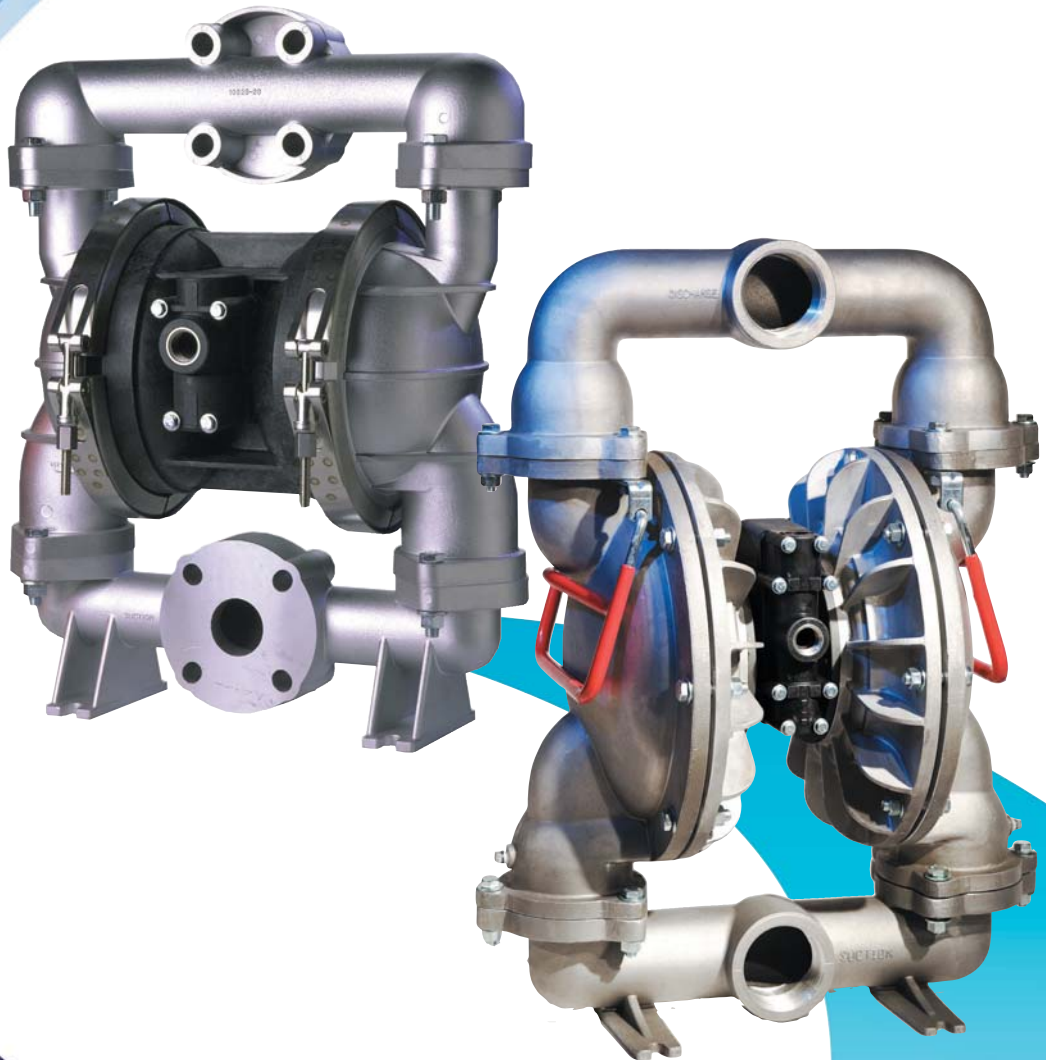


Aquaplus

AD Series Air Driven Diaphragm Pumps



QUALITY PUMPS FOR ALL INDUSTRIES



Aquaplus pumps are a range of high quality industrial pumps designed specifically for Australian and international industries. Available through some of Australia's leading pump distributors, the Aquaplus range includes Centrifugal Self Priming, End Suction, Submersible, Chemical/Plastic, Peristaltic, Diaphragm, and Progressive Cavity Pumps.

The Aquaplus range is employed across many industries including mining, construction, water, sewerage & waste water, agriculture, petro-chemical, industrial, food and beverage and manufacturing.

If you are looking for a reliable, competitively priced pump that delivers results every time; then look no further than the Aquaplus pump range.

THE AQUAPLUS PRODUCT RANGE

Centrifugal Pumps

- ES Series End Suction Pumps
- IP Series Vertical Centrifugal Pumps
- SD Series Horizontal Split Case Pumps
- MD Series Magnetic Drive Pumps
- DP Series Submersible Drainage Pumps
- SP Series Submersible Clean Water Pumps
- FP Series Submersible Dirty Water Pumps
- SS Series Transfer Pumps



Positive Displacement Pumps

- AD Series Air Driven Diaphragm Pumps
- RD Series Mechanical Diaphragm Pumps
- HP Series Peristaltic Pumps
- PC Series Progressive Cavity Pumps



Pressure Systems

- PS Series Pressure Systems

Flexible Rising Main

- AB Series Flexible Rising Main



Accessories

- DC Series Drive Couplings
- MS Series Mechanical Seals

Unless otherwise agreed in writing, Aquaplus products are purchased subject to Malcolm Thompson Pumps' Terms and Conditions which can be found at www.mtp.com.au. Malcolm Thompson Pumps Pty Ltd - ABN 28 009 095 818.

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OPERATING PRINCIPLE

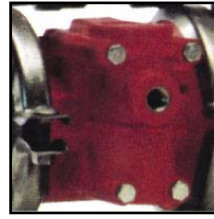
Aquaplus double diaphragm pumps are operated by compressed air or any non-flammable compressed gas. The pumping stroke begins as air is delivered by the air distribution system, putting pressure on one diaphragm and then the opposite diaphragm. The two diaphragms are linked together by a common rod. The pumping stroke on one side is simultaneous with the suction stroke on the opposing diaphragm. This results in fluid being drawn from one side, while discharging fluid from the other side.

FEATURES

- Pumps anything that pours
- Wide range of pump types and sizes
- Patented lube-free air system
- Will not stall at slow speeds
- 100% tested prior to shipment
- Self-priming
- Non electrical
- Runs dry without damage
- Infinitely variable flow rate
- Intermittent operation or continuous duty
- Pumps fluids which contain particles
- Pumps high viscosity fluids
- Reduced solvent flash-off
- Simple modular design
- Dual manifold capability for 6mm to 25mm modules
- Parts interchangeability between models and sizes



PATENTED FREE, NON-STALLING AIR SYSTEM



The heart of the pump gives reliable, trouble-free operation in all sizes of pumps. Competitive pumps claim lube free operation, but operation manuals note that lubrication is always needed during 'certain operating conditions'. Aquaplus' air system is truly lube-free and will not stall at slow speeds.

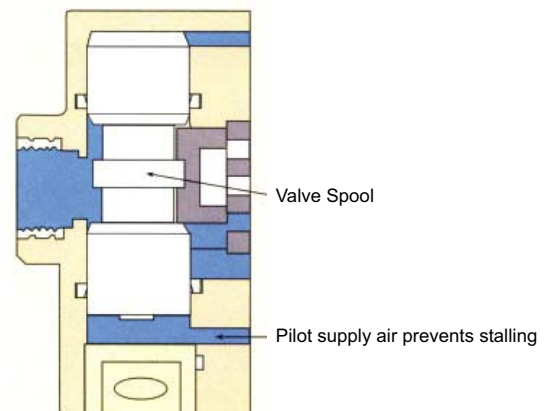
Lube free operation throughout the life of the pump is achieved by using dissimilar plastic materials within the air system and shuttle mechanism constructed of lubrication filled materials to maximize lubricity. Flatness and surface finishes are held to strict engineering tolerances which also reduce the coefficient of friction resulting in trouble-free operation and increased air efficiency.

No air is lost when fluid discharge lines are closed. The air system seals completely and prevents air consumption when the pump is not transferring fluid. The low coefficient of friction between the air system components also helps reduce air consumption.

All plastic air systems used in both metallic and plastic pumps are corrosion resistant and will not be destroyed in case of diaphragm rupture, spills or corrosive atmospheres.

State of the art seal technology used in the air system is more tolerant of dirty and wet air supplies. Lip seals and high wear elastomers offer outstanding cycle life.

Stalling is prevented as the pilot supply air maintains a constant pressure against the air valve spool throughout the discharge stroke preventing the spool/shuttle combination from moving into a neutral or stall position. Aquaplus pumps do not require reset buttons or magnets to ensure continuous pump operation – only air.



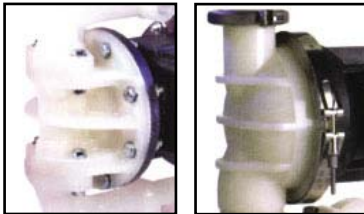
NO STALLOUTS DUE TO FREEZING

Stallout due to ice formation in the air system is virtually eliminated due to the insulating quality of all plastic construction plus the ability to slow air expansion and velocity without compromising performance.

NO VENT HOLES

There are no vent holes in the air valve. Vent holes needed to prevent stalling in competitive pumps allow corrosive fumes to enter and destroy valuable components. Additionally, if a diaphragm pump ruptures, fluid leakage cannot be routed to a safe containment zone. The sealed air valve allows containment of fluid and prevents fumes from entering air system.

