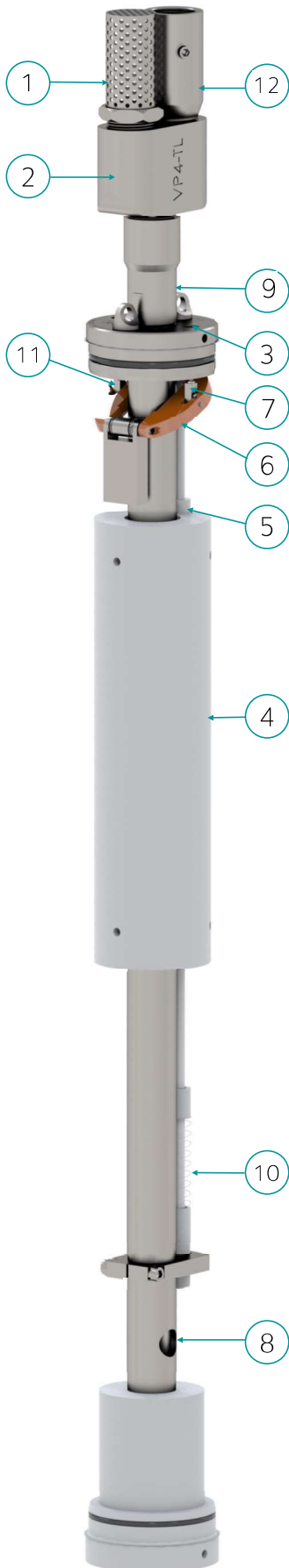


# How it works

## VP4 Top Loader



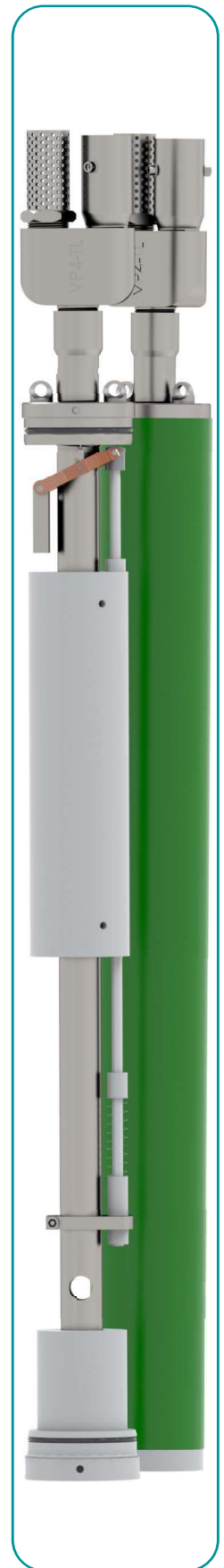
- Liquid enters the pump via the strainer (1) and inlet check valve (2)
- Air trapped within the pump escapes through the air exhaust (3)
- The float (4) rises as the liquid enters and when it gets to the top of its travel (5), it trips the rocker mechanism (6)
- The air exhaust valve (11) closes
- The air inlet valve (7) opens allowing compressed air into the pump
- Compressed air closes the inlet check valve (2)
- Liquid within the pump is discharged from the pump through the discharge port (8) and up the central discharge tube
- Liquid passes through the riser (9) and out through the top check valve (12)
- The float descends as liquid is discharged
- The float pulls the rocker mechanism back when the spring (10) is compressed
- The air inlet valve (7) closes and the air exhaust valve (11) opens
- Compressed air trapped within the pump can now escape to atmosphere via the air exhaust (3)
- The pump continues to cycle in this way

