

Piston pumps achieve positive-displacement liquid flow generated through simple reciprocating-piston technology. They are highly efficient, require low power, and are well suited for a broad range of applications. The all-weather drive motor can be powered using electricity, pneumatic air, or solar energy.

Blackhawk piston pumps are built with a unique hollow piston and internal check valve. On the Down stroke compressed fluids travel up the piston and into the discharge side of the cylinder. The Up stroke then forces the pumped fluid through the discharge tee – displacing total fluids to the surface.

FEATURES

- Capable of pumping semi-solid, viscous, and foamy fluids
- Operates in vertical or horizontal applications
- Up to 800 foot pumping depth
- Compatible in extreme environments
- Removes fluids from bottom of tanks, wells, or caissons
- Unaffected in dry run conditions
- Features controlled, metered flow rate
- Safe installation and operation

BLACKHAWK PUMP RANGES

Model	Power	Gal./liters per min.	Gal./liters per day	Lift weight in ft./m	Min. pipe size: in./cm
Anchor	Electric	6.7/25.3	9,648/36,432	800/240	2/4.8
Apollo-AC	Electric	2.7/10.2	3,888/14,172	400/122	2/4.8
Apollo	Solar	2.7/10.2	3,888/14,172	400/122	2/4.8
Edge	Pneumatic	5.0/18.9	7,200/27,250	281/86	2/4.8
V-2	Pneumatic	11/41.6	15,800/59,900	555/169	2/4.8
Atlas	Pneumatic	11.5/43.5	16,560/62,686	813/248	2/4.8

Performances vary by model size.

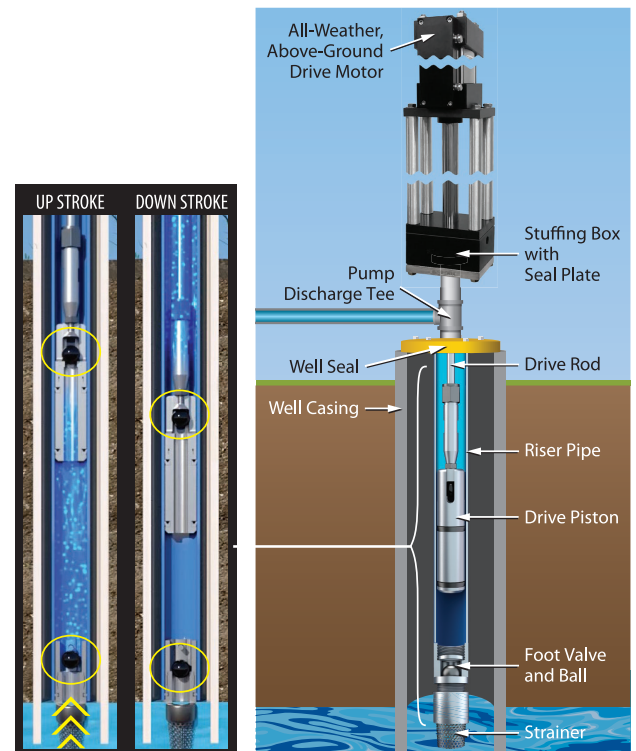
CleanHead System:

All Blackhawk pneumatic, electric and solar pumps include the CleanHead Contained-Pump System™ to ensure that no below-ground fluid is present at or above the wellhead. The closed CleanHead system provides an exit drain to return any potential surface fluids back into the well. Together with Blackhawk's air-tight-seal plate and high-clearance driver extensions, the system is designed to keep stuffing-box cartridge seals and wellheads clean and dry if seals begin to wear.



Reciprocating Piston Function:

Piston pumps utilize a piston within the cylinder to create an alternating increase and decrease in flow between the suction side and discharge side. As the piston move backward (up), the available volume in the intake portion of the cylinder increases. A one-way suction valve opens to allow fluid to enter. Blackhawk piston pumps are built with a unique hollow piston and internal check valve. On the forward stroke (down), the fluid is compressed and flows through the piston into the discharge side of the cylinder, trapped from returning by the check valve. On the next backward (up) stroke, the fluid is forced out through the discharge tee.