BOLTED OR BAND CLAMP CONSTRUCTION



The 6mm, 10mm, 40mm, 50mm and the 80mm are available in bolted design only. The 15mm and 25mm are available in clamped and bolted designs.

PERFORMANCE ENGINEERED PTFE DESIGN

Superior PTFE overlay design does not require reduced diaphragm rod stroke, which in turn reduces pump capacity by 20%. All back-up diaphragms for PTFE overlays are Santoprene® which offers a chemically resistant 'second line of defence'.

THERMOPLASTIC DIAPHRAGMS



The thermoplastic diaphragms offer superior chemical abrasion resistance and increased cycle life. The wide range of applications that these materials can address also make ordering the correct pump much easier.

MAINTENANCE TIME IS REDUCED

Due to uniform product design maintenance time is reduced. All models share the same design concept from 15mm pumps to 80mm pumps. The size of the components just becomes larger. If you know how to rebuild one size you can easily rebuild any size.

INVENTORY IS REDUCED

Metallic and plastic pumps all share the same air systems, diaphragms, O-Rings, balls and in some cases valve seats, which helps to reduce inventory requirements. To further help minimise inventory requirements, 40mm and 50mm models share the same air systems, diaphragms and valve seat components.

ALL PLASTIC AIR SYSTEMS

There are all plastic air systems in both metallic and plastic pumps preventing destruction of air system components from corrosive atmospheres or diaphragm ruptures. No brass or aluminium components are used within the air systems.

SIMPLE ORDERING CODES

Are you confused by the complex ordering codes, required by some manufacturers? Not with Aquaplus, as all our models are easily associated with materials and have a simplified model number as shown on page 6.

FLANGE FITTINGS OR THREADED FITTINGS

The Aquaplus 25mm plastic bolted, 40mm and 50mm plastic and metal pumps are built with flange fittings that reduce installation and service time. Threaded pipe connections may be ordered for the 50mm aluminium pumps.

LARGER CAPACITY

Larger capacity per stroke than competitive models means less wear on moving parts.

BSP COMPATIBILITY



BSP compatibility is accomplished through the use of slotted flanges on the 25mm, 40mm and 50mm models and BSP compatible threads are available on other models when requested.

ATEX AND CE

Certification and quality control procedures have been obtained for all models.

			Fluid Chambers	Diaphragms	Valve Balls	Valve Seats	O-Rings	Fasteners
6mm Classic Performance Bolted Range								
6mm								
NC-025			Polypropylene	Geolast®	PTFE	Polypropylene	Nitrile	SS ²
NC-025E			Polypropylene	Santoprene®	PTFE	Polypropylene	EPDM	SS
BK-025			Polypropylene	PTFE	PTFE	Polypropylene	PTFE	SS
RD-025			Nylon	PTFE	PTFE	Nylon	PTFE	SS
RD025B			Nylon	Geolast®	PTFE	Nylon	Nitrile	SS
CN-025			Conductive Nylon	PTFE	PTFE	Nylon	PTFE	SS
CN-025B			Conductive Nylon	Geolast®	PTFE	Nylon	Geolast®	SS
KN-025			PVDF	PTFE	PTFE	PVDF	PTFE	SS
KN-025E			PVDF	Santoprene®	PTFE	PVDF	EPDM	SS
10mm Specialty Performance Clamped Range								
10mm								
PB-038			Polypropylene	Geolast®	Nitrile Max-Pass™	N/A	Nitrile	SS ²
PE-038			Polypropylene	Santoprene®	EPDM Max-Pass™	N/A	EPDM	SS
PT-038			Polypropylene	PTFE	PTFE	Polypropylene	PTFE	SS
PV-038			Polypropylene	PTFE	Viton® Max-Pass™	N/A	Viton®	SS
KE-038			PVDF	Santoprene®	EPDM Max-Pass™	N/A	EPDM	SS
KT-038			PVDF	PTFE	PTFE	PVDF	PTFE	SS
KV-038			PVDF	PTFE	Viton® Max-Pass™	N/A	Viton®	SS
CT-038			Conductive Nylon	PTFE	PTFE	SS	PTFE	SS
CB-038			Conductive Nylon	Geolast®	Nitrile Max-Pass™	N/A	Nitrile	SS
CV-038			Conductive Nylon	PTFE	Viton® Max-Pass™	N/A	Viton®	SS
15mm - 25mm Performance Plus Bolted Range								
15mm	25mm							
PB-05	PB-10		Polypropylene	Geolast®	Geolast®	Polypropylene	Nitrile	SS ²
PE-05	PE-10		Polypropylene	Santoprene®	Santoprene®	Polypropylene	EPDM	SS
PT-05	PT-10		Polypropylene	PTFE	PTFE	Polypropylene	PTFE	SS
PV-05	PV-10		Polypropylene	Viton®	Viton®	Polypropylene	Viton®	SS
NB-05			Nylon	Geolast®	Geolast®	PVDF	Nitrile	SS
NT-05			Nylon	PTFE	PTFE	PVDF	PTFE	SS
NV-05			Nylon	Viton®	Viton®	PVDF	Viton®	SS
CT-05			Conductive Nylon	PTFE	PTFE	SS	PTFE	SS
CB-05			Conductive Nylon	Geolast®	Geolast®	SS	Nitrile	SS
CV-05			Conductive Nylon	Viton®	Viton®	SS	Viton®	SS
KT-05	KT-10		PVDF	PTFE	PTFE	PVDF	PTFE	SS
KE-05	KE-10		PVDF	Santoprene®	Santoprene®	PVDF	EPDM	SS
KV-05	KV-10		PVDF	Viton®	Viton®	PVDF	Viton®	SS
AB-05	AB-10		Aluminum	Geolast®	Geolast®	Polypropylene	Nitrile	SS
AE-05	AE-10		Aluminum	Santoprene®	Santoprene®	Polypropylene	EPDM	SS
AT-05	AT-10		Aluminum	PTFE	PTFE	Nylon	PTFE	SS
AV-05	AV-10		Aluminum	Viton®	Viton®	Nylon	Viton®	SS
SB-05	SB-10		316 SS	Geolast®	Geolast®	SS	Nitrile	SS
SE-05	SE-10		316 SS	Santoprene®	Santoprene®	SS	EPDM	SS
SP-05	SP-10		316 SS	PTFE	PTFE	SS	PTFE	SS
SV-05	SV-10		316 SS	Viton®	Viton®	SS	Viton®	SS
15mm - 25mm Classic Performance Clamped Range								
15mm	25mm							
NC-5	NC-10 ³		Polypropylene	Geolast®	Geolast®	Polypropylene	Nitrile	SS and PS ¹
BK-5	BK-10 ³		Polypropylene	PTFE	PTFE	Polypropylene	PTFE	SS
BK-5E	BK-10E ³		Polypropylene	Santoprene®	Santoprene®	Polypropylene	EPDM	SS
BK-5V	BK-10V ³		Polypropylene	Viton®	Viton®	Polypropylene	Viton®	SS
KN-5	KN-10		PVDF	PTFE	PTFE	PVDF	PTFE	SS
KN-5E	KN-10E		PVDF	Santoprene®	Santoprene®	PVDF	EPDM	SS
KN-5V	KN-10V		PVDF	Viton®	Viton®	PVDF	Viton®	SS
40mm, 50mm & 80mm Performance Plus Bolted Range								
40mm	50mm	80mm						
PB-15	PB-20		Polypropylene	Geolast®	Geolast®	Polypropylene	Nitrile	SS ²
PT-15	PT-20		Polypropylene	PTFE	PTFE	Polypropylene	PTFE	SS
PE-15	PE-20		Polypropylene	Santoprene®	Santoprene®	Polypropylene	EPDM	SS
KT-15	KT-20		PVDF	PTFE	PTFE	PVDF	PTFE	SS
KE-15	KE-20		PVDF	Santoprene®	Santoprene®	PVDF	EPDM	SS
AB-15	AB-20		Aluminum	Geolast®	Geolast®	Polypropylene	Nitrile	SS
AE-15	AE-20		Aluminum	Santoprene®	Santoprene®	Polypropylene	EPDM	SS
AT-15	AT-20		Aluminum	PTFE	PTFE	Nylon	PTFE	SS
SB-15	SB-20		316 SS	Geolast®	Geolast®	SS	Nitrile	SS
SE-15	SE-20		316 SS	Santoprene®	Santoprene®	SS	EPDM	SS
SP-15	SP-20		316 SS	PTFE	PTFE	SS	PTFE	SS
		AL-30	Aluminum	Urethane	Geolast®	Nitrile	N/A	SS and PS
		AL-30E	Aluminum	Santoprene®	Santoprene®	EPDM	N/A	SS and PS
		AL-30T	Aluminum	PTFE	PTFE	Nylon	PTFE	SS and PS
		AL-30V	Aluminum	Viton®	Viton®	Viton®	N/A	SS and PS

NOTES

- 1 PS = Plated Steel
 - 2 SS = Stainless Steel
 - 3 Glass-filled polypropylene
- Santoprene® and Geolast® are registered trademarks of Advanced Elastomer Systems.
 - Viton® is a registered trademark of DuPont Dow Elastomers.
 - All air systems are glass-filled polypropylene.

PB Model

The PB Model is the most economical choice for all non-aggressive, water-based liquids and slurries. Water-based inks, paints, adhesives and ceramic slurries are some common applications. Polypropylene offers excellent abrasion resistance and zero water absorption.

