

SUPERIOR PERFORMANCE

INNOVATIVE DESIGN

CUSTOM OEM SOLUTIONS

WHO WE ARE

Aquatec is a leading manufacturer of precision diaphragm pumps and flow control components. Since 1986, we've provided innovative, high-quality products for a wide range of fluid control applications. We've been awarded over 25 patents worldwide relating to our unique devices and their capabilities.

Our U.S. manufactured products are used within many different industries including: Water Purification, Biotechnology (Labwater), Beverage/Foodservice, RV/Marine, Agriculture, and Alternative Energy/Solar. Aquatec pumps are well suited for many General Industrial applications as well, particularly those with flow requirements less than 6 GPM/23 LPM and pressure requirements up to 180 PSI/12 Bar.

Aquatec works on a factory direct basis with OEMs in over thirty countries. Our product engineers work closely with these customers to help them meet precise performance requirements. Because we manufacture dozens of different configurations for each of our pump series, we can generally pinpoint an ideal configuration for most applications.

Aquatec also offers many of our popular configurations through authorized distributors worldwide. By purchasing in large quantities, these distributors can often provide better pricing and shorter lead times for small unit orders than Aquatec can offer directly. Specification sheets for some of these "standardized" offerings are included alongside certain product descriptions in this catalog.

It's very difficult to match our winning combination of engineering expertise, innovative design, quality components, and superior performance capabilities. Although we often customize product configurations to suit industry specific requirements (different component materials, sealing processes, fitting requirements, etc), the following general features list applies to all Aquatec 3-chamber and 5-chamber pumps:



- **Self-Priming capabilities**
- **Runs dry without damage**
- **Asymmetrical manifold design, reducing airlocks**
- **Closed, impervious diaphragm design**
- **Extremely quiet operation, minimal pulsations**
- **Corrosion resistant materials**
- **Multiple porting and mounting options**
- **Energy efficient**
- **AC and DC versions available**
- **UL, CSA, IAPMO, NSF, and CE versions available**

For additional information on our products, including technical specifications, please visit our website at www.aquatec.com. For assistance in locating an authorized Aquatec distributor, please e-mail distributorinfo@aquatec.com or phone our offices at **(949) 225-2200**.

THE AQUATEC ADVANTAGES

Since our inception, Aquatec has remained committed to manufacturing the highest quality, most innovative diaphragm pumps available. There are many subtle - but valuable - distinctions between our products and “similar looking” ones, including the following:

- **Our pumps use stainless steel fasteners,** highest grade plastic, powder coated diecast parts, and a patented wrap-around mylar label that minimizes corrosion (even in humid, damp environments). Our pumps often look new and sanitary after years of use.
- **Our pumps use non-perforated,** single piece diaphragms and a unique, patented clamping system that insures the longest possible product life at consistent, high operating pressures. Our patented diaphragm design also helps minimize leaks as we don't place any screws, etc. through the diaphragm itself.
- **Our patented diaphragm wobbler construction** improves pump performance and increases pump life due to its unique geometry and available anti-friction coating.
- **We manufacture our own motors** using the highest-grade ceramic magnets and extra heavy gauge motor shells. This combination insures maximum torque and operating efficiency, which means our pumps generally operate at either higher pressures or lower amperages than competitive ones.
- **Our pump-transformer combinations** are designed to operate at maximum efficiency under a wide range of voltage conditions without overheating or overloading. This saves thousands of kilowatt hours per year compared to less efficient pumps. Our transformers are both current and temperature protected for additional safety protection.
- **We manufacture the only pumps in the world** which have been tested and approved by NSF to meet Standard 58 (specific NSF standard for water purifying equipment). This component approval, by a world recognized approval agency, can be valuable in facilitating system approvals.
- **Our low voltage pumps (12V and 24V)** have their lead wires terminated with AMP Mate-N-Lok connectors. This allows for true “Plug and Play” electrical installations, because all connections are keyed and compatible with Aquatec's related valves, transformers, and pressure switches. Custom wire harnesses for multiple accessories are also available.
- **Aquatec pumps are manufactured and tested** to our consistently high quality standards. As a result, costly service calls and other pump related problems are minimized.



