

TopDrive™ Piston Pumps



Flexible Options for Drive, Depth Setting and Flow

This versatile system offers the most flexible pumping setup for every landfill and cleanup pumping need. Designed for reliable, high-performance pumping of almost any fluid under the most difficult operating conditions, Top-Drive™ piston pumps allow for substantial flexibility in depth setting, drive and flow options.

There are no down-well pneumatic lines or electric motors, and the mechanism provides an optimal blend of power, reliability and efficiency. A compact cylinder stroke results in greater efficiency and lower air or power consumption. Unique bearing design and durable

seals deliver longer lifespan with simple installation and maintenance.

Key Advantages

- 100% interchangeable drive assembly, switches from top drive solar or electric to pneumatic without removing the well seal.
- Pumps can be upgraded to a higher flow rate with only a change of the lower assembly.
- The intake design of the lower pump requires minimal liquid level to operate; pumps can run dry with nominal impact on long term performance.



Adjustable drop assembly has 5 and 10 foot sections, optimizing pump inlet depth.



Patented well seals provide unsurpassed rigidity; customizable port options meet site specific needs.



Custom control panels offer level alarms, on/off, timers, beacons and other key parameters.

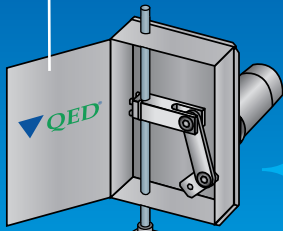


(800) 624-2026 • www.qedenv.com

P.O. Box 3726 Ann Arbor, MI 48106-3726 USA • (734) 995-2547 • Fax (734) 995-1170 • info@qedenv.com

Interchangeable Drive Heads

Electronic Drive Assembly Shown



3/4" NPT Discharge

Well seal

Drop assembly

5 ft.

10 ft.

Lower pump assembly

Solar Pump Head



- **Easily Implemented** – Eliminates the infrastructure required for pneumatic or electric pumping systems.
- **Flexible** – System design allows flexibility in pump operation based on site specific environmental and operational conditions.
- **Environmentally friendly** – Pumping alternative reduces operational costs and improves green image.
- **Top quality** – Manufactured with industry standard, highest grade materials.
- **Easy service & installation** – Minimal tools and personnel required; most serviceable components are located above the well-head for easy access instead of pulling submerged pumps.

Electric Pump Head



- **Unsurpassed control options** - Explosion-proof, brushless motors available. Low power requirements.
- **Proven track record** – 24/7/365 operation with millions of uninterrupted operating hours in extreme climates.
- **Top quality** – Manufactured with industry standard, highest grade materials.
- **Easy service & installation** – Minimal tools and personnel required; most serviceable components are located above the well-head for easy access instead of pulling submerged pumps.

Pneumatic Pump Head



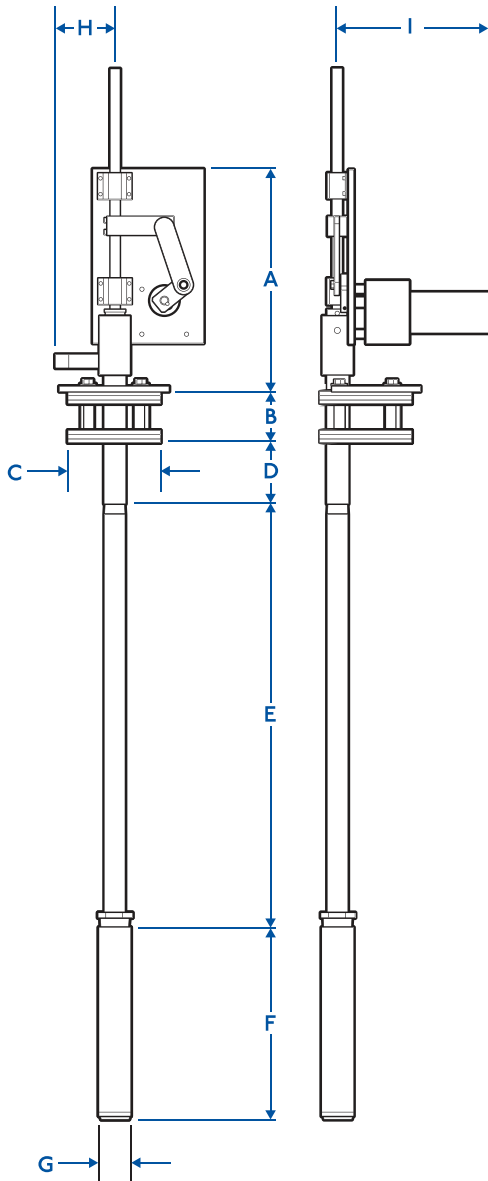
- **Dependable** – Designed for applications where airlift pumps fail: high pressure, high solids, and extreme weather conditions.
- **Flexible** – Easily adjustable built-in speed and stroke control with optional level controller allows for a wide range of pumping options.
- **No Air in Well** – Piston pump isolates air from pumped liquids to keep oxygen levels low.
- **Longer Lifespan** – Drive assembly life is maximized by incorporating a linear bearing in addition to the internal pneumatic drive cylinder bearing.
- **Low Air Consumption** – Efficient operation and flexible pump sizing result in significant savings for the owner/operator.
- **Easy service & installation** – Minimal tools and personnel required; most serviceable components are located above the well-head for easy access instead of pulling submerged pumps.

