

# **PRODUCT GUIDE**

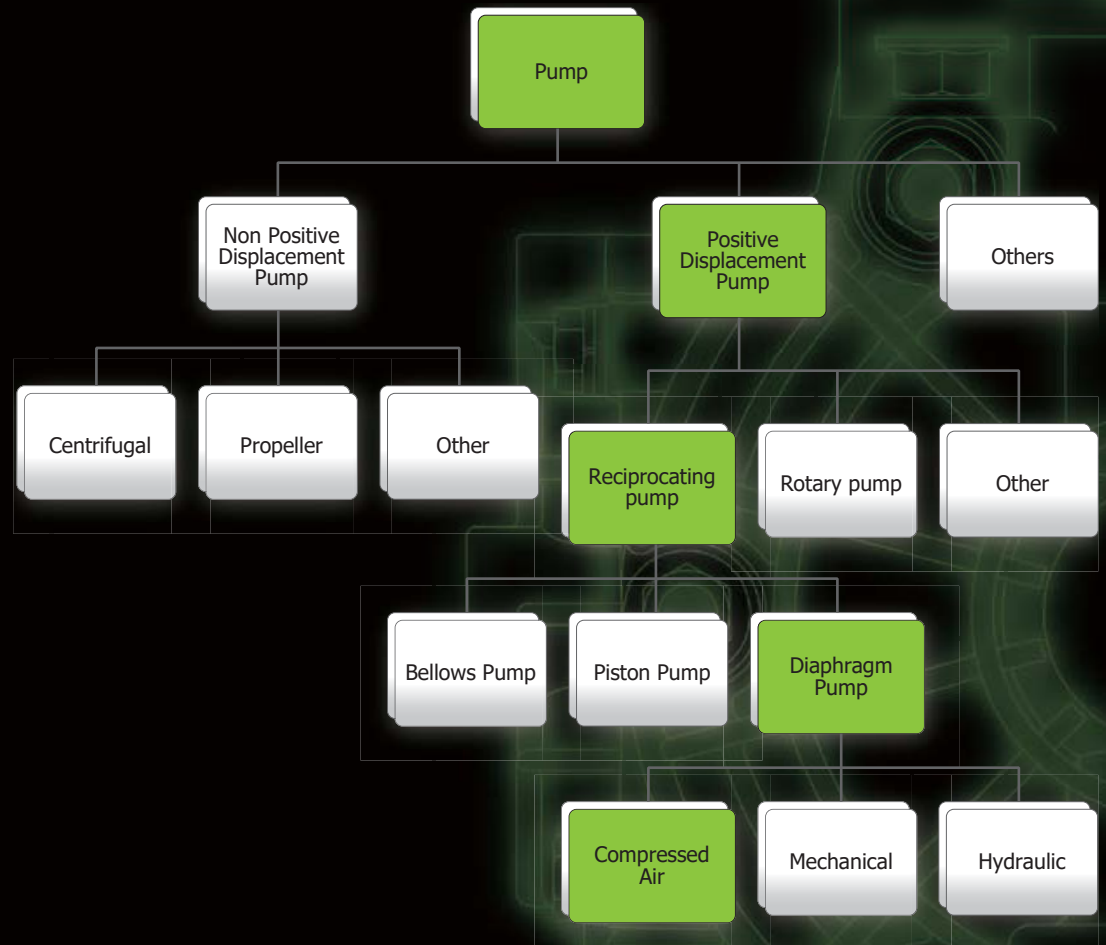


**AIR POWERED DOUBLE DIAPHRAGM PUMPS**





# Diaphragm Pump Characteristics



**Air Powered Double Diaphragm Pumps Manufactured in Japan with Superior Quality & Finish. Designed for High Performance Operation & Long Life Expectancy. Engineered with Design Features Not Often Found in Other Brand Pumps.**

*Contact YTS or your local distributor for more information.*

**yts-pump.com**



# Fully Engineered Diaphragm Pumps.

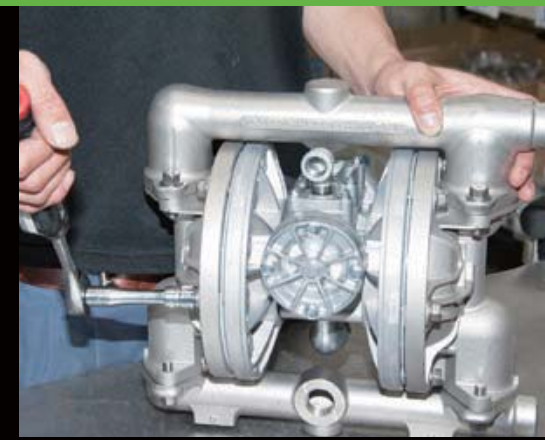
YTS has been producing a range of Air Operated Double Diaphragm Pumps in Japan since 1978 and now offers a huge line-up of standard & customized pumps available in many different sizes & materials.

All YTS pumps are specifically designed to be used in process type liquid transfer applications and offer various engineered design features enabling efficient high performance liquid transfer & high operational reliability. They can be easily and quickly serviced and maintained even without pulling the pump from the process line. All serviceable wear components are modular and fully replaceable offering simple low cost replacement over a long lifetime of use.

Due to their engineered design, and due to the specific utilization of modern high tech materials, all YTS pumps can be operated without the need for Air Line Oil or Grease Lubricants. They therefore offer safe, clean zero emissions pump operation, protecting people, processes and work environments from dangerous airborne vaporized contaminants.

The new patent pending Looped-C® Spool and the third generation Coil-Spring Air Valve offer much improved pumping performance, air consumption, operational reliability & reduced maintenance. Pumps fitted with the new patent pending Air EcoRing offer on average, 16% better air consumption figures without any negative effects to overall pumping performance.

All pumps incorporate independent high performance Pilot Valves for unrivalled reliability and high speed short stroke operation. YTS pumps utilize large diameter air porting and will resist stalling and resist freezing in nearly all conditions. They have leak resistant design features such as; fully bolted construction, machined liquid matting surfaces and registered fit body assembly. All YTS pumps are fully torqued and rigorously tested prior to shipment.



# Presenting YTS Double Diaphragm Pumps



**D500AS-FL**  
2" Aluminium Pump  
730L/min Max Flow Rate  
8.0mm Max Solids Size

## High Flow Rates

Up to 730 L/min on this 2" Pump.

## Compact & Robust

With its Compact Size & Robust Construction, this High Performance Pump is Designed for use in any Application.

## Fully Bolted Construction

Pumps Bolted and Fully Torqued prior to shipment. Easy to Assemble and Disassemble.

## Machined Mating Surfaces

Reducing any Chance of Leaks.

## Outside Accessible Air Motor

Simple and Fast to Service.

## Extremely Reliable Operation

New Coil Spring Air Motor for High Performance Operation. Low Start Up Pressure and High Head Discharge.

## Non-Lubricated Air Motor

No Oil or Grease Required for normal operation.

## Efficient Air Consumption

Designed to operate Extremely Efficiently and also reduce air leakage or loss in all operating conditions.

## Non Stall Operation

Will operate from Very Low to Very High Air Pressure using State of the Art materials. This Non-Lubricated Air Motor has been engineered to offer Extremely Reliable switching operation.

## Common Footprint & Dimensions

Ports and Foot Dimensions match many other Brand Pumps making it easy to replace another pump without changing the pipe fittings.

## Patent Pending

Designed and Manufactured in Japan with various Patents Pending.



## Looped C<sup>®</sup> Air Spool.

### New Generation Mechanically Assisted Non-Centering Spool

100% Non-Lubricated.  
Increased Performance.  
Improved Reliability.  
Extended Life expectancy.  
Outside Accessible.  
Modern Materials of Construction.  
Common "Drop-in" sizes.  
Patented Design.



## Coil Spring Air Spool.

### New Generation Mechanically Assisted Non-Centering Spool

100% Non-Lubricated.  
Increased Performance.  
Improved Reliability.  
Extended Life expectancy.  
Outside Accessible.  
Modern Materials of Construction.



# AODD Pump Capabilities

## Dry Run

Diaphragm Pumps can Run Dry for extended periods with no damage to the pumps moving parts. Also when running dry the pump will not overheat.

#1. Dry running pumps will speed up and will consume higher amounts of air.

#2. Dry Running can negatively affect the life of PTFE Diaphragms.

## Transfer Solids

Due to their unique design, liquid slurries as well as large sized solids such as beads, stones etc. can be pumped with ease.

#1 the allowable solid size is different for each pump and is determined by the ball valve dimensions.

#2 Abrasive slurries can be pumped however care should be taken that the wetted materials of construction are abrasion resistant.

## Variable Flow Rates and Discharge Pressure

By adjusting either the air regulator or a liquid discharge valve, it's possible to operate the pump anywhere between 0.1 liters per minute to full capacity. Liquid discharge pressure can be adjusted from less than 1 bar up to 8.4 bars, on some larger pumps.

## Dead Head

A Diaphragm Pump can run against a semi closed or fully closed liquid discharge valve "Dead Head" without damage or wear to the pump. Therefore the Discharge Line may be closed fully at any time and even closed repeatedly. There will be no Power consumed, no Temperature increase and no damage to the pump, it will simply stop.

#1 Discharge Pressure cannot exceed Air Pressure so there is no need for a Pressure Relief System.

## Self-priming

Diaphragm Pumps can operate dry and they also generate relatively high Vacuum Pressure, thus allowing the pump to Self-Prime.

#1 There is no need to use special mechanisms, equipment or special startup procedures to prime the pump.

#2 Pumps can operate both wet and dry and can self-prime repeatedly without damage.

## Safely Transfer Flammable and Hazardous materials.

Diaphragm pumps are powered by compressed air and do not have any kind of electrical connections. They cannot overheat and they are cooled naturally during operation by the supply of compressed air. When correctly earthed, they are considered safe to use when pumping flammable liquids or when used in Explosive Environments.

## Made in Japan

All YTS Pumps are designed engineered and manufactured in Japan. Every pump is torqued and tested prior to dispatch to ensure correct performance and optimal leak proof operation.

The new Looped C<sup>®</sup> Spool offers improved switching reliability and longer parts life expectancy. The Looped C<sup>®</sup> Spool has fully replaceable Seal Rings and a new lightweight Shaft. The Sleeve has been redesigned offering increased wear resistance and increased surface smoothness. Spool & Sleeve are both outside accessible and completely Non-lubricated.



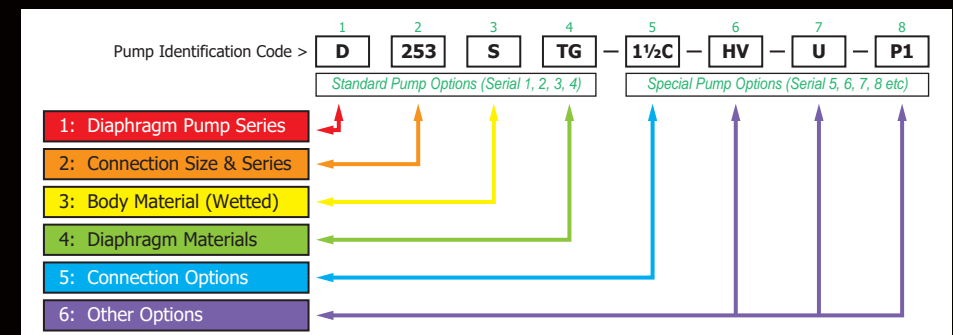
## The Looped C<sup>®</sup> Spool

When installed can decrease actual Air Volume requirements by up to 25% with no decrease in liquid low rates. (Compared to an old equivalent model pump. (Average 16%).



## The Air EcoRing

## Pump Model Nomenclature



# D030 Plastic Pump Series

PVDF Diaphragm Pump with 1/4" Connections  
8 L/min Max Flow Rate.



## D030V

1/4" Air Powered Double Diaphragm Pumps  
Max flow rate: 8 L/min.

