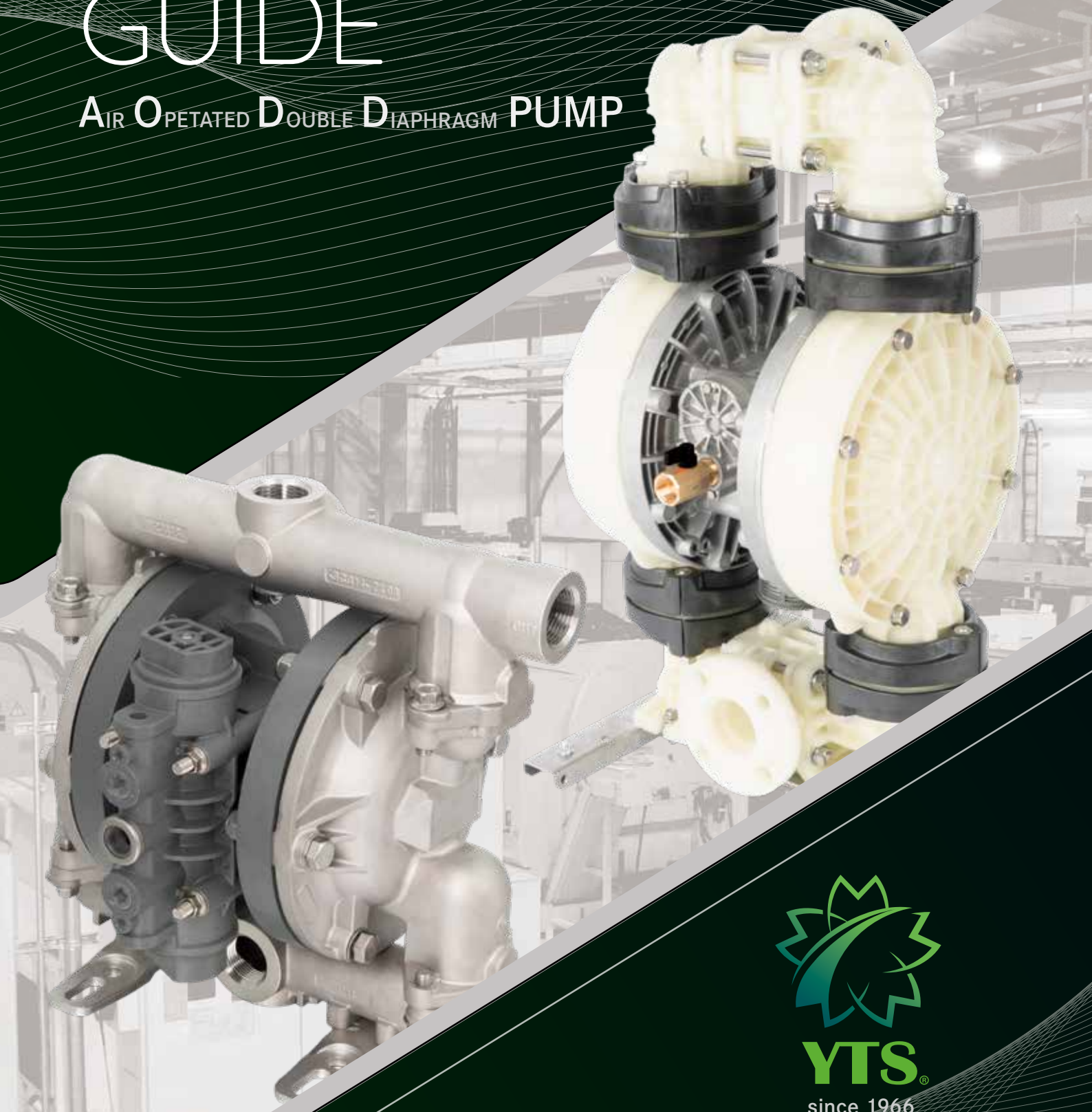
PRODUCT GUIDE

Air Opetated Double Diaphragm PUMP



YTS®

since 1966

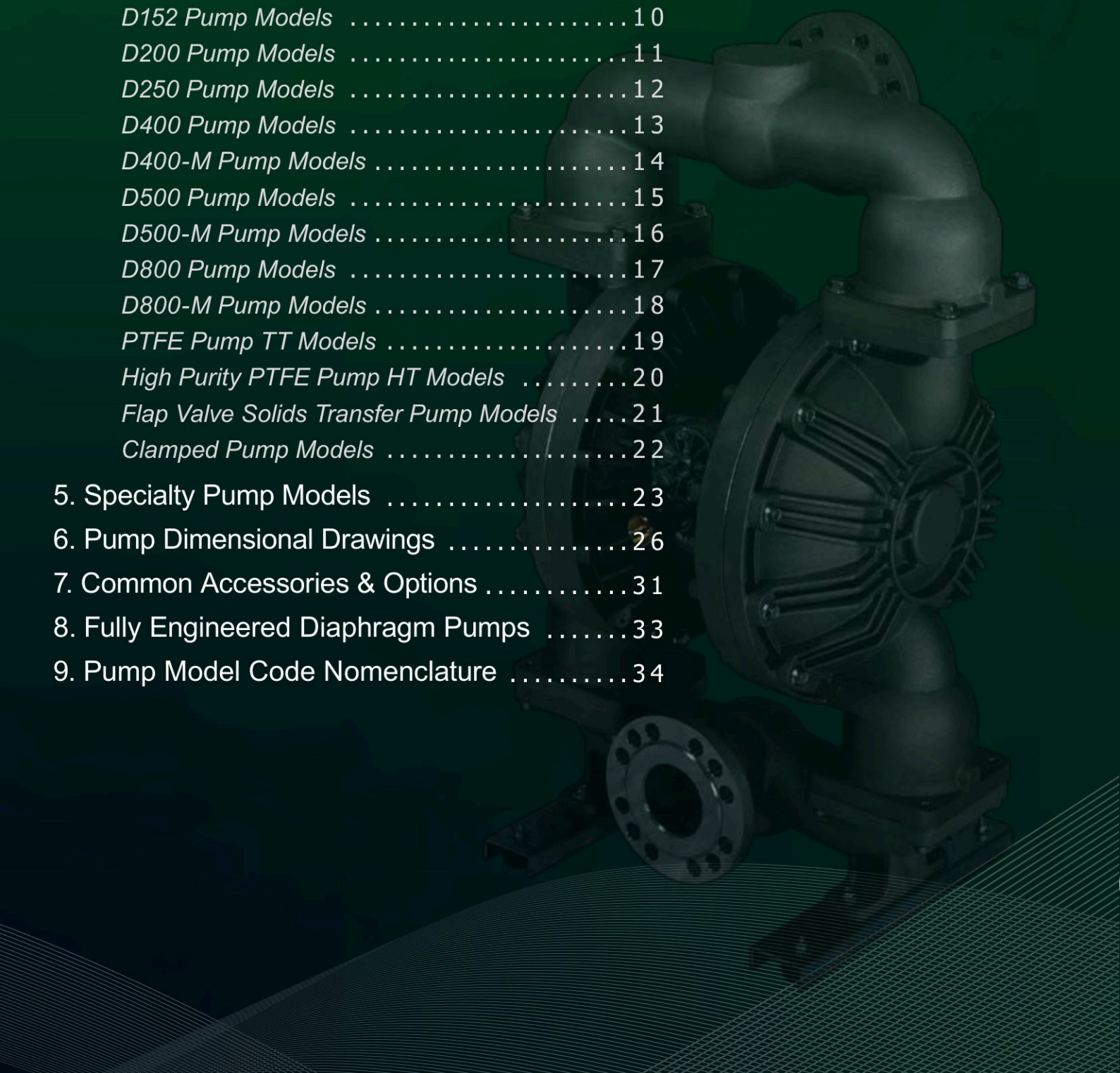
YTS JAPAN Co.,Ltd.

Assisting your flow is what we aim for.

Over 60 years of experience in the pump industry.

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PRESENTING YTS DOUBLE DIAPHRAGM PUMPS

YTS has been producing a large 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 generation 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 mating surfaces and registered fit body assembly. All YTS pumps are fully torqued and rigorously tested prior to shipment.



DIAPHRAGM 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 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 is possible to operate the pump anywhere between 0 liter per minute to full capacity.

#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 Materials

Diaphragm pumps are operated 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 in explosive environments.

The Looped C® Spool

The new Looped C® Spool offers improved switching reliability and longer parts life expectancy. The Looped C® 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 Air EcoRing

When installed, it can decrease actual air volume requirement by up to 25% compared to an old equivalent model pump with no decrease in liquid flow rates.



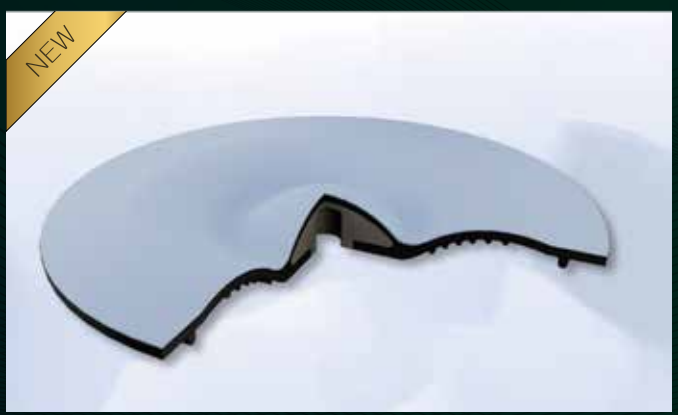
Threaded Flange Manifolds

The manifolds for the type 400,500 and 800 standard metallic pumps are modified to the newly designed “Threaded Flange manifolds”. This provides customers a wider option of both flange and thread connection availability.

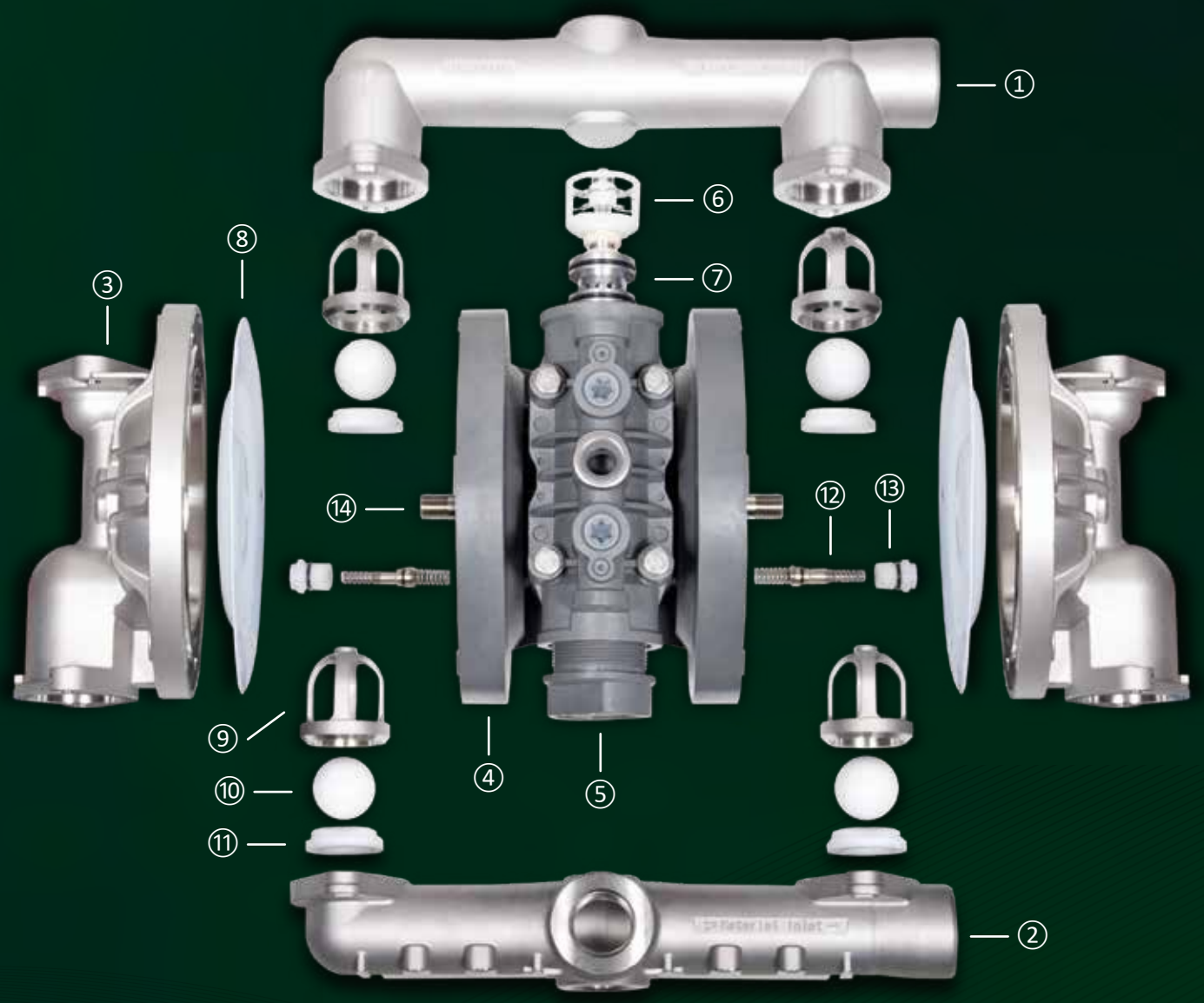


Solid One-piece PTFE Diaphragm

The new wide-range diaphragm features a smooth PTFE surface reinforced with rubber back-up. The rubber backup enhances the flexibility of the diaphragm, significantly extending its life expectancy. Additionally, an outer center disc is integrated within the diaphragm, preventing slurry accumulation around it.



DIAPHRAGM PUMP STRUCTURE



① Out Manifold
② In Manifold
③ Out Chamber
④ Body Assembly
⑤ Main Valve Assembly
⑥ C Spool Assembly (Looped C®)
⑦ Sleeve Assembly
⑧ Diaphragm
⑨ Valve Stopper
⑩ Ball Valve
⑪ Valve Seat
⑫ Pilot Valve Assembly
⑬ Pilot Valve Seat
⑭ Center Rod

D030 Pump Models (E/L Not Required)

Diaphragm Pumps with ¼" Connections
8.5 L/min Max Flow Rate.
An Export Licence is not required.

