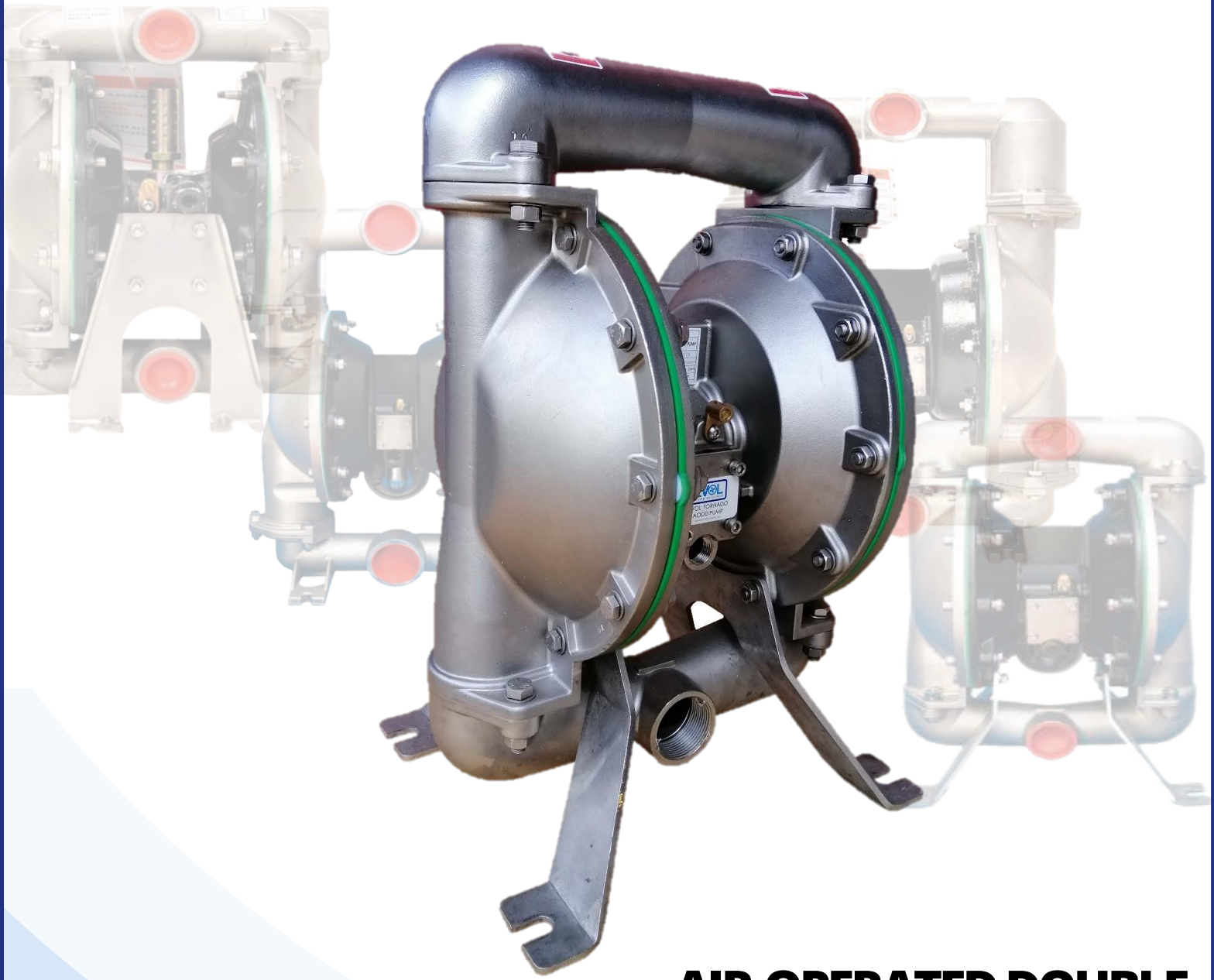
EVOL Technologies

EVOL PUMP SOLUTIONS



AIR-OPERATED DOUBLE DIAPHRAGM PUMPS

EVOL Pump solutions

ABOUT TORNADO

EVOL TORNADO- Air Operated Double Diaphragm Pump

The EVOL Tornado Series Air Operated Double Diaphragm Pump is a positive displacement pump driven by compressed air, having the function to transfer a variety of corrosive and toxic fluid, low to high viscosity, flammable, volatile and even liquid with particles.

