

Total Fluids Pumping for Landfill, Remediation, and Brownfield applications


The **AP2 Bottom Inlet Short** and the **AP2 Top Inlet Short** Autopumps both provide maximum capabilities and flow in a pump for 2" (50 mm) diameter wells.

The **AP2 Bottom Inlet Short** Autopump can handle even severe remediation and landfill pumping and applications, whilst the **AP2 Top Inlet Short** Autopump is also suitable for wells having shorter water columns and / or the need to pump down to lower water levels. It is designed for applications requiring an elevated inlet, such as pumping total fluids or wells contaminated with LNAPLs.

Benefits

- Based on the original automatic air-powered well pump, proven worldwide
- Competitive flow rates and pumping capabilities
- Patented, proven design for superior reliability and durability
- Handles solids, some solvents, hydrocarbons and corrosive conditions beyond the limits of electric pumps

Features

- ATEX certified to Zone 0 
- Positive air displacement
- Top and bottom fill design
- Short and long bodies
- Pump from approximately 90 metres




Applications

- Designed to handle difficult pumping challenges that other pumps can't, extreme temperature, viscous fluids, and frequent start/ stop cycles
- Remediation pumping applications with well casings 2 inch (50 mm) diameter and larger.
- Landfill / Remediation/ Petrochemical sites
- Leachate, Condensate, Product only, and Total Fluids
- Compliance Pumping

Pump Operation

- **Fill Cycle:** the fluid inlet check valve opens, allowing fluid to enter the pump. As the fluid level rises, air is expelled through the exhaust air valve and the internal float rises to the top of its stroke. In this upper position, the float triggers a lever assembly, which opens the air inlet and closes the air exhaust valve, which allows air to enter and pressurises the pump.
- **Discharge Cycle:** with the air inlet valve open, air pressure builds up within the pump body. This causes the fluid inlet check valve to close allowing the fluid to be displaced up and out of the fluid discharge check valve. As the fluid level falls, the float moves downward to the bottom of its stroke. In this lower position, the float triggers the lever assembly to close the air supply and open the air exhaust valve and a new cycle begins.

Technical Specifications

AP2 AutoPump		
	SHORT AP2 BOTTOM	SHORT AP2 TOP
Liquid Inlet Location	Bottom	Top
Outside Diameter	1.75 inches (4.45 cm)	1.75 inches (4.45 cm)
Length Overall (pump & fittings)	33 inches (85 cm)	35 inches (89 cm)
Length Overall, with Extended Screen	35 inches (89 cm)	
Weight	5.4 lb (3.6 kg)	5.7 lbs (2.6 kg)
Maximum Flow Rate	2.0 gpm (7.6 lpm)	1.6 gpm (6.0 lpm)
Pump Volume/ Cycle	0.05 - 0.08 gal (0.19 - 0.30 l)	0.05 - 0.08 gal (0.19 - 0.30 l)
Maximum Depth	300 ft (91.4 m)	300 ft (91.4 m)
Air Pressure Range	5 - 130 psi (0.4 - 9.2 kg/ cm ²)	5 - 130 psi (0.4 - 9.2 kg/ cm ²)
Minimum Actuation Level	20 inches (51 cm)	31 inches (78.7 cm)
Air Usage	0.39 - 2.58 scf/ gal (2.9 - 19.3 litres of air/ fluid litre)	0.39 - 2.59 scf/ gal (2.9 - 19.3 litres of air/ fluid litre)
Minimum Liquid Density	0.7 SpG (0.7g/ cm ³)	0.7 SpG (0.7g/ cm ³)
STANDARD CONSTRUCTION MATERIALS		
Pump Body	Stainless Steel	Stainless Steel
Pump Ends	Stainless Steel	Stainless Steel
Internal Components	Stainless Steel, Viton, PVDF	Stainless Steel, Viton, PVDF
Tube and Hose Fittings	Brass or Stainless Steel	Brass or Stainless Steel
Fitting Type	Barbs or Quick Connects	Barbs or Quick Connects
TUBE OPTIONS		
Tubing Material	Nylon	Nylon
Sizes - Liquid Discharge	5/8 inch (16 mm) OD	5/8 inch (16 mm) OD
Pump Air Supply	3/8 inch (9.5 mm) OD	3/8 inch (9.5 mm) OD
Air Exhaust	1/2 inch (13 mm) OD	1/2 inch (13 mm) OD
ATEX Certification	 II 1 G c IIB T6 Ta = 1 °C to 65 °C	

