

PL Slimline Design Features

(PL 7020 - 7040)

1. Cable Entry

Cable entry consists of two compressible rubber bushings to seal off motor area and relieve strain on the cable. Two sealing bushings means high reliability in difficult applications.

2. Junction Box

The junction box is sealed from the motor via a protective cap and stator lead through grommet. Terminal board for power and monitoring cables is designed for easy servicing and minimizes the risk of voltage interference.

3. Bearings

Bearings are rated for a minimum L_{10} bearing life of 100,000 hours. The lower bearing consists of one or two, single-row angular contact ball bearings (depending on hydraulic end). A platinum RTD (resistive temperature detector) monitors the temperature of the lower bearing outer race during operation. The upper guide bearing is a double row angular contact ball bearing. The bearings are sealed and lubricated with grease.

4. Shaft

Motor shaft and rotor are a single integral unit. The short overhang of the shaft virtually eliminates shaft deflection, resulting in increased seal and bearing life, low vibration levels and quiet operation. Shaft is completely isolated and cannot come in contact with the pumped media.

5. Motor

The high performance submersible induction motor is designed and manufactured by Flygt to be used specifically with Flygt pumps. Stator is Class H insulated rated to 356°F. Stator is shrink fitted into the stator housing, providing superior cooling by the pumped liquid which passes directly outside the stator housing. The stator incorporates three thermal switches connected in series (one in each phase). A float switch in the lower part of the stator housing reacts if liquid enters this area.

Sensors

In addition to the standard thermal switches in the stator windings and the sensor in the leakage chamber, the motor can be equipped with analog sensors (PT 100) to measure the temperature in the bearings and/or in the stator housing. Vibration and leakage sensors can also be placed in the junction box. All sensors can be monitored using the Flygt MAS or MiniCas control units.

6. Shaft Seals

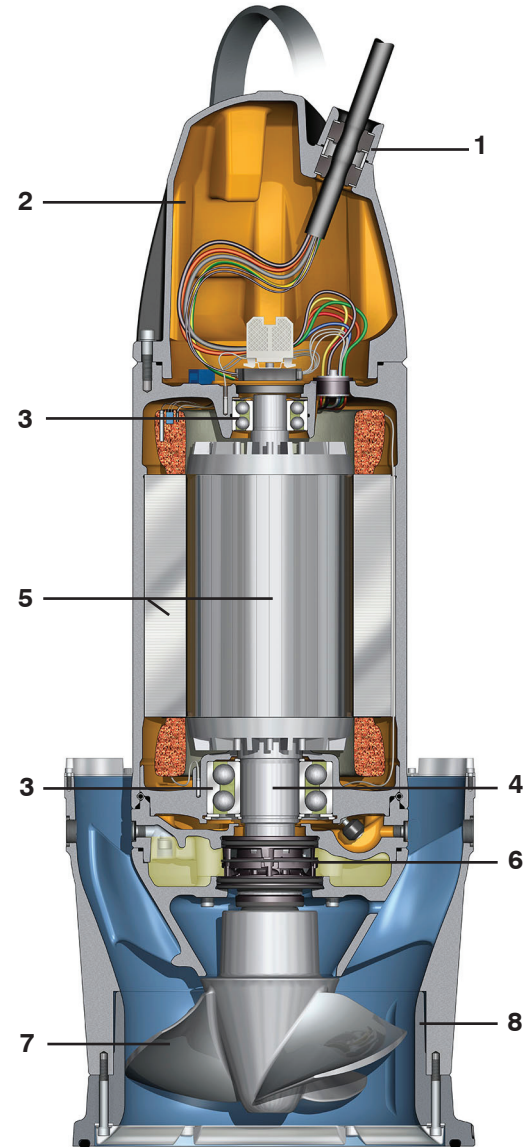
The Flygt Plug-in™ seal with the Active Seal™ system offers increased sealing reliability, reducing the risk of bearing and stator failure.

7. Propeller

N-technology, stainless steel (AISI 316) propeller enables excellent selfcleaning, corrosion and wear resistance.