FEATURES & SPECIFICATIONS

Easy to use

No need of guarding device, flexible and easy to adjust.

Ease of maintenance

Few components and long life design: low downtime and maintenance cost.

Portable and simple installation

EVOL pumps transport easily to the application site. Simply connect your air supply line and liquid lines; the pump is ready to perform. There are no complex controls to install and operate.

No electricity installation needed

Air operated, ideal for use in hazardous areas and is intrinsically safe.

Ability to run dry without damage

In case of unexpected situation that lead to pump run without medium for a long time or sudden shut down, the pump will not be damaged.

Wide range of flow rate

EVOL pumps will run at any setting within their operating range simply by adjusting the air inlet pressure and system conditions.

Lubrication free air distribution system

Saves the environment from pollution.

Sealess design

No packing or mechanical seals.

Submersible

If external components are compatible, EVOL pumps can be submerged in the liquid by simply running the exhaust line above the liquid level.

Reliable and energy saving

Air valve is the driving heart of the pump, redirecting the compressed air to the chambers behind diaphragms.

Dead-head

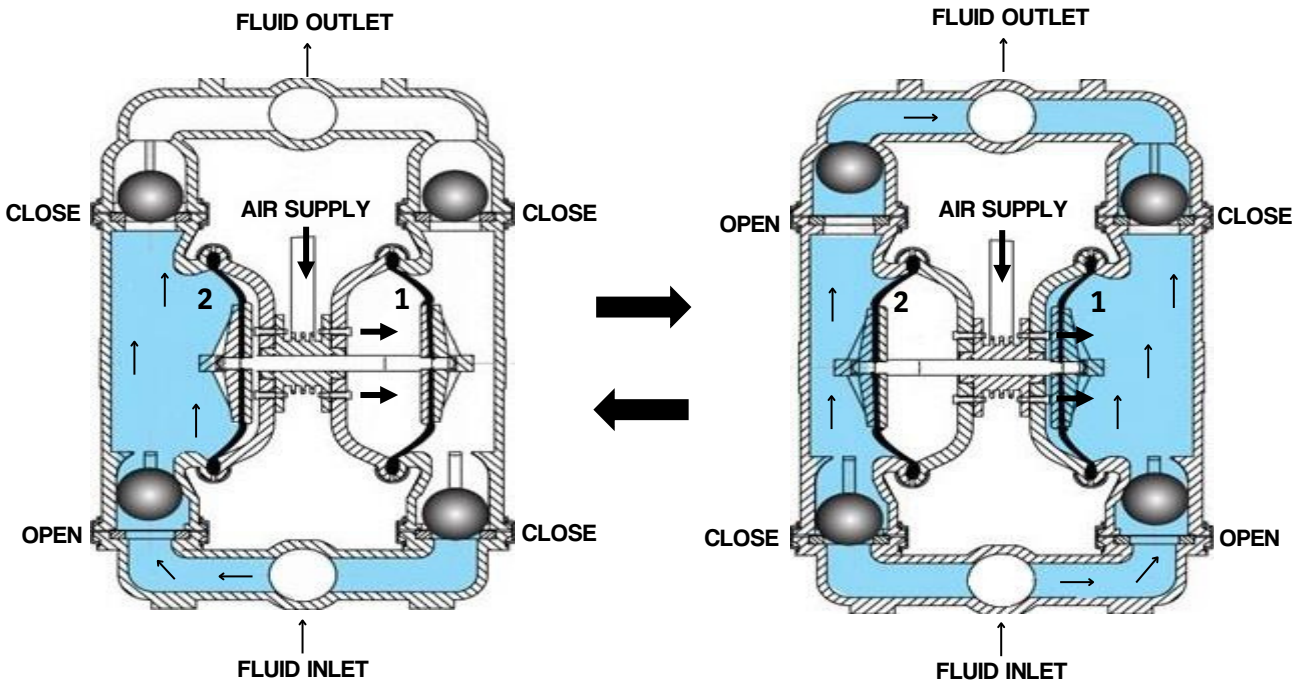
The discharge pressure can never exceed air inlet pressure; thus the discharge line can be closed with no damage or wear. The pump will slow down and stop.