# VP4 Top Loader

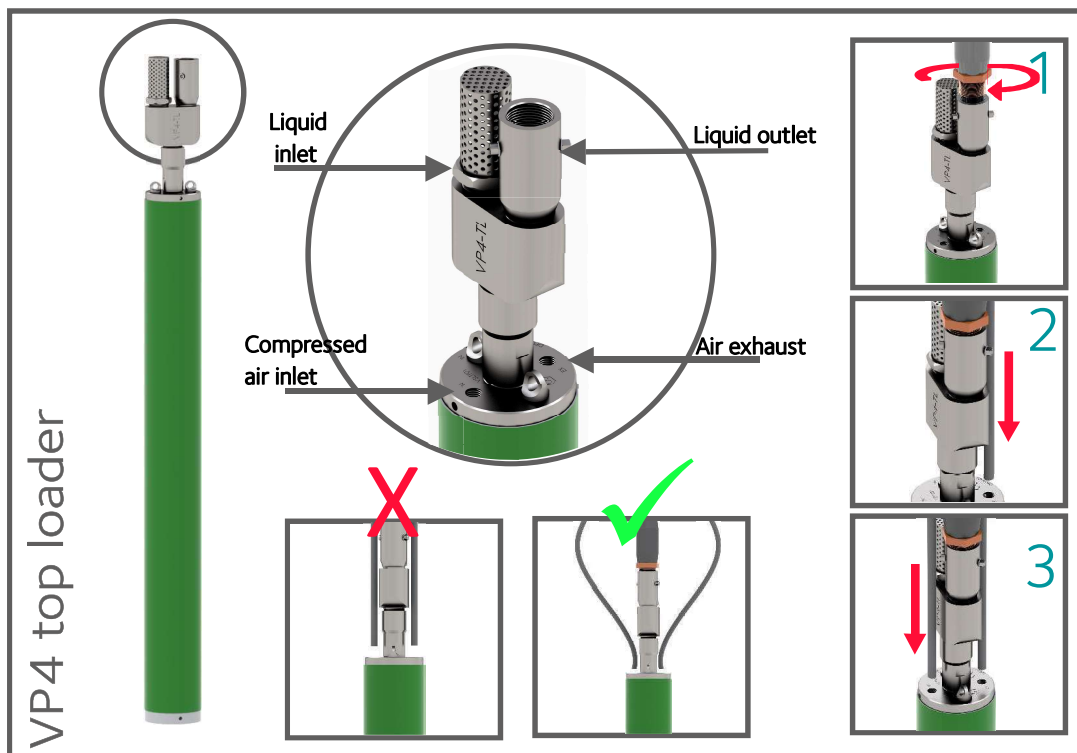
Model & Type	VP4-TL
Liquid Inlet Position	Top
Max Flow Rate Litres/hr	>2,100
Volume/Cycle: Litres	0.9-1.1
Pump Length: mm	1,070
Weight: Kg	8
Pump Diameter: mm	90
Pump Trigger Point: mm	620
Min Internal Well Dia: mm	100
Max Working Depth: m	130
Max Operating Temp: °C	100
pH Operating Range	3 -12

The VP4-TL can be installed in wells of 4"/100 mm minimum internal diameter. They are designed to pump landfill leachate, landfill gas condensate and contaminated or clean groundwater. Top-loaders can be very effective in leachate and gas wells with excessively gaseous/foamy leachate.

Top-loaders are often referred to as "Total Fluids" pumps in the contaminated groundwater sector because they are widely used for pumping LNAPL (Light Non-Aqueous Phase Liquids). Viridian pumps are designed for user serviceability and longevity, providing the lowest whole-life cost of any similar pump on the market.