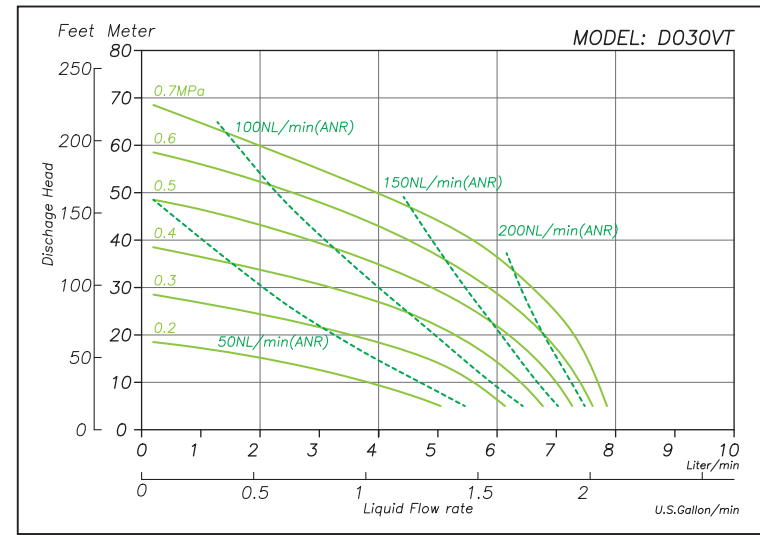
## Special low flow 1/4" plastic pump model available in PVDF.

Looped C® Air Spool. Ryton (PPS) Plastic Air Motor Section. Internal Silencer. Female Threaded Side Port Liquid Connections. Fully bolted body. Compact size. Small footprint. Non-Lubricated design. Torqued, leak & operation tested prior to shipment.

Special 1/4" PVDF Pump model fitted with the Looped C® Air Spool for increased performance, reliability & extended parts life expectancy. PTFE Diaphragms & Flat Check Valves as standard. Extra Low flow rates. Typically, an Export Licence is not required.

D030 Plastic Pump Series		
<b>Max Flow Rate:</b>	8 L/min.	
<b>Max Solids Size:</b>	0 mm.	
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa	
<b>Max Suction Lift:</b>	Dry: 3.5 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	1/4" (6mm) Threaded Connections. (Side Ports)	
<b>Wetted Body Materials:</b>	PVDF.	
<b>Diaphragm / Check Valve Materials:</b>	PTFE.	
<b>Certification:</b>	CE.	ATEX.

*Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.*



# D050 Pump Series

**Compact 1/4" pump series available in a large range of materials.**

Looped C® Air Spool. Ryton (PPS) Plastic Air Motor Section. Internal Silencer. Female Threaded Side Port Liquid Connections. Fully bolted body. Compact size. Small footprint. Non-Lubricated design. Torqued, leak & operation tested prior to shipment.

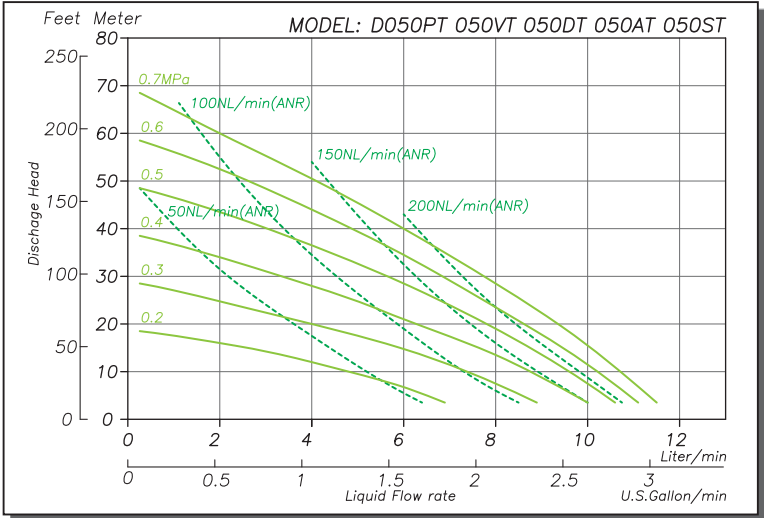
*Small compact 1/4" pumps fitted with the Looped C® Air Spool for increased performance, reliability & extended parts life expectancy. Available with a large range of metal and plastic materials of construction. PTFE Diaphragms & Flat Check Valves as standard. Other options also available.*

**Diaphragm Pumps with 1/4" Connections  
11.5 L/min Max Flow Rate.**



D050 Pump Series			
<b>Max Flow Rate:</b>	11.5 L/min.		
<b>Max Solids Size:</b>	Flat Valve = 0 mm.		
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa		
<b>Max Suction Lift:</b>	Dry: 3.5 meters	Wet (Primed): 8.0 meters	
<b>Liquid Connections:</b>	1/4" (6mm) Threaded Connections. (Side Ports or optional Multi Ports)		
<b>Wetted Body Materials:</b>	Pure PP, GFRPP, Conductive PP, PVDF, SUS, Aluminium, POM.		
<b>Diaphragm / Check Valve Materials:</b>	PTFE.		
<b>Certification:</b>	CE.	ATEX. (Some Models)	FDA. (Some Models)

*Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.*



**D050A**



Optional MultiPort Models.



**D050P**

1/4" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 11.5 L/min  
Material Options: Pure PP, GFRPP, Conductive PP, PVDF, SUS, Aluminium, POM.



# D100 Plastic Pump Series

Diaphragm Pumps with  $\frac{3}{8}$ " Connections  
18 L/min Max Flow Rate.



**D100P-PP**

**D100P**

$\frac{3}{8}$ " Air Powered Double Diaphragm Pumps  
Max Flow Rate: 18 L/min  
Material Options: Pure PP, GFRPP.

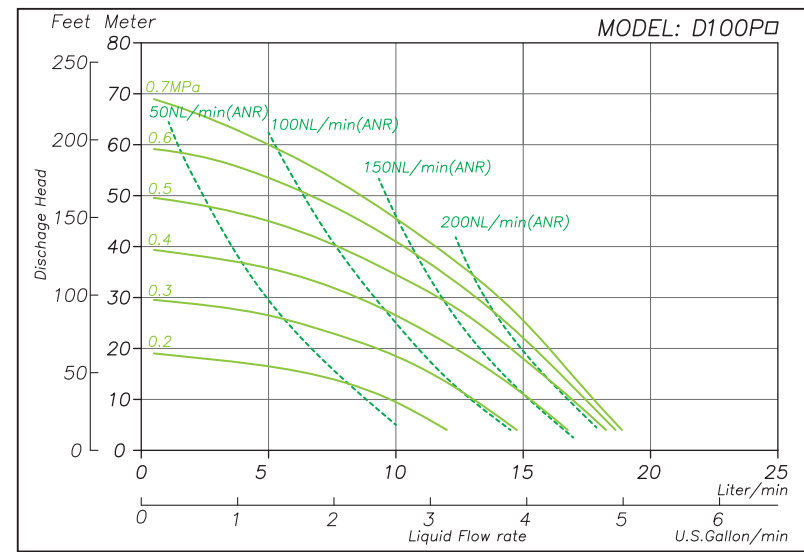
**Original  $\frac{3}{8}$ " plastic pumps available in GFRPP & Pure Polypropylene.**

Spring-Less Air Spool. Aluminium Air Motor Section. Externally mounted Silencer. Female Threaded Centre Port Liquid Connections. Fully bolted body. Compact size. Non-Lubricated design. Torqued, leak & operation tested prior to shipment.

Compact  $\frac{3}{8}$ " plastic pumps fitted with the Spring-Less Air Spool. Particularly suited to frequent start stop, Dead Head & high backpressure type applications. Available with a wide range of Diaphragm elastomer options. Ball Check Valves as standard.

D100 Plastic Pump Series	
<b>Max Flow Rate:</b>	18 L/min.
<b>Max Solids Size:</b>	1.0 mm.
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa
<b>Max Suction Lift:</b>	Dry: 2.0 meters      Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	$\frac{3}{8}$ " (10mm) Threaded Connections. (Centre Port & Multi Ports on PP pump)
<b>Wetted Body Materials:</b>	Pure PP, GFRPP.
<b>Diaphragm / Check Valve Materials:</b>	PTFE, CR, EPDM, NBR, TPEE, TPO.
<b>Certification:</b>	CE.

*Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.*





# D101 Metallic Pump Series

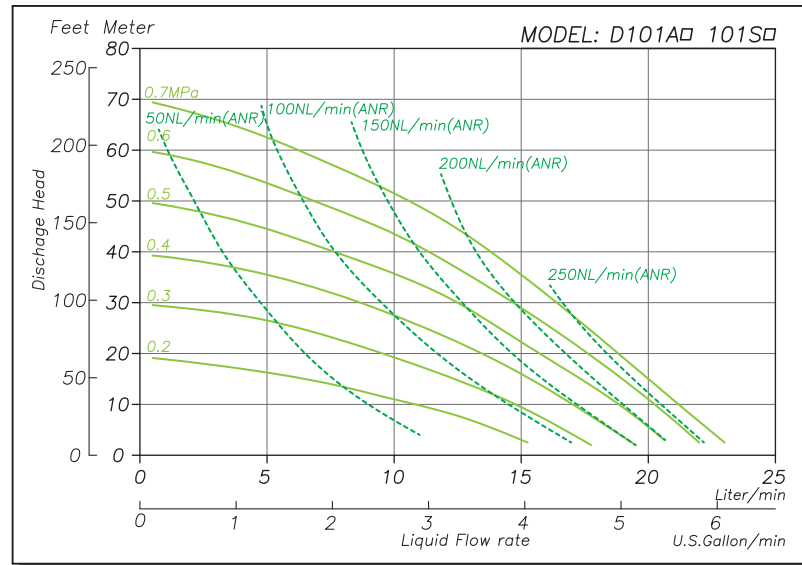
## Original 3/8" metallic pumps available in Aluminium & Stainless Steel.

Spring-Less Air Spool. Aluminium Air Motor Section. Externally mounted Silencer. Female Threaded Multi-port Liquid Connections. Fully bolted body. Compact size. Non-Lubricated design. Torqued, leak & operation tested prior to shipment.

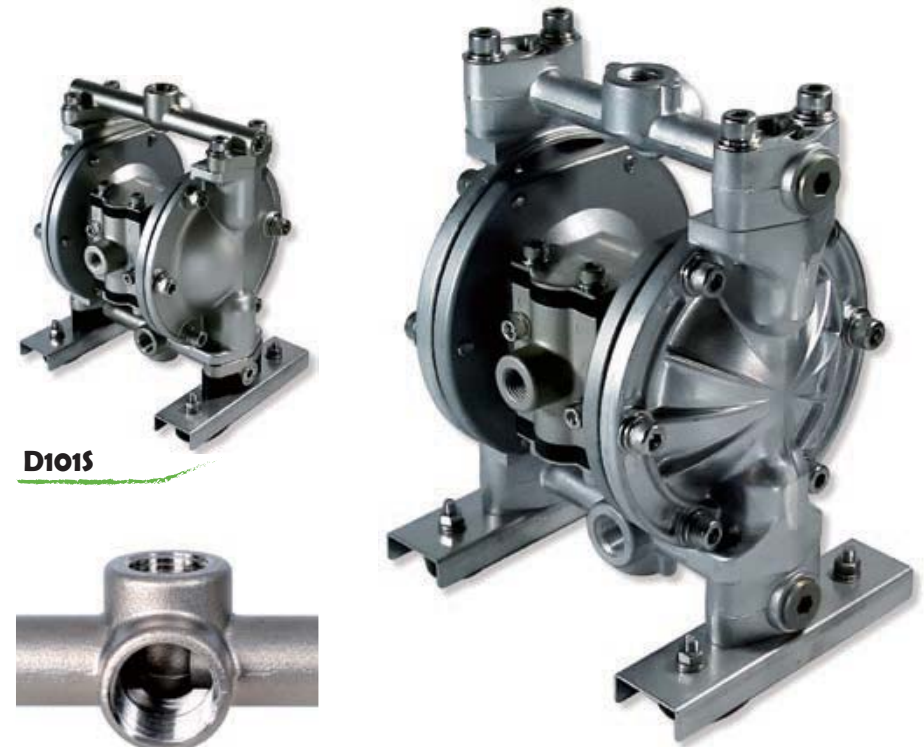
Compact 3/8" metal pumps fitted with the Spring-Less Air Spool. Particularly suited to frequent start stop, Dead Head & high backpressure type applications. Available with a wide range of Diaphragm elastomer options. Ball Check Valves as standard. Heavy-duty construction.