PT Model

The PT Model is often used in corrosive environments, inorganic acids, bases, plating solutions, alcohols and most water-soluble chemicals. The 25mm and larger polypropylene pumps have fiberglass reinforcement for structural integrity. Do not use with hydrofluoric acid or other fluids not recommended for use with fiberglass.

KT Model

The KT Model has excellent mechanical properties and is able to handle a wide range of chemicals such as strong acids and bases, phenols.

AB Model

The AB Model contains aluminium that is an A380 class material that does not require anodising impregnation or painting for appearance or wear characteristics. Do not use aluminium with halogenated solvents.

SP Model

The SP model as with the PT model is often used in a corrosive environment where a big stainless steel pump is preferred. Generally used for acidic based products but caution must be taken to ensure suitability.

NOTES

- **Always check chemical resistance guide for compatibility.**
- **Do not use aluminium with halogenated solvents.**

DIAPHRAGM NOTES

Geolast® is nitrile based thermoplastic elastomer used in place of nitrile (Buna-N) or Neoprene for non-aggressive water based applications.

Santoprene® is an EPDM-based thermoplastic elastomer and is resistant to mild acids, some solvents and bases.

Both Geolast® and Santoprene® offer superior cycle life over cloth reinforced diaphragms, abrasion resistance and extended chemical resistance.

PTFE – stock models feature a two part diaphragm system. Bonded single piece diaphragms are available on 25mm models only.

Santoprene® and Geolast® are registered trademarks of Advanced Elastomer Systems.

Teflon® and Viton® are registered trademarks of DuPont Dow Elastomers.

DRUM KITS

Drum pump kits are available for 6mm, 15mm and 25mm plastic and 15mm metallic pumps.

The pumps are supplied with bung adaptor and suction tube. Manifolds are pre-positioned for immediate assembly.



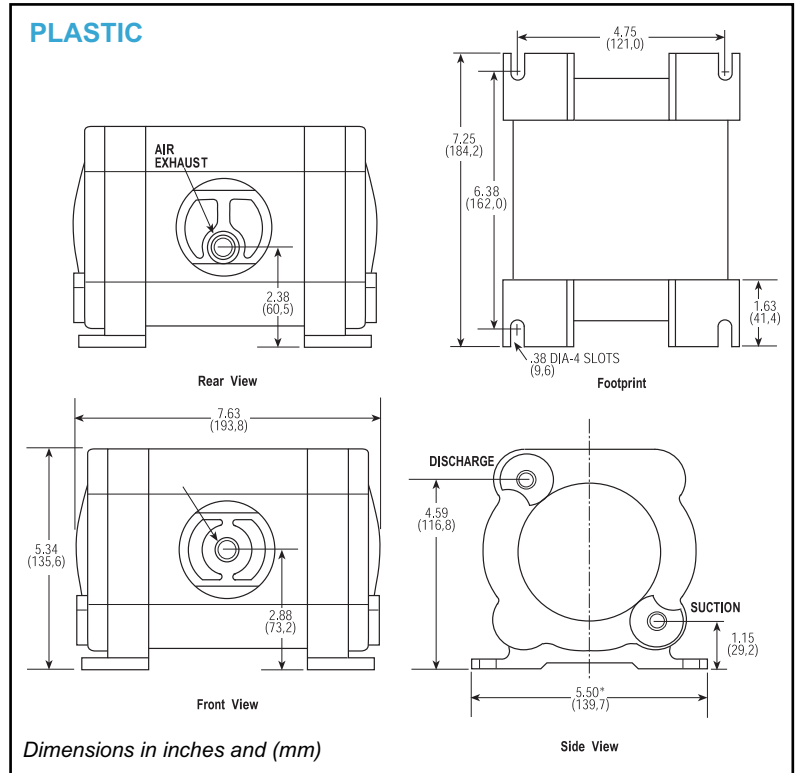
6mm Classic Performance Bolted Range



PLASTIC MODELS

NC-025	Polypropylene / Geolast®	2.3 kg
NC-025E	Polypropylene / Santoprene®	2.3 kg
BK-025	Polypropylene / PTFE	2.3 kg
RD-025	Nylon / PTFE	3.2 kg
RD-025B	Nylon / Geolast®	3.2 kg
CN-025	Conductive Nylon / PTFE	3.2 kg
CN-025B	Conductive Nylon / Geolast®	3.2 kg
KN-025	PVDF/ PTFE	3.2 kg
KN-025E	PVDF/ Santoprene®	3.2 kg

Geolast® properties are similar to that of Nitrile (Buna-N)
See page 6 for fastener and valve seat material.



SPECIFICATIONS

Capacity

Adjustable 0 to 16.3 litres/min

Maximum Temperature

KN-025 model 93°C
Other KN models 66°C

Maximum Air Pressure

All models 6.8 bar

Minimum Air Pressure

All models 1.3 bar

Dry Lift Capacity @ 6.8 bar

All models 5 metres

Maximum Solids

1.6mm

Air Supply

Inlet 1/4" BSP Female

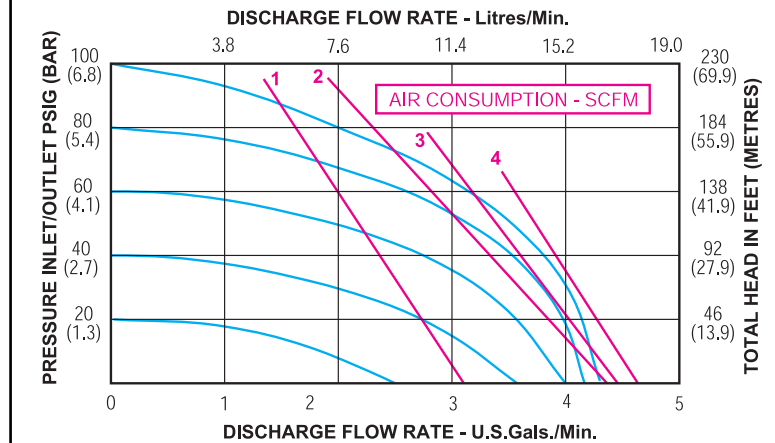
Airflow control valve supplied

Outlet 1/4" BSP Female

Muffler supplied

Fluid Inlet/Discharge 1/4" BSP

PERFORMANCE CURVE (Based on water-flooded suction)



NOTES

- NPT threads available upon request.
- For optional dual manifold inlet/outlet add – P2S to Model No.

10mm Specialty Performance Clamped Range



PLASTIC MODELS

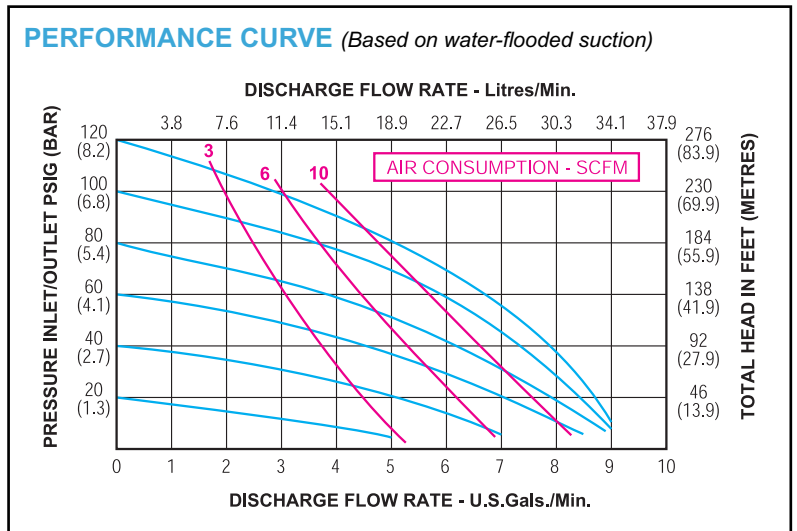
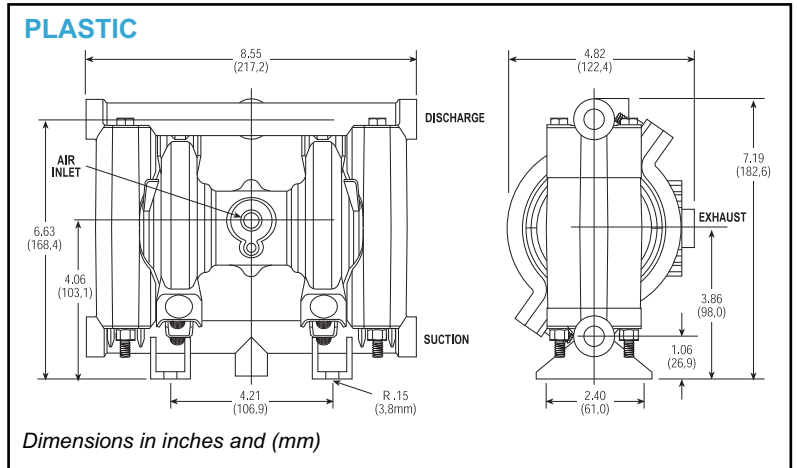
PB-038	Polypropylene / Geolast®	1.7 kg
PE-038	Polypropylene / Santoprene®	1.7 kg
PT-038	Polypropylene / PTFE	1.7 kg
PV-038	Polypropylene / PTFE	1.7 kg
KE-038	PVDF / Santoprene®	2.3 kg
KT-038	PVDF / PTFE	2.3 kg
KV-038	PVDF / PTFE	2.3 kg
CT-038	Conductive Nylon / PTFE	2.3 kg
CB-038	Conductive Nylon / Geolast®	2.3 kg
CV-038	Conductive Nylon / PTFE	2.3 kg