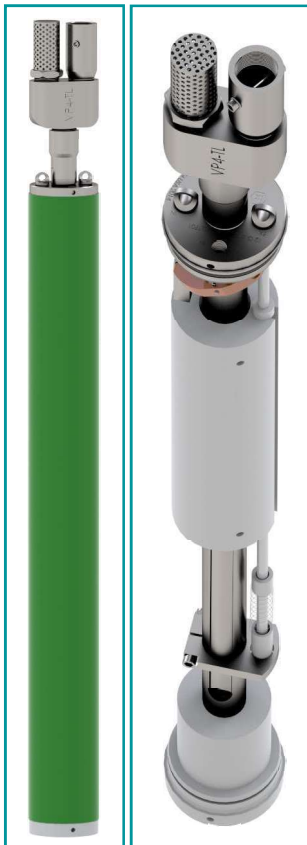
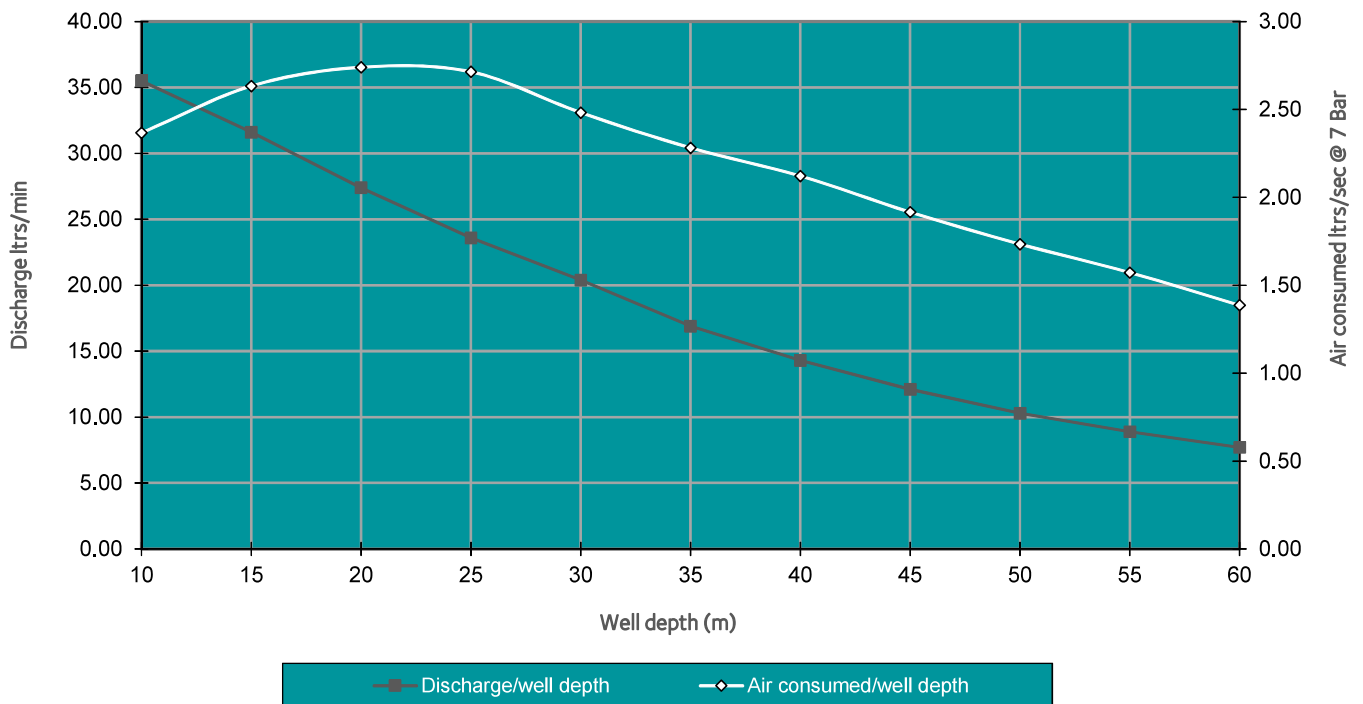


## Quick installation guide



# VP4 TL Performance Curve

VP4-TL liquid discharged & air consumed/well depth.  
 Pump submerged by 3m and 25mm bore discharge hose.  
 Air inlet pressure 7 Bar



Well Depth	Discharge LPM	Total Air Requirement (L/S)	Total Air (SCFM) Requirement
10	35.50	2.37	5.01
15	31.60	2.63	5.58
20	27.40	2.74	5.81
25	23.60	2.71	5.75
30	20.40	2.48	5.26
35	16.90	2.28	4.83
40	14.30	2.12	4.49
45	12.10	1.92	4.06
50	10.30	1.73	3.67
55	8.90	1.57	3.33
60	7.70	1.39	2.94

DATA table

Values for SCFM have been shown in the DATA table for ease of compressor specification.

# How it works

## VP3 Top Loader



- Liquid enters the pump via the strainer (1) and inlet check valve (2)
- Air trapped within the pump escapes through the air exhaust (3)
- The float (4) rises as the liquid enters and when it gets to the top of its travel (5), it trips the rocker mechanism (6)
- The air exhaust valve (11) closes
- The air inlet valve (7) opens allowing compressed air into the pump
- Compressed air closes the inlet check valve (2)
- Liquid within the pump is discharged from the pump through the discharge port (8) and up the central discharge tube
- Liquid passes through the riser (9) and out through the top check valve (12)
- The float descends as liquid is discharged
- The float pulls the rocker mechanism back when the spring (10) is compressed
- The air inlet valve (7) closes and the air exhaust valve (11) opens
- Compressed air trapped within the pump can now escape to atmosphere via the air exhaust (3)
- The pump continues to cycle in this way