DIAPHRAGM PUMPS

BOOSTER PUMPS | RECIRCULATING PUMPS

6800/8800 SERIES

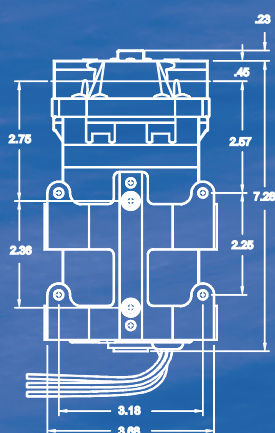
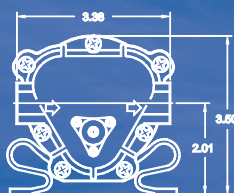


TYPICAL APPLICATIONS

Water Treatment/RO(*)
Carbonation Systems
Misting Systems
Alternative Energy/Solar
Medical Labwater
Laser Cooling Systems
Fuel Cells

(*) See sample data sheet at right for model number 6840-2J03-B221, our most popular Reverse Osmosis booster pump

FULL RANGE CAPABILITIES FOR 6800/8800 MODELS ARE .4LPM TO 2.5 LPM, 200PSI MAXIMUM.



Series) or electronic shut-off valves (ESO Series).

A typical "R.O. Kit" includes a booster pump, pressure switch, and a transformer. All system components are sold separately.

Aquatec's original product, and still the "global standard" in booster pump technology, providing reliable inlet pressure for efficient membrane utilization. These pumps are capable of continuous duty and are effective for recirculation based applications as well. They are ideally suited to work with hydro-pneumatic storage systems but are compatible with most hydraulic shut-off valves also.

These pumps are commonly used with one or more of our flow control components including: pressure switches (PSW Series), tank level controllers (TLC

AP	PERFORMANCE DATA					
DISCHARGE PRESSURE	PUMPHEAD MODEL				RECOMMENDED BY-PASS PRESSURE	
	68X0		68X1			
(PSI)	FLOW (LPM)	CURRENT (AMPS)	FLOW (LPM)	CURRENT (AMPS)	PSI	CODE
80	0.38	0.62	0.45	0.72	110	J
70	0.41	0.58	0.50	0.67	100	I
60	0.43	0.53	0.58	0.61	90	II
50	0.49	0.49	0.61	0.56	80	G
40	0.55	0.43	0.63	0.49	70	F
30	0.59	0.38	0.66	0.43	60	E
20	0.63	0.33	0.70	0.36	50	D
10	0.67	0.27	0.77	0.28	40	B
OPEN	0.73	0.23	0.84	0.23	30	A

COMPLETING THE PART NUMBER:

68XX-2X03-B221

- Flexible Mounting Plate (Other Types Available)
- See Performance Data for Recommended By-pass Pressure and Code
- By-Pass Pressure Relief Control Valve
- Select Pumphead Model From Performance Data Chart
- 2 = Open Ports for 1/4" Compression Fitting
- 4 = Push to Connect Ports for 1/4" Tubing
- 5 = Push-to-Connect Ports for 3/8" Tubing

TECHNICAL SPECIFICATIONS:

POWER: Safe operation with low energy (24 watts), low voltage (12-24V) motors. Can be used with compatible transformers (100VAC, 120VAC, 230VAC), to be ordered separately.

ENVELOPE DIMENSIONS: Approximately 3"x 4"x 7", 6 lbs.

MOUNTING: Our patented "flex-mount" baseplate significantly dampens vibration and reduces noise. Other steel mounting baseplates and "universal" baseplates are available at no additional cost. Pump performance may be affected by location and positioning.

CONTROL OPTIONS: Internal Bypass (20-200 psi)

FITTINGS: Available options include built-in 3/8", 1/4", or 5/16" John Guest half cartridges

PRIMING CAPABILITIES:

	68X0	68X1
PRIME (FEET)	7	8

DEMAND/DELIVERY PUMPS TRANSFER/DISPENSING PUMPS

DIAPHRAGM PUMPS

5800/7800 SERIES

These pumps are designed for intermittent duty, though most models can be run continuously for hours at a time. They are commonly used either to pressurize water from an atmospheric tank, to deliver purified water to a specific point of use, or simply to increase pressure when required.