Looped C CE Ex Some Models

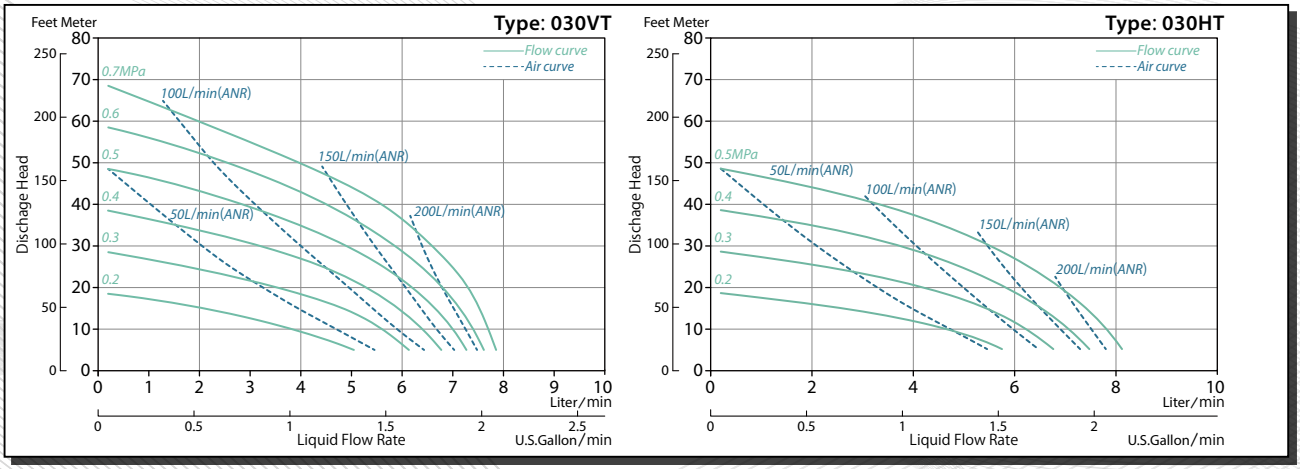


D030V



D030HT

Type 030			
Model Code		030 VT	030 HT
Max Flow Rate		8 L/min	8.5 L/min
Connection Type		Thread	
Connection Size	Air Supply	¼"	
	Air Exhaust	⅜"	
	Liquid	¼" ※Side Port	
Check Valve Type		Flat	
Max Solid Size		0mm	
Supply Air Pressure Range		0.2 ~ 0.7MPa	0.2 ~ 0.5MPa
Materials	Wetted Body	CFPVDF	PTFE (CFPTFE)
	Air Motor	PPS	
	Diaphragm	PTFE	



D031 Pump Models (E/L Not Required)

Diaphragm Pumps with ¼" Connections
8.5 L/min Max Flow Rate.
An Export Licence is not required.

Looped C CE Ex Some Models

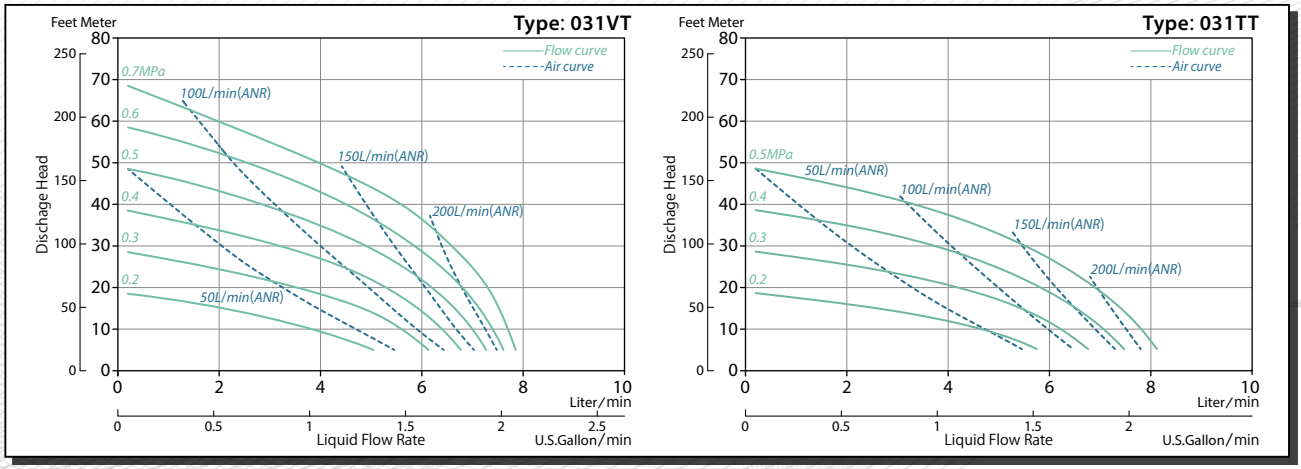


D031V



D031TT

Type 031			
Model Code		031 VT	031 TT
Max Flow Rate		8 L/min	8.5 L/min
Connection Type		Thread	
Connection Size	Air Supply	¼"	
	Air Exhaust	-	
	Liquid	¼" ※Side Port	
Check Valve Type		Flat	
Max Solid Size		0mm	
Supply Air Pressure Range		0.2 ~ 0.7MPa	0.2 ~ 0.5MPa
Materials	Wetted Body	CFPVDF	PTFE (CFPTFE)
	Air Motor	GFRPP	
	Diaphragm	PTFE	



D050 Pump Models

Diaphragm Pumps with ¼" Connections
11.5 L/min Max Flow Rate.

Some Models



D050P

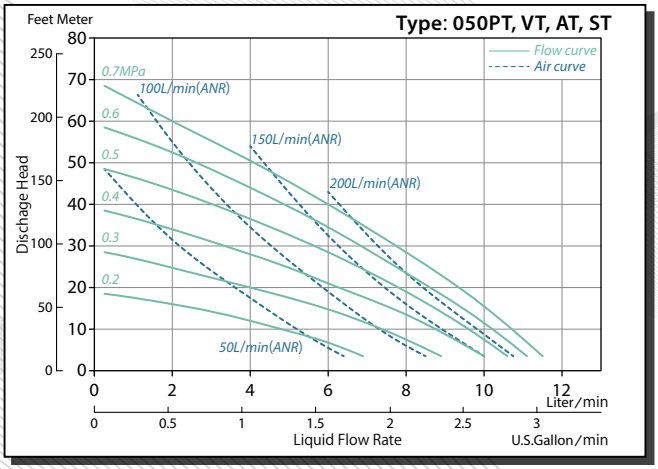


D050A



Optional MultiPort Models

Type 050			
Model Code		050 PT · VT	050 AT · ST
Max Flow Rate		11.5 L/min	
Connection Type		Thread	
Connection Size	Air Supply	¼"	
	Air Exhaust	⅜"	
	Liquid	¼" ※Side Port (Multiport Option)	
Check Valve Type		Flat	
Max Solid Size		0mm	
Supply Air Pressure Range		0.2 ~ 0.7MPa	
Materials	Wetted Body	PP, CFPVDF (GFRPP, CFPP)	Aluminium, SUS
	Air Motor	PPS	
	Diaphragm	PTFE	



D051 Pump Models

Diaphragm Pumps with ¼" Connections
15 L/min Max Flow Rate.

Some Models



D051P

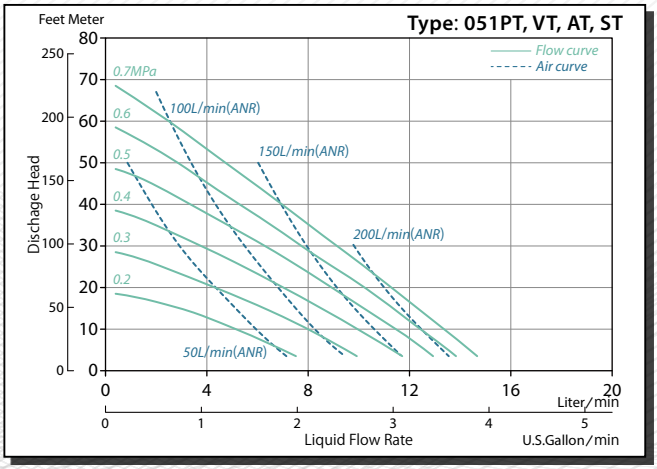


D051S



Optional MultiPort Models

Type 051			
Model Code		051 PT · VT	051 AT · ST
Max Flow Rate		15 L/min	
Connection Type		Thread	
Connection Size	Air Supply	¼"	
	Air Exhaust	-	
	Liquid	¼" ※Side Port (Multiport Option)	
Check Valve Type		Flat	
Max Solid Size		0mm	
Supply Air Pressure Range		0.2 ~ 0.7MPa	
Materials	Wetted Body	PP, CFPVDF (GFRPP, CFPP)	Aluminium, SUS
	Air Motor	GFRPP	
	Diaphragm	PTFE	



D101 Pump Models

Diaphragm Pumps with ⅜” Connections

24 L/min Max Flow Rate.

Some Models



D101A

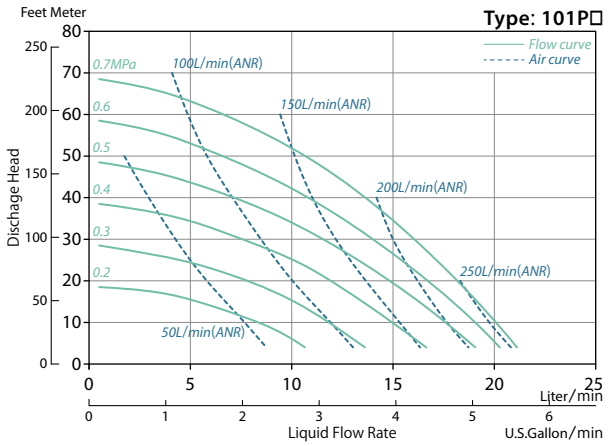


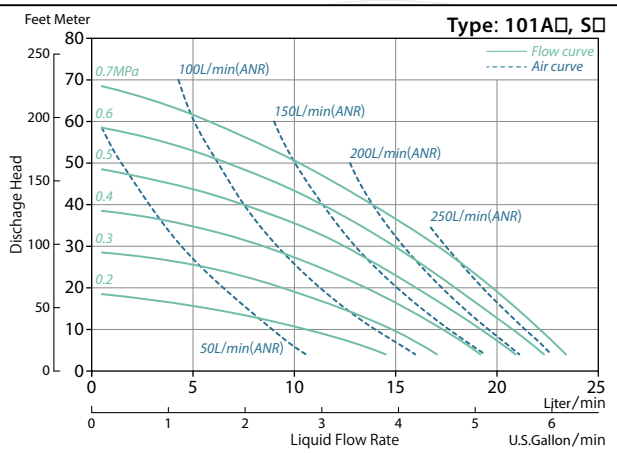
D101P



Optional ½” Connections

Type 101			
Model Code		101 P□	101 A□ · S□
Max Flow Rate		22 L/min	24 L/min
Connection Type		Thread	
Connection Size	Air Supply	¼"	
	Air Exhaust	⅜"	
	Liquid	⅜" (½" Option) ※Multiport	
Check Valve Type		Ball	
Max Solid Size		1mm or less	
Supply Air Pressure Range		0.2 ~ 0.7MPa	
Materials	Wetted Body	PP (GFRPP, CFPP)	Aluminium, SUS
	Air Motor	Aluminium	
	Diaphragm	CR, NBR, PTFE, TPEE, TPO, One-piece PTFE	





D152 Pump Models

Diaphragm Pumps with ½" Connections

65 L/min Max Flow Rate.

Some Models



D152P

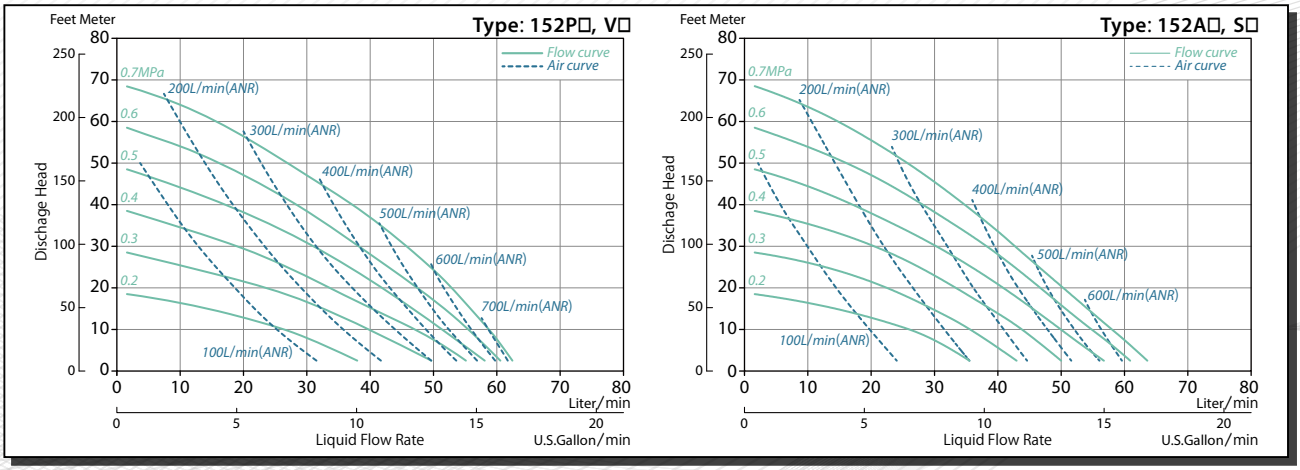


D152A



Optional Conductive PP
Air Motor Section

Type 152			
Model Code		152 P□ · V□	152 A□ · S□
Max Flow Rate		62 L/min	65 L/min
Connection Type		Thread	
Connection Size	Air Supply	¼"	
	Air Exhaust	⅜"	
	Liquid	½" ※Multiport	
Check Valve Type		Flat	Ball
Max Solid Size		0mm	2mm or less
Supply Air Pressure Range		0.2 ~ 0.7MPa	
Materials	Wetted Body	PP, CFPVDF (CFPP)	Aluminium, SUS
	Air Motor	GFRPP (CFPP)	
	Diaphragm	CR, NBR, PTFE, TPEE, TPO, One-piece PTFE	



D200 Pump Models

Diaphragm Pumps with ¾” Connections

210 L/min Max Flow Rate.

Looped C · Air EcoRing · CE · Ex Some Models



D200A



D200G□J

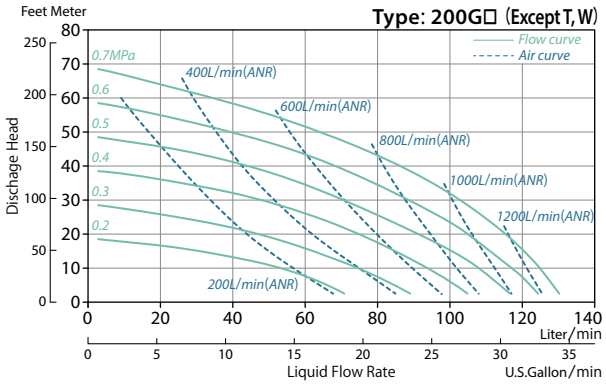


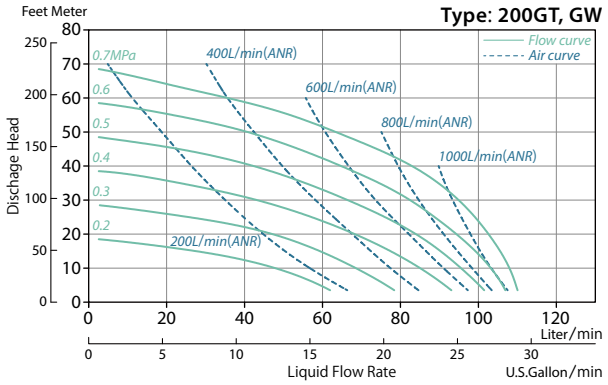
Aluminium Air Motor Section (-A)

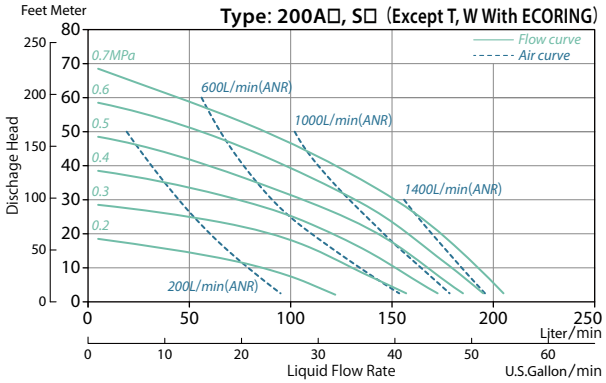


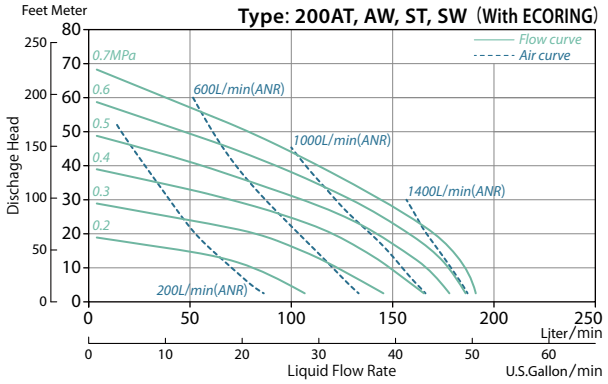
Optional Conductive PP Air Motor Section