Total Fluids Pumping for Landfill, Remediation, and Brownfield applications


The **AP3 Top Inlet, Short** AutoPump is designed for applications requiring an elevated inlet, such as pumping total fluids from wells contaminated with LNAPLs.

The **AP3 Bottom Inlet Short** AutoPump is designed for wells having shorter water columns and/or the need to pump down to lower water levels, compared to full-length pumps.

Benefits

- Based on the original automatic air-powered well pump, proven worldwide
- Competitive flow rates and pumping capabilities
- Patented, proven design for superior reliability and durability
- Handles solids, some solvents, hydrocarbons and corrosive conditions beyond the limits of electric pumps

Features

- ATEX certified to Zone 0 
- Positive air displacement
- Top and bottom fill design
- Short and long bodies
- Pump from approximately 60 metres

Applications


- Designed to handle difficult pumping challenges that other pumps can't, extreme temperature, viscous fluids, and frequent start/ stop cycles
- Remediation pumping applications with well casings 3 inch (75mm) diameter and larger.
- Landfill, Remediation, and Petrochemical sites
- Leachate, Condensate, Product only, and Total Fluids
- Compliance Pumping



Pump Operation

- **Fill Cycle:** the fluid inlet check valve opens, allowing fluid to enter the pump. As the fluid level rises, air is expelled through the exhaust air valve and the internal float rises to the top of its stroke. In this upper position, the float triggers a lever assembly, which opens the air inlet and closes the air exhaust valve, which allows air to enter and pressurises the pump.
- **Discharge Cycle:** with the air inlet valve open, air pressure builds up within the pump body. This causes the fluid inlet check valve to close allowing the fluid to be displaced up and out of the fluid discharge check valve. As the fluid level falls, the float moves downward to the bottom of its stroke. In this lower position, the float triggers the lever assembly to close the air supply and open the air exhaust valve and a new cycle begins.

Technical Specifications

AP3 AutoPump		
	SHORT AP3/ B	SHORT AP3/ T
Liquid Inlet Location	Bottom	Top
Outside Diameter	2.63 inches (6.68 cm)	3.4 inches (8.64 cm) (2.63 inches available)
Length Overall (pump & fittings)	42 inches (107 cm)	47 inches (119 cm)
Length Overall, with Extended Screen	47 inches (117 cm)	
Weight	10 lbs (4.5 kg)	10 lbs (4.5 kg)
Maximum Flow Rate	6.0 gpm (22.7 lpm) - See Flow Rate Chart	4.8 gpm (18.1 lpm) - See Flow Rate Chart
Pump Volume/ Cycle	0.08 - 0.15 gal (0.30 - 0.57L)	0.08 - 0.15 gal (0.30 - 0.57 L)
Maximum Depth	175 ft. (53.3 m)	175 ft. (53.3 m)
Air Pressure Range	5 - 80 psi (0.4 - 5.6 kg/cm ²)	5 - 80 psi (0.4 - 5.6 kg/ cm ²)
Minimum Actuation Level	22 inches (56 cm)	42 inches (107 cm)
Air Usage	0.35 - 1.6 scf/ gal.(2.6 - 12.0 litres of air/ fluid litre) - See Air Usage Chart	0.43 - 1.6 scf/ gal. (3.2 - 12.0 litres of air/ fluid litre) 9 See Air Usage Chart
Minimum Liquid Density	0.7 SpG (0.7 g/ cm ³)	0.7 SpG (0.7 g/ cm ³)
STANDARD CONSTRUCTION MATERIALS		
Pump Body	Fibreglass or Stainless Steel	Fibreglass or Stainless Steel
Pump Ends	Stainless Steel, Brass	Stainless Steel, Acetal, HDPE, Brass
Internal Components	Stainless Steel, Viton, Acetal, Nylon	Stainless Steel, Viton, Acetal, Nylon
Tube and Hose Fittings	Brass or Stainless Steel	Brass or Stainless Steel
Fitting Type	Push Fit or Quick Connects	Push Fit or Quick Connects
TUBE OPTIONS		
Tubing Material	Nylon/ MDPE	Nylon/ MDPE
Sizes - Liquid Discharge	32 mm MDPE OD	32 mm MDPE OD
Pump Air Supply	10 mm OD	10 mm OD
Air Exhaust	10 mm OD	10 mm OD
ATEX Certification	 II 1G c IIB T6 Ta = 1 °C to +65 °C	