8. Wear Ring

N-technology, hard iron bell mouth with integrated wear ring function and relief groove, increases the liquid velocity with minimum losses.



PL Pump Design Features

(PL 7061 - 7125)

1. Cable Entry

Cable entry consists of two compressible rubber bushings to seal off motor area and relieve strain on the cable. Two sealing bushings means high reliability in difficult applications.

2. Junction Box

The junction box is sealed from the motor via terminal board and an O-ring. Separate terminal boards for power and monitoring cables provide for ease of servicing and minimize the risk of voltage interference. A float switch in the junction box reacts if liquid enters this area.

3. Bearings

Bearings are rated for a minimum L_{10} bearing life of 100,000 hours. The lower bearing consists of one or two, single-row angular contact ball bearings (depending on hydraulic end) and one roller guide bearing. A platinum RTD (resistive temperature detector) monitors the temperature of the lower bearing outer race during operation. The upper guide bearing is a roller bearing. The bearings are sealed and lubricated with grease.

4. Shaft

Motor shaft and rotor are a single integral unit. The short overhang of the shaft virtually eliminates shaft deflection, resulting in increased seal and bearing life, low vibration levels and quiet operation. Shaft is completely isolated and cannot come in contact with the pumped media.

5. Motor

The high performance submersible induction motor is designed and manufactured by Flygt to be used specifically with Flygt pumps. Stator is Class H insulated rated to 356°F. Stator is shrink fitted into the stator housing, providing superior cooling by the pumped liquid which passes directly outside the stator housing. The stator incorporates three thermal switches connected in series (one in each phase). A float switch in the lower part of the stator housing reacts if liquid enters this area.

Sensors

In addition to the standard thermal switches in the stator windings and the sensor in the leakage chamber, the motor can be equipped with analog sensors (PT 100) to measure the temperature in the bearings and/or in the stator housing. Vibration and leakage sensors can also be placed in the junction box. All sensors can be monitored using the Flygt MAS or MiniCas control units.

6. Shaft Seals

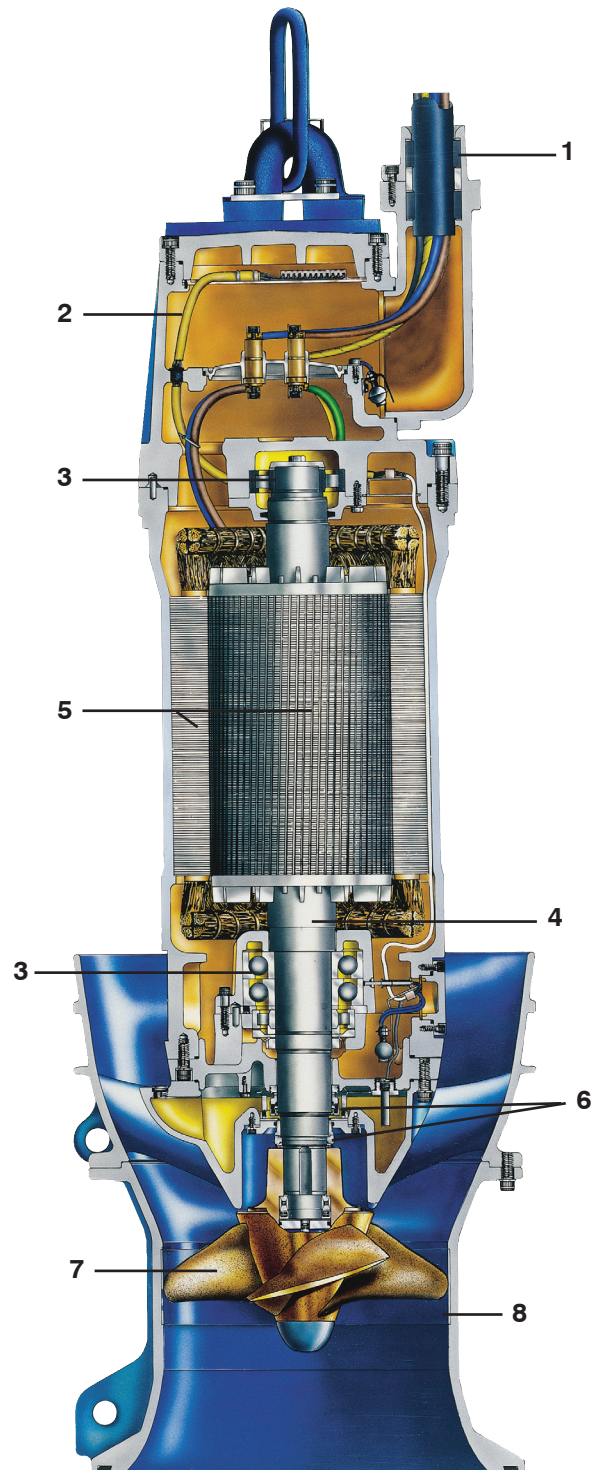
Two sets of mechanical seals having corrosion resistant tungsten carbide faces operate independently of each other within a common seal lubricant bath. This design provides superior reliability and sealing of the motor from pumped liquid.