Type 200					
Model Code		200 G□	200 GT · GW	200 A□ · S□	200 AT · AW · ST · SW
Max Flow Rate		130 L/min	110 L/min	210 L/min	190 L/min
Connection Type		Thread or Flange		Thread	
Connection Size	Air Supply	¼"		⅜"	
	Air Exhaust	¾"			
	Liquid	¾" or 20A ※Side Port		¾" ※Center Port	
Check Valve Type		Ball			
Max Solid Size		2mm or less		6.5mm or less	
Supply Air Pressure Range		0.2 ~ 0.7MPa			
Materials	Wetted Body	GFRPP (CFPVDF)		Aluminium, SUS	
	Air Motor	GFRPP		GFRPP, Aluminium (CFPP)	
	Diaphragm	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE









D250 Pump Models

Diaphragm Pumps with 1” Connections

220 L/min Max Flow Rate.

Some Models



D250S



D250V□J



Optional 1½” Connections

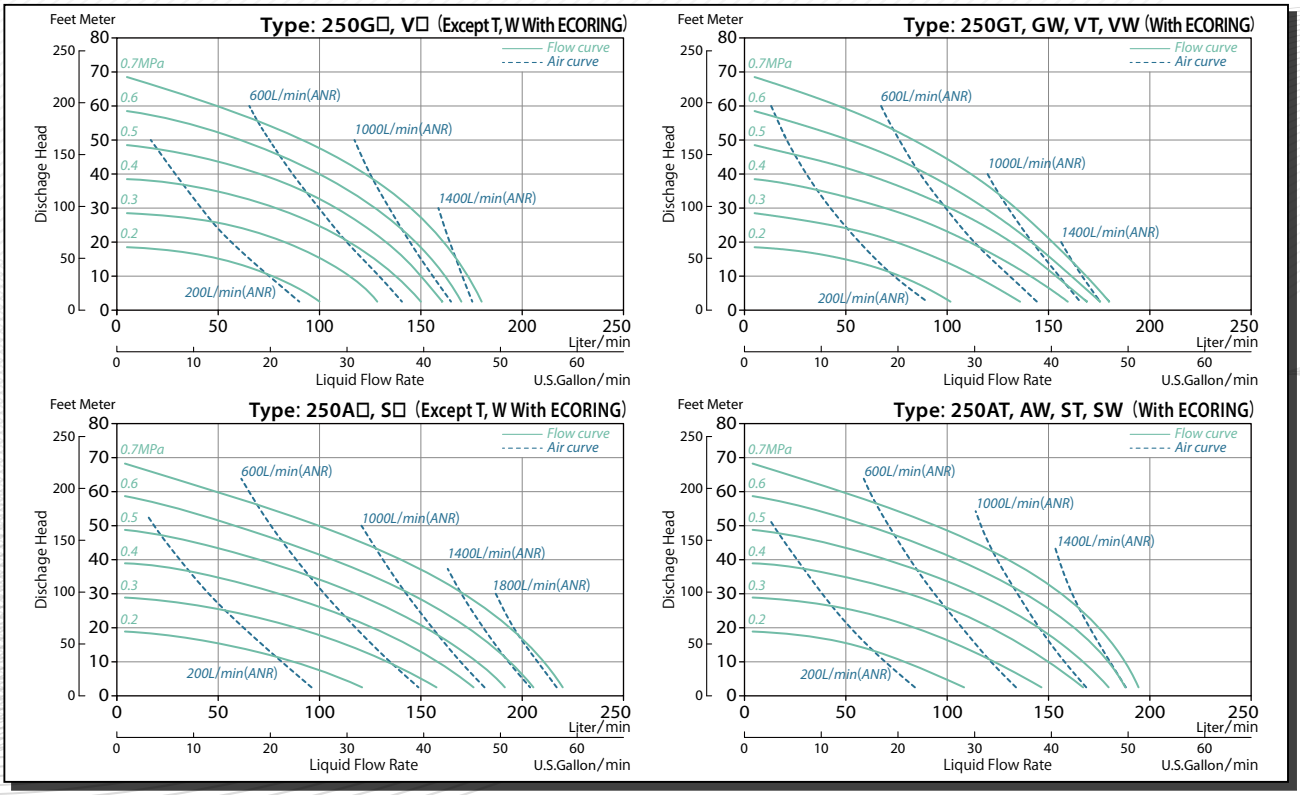


Aluminium Air Motor Section (-A)



Optional Conductive PP Air Motor Section

Type 250				
Model Code		250 G□ · V□	250 A□ · S□	250 AT · AW · ST · SW
Max Flow Rate		180 L/min	220 L/min	190 L/min
Connection Type		Thread or Flange	Thread	
Connection Size	Air Supply	⅜"		
	Air Exhaust	¾"		
	Liquid	1" or 25A ※Side Port	1" (1½" Option) ※Multiport	
Check Valve Type		Ball		
Max Solid Size		3mm or less	6.5mm or less	
Supply Air Pressure Range		0.2 ~ 0.7MPa		
Materials	Wetted Body	GFRPP, CFPVDF (CFPP)	Aluminium, SUS (Cast Iron)	
	Air Motor	GFRPP, Aluminium (CFPP)		
	Diaphragm	CR, NBR, EPDM, FKM, PTFE, TPEE, TPO, One-piece PTFE	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE



D400 Pump Models

Diaphragm Pumps with 1½” Connections

600 L/min Max Flow Rate.
Fitted with the Looped C Air spool.

Looped C CE Ex Some Models



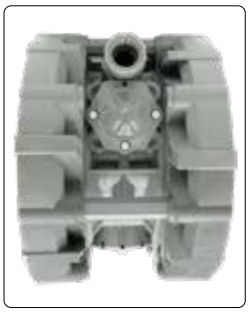
D400G□J



D400V□J

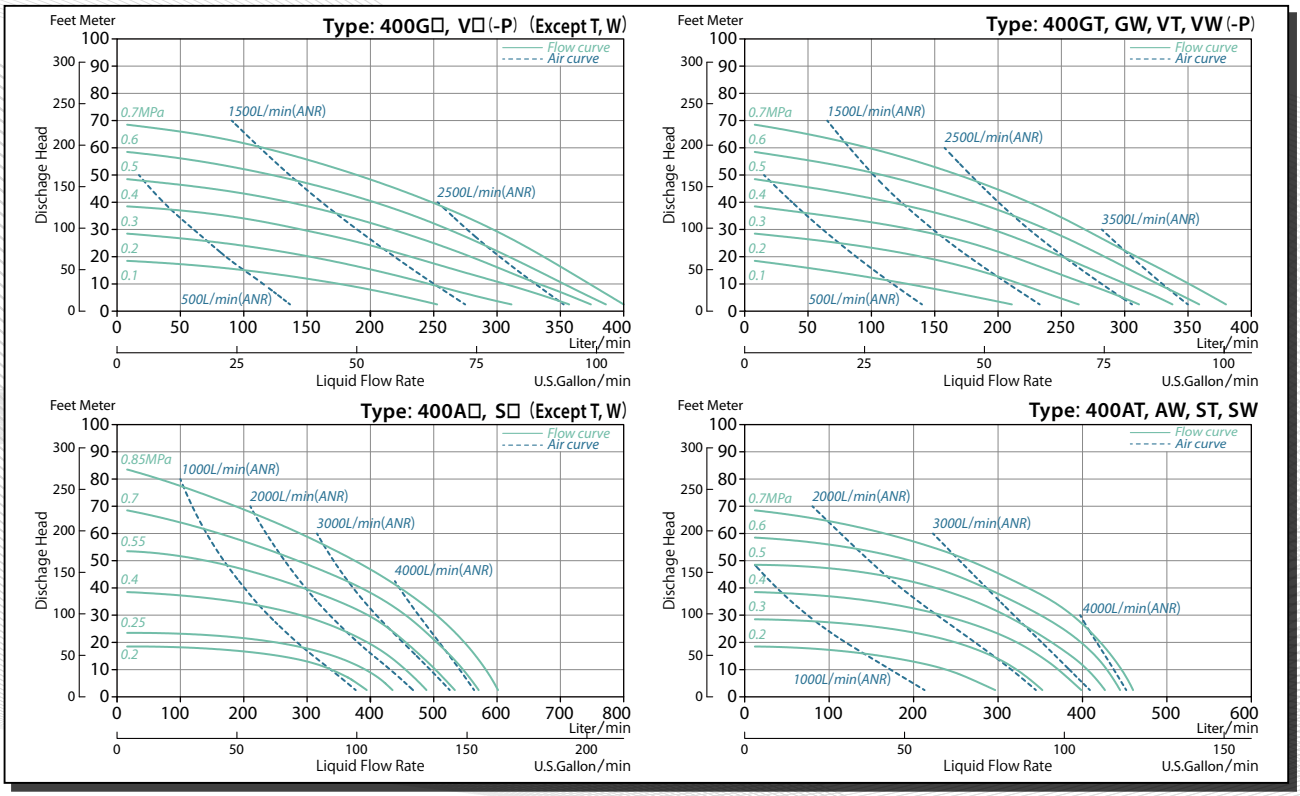


D400S□J



GFRPP Air Motor Section (-P)

Type 400					
Model Code		400 G□ · V□	400 GT · GW · VT · VW	400 A□ · S□	400 AT · AW · ST · SW
Max Flow Rate		400 L/min	380 L/min	600 L/min	460 L/min
Connection Type		Flange		Threaded Flange	
Connection Size	Air Supply	¾"			
	Air Exhaust	1"			
	Liquid	40A ※Center Port		1½" or 40A ※Center Port	
Check Valve Type		Ball			
Max Solid Size		7mm or less		8mm or less	
Supply Air Pressure Range		0.2 ~ 0.7MPa		0.2 ~ 0.85MPa	0.2 ~ 0.7MPa
Materials	Wetted Body	GFRPP, CFPVDF (CFPP)		Aluminium, SUS (Cast Iron)	
	Air Motor	Aluminium, GFRPP (CFPP)		Aluminium	
	Diaphragm	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE



D400-M Pump Models

Diaphragm Pumps with 1½" Connections

450 L/min Max Flow Rate.
Fitted with the heavy-duty mechanical coil-spring air motor.

Mechanical HD Spool

CE Ex Some Models



D400G□J-M



D400V□J-M

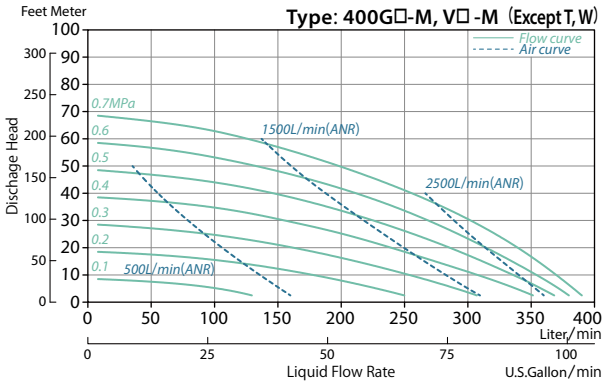


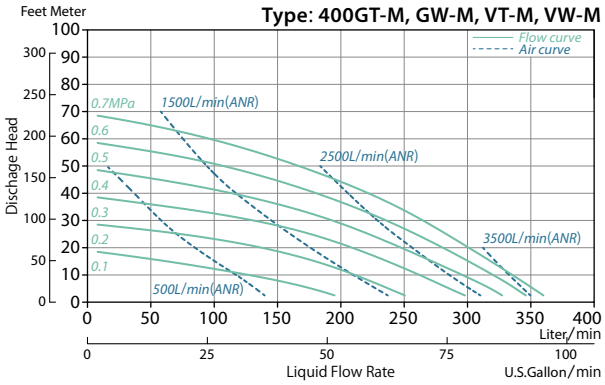
D400A□J-M

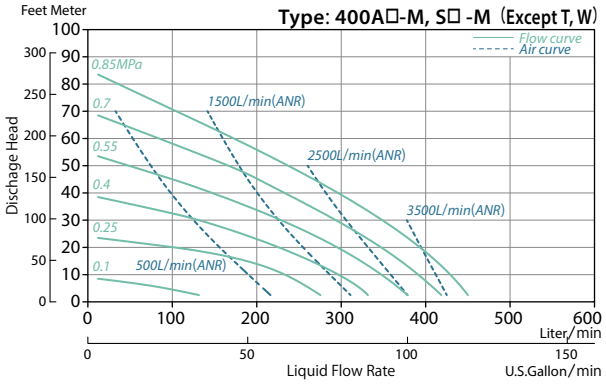


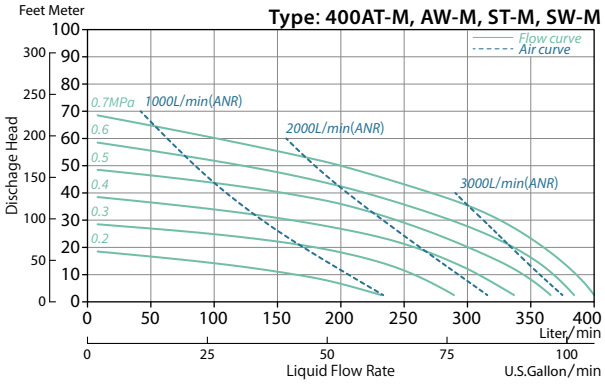
D400S□J-M

Type 400-M					
Model Code		400 G□ · V□	400 GT · GW · VT · VW	400 A□ · S□	400 AT · AW · ST · SW
Max Flow Rate		390 L/min	360 L/min	450 L/min	400 L/min
Connection Type		Flange		Threaded Flange	
Connection Size	Air Supply	¾"			
	Air Exhaust	¾" ※2 Ports			
	Liquid	40A ※Center Port		1½" or 40A ※Center Port	
Check Valve Type		Ball			
Max Solid Size		7mm or less		8mm or less	
Supply Air Pressure Range		0.1 ~ 0.7MPa	0.15 ~ 0.7MPa	0.1 ~ 0.85MPa	0.15 ~ 0.7MPa
Materials	Wetted Body	GFRPP, CFPVDF (CFPP)		Aluminium, SUS (Cast Iron)	
	Air Motor	Aluminium			
	Diaphragm	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE









D500 Pump Models

Diaphragm Pumps with 2” Connections

800 L/min Max Flow Rate.
Fitted with the Looped C Air spool.

Looped C CE Ex Some Models



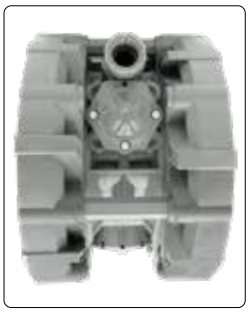
D500G□J



D500V□J

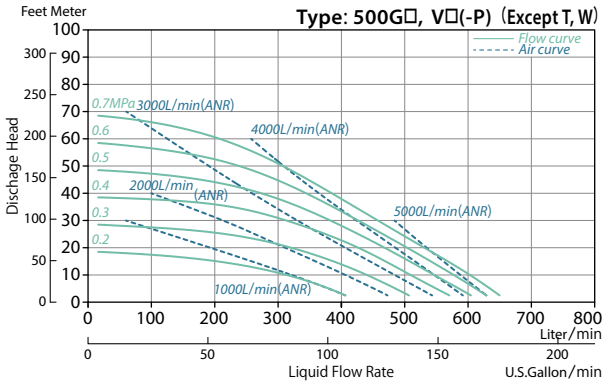


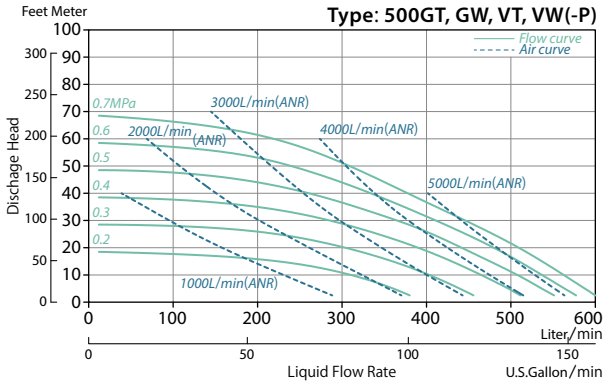
D500S□J

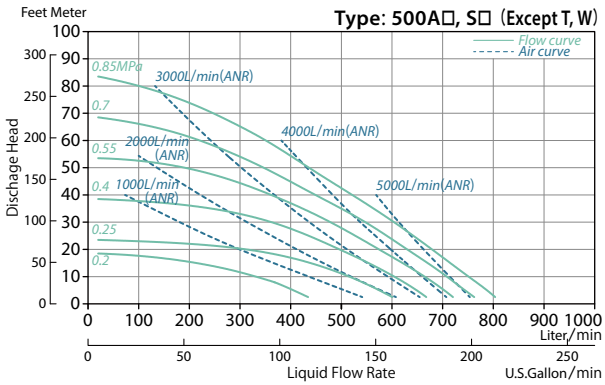


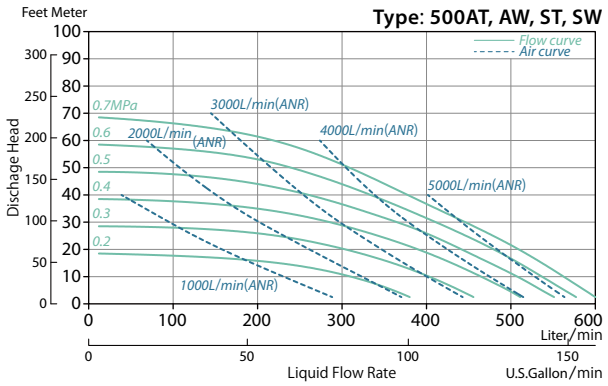
GFRPP Air Motor Section (-P)

Type 500					
Model Code		500 G□ · V□	500 GT · GW · VT · VW	500 A□ · S□	500 AT · AW · ST · SW
Max Flow Rate		650 L/min	600 L/min	800 L/min	600 L/min
Connection Type		Flange		Threaded Flange	
Connection Size	Air Supply	¾"			
	Air Exhaust	1"			
	Liquid	50A ※Center Port		2" or 50A ※Center Port	
Check Valve Type		Ball			
Max Solid Size		8mm or less			
Supply Air Pressure Range		0.2 ~ 0.7MPa		0.2 ~ 0.85MPa	0.2 ~ 0.7MPa
Materials	Wetted Body	GFRPP, CFPVDF (CFPP)		Aluminium, SUS (Cast Iron)	
	Air Motor	Aluminium, GFRPP (CFPP)		Aluminium	
	Diaphragm	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE









D500-M Pump Models

Diaphragm Pumps with 2” Connections

750 L/min Max Flow Rate.
Fitted with the heavy-duty mechanical coil-spring air motor.

Mechanical HD Spool

CE Ex Some Models



D500G□J-M



D500V□J-M

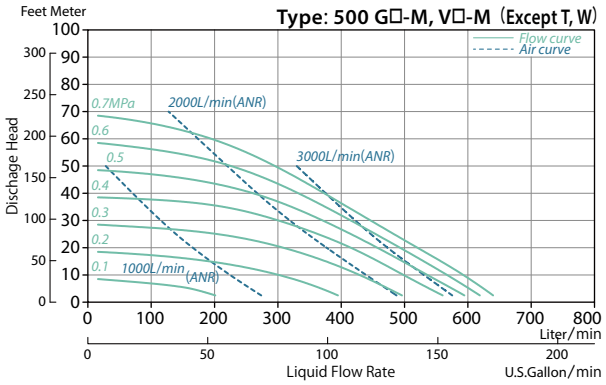


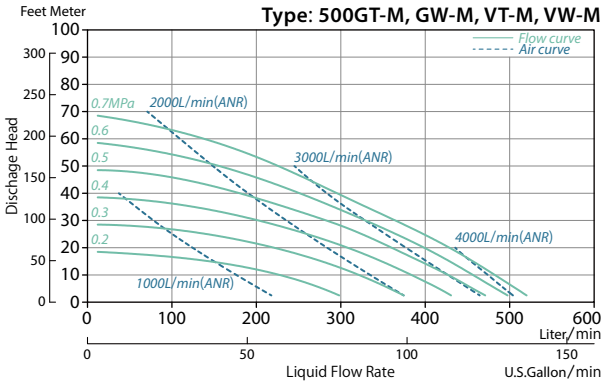
D500A□J-M

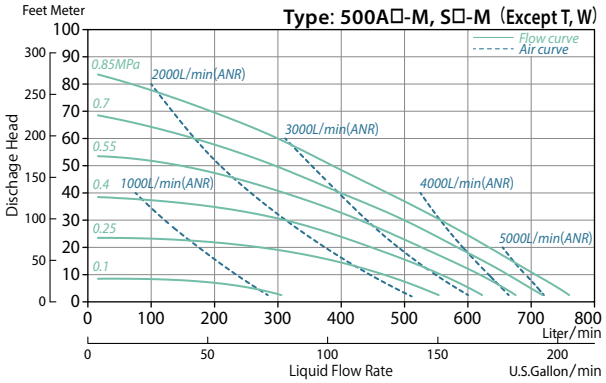


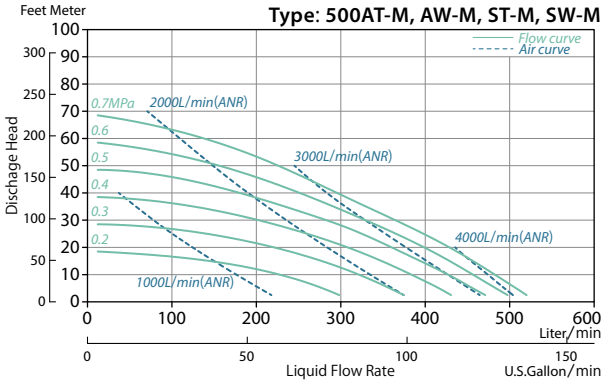
D500S□J-M

Type 500-M					
Model Code		500 G□ · V□	500 GT · GW · VT · VW	500 A□ · S□	500 AT · AW · ST · SW
Max Flow Rate		640 L/min	520 L/min	750 L/min	520 L/min
Connection Type		Flange		Threaded Flange	
Connection Size	Air Supply	¾"			
	Air Exhaust	¾" ※2 Ports			
	Liquid	50A ※Center Port		2" or 50A ※Center Port	
Check Valve Type		Ball			
Max Solid Size		8mm or less			
Supply Air Pressure Range		0.1 ~ 0.7MPa	0.15 ~ 0.7MPa	0.1 ~ 0.85MPa	0.15 ~ 0.7MPa
Materials	Wetted Body	GFRPP, CFPVDF (CFPP)		Aluminium, SUS (Cast Iron)	
	Air Motor	Aluminium			
	Diaphragm	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE









D800 Pump Models

Diaphragm Pumps with 3” Connections

1050 L/min Max Flow Rate.
Fitted with the Looped C Air spool.

Looped C CE Ex Some Models



D800G□J

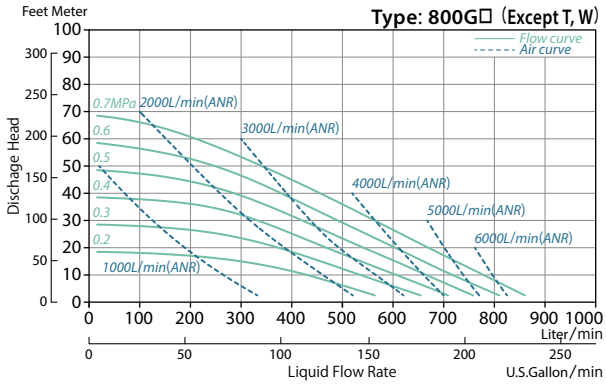


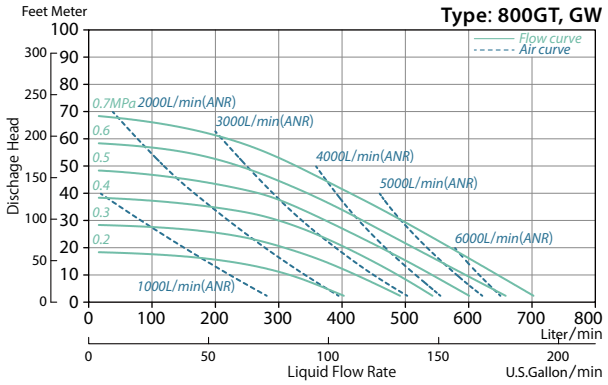
D800A□J

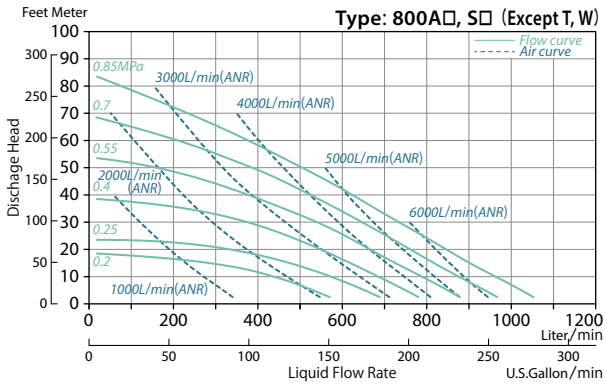


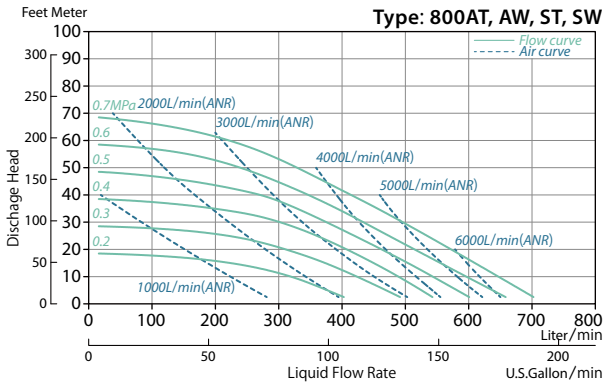
D800S□J

Type 800					
Model Code		800 G□	800 GT, GW	800 A□ · S□	800 AT · AW · ST · SW
Max Flow Rate		860 L/min	700 L/min	1050 L/min	700 L/min
Connection Type		Flange		Threaded Flange	
Connection Size	Air Supply	¾"			
	Air Exhaust	1"			
	Liquid	80A ※Center Port		3" or 80A ※Center Port	
Check Valve Type		Ball			
Max Solid Size		10mm or less			
Supply Air Pressure Range		0.2 ~ 0.7MPa		0.2 ~ 0.85MPa	0.2 ~ 0.7MPa
Materials	Wetted Body	GFRPP		Aluminium, SUS (Cast Iron)	
	Air Motor	Aluminium			
	Diaphragm	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE









D800-M Pump Models

Diaphragm Pumps with 3” Connections

850 L/min Max Flow Rate.
Fitted with the heavy-duty mechanical coil-spring air motor.

Mechanical HD Spool

CE Ex Some Models



D800G□J-M

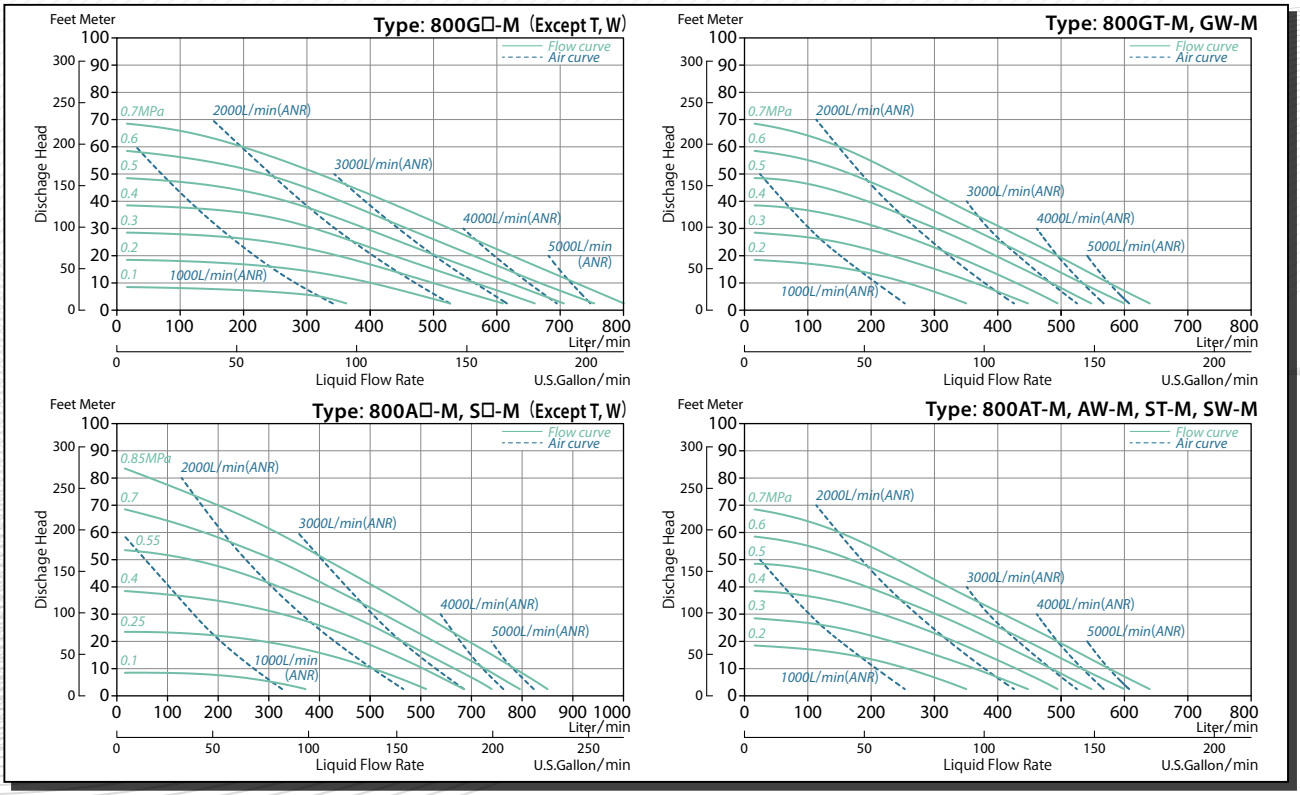


D800A□J-M



D800S□J-M

Type 800-M					
Model Code		800 G□	800 GT, GW	800 A · S □	800 AT · AW · ST · SW
Max Flow Rate		800 L/min	640 L/min	850 L/min	640 L/min
Connection Type		Flange		Threaded Flange	
Connection Size	Air Supply	¾"			
	Air Exhaust	¾" ※2 Ports			
	Liquid	80A ※Center Port		3" or 80A ※Center Port	
Check Valve Type		Ball			
Max Solid Size		10mm or less			
Supply Air Pressure Range		0.1 ~ 0.7MPa	0.15 ~ 0.7MPa	0.1 ~ 0.85MPa	0.15 ~ 0.7MPa
Materials	Wetted Body	GFRPP		Aluminium, SUS (Cast Iron)	
	Air Motor	Aluminium			
	Diaphragm	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE	CR, NBR, EPDM, FKM, TPEE, TPO	PTFE, One-piece PTFE