Total Fluids Pumping for Landfill, Remediation, and Brownfield applications


The **AP4 Top Inlet Short**, **AP4 Low Drawdown Top Inlet**, **AP4 Bottom Inlet Short** and **AP4 Low-Drawdown Bottom Inlet** AutoPump provide maximum capabilities and flow in a pump for 4" (100mm) diameter and larger wells and the need for an elevated inlet, such as pumping total fluids from wells contaminated with LNAPLs. Where there is the need to pump down to as low as 24 inches (62 cm) above the bottom, the **AP4 Low Drawdown Top Inlet** AutoPump is recommended.

The **AP4 Bottom Inlet Short** and The **AP4 Low-Drawdown Bottom Inlet** are suitable when there is the need to pump down to lower water levels. The **AP4 Low-Drawdown Bottom Inlet** AutoPump is also suitable where there is the need to pump down to as low as 11.5 inches(29 cm) above the bottom.

Benefits

- Based on the original automatic air-powered well pump, proven worldwide
- Competitive flow rates and pumping capabilities
- Patented, proven design for superior reliability and durability
- Handles solids, some solvents, hydrocarbons and corrosive conditions beyond the limits of electric pumps

Features

- ATEX certified to Zone 0 
- Positive air displacement
- Top and bottom fill design
- Short and long bodies
- Pump from approximately 80 metres



Applications

- Designed to handle difficult pumping challenges that other pumps can't, extreme temperature, viscous fluids, and frequent start/ stop cycles
- Remediation pumping applications with well casings 4 inch (100mm) diameter and larger.
- Landfill, Remediation, and Petrochemical sites
- Leachate, Condensate, Product only, and Total Fluids
- Compliance Pumping

Pump Operation


- **Fill Cycle:** the fluid inlet check valve opens, allowing fluid to enter the pump. As the fluid level rises, air is expelled through the exhaust air valve and the internal float rises to the top of its stroke. In this upper position, the float triggers a lever assembly, which opens the air inlet and closes the air exhaust valve, which allows air to enter and pressurises the pump.
- **Discharge Cycle:** with the air inlet valve open, air pressure builds up within the pump body. This causes the fluid inlet check valve to close allowing the fluid to be displaced up and out of the fluid discharge check valve. As the fluid level falls, the float moves downward to the bottom of its stroke. In this lower position, the float triggers the lever assembly to close the air supply and open the air exhaust valve and a new cycle begins.