Down-Well Pump Choices



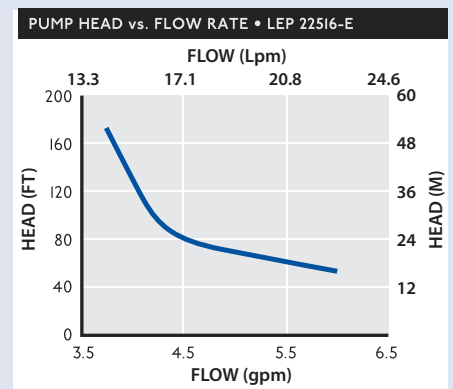
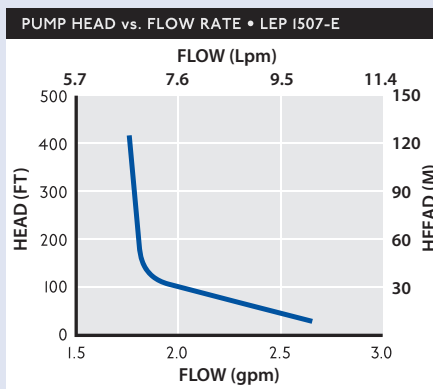
- **Low draw intake** – Intake design requires minimal liquid level to operate.
- **Two sizes** – Interchangeable Standard and High Flow models are available.

Solar and Electric TopDrive™ Pumps



Dimensions

| | | |
|--|---|--|
| Pump Head Height | A | 17.9" (45.5 cm) |
| Well Seal Insertion | B | 4.0" (10.2 cm) |
| Well Seal Diameter | C | 7.5" (19.0 cm) |
| Drop Tube Connector | D | 5.0" (12.7 cm) |
| Drop Tube Length | E | 5 or 10 ft. (1.5 or 3 m) sections up to maximum pump head |
| Lower Pump Length | F | 15.5" (39.4 cm) |
| Piston Cylinder Diameter | G | |
| LEP 1507-E | | 1.75" (4.45 cm) |
| LEP 22516-E | | 2.5" (6.35 cm) |
| Width at Discharge | H | 4.8" (12.2 cm) |
| Standard Motor Depth (Optional Models Vary) | I | 12.3" (31.2 cm) |



Solar Pumps

| Pump Model | Standard Solar Pump | Max. Head ft (m) | Flow Range gpm (Lpm) | Motor Ratings (HP) | Power Requirements |
|-------------|---------------------|------------------|----------------------------|--------------------|--------------------|
| LEP 1507-S | Solar | 200 (61) | 1.8 - 2.5 (.48 - .66) | 0.2 | 12-24v DC |
| LEP 22516-S | Solar | 160 (49) | 4.0 - 6.0 (1.06 - 1.59) | 0.33 | 12-24v DC |