These pumps can be controlled by either a pressure switch ("demand" mode) or an external power control device ("delivery" mode). When required, an integrated bypass can be incorporated to help regulate pressure levels.



TYPICAL APPLICATIONS

Water Treatment/RO
Beverage/Foodservice(*)
Distillation Equipment
Agricultural Spraying
General Industrial
Automotive

(*)See sample data sheet at right for model number 5852-7E12-B584, a basic demand/delivery pump

PERFORMANCE DATA										
DISCHARGE PRESSURE (PSI)	PUMPHEAD MODEL									
	58X0		58X1		58X2		58X3		58X4	
	FLOW (GPM)	CURRENT (AMPS)	FLOW (GPM)	CURRENT (AMPS)	FLOW (GPM)	CURRENT (AMPS)	FLOW (GPM)	CURRENT (AMPS)	FLOW (GPM)	CURRENT (AMPS)
70	0.54	1.41	0.67	0.48	0.87	0.53	0.95	0.68	1.10	0.75
60	0.60	1.33	0.73	0.45	0.94	0.54	1.00	0.63	1.17	0.78
50	0.66	1.25	0.78	0.41	0.96	0.52	1.06	0.60	1.16	0.64
40	0.70	1.32	0.82	0.37	0.98	0.48	1.14	0.53	1.24	0.58
30	0.76	1.33	0.87	0.34	1.02	0.41	1.20	0.48	1.30	0.52
20	0.83	1.28	0.91	0.30	1.08	0.38	1.27	0.42	1.37	0.47
10	0.90	1.23	0.92	0.26	1.16	0.32	1.34	0.38	1.44	0.42
OPEN	0.97	1.21	0.93	0.22	1.22	0.34	1.40	0.38	1.50	0.40

COMPLETING THE PART NUMBER:

58XX-7X12-B584

- Steel Mounting Plate (Other Types Available)
- Desired Shut-off Pressure & Code
A = 30PSI C = 45PSI E = 60PSI
B = 40PSI D = 50PSI F = 70PSI
- 70 PSI Pressure Switch Limit (Maximum Flow Components)
- Select Pumphead Model From Performance Data Chart
- 3 = Open Ports for 3/8" Compression Fitting
5 = Push-to-Connect Ports for 3/8" Tubing

TECHNICAL SPECIFICATIONS:

POWER:

Available motors from 12VDC to 230VAC, energy requirements between 25W-100W (depending on flow, pressure). Can be used with compatible transformers and/or DC power supplies, to be ordered separately. Standard terminations are 12", stripped end leadwires. Connectors and power cords are also available.

ENVELOPE DIMENSIONS:

Approximately 3"x 4"x 7", weighing 6 lbs.

MOUNTING:

All positions. Standard offering is a steel mounting base with four hollow rubber grommets.

CONTROL OPTIONS:

Internal Bypass (20-200 psi), Pressure Switch (40-100 psi)

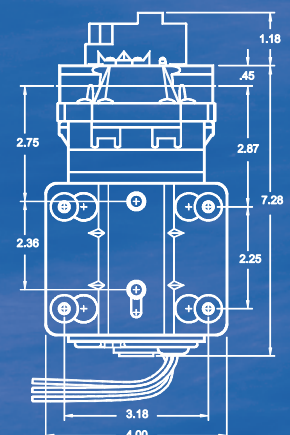
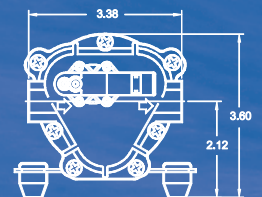
FITTINGS:

5800 Series options include built-in 3/8", 1/4", or 5/16" John Guest half cartridges. 7800 Series options include 3/8" or 1/2" hose barb, quick connect fittings. For additional information on fittings, please refer to page 21.

