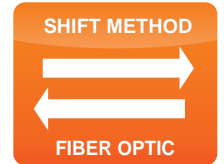
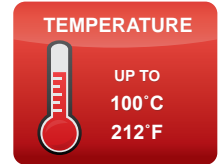
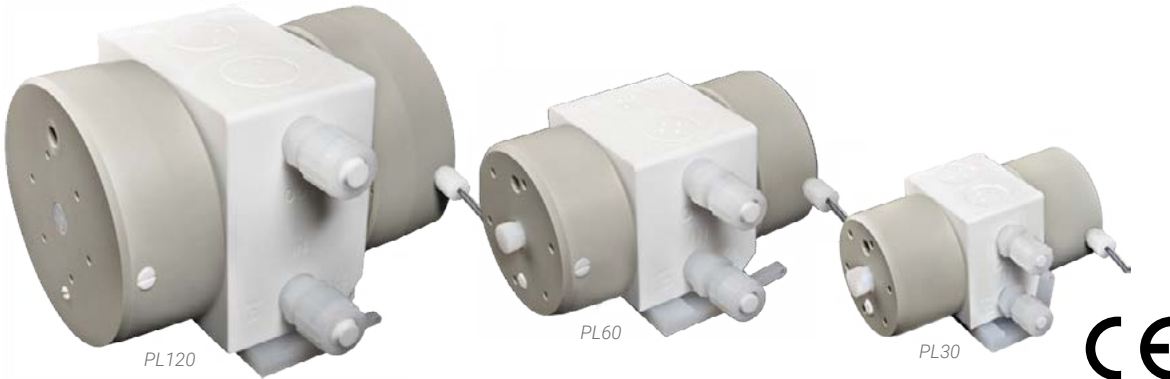


Durable Pumps with Fiber-Optics for High-Purity Chemicals

PF/PLF Series pumps were discontinued Dec 31, 2015. The pumps will be supported for five years after the dates of discontinuance. While White Knight continues to support PF/PLF Series pumps, we recommend users consider PFA Series pumps, which provide better performance, increased flow rates, higher pressure capabilities, improved reliability, extended pump life and warranty periods, as well as shorter lead times. Details: <https://wkfluidhandling.com/pfa-series/>



Easily replaces competitive products using fiber optic sensors

PLF Series metal-free pumps have PTFE/PFA fluid paths. They are capable of distributing chemicals at temperatures up to 100°C (212°F) and allow for air supply pressures up to 7 Bar (100 psi). The pumps operate with fiber optic sensors. They are available in three models, PLF30, PLF60, and PLF120, which are capable of maximum flow rates of 30, 60 and 120 lpm, respectively.

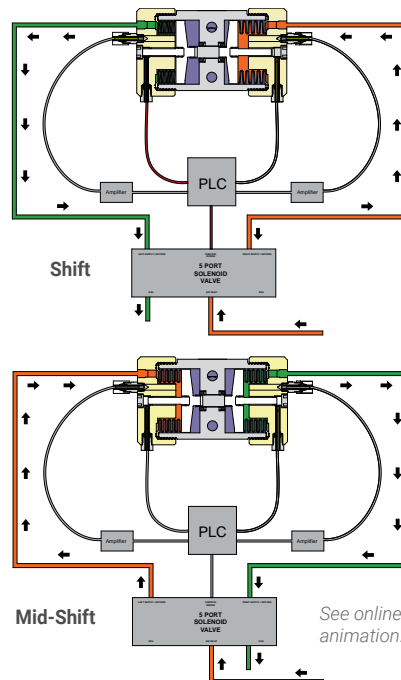
Features & Benefits

- Proven reliable to 400, 300, or 200 million+ cycles for PLF30, PLF60, PLF120, respectively
- Nonmetal pumps with PTFE/PFA liquid paths
- Safe, leak-free operation due to no-metal design
- Durable machined design with minimal parts; PP heads
- No elastomer O-rings, no leaks, never retorque
- No lubrication in shift mechanisms
- No electric motors, which generate heat
- No preventative maintenance during two-year warranty
- Class 100 cleanroom assembly, testing, and packaging
- Various liquid connection options
- Easy to install and service

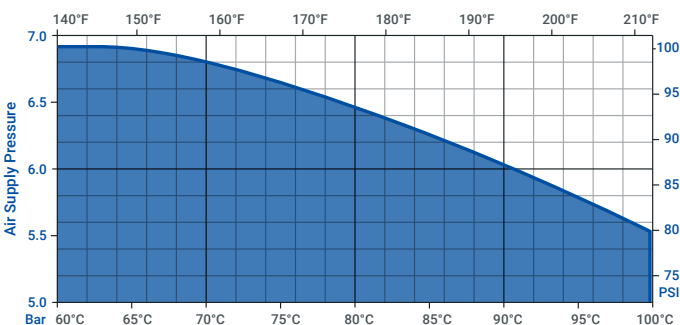
Operation

A solenoid valve and fiber optics monitor stroke timing to optimize liquid flow and pump durability.