Electric Pumps

| | | | | | |
|-------------|---------|-----------|----------------------------|------|---------------------------------------|
| LEP 1507-E | Single | 400 (122) | 1.8 - 2.5 (.48 - .66) | 0.33 | 120/208/240 1ø - 50/60 Hz |
| | 3-Phase | 400 (122) | 1.8 - 2.5 (.48 - .66) | 0.33 | 208/230/440/600 1ø or 3ø- 50/60 Hz |
| LEP 22516-E | Single | 160 (49) | 4.0 - 6.0 (1.06 - 1.59) | 0.33 | 120/208/240 1ø - 50/60 Hz |
| | 3-Phase | 160 (49) | 4.0 - 6.0 (1.06 - 1.59) | 0.33 | 208/230/440/600 1ø or 3ø- 50/60 Hz |

Components

| | |
|-------------------|-------------------------|
| LP-EB-ASSBLY_120V | Electric Drive Assembly |
| LP-EB-ASSBLY_12V | Solar Drive Assembly |
| LP-PH-ASSBLY | Pump Head Assembly |
| LP-DA-ASSBLY_5FT | Drop Assembly 5' |
| LP-DA-ASSBLY_10FT | Drop Assembly 10' |
| LP-LP150-ASSBLY | Standard Lower Pump |
| LP-LP225-ASSBLY | High Flow Lower Pump |
| xxx-x-WCA | Well Seal Assembly |

The 150 and 225 series pump have a discharge pipe size of 3/4" (1.9 cm) NPT, a **minimum** nominal pipe size for well casing (inches) of 4" without gas extraction, and 6" with gas extraction; 8" (20.3 cm) and other custom sizes are available. Max temperature for both are 212°F/100°C, and includes a speed stroke control.

Controls Standard

Nema 4x enclosure with cover interlocked disconnect switch, overload contactor. All panels are SCA/UL approved and manufactured in an ISO 9001 certified facility.

Control Options

- On-off cycle timers, wireless interface (operation and status), GFI protected heat trace circuit.
- Variable speed can be provided with custom motor selection.
- Step down transformers and control circuits as required.

Other Options

Solar system sizing is done to meet site specific environmental and run time conditions.

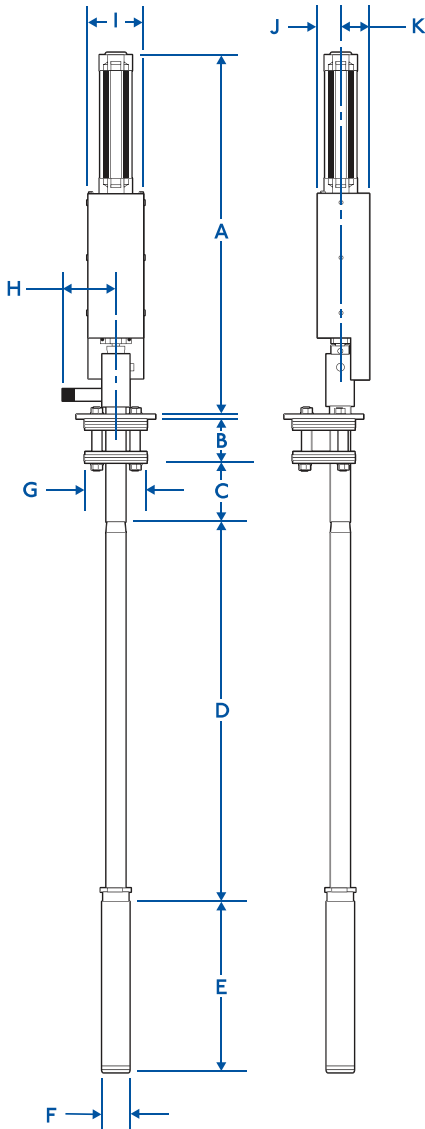
Materials

In-well components are fabricated from stainless steel or PVC, and feature Buna-N seals. These materials provide the best corrosion resistance possible. Above-ground components are fabricated from stainless steel, 6061-T6 aluminum and PVC. All fasteners are stainless steel for maximum corrosion resistance. High temperature and chemical resistant options are available.

Warranty

Each leachate pump comes with a no-hassle 2-year warranty against manufacturers' defects.