D101 Metallic Pump Series		
<b>Max Flow Rate:</b>	23 L/min.	
<b>Max Solids Size:</b>	1.0 mm.	
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa	
<b>Max Suction Lift:</b>	Dry: 2.0 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	3/8" (10mm) Threaded Connections. (Multi Ports)	
<b>Wetted Body Materials:</b>	SUS, Aluminium.	
<b>Diaphragm / Check Valve Materials:</b>	PTFE, CR, EPDM, NBR, TPEE, TPO.	
<b>Certification:</b>	CE.	ATEX. FDA. (Some Models)

Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.



## Diaphragm Pumps with 3/8" Connections 23 L/min Max Flow Rate.



**D101S**



Optional 1/2" Connections.

**D101A**

3/8" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 23 L/min  
Material Options: SUS, Aluminium.

# D102 Plastic Pump Series

Diaphragm Pumps with  $\frac{3}{8}$ " Connections  
24 L/min Max Flow Rate.



**D102P**

$\frac{3}{8}$ " Air Powered Double Diaphragm Pumps  
Max Flow Rate: 24 L/min  
Material Options: GFRPP.

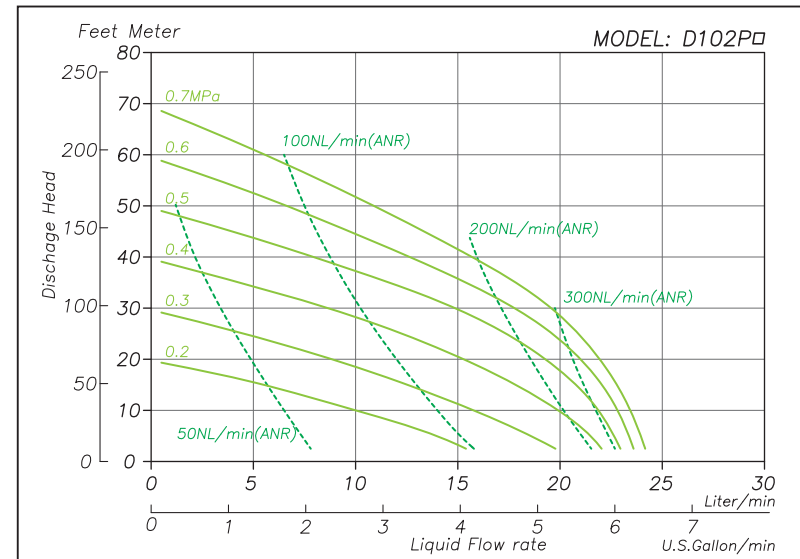
**Original  $\frac{3}{8}$ " plastic pumps available in GFRPP with PPS Air Motor.**

C-Spool Air Motor. Ryton (PPS) Plastic Air Motor Section. Internal Silencer. Female Threaded Side Port Liquid Connections. Fully bolted body. Compact size. Non-Lubricated design. Torqued, leak & operation tested prior to shipment.

Compact  $\frac{3}{8}$ " plastic pumps fitted with the C-Spool Air Motor. Based on the D100 plastic pump design however utilizing the Ryton Plastic Air Motor Section for better chemical compatibility. Available with a wide range of Diaphragm elastomer options. Ball CheckValves as standard.

D102 Plastic Pump Series	
<b>Max Flow Rate:</b>	24 L/min.
<b>Max Solids Size:</b>	1.0 mm.
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa
<b>Max Suction Lift:</b>	Dry: 2.0 meters      Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	$\frac{3}{8}$ " (10mm) Threaded Connections. (Side ports)
<b>Wetted Body Materials:</b>	GFRPP.
<b>Diaphragm / Check Valve Materials:</b>	PTFE, TPO, TPEE, NBR, CR, EPDM.
<b>Certification:</b>	CE.

*Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.*





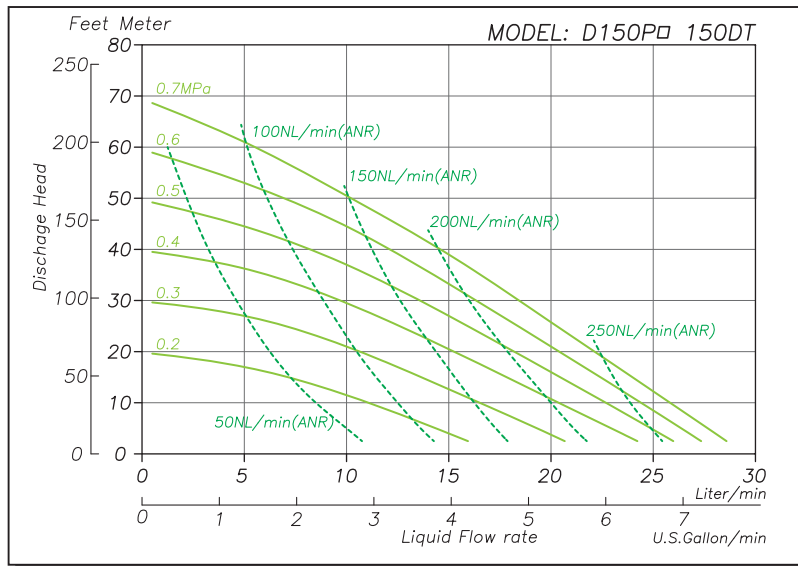
# D150 Plastic Pump Series

## Original 1/2" plastic pumps available in GFRPP & POM.

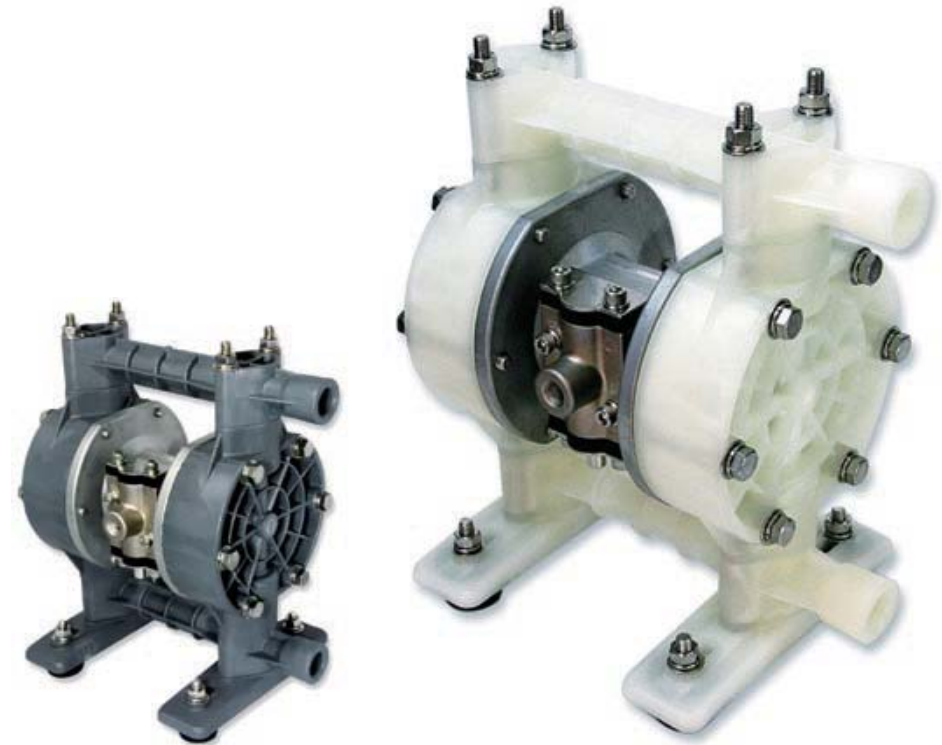
Spring-Less Air Spool. Aluminium Air Motor Section. Externally mounted Silencer. Female Threaded Side Port Liquid Connections. Fully bolted body. Non-Lubricated design. Torqued, leak & operation tested prior to shipment.

1/2" plastic pumps fitted with the Spring-Less Air Spool air motor. Based originally on the D151 pump design, the Spring-less spool is more suited to frequent start stop, Dead Head & high backpressure type applications. Available with a wide range of Diaphragm elastomer options. A choice of Flat or Ball Check Valves.

D150 Plastic Pump Series		
<b>Max Flow Rate:</b>	28 L/min.	
<b>Max Solids Size:</b>	Flat Valve = 0 mm.	Ball Valve = 1.0 mm.
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa	
<b>Max Suction Lift:</b>	Flat Valve Dry: 2.0 meters	Ball Valve Dry: 1.5 meters   Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	1/2" (15mm) Threaded Connections. (Side ports)	
<b>Wetted Body Materials:</b>	GFRPP, POM.	
<b>Diaphragm / Check Valve Materials:</b>	PTFE, TPO, TPEE, NBR, CR, EPDM.	
<b>Certification:</b>	CE.	ATEX. (Some models)



## Diaphragm Pumps with 1/2" Connections 28 L/min Max Flow Rate.



**D150D**

**D150P**

1/2" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 28 L/min  
Material Options: GFRPP, POM,  
Flat & Ball Check Valve Versions Available.

**Note.** factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.

# D151 Pump Series

Diaphragm Pumps with 1/2" Connections  
54 L/min Max Flow Rate.



**D151A**

1/2" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 54 L/min  
Material Options: GFRPP, PVDF, SUS, Aluminium, POM  
Flat & Ball Check Valve Versions Available.



**D151V**

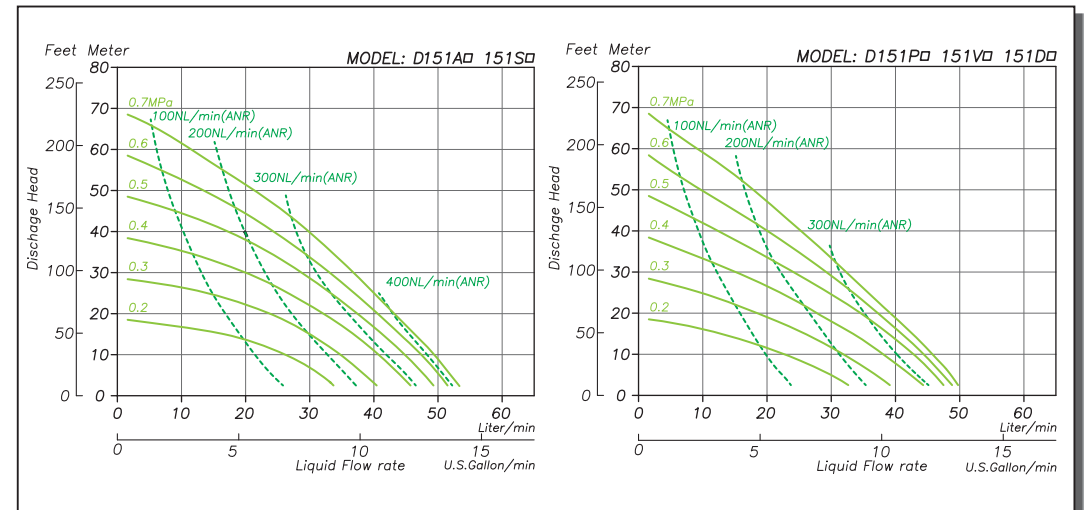
Original 1/2" pump series available in a wide range of materials.

C-Spool Air motor. Ryton (PPS) Plastic Air Motor Section. Internal Silencer. Female Threaded Side Port Liquid Connections. Fully bolted body. Non-Lubricated design. Torqued, leak & operation tested prior to shipment.

1/2" pumps fitted with the C-Spool Air motor. Available with a wide range of metal and plastic materials of construction. Available with a wide variety of Diaphragm elastomer options. A choice of Flat or Ball Check Valves.