1:1 ratio design

WORKING MECHANISM

The air inlet of a double diaphragm pump is driven by compressed air, which is directed to a diaphragm that separates the air and liquid sections. The pneumatic distribution system pushes fluid out of the pump discharge by sending compressed air behind one of the two diaphragms 1, while the opposite diaphragm 2 is pulled back by the shaft that connects the two diaphragms, providing a suction action to suck fluid into the pump inlet.

When diaphragm 1 hits the stroke limit while under pressure, the pneumatic distribution system switches the two inputs to the chamber on the diaphragm's air side, putting diaphragm 2 under pressure and diaphragm 1 in suction motion. When the pump returns to its original starting position, each diaphragm has completed one air discharge and one fluid suction stroke. This sequence of movements make up a complete pumping cycle. The cycle is repeated causing a constant flow through the pump unit via 2 way type ball valves. During each cycle, the air pressure on the back of the discharging diaphragm is equal to the head pressure on the liquid side. Therefore the diaphragm pump can be operated against a closed discharge valve with no adverse effect to the life of the diaphragms.



APPLICATIONS

PROFESSIONAL QUALITY SAFETY

Wide Range of Professional Services and Application Fields

Oil & Gas Industry
- Material transfer (lube oil, diesel fuel, sump, produced water etc.
- Spill clean-up
- Falme knockout

Chemical Industry
- Mixing, processing and packaging
- Injection

Marine Offshore
- Suitable for offshore platform requirement
- Oil, fuel and lubricants transfers
- Cargo clean-up

Food Processing
- Product transfer
- Food packaging
- Wine fermentation

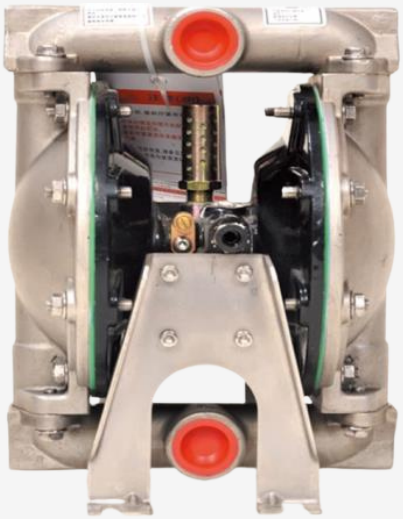
Automotive
- Oil and fuel transfer
- Auto wash
- Machine coolant

Construction
- Oil and fuel transfer
- Site dewatering

Pharmaceutical and Cosmetic Industry
- Day tank transfer
- Chemical feed

Waste Water Treatment
- Waste water transfer and neutralization
- Transfer chemical for water treatment process