CALL GEOTECH TODAY (800) 833-7958

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Apollo AC Electric Piston Pump

The Apollo-AC Electric Piston Pump™ combines the reliable simplicity of Blackhawk's linear-rod Apollo drive motor design with the convenience of grid AC electric power. The result is 24/7 performance in a low-cost, low-maintenance, low-profile package.

Apollo AC 101 Specifications

Operational Depth	Up to 230 ft./70 m
Flow Range	Up to 1.4 gpm/5.3 lpm
Well-Casing Size	Minimum 2 in./5.08 cm
Drive Motor	⅜ hp



Apollo AC 102 Specifications

Operational Depth	Up to 100 ft./30.5 m
Flow Range	Up to 3.5 gpm/13.25 lpm
Well-Casing Size	Minimum 3 in./7.62 cm
Drive Motor	⅜ hp

Apollo Solar Powered Piston Pump

The Apollo Solar is a reciprocal-action piston pump powered by solar panels, with or without supplemental batteries. The simple, highly efficient ⅜ hp.-driver is mounted above the wellhead for easy installation and servicing at surface grade.

Apollo Solar 101 Specifications

Operational Depth	Up to 400 ft./122 m
Flow Range	Up to 1.1 gpm/4.1 lpm
Well-Casing Size	Minimum 2 in./5.08 cm
Drive Motor	⅜ hp

Apollo Solar 102 Specifications

Operational Depth	Up to 175 ft./53.3 m
Flow Range	Up to 2.7 gpm/10.2 lpm
Well-Casing Size	Minimum 3 in./7.62 cm
Drive Motor	⅜ hp



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Anchor Electric Piston Pump

The Anchor Electric is a positive-displacement, reciprocating piston pump. The top-head-drive electric control motor, mounted above the wellhead, provides linear pumping action from grade through the sucker-rod assembly in the downhole cylinder.

Anchor Model 101 Specifications

Operational Depth	To 800 ft./240 m (1 HP); 385 ft./117 m (1/2 HP)
Flow Range	To 1.2 US gpm/4.5 lpm
Well-Casing Size	Min. 2 in./5.08 cm

Anchor Model 102 Specifications

Operational Depth	To 351 ft./107 m (1 HP); 165 ft./50 m (1/2 HP)
Flow Range	To 3.0 US gpm/11.3 lpm
Well-Casing Size	Min. 3 in./7.62 cm



Atlas 2.5 Pneumatic Pump

Blackhawk's most powerful pneumatic, the highly reliable Atlas Pneumatic Piston Pump® excels in a broad range of demanding pumping situations, particularly hot, harsh environments, extended duty, winter running, and deep wells.

Atlas 101 Specifications

Operational Depth	Up to 813 ft./248 m
Flow Range	Up to 2.0 US gpm/7.6 lpm
Well-Casing Size	2 in./5.08 cm or greater

Atlas 102 Specifications

Operational Depth	Up to 359 ft./109 m
Flow Range	Up to 5.0 US gpm/18.9 lpm
Well-Casing Size	3 in./7.62 cm or greater

Atlas 103 Specifications

Operational Depth	Up to 137 ft./41.7 m
Flow Range	Up to 11.0 US gpm/41.6 lpm
Well-Casing Size	4 in./10.16 cm or greater



Edge Pneumatic Piston Pump

Blackhawk's newest Edge Pneumatic Piston Pump™ significantly outperforms competitors' airpush pumps – at comparable all-in pricing, with unmatched advantages. The Edge will pump virtually anything flowable, including elevated-temperature and harsh/viscous fluids.

Edge 101 Specifications

Operational Depth	Up to 281 ft./85.6 m
Flow Range	Up to 2 US gpm/7.6 lpm
Well-Casing Size	2 in./5.08 cm or greater

Edge 102 Specifications

Operational Depth	Up to 119 ft./36.2 m
Flow Range	Up to 5.0 US gpm/18.9 lpm
Well-Casing Size	3 in./7.62 cm or greater



V-2 Pneumatic Pump

The rugged, dependable V-2 Pneumatic Piston Pump™ excels in the broadest range of pumping applications and environments, including NAPL recovery and remediation, landfill leachate, elevated-temperature to 350°F, gas condensate & dewatering.