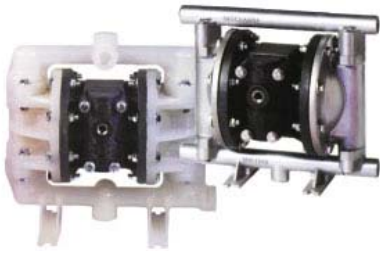
SPECIFICATIONS

Capacity		
Adjustable		0 to 34 litres/min
Maximum Temperature		
KT-038 model		93°C
Other models		66°C
Maximum Air Pressure		
All models		8.2 bar
Minimum Air Pressure		
All models		1.3 bar
Dry Lift Capacity @ 8 bar		
Models with PTFE balls		3 metres
Models with Max-Pass™ valves		5.2 metres
Maximum Solid		
Optional Max-Pass™ valves		6.4mm
PT,KT CT models		1.6mm
Air Supply		
Inlet		1/4" BSP Female
Outlet		3/8" BSP Female
<i>Muffler supplied</i>		
Fluid Inlet/Discharge		
All models		3/8" BSP Female

NOTES

- Dual manifold/split delivery is an option. This option allows the pump to be used as two pumps in one, isolating different fluids when needed.
- PT, KT, CT Models are built with PTFE check balls (not Max-Pass™ valves). See specifications for maximum solids.





PLASTIC MODELS

PB-05	Polypropylene / Geolast®	4.1 kg
PE-05	Polypropylene / Santoprene®	4.1 kg
PT-05	Polypropylene / PTFE	4.1 kg
PV-05	Polypropylene / Viton®	4.1 kg
NB-05	Nylon / Geolast®	4.1 kg
NT-05	Nylon / PTFE	4.1 kg
NV-05	Nylon / Viton®	4.1 kg
CT-05	Conductive Nylon / PTFE	5.4 kg
CB-05	Conductive Nylon / Geolast®	5.4 kg
CV-05	Conductive Nylon / Viton®	5.4 kg
KT-05	PVDF/ PTFE	5.4 kg
KE-05	PVDF/ Santoprene®	5.4 kg
KV-05	PVDF/ Viton®	5.4 kg

METALLIC MODELS

AB-05	Aluminium / Geolast®	4.5 kg
AE-05	Aluminium / Santoprene®	4.5 kg
AT-05	Aluminium / PTFE	4.5 kg
AV-05	Aluminium / Viton®	4.5 kg
SB-05	316 Stainless Steel / Geolast®	8.6 kg
SE-05	316 Stainless Steel / Santoprene®	8.6 kg
SP-05	316 Stainless Steel / PTFE	8.6 kg
SV-05	316 Stainless Steel / Viton®	8.6 kg

All fasteners are 18 - 8 stainless steel (comparable to 302 - 304)

SPECIFICATIONS

Capacity

Adjustable 0 to 64.6 litres/min

Maximum Temperature

KT-05 model 93°C

Other plastic models 66°C

Metallic models 93°C

Maximum Air Pressure

All models 8 bar

Minimum Air Pressure

All models 1.2 bar

Dry Lift Capacity @ 8 bar

Models with PTFE balls 3 metres

Other models 4.5 metres

Maximum Solids

Optional Max-Pass™ valves 9 mm

Air Supply

Inlet 1/4" BSP Female

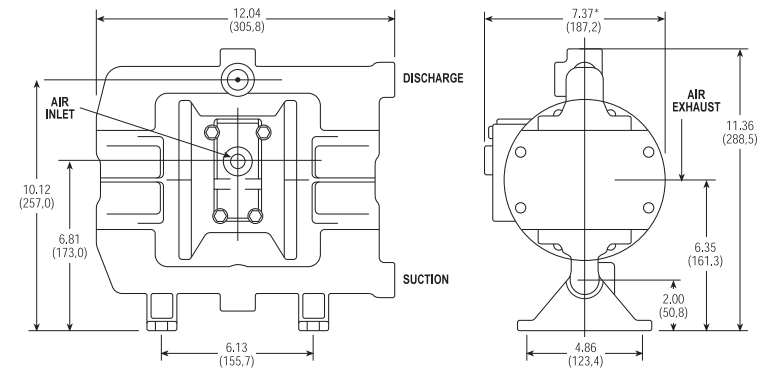
Outlet 1/4" BSP Female

Muffler supplied

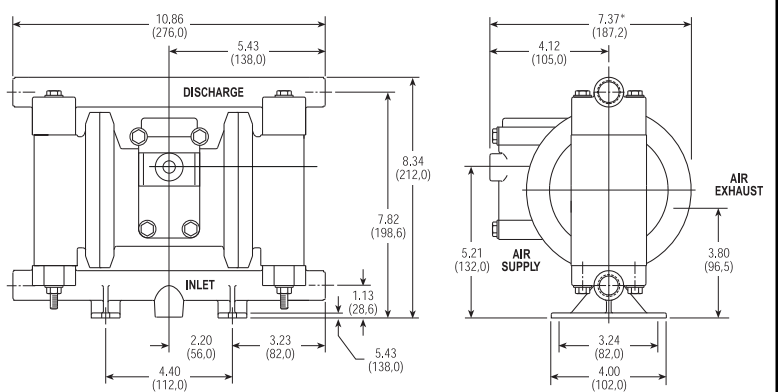
Fluid Inlet/Discharge

NPT compatible 1/2" BSP models

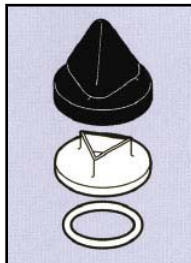
PLASTIC



METALLIC



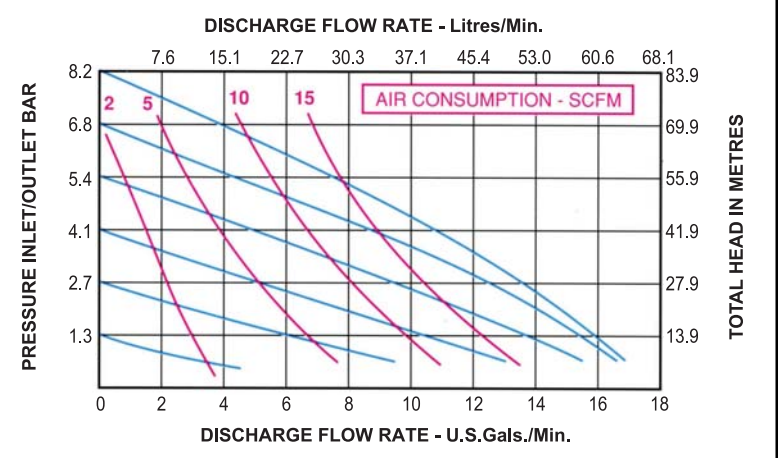
Dimensions in inches and (mm).



OPTIONAL MAX-PASS™ VALVE SYSTEM

- Up to 9mm solids
- Abrasion resistant
- To order Max-pass™ valve system add the following code to the model number: M37 (Nitrile, FDA), M39 (EPDM, FDA), M40 (Viton®, FDA)
- Ideal for inks, paints, slurries and other specialised applications.

PERFORMANCE CURVE (Based on water-flooded suction)



NOTES

- Stock models have a side port.
- Optional centre, top or dual ports must be specified when ordering.
- Fluid is not separated within the single piece manifold when dual ports are specified.

15mm Classic Performance Clamped Range



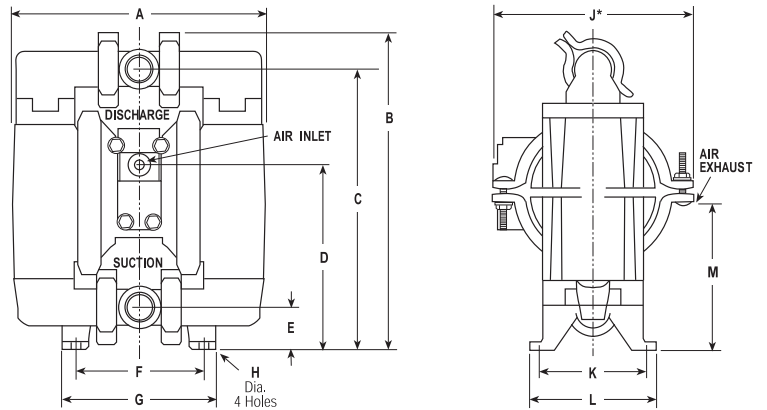
PLASTIC MODELS

NC-5	Polypropylene / Geolast®	3.6 kg
BK-5	Polypropylene / PTFE	3.6 kg
BK-5E	Polypropylene / Santoprene®	3.6 kg
BK-5V	Polypropylene / Viton®	3.6 kg
KN-5	PVDF / PTFE	4.9 kg
KN-5E	PVDF / Santoprene®	4.9 kg
KN-5V	PVDF / Viton®	4.9 kg

