

# P400-5100 Series Pumps

## 1. Performance

### U.S. Measurements

	Max. Flow	Pressure	Max. Speed	Power Req'd.	Plunger Diameter	Stroke	NPSHR
Model	GPM	PSI	RPM	BHP	In.	In.	ft. of head
P423-5100	8.2	3000	1450	16.4	0.87	0.79	21.0
P422-5100	9.9	2600	1450	17.7	0.87	0.94	22.3
P425-5100	10.7	2500	1450	18.1	0.98	0.79	26.2
P420A-5100	12.8	2200	1450	19.2	0.98	0.94	30.5

### Metric Measurements

	Max. Flow	Pressure	Max. Speed	Power Req'd.	Plunger Diameter	Stroke	NPSHR
Model	LPM	Bar	RPM	kW	mm	mm	mWs
P423-5100	31.1	200	1450	12.2	22	20	6.4
P422-5100	37.3	180	1450	13.2	22	24	6.8
P425-5100	40.4	170	1450	13.5	25	20	8.0
P420A-5100	48.4	150	1450	14.3	25	24	9.3

### Common Specifications

	U.S.	(Metric)
Inlet Pressure .....	145 PSI.....	(10 bar)
Temperature of Pumped Fluids .....	Up to 160 °F .....	(70 °C)
Inlet Ports .....		2 x 1" BSP
Discharge Ports .....		2 x 3/4" BSP
Shaft Rotation .....		Top of pulley towards manifold
Crankshaft Diameter .....		(28 mm)
Key Width.....		(8 mm)
Shaft Mounting.....		Either side (specify when ordering)
Weight.....	38.3 lbs .....	(17.4 kg)
Crankcase Capacity .....	30.4 fl.oz. ....	(0.9 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: 29 PSI (2 bar)

#### Level of noise emission

Emission sound pressure level: ≤ 88 dB(A)

#### SPECIAL NOTE:

##### P420-5100:

The theoretical gallons per revolution (gal/rev) is 0.00883. To find specific outputs at various RPM, use the formula:  $GPM = 0.00883 \times RPM$

##### P422-5100:

The theoretical gallons per revolution (gal/rev) is 0.00679. To find specific outputs at various RPM, use the formula:  $GPM = 0.00679 \times RPM$

##### P423-5100:

The theoretical gallons per revolution (gal/rev) is 0.00455. To find specific outputs at various RPM, use the formula:  $GPM = 0.00566 \times RPM$

##### P425-5100:

The theoretical gallons per revolution (gal/rev) is 0.00738. To find specific outputs at various RPM, use the formula:  $GPM = 0.00738 \times RPM$

# P400-5100 Series Pumps

## 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:

$$(GPM \times PSI) / 1450 = HP$$

## 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:  $41\text{ }^{\circ}\text{F} < T_{\text{Amb.}} < 86\text{ }^{\circ}\text{F}$

Ambient temperature:  $5\text{ }^{\circ}\text{C} < T_{\text{Amb.}} < 30\text{ }^{\circ}\text{C}$

## 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.