- Supply Air (Orange)
- Exhaust Air (Green)
- Shift Signal (Red)
- Liquid Out (Purple)



Temperature Limits



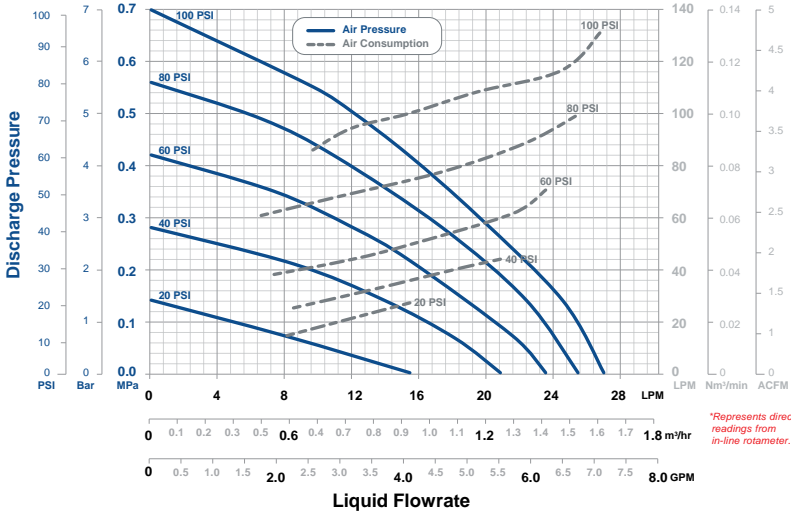
Options

Leak detection, stroke detection, electronic controls and monitoring, as well as pulsation dampeners.