PTFE Pump TT Models

Diaphragm Pumps with ¼" ½" & 1" Connections

Up to 150 L/min Max Flow rate.
Industrial Grade PTFE Pumps available in four different sizes.
*An Export Licence is not required for D031TT

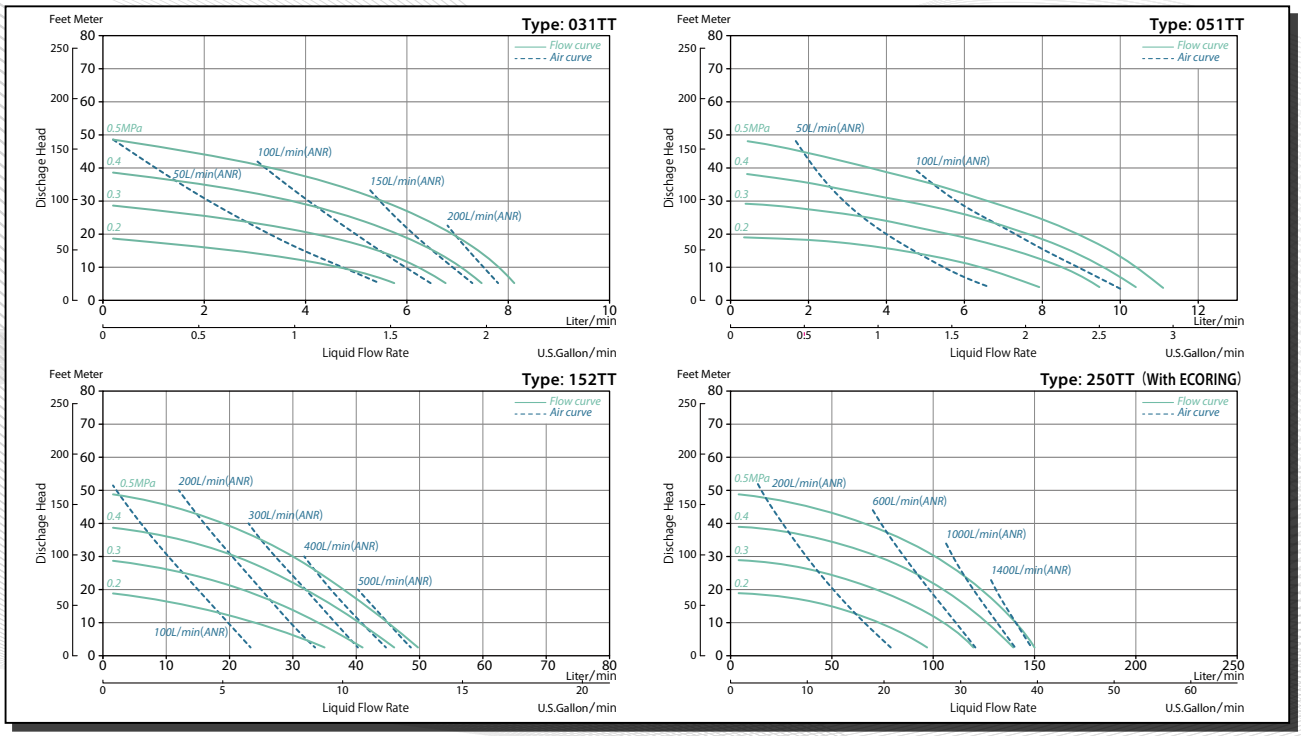
Looped C Air EcoRing

CE Ex Some Models



D031TT D051TT D152TTJ D250TTJ

Standard PTFE Pumps					
Model Code		031 TT	051 TT	152 TT	250 TT
Max Flow Rate		8.5 L/min	11 L/min	50 L/min	150 L/min
Connection Type		Thread		Flange (Thread)	
Connection Size	Air Supply	¼"			⅜"
	Air Exhaust	-		⅜"	¾"
	Liquid	¼" ※SidePort		15A (½" Thread Option) ※Side Port	25A (1" Thread Option) ※Side Port
Check Valve Type		Flat		Ball	
Max Solid Size		0mm		2mm or less	3mm or less
Supply Air Pressure Range		0.2 ~ 0.5MPa			
Materials	Wetted Body	PTFE (CFPTFE)			
	Air Motor	GFRPP		GFRPP (CFPP)	
	Diaphragm	PTFE			



High Purity PTFE Pump HT Models

Diaphragm Pumps with ¼" ⅜" ¾" & 1" Connections
Up to 95 L/min Max Flow rate.
High Purity Virgin PTFE Pumps available in six different sizes.
*An Export Licence is not required for D030HT

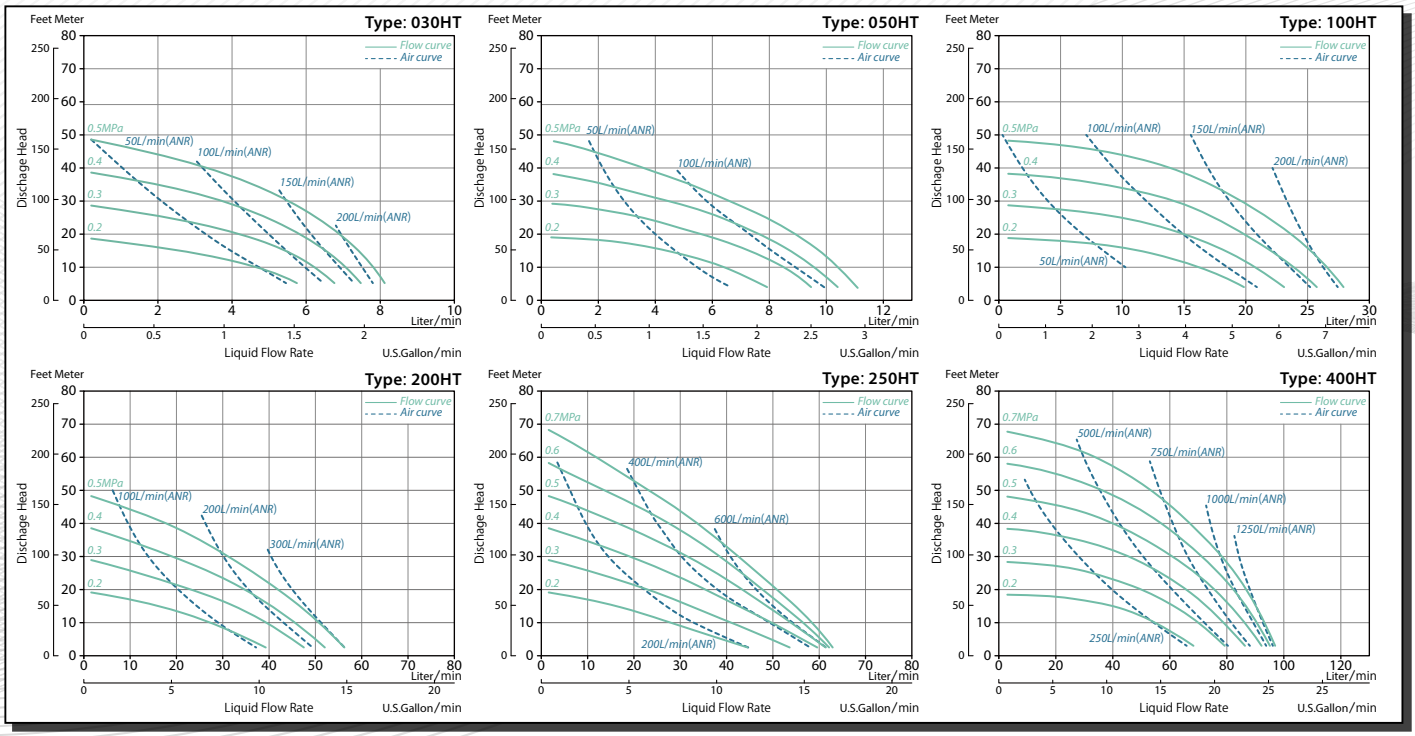
Looped C

CE Ex Some Models



D050HT D100HTJ D200HTJ D400HTJ

High Purity PTFE Pumps							
Model Code		030 HT	050 HT	100 HT	200 HT	250 HT	400 HT
Max Flow Rate		8.5 L/min	11 L/min	27 L/min	57 L/min	64 L/min	95 L/min
Connection Type		Thread		Thread or Flange		Flange (Thread)	
Connection Size	Air Supply	¼"				⅜"	½"
	Air Exhaust	⅜"				¾"	
	Liquid	¼" ※SidePort		⅜" or JIS 10A / ANSI ½"B ※Side Port	¾" or 20A ※Side Port	25A (1" Thread Option) ※Side Port	
Check Valve Type		Flat		Ball (Flat)			
Max Solid Size		0mm		1mm or less	2mm or less	3mm or less	
Supply Air Pressure Range		0.2 ~ 0.5MPa				0.2 ~ 0.7MPa	
Materials	Wetted Body	PTFE (CFPTFE)					
	Air Motor	PPS		PP		HDPE / PP	
	Diaphragm	PTFE					



Flap Valve Solids Transfer Pump Models

Diaphragm Pumps with 2” Connections
Up to 600 L/min Max Flow rate.

Some Models

New 2” Flap Valve Solids Transfer Pumps for the Transfer of Large Solid Laden Liquids Up to 45mm in size.

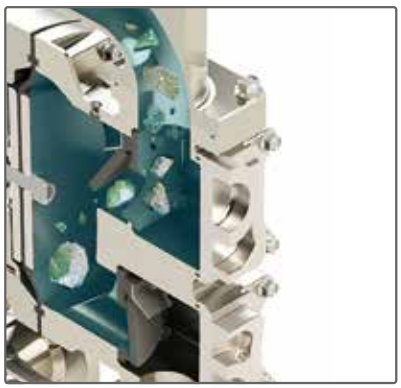
Typically operated in water evacuation, process and waste type applications, Flap Valves Pumps utilize a reversed top down liquid flow path and with 4 large heavy duty flap valves to facilitate to transfer of liquids containing large sized solids. For ease of use & ease of maintenance, each pump is fitted 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.

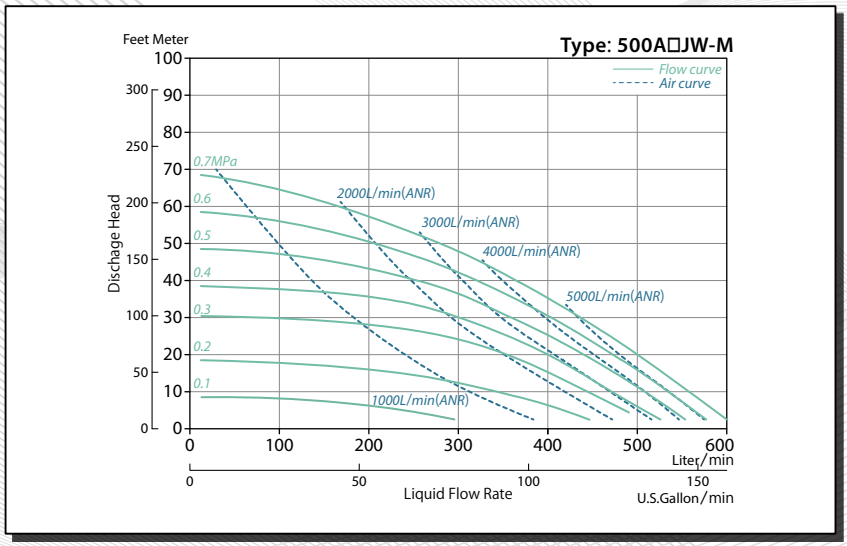
Fitted with the heavy duty Mechanical Coil-Spring Air Motor, each pump is designed for high performance operation, extreme reliability & extended parts life expectancy. They can operate anywhere from very low to very high air pressures with extremely efficient air consumption ratings. These pumps are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



D500A□JW-M

Flap Valve Solids Transfer Pump		
Model Code		500 A □ W
Max Flow Rate		600 L/min
Connection Type		Flange
Connections size	Air Supply	¾"
	Air Exhaust	¾" ※2 Ports
	Liquid	50A ※Center Port
Check Valve Type		Flap
Max Solid Size		Spherical Shape : Φ30mm or less Stick Shape : Φ15mm×45mm or less
Supply Air Pressure Range		0.1 ~ 0.7MPa
Materials	Wetted Body	Aluminium
	Air Motor	Aluminium
	Diaphragm	NBR, TPO







Externally Accessible Flap Valves.
Special outside accessible design.
Inspect, Clean and Service in Place.
Maintain Inline.
No need to pull the pump from service.

Clamped Pump Models

Diaphragm Pumps with Ferrule Connections
Up to 330 L/min Max Flow rate.

CE Ex Some Models

New Clamped Pumps for Sanitary Applications are now available.

Clamp mounting structure enables pump to be easily serviced. All clamps used in these pumps are a 3-segment clamp for smooth tightening. The metal-to-metal contact is avoided and hence no metal sludge is generated from the pump, allowing the pump to be used in various industries.

The valve section uses an eccentric mechanism enabling valve to offset its position by rotating it even if the pump is slightly deformed due to the excess use of diaphragms, maintaining a high sealability for leakage prevention. High Performance looped C air spool can be accessed and replaced from the outside which makes the pump more convenient for maintenance.

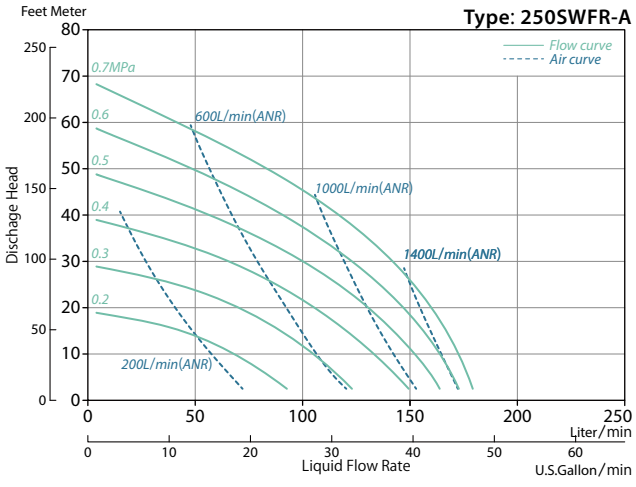


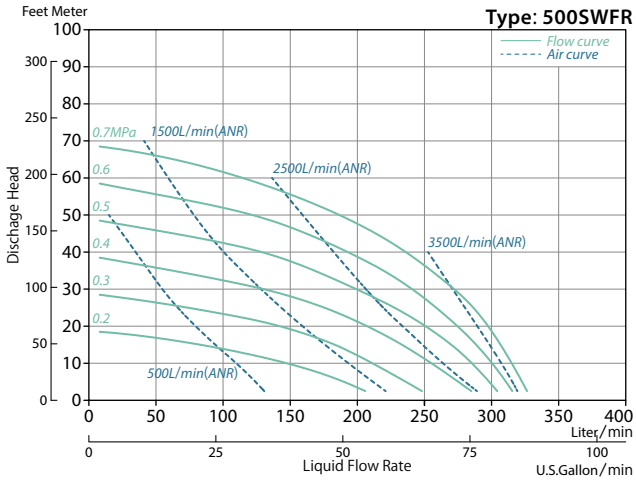
D250SWFR-A



D500SWFR

Clamped Pumps			
Model Code		250 SWFR-A	500 SWFR
Max Flow Rate		180 L/min	330 L/min
Connection Type		Ferrule	
Connections size	Air Supply	⅜"	¾"
	Air Exhaust	¾"	1"
	Liquid	ISO 1.5s ≒ 3A 1½"	ISO 2.0s ≒ 3A 2"
Check Valve Type		Ball	
Max Solid Size		3mm or less	8mm or less
Supply Air Pressure Range		0.2 ~ 0.7MPa	
Materials	Wetted Body	SUS316	SUS316L
	Air Motor	Nickel Plated Aluminium	
	Diaphragm	One-piece PTFE	





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 ¼" ⅜" ½" ¾" and 1" Liquid connections. Available Materials: PP, GFRPP, CFPP, CFPVDF, 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)



E Series Pumps

Compressed air powered AODD pumps with an electrically actuated air switching mechanism. E Series 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.

