P435-5121 and P450-5121

1. Performance

U.S. Measurements

	Max. Flow	Pressure	Max. Speed	Power Req'd.	Plunger Diameter	Stroke
Model	**GPM**	**PSI**	**RPM**	**BHP**	**In.**	**In.**
P450-5121	5.5	5075	1450	19.2	0.71	0.79
P435-5100	6.6	3625	1450	16.6	0.71	0.94

Metric Measurements

	Max. Flow	Pressure	Max. Speed	Power Req'd.	Plunger Diameter	Stroke
Model	**LPM**	**Bar**	**RPM**	**kW**	**mm**	**mm**
P450-5100	20.8	350	1450	14.3	18	20
P435-5100	25.0	250	1450	12.4	18	24

Common Specifications

	U.S.	(Metric)
Inlet Pressure	90 PSI	(6.2 bar)
Temperature of Pumped Fluids	Up to 160 °F	(70 °C)
Inlet Ports		2 x 3/4" BSP
Discharge Ports		2 x 1/2" BSP
Shaft Rotation		Top of pulley towards manifold
Crankshaft Diameter		(28 mm)
Key Width		(8 mm)
Shaft Mounting		Either side (specify when ordering)
Weight	36.5 lbs	(16.6 kg)
Crankcase Capacity	30 fl.oz.	(0.89 liters)

Performance data for intermittent operation, data for continuous operation on request.
For information on intermittent operation and calculating of the performance data, see the Giant Pumps assembly instructions.

NPSHR / Inlet pressure
Required NPSH refers to water at 60 °F (20 °C) at max. permissible pump speed.
Maximum inlet pressure: 145 PSI (10 bar)

Level of noise emission
Emission sound pressure level: ≤ 88 dB(A)

SPECIAL NOTE:
P450-5121:
The theoretical gallons per revolution (gal/rev) is 0.00455. To find specific outputs at various RPM, use the formula: GPM = 0.00455 x RPM
P430-5121:
The theoretical gallons per revolution (gal/rev) is 0.00379. To find specific outputs at various RPM, use the formula: GPM = 0.00379 x RPM

1.3 Horsepower Information

Horsepower ratings shown are the power requirements for the pump. Gas engine power outputs must be approximately twice the pump power requirements shown above.
We recommend that a 1.15 service factor be specified when selecting an electric motor as the power source.
To compute specific pump horsepower requirements, use the following formula: **(GPM X PSI) / 1450 = HP**

P450-5121 HORSEPOWER REQUIREMENTS					
RPM	**GPM**	**2000 PSI**	**3000 PSI**	**4000 PSI**	**5000 PSI**
800	3.0	4.1	6.2	8.3	10.3
933	3.5	4.8	7.2	9.7	12.1
1066	4.0	5.5	8.3	11.0	13.8
1200	4.5	6.2	9.3	12.4	15.5
1450	5.5	7.6	11.4	15.2	19.0

P435-5121 HORSEPOWER REQUIREMENTS					
RPM	**GPM**	**2000 PSI**	**2500 PSI**	**3000 PSI**	**3625 PSI**
920	4.2	5.8	7.2	8.7	10.5
1050	4.8	6.6	8.3	9.9	12.0
1185	5.4	7.4	9.3	11.2	13.5
1315	6.0	8.3	10.3	12.4	15.0
1450	6.6	9.1	11.4	13.7	16.5

2. Fields of application

The fields of application of these pump types correspond to the specifications in the assembly instructions Giant Pumps.

3. Ambient conditions

Ambient temperature: 41 °F < $T_{Amb.}$ < 86 °F
Ambient temperature: 5 °C < $T_{Amb.}$ < 30°C

4. Oil filling

- Filling quantity: **30.4 fl. oz. (0.9 l)**
- Quality: Industrial gear oil **ISO VG 220** or automotive gear oil **SAE 90 GL4 (Giant's p/n 01154)**
- Intervals: first oil change after **50 operating hours** then every **500 operating hours**, but at the latest after **12 months**

5. Installation/ Putting into Operation

5.1 To Turn Drive Shaft to the Other Side

Remove the valve casing.
Turn the seal adaptors (20) by 180° also so that the leakage holes are underneath.
Remount valve casing rotated by 180°.
Interchange plug (5B) and oil dipstick (2) with each other.
Turn crankcase cover (3) by 180°.

5.2 Direction of pump rotation

When looking at crankshaft with valve casing mounted on left-hand side, counterclockwise direction of rotation.
When looking at crankshaft with valve casing mounted on right-hand side, clockwise direction of rotation.

5.3 Suction line filter

Recommended mesh size 150 µm.

6. Operation

For information, see assembly instructions Giant Pumps.