<https://wkfluidhandling.com/plf-series/>

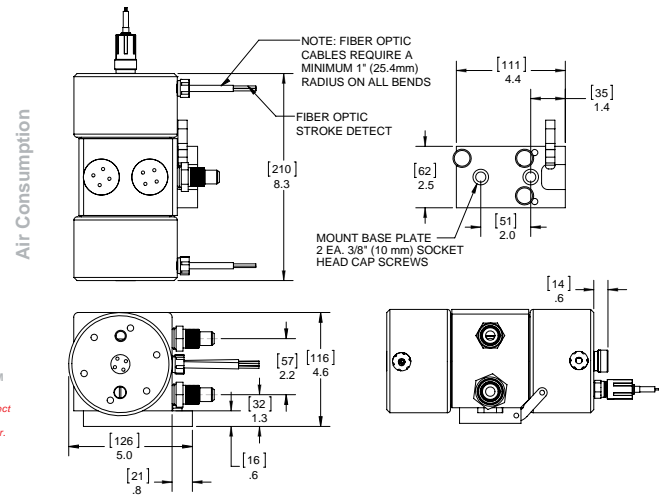
Performance

PLF30

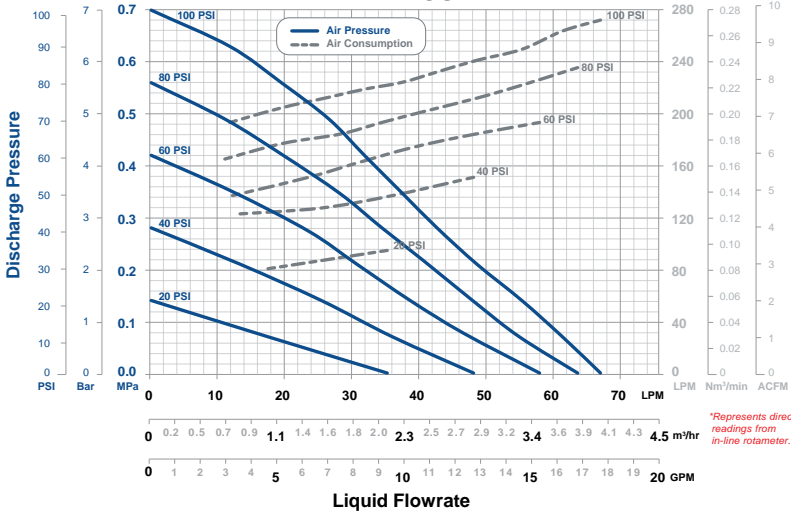


Dimensions

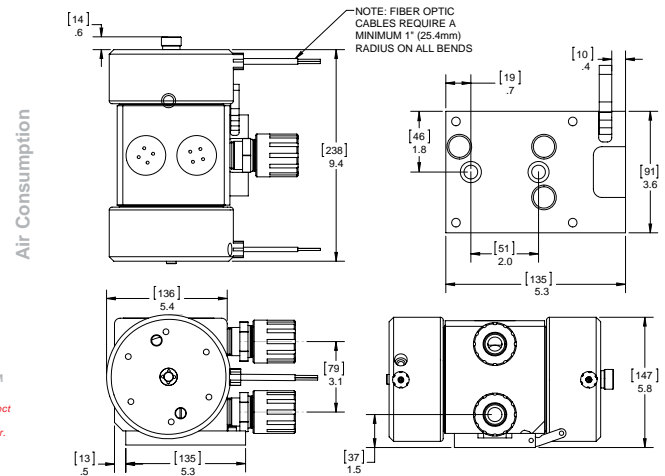
PLF30 [mm] in



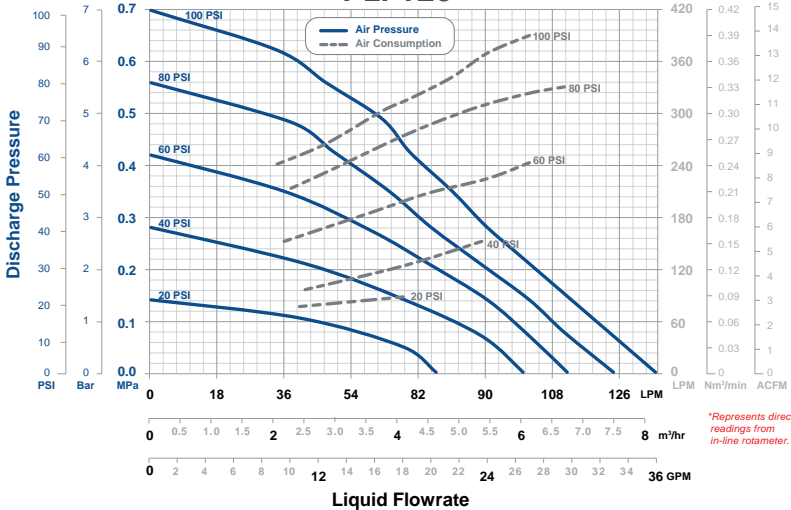
PLF60



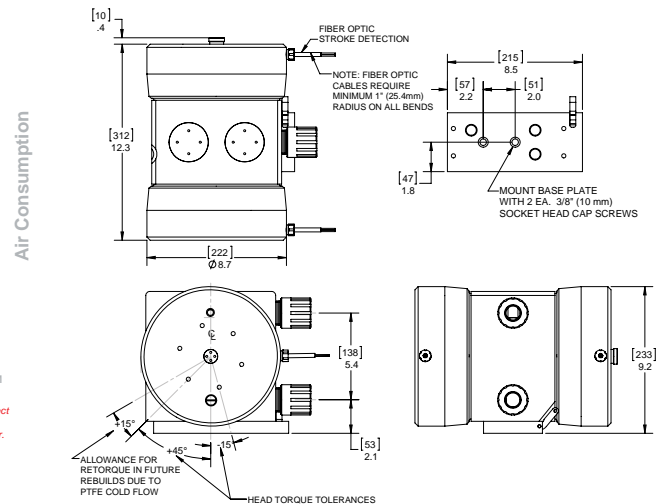
PLF60 [mm] in



PLF120



PLF120 [mm] in



PF/PLF Series pumps were discontinued Dec 31, 2015. The pumps will be supported for five years after the dates of discontinuance. While White Knight continues to support PF/PLF Series pumps, we recommend users consider PFA Series pumps, which provide better performance, increased flow rates, higher pressure capabilities, improved reliability, extended pump life and warranty periods, as well as shorter lead times. Details: <https://wkfluidhandling.com/pfa-series/>