7. Propeller

The one-piece bronze or stainless steel propeller is of three or four-blade configuration, Factory balanced and having swept-back design for superior clogging resistance, and includes a conical hub for high efficiency.

8. Wear Ring

A replaceable stainless steel wear ring helps maintain high pumping efficiency.

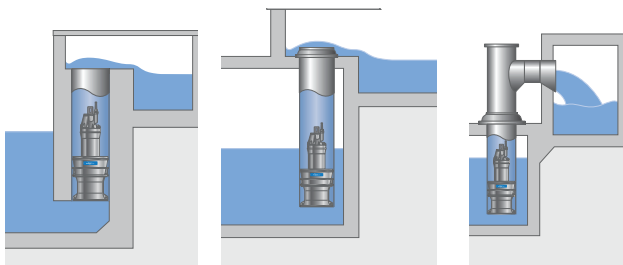


PL 7000 capacities and sizes

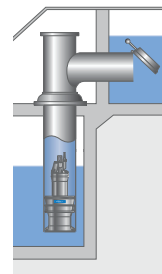
| Model | max. Capacity (at 60 Hz) | Head range | Motor (60Hz) hp / rpm | Discharge tube Ø /inch | Diffuser material | Propeller material |
|---------|--------------------------|------------|-----------------------|------------------------|-------------------|--------------------|
| PL 7020 | 5,070 gpm | 3-15 ft. | 27 hp / 1155 | 16" | Hard-Iron™ | Stainless Steel |
| PL 7020 | 7,150 gpm | 10-30 ft | 40 hp / 1750 | 16" | Hard-Iron™ | Stainless Steel |
| PL 7030 | 7,950 gpm | 5-16 ft. | 26 hp / 1165 | 500 / 20" | Hard-Iron™ | Stainless Steel |
| PL 7030 | 9,500 gpm | 5-18 ft. | 38 hp / 1165 | 500 / 20" | Hard-Iron™ | Stainless Steel |
| PL 7030 | 11,400 gpm | 5-20 ft. | 50 hp / 1165 | 500 / 20" | Hard-Iron™ | Stainless Steel |
| PL 7035 | 12,700 gpm | 10-39 ft. | 90 hp / 1750 | 550 / 22" | Hard-Iron™ | Stainless Steel |
| PL 7035 | 12,700 gpm | 10-46 ft. | 115 hp / 1750 | 550 / 22" | Hard-Iron™ | Stainless Steel |
| PL 7035 | 12,700 gpm | 10-53 ft. | 150 hp / 1750 | 550 / 22" | Hard-Iron™ | Stainless Steel |
| PL 7040 | 12,700 gpm | 5-12 ft. | 40 hp / 880 | 600 / 24" | Hard-Iron™ | Stainless Steel |
| PL 7040 | 14,600 gpm | 5-16 ft. | 75 hp / 880 | 600 / 24" | Hard-Iron™ | Stainless Steel |
| PL 7040 | 17,500 gpm | 7-23 ft. | 80 hp / 1190 | 600 / 24" | Hard-Iron™ | Stainless Steel |
| PL 7040 | 17,500 gpm | 7-26 ft. | 100 hp / 1190 | 600 / 24" | Hard-Iron™ | Stainless Steel |
| PL 7040 | 19,800 gpm | 7-26 ft. | 125 hp / 1190 | 600 / 24" | Hard-Iron™ | Stainless Steel |