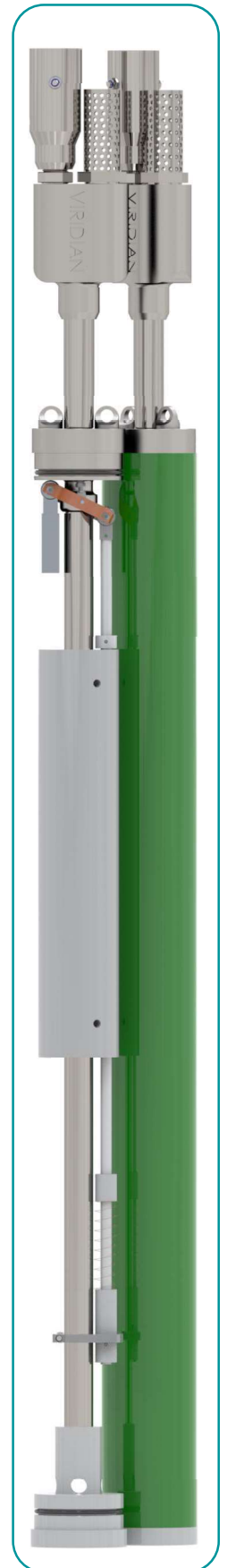
# VP3 Top Loader

Model & Type	VP3-TL
Liquid Inlet Position	Top
Max Flow Rate Litres/hr	>1,000
Volume/Cycle: Litres	0.6
Pump Length: mm	1,130
Weight: Kg	5
Pump Diameter: mm	70
Pump Trigger Point: mm	630
Min Internal Well Dia: mm	80
Max Working Depth: m	130
Max Operating Temp: °C	100
pH Operating Range	3 -12

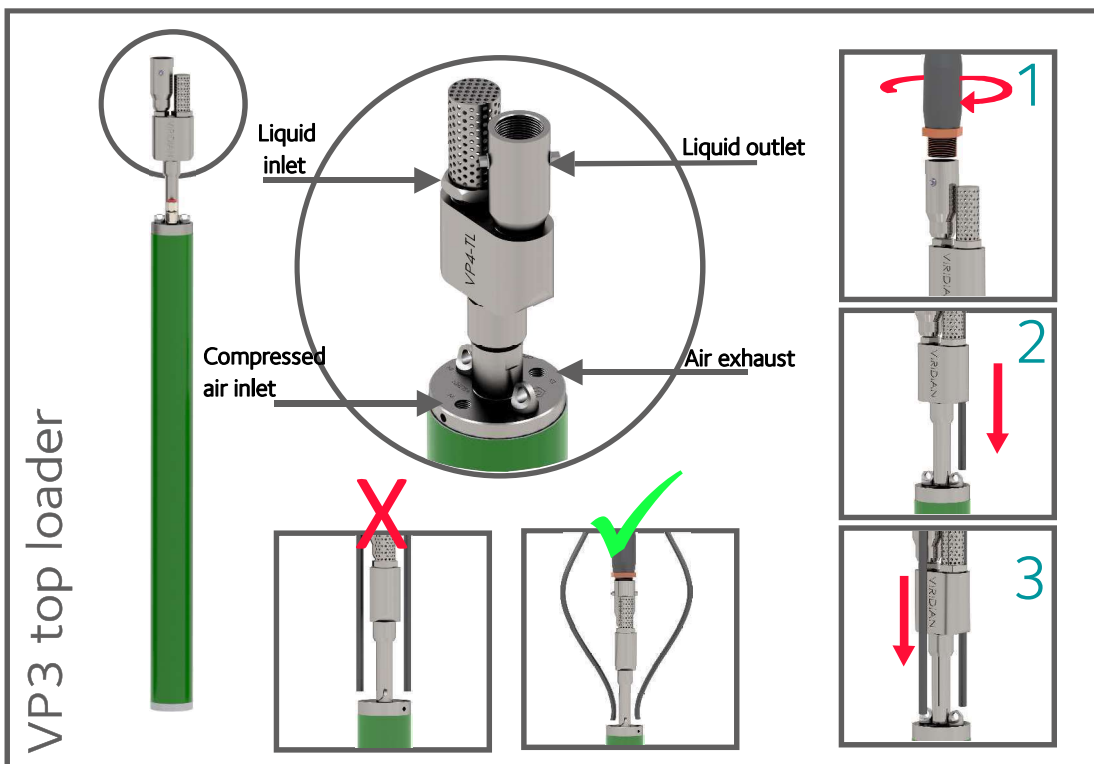
The VP3-TL can be installed in wells of 3"/80 mm minimum internal diameter. They are designed to pump landfill leachate, landfill gas condensate and contaminated or clean groundwater.