D151 Pump Series		
<b>Max Flow Rate:</b>	54 L/min.	
<b>Max Solids Size:</b>	Flat Valve = 0 mm.	Ball Valve = 1.0 mm.
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa	
<b>Max Suction Lift:</b>	Flat Valve Dry: 2.0 meters	Ball Valve Dry: 1.5 meters   Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	1/2" (15mm) Threaded Connections. (Side ports)	
<b>Wetted Body Materials:</b>	GFRPP, PVDF, SUS, Aluminium, POM.	
<b>Diaphragm / Check Valve Materials:</b>	PTFE, TPO, TPEE, NBR, CR, EPDM.	
<b>Certification:</b>	CE.	ATEX. (Some models)

*Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.*





# D152 Pump Series

**½" high performance pump series available in a large range of materials.**

Looped C® Air Spool. Choice of both GFRPP and CFPP Plastic Air Motor Section. Internal Silencer. Female Threaded Multi-port Liquid Connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions & Multi-point footprint. Torqued, leak & operation tested prior to shipment.

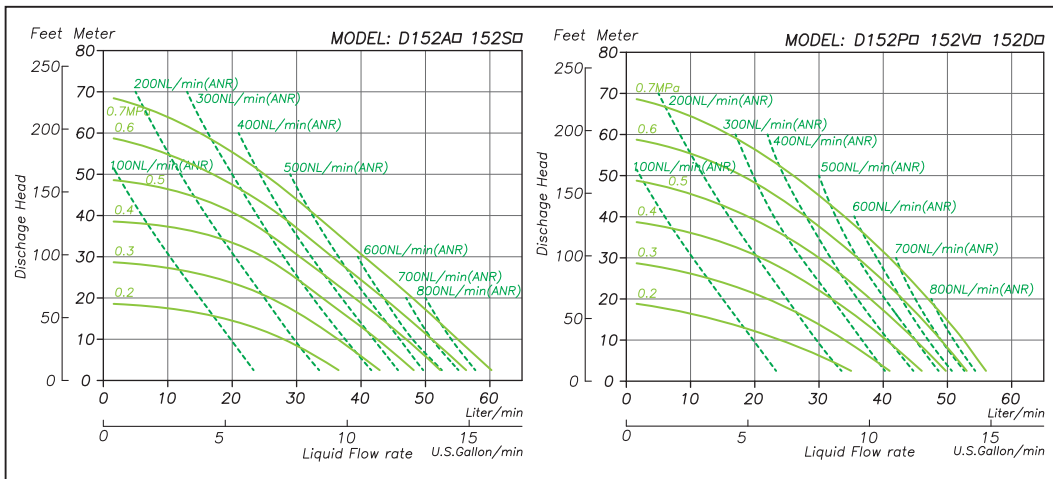
½" pumps fitted with the Looped C® Spool Air Motor. Available with a wide range of metal and plastic materials of construction. Available with a wide variety of Diaphragm elastomer options. A choice of Flat or Ball Check Valves.

**Diaphragm Pumps with ½" Connections  
60 L/min Max Flow Rate.**



D152 Pump Series			
<b>Max Flow Rate:</b>	60 L/min.		
<b>Max Solids Size:</b>	Flat Valve = 0 mm.	Ball Valve = 2.0 mm.	
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa		
<b>Max Suction Lift:</b>	Flat Valve Dry: 2.0 meters	Ball Valve Dry: 1.5 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	½" (15mm) Threaded Connections PT (Multiport)		
<b>Wetted Body Materials:</b>	Pure PP, PVDF, SUS, Aluminium, POM, Conductive PP.		
<b>Diaphragm / Check Valve Materials:</b>	PTFE, TPO, FKM, TPEE, CR, EDPM, NBR.		
<b>Certification:</b>	CE.	ATEX. (Some Models)	FDA. (Some Models)

*Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.*



**D152A**



Optional Conductive PP Air Motor Section (-PC)



**D152P-PP**

½" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 60 L/min  
Material Options: Pure PP, PVDF, SUS, Aluminium, POM, Conductive PP  
Flat & Ball Check Valve Versions Available.

# D202 Plastic Pump Series

Diaphragm Pumps with 3/4" Connections  
120 L/min Max Flow Rate.



**D202P-FL**

3/4" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 120 L/min  
Material Options: GFRPP, PVDF  
Flange & Threaded Versions Available.



**D202V**



Optional Conductive PP  
Air Motor Section (-PC)

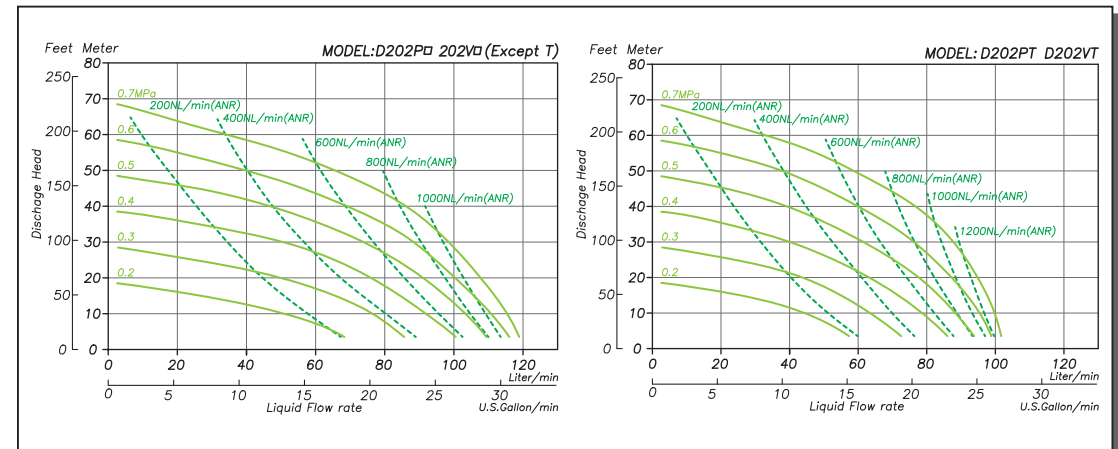
3/4" plastic pumps available in GFRPP & New PVDF.

Looped C® Air Spool. Choice of both GFRPP & CFPP Plastic Air Motor Section. Externally mounted Silencer. Choice of both Flanged & Female Threaded Side Port Liquid Connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions and footprint. Torqued, leak & operation tested prior to shipment.

3/4" plastic pumps fitted with the Looped C® Air Spool for increased performance, reliability & improved parts life expectancy. High flow rates. A choice of both Threaded and Flanged Liquid connections. GFRPP Plastic Air Motor Section as standard with an optional CFPP Air motor for ATEX type applications. Available with a large range of Diaphragm elastomer options. Ball Check Valves as standard.

D202 Plastic Pump Series			
<b>Max Flow Rate:</b>	120 L/min.		
<b>Max Solids Size:</b>	2.0 mm.		
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa		
<b>Max Suction Lift:</b>	PTFE Dry: 1.5 meters	Rubber Dry: 3.0 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	3/4" (20mm) Flange or Threaded Connections. (Side Port)		
<b>Wetted Body Materials:</b>	GFRPP, PVDF.		
<b>Diaphragm / Check Valve Materials:</b>	PTFE, TPO, FKM, EPDM, TPEE, CR, NBR.		
<b>Certification:</b>	CE.	ATEX. (Some Models)	FDA. (Some Models)

**Note.** factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.





# D203 Metallic Pump Series

## 3/4" high performance metallic pumps available in Aluminium & SUS.

Looped C® Air Spool. Choice of GFRPP Plastic, CFPP Plastic or an Aluminium Air Motor Section. Externally mounted Silencer. Female Threaded Centre Port Liquid Connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions and footprint. Torqued, leak & operation tested prior to shipment.

New high performance 3/4" metal pumps fitted with the Looped C® Air Spool for increased performance, reliability & improved parts life expectancy. Very High flow rates. Very large solids size due to the Patented High Flow Ball Guides. Improved air consumption utilizing the new Air Eco-Ring®. GFRPP Air Motor Section as standard. Optional Aluminium & CFPP Air Motor sections are also available. Available with a large range of Diaphragm elastomer options. Ball Check Valves as standard. Special compact size with Drop-in dimensions and common footprint. Very heavy-duty construction.

## Diaphragm Pumps with 3/4" Connections 200 L/min Max Flow rate.



**D203S**



Optional Aluminium  
Air Motor Section (-MT)



**D203A**

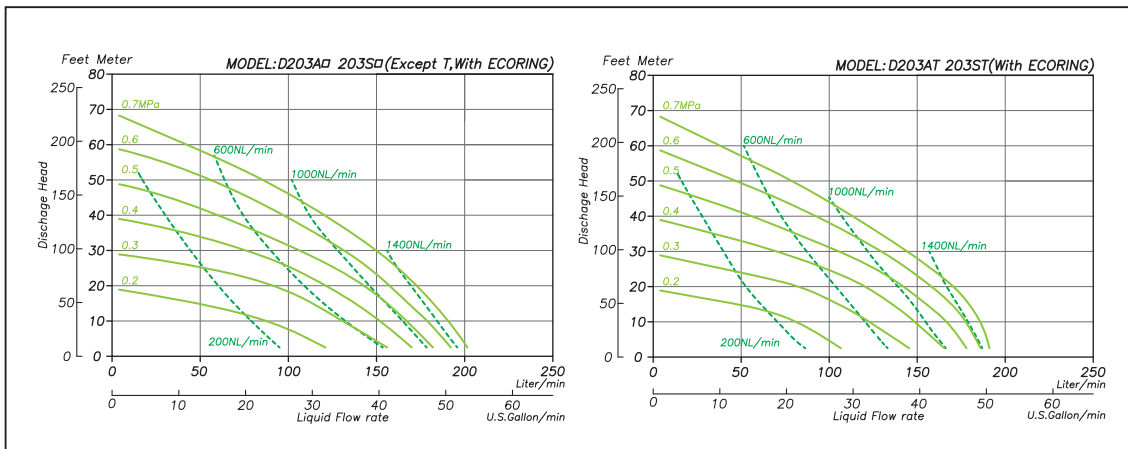
3/4" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 200 L/min  
Material Options: SUS, Aluminium.



Optional Conductive PP  
Air Motor Section (-PC)

D203 Metallic Pump Series			
<b>Max Flow Rate:</b>	200 L/min.		
<b>Max Solids Size:</b>	6.5 mm.		
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa		
<b>Max Suction Lift:</b>	PTFE Dry: 1.5 meters	Rubber Dry: 4.5 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	3/4" (20mm) Threaded Connections. (Centre Ports)		
<b>Wetted Body Materials:</b>	SUS, Aluminium.		
<b>Diaphragm / Check Valve Materials:</b>	PTFE, EPDM, TPEE, FKM, TPO, NBR, CR.		
<b>Certification:</b>	CE.	ATEX. (Some Models)	FDA. (Some Models)

Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.



# D252 Plastic Pump Series

Diaphragm Pumps with 1" Connections  
170 L/min Max Flow rate.



**D252V-FL**

1" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 170 L/min  
Material Options: GFRPP, PVDF, Conductive PP  
Flange & Threaded Versions Available.



**D252P**

Optional Threaded Connections



Optional Conductive PP  
Air Motor Section (-PC)

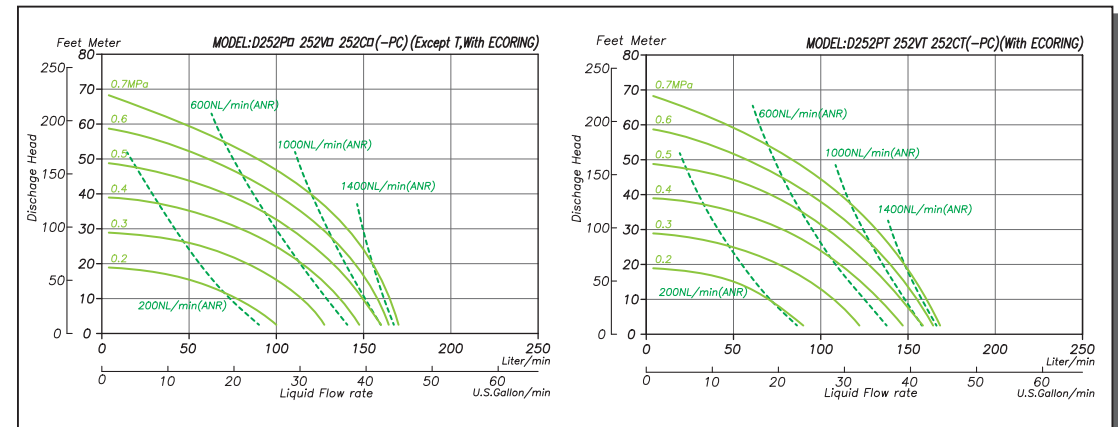
**1" plastic Pumps available in GFRPP, PVDF & CFPP.**

Looped C® Air Spool. Choice of both GFRPP & CFPP plastic Air Motor Section. Externally mounted Silencer. Choice of both Flanged & Female Threaded Side Port Liquid Connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions & New Multi-point footprint. Torqued, leak & operation tested prior to shipment.