TORNADO SERIES

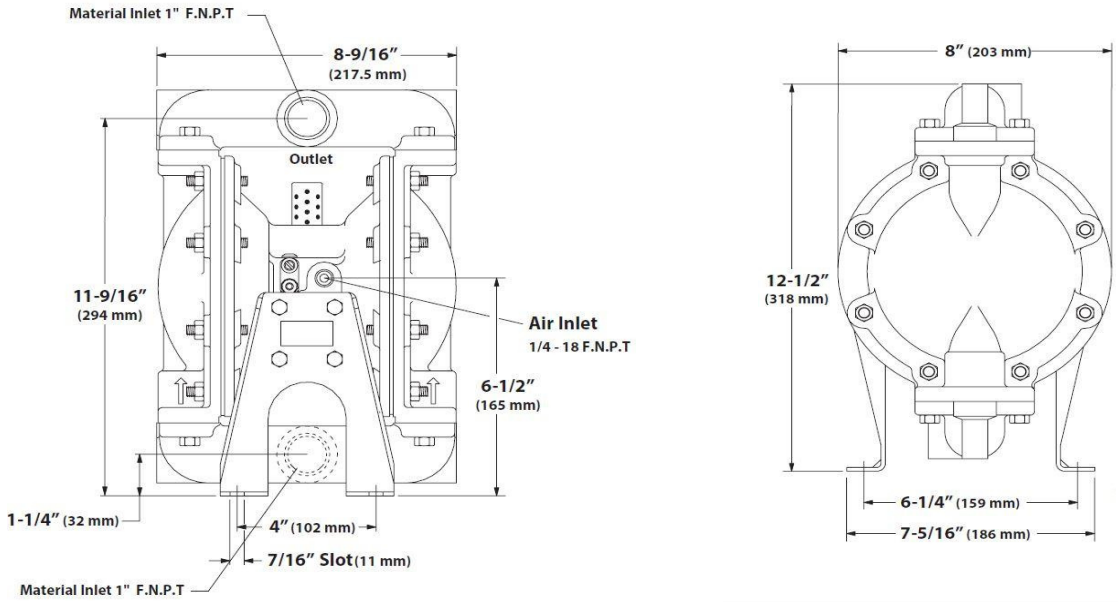


EVTD25

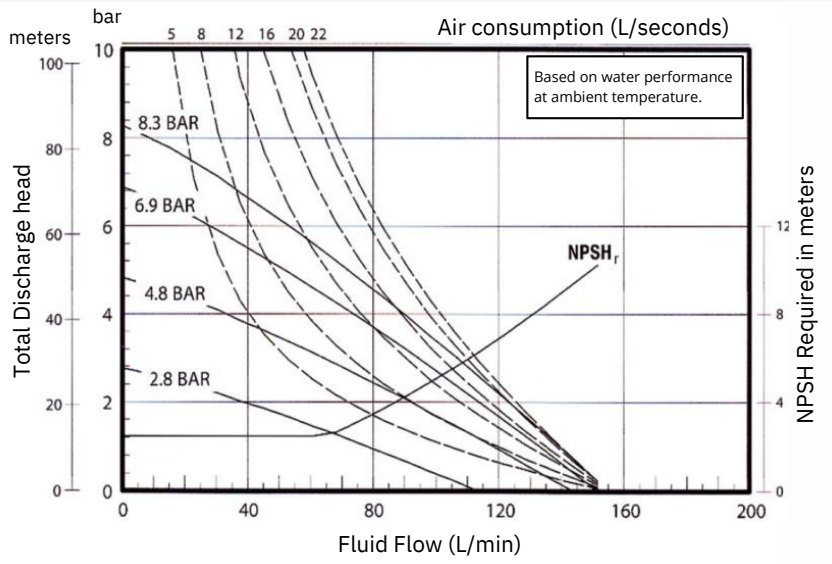
TECHNICAL PARAMETERS	
Max flow rate	133 L/min
Max working pressure	120 psi / 8.3 bar
Output volume of each circulation	0.6 L
Air inlet size	1/4 – 18" FNPT
Fluid inlet/outlet size	1" FNPT
Suction lift	5-7 m
Discharge lift	70 m
Max air consumption	0.4 m^3/min
Max particle diameter	3.2 mm
Weight	16.3 kg

DIMENSIONAL DRAWING

NOTE: All dimensions shown are for reference purpose only.