Can be connected to our controller PC-124, has batching control system by strokes and / or time, remote control, and dry-run detection systems as its standard function. The controller can be linked with the leak sensor and the alarming system.
E series pumps are extremely reliable under all the operating conditions. It utilizes electric spool actuation and stroke sensor for full pump controllability.



D400V□J-EX
1 ½" CFPVDF E Type Pump (Flanged)
350 L/min Max Flow Rate



PC-124



D050HT-EX
¼" PTFE E Type Pump
13 L/min Max Flow Rate

Specialty Pump Models

Conductive Polypropylene Pumps

Some Models

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 in sizes ¼" to 2" 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.



D400C□J-X
1½" Carbon PP Pump
380 L/min Max Flow Rate



D050CT-X
¼" Carbon PP Pump
11.5 L/min Max Flow Rate



D152C□-X
½" Carbon PP Pump
62 L/min Max Flow Rate



D101C□-X
⅜" Carbon PP Pump
22L/min Max Flow Rate



D250C□J-X
1" Carbon PP Pump (Flanged)
180 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 free flowing. Typically powders such as Pigments, Activated Carbon, Powder Coatings, Carbon Black, Fumed Silica, Talc, Toners & Powdered Plastics can all be transferred successfully. Transferring distance will depend entirely on the type of powder, its weight, size, shape and bulk density. However it is always recommended that a trial is firstly carried out to determine the pump-ability of a certain type of powder.



D250A□-X
1" Powder Pump.

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.

Powder 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.



D500A□J-X
2" Powder Pump.

Specialty Pump Models

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 ¼" to 3" in Stainless Steel. Manufactured from FDA & Halal compliant materials. 316 Electro Polished Stainless Steel Housings & Hardware with Oversized Sanitary Ferrule connections welded directly to the Pump. Electro Polished Inside and Outside.

 # ISO Type Sanitary Ferrule shipped as standard. Optional 3A and DIN Type Connections are Also Available.

 # FDA Compliant Drum Pumps & FDA Pulsation Dampeners are also available.



D250S□F-X
FDA Type Electro Polished HD SUS Pump.
1½" Sanitary Ferrule Connections.
190 L/min Max Flow Rate. (PTFE Diaphragms)
6.5mm Max Solids Size.

D500S□F-MX
FDA Type Electro Polished SUS Pump.
2½" Sanitary Ferrule Connections.
520 L/min Max Flow Rate. (PTFE Diaphragms)
8mm Max Solids Size.



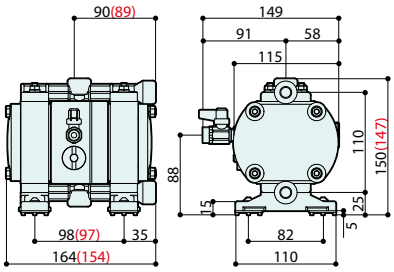
Sanitary Flange Connections
Shipped as standard on all FDA compliant pumps. Welded and Oversized Stainless Steel. Available in either Standard ISO or optional 3A and DIN types.
 # Suitable Sanitary Type Clamp fittings and gaskets sold separately

Pump Dimensional Drawings

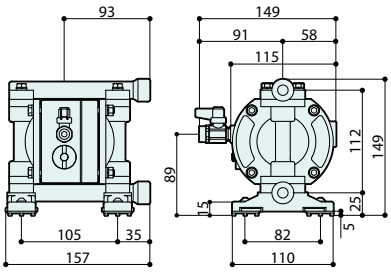
Unit = mm

Type 030 / 050

030V ... 1.7Kg
050P ... 1.4Kg
050V ... 1.7Kg **( ) 030V, 050V**

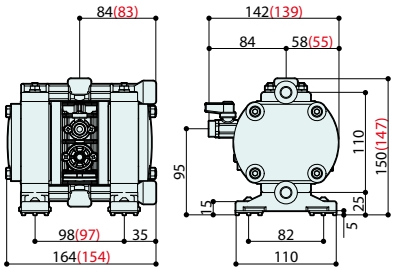


050A ... 1.7Kg
050S ... 2.7Kg



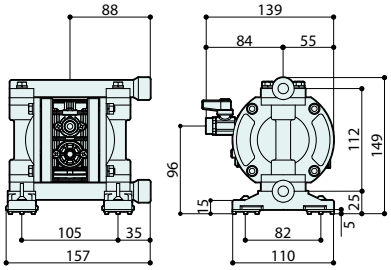
Type 031 / 051

031V ... 1.5Kg
051P ... 1.2Kg
051V ... 1.5Kg **( ) 031V, 051V**

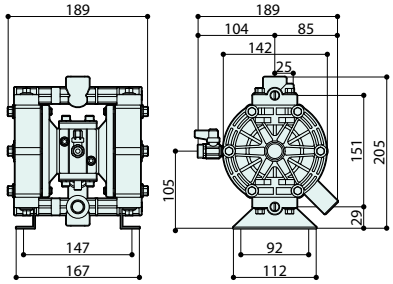


Type101

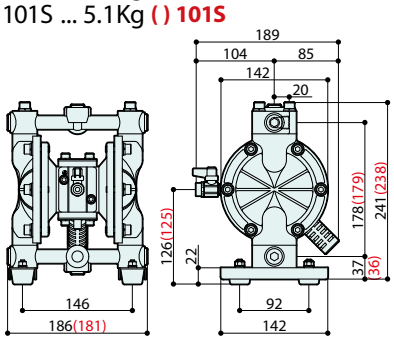
051A ... 1.5Kg
051S ... 2.5Kg



101P ... 2.9Kg



101A ... 3.4Kg
101S ... 5.1Kg **( ) 101S**

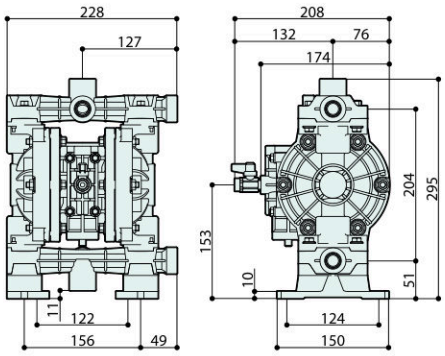


Pump Dimensional Drawings

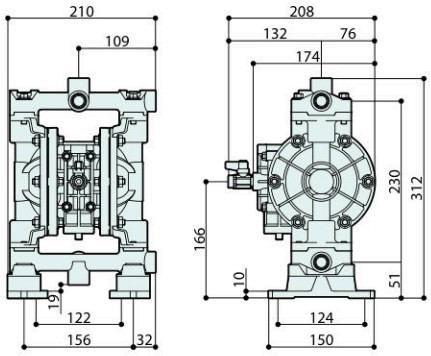
Type 152

Unit = mm

152P ... 3.2Kg
152V ... 4.2Kg



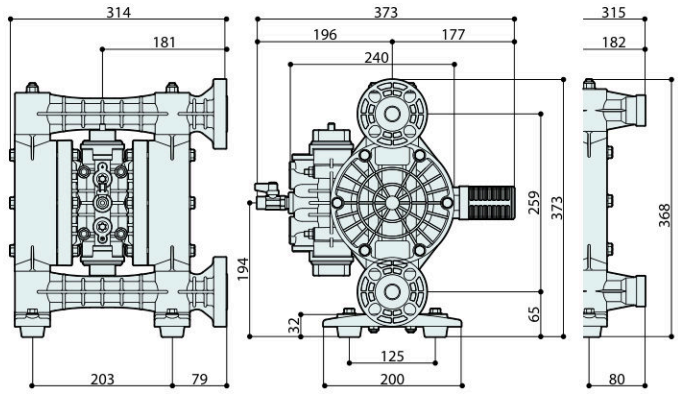
152A ... 4.2Kg
152S ... 6.7Kg



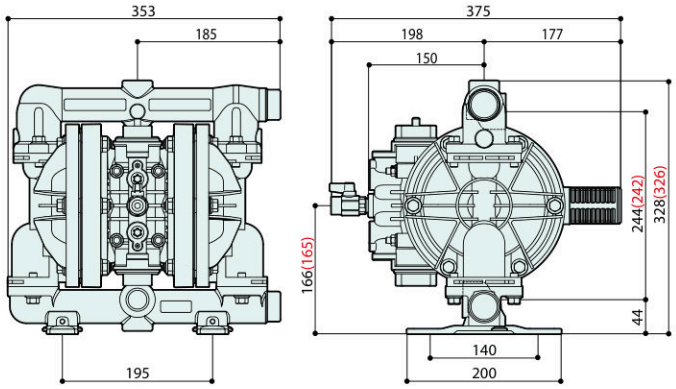
Type 200

200G ... 6.8Kg

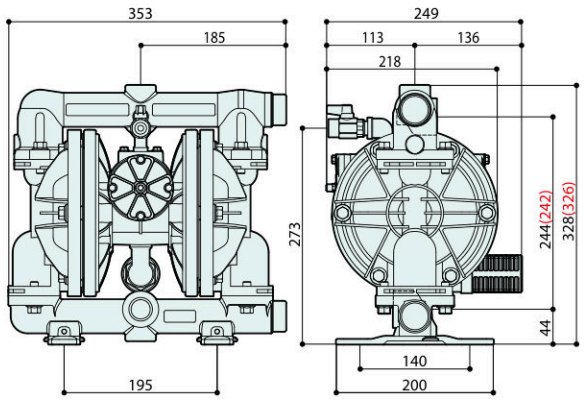
Thread



200A ... 10.5Kg
200S ... 18.0Kg ( ) 200S



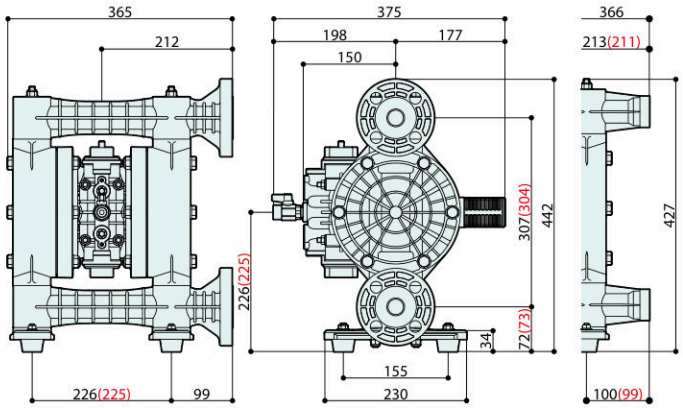
200A-A ... 12.0Kg
200S-A ... 19.5Kg ( ) 200S-A