1" plastic pumps fitted with the Looped C® Air Spool for increased performance, reliability & improved parts life expectancy. High flow rates. Improved air consumption utilizing the new Air Eco-Ring®. GFRPP Air Motor Section as standard with an optional CFPP air motor for ATEX type applications. Available with a large range of Diaphragm elastomer options. Ball Check Valves as standard.

D252 Plastic Pump Series			
<b>Max Flow Rate:</b>	170 L/min.		
<b>Max Solids Size:</b>	4.8 mm.		
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa		
<b>Max Suction Lift:</b>	PTFE Dry: 2.5 meters	Rubber Dry: 5.5 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	1" (25mm) Flange or Threaded Connections. (Side Ports)		
<b>Wetted Body Materials:</b>	GFRPP, PVDF, Conductive PP.		
<b>Diaphragm / Check Valve Materials:</b>	PTFE, EPDM, TPEE, FKM, TPO, NBR, CR.		
<b>Certification:</b>	CE.	ATEX. (Some Models)	

**Note.** factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.





# D253 Metallic Pump Series

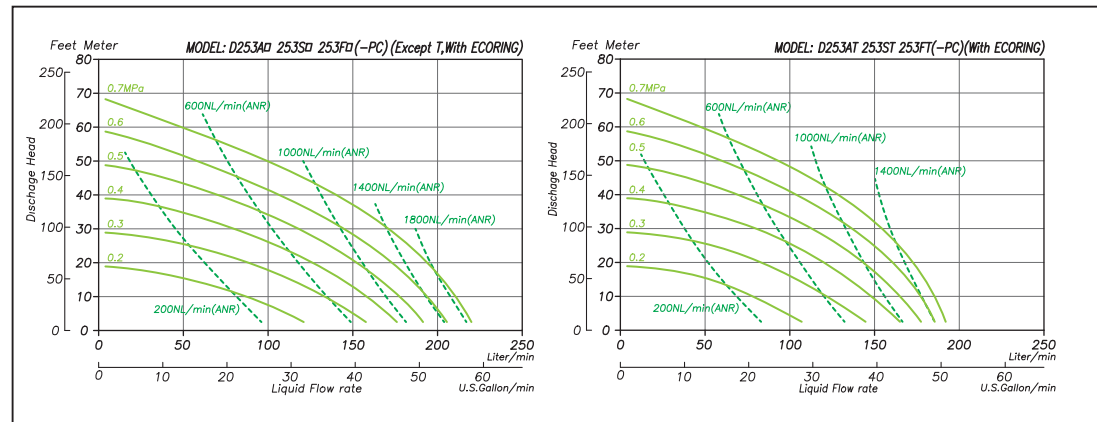
## 1" high performance metallic pumps available in Aluminium, SUS & Cast iron.

Looped C® Air Spool. Choice of GFRPP Plastic, CFPP Plastic or an Aluminium Air Motor Section. Externally mounted Silencer. Female Threaded Multi-Port Liquid Connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions & adjustable Multi-point footprint. Torqued, leak & operation tested prior to shipment.

1" metal pumps fitted with the Looped C® Air Spool for increased performance, reliability & improved parts life expectancy. Very high flow rates. Very large solids size due to the Patented High Flow Ball Guides. Improved air consumption utilizing the new Air Eco-Ring®. GFRPP Air Motor Section as standard with optional Aluminium & CFPP Air Motor sections available. Available with a large range of Diaphragm elastomer options. Ball Check Valves as standard. Special compact size with Drop-in dimensions and common footprint. Very heavy-duty construction.

D253 Metallic Pump Series			
<b>Max Flow Rate:</b>	220 L/min.		
<b>Max Solids Size:</b>	6.5 mm.		
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.7 Mpa		
<b>Max Suction Lift:</b>	PTFE Dry: 1.5 meters	Rubber Dry: 4.5 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	1" (25mm) Threaded Connections. (Multiport)		
<b>Wetted Body Materials:</b>	SUS, Aluminium, Cast Iron.		
<b>Diaphragm / Check Valve Materials:</b>	PTFE, EPDM, TPEE, FKM, TPO, CR, NBR.		
<b>Certification:</b>	CE.	ATEX. (Some Models)	FDA. (Some Models)

*Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.*



## Diaphragm Pumps with 1" Connections 220 L/min Max Flow rate.



**D253S**

**D253A**

1" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 220 L/min  
Material Options: SUS, Aluminium, Cast Iron.



Optional Aluminium Air Motor Section (-MT)



Optional Conductive PP Air Motor Section (-PC)



Optional 1 1/2" Connections

# D400 / 401 Plastic Pump Series

## Diaphragm Pumps with 1½" Connections

**D400 > 380 L/min Max Flow rate.**

**D401 > 390 L/min Max Flow rate.**



**D401P-FL**



**D400V-FL**



1½" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 380/390 L/min  
Material Options: GFRPP, PVDF.

**Note.** factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.

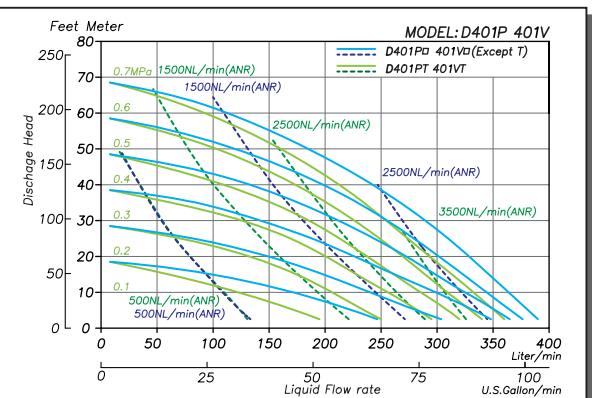
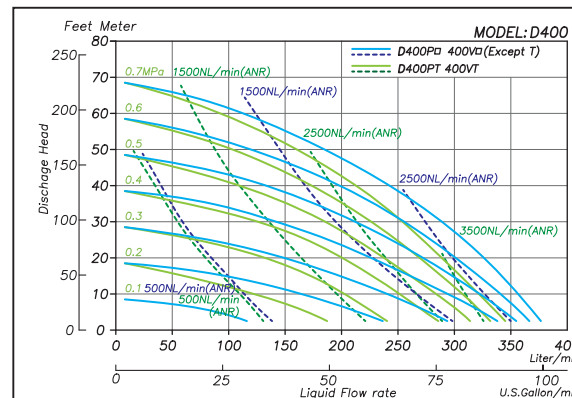
## 1½" high performance plastic pumps available in GFRPP & PVDF.

Choice of both Mechanical Coil-Spring Air Spool (400 Series) or New Looped C® Spool (401 Series).

400 Series 1½" heavy duty plastic pumps fitted with the new Mechanical Coil-Spring Air Spool designed for high performance operation, extreme reliability & extended parts life expectancy. Operate anywhere from very low to very high air pressures with extremely efficient air consumption ratings. Particularly suited to frequent startstop, Dead Head & high backpressure type applications and can easily handle High Heads & very Long Discharge Lines.

New 401 Series 1½" lightweight plastic pumps fitted with the New Looped C® Air Spool for high speed operation and very high liquid flow rates. Designed as a lighter weight lower cost pump with very high flow rates suited to process type applications operating at higher speeds or operating continuously over long periods. Externally Accessible Looped C® Spool and independent Pilot Valves for reliability & ease of maintenance.

D400 / 401 Plastic Pump Series			
Model Code:	D400		D401
Max Flow Rate:	380 L/min.		390 L/min.
Max Solids Size:	7.0 mm.		7.0 mm.
Max Air Inlet Pressure:	0.15 ~ 0.7 Mpa		0.2 ~ 0.7 Mpa
Max Suction Lift:	PTFE Dry: 2.0 meters	Rubber Dry: 5.0 meters	Wet (Primed): 8.0 meters
Description:	Aluminium Air Motor Section, Mechanical Coil-Spring Air Motor, Ball Check Valves, External Silencers (2). Fully Bolted Body. Heavy Duty SUS Legs. Multi Footprint.		Aluminium Air Motor Section, New Looped C® Air Spool Type Air Motor, Ball Check Valves, External Silencer. Fully Bolted Body. Heavy Duty SUS Legs. Multi Footprint.
Liquid Connections:	1½" (40mm) Flange Connections. (Centre ports)		
Wetted Body Materials:	GFRPP, PVDF.		
Diaphragm / Check Valve Materials:	PTFE, CR, EPDM, NBR. TPEE, FKM, TPO.		
Certification:	CE.		ATEX. (Some Models)





# D401 Metallic Pump Series

**1½" high performance metallic pumps available in Aluminium, Stainless steel and Cast iron.**

Looped C® Spool Non-Lubricated Aluminium Air Motor Section. Externally mounted Silencer. Choice of Flanged & Threaded Centre Port Liquid Connections. Fully bolted body, Compact Drop-in dimensions and common footprint. Torqued, leak & operation tested prior to shipment. 401 Pump models are available with a large range of Diaphragm elastomer options with Ball Check Valves as standard.

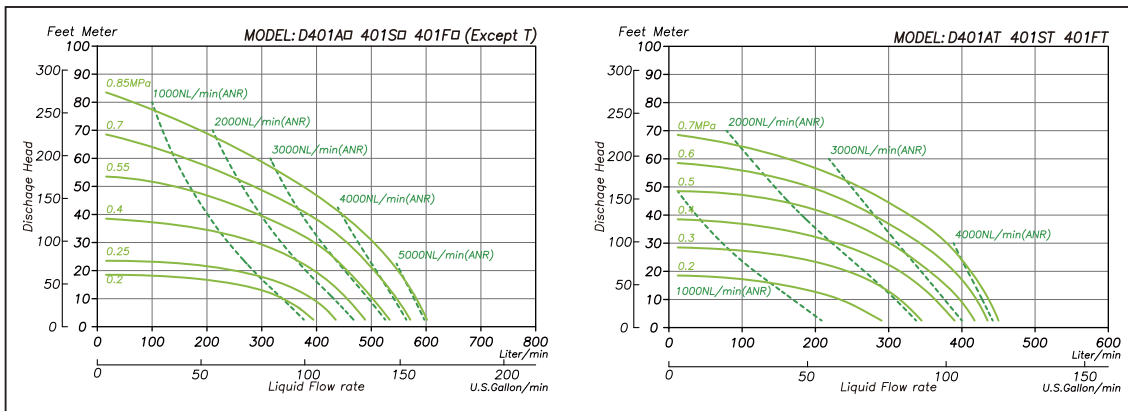
New 401 Series 1½" lightweight Metallic pumps fitted with the New Looped C® Air Spool for high speed operation and very high liquid flow rates. Designed as a lighter weight lower cost pump with very high flow rates suited to process type applications operating at higher speeds or operating continuously over long periods. Externally Accessible Looped C® Spool and independent Pilot Valves for reliability & ease of maintenance.

**Diaphragm Pumps with 1½" Connections  
600 L/min Max Flow rate.**



D401 Metallic Pump Series			
<b>Max Flow Rate:</b>	600 L/min.		
<b>Max Solids Size:</b>	8.0 mm.		
<b>Max Air Inlet Pressure:</b>	0.2 ~ 0.85 Mpa		
<b>Max Suction Lift:</b>	PTFE Dry: 3.0 meters	Rubber Dry: 5.5 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	1 ½" (40mm) Threaded or Flange Connections. (Centre Ports)		
<b>Wetted Body Materials:</b>	SUS, Aluminium, Cast Iron.		
<b>Diaphragm / Check Valve Materials:</b>	PTFE, CR, EPDM, NBR, TPEE, FKM, TPO.		
<b>Certification:</b>	CE.	ATEX.	FDA. (Some Models)

*Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.*



**D401A-FL**

**D401S-FL**

1½" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 600 L/min  
Material Options: SUS, Aluminium, Cast Iron.