Top-loaders can be very effective in leachate and gas wells with excessively gaseous/foamy leachate. Top-loaders are often referred to as "Total Fluids" pumps in the contaminated groundwater sector because they are widely used for pumping LNAPL (Light Non-Aqueous Phase Liquids).

Viridian pumps are designed for user serviceability and longevity, providing the lowest whole-life cost of any similar pump on the market.

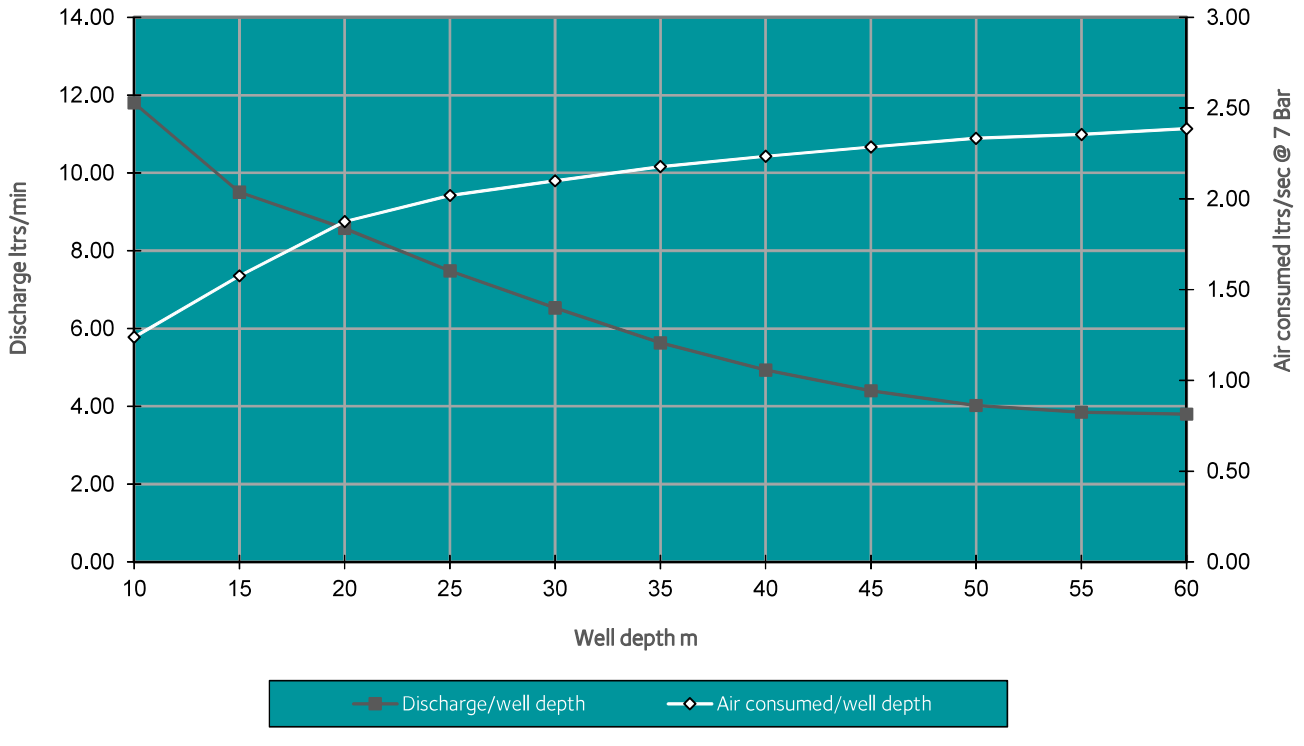


## Quick installation guide



# VP3 TL Performance Curve

VP3-TL LDD liquid discharged & air consumed/well depth.  
 Pump submerged by 3m and 25mm bore discharge hose.  
 Air inlet pressure 7 Bar