SPECIFICATIONS

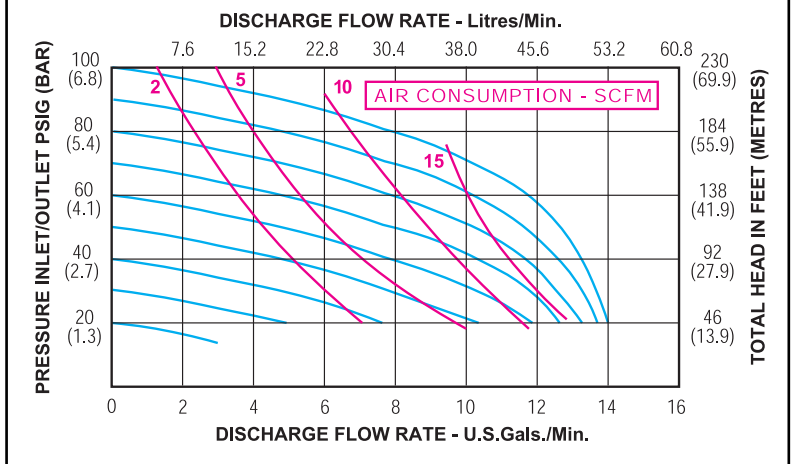
Capacity	Adjustable	0 to 53.2 litres/min
Maximum Temperature	KN model	93°C
	Other models	66°C
Maximum Air Pressure	All models	6.8 bar
Minimum Air Pressure	All models	1.3 bar
Dry Lift Capacity @ 8 bar	Models with PTFE balls	3 metres
	Other models	4.5 metres
Maximum Solids	All models	3.2 mm
Air Supply	Inlet	1/4" BSP Female
	Outlet	3/8" BSP Female
	Muffler supplied	
Fluid Inlet/Discharge	All models	1/2" BSP Female

PLASTIC



Model	Dimensions (mm)												
Size	A	B	C	D	E	F	G	H	J	K	L	M	P
15mm	248	273	238	157.2	35	145	170	8	190.5	83	102	130	203.2
25mm	305	394	343	211	51	146	194	11.2	252	130	152.4	211	293.9

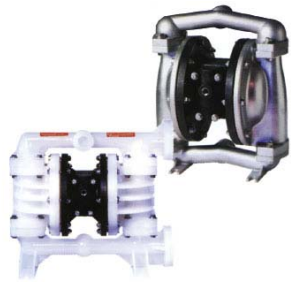
PERFORMANCE CURVE (Based on water-flooded suction)



NOTES

- For optional dual manifold inlet/outlet, add - P25 to Model No.

25mm Performance Plus Bolted Range



PLASTIC MODELS

PB-10	Polypropylene / Geolast®	9.1 kg
PE-10	Polypropylene / Santoprene®	9.1 kg
PT-10	Polypropylene / PTFE	9.1 kg
PV-10	Polypropylene / Viton®	9.1 kg
KT-10	PVDF/ PTFE	13.7 kg
KE-10	PVDF/ Santoprene®	13.7 kg
KV-10	PVDF/ Viton®	13.7 kg

METALLIC MODELS

AB-10	Aluminium / Geolast®	10.5 kg
AE-10	Aluminium / Santoprene®	10.5 kg
AT-10	Aluminium / PTFE	10.5 kg
AV-10	Aluminium / Viton®	10.5 kg
SB-10	316 Stainless Steel / Geolast®	20.4 kg
SE-10	316 Stainless Steel / Santoprene®	20.4 kg
SP-10	316 Stainless Steel / PTFE	20.4 kg
SV-10	316 Stainless Steel / Viton®	20.4 kg

All fasteners are 18 - 8 stainless steel (comparable to 302 - 304)

SPECIFICATIONS

Capacity

Adjustable 0 to 155.8 litres/min

Maximum Temperature

KT-10 model 93°C
 Other plastic models 66°C
 Metallic models 93°C

Maximum Air Pressure

All models 8 bar

Minimum Air Pressure

All models 1.2 bar

Dry Lift Capacity @ 8 bar

Models with PTFE balls 3 metres
 Other models 4.5 metres

Maximum Solids

6.2 mm

Air Supply

Inlet 1/4" BSP Female

Outlet 3/8" BSP Female

Muffler supplied

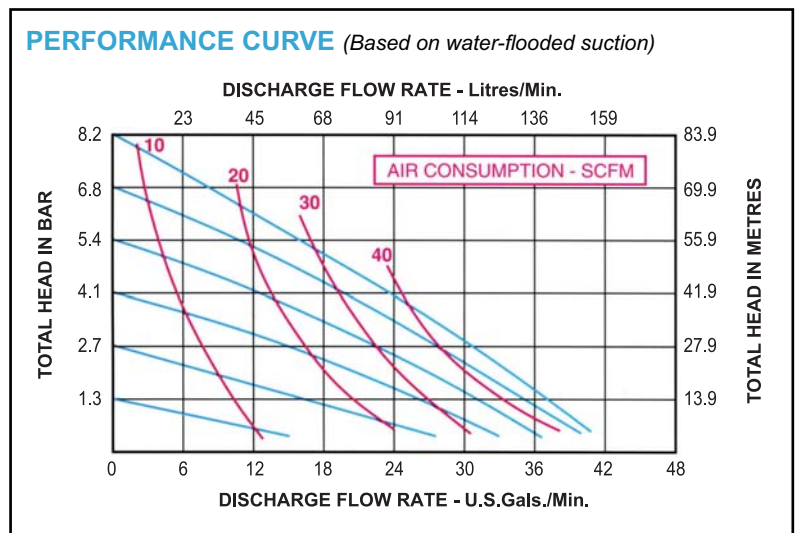
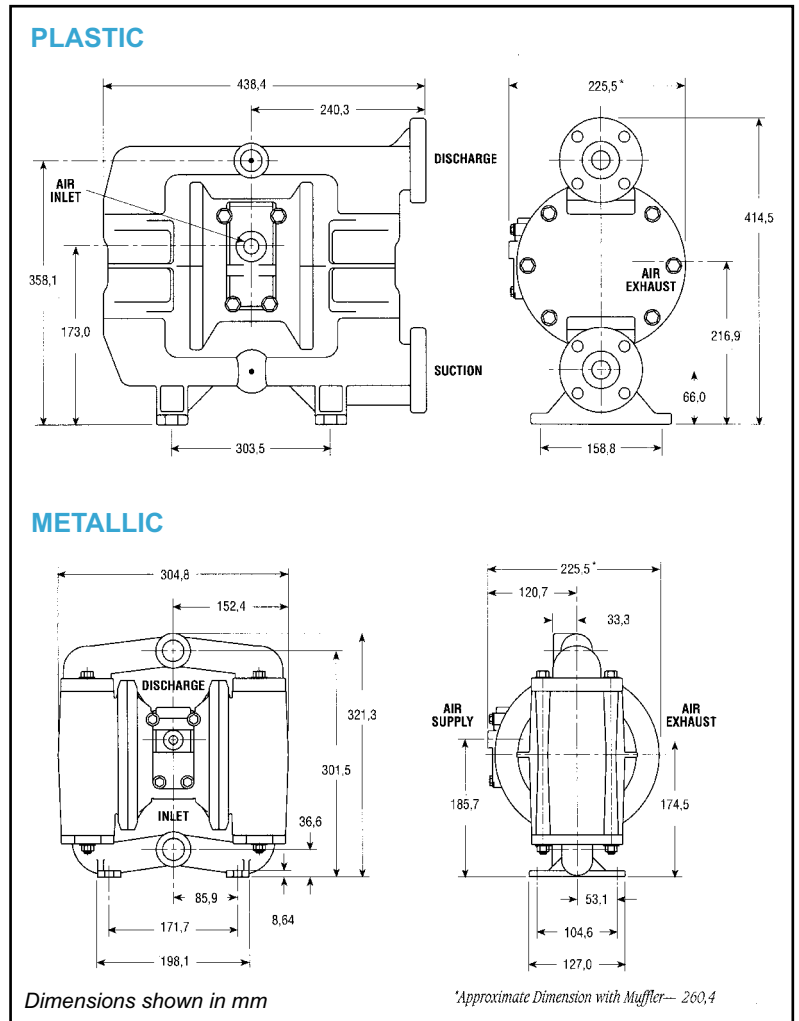
Fluid Inlet/Discharge

Plastic models 1" flange ANSI/DIN compatible

Metallic models 1" BSP

NOTES

- Stock models have a flanged side port.
- Optional threaded centre ports must be specified when ordering.



