



BIG BERTHA PNEUMATIC PISTON PUMPS

PRODUCT OVERVIEW

APPLICATIONS

LANDFILL LEACHATE
GAS CONDENSATE RECOVERY
GAS WELL DEWATERING

LARGEST TOP-HEAD-DRIVE PNEUMATIC DRIVE MOTORS

Big Bertha Pneumatic Piston Pumps, designed for very difficult heavy duty applications, provide high pumping volume at high discharge pressure and provide a positive one-way push with each stroke. These pumps handle hot, viscous liquids and can be installed in side slope pumping configurations.

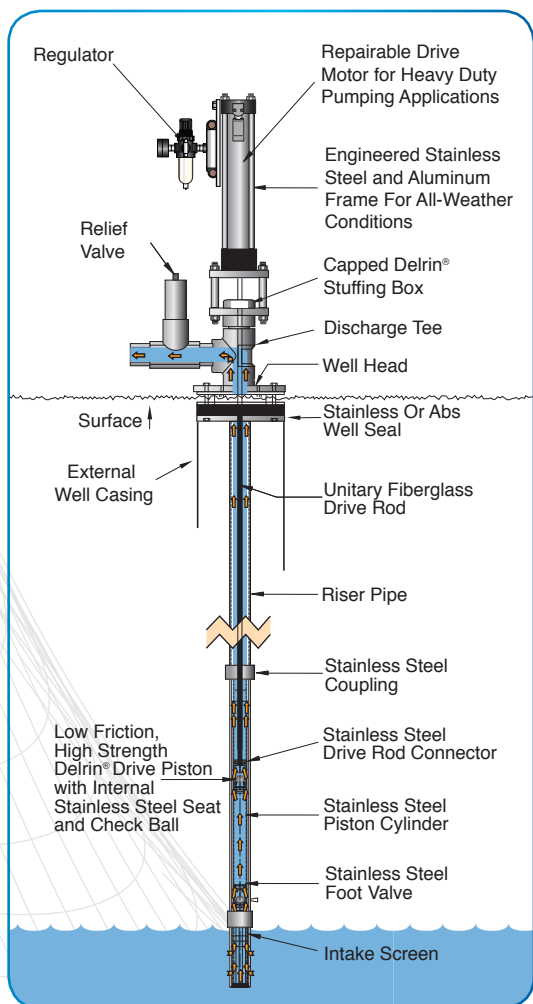
PUMPING CAPABILITIES DEPENDING ON MODEL CHOICE

FLOW RANGE

**10 US GPM
38 LPM**

OPERATIONAL DEPTH

**1,000 Ft.
300 M**



APPLICATIONS

- High volume
- High discharge pressure
- Hot, viscous liquids
- Side slope pumping

FEATURES

Largest pneumatic piston pump drive motor—3.25 in. by 12 in.

BENEFITS

- Handles difficult to handle liquids
- Provides high head
- Handles high discharge pressure
- Uses either air or electric logic to run pump
- Offers high strength, non stall design

Model	Force/Lift (feet -- at 100 psig regulator pressure)
101	0 – 1,500
102	0 – 700
103	0 – 320

Positive one-way push with each stroke

Provides high pumping volume. Positive magnetic limit switches reverse strokes back and forth. This unit will automatically shut down against high back pressure or when dead head conditions are encountered.

High temperature oil pump motor stretch offset configuration option insures motor drive does not contact liquid being pumped.

Because the rod stroke that contacts the liquid being pumped never contacts the motor, the drive motor never sticks or clogs and can handle chemically active liquids, sticky chemicals, tar, and high temperature liquids.

Field-serviceable Pneumatic Top-Head-Drive Motor

- Motor is above the well head to facilitate easy maintenance and service operations.
- Simple, three-input control is located on the motor's side frame, keeping maintenance simple and safe for field personnel.
- Weather resistant design handles all weather conditions.