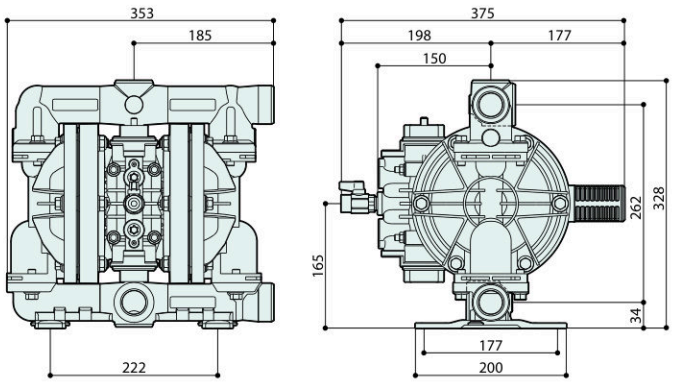
Type 250

250G ... 10.0Kg
250V ... 12.5Kg ( ) 250V

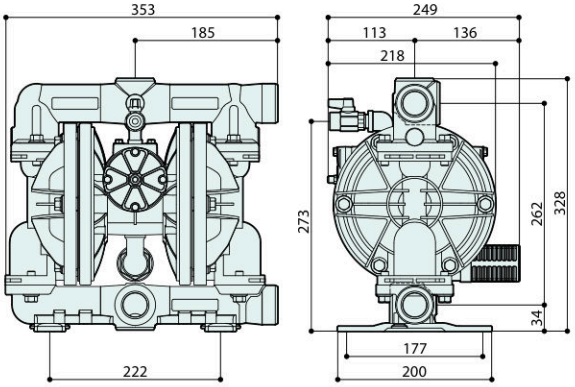
Thread



250A ... 11.0Kg
250S ... 18.5Kg



250A-A ... 12.5Kg
250S-A ... 20.0Kg

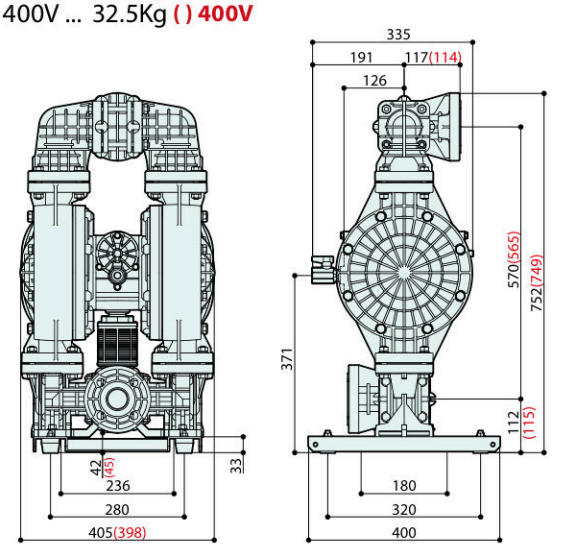


Pump Dimensional Drawings

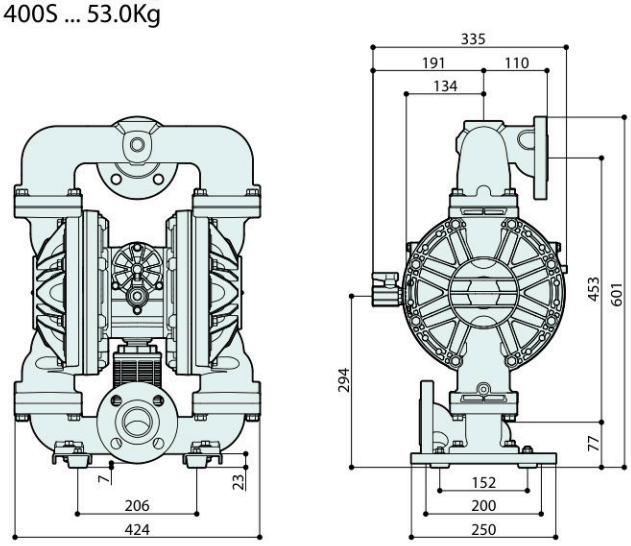
Type 400

Unit = mm

400G ... 29.0Kg
400V ... 32.5Kg **( ) 400V**

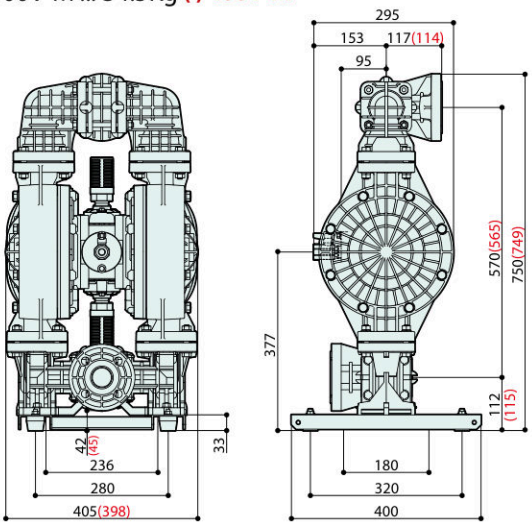


400A ... 30.0Kg
400S ... 53.0Kg

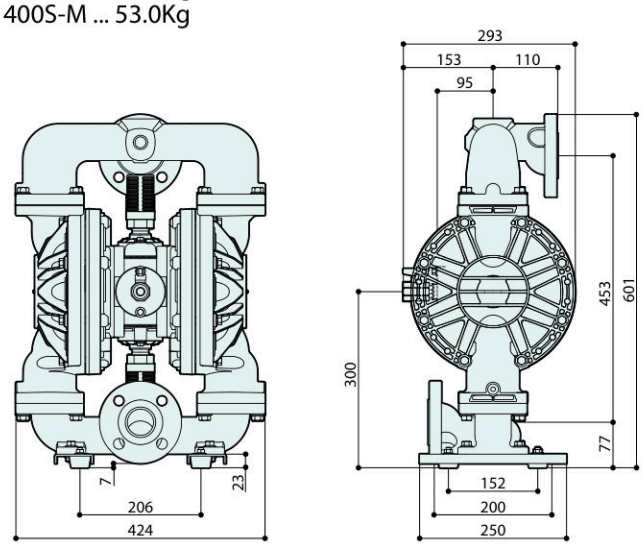


Type 400-M

400G-M ... 28.5Kg
400V-M ... 34.5Kg **( ) 400V-M**

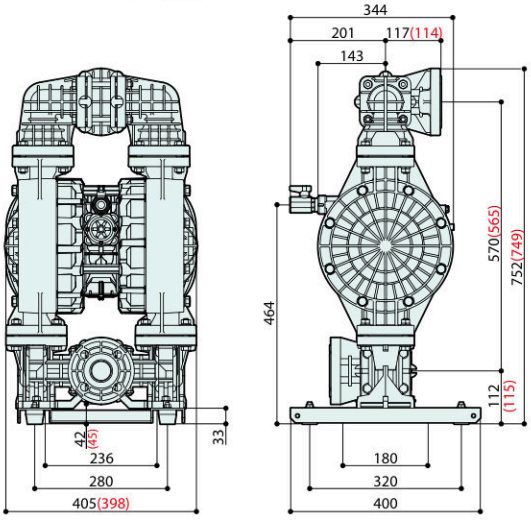


400A-M ... 31.5Kg
400S-M ... 53.0Kg



Type 400-P

400G-P ... 28.0Kg
400V-P ... 31.5Kg **( ) 400V-P**

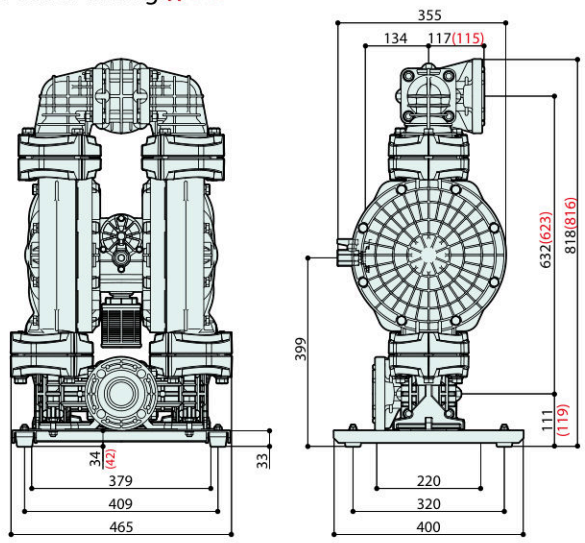


Pump Dimensional Drawings

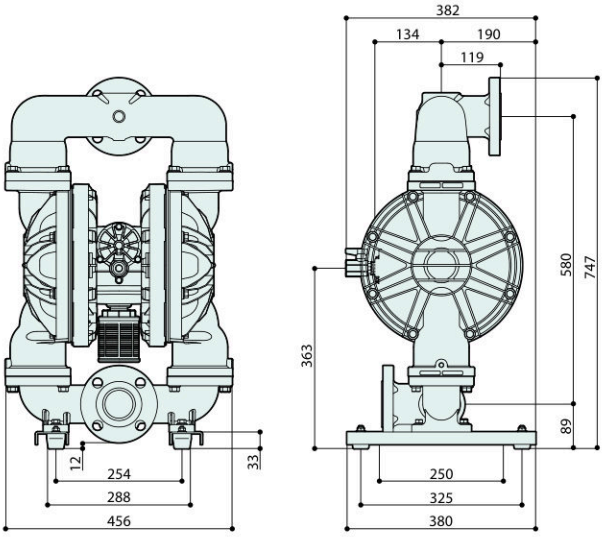
Type 500

Unit = mm

500G ... 37.5Kg
500V ... 44.5Kg **( ) 500V**

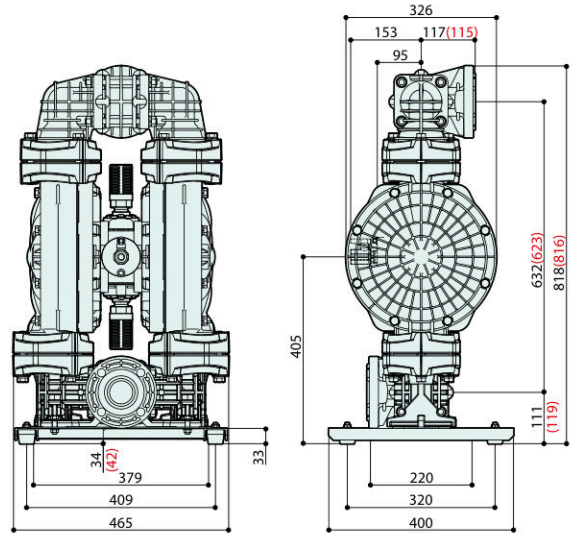


500A ... 40.0Kg
500S ... 68.0Kg **( ) 500S**

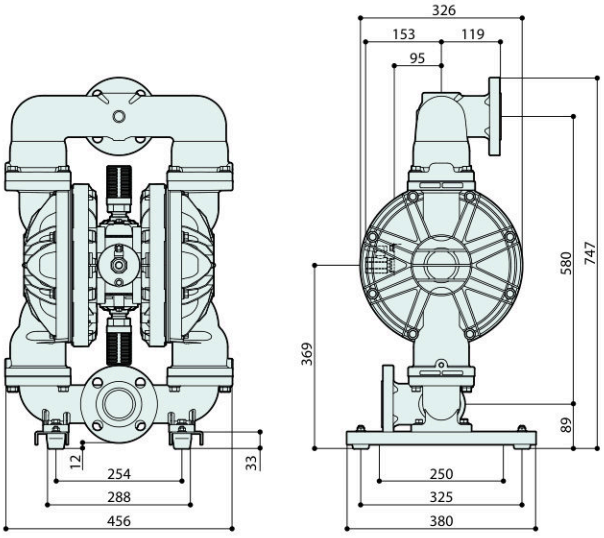


Type 500-M

500G-M ... 39.0Kg
500V-M ... 46.0Kg **( ) 500V-M**

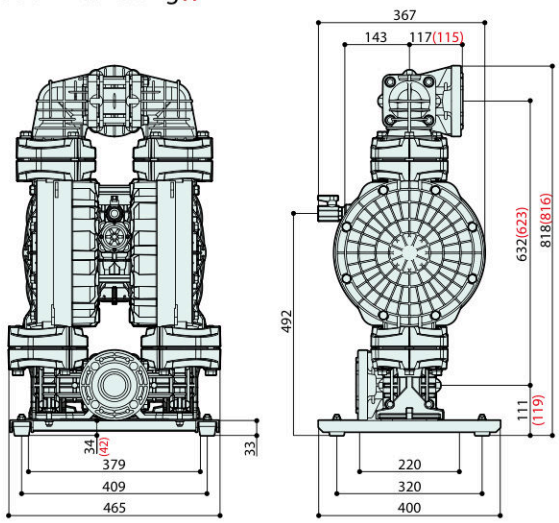


500A-M ... 40.5Kg
500S-M ... 68.5Kg **( ) 500S-M**



Type 500-P

500G-P ... 36.5Kg
500V-P ... 43.5Kg**( ) 500V-P**

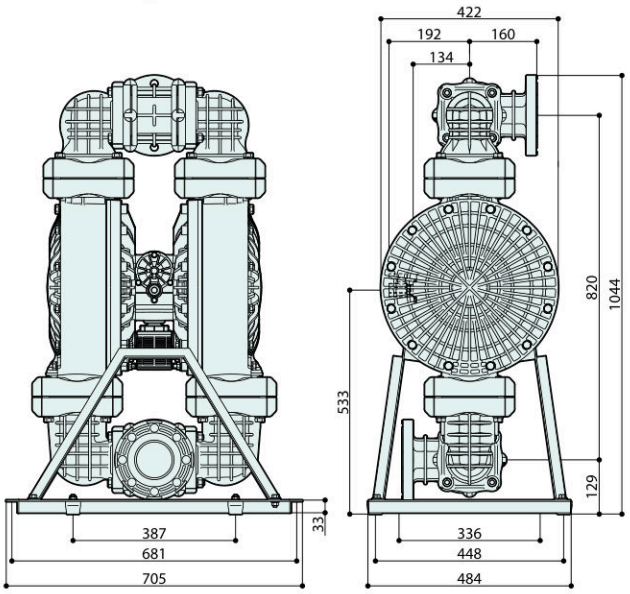


Pump Dimensional Drawings

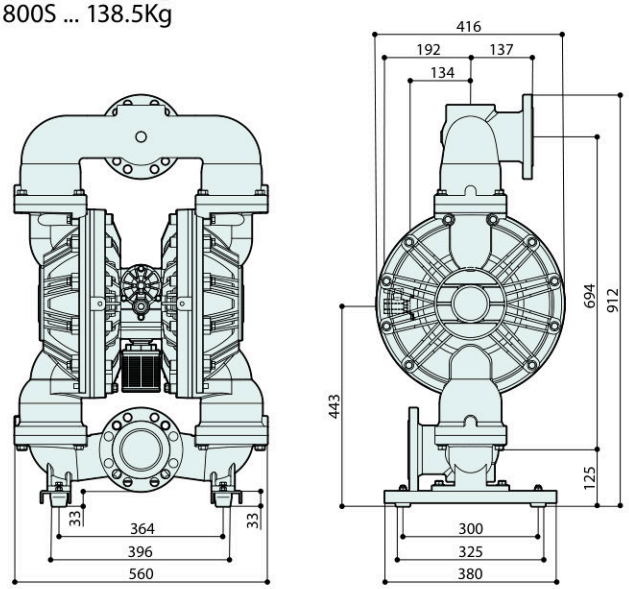
Type 800

Unit = mm

800G ... 70.0Kg

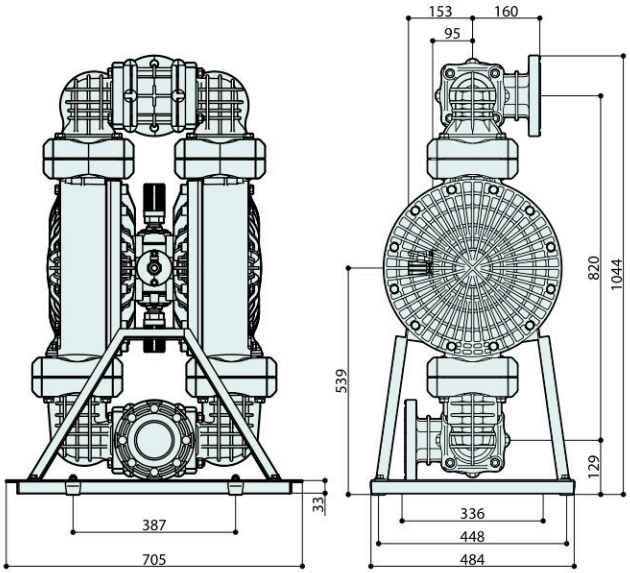


800A ... 68.5Kg
800S ... 138.5Kg

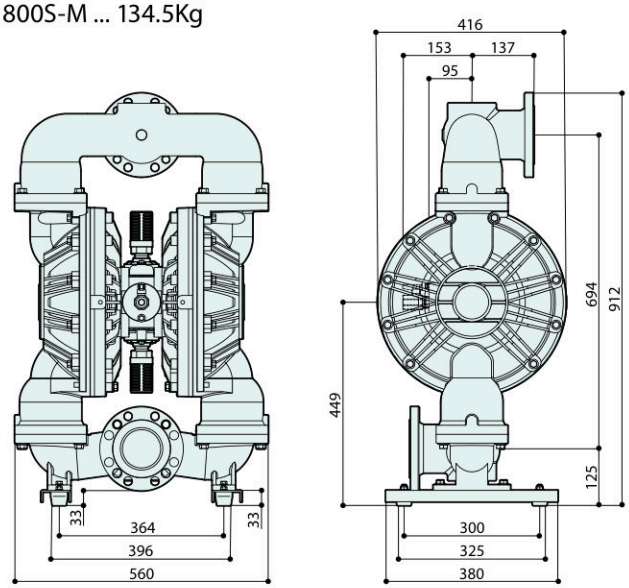


Type 800-M

800G-M ... 70.0Kg

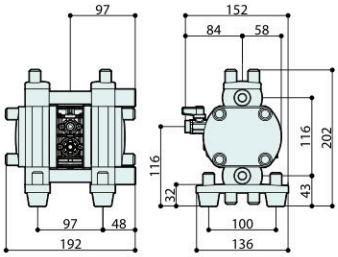


800A-M ... 69.0Kg
800S-M ... 134.5Kg

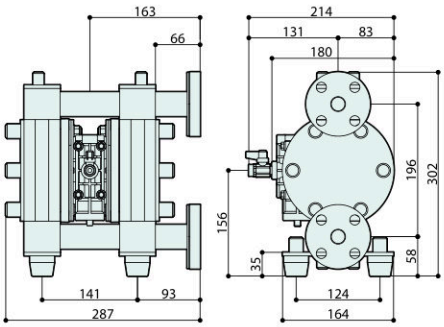


Standard PTFE Pumps

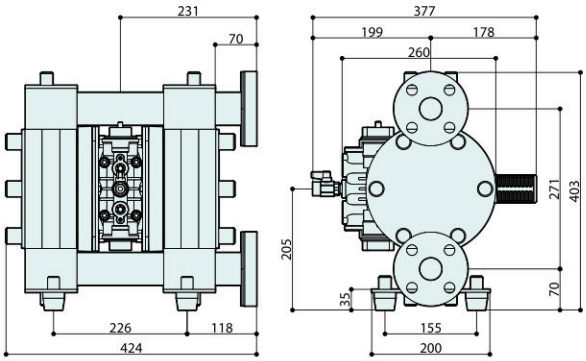
031TT ... 3.0Kg
051TT ... 3.0Kg



152TT ... 11.5Kg



250TT ... 31.0Kg

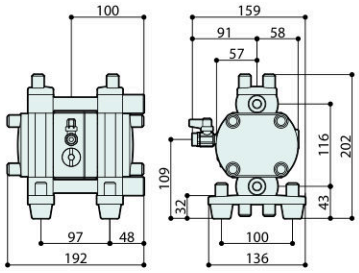


Pump Dimensional Drawings

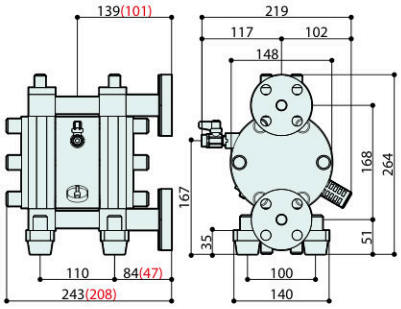
High Purity PTFE Pumps

Unit = mm

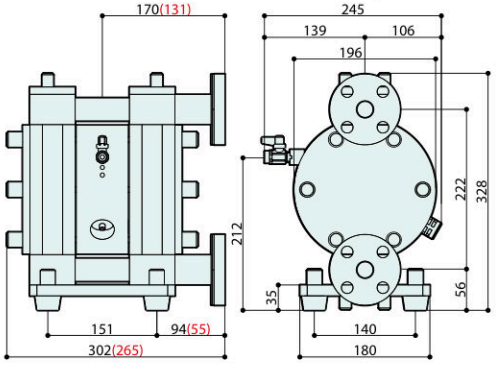
030HT ... 3.4Kg
050HT ... 3.4Kg



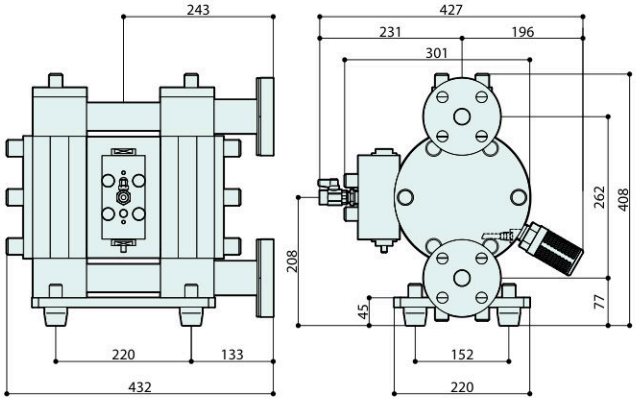
100HT ... 7.4Kg () **Thread ... 7.0Kg**



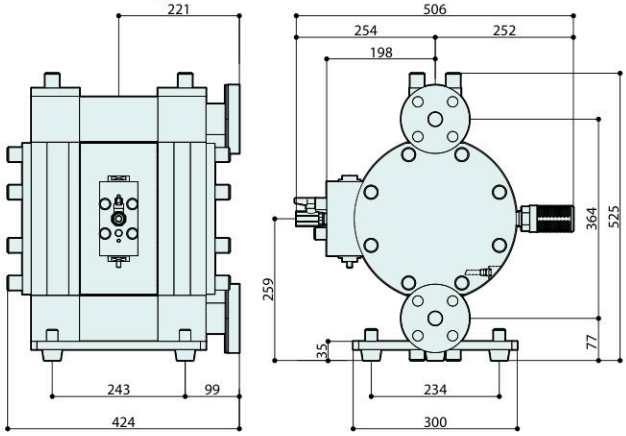
200HT ... 15.0Kg () **Thread ... 14.0Kg**



250HT ... 32.0Kg

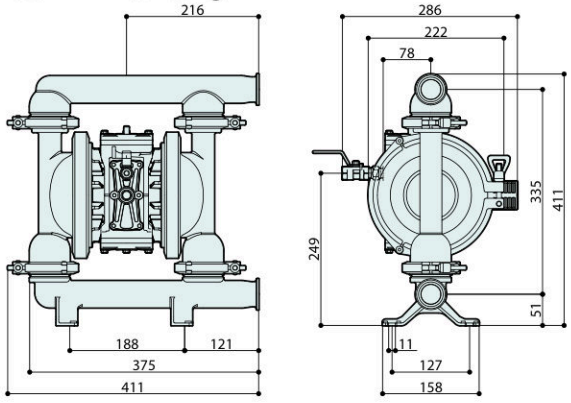


400HT ... 53.0Kg

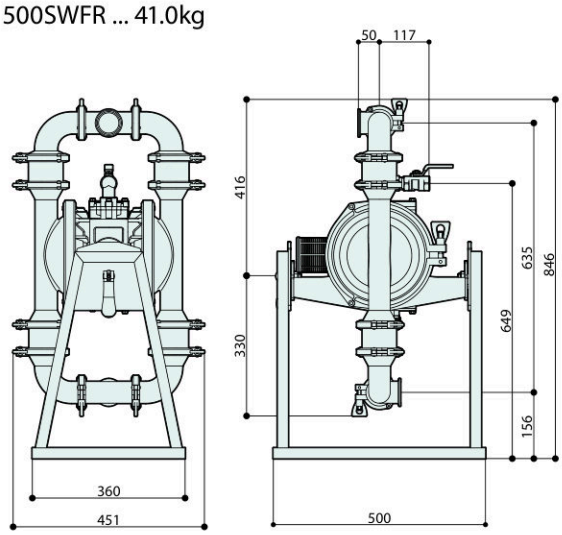


Clamped Pumps

250SWFR-A ... 19.5kg

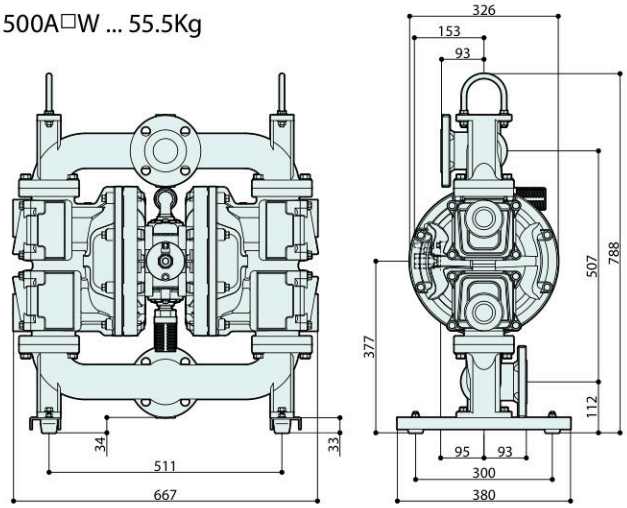


500SWFR ... 41.0kg



Flap Valve Solids Transfer Pumps

500A□W ... 55.5Kg



Common Accessories & Options

Liquid Pulsation Dampeners

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



Pulsation Surge Tanks

Cost effective & convenient method of suppressing liquid pulsation. Able to transfer liquid slurries and large solids without decreasing flow rates. Available in SUS316 with threaded connections from ⅜" to 2" metallic pumps.



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.



Specialty Diaphragm Options

A full range of high performance Pump Diaphragms available in all sizes and materials.
Optional TPO rubber Backup Diaphragms.
One Up® Brand specialty Diaphragms.
New One-piece solid type PTFE Diaphragms are also available.



Stroke Counter Option

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 chemical spills or for use in corrosive environments.



Common Accessories & Options

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 High or Low level.
The HLC is available in 4 different models.



Anti-stall Accessories

Variety of accessories to solve stall problems are available.



Conductive Liquid Leak Sensor Kit

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



Check Ball Valve & Seat Options

The materials of the check ball valves and seats can be changed for specific applications when transferring fluids that have a high specific gravity, are highly viscous and / or when increased chemical resistance is required.



