C)
- 362 psi at +14°F to +122°F (25 bar at -10°C to +50°C)
- Special pumps are available to accommodate pressures up to 580 psi (40 bar). Consult Refrigerating Specialties for further details.

Materials of Construction

- Pump housing GGG 40.3
- Stator Steel/Copper
- Rotor Steel/Aluminum
- Bearings PTFE
- Shaft 1 C 35
- Motor Can 1.4313 or 1.4059
- Impellers GX22CrNi17M



Type GP pumps are intended to deliver liquid refrigerant to evaporators at saturated conditions. These pumps can also be used to transfer liquid refrigerant between vessels. (Vessel pressures should be properly equalized.)

Pumps may be ordered either without motors (as replacements for existing systems), or with motors (for new applications).

Pump Capacity

The following table summarizes the operating capabilities of the HRP series pumps for ammonia and R22. For details of how to select a pump/motor combination for a specific application, refer to the GP Pump Service and Operation Manual, GP-00.

MODEL	R717 HP	R22 HP	Max Flow (GPM)	Max Head (Feet)
GP41 (1150 RPM)	0.75	1.0	11	50
GP42 (1150 RPM)	1.5	2.0	13	100
GP41 (1740 RPM)	1.5	3.0	18	115
GP42 (1740 RPM)	3.0	5.0	19	220
GP51A (1150 RPM)	3.0	5.0	32	70
GP51A (1740 RPM)	5.0	10	53	165
GP51 (1150 RPM)	3.0	5.0	58	60
GP52 (1150 RPM)	5.0	7.5	58	120
GP51 (1740 RPM)	7.5	10	86	140

Standard Pump Configuration

Whether ordered with or without a motor, GP series pumps are supplied with bolt-on inlet and discharge flanges that may be welded directly to the customer's existing piping. In addition, all pumps are protected with an internal conical strainer at the inlet connection.

Pump Connection Sizes

MODEL	Inlet Connection	Discharge Connection
GP-41	1-1/2"	1-1/2"
GP-42	1-1/2"	1-1/2"
GP-51	2"	2"
GP-51a	2"	2"
GP-52	2"	2"

Available Options

The following items may be ordered separately to better integrate the pumps into the refrigeration system and to optimize pump performance and reliability.

- Low-pressure-drop inlet stop valve
- Low-pressure-drop discharge stop-check valve
- External inlet strainer
- Differential pressure switch to shut down pump in low-flow conditions
- Flow bypass valve
- Three-way valve with pressure gauge to monitor operation

Admissible Pressure Ranges

- 116 psig at -76°F to +14°F (8 bar at -60°C to -10°C)
 For pump operation below -60°F, special low temperature oil must be ordered.
- 362 psig at +14°F to +122°F (25 bar at -10°C to +50°C)

Materials of Construction

- Pump housing GGG 40.3
- Motor flange GGG 40
- Shaft 1 C 35
- Shaft seal PTFE
- Impellers GGG 40
- Reservoir oil MR 520