

# P400-3100 PUMPS

## 1. Performance

Due to potential of corrosion, the maximum temperature of 86 °F (30 °C) is applicable only for seawater; other media is 160 °F (70 °C).

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 Industries assembly instructions.

### NPSHR / Inlet pressure

Required NPSH refers to water at 68 °F (20 °C) at maximum permissible pump speed.  
The inlet pressure on the suction side must not exceed 145 PSI (10 bar).

### Level of noise emission

Emission sound pressure level: ≤ 88 dB(A)

#### U.S. Measurements

	Max. Flow	Max. Pressure	Max. Speed	Power Required	Max. Temp*	Plunger Diameter	Stroke	Weight	NPSH
Model	GPM	PSI	RPM	HP	F	in	in	lbs	ft. of head
P450-3100	5.5	5100	1450	19.2	86	0.71	0.79	38.6	28.5
P435-3100	6.6	3625	1450	16.6	86	0.71	0.95	38.6	30.5
P423-3100	8.2	2900	1450	16.4	86	0.87	0.79	38.6	21.0
P425-3100	10.6	2500	1450	18.1	86	0.98	0.79	38.6	26.3
P420-3100	12.8	2200	1450	19.2	86	0.98	0.95	38.6	30.5

#### Metric Measurements

	Max. Flow	Max. Pressure	Max. Speed	Power Required	Max. Temp*	Plunger Diameter	Stroke	Weight	NPSH
Model	L/min	Bar	RPM	kW	C	mm	mm	kg	mWs
P450-3100	20.8	350	1450	14.3	30	18	20	17.5	8.7
P435-3100	25.0	250	1450	12.4	30	18	24	17.5	9.3
P423-3100	31.1	200	1450	12.2	30	22	20	17.5	6.4
P425-3100	40.4	170	1450	13.5	30	25	20	17.5	8.0
P420-3100	48.4	150	1450	14.3	30	25	24	17.5	9.3

#### Common Specifications:

Inlet Pressure ..... 145 PSI (10 Bar)  
 Crankshaft Diameter..... 1.1" (28mm)  
 Keyway Width..... 8mm  
 Crankcase Oil Capacity ..... 30 fl. oz. (0.89 L)  
 Inlet Ports ..... (2) 3/4" BSP  
 Discharge Ports ..... (2) 3/4" BSP  
 Shaft Rotation..... Top of Pulley Towards Fluid End

#### Materials Used for P400-3100 Pumps:

Manifold ..... Nickete Aluminum Bronze  
 Plungers ..... Solid Ceramic Oxide  
 Valves ..... 316 Stainless Steel  
 Seals..... Nitrile with Fabric Reinforcing  
 Gear End ..... Aluminum

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## 2. Fields of application

The pump types specified in this data sheet are suitable for pumping seawater.

Furthermore, the fields of application of these pump types correspond to the specifications in the assembly instructions GIANT INDUSTRIES.

## 3. Ambient conditions

Ambient temperature:  $41\text{ }^{\circ}\text{F (5 }^{\circ}\text{C)} < T_{\text{Amb.}} < 86\text{ }^{\circ}\text{F (30 }^{\circ}\text{C)}$

## 4. Oil filling

- Filling quantity: **30 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**; subsequent oil changes every **500 operating hours**. In either case, change the oil at least once a year.

## 5. Installation/Putting into Operation

### 5.1 To Turn Drive Shaft to the Other Side

Remove the valve casing (26).

Turn the seal adaptors (20) and extended sleeve (20B) 180° so that the leakage holes are underneath.

Remount valve casing (26) and cover (18) 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 INDUSTRIES