PRIMING CAPABILITIES:

	58X0	58X1	58X2	58X3	58X4
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FULL RANGE CAPABILITIES FOR
5800/7800 MODELS ARE .2 GPM
TO 2.0 GPM, 150 PSI MAXIMUM.



HIGH FLOW PUMPS | TRANSFER PUMPS



550 SERIES

Aquatec's 550 Series delivers powerful flow rates up to 5.5 GPM/21 LPM at pressures up to 80 PSI/5.5 Bar. Our patented 5-chamber diaphragm and piston design allows these pumps to operate at exceptionally quiet noise levels and with minimal pulsations.

Like our smaller, 3-chamber 5800/7800 Series, these pumps are designed for intermittent duty, though most models can be run continuously for hours at a time. These pumps are commonly used either to pressurize water from an atmospheric tank, to deliver purified water to a specific point of use, or simply to increase pressure when required.

TYPICAL APPLICATIONS

Water Vending

General Industrial

Agricultural Spraying(*)

Alternative Energy/Solar

(*) See sample data sheet at right for model number 5513-1E77-M638, a popular, specially sealed agricultural pump

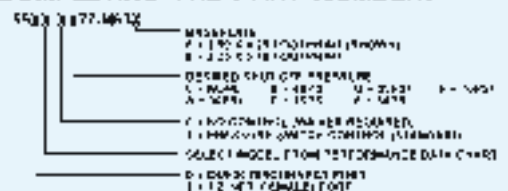
***FULL RANGE CAPABILITIES FOR
550 MODELS ARE .5 GPM TO
6.0 GPM, 80 PSI MAXIMUM**



PERFORMANCE DATA

Performance Data								
Discharge	Pumphead							
Pressure	55X0		55X1		55X2		55X3	
(PSI)	Flow (GPM)	Current (AMPS)	Flow (GPM)	Current (AMPS)	Flow (GPM)	Current (AMPS)	Flow (GPM)	Current (AMPS)
70	1.10	7.20	1.80	11.20	2.50	15.00	3.00	18.00
60	1.25	7.00	2.00	10.50	2.65	14.00	3.20	16.30
50	1.40	6.60	2.10	9.50	2.80	12.80	3.55	14.60
40	1.60	6.20	2.30	8.50	3.00	11.20	3.80	13.00
30	1.80	5.20	2.50	7.20	3.25	9.80	4.10	11.00
20	2.10	4.60	2.75	5.80	3.50	8.00	4.50	9.00
10	2.40	3.60	3.05	4.60	3.90	6.20	4.90	7.00
OPEN	2.75	2.50	3.35	3.20	4.25	5.00	5.30	5.50

COMPLETING THE PART NUMBER:



TECHNICAL SPECIFICATIONS:

POWER:

Available motors from 12VDC to 230VAC, energy requirements between 50W-200W (depending on flow, pressure). Can be used with compatible transformers and/or DC power supplies, to be ordered separately. Standard terminations are 12", stripped end AWG leadwires, with connectors and power cords also available

ENVELOPE DIMENSIONS::

Approximately 4"x 5"x 8", weighing 8 lbs

MOUNTING:

All positions. Standard offering is a steel mounting base with four hollow rubber grommets

CONTROL OPTIONS:

Internal Bypass (20-100 psi), Pressure Switch (40-70 psi)

FITTINGS:

Pumphead options include 3/4" openings (for use with 3/8", 5/8", 1/2", and 3/4" hose barb, quick connect fittings), and 1/2" NPT female ports, and John Guest 1/2" and 3/8" fittings. For additional information on fittings, please refer to page 21.

2800 SERIES

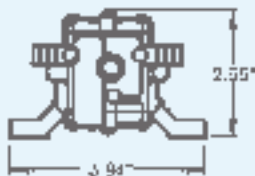
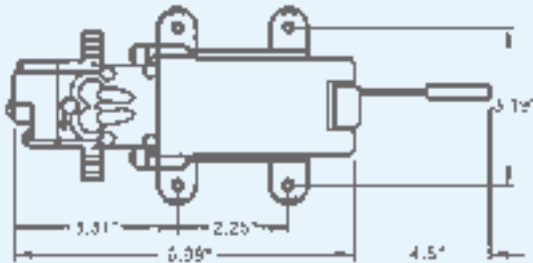
The 2800 Series is a “mini” delivery pump, designed for applications where package size is a primary concern. This pump delivers up to 1 GPM at pressures up to 40 PSI. It is designed for intermittent duty but, depending on the application, can be run continuously for hours at a time.