PERFORMANCE CURVE



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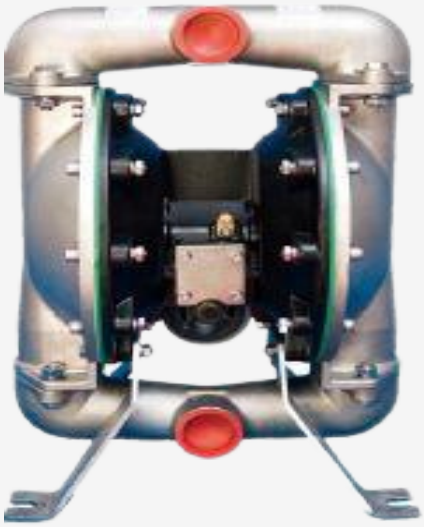

EVTD40

TECHNICAL PARAMETERS	
Max flow rate	340.7 L/min
Max working pressure	120 psi / 8.3 bar
Output volume of each circulation	2.42 L
Air inlet size	1/2 – 14" FNPT
Fluid inlet/outlet size	1 ½"
Suction lift	5-7 m
Discharge lift	70 m
Max air consumption	0.5 m^3/min
Max particle diameter	6.4 mm
Weight	38.3 kg

DIMENSIONAL DRAWING

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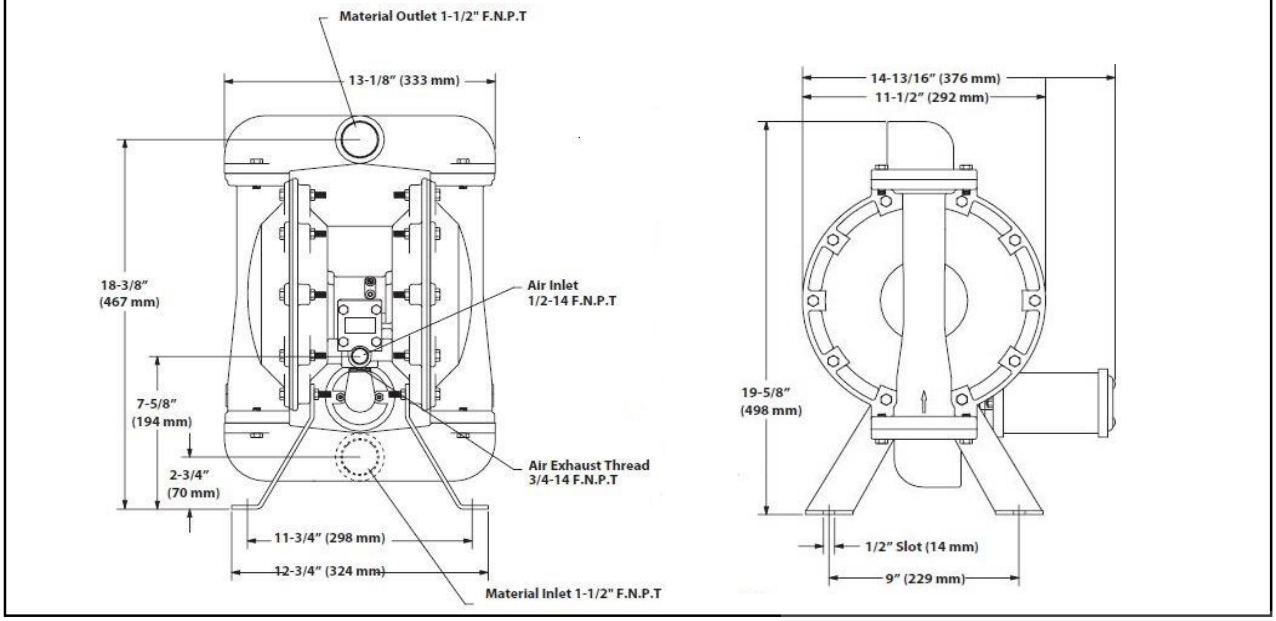