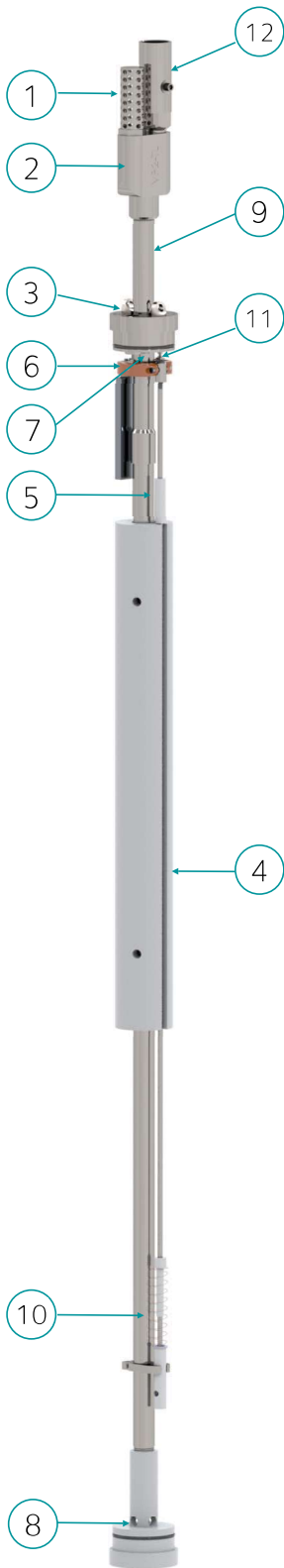
Well Depth	Discharge LPM	Total Air Requirement (L/S)	Total Air (SCFM) Requirement
10	13.50	1.25	2.66
15	12.70	1.62	3.43
20	12.20	1.95	4.13
25	11.40	2.21	4.68
30	10.51	2.48	5.27
35	9.60	2.72	5.75
40	8.60	2.77	5.87
45	7.30	2.71	5.74
50	6.50	2.56	5.43
55	5.90	2.44	5.17
60	5.30	2.27	4.82

DATA table

Values for SCFM have been shown in the DATA table for ease of compressor specification.

# How it works

## VP2 Top Loader



- Liquid enters the pump via the strainer (1) and inlet check valve (2)
- Air trapped within the pump escapes through the air exhaust (3)
- The float (4) rises as the liquid enters and when it gets to the top of its travel (5), it trips the rocker mechanism (6)
- The air exhaust valve (11) closes
- The air inlet valve (7) opens allowing compressed air into the pump
- Compressed air closes the inlet check valve (2)
- Liquid within the pump is discharged from the pump through the discharge port (8) and up the central discharge tube
- Liquid passes through the riser (9) and out through the top check valve (12)
- The float descends as liquid is discharged
- The float pulls the rocker mechanism back when the spring (10) is compressed
- The air inlet valve (7) closes and the air exhaust valve (11) opens
- Compressed air trapped within the pump can now escape to atmosphere via the air exhaust (3)
- The pump continues to cycle in this way