Specifications

| Model | PLF30 | PLF60 | PLF120 | |
|--------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Max Flow Rate* | 30 lpm (7 gpm) | 60 lpm (15 gpm) | 120 lpm (32 gpm) | |
| Displacement Per Cycle* | 0.076 liters (0.02 gal) | 0.189 liters (0.04 gal) | 0.473 liters (0.12 gal) | |
| Cycles per min | ≤ 400 | ≤ 320 | ≤ 130 | |
| Air Connection | 1/8 or 1/4 in FNPT | | | |
| Weight | 2.6 kg (5.7 lb) | 5.2 kg (11.3 lb) | 17.1 kg (37.6 lb) | |
| Sound | Pressure** | 72.95 dB(a) 80.35 dB(a) | 75.44 dB(a) 83.49 dB(a) | 81.98 dB(a) 91.60 dB(a) |
| | Power** | 62.42 dB(a) 70.38 dB(a) | 66.94 dB(a) 75.73 dB(a) | 76.37 dB(a) 83.16 dB(a) |

| All PLF Series Models | |
|---------------------------------|---------------------|
| Max Fluid Temperature | 100°C (212°F) |
| Max Supply Air Pressure | 7 Bar (100 psi) |
| Min Startup Air Pressure | 1.4 bar (20 psi) |
| Suction Lift* | ≤ 1 m (3 ft) |
| Fluid Path Materials | PTFE, PFA |
| Non-Fluid Path Materials | PTFE, PFA, PP |

| All PLF Series Models | |
|---------------------------|---|
| Stroke Detection | Fiber optic with or without D10 sensor |
| Leak Detection | Fiber optic with or without sensor, or conductivity |
| Electronic Control | CPC, CPT, or custom. Call for details. |

* May vary by configuration. Suction lift diminishes over time. Recommended installation level less than 3 ft above source. ** dB at 100 psi 50 CPM (top) and 100 psi max. CPM (bottom). Sound levels measured in accordance with ISO9614-2:1997.



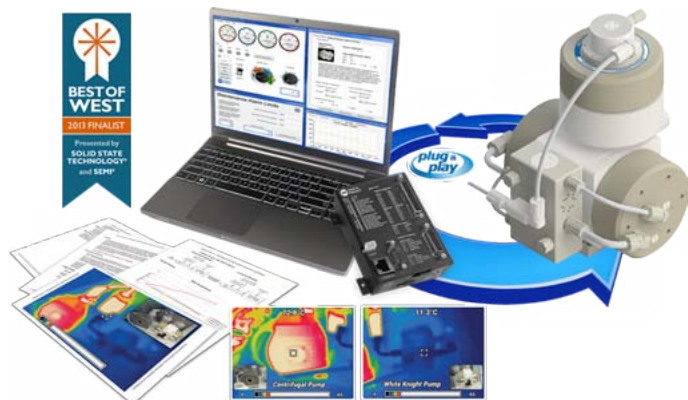
<https://wkfluidhandling.com/pfa-series/>

PLF Series Replacement Pumps: PFA Series

PFA Series pumps are the ideal solution for high-purity recirculation or delivery applications where fiber-optic sensors are required for optimum system control. These PTFE/PFA pumps are completely nonmetal and operate with fiber-optic sensors and an external solenoid valve. They offer air supply pressures up to 7 Bar (100 psi) and operate in thermal cycling applications up to 100°C (212°F). The pumps are available in three models, PFA030, PFA060 and PFA140, which are capable of maximum flow rates of 30, 60 and 140 lpm, respectively.

White Knight Accessories

Ultra-Pure Closed-Loop Systems



Automatically control flow or pressure with metal-free systems capable of 210°C, dead-head and suction lift!

- Automatically maintain flow or pressure in ultra-pure chemical process and delivery systems. Simplify process automation to save time and resources, improve yields and reduce cost.
- Up to 210°C (410°F)
- No metals or elastomers
- No heat generation
- No O-rings or lubrication
- Suction lift & dead-head

<https://wkfluidhandling.com/closed-loop/>

Pulse Dampeners

Reduce pulsation in fluid systems to improve flow control, increase yields, protect fittings and pipes, and minimize downtime for repairs.

<https://wkfluidhandling.com/dampeners/>



Pressure Regulators

Control upstream or downstream pressure! A single back-pressure regulator equalizes upstream fluid pressure across multiple discharge outlets. Forward-pressure regulators control downstream pressure.

<https://wkfluidhandling.com/regulators/>



Cycle-Rate Translator

The CPT enables pump replacements in existing tools. It operates a White Knight pump at its optimal cycle rate and scales the operational cycle rate to that expected by the tool.

<https://wkfluidhandling.com/cpt/>