These pumps are well suited for a variety of applications, particularly bottled water delivery, agricultural spraying and soil extraction.



TYPICAL APPLICATIONS

Bottled Water Delivery
General Industrial
Agricultural Spraying
Alternative Energy/Solar



TECHNICAL SPECIFICATIONS:

POWER:	12VDC
ENVELOPE DIMENSIONS:	Approximately 2.5"x4"x7", weighing 1.5 lbs
MOUNTING:	Integrated flexible, vibration dampening baseplate
CONTROL OPTIONS:	Pressure Switch (40 psi)
FITTINGS:	3/8" hose barb

550/5800 SERIES



The Aquajet “Smart Pump” Series, our newest and most technologically advanced pumps, integrates advanced digital controllers with our proven 3-chamber and 5-chamber diaphragm pumps. The result is a patent-pending, pump series which maintains constant pressures (± 2 PSI) for variable flow rates across their entire performance range. Using integrated pressure transducers, these pumps monitor pressure fluctuations and can instantly adjust their operating speeds as required.

TYPICAL APPLICATIONS

Beverage/Foodservice
Alternative Energy/Solar
General Industrial
Plumbing

(*) See sample performance curves at right for 5-chamber model number 5502-1DN2-V77D, 3-chamber model number 5853-GE12-V81D and model number 5853-GB12-V81D.

***FULL RANGE CAPABILITIES FOR 550/5800 VARIABLE SPEED MODELS ARE 1.5 GPM TO 5.0 GPM, 150 PSI MAXIMUM.**

In the past, most automatic demand pumps were designed for a specific flow rate. If variable flow rates were required (i.e. multiple fixtures drawing fluid from a single source), then accumulator tanks become necessary with common pressure fluctuations of ± 20 PSI.

Proudly, Aquatec has changed all that. Our digitally controlled, variable speed pumps will alter your perceptions of “what’s possible” using current diaphragm pump technology.

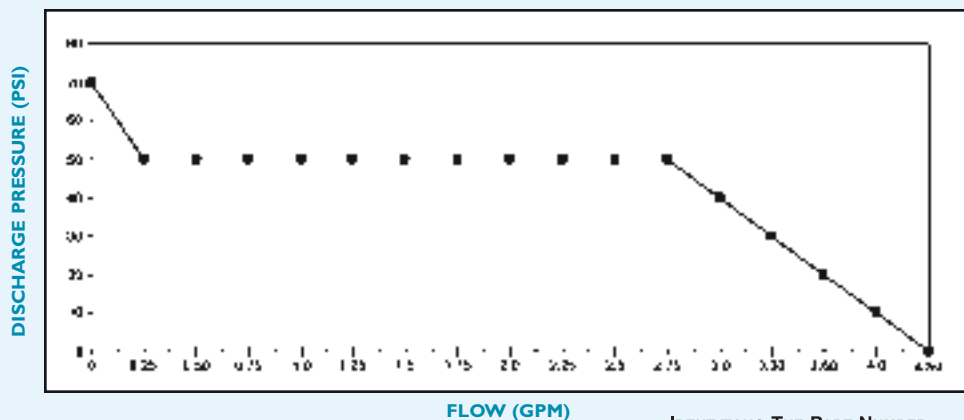
FEATURES AND BENEFITS:

- Digitally controlled, with variable speed capabilities
- Constant pressure (± 2 PSI) across multiple outlets
- No accumulator tanks or pressure switches required
- Reduced system bacteria
- Reduced space requirements
- Plug-and-play performance
- Fully NSF Approved

TECHNICAL SPECIFICATIONS:

POWER:	Currently available with 115V motors, energy requirements between 25W-100W (depending on flow, pressure). Standard terminations are provided with power cords.
ENVELOPE DIMENSIONS::	Approximately 4"x 5"x 8", weighing 8 lbs
MOUNTING:	Standard offering is an integrated, patented base unit which houses the digital controller.
FITTINGS:	5800 Series options include built-in 3/8", 1/4", or 5/16" John Guest half cartridges. 550 Series options include 3/4" openings for use with 3/8", 5/8", 1/2", and 3/4" hose barb, quick connect fittings, and John Guest 1/2" and 3/8" fittings. For additional information on fittings, please refer to page 21.