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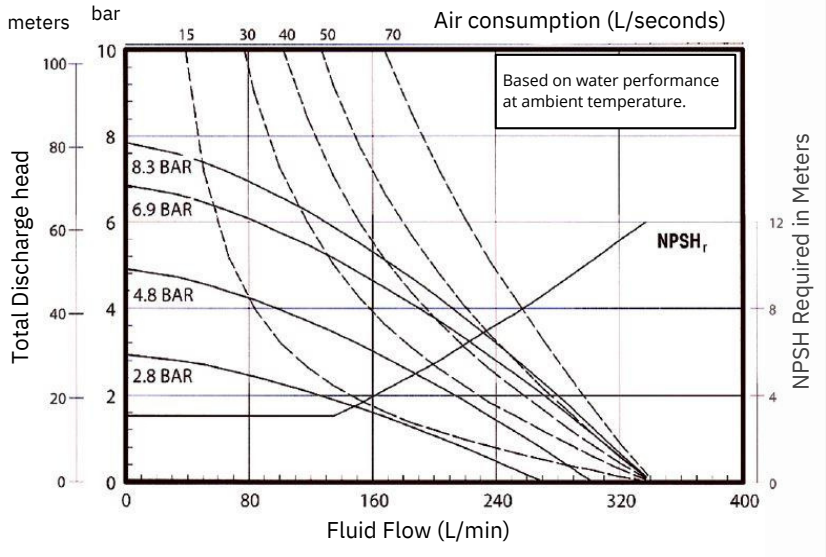

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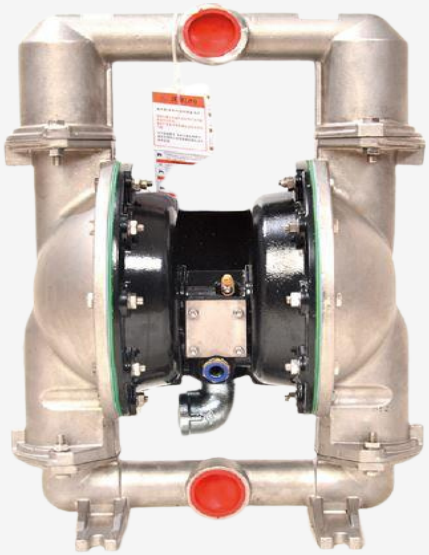

EVTD50

TECHNICAL PARAMETERS	
Max flow rate	651 L/min
Max working pressure	120 psi / 8.3 bar
Output volume of each circulation	5.3 L
Air inlet size	3/4 – 14" FNPT
Fluid inlet/outlet size	2"
Suction lift	5-7 m
Discharge lift	70 m
Max air consumption	0.8 m^3/min
Max particle diameter	6.4 mm
Weight	58.9 kg

DIMENSIONAL DRAWING

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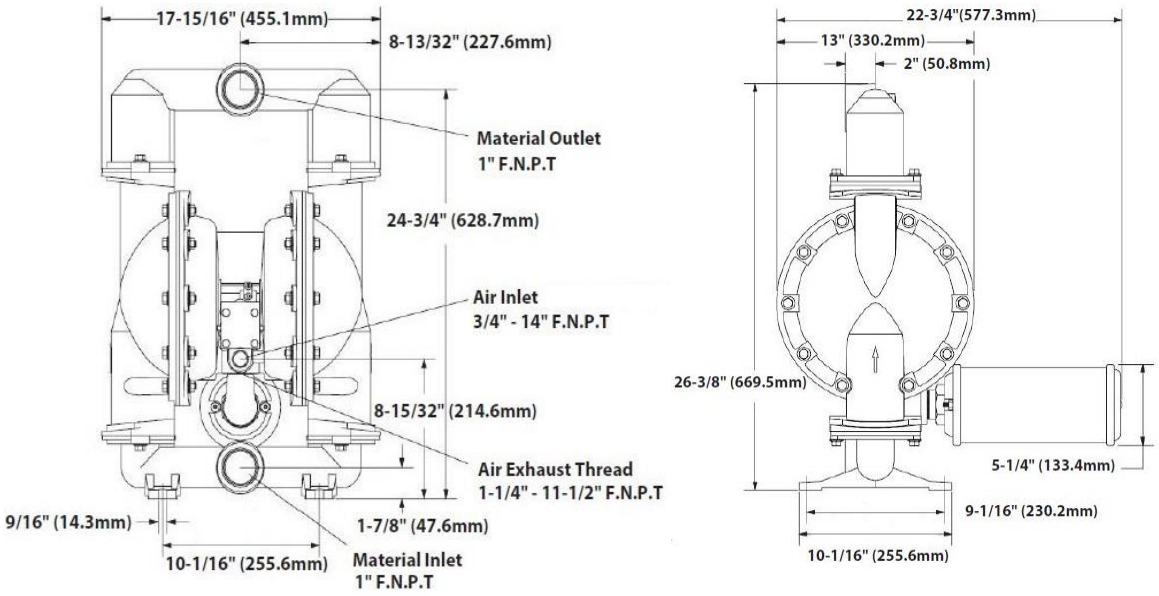