FEATURES

Field-serviceable Pneumatic Top-Head-Drive Motor (continued)

Non-Metallic Delrin* or heat and chemically resistant PEEK Drive Pistons

Stainless Steel Downhole Pump Cylinder

Patented drive rod and connector

Customizable

BENEFITS

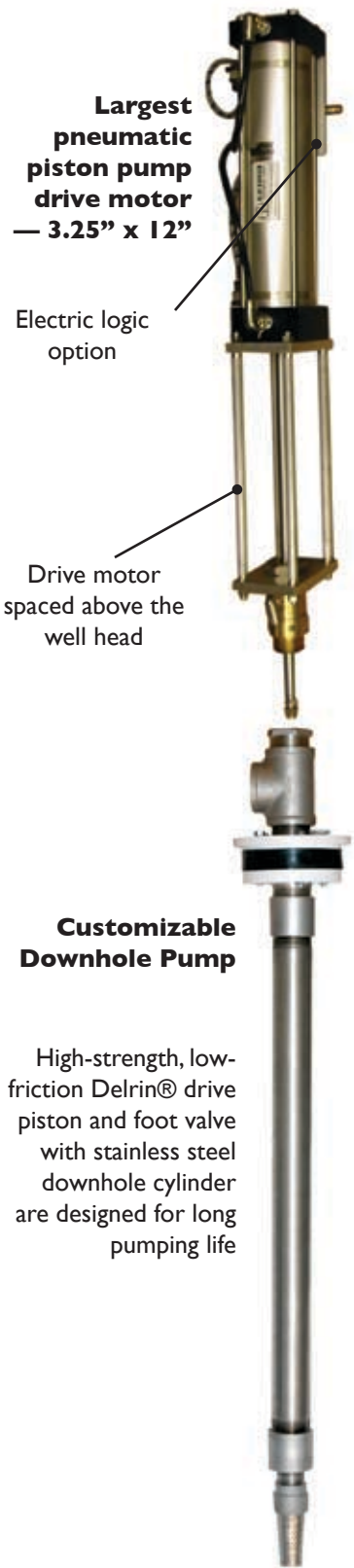
- Controlled pumping rate reduces risk of overpumping and significantly reduces silting.
- Top head motor design provides a safer working environment
- Eliminates fugitive emissions, because the top head mechanical pneumatic drive motor is above grade and driver air never enters the well. There are no exhaust emissions.
- Replaceable seals make the pump field serviceable.
- No high pressure air enters the well.
- Strong custom built drive pistons with Delrin housing and stainless steel internal seat and check ball provide proven extended service life.
- Eliminating metal-to-metal moving parts makes this pump ideal for applications requiring resistance to chemical encrustation, bio-fouling, and abrasion.
- Stainless steel provides long downhole life, even in critical tough grit and silt environments of landfills, gas wells, and chemical and hydrocarbon wells.
- Field-proven Delrin foot valve drive pistons, and stainless steel seat and check ball with patent-applied-for seat, provide durable, dependable performance.
- Patented drive rod/connector design allows pumping capabilities to 10 gpm to depths of 1,000 feet, depending on model choice.
- Patented design provides easy, clean operation in tough pumping environments.
- Strong, fail-proof unitary reinforced drive rods handle difficult pumping conditions in vertical or horizontal wells.
- Standard components can be configured for specific applications demands.

ABOUT BLACKHAWK TECHNOLOGY COMPANY

Founded in 1990, Blackhawk Technology Company manufactures the industry's most comprehensive line of electric, pneumatic, and windmill top-head-drive positive displacement piston pumps designed to withstand the harshest outdoor environments and the most rigorous downhole pumping conditions. The Company originated landfill and groundwater remediation piston pumps, and no one offers more application experience in landfills, petrochemical facilities, and remediation sites.

To learn more, see our customer testimonials and case histories at www.blackhawkco.com.

**PATENTED PUMPS THAT WORK WHEN OTHERS FAIL –
NO PUMP OUTPERFORMS BLACKHAWK**



Largest pneumatic piston pump drive motor — 3.25" x 12"

Electric logic option

Drive motor spaced above the well head

Customizable Downhole Pump

High-strength, low-friction Delrin® drive piston and foot valve with stainless steel downhole cylinder are designed for long pumping life