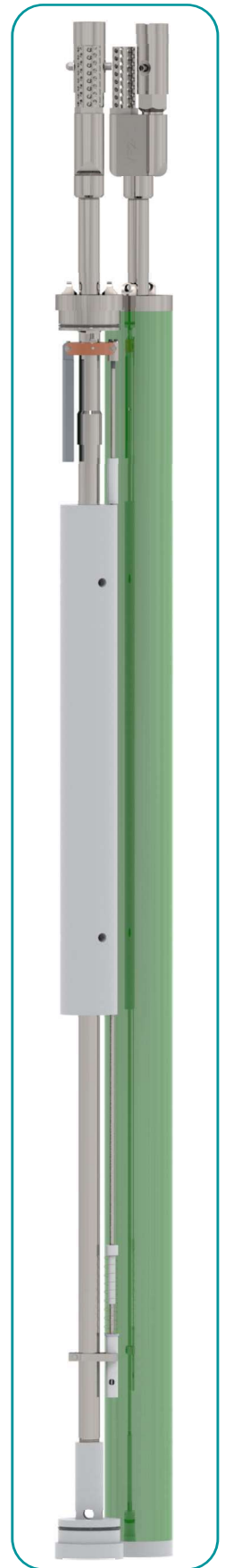


# VP2 Top Loader

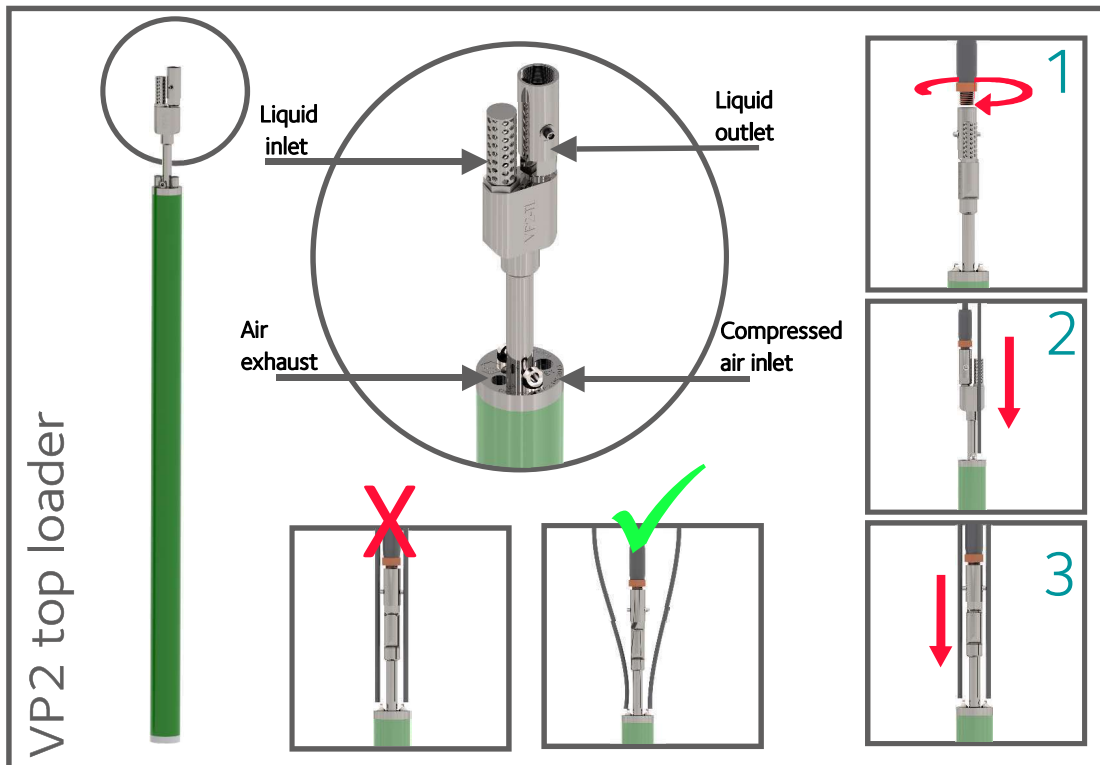
Model & Type	VP2-TL
Liquid Inlet Position	Top
Max Flow Rate Litres/hr	>400
Volume/Cycle: Litres	0.3
Pump Length: mm	995
Weight: Kg	2
Pump Diameter: mm	44
Pump Trigger Point: mm	595
Min Internal Well Dia: mm	50
Max Working Depth: m	130
Max Operating Temp: °C	100
pH Operating Range	3 -12

The VP2-BL can be installed in wells of 2"/50 mm minimum internal diameter. They are designed to pump landfill leachate, landfill gas condensate and contaminated or clean groundwater. The base of the pump is domed to aid installation and to deflect entrained gases in liquids.

Viridian pumps are designed for user serviceability and longevity, providing the lowest whole-life cost of any similar pump on the market.