Technical Specifications

AP4 AutoPump				
	SHORT AP4 TOP	LOW DRAWDOWN AP4 TOP	SHORT AP4 BOTTOM	LOW DRAWDOWN AP4 BOTTOM
Liquid Inlet Location	Top	Top	Bottom	Bottom (standard plug type check valve)
Outside Diameter	3.5 inches (8.9 cm)	3.5 inches (8.9 cm)	3.5 inches (8.9 cm)	3.5 inches (8.9 cm)
Length Overall (pump & fittings)	42 inches (107 cm)	29 inches (74 cm)	41 inches (104 cm)	25 inches (63.5 cm)
Length Overall, with Extended Screen			44 inches (112 cm)	28 inches (71.1 cm)
Weight	17 lbs (7.8 kg)	11 lbs (5.0 kg)	13 lbs (5.9 kg)	11 lbs (5.0 kg)
Maximum Flow Rate	9 gpm (34 lpm)	6.4 gpm (24 lpm)	13 gpm (49 lpm)	7 gpm (26.5 lpm)
Pump Volume/ Cycle	0.22 - 0.36 gal (.83 - 1.36L)	0.11 - 0.16 gal (.42 - .61L)	0.22 - 0.36 gal (.83 - 1.36L)	0.11 - 0.16 gal (.42 - .61 L)
Minimum Actuation Level	37 inches (94 cm)	24 inches (62 cm)	27 inches (69 cm)	13 inches (33.2 cm) standard outlet
STANDARD PUMP				
Maximum Depth	250 ft. (76 m)	250 ft. (76 m)	250 ft. (76 m)	250 ft. (76 m)
Air Pressure Range	5 - 120 psi (0.4 - 8.4 kg / cm ²)	5 - 120 psi (0.4 - 8.4 kg / cm ²)	5 - 120 psi (0.4 - 8.4 kg / cm ²)	5 - 120 psi (0.4 - 8.4 kg / cm ²)
Air Usage	0.35 - 1.5 scf / gal. (2.4 - 11.3 litres of air / fluid litre)	.31 - 2.85 scf / gal (2.2 - 21.5 litres of air / fluid litre)	0.4 - 1.5 scf / gal. (1.5 - 5.7 litres of air / fluid litre)	.32 - 2.86 scf / gal (2.2 - 21.5 litres of air / fluid litre).
HIGH PRESSURE PUMP				
Maximum Depth	425 ft. (130 m)		425 ft. (130 m)	
Air Pressure Range	5 - 200 psi (0.4 - 14.1 kg / cm ²)		5 - 200 psi (0.4 - 14.1 kg / cm ²)	
Minimum Liquid Density	0.7 SpG (0.7 g / cm ³)	0.7 SpG (0.7 g / cm ³)	0.7 SpG (0.7 g / cm ³)	0.7 SpG (0.7 g / cm ³)

Technical Specifications, cont'd.

AP4 AutoPump, cont'd.

	SHORT AP4 TOP	LOW DRAWDOWN AP4 TOP	SHORT AP4 BOTTOM	LOW DRAWDOWN AP4 BOTTOM
STANDARD CONSTRUCTION MATERIALS				
Pump Body	Fibreglass or Stainless Steel	Fibreglass or Stainless Steel	Fibreglass or Stainless Steel	Fibreglass or Stainless Steel
Pump Ends	Stainless Steel, Acetal, Brass	Stainless Steel, Acetal, Brass	Stainless Steel, UHMWPE ³ , Brass	Stainless Steel, UHMWPE ³ , Brass
Internal Components	Stainless Steel, Viton, Acetal, PVDF ³	Stainless Steel, Viton, Acetal, PVDF ³	Stainless Steel, Viton, Acetal, PVDF ³	Stainless Steel, Viton, Acetal, PVDF ³
Tube and Hose Fittings	Brass or Stainless Steel	Brass or Stainless Steel	Brass or Stainless Steel	Brass or Stainless Steel
Fitting Type	Barbs or Quick Connects	Barbs or Quick Connects	Barbs or Quick Connects	Barbs or Quick Connects
TUBE OPTIONS				
Tubing Material	Nylon/ MDPE	Nylon/ MDPE	Nylon/ MDPE	Nylon/ MDPE
Sizes - Liquid Discharge	32 mm MPPE OD	32 mm MDPE OD	32 mm MDPE OD	32 mm MDPE OD
Pump Air Supply	10 mm OD Nylon	10 mm OD Nylon	10 mm OD Nylon	10 mm OD Nylon
Air Exhaust	10 mm OD Nylon	10 mm OD Nylon	10 mm OD Nylon	10 mm OD Nylon
ATEX Certification	 II 1 G c IIB T6 Ta = 1 °C to +65 °C			