25mm Classic Performance Clamped Range



PLASTIC MODELS

NC-10	Polypropylene / Geolast®	8.6 kg
BK-10	Polypropylene / PTFE	8.6 kg
BK-10E	Polypropylene / Santoprene®	8.6 kg
BK-10V	Polypropylene / Viton®	8.6 kg
KN-10	PVDF / PTFE	9.9 kg
KN-10E	PVDF / Santoprene®	9.9 kg
KN-10V	PVDF / Viton®	9.9 kg

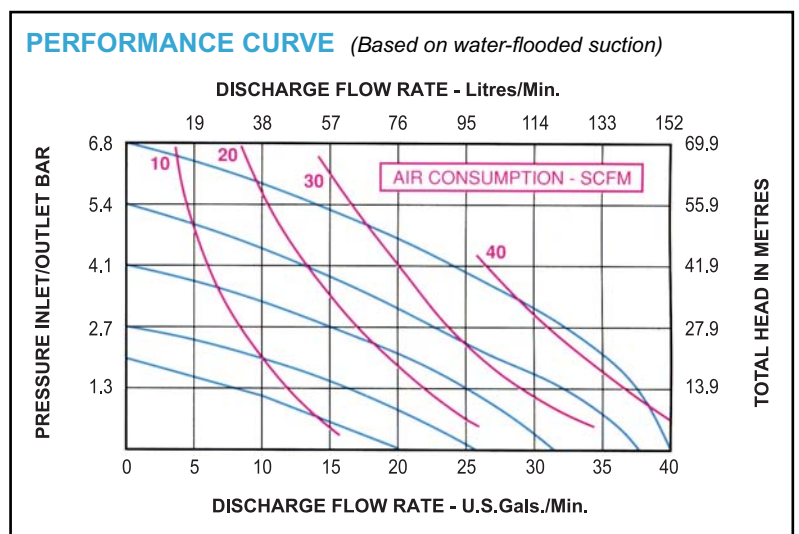
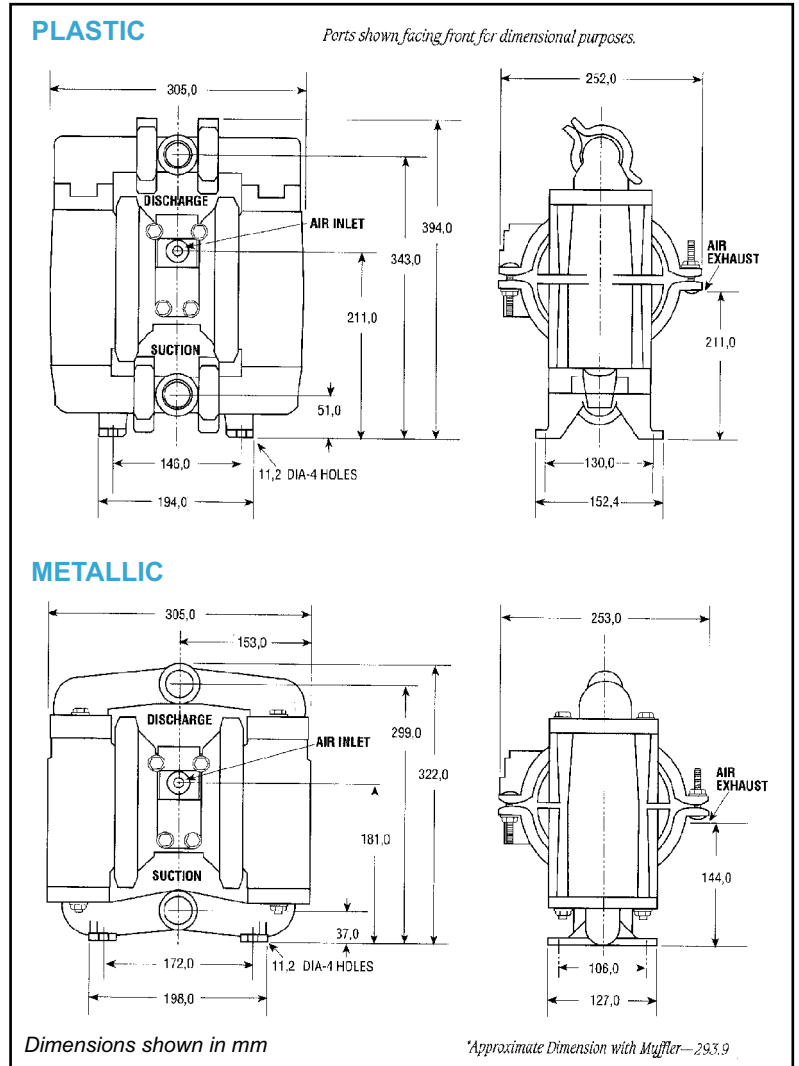
Geolast® properties are similar to that of Nitrile (Buna-N)

Optional elastomers are available

Glass filled polypropylene

SPECIFICATIONS

Capacity	Adjustable	0 to 152 litres/min
Maximum Temperature	KN-10 model	93°C
	Other plastic models	66°C
	Metallic models	93°C
Maximum Air Pressure	All models	6.8 bar
Minimum Air Pressure	All models	1.3 bar
Dry Lift Capacity @ 8 bar	Models with PTFE balls	3 metres
	Other models	4.5 metres
Maximum Solids		6.4 mm
Air Supply	Inlet	1/4" BSP Female
	Outlet	1/4" BSP Female
	Muffler supplied	
Fluid Inlet/Discharge		1" BSP Female



40mm Performance Plus Bolted Range



PLASTIC MODELS

PB-15	Polypropylene / Geolast®	20.8 kg
PT-15	Polypropylene / PTFE	20.8 kg
PE-15	Polypropylene / Santoprene®	20.8 kg
KT-15	PVDF/ PTFE	29.4 kg
KE-15	PVDF/ Santoprene®	29.4 kg

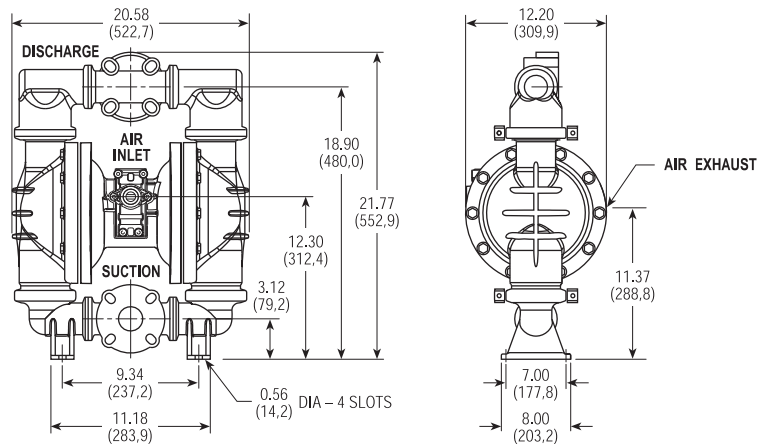
METALLIC MODELS

AB-15	Aluminium / Geolast®	27.2 kg
AE-15	Aluminium / Santoprene®	27.2 kg
AT-15	Aluminium / PTFE	27.2 kg
SB-15	316 Stainless Steel / Geolast®	60.0 kg
SE-15	316 Stainless Steel / Santoprene®	60.0 kg
SP-15	316 Stainless Steel / PTFE	60.0 kg

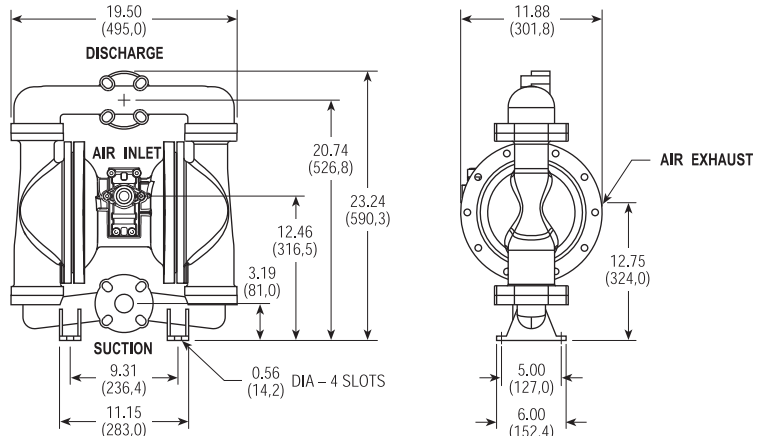
SPECIFICATIONS

Capacity	
Adjustable	0 to 492 litres/min
Maximum Temperature	
KT-15 model	93°C
Other plastic models	66°C
Metallic models	93°C
Maximum Air Pressure	
All models	8.2 bar
Minimum Air Pressure	
All models	1.3 bar
Dry Lift Capacity @ 8 bar	
Models with PTFE balls	3 metres
Other models	4.5 metres
Maximum Solids	6.4 mm
Air Supply	
Inlet	3/4" BSP Female
Outlet	3/4" BSP Female
<i>Muffler supplied</i>	
Fluid Inlet/Discharge	40mm Flange

PLASTIC

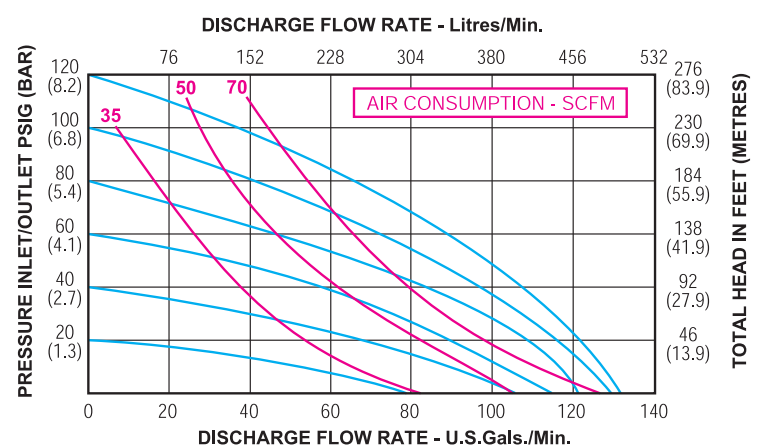


METALLIC



Dimensions shown in inches and (mm)

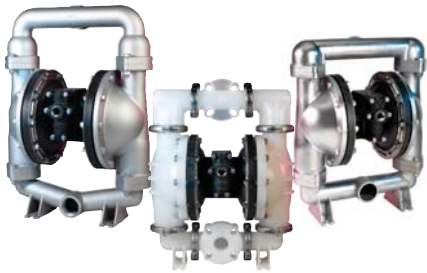
PERFORMANCE CURVE (Based on water-flooded suction)



NOTES

- Flanges are ANSI and DIN compatible.
- Threaded companion flanges available.

