Performance

	Power Required	Pressure	Max. Speed	Max. Flow	Max. Temp.	Plunger ø	Plunger Stroke	Weight	NPSHR
Model	**BHP (kW)**	**PSI (bar)**	**RPM**	**GPM (l/min)**	**°F (°C)**	**in (mm)**	**in (mm)**	**lbs. (kg)**	**ft. of head (mWs)**
LP700	39.5 (29.5)	7250 (500)	1000	7.9 (30)	104 (40)	0.7 (18)	1.65 (42)	141 (64)	26.2 (8.0)

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 29 PSI (2 bar).
Make sure that suction pulsation is sufficiently dampened – water column resonance must be avoided.

Level of noise emission
Emission sound pressure level: ≤ 82 dB(A)

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

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

Oil filling
- Filling quantity: **0.79 gal (3.0 l)**
- Quality: Industrial gear oil **ISO VG 220** (e.g. Aral Degol BG220) or automotive gear oil **SAE 90 GL4 (Giant's p/n 01154)**
- Intervals: first oil change after **50 operating hours** then every **1000 operating hours**, but at the latest after **12 months**

LP700 HORSEPOWER CHART					
RPM	GPM	3000 PSI	5000 PSI	6000 PSI	7250 PSI
500	3.9	8.1	13.5	16.3	19.6
600	4.7	9.8	16.3	19.6	23.7
700	5.3	11.0	18.4	22.1	26.7
800	6.3	13.1	21.9	26.3	31.7
900	7.1	14.8	24.7	29.6	35.7
1000	7.9	16.5	27.4	32.9	39.8

Installation/ Putting into Operation

Shaft protector
When the pump is in operation, the open shaft end must be covered up by shaft protector (21), the driven shaft side and coupling by a contact-protector.

To cover the exposed crankshaft end, mount the shaft guard (21) together with the holder (21A) onto the bearing cover (14) and secure with bearing cover screws (17).

Direction of pump rotation
Set the direction of rotation of the drive unit according to the direction of rotation arrow on the crankcase.

Suction line filter
Recommended mesh size 150 µm.

Operation
For informations, see assembly instructions Giant Industries

Maintenance and Servicing
For the type of thread locker used and the required tightening torques, observe the table in the exploded view.

Special tools required
The following special tools are required for assembly:
- snap-ring tongs tool
- Pull-out tool Ø12

Suction and Discharge Valves
Discharge Valves:
Discharge Valves: Loosen the screws (54) and remove the cover (51). Remove tension plugs (50). Take the spring tension cap (44A) out of the exposed discharge valve with a flat nose pliers. Remove the valve seat (44D). If necessary, use a dia. 12 pull-out tool to remove valve seat.
If the valve is extracted as a complete unit, position a screwdriver through the recess in the spring tension cap and press down on the valve plate to gently lever the valve apart.
Check parts and replace if worn. Tighten plugs (50) to the required torque

Suction Valves:
Unscrew the 8 nuts (47) and remove the valve casing (45) from seal sleeves (35). Using two screwdrivers, pry the seal case (42) out of the valve casing. Remove the spring tension cap with a flat nose pliers. Remove the valve seat (44D).
If necessary, use a dia. 12 pull-out tool to remove valve seat.
Check parts, and replace if worn.


The leakage seal (39) must be positioned with its Ø3mm bore onto the notched pin (35A) so that its cut-outs are placed exactly over the bores of the seal sleeve (35) and the drip-return bores of the valve casing.

Tighten the fixing nuts (47) for the valve casing evenly to the required torque.

Seals and Plunger
Unscrew nut (47); remove valve casing by pulling it out to the front. Remove seal sleeve (35) from crankcase guides.
If necessary, remove seal case (42) from seal sleeve (35). Remove tension spring (38A) and seal parts (36-37) from seal sleeve.
Check plunger surfaces and seals (37). Replace worn parts.
After removing clipring (32) and support ring (33), check leakage seal (33A) and replace if necessary.

If the surface of the plunger is worn, remove the plunger (29) with a size 13 tool.
Clean center and front surface of crosshead with plunger (25).
Thread new plunger carefully through oiled seals in seal sleeve.
Coat thread of new plunger lightly with threadlocker.

Insert the seal sleeve together with the plunger into crankcase guide until the threads of the plunger (29) push against plunger (25).


Push the seal sleeves all the way into the crankcase guides only after the plungers (29) have been screwed in; otherwise, the leakage seal (33A) may be torn off.

Turn the drive until all the plungers have been to the top. Tighten plungers (29) to the required torque using a size 13 torque wrench.
Then press the seal sleeves (35) all the way into the crankcase guides.


The leakage seal (39) must be positioned with its Ø3mm bore onto the notched pin (35A) so that its cut-outs are placed exactly over the bores of the seal sleeve (35) and the dirp-return bores of the valve casing.

Tighten the nuts (47) for the valve casing evenly to the required torque.

If required, supplementary assembly instructions can be requested from the manufacturer Giant Industries.

Malfunctions / Remedy
For informations, see assembly instructions Giant Industries.

Materials Used

Valve Casing:	Stainless Steel
Plunger:	Hard metal-coated stainless steel
Valves:	High-Grade Stainless Steel
Seals:	Teflon
O-Rings:	Viton/PU.

Paint
The pump drive is painted in RAL 3001 as standard.

LP700 Torque Specifications/Lubrication Information

Position	Thread	Lubrication	Torque Amount
1		Molycote Cu-Paste	
6	1” BSP	Loctite 5400	29 ft.-lbs. (40 Nm)
10	M8		221 in.-lbs. (25 Nm)
12	1/2” BSP		29 ft.-lbs. (40 Nm)
15		Loctite 403	
17	M8		221 in.-lbs. (25 Nm)
24	M8		22 ft.-lbs. (30 Nm)
29	M10	Loctite 243	22 ft.-lbs. (30 Nm)
31		Loctite 403	
46		Loctite 638 (crankcase side)	
47	M12		59 ft.-lbs. (80 Nm)
54	M12	Molycote Cu-Paste	59 ft.-lbs. (80 Nm)