Pneumatic TopDrive™ Pumps



Dimensions

| | | |
|--------------------------|---|----------------------------------|
| Pump Head Height | A | 32.6" (82.8 cm) |
| Well Seal Insertion | B | 4.0" (10.2 cm) |
| Drop Tube Connector | C | 5.37" (13.7 cm) |
| Drop Tube Length | D | 5 or 10 ft. (1.5 or 3 m) |
| | | sections up to maximum pump head |
| Lower Pump Length | E | 15.5" (39.4 cm) |
| Piston Cylinder Diameter | F | |
| 150 Series | | 1.75" (4.4 cm) |
| 225 Series | | 2.5" (6.4 cm) |
| Well Seal Diameter | G | 5.36" (13.6 cm) |
| (6"/15 cm Nominal Well) | | |
| Width at Discharge | H | 4.8" (12.2 cm) |
| Cover Width | I | 5.1" (13.0 cm) |
| Cover Depth (Front) | J | 2.1" (5.3 cm) |
| Cover Depth (Rear) | K | 2.6" (6.6 cm) |

Pneumatic Pumps

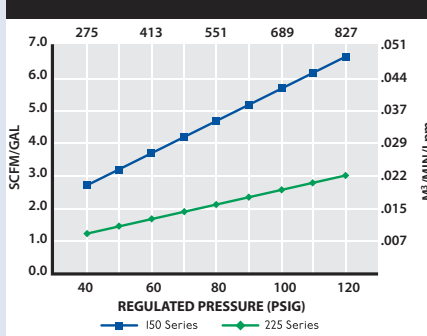
| Pump Model | Max. Flow Rate gpm (Lpm) | Pump Vol. Cycle gal. (l) | Max. Depth ft. (m) | Max. Air Pressure psi (kg/cm ²) |
|------------|-----------------------------|-----------------------------|-----------------------|--|
| 150 Series | 2.4 (9.1) | 0.06 (0.23) | 350 (107) | 120 (8.4) |
| 225 Series | 5.4 (20.4) | 0.23 (0.51) | 150 (46) | 120 (8.4) |

Components

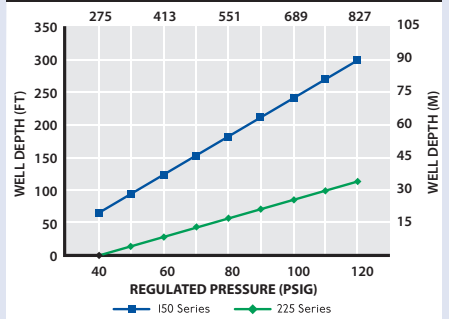
| | |
|-------------------|--------------------------|
| LP-PB-ASSBLY | Pneumatic Drive Assembly |
| LP-PH-ASSBLY | Pump Head Assembly |
| LP-DA-ASSBLY_5FT | Drop Assembly 5' |
| LP-DA-ASSBLY_10FT | Drop Assembly 10' |
| LP-LP150-ASSBLY | Standard Lower Pump |
| LP-LP225-ASSBLY | High Flow Lower Pump |
| xxx-x-WCA | Well Seal Assembly |

The 150 and 225 series pump have a discharge pipe size of 3/4" (1.9 cm) NPT, a **minimum** nominal pipe size for well casing (inches) of 4" without gas extraction, and 6" with gas extraction; 8" (20.3 cm) and other custom sizes are available. Max temperature for both are 212°F/100°C, and includes a speed stroke control.

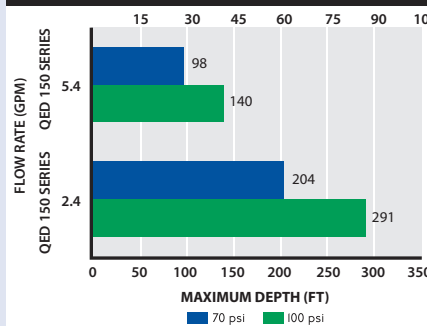
SCFM/GPM BY REGULATED PRESSURE



DEPTH BY REGULATED PRESSURE WITH 25PSI DISCHARGE HEAD



FLOW RATE VS. MAXIMUM DEPTH (M)



Materials

In-well components are fabricated from type 316 stainless steel or PVC, and feature Buna-N seals. These materials provide the best corrosion resistance possible. Above-ground components are fabricated from stainless steel, 6061-T6 aluminum and PVC. All fasteners are stainless steel for maximum corrosion resistance. High temperature and chemical resistance options are available.

Warranty

Each leachate pump comes with a no-hassle 2-year warranty against manufacturers' defects.

For complete details on all products visit:
www.qedenv.com