50mm Performance Plus Bolted Range



PLASTIC MODELS

PB-20	Polypropylene / Geolast®	21.7 kg
PT-20	Polypropylene / PTFE	21.7 kg
PE-20	Polypropylene / Santoprene®	21.7 kg
KT-20	PVDF / PTFE	31.3 kg
KE-20	PVDF / Santoprene®	31.3 kg

METALLIC MODELS

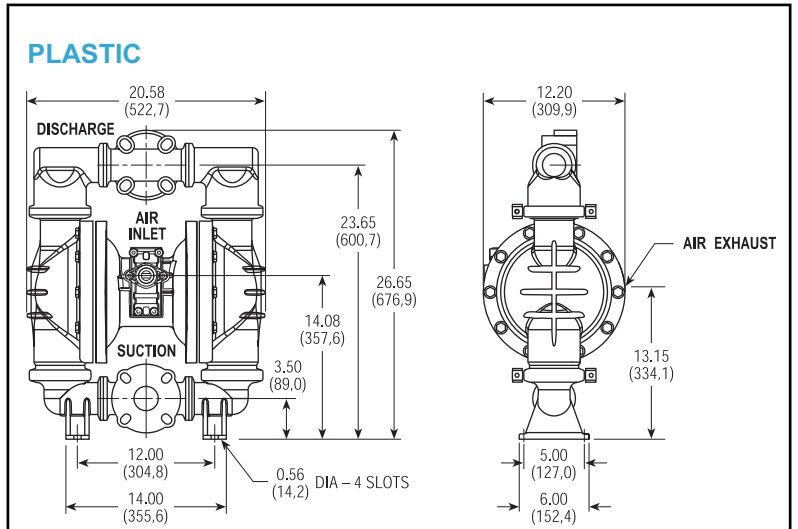
AB-20	Aluminium / Geolast®	27.7 kg
AE-20	Aluminium / Santoprene®	27.7 kg
AT-20	Aluminium / PTFE	27.7 kg
SB-20	316 Stainless Steel / Geolast®	60.0 kg
SE-20	316 Stainless Steel / Santoprene®	60.0 kg
SP-20	316 Stainless Steel / PTFE	60.0 kg

SPECIFICATIONS

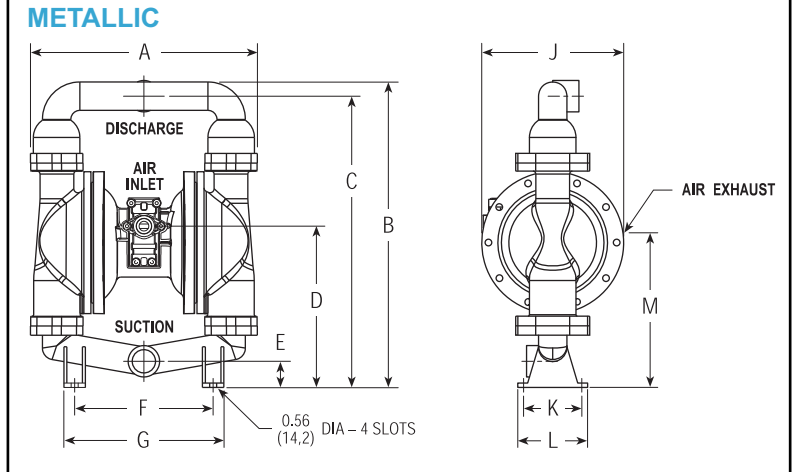
Capacity	Adjustable	0 to 681 litres/min
Maximum Temperature	KT-20 model	93°C
	Other plastic models	66°C
	Metallic models	93°C
Maximum Air Pressure	All models	8.2 bar
Minimum Air Pressure	All models	1.3 bar
Dry Lift Capacity @ 8 bar	Models with PTFE balls	3 metres
	Other models	4.5 metres
Maximum Solids		6.4 mm
Air Supply	Inlet	3/4" BSP Female
	Outlet	3/4" BSP Female
	Muffler supplied	
Fluid Inlet/Discharge		51mm Flange

NOTES

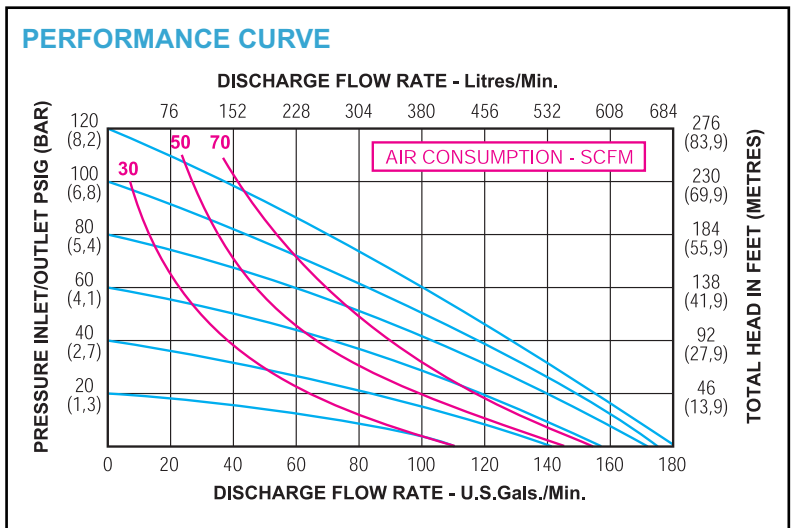
- Plastic Pumps - ANSI and DIN flanges *Companion flanges available.
- Stainless Steel Pump Option *tri clamp fittings - add x44 to Model No.



Dimensions in inches and (mm)



Model Size (Inlet/outlet)	Dimensions (mm)										
	A	B	C	D	E	F	G	J	K	L	M
50mm Aluminium (BSP)	495	667	636	352	57.1	225.5	304.8	309.9	127	152.4	327.6
50mm Stainless Steel (BSP)	495	625.3	584.2	382.3	89	304.8	351.5	309.9	127	152.4	358.1
Metal Flange Optional (50mm)	495	625.3	549.2	336.6	89	304.8	351.5	301.8	127	152.4	324





METALLIC MODELS

AL-30	Aluminium / Urethane	59.0 kg
AL-30E	Aluminium / Santoprene®	59.0 kg
AL-30T	Aluminium / PTFE	59.0 kg
AL-30V	Aluminium / Viton®	59.0 kg

SPECIFICATIONS

Capacity

Adjustable 0 to 965 litres/min

Maximum Temperature

All models 93°C

Maximum Air Pressure

All models 8.5 bar

Minimum Air Pressure

All models 1.3 bar

Dry Lift Capacity @ 6.8 bar

Models with PTFE balls 3 metres

Other models 4.5 metres

Maximum Solids

11.1 mm

Air Supply

Inlet 3/4" BSP Female

Air flow control valve supplied

Outlet 3/4" BSP Female

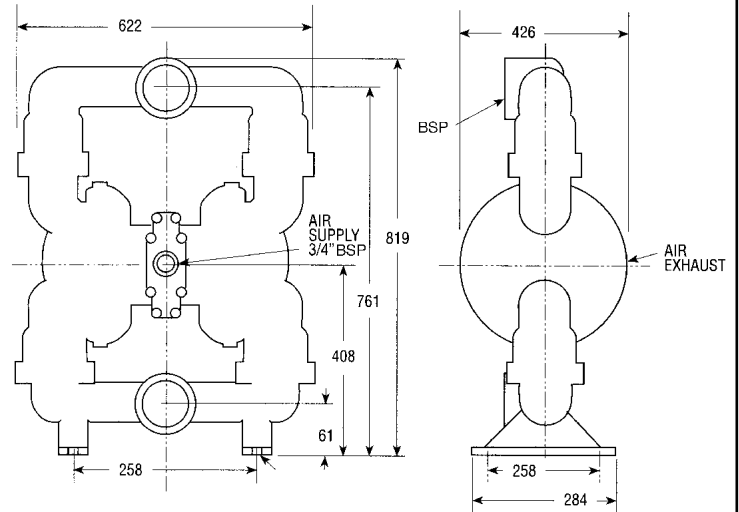
Muffler supplied

Fluid Inlet/Discharge

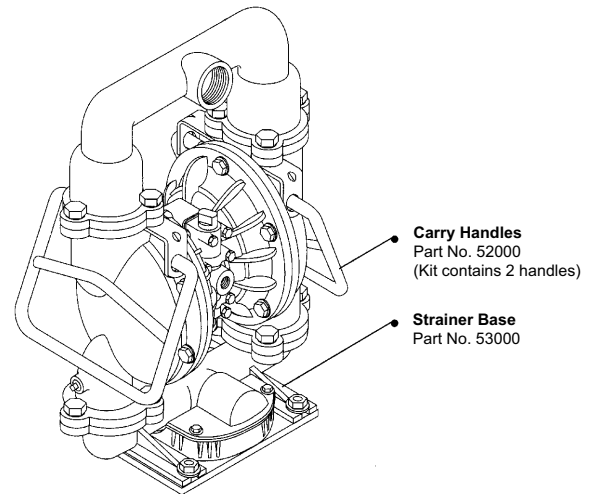
Metallic models 3" BSP Female

METALLIC

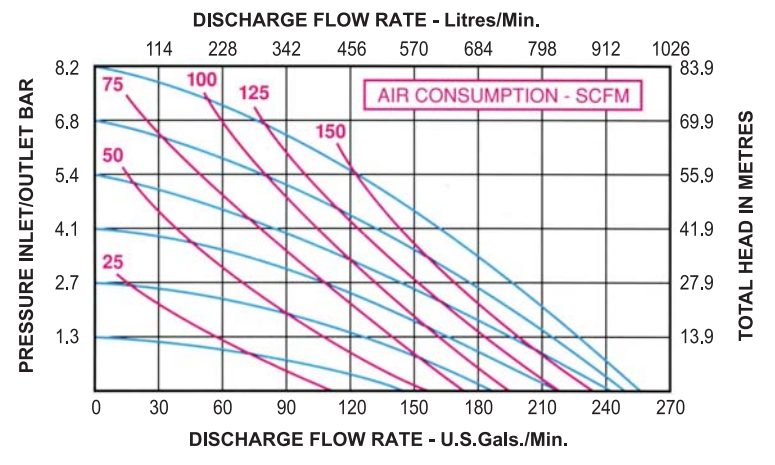
Ports shown facing front for dimensional purposes.