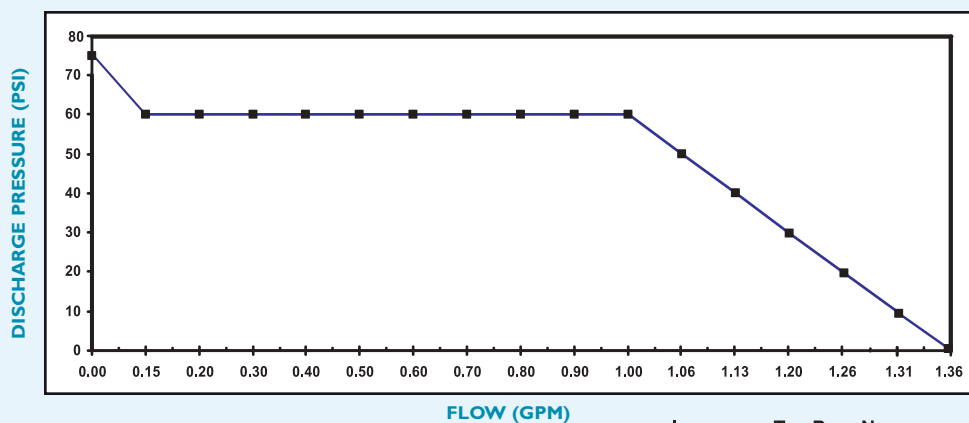
550 SERIES, 50 PSI



IDENTIFYING THE PART NUMBER:

- 5502-IDN2-V77D
- BASEPLATE AS SHOWN
 - 115VAC MOTOR
 - EMIRFI NOISE SUPPRESSION
 - BEVERAGE AND DRINKING WATER DELIVERY
 - NSF OR FDA LISTED MATERIALS
 - PRESSURE REGULATED AT 50 PSI
 - PRESSURE SENSING MOTOR CONTROLLER
 - 3.0 DEGREE CAM
 - QUICK DISCONNECT PORT
 - SERIES 550 PUMP

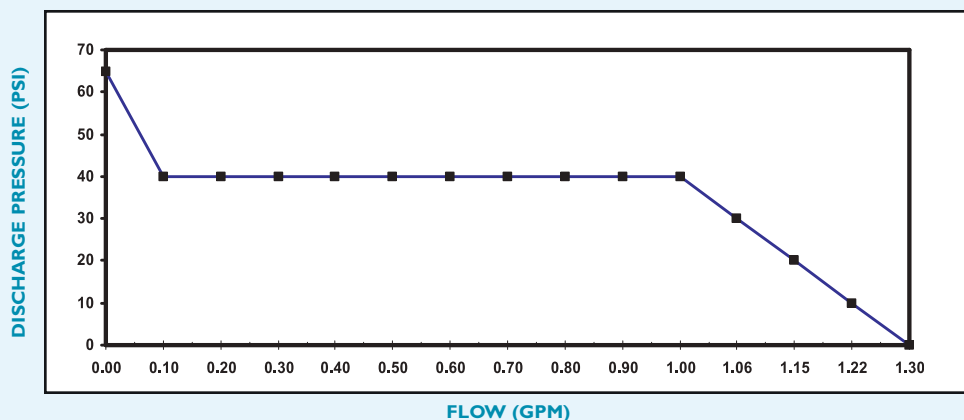
5800 SERIES, 60 PSI



IDENTIFYING THE PART NUMBER:

