Revolutionizing the Pumping Industry

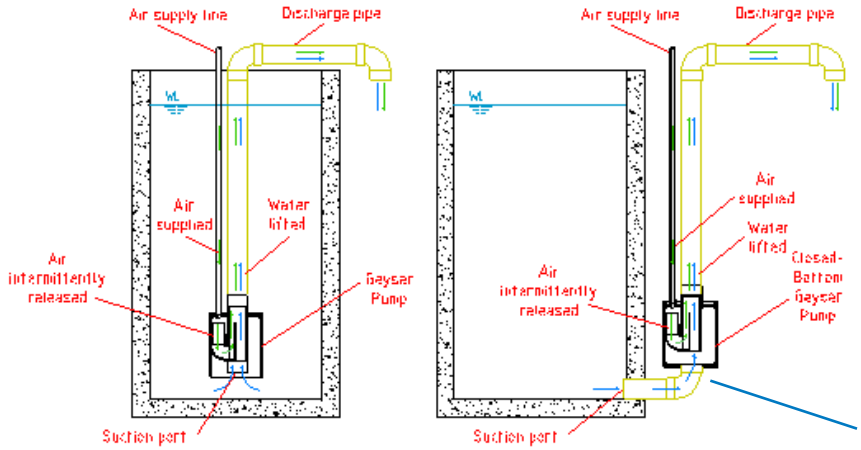
Geyser Pump

Geyser Inertia Pump, Geyser Air-Pulse Pump (GIP, GAP)

Low Cost, Low Energy for Return/Waste Activated Sludge (RAS, WAS) Pumping
(Patented, with Patent Pending Features)

The Geyser Pump has been developed to provide clog free sludge pumping using less energy with easy control of the pumping rate.

Lift Pipe Diameters
2", 3", 4", 6", 8", 10", 12"
Lifting Height
2.0 x Submergence
Pumping Capability
6-8% Solids
60,000 - 80,000 mg/l
Flow Velocity
18 ft per second



GIP inside a tank/GAP inside a tank GIP outside a tank

When the length of this suction pipe is long, water in the pipe is entrained by inertia. The energy required for pumping is low because power is consumed only to eject the volume of liquid in the pump cylinder during each pulse phase.

Specifications - GIP

Discharge pipe diameter	2"	3"	4"	6"	8"
Overall height	1' 4.9"	1' 3.5"	1' 7.5"	1' 10.5"	2' 3"
Overall diameter	8.6"	2' 2.6"	2' 5.3"	3' 0.5"	3' 5.4"
Weight (lbs)	21	29	38	96	113
Air supply	1/2"	1"	1"	1 1/4"	1 1/2"
Typical pumping rate (gpm)	4	25	45	101	180
Materials: PVC standard (Max. operational pressure 40 psig), Powder coated mild steel and stainless steel					

*(note) Proper pumping rate selected based on submergence, lift, application and gpm required

Specifications - GAP

Discharge pipe diameter	1"	2"	3"	4"	6"	8"	10"	12"
Overall height	1' 0.5"	1' 0.5"	1' 3.5"	1' 7.5"	1' 10.5"	2' 3"	2' 6.5"	3'
Overall diameter	5.1"	8.6"	1' 0.8"	1' 0.8"	1' 6.7"	1' 10.1"	2' 3.5"	2' 8.6"
Weight (lbs)	8	14	19	25	64	75	83	95
Air supply	1/4"	1/2"	1"	1"	1 1/4"	1 1/2"	2"	2"
Typical pumping rate (gpm)	1	4	25	45	101	180	282	405
Materials: PVC standard (Max. operational pressure 40 psig), Powder coated mild steel and stainless steel								

*(note) Proper pumping rate selected based on submergence, lift, application and gpm required

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Operating pressure =
[Submergence (ft) + GIP/GAP height (ft)] x 0.43 (psi/ft)]

Air flow [DCFM] =
[pulses/min] x Delivered air volume to GIP/GAP [ft3/pulse]

Air flow [SCFM] =
[Operating pressure (psi) + 14.7 (psi)]/14.7 (psi) x Air flow [DCFM]

GIP & GAP Flow rate: # pulses/min x gallon/pulse = flow (gpm)

GIP & GAP

Delivered Air Flow to GIP & GAP [ft3 / pulse]

1″	2″	3″	4″	6″	8″	10″	12″
0.04	0.13	0.35	0.52	1.21	2.10	3.16	4.08

Delivered Sludge to GIP & GAP [gallon / pulse]

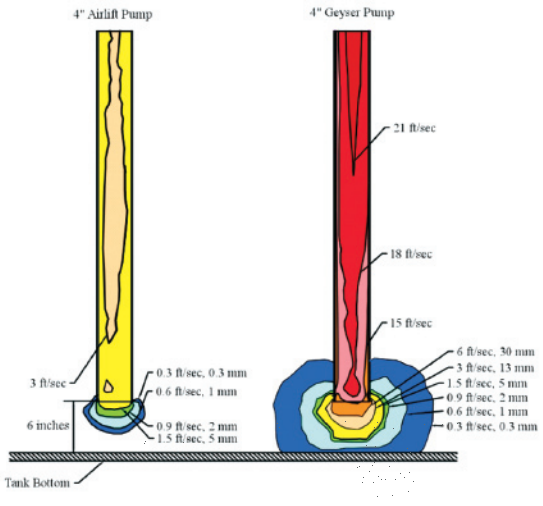
1″	2″	3″	4″	6″	8″	10″	12″
0.4	1.61	3.62	6.44	14.48	25.7	40.23	57.92

Comparison of Pumps for Sludge Handling

	Mechanical Pump	Airlift Pump	GIP GAP
Consistent slow pumping	✕	✕	◎
Concentrated sludge	✕	✕	◎
Non-biological material	✕	✕	◎
Flow Control	✕	✕	◎
High Lift, Shallow water	◎	✕	△
Solid handling	✕	○	◎
No Clogging	✕	△	◎
Shear Force	✕	○	◎

◎ Very good ○ Good △ Limited ✕ Not good

Radii of Influence



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