Tools

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

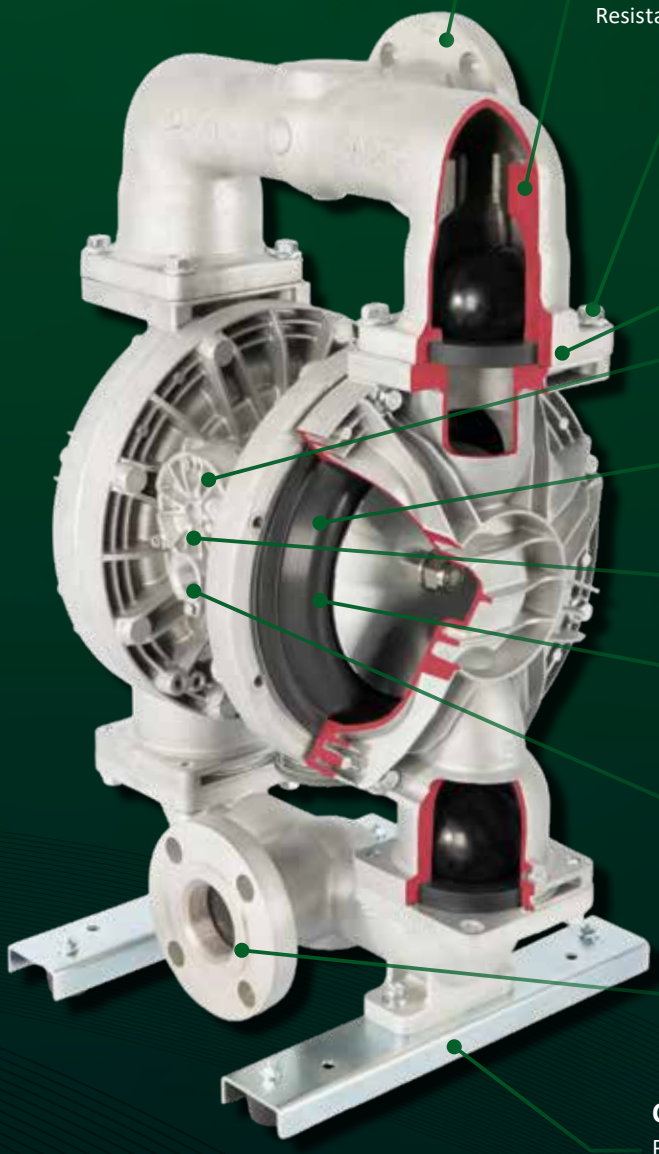


Spare Parts & Pump Service Kits

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



FULLY ENGINEERED DIAPHRAGM PUMPS



High Flow Rates
Up to 1,050 L/min on 3" Pumps.

Enhanced Durability
The redesigned ribs of the ball guide provide improved Wear Resistance, enabling reliable transfer of Highly Abrasive Slurries.

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.

Threaded Flange
Available with both threaded and flange connection options to suit various installation requirements.
*Type 400, 500 and 800 metallic pumps.

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

The Looped C® 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.

Mechanical Air Spool



3rd Generation Heavy Duty Mechanically Assisted Non-Centering Air Spool

For tough & demanding applications.
Will resist spool stalling & freezing in nearly all operating conditions.
Superior pumping performance.
Extreme Reliability.
Serviceability & Longevity.
100% Non-lubricated.
Outside Accessible.

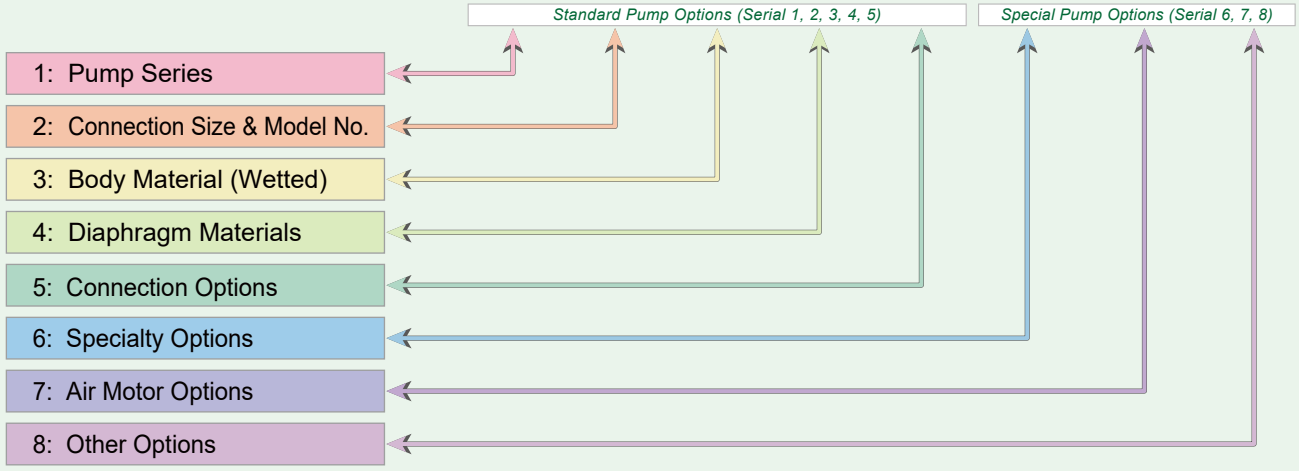
YTS PUMP MODEL CODE NOMENCLATURE

Pump Model Nomenclature >

1	2	3	4	5	6	7	8
D	500	A	N	A	W	-	M	X

Standard Pump Options (Serial 1, 2, 3, 4, 5)

Special Pump Options (Serial 6, 7, 8)



1: Pump Series

D: Standard Pump Series

The red characters are non-standard productus.

2: Connection Size & Model No.

030 =	5mm (¼")
031 =	5mm (¼")
050 =	5mm (¼")
051 =	5mm (¼")
101 =	10mm (⅜")
152 =	15mm (½")
200 =	20mm (¾")
250 =	25mm (1")
400 =	40mm (1½")
500 =	50mm (2")
800 =	80mm (3")
100 =	10mm (⅜")
150 =	15mm (½")
151 =	15mm (½")

3: Body Material (Wetted)

A: Al (Aluminium)
S: SUS (Stainless Steel)
G: GFRPP (Glass Filled PP)
P: PP (Pure Polypropylene)
V: PVDF (Polyvinylidene Fluoride "KYNAR")
T: PTFE (Fluoroplastics)
H: High Purity PTFE (Fluoroplastics)
D: POM (Polyoxymenthylene)
F: Fe (Cast Iron)
C: CF PP (Conductive Polypropylene)
E: CF PTFE (Conductive Fluoroplastics)

4: Diaphragm Materials

C: Neoprene™ (CR)
E: Nordel™ (EPDM)
N: Buna N (NBR)
H: Hytrel™ (TPE / TPEE)
S: Santoprene® (TPO)
V: Viton® (FPM / FKM)
T: PTFE
W: PTFE & EPDM (One-piece PTFE)

5: Connection Options

□: PT, Rc, BSPT
N: NPT
J: PT Air Supply, JIS / DIN Flange *
A: NPT Air Supply, ANSI Flange *
F: Ferrule (ISO/3A)
T: Tube

*Type 400, 500 and 800 metallic pumps come with threaded flange manifolds.

6: Specialty Options

□: Standard Pump
W: Flap Valve Pump
R: Clamped Pump

7: Air Motor Options

□: Spool Valve
M: Mechanical Coil Spring
A: Spool Valve with Aluminium Body (200 & 250 series only)
P: Spool Valve with Glass Filled PP Body (400 & 500 series only)
E: Electrical Type

8: Other Options

X: Other Options
Other than standard pumps
TPO Backup Diaphragm, One-Up® PTFE Diaphragm, PTFE Ball Check Valves, PTFE Check Seats, SUS Ball Check Valves, SUS Check Seats, FDA Compliant Pump, 1½" Center Ports (250 metallic pump) Leak Sensor, Stroke Counter, High Pressure 2:1 Pump, Powder Pump, Split Manifold Pump and more...

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Notes; Options, Variations, Add On's and Accessories may not be available for all models sizes or materials. YTS stocks a full range of Pumps Parts and Accessories (Standard Stocked Items). Other models are classified as Order-only and stock may not be available. For information about the Line Up, Prices, Availability and Delivery please contact YTS or your Pump Distributor directly.

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.

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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Phone : +31 (0) 85 760 7060
E-mail : info@yts-pumps.com

Distributor

JQA-QMA14279 091

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No.0008