| PL 7040 | 19,800 gpm | 7-30 ft. | 145 hp / 1190 | 600 / 24" | Hard-Iron™ | Stainless Steel |
| PL 7061 | 19,800 gpm | 7-21 ft. | 85 hp / 880 | 800 / 32" | Cast iron | Bronze or SS |
| PL 7061 | 22,200 gpm | 10-39 ft. | 170 hp / 1185 | 800 / 32" | Cast iron | Bronze or SS |
| PL 7061 | 26,200 gpm | 10-39 ft. | 240 hp / 1185 | 800 / 32" | Cast iron | Bronze or SS |
| PL 7065 | 17,500 gpm | 3-12 ft. | 60 hp / 590 | 800 / 32" | Cast iron | Bronze or SS |
| PL 7065 | 21,400 gpm | 3-18 ft. | 110 hp / 705 | 800 / 32" | Cast iron | Bronze or SS |
| PL 7065 | 27,000 gpm | 5-28 ft. | 215 hp / 885 | 800 / 32" | Cast iron | Bronze or SS |
| PL 7076 | 17,500 gpm | 3-12 ft. | 65 hp / 590 | 1000 / 40" | Cast iron | Bronze or SS |
| PL 7081 | 25,400 gpm | 7-20 ft. | 150 hp / 705 | 1000 / 40" | Cast iron | Bronze or SS |
| PL 7081 | 31,700 gpm | 10-30 ft. | 250 hp / 880 | 1000 / 40" | Cast iron | Bronze or SS |
| PL 7101 | 42,800 gpm | 7-17 ft. | 185 hp / 500 | 1200 / 48" | Cast iron | Bronze or SS |
| PL 7101 | 49,100 gpm | 10-25 ft. | 335 hp / 590 | 1200 / 48" | Cast iron | Bronze or SS |
| PL 7101 | 57,100 gpm | 13-33 ft. | 480 hp / 710 | 1200 / 48" | Cast iron | Bronze or SS |
| PL 7105 | 63,400 gpm | 8-20 ft. | 230 hp / 505 | 1200 / 48" | Cast iron | Bronze or SS |
| PL 7105 | 76,100 gpm | 8-26 ft. | 480 hp / 590 | 1200 / 48" | Cast iron | Bronze or SS |
| PL 7121 | 83,200 gpm | 10-28 ft. | 600 hp / 505 | 1400 / 56" | Cast iron | Bronze or SS |
| PL 7121 | 98,300 gpm | 10-39 ft. | 775 hp / 590 | 1400 / 56" | Cast iron | Bronze or SS |
| PL 7125 | 119,000 gpm | 8-33 ft. | 600 hp / 505 | 1400 / 56" | Cast iron | Bronze or SS |

* For individual performance curves and dimensional drawings, go to www.xylect.com and the "Xylem design recommendations" booklet.

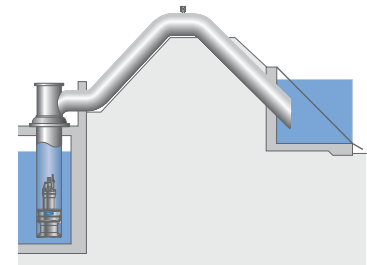
INSTALLATION EXAMPLES



Installation is steel, plastic or concrete column lifting to an open channel. No check valve is required.



With submerged outlet and flap valve.



With a siphon.