# D500 Plastic Pump Series

Diaphragm Pumps with 2" Connections  
620 L/min Max Flow rate.

Mechanical Coil Spring Spool



**D500P-FL**

**D500V-FL**

2" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 620 L/min  
Material Options: GFRPP, PVDF.

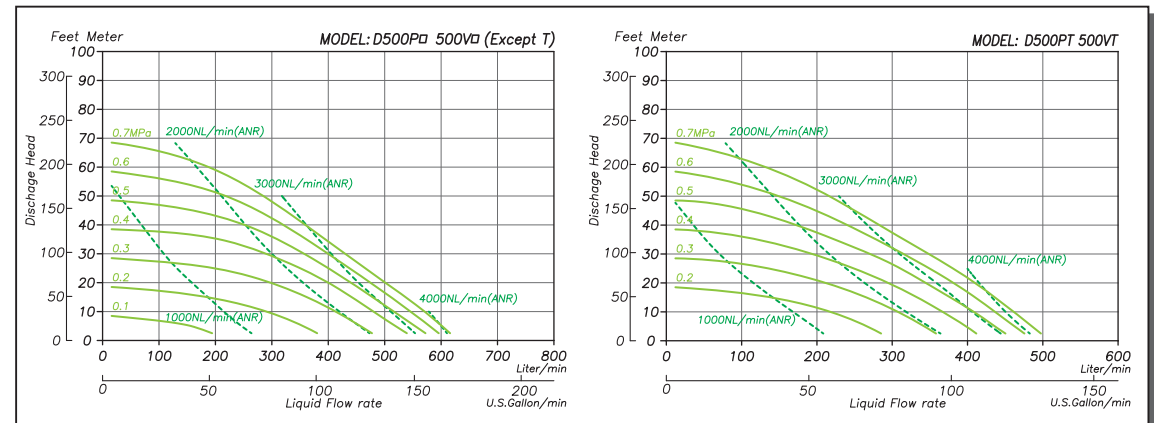
2" high performance plastic pumps available in GFRPP & PVDF.

Mechanical Coil-Spring Air Spool. Aluminium Air Motor Section. Externally mounted Silencers (x2). Flanged Centre Port Liquid Connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions and common footprint. Torqued, leak & operation tested prior to shipment.

2" plastic pumps fitted with the new Mechanical Coil-Spring Air Spool. Designed for high performance operation, improved reliability & longer parts life expectancy. Achieve High flow rates and improved air consumption. Operate anywhere from very low to very high air pressures. Particularly suited to frequent start stop, Dead Head & high backpressure type applications. Easily handle High Heads & very Long Discharge Lines. Available with a large range of Diaphragm elastomer options. Ball Check Valves as standard. New Heavy Duty SUS Foot Assembly with Drop-in dimensions.

D500 Plastic Pump Series	
<b>Max Flow Rate:</b>	620 L/min.
<b>Max Solids Size:</b>	8.0 mm.
<b>Max Air Inlet Pressure:</b>	0.15 ~ 0.7 Mpa
<b>Max Suction Lift:</b>	PTFE Dry: 2.0 meters   Rubber Dry: 5.0 meters   Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	2" (50mm) Flange Connections. (Centre Ports)
<b>Wetted Body Materials:</b>	GFRPP, PVDF.
<b>Diaphragm / Check Valve Materials:</b>	PTFE, CR, EPDM, NBR. TPEE, FKM, TPO.
<b>Certification:</b>	CE.   ATEX. (Some Models)

*Note.* factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.





# D500 Metallic Pump Series

## New 2" high performance Metallic pump series available in Aluminium, Stainless steel and Cast iron.

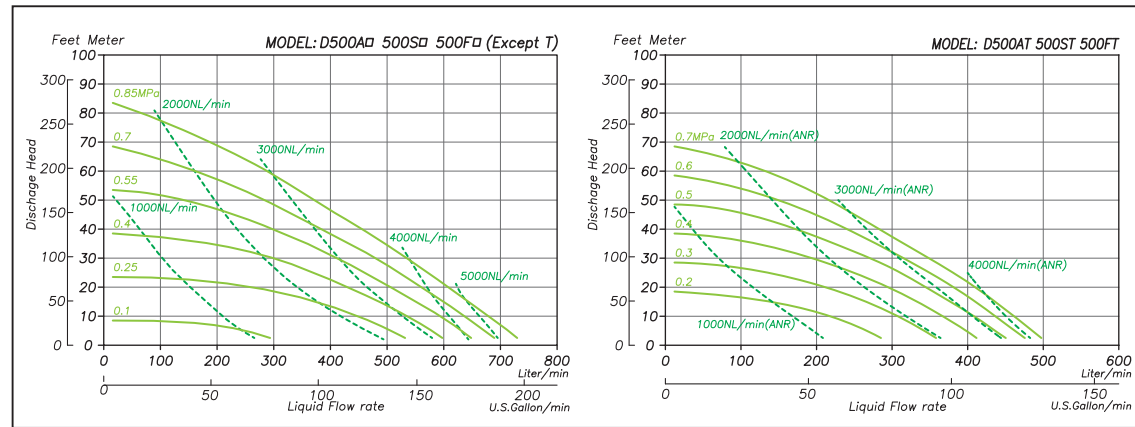
Mechanical Coil-Spring Air Spool. Aluminium Air Motor Section. Externally mounted Silencers (x2). Choice of both Flanged & Female Threaded Centre Port Liquid Connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions and common footprint. Torqued, leak & operation tested prior to shipment.

2" metal pumps fitted with the new Mechanical Coil-Spring Air Spool. Designed for high performance operation, improved reliability & longer parts life expectancy. Achieve very High flow rates and improved air consumption. Operate anywhere from very low to very high air pressures. Particularly suited to frequent start stop, Dead Head & high backpressure type applications. Easily handle High Heads & very Long Discharge Lines. Available with a large range of Diaphragm elastomer options. Ball Check Valves as standard. Special compact size with Drop-in dimensions and common footprint. Very Heavy-duty construction.

## Diaphragm Pumps with 2" Connections 730 L/min Maximum Flow rate.

Mechanical Coil Spring Spool

D500 Metallic Pump Series			
<b>Max Flow Rate:</b>	730 L/min.		
<b>Max Solids Size:</b>	8.0 mm.		
<b>Max Air Inlet Pressure:</b>	0.1 ~ 0.85 Mpa		
<b>Max Suction Lift:</b>	PTFE Dry: 3.0 meters	Rubber Dry: 5.5 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	2" (50mm) Threaded or Flange Connections. (Centre Ports)		
<b>Wetted Body Materials:</b>	SUS, Aluminium, Cast Iron.		
<b>Diaphragm / Check Valve Materials:</b>	PTFE, CR, EPDM, NBR. TPEE, FKM, TPO.		
<b>Certification:</b>	CE.	ATEX. (Some Models)	FDA. (Some Models)



**D500S-FL**

**D500A-FL**

2" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 730 L/min  
Material Options: SUS, Aluminium, Cast Iron.

**Note.** factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.

# D800 Plastic Pump Series

Diaphragm Pumps with 3" Connections  
760 L/min Maximum Flow rate.

Mechanical Coil Spring Spool



## D800P-FL

3" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 760 L/min  
Material Options: GFRPP.

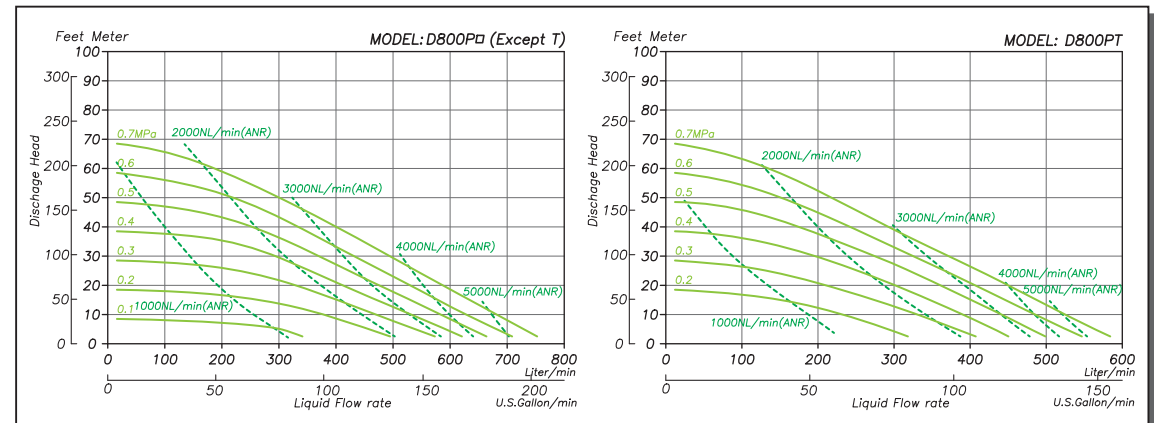
## New 3" high performance Plastic pump series available in GFRPP.

Mechanical Coil-Spring Air Spool. Aluminium Air Motor Section. Externally mounted Silencers (x2). Flanged Centre Port Liquid Connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions and common footprint. Torqued, leak & operation tested prior to shipment.

3" plastic pumps fitted with the new Mechanical Coil-Spring Air Spool. Designed for high performance operation, improved reliability & longer parts life expectancy. Achieve High flow rates and improved air consumption. Operate anywhere from very low to very high air pressures. Particularly suited to frequent start stop, Dead Head & high backpressure type applications. Easily handle High Heads & very Long Discharge Lines. Available with a large range of Diaphragm elastomer options. Ball Check Valves as standard. New Heavy Duty SUS Foot Assembly with Drop-in dimensions.

D800 Plastic Pump Series			
<b>Max Flow Rate:</b>	760 L/min.		
<b>Max Solids Size:</b>	10.0 mm.		
<b>Max Air Inlet Pressure:</b>	0.15 ~ 0.7 Mpa		
<b>Max Suction Lift:</b>	PTFE Dry: 2.0 meters	Rubber Dry: 5.0 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	3" (80mm) Flange Connections. (Centre Ports)		
<b>Wetted Body Materials:</b>	GFRPP.		
<b>Diaphragm / Check Valve Materials:</b>	PTFE, CR, EPDM, NBR. TPEE, FKM, TPO.		
<b>Certification:</b>	CE.		

*Note.* factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.





# D800 Metallic Pump Series

## 3" high performance Metallic pumps available in Aluminium, SUS & Cast iron.

Mechanical Coil-Spring Air Spool. Aluminium Air Motor Section. Externally mounted Silencers (x2). Choice of both Flanged & Female Threaded Centre Port Liquid Connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions and common footprint. Torqued, leak & operation tested prior to shipment.

3" metal pumps fitted with the new Mechanical Coil-Spring Air Spool. Designed for high performance operation, improved reliability & longer parts life expectancy. Achieve High flow rates and improved air consumption. Operate anywhere from very low to very high air pressures. Particularly suited to frequent start stop, Dead Head & high backpressure type applications. Easily handle High Heads & very Long Discharge Lines. Available with a large range of Diaphragm elastomer options. Ball Check Valves as standard. Special compact size with Drop-in dimensions and common footprint. Very Heavy-duty construction.