V-2 101 Specifications

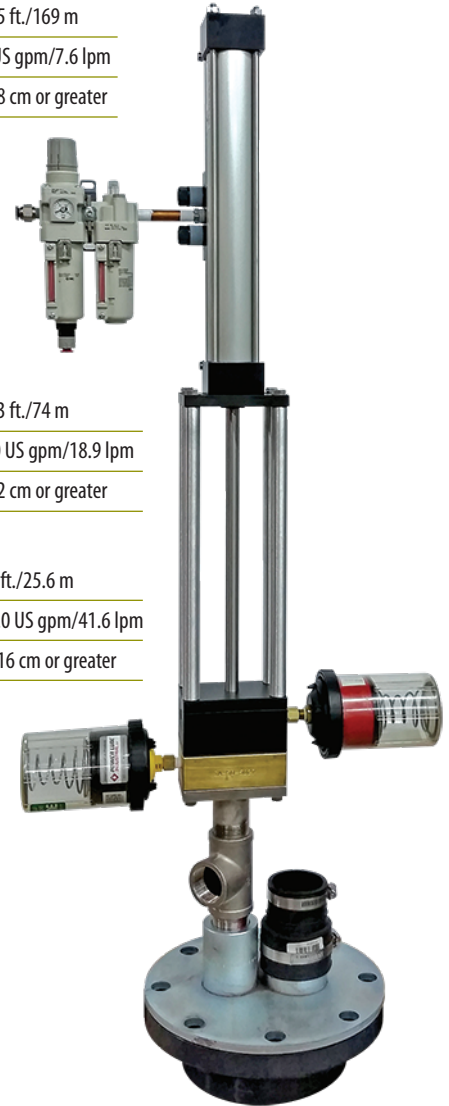
Operational Depth	Up to 555 ft./169 m
Flow Range	Up to 2 US gpm/7.6 lpm
Well Size	2 in./5.08 cm or greater

V-2 102 Specifications

Operational Depth	Up to 243 ft./74 m
Flow Range	Up to 5.0 US gpm/18.9 lpm
Well Size	3 in./7.62 cm or greater

V-2 103 Specifications

Operational Depth	Up to 84 ft./25.6 m
Flow Range	Up to 11.0 US gpm/41.6 lpm
Well Size	4 in./10.16 cm or greater



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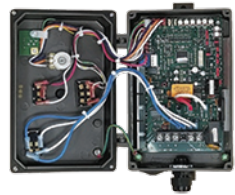
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ACCESSORIES



Air-Supply Kit
Cylinder oiler/filter regulator conditions, cleans & regulates incoming air



Apollo-AC Speed Control
Sets operator directed speed



Conductivity Liquid-Level Control
Uses conductivity probes to turn pump on and off



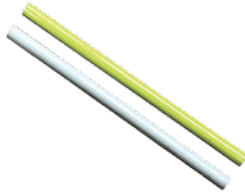
Cycle Counter
Counts each full stroke; mounted on driver



Discharge Kit
Includes hose and connectors



External Foot Valve
Includes check valve & SS ball



Flexible Fiberglass Rod
Choose elevated-temp (green) or standard drive rod. Cut to any length.



Flow Meter
Counts gallons of liquid flowing from discharge tee



HDPE to SS Fittings
Threaded for heat butt fuse connections



Rod Lubricator
Injects tiny, preset amounts of oil into stuffing box to lubricate rod



Rod-to-Rod Coupling
Connects fiberglass rods to extend length



Solar DC Controller
Modulates solar panel variances to feed steady 24V DC current



SS Coupling w Drain Port
1.25 in. NPT female threaded connection from discharge tee



Stuffing Box Seal Kit
Seals in Buna & Viton; quick pop-out cartridges



Vanstone Flange & Well Seals
Zinc-coated steel seals 4 to 12 in., gas head 6 to 12 in.; with drain port



Pneumatic On/Off Timer
Turns pump on and off at operator-set schedule



Pressure Gauge
Measures pressure in pump discharge



Pressure Relief Valve
Controls/limits built-up pressure from clogs, failures



Rod Extractor
Rescue tool if drive rod slips below discharge tee

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