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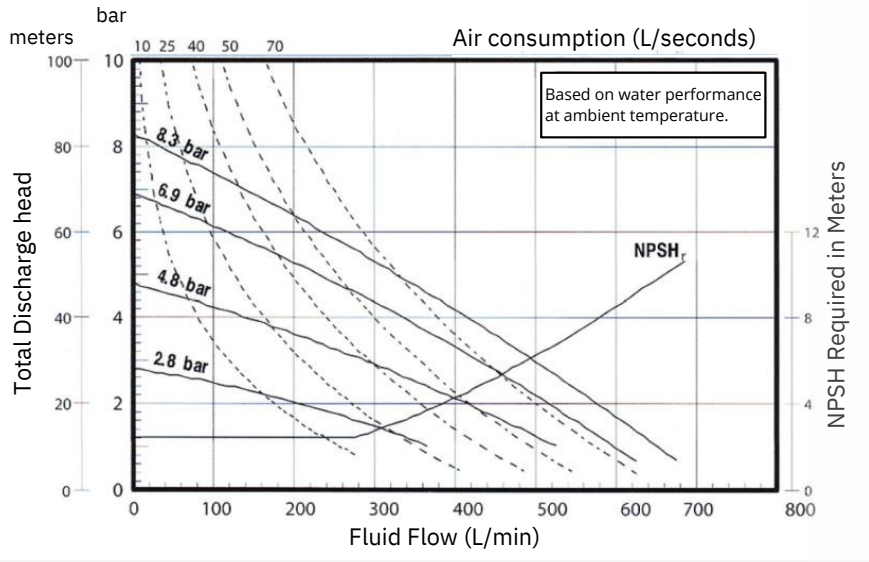

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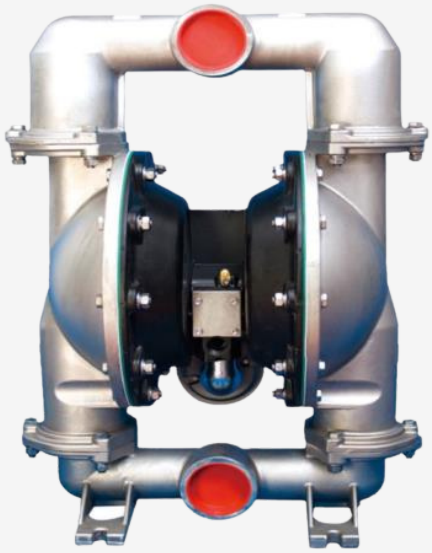

EVTD80

TECHNICAL PARAMETERS	
Max flow rate	897 L/min
Max working pressure	120 psi / 8.3 bar
Output volume of each circulation	10.03 L
Air inlet size	3/4 – 14" FNPT
Fluid inlet/outlet size	3"
Suction lift	5-7 m
Discharge lift	70 m
Max air consumption	0.9 m^3/min
Max particle diameter	9.5 mm
Weight	222.2 kg