## Diaphragm Pumps with 3" Connections 800 L/min Maximum Flow rate.

Mechanical Coil Spring Spool

D800 Metallic Pump Series			
<b>Max Flow Rate:</b>	800 L/min.		
<b>Max Solids Size:</b>	10.0 mm.		
<b>Max Air Inlet Pressure:</b>	0.1 ~ 0.85 Mpa		
<b>Max Suction Lift:</b>	PTFE Dry: 3.0 meters	Rubber Dry: 5.5 meters	Wet (Primed): 8.0 meters
<b>Liquid Connections:</b>	3" (80mm) Threaded or Flange Connections. (Centre Ports)		
<b>Wetted Body Materials:</b>	SUS, Aluminium, Cast Iron.		
<b>Diaphragm / Check Valve Materials:</b>	PTFE, CR, EPDM, NBR, TPEE, FKM, TPO.		
<b>Certification:</b>	CE.	ATEX. (Some Models)	FDA. (Some Models)

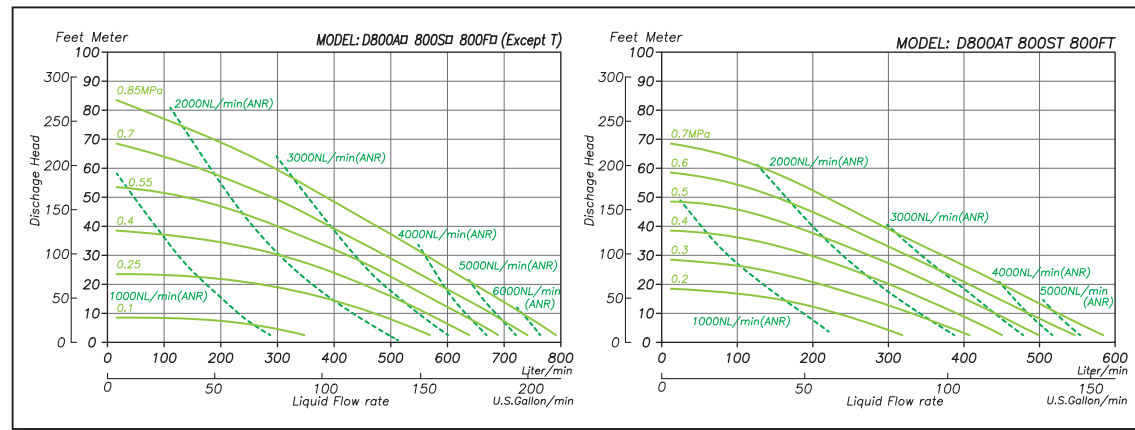


D800F-FL



D800A-FL

3" Air Powered Double Diaphragm Pumps  
Max Flow Rate: 800 L/min  
Material Options: SUS, Aluminium, Cast Iron.



**Note.** factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.

# DFS PTFE Pump Series

Diaphragm Pumps with 1/4" 1/2" 3/4" & 1" Connections  
Up to 150 L/min Max Flow rate.



**DF5152TT-FL**



**DF5050TT**



**DF5253TT-FL**

**Industrial Grade PTFE pumps available in five different sizes.**

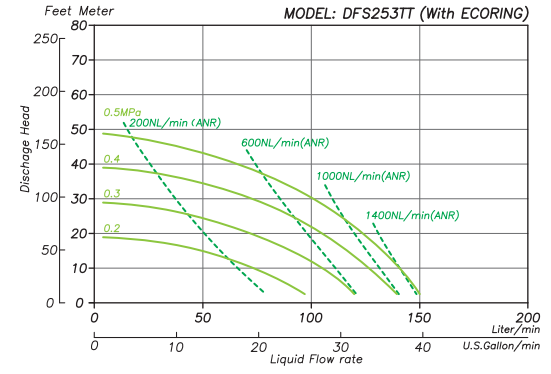
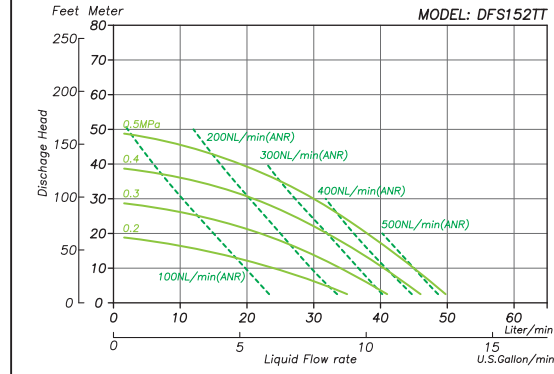
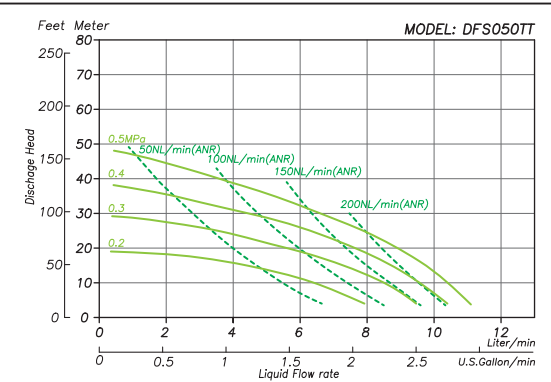
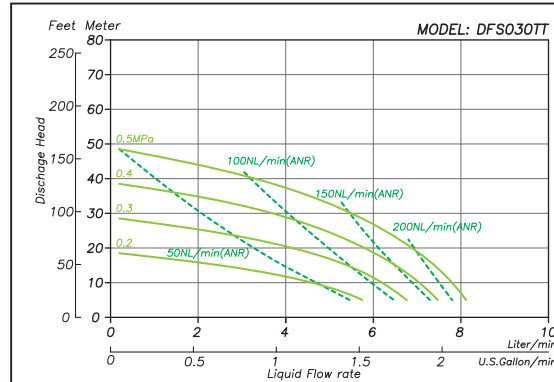
Looped C® Air Spool. Choice of both GFRPP & PPS Air Motor Section. Choice of both Flanged & Female Threaded liquid connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions and common footprint. Torqued, leak & operation tested prior to shipment.

A wide range of industrial grade PTFE pumps specifically designed to transfer highly corrosive chemicals in processes such as in the manufacture of microelectronic components, solar panels and for some lower-grade Semiconductor related applications. Able to transfer solid laden chemicals and can achieve reasonably high flow rates. Also available with a wide range of specialist options and accessories. # 030TT Pump model with especially low flow rates where an Export Licence is typically not required.

**Note.** factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.

## Standard Grade PTFE Pump Models

Model Code:	DF5030TT	DF5050TT	DF5152TT DF5152TT-FL	DF5152TT-SP20 DF5152TT-SP20-FL	DF5253TT DF5253TT-FL
<b>Max Flow Rate:</b>	8.2 L/min.	11.0 L/min.	50 L/min.	50 L/min.	150 L/min.
<b>Connection Size:</b>	1/4" (6mm)	1/4" (6mm)	1/2" (15mm)	3/4" (20mm)	1" (25mm)
<b>Connection Type:</b>	Threaded	Threaded	Thread or Flange	Thread or Flange	Thread or Flange
<b>Check Valves:</b>	Flat Valve	Flat Valve	Ball Valve	Ball Valve	Ball Valve
<b>Max Slurry Solids Size:</b>	0 mm.	0 mm.	2 mm.	2 mm.	3 mm.
<b>Air Pressure Range:</b>	0.2 ~ 0.5 MPa				
<b>Description:</b>	PTFE Diaphragm Pumps available in 5 sizes with high flow rates designed to transfer highly corrosive chemicals or for use in various types of clean industries. Grease or oil lubrication not required.				
<b>Wetted Body Materials:</b>	PTFE				
<b>Diaphragm / Valve Materials:</b>	PTFE on all Models				
<b>Certification:</b>	CE.				



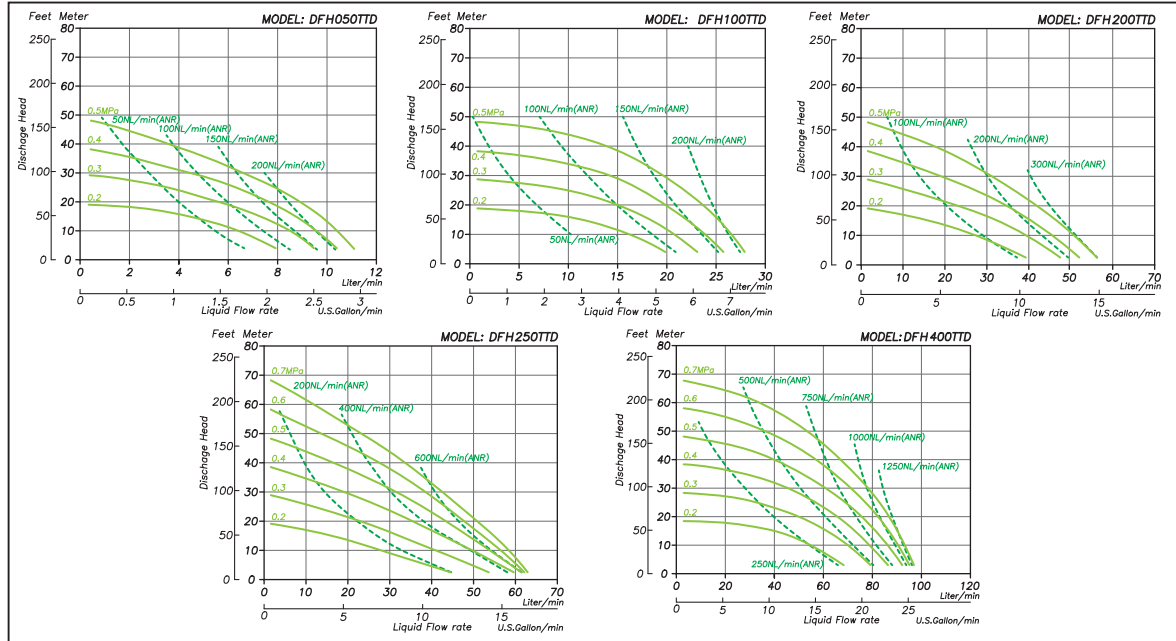


# DFH Virgin High Purity PTFE Pump Series

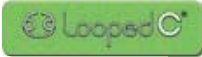
## High Purity PTFE Pump Models

Model Code:	DFH030TTD	DFH050TTD	DFH100TTD DFH100TTD-FL	DFH200TTD DFH200TTD-FL	DFH250TTD-FL	DFH400TTD-FL
<b>Max Flow Rate:</b>	8.2 L/min.	11.0 L/min.	27 L/min.	54 L/min.	65 L/min.	95 L/min.
<b>Connection Size:</b>	¼" (6mm)	¼" (6mm)	⅜" (10mm)	¾" (20mm)	1" (25mm)	1" (25mm)
<b>Connection Type:</b>	Threaded	Threaded	Thread or Flange	Thread or Flange	Flange	Flange
<b>Check Valves:</b>	Flat	Flat	Ball or Flat	Ball or Flat	Ball or Flat	Ball or Flat
<b>Max Slurry Solids Size:</b>	0 mm.	0 mm.	1 mm.	3mm (Ball valve)	3mm (Ball valve)	3mm (Ball valve)
<b>Air Pressure Range:</b>	0.2 ~ 0.5 MPa			0.2 ~ 0.7 MPa		
<b>Description:</b>	High Purity Virgin PTFE Diaphragm Pumps manufactured specifically for use in the Micro-Electronics and Semiconductor Industries. Available in 6 sizes. Class 1000 Clean Room Assembled Tested & Packed. Available with Threaded & Flange Liquid Connections & Ball & Flat Check Valves on some models.					
<b>Wetted Material:</b>	High Purity PTFE / PFA.					
<b>Diaphragm / Valve Materials:</b>	PTFE on all Models					
<b>Certification:</b>	CE.					

Note. factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration.



Diaphragm Pumps with ¼" ⅜" ¾" & 1" Connections Up to 95 L/min Max Flow rate.



**DFH050TTD**



**DFH100TTD-FL**



**DFH400TTD-FL**

High Purity Virgin PTFE Pumps available in six different sizes.

Looped C® Air Spool. Choice of PPS / PP / HDPP Air Motor Section. Choice of both Flanged & Female Threaded Liquid Connections. Fully bolted body. Non-Lubricated design. Drop-in dimensions and common footprint. Torqued, leak & operation tested prior to shipment. Designed and manufactured to ensure Low Particle Counts and Reduced Chance of Metallic Ion Contamination within a clean process. Class 1000 clean room assembled, tested and packed.

A wide range of virgin high purity PTFE pumps specifically designed to transfer highly corrosive chemicals for the manufacture of Semiconductors or for use in some laboratories & Clean Rooms. Able to transfer slurry laden chemicals and can achieve reasonably high flow rates. Also available with a wide range of specialist options and accessories.