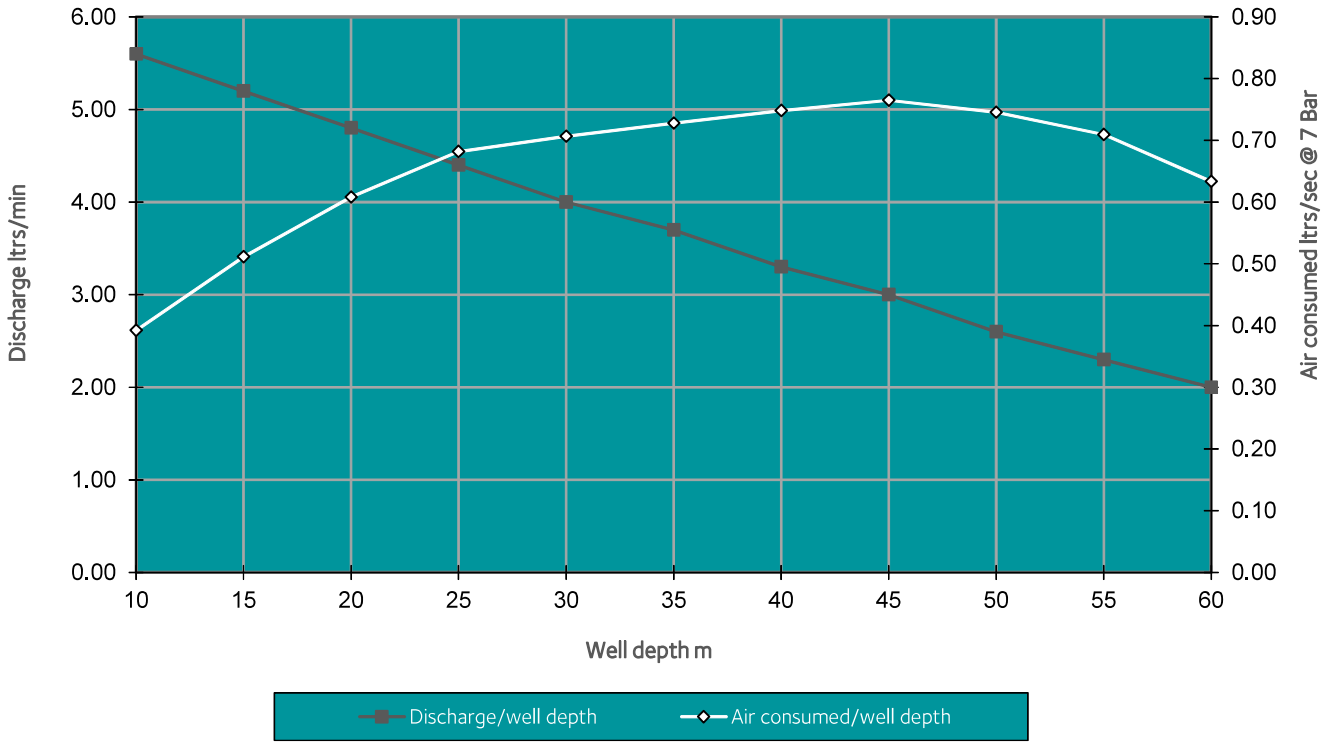
## Quick installation guide





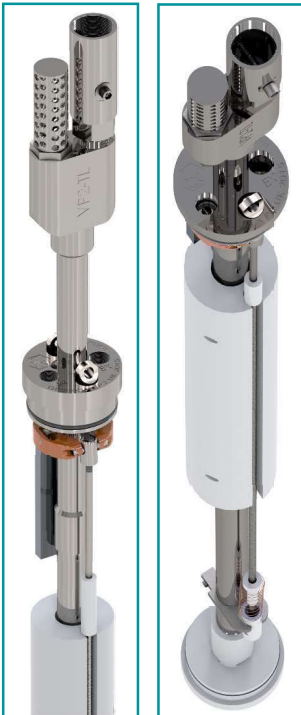
# VP2 TL Performance Curve

VP2-TL liquid discharged & air consumed/well depth.  
 Pump submerged by 3m and 12.5mm bore discharge hose.  
 Air inlet pressure 7 Bar



Well Depth	Discharge LPM	Total Air Requirement (L/S)	Total Air (SCFM) Requirement
10	5.60	0.39	0.83
15	5.20	0.51	1.08
20	4.80	0.61	1.29
25	4.40	0.68	1.45
30	4.00	0.71	1.50
35	3.70	0.73	1.54
40	3.30	0.75	1.58
45	3.00	0.77	1.62
50	2.60	0.75	1.58
55	2.30	0.71	1.50
60	2.00	0.63	1.34

DATA table



Values for SCFM have been shown in the DATA table for ease of compressor specification.