OPTIONAL 80mm PUMP ACCESSORIES



PERFORMANCE CURVE (Based on water-flooded suction)



PROCESS CONTROL FOR AQUAPLUS PUMPS

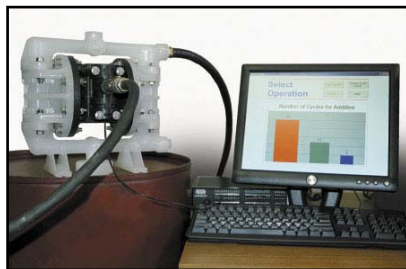
CYCLE COUNTING

Every time a cycle is completed, an impulse is sent from the cycle count valve to a data acquisition centre for automated input to a PC, PLC, relay or switch. Measuring how much fluid is being transferred through the pump based on the number of elapsed cycles is a convenient method for:

1. monitoring how much additive a system has received or
2. adding a precise dose of fluid based on a set number of cycles. Cycle based maintenance rather than time interval maintenance is ideal for systems where the fluid is hazardous or abrasive. Elapsed cycles can be monitored from any workstation within a network.

The cycle count valve is integral to the air valve. The sensor at the bottom of the air valve is provided (*see photo*). The configuration for data acquisition and control is not provided.

To order a pump with the cycle count valve assembled on the pump, add Option Code – A42 to the pump model number.



DRUM KITS

The many advantages of diaphragm pumps make them ideal for drum evacuation. When ordering an Aquaplus pump with a drum mounting kit, the bottom port is positioned for immediate assembly, and a universal bung adaptor and compatible suction tube are provided. All the components necessary for the perfect drum pump!

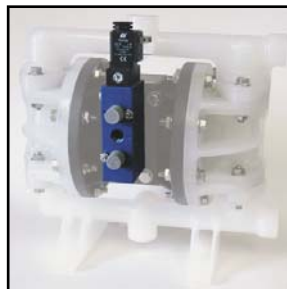
Add a 'D' after the model code (e.g. PED-05) to receive the drum configuration. Drum mounting kits are available for pumps up to 25mm in size. Contact your Aquaplus distributor for compatible pump models.



SOLENOID CONTROL

(Optional for Specialty Performance & Performance Plus)

The solenoid control valve is used for remote, electrical control of an Aquaplus pump through a PC, PLC, relay or switch. The solenoid control valve can be operated from any workstation in a network.



The solenoid control valve replaces the air valve assembly. The solenoid is mounted onto the intermediate using an adaptor plate. When energized, air is delivered to one side of the pump while simultaneously exhausting the other side. The reverse occurs when the valve is de-energised.

World standard connections and coil voltage are available. The control signal is a solution to 'on demand' fluid transfer requirements or the pump can be used to monitor flow rate.

To order the solenoid control valve, add-A43-XX to the model number with the voltage requirement replacing 'XX'..

Both the Cycle Counter and Solenoid control valves are designed to make your Aquaplus pump an integral component of your process. Chemical, ink, paint pigment and adhesive transfer are just a few of the literally thousands of applications requiring process control.

Note: The cycle count solenoid control valves can be used on pumps 10mm and larger. Contact your Aquaplus distributor for pricing and application information.

READING THE PUMP CURVE

You must know the following data:

1. Required discharge pressure.
2. Air pressure available at the air inlet of the pump.
3. Required flow rate.

To obtain discharge pressure

Using the performance chart for a 15mm pump shown:

If 5.4bar is available at the air inlet and the required capacity of the pump is 22.8L/min. Follow the blue concave curve at 5.4bar ❶ as it slopes to the right and intersects with the 22.8L/min vertical line. ❷ By tracking horizontally back to the left (Y) axis, the discharge pressure is ascertained – 4.4bar ❸.

To obtain the required air inlet pressure

Reverse the steps above:

Choose required discharge pressure 4.4bar ❸. On left (Y) axis, go directly across the graph to the intersection of the correct flow rate 22.8L/min ❷ then track up and back toward the left (Y) axis along the blue curve; and the correct required air pressure can be obtained (5.4 bar) ❶.

Note: If greater outlet pressure vs. air inlet pressure is required select a larger pump.

To obtain air consumption

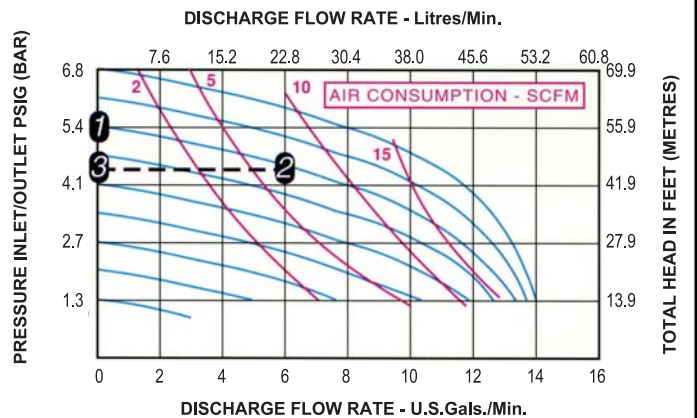
The convex red lines represent the air consumption (standard cubic feet per minute), and the closest red line to where the blue line and the flow rate intersect ❷ represents the air capacity required. On our example the air consumption would be approximately 6SCFM.

Note: To Convert SCFM to m³/h (N) multiply by 1.7.

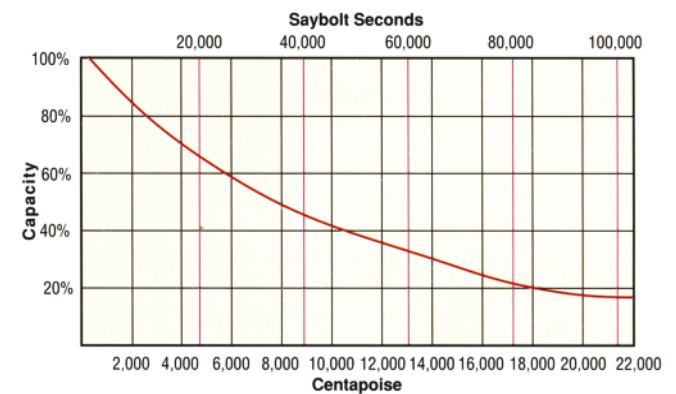
INSTALLATION

1. A lube-free, clean, dry compressed air source (or any non-flammable, compressed gas) is recommended. Use a filter that is capable of filtering out particles larger than 50 microns.
2. Pumps should be mounted in an upright position with the exception of the 6mm models which may be rotated 360° to suit the application.
3. Install a particle fluid filter on the fluid suction line when particles in the fluid exceed the maximum particle size specifications of the pump or particles are sharp enough to cut the diaphragms.
4. Never restrict fluid suction lines by means of a reduced pipe size (smaller than pump inlet size) or control the pump with valves on the fluid inlet side of the pump.
5. Limit fluid inlet pressure to 0.68bar.

PERFORMANCE CURVE



HIGH VISCOSITY APPLICATIONS



As you can see from the diagram above, as viscosities increase, the capacity of the pump decreases. Do not exceed 22,000 centipoise or 100,000 saybolt seconds on all 6mm to 80mm models. Do not exceed 4,000 centipoise or 18,000 saybolt seconds on 6mm models.

Some points to remember when pumping high viscosities:

1. Position the pump close to or below the level of the fluid source.
2. Suction lines should be increased in size up to three times the size of the pump manifold inlet. Dual manifolds may be used when available.
3. Start the pump slowly using a control valve on the air line.
4. Maximum air pressure required is reached when increasing the air pressure does not increase the flow rate.
5. If greater capacity is required, select a large pump.

The logo for Aquaplus, featuring the word "Aquaplus" in a stylized, blue, italicized font. The letter 'A' is large and has a curved underline that sweeps under the rest of the word. The background of the page consists of large, overlapping, curved shapes in shades of blue and white, creating a dynamic, water-like effect.

AVAILABLE FROM

For information on these products or for any specialised requirements
please contact your local Aquaplus distributor or visit our
website at www.aquapluspumps.com.au