# 030TTD Pump model with low flow rates. Typically, an Export Licence is not required.

# Specialty Pump Models

## Drum pumps

**Air Powered Drum Syphon Double Diaphragm Pumps available in a wide range of sizes and materials. Suitable for pumping directly from 200 litre Barrels.**

For the safe clean and efficient transfer of all kinds of liquids including corrosive chemicals, oils, lubricants, waste liquids, solvents and fuels. Can be used to pump flammable liquids and in explosive environments. Available with 1/4" 3/8" 1/2" 3/4" and 1" Liquid connections. Available Materials: PP, GFRPP, CFPP, PVDF, PTFE, CFPTFE, Aluminium, SUS, FDA & Electro Polished SUS. Max Flow Rate: 220 L/min. Max Slurry Size: 6.5mm on a 1" pump



**Drum Bung Pipe Adapter (SUS)**

## FDA Grade Sanitary Diaphragm Pumps

**FDA Grade Sanitary Double Diaphragm Pumps for Food, Beverage, Pharmaceutical, Cosmetics & Chemical applications where 3A, USDA or EHEDG standards are not required.**

Available in all sizes 1/4" through to 3" in Stainless Steel. Manufactured from FDA Compliant Materials. 316 Electro Polished Stainless Steel Housings & Hardware with Oversized Sanitary Flange Connections Welded Directly to the Pump. Electro Polished Inside and Out.

# ISO Type Sanitary Flanges Shipped as Standard. Optional 3A Type Connections are Also Available.  
# FDA Compliant Drum Pumps & FDA Pulsation Dampeners are also available.

### D253ST-FDA

FDA Type Electro Polished SUS Pump.  
1 1/2" Sanitary Flange Connections.  
190 L/min Max Flow Rate. (PTFE Diaphragms)  
6.5mm Max Solids Size.



### D500ST-FDA

FDA Type Electro Polished SUS Pump.  
2 1/2" Sanitary Flange Connections.  
500 L/min Max Flow Rate. (PTFE Diaphragms)  
8mm Max Solids Size.



### Sanitary Flange Connections

Shipped as standard on all FDA compliant pumps. Welded and Oversized Stainless Steel. Available in either Standard ISO or optional 3A sizes.  
# Suitable Sanitary Type Clamp fittings and gaskets sold separately



## E Series

**E Series Electric Double Diaphragm Pumps used in critical process type applications and can be fully integrated into control systems and process machinery while still offering all the major benefits of an AODD Pump.**

Used for Liquid transfer, metering, batching, or cycle speed control. Can also be connected to warning devices to monitor pump stroke rate or pump stoppages etc. E Series Pumps have extremely high start stop reliability. More accurate liquid flow rates and lower liquid pulsation. Increased life expectancy of the pumps moving parts and generally lower maintenance requirements overall. The E type design allows for lower air consumption and are a much more reliable and efficient way to transfer liquids.

### DFS050TT-E

¼" PTFE E Type Pump  
12 L/min Max Flow Rate



### D400VS-FL-E

1 ½" PVDF E Type Pump (Flanged)  
380 L/min Max Flow Rate



## Conductive Polypropylene Pumps

**Electrically Conductive Polypropylene Double Diaphragm Pumps used for the safe transfer of flammable chemicals or for use in explosive environments.**

Carbon filled Polypropylene used to manufacture all major body components including both the Liquid and Air Side on the pump. Available with ¼" ½" & 1" Connections. Offering high Chemical Resistance and a fully Bolted Design with inbuilt engineering features designed to resist material creep so reducing the chance of leaks forming over time.

### D252C□-PC-FL

1" Carbon PP Pump (Flanged)  
170 L/min Max Flow Rate



### D152C□-PC

½" Carbon PP Pump  
56 L/min Max Flow Rate



### D152C□-PC-D

½" Carbon PP Drum Pump  
56 L/min Max Flow Rate



### D050CT

¼" Carbon PP Pump  
11.5 L/min Max Flow Rate



## Conductive PTFE Pumps

**Electrically Conductive PTFE Double Diaphragm Pumps used for the safe transfer of highly corrosive & flammable chemicals or for use in explosive environments.**

Carbon filled PTFE used to manufacture all major body components including both the Liquid and Air Side on the pump. 3 models available with ¼" ½" & 1" Connections. Offering Very High Chemical Resistance and a Fully Bolted Design with inbuilt engineering features designed to resist material creep and so reducing the chance of leaks forming over time.

### D252TTC-PC

1" Conductive PTFE Pump  
150 L/min Max Flow Rate



### D152TTC-PC

½" Conductive PTFE Pump  
50 L/min Max Flow Rate



### D050TTC

¼" Conductive PTFE Pump  
11 L/min Max Flow Rate

## Powder Transfer Pumps

**Specially Designed Powder Pumps to syphon and transfer very fine, dry, bulk powders effectively throughout a process and help create a safe, efficient and dust free environment. Powder Transfer Pumps can eliminate the need for intensive manual labour, heavy lifting or mechanical Augers & Conveyors.**

To operate correctly, the Powder must be completely dry and typically free flowing. Conveying distance will depend entirely on the type of powder, its weight, size, shape and bulk density. Typically powders such as Pigments, Activated Carbon, Powder Coatings, Carbon Black, Fumed Silica, Talc, Toners & Powdered Plastics can all be transferred successfully. However it is always recommended that a trial is firstly carried out to determine the pump-ability of a certain type of powder.

### Powder Pumps are available in the following Sizes & Materials

¾" 1" 1½" 2" & 3" Aluminium or Stainless Steel. Shipped with factory fitted Compressed Air Induction System. The standard model utilizes 4 inlets however custom models are available. Many more options and accessories are also available. # please consult YTS for more information about pumping powders and Powder Pumps.

### Compressed Air Induction System.

Power Pumps are fitted with an Air Induction System to fluidize the powder and help stop clumping and sticking. Pre Fluidization before operating the pump will also help reduce the chance of pump damage caused by settled and compacted powders.



### D500AC-FL-PDR

2" Flanged Powder Pump.



## Flap Valve Solids Transfer Pumps

### New 2" Flap Valve Solids Transfer Pumps for the Transfer of Large Solid Laden Liquids.

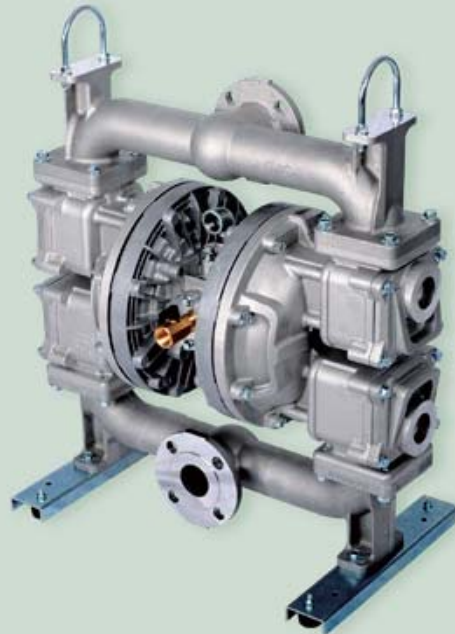
Typically operated in water evacuation, process and waste type applications, Flap Valve Pumps utilize a reversed top down liquid flow path and with 4 large heavy duty flap valves to facilitate to transfer of liquids containing large sized solids. For ease of use & ease of maintenance, each pump is fitted with 4 externally accessible inspection panels allowing for each individual Flap Valve to be inspected cleaned or replaced simply and easily without having to remove the pump for service. This special externally accessible design also allows for the inspection & cleaning of the pumps diaphragms and other moving parts.

Fitted with the heavy duty Mechanical Coil-Spring Air Motor, each pump is designed for high performance operation, extreme reliability & extended parts life expectancy. They can operate anywhere from very low to very high air pressures with extremely efficient air consumption ratings. These pumps are particularly suited to frequent start stop, Dead Head & high backpressure type applications and can easily handle High Heads & very Long Discharge Lines with ease.



#### Externally Accessible Flap Valves

Easy Access for Maintenance, Inspection, & Cleaning without having to pull the pump from service.



## High Pressure Pumps

### High Pressure Double Diaphragm Pumps for applications where high liquid discharge pressures are required to overcome system requirements.

Often utilized in filter press type applications and can easily handle High Heads, very Long Discharge Lines and Frequent Dead Head type processes. Pressure output is roughly doubled however the flow rate is roughly halved. 2:1 discharge pressure ratio is achieved by utilizing twice the surface area (driving both diaphragms) to double the discharge pressure output. High Pressure 2:1 pumps are available with ¾" 1" 1½" 2" & 3" connections with aluminium stainless steel and cast iron construction.

#### D500SS-HP

2" High Pressure SUS Pump  
365 L/min Max Flow Rate



# Common Accessories & Pump Options

## Liquid Pulsation Dampeners

A comprehensive range of high Performance Liquid Pulsation Dampeners in various sizes and Materials. Reduce Liquid Pulsation by up to 95%.



## High Performance Exhaust

Reduce exhaust particulate contamination by up to 99.9%. Reduce Exhaust Noise by up to 35%. High corrosion resistance. Built in reservoir and drain for accumulated oil & condensation. Available in various sizes. Easy to fit and easy to service.



## Air Filter Regulators

Built in moisture and particulate removal of up to 5 micron. Analogue type pressure gauge with locking function. Manual drain system. Provides optimal pump control and helps improve compressed air efficiency.



## Diaphragm Options

A full range of high performance Pump Diaphragms available in all sizes and materials. Optional TPO rubber Back up Diaphragms. One Up® Brand Specialty Diaphragms. Bonded Rubber PTFE Diaphragms. New One piece solid type PTFE diaphragms are also available.



## Stroke Counter

Pneumatically actuated mechanical stroke counter. Non electrical. Fitted to the pump via an air hose. Used for measuring stroke life of pump or diaphragms. Can be used to measure and calculate liquid volume over time.



## PTFE Coatings

PTFE Coated Air motor Assembly for increased chemical resistance. Used to protect air motor assembly from ruptured Diaphragms, chemical spills or for use in corrosive environments.





## Automatic Liquid Level Controller

The HLC Automatic Liquid Level Controller is a pneumatically controlled system designed to automatically start and stop an AODD Pump when the liquid level within a tank reaches a predetermined Hi or Low level. The HLC is available in 4 different models.



## Electro Polished Stainless Steel

Specifically for ultra-high purity solvents and other non-corrosive liquids compatible with 316 Stainless Steel. A common option for food, pharmaceutical cosmetics, electronics & semiconductor related applications. # Electro polished pulsation dampeners are also available.



## Tools

A full range of standard & specialty pump service tools are available for all model pumps.



## High Performance PTFE Diaphragms

High performance PTFE Diaphragms with bonded Rubber Backing. Newly engineered & fully Patented design. High performance materials. High reliability & extended stroke life. High Permeation resistance. Solid One-piece design for clean applications. No Leak path or loss of torque possible.



## Conductive Liquid Leak Sensor Kit

Automatically detect leaks or diaphragm ruptures. Automatically cuts air supply, triggers cut of valves or sounds warning alarms etc.



## Spare Parts & Pump Service Kits

A full Range of Spare Parts and Pump Service Kits are available for all new and old model pumps.





**Notes:**

Products & specifications contained within this catalogue may be changed without notice. Pumps listed are available in various and materials. For each application please take extreme care with pump choice and always consider factors such as chemical compatibility, solids size, abrasion resistance, temperature of the liquid, temperature of the surrounding atmosphere, airline or liquid line pressure etc. Always refer to MSDS and chemical compatibility charts or for more information about chemical compatibility. For more information on choosing the correct pump, please consult with your distributor or contact YTS directly. Note that products contained may be subject to international trade restrictions or embargoes and may require an export permit from the Japan Ministry of Economy and Industry (METI) prior to dispatch. For more information regarding international export control regulations please contact your distributor or YTS directly. For information regarding re-export please contact your local authorities directly. For information regarding CE & ATEX refer to the CE and ATEX certification available separately. Countries where YTS patents were applied : Japan, China, Korea, USA, Italy, Denmark, France, Germany, Netherlands, Sweden, and England.



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