DIMENSIONAL DRAWING

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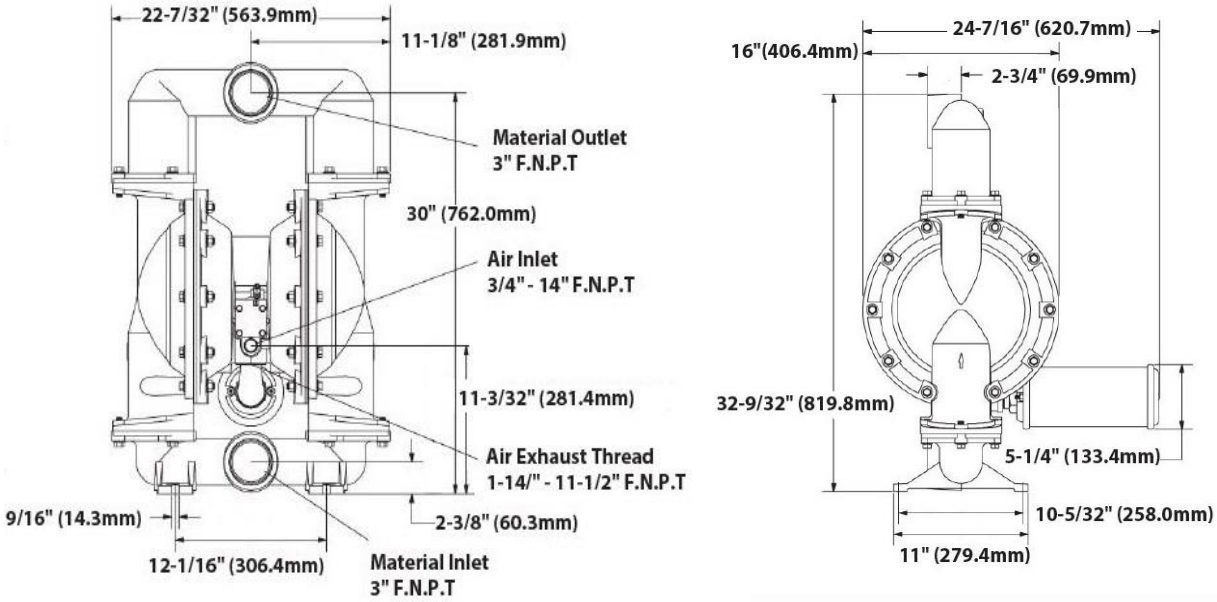
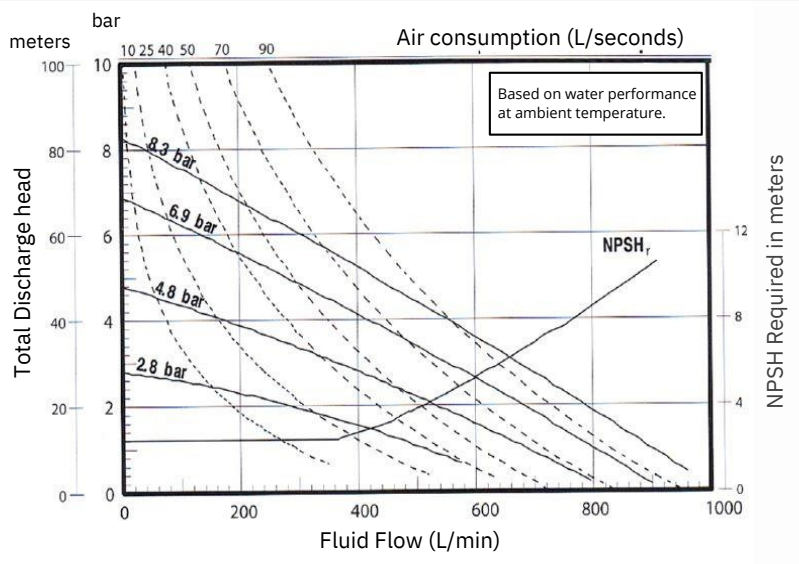


PERFORMANCE CURVE



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