- 5853-GE12-V81D
- BASEPLATE AS SHOWN
 - 115VAC MOTOR
 - EMIRFI NOISE SUPPRESSION
 - BEVERAGE AND DRINKING WATER DELIVERY
 - NSF OR FDA LISTED MATERIALS
 - PRESSURE REGULATED AT 60 PSI
 - PRESSURE SENSING MOTOR CONTROLLER
 - 3.5 DEGREE CAM
 - PUSH-TO-CONNECT PORTS FOR 3/8" TUBING
 - SERIES 5800 PUMP

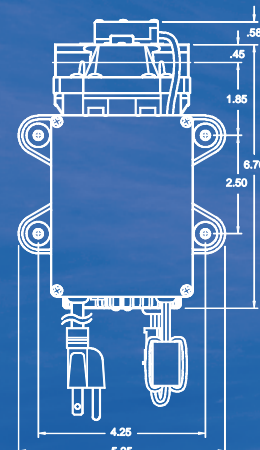
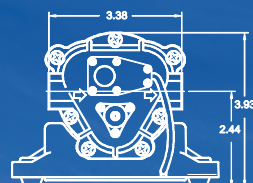
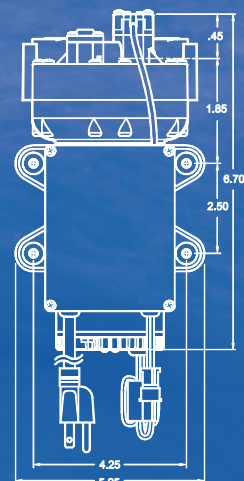
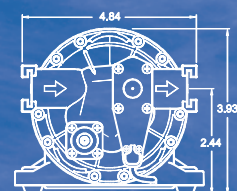
5800 SERIES, 40 PSI



IDENTIFYING THE PART NUMBER:

- 5853-GB12-V81D
- BASEPLATE AS SHOWN
 - 115VAC MOTOR
 - EMIRFI NOISE SUPPRESSION
 - BEVERAGE AND DRINKING WATER DELIVERY
 - NSF OR FDA LISTED MATERIALS
 - PRESSURE REGULATED AT 40 PSI
 - PRESSURE SENSING MOTOR CONTROLLER
 - 3.5 DEGREE CAM
 - PUSH-TO-CONNECT PORTS FOR 3/8" TUBING
 - SERIES 5800 PUMP

DIAPHRAGM PUMPS





Over four years ago, Aquatec introduced our patented variable speed technology, the Aquajet RV Series, to an industry that had seen little water system advancement since the 1980's. Leading RV manufacturers including Monaco Coach, Fleetwood, Airstream, Newmar, Foretravel, and Country Coach were among the first to upgrade their high-end water systems by including our Aquajet RV pumps as standard equipment.

Two years later, Aquatec introduced our ES version, an efficiency model designed for smaller coaches and aftermarket installations. For the very first time, RV

owners everywhere could enjoy the same upgraded, "just like at home" water system being offered on many of the world's finest coaches.

Today, as variable speed technology is becoming increasingly popular throughout the RV industry, Aquatec remains committed to its continued product leadership. Our unmatched experience with both RV manufacturers and owners has enabled us to provide "the best RV pumps in the world".

- **Smoother flows without rapid cycling**

Aquatec's patented variable speed controllers, improved with additional "smart" features, eliminate all rapid cycling within normal flow ranges. Our 5-chamber construction, along with our patented screwless diaphragm, minimizes pulsation found in competitive pumps.

- **Automatic adjustment for easier installation**

Improved electronic controls provide automatic adjustments, insuring proper, "Plug and Play" operation regardless of plumbing and/or electrical system design. Plus, our new universal mounting option makes retrofits easier than ever.

- **Improved safety features**

Valuable new safety features, includes low voltage protection (protects the pump from weakened battery power conditions) and a maximum pressure bypass (protects the coach's plumbing system from excess pressurization). Such safety features are presently unavailable on competitive RV pumps.

- **Greater flows, higher pressures**

Aquatec's patented 5-chamber design delivers the strongest flow rates and highest pressures available, even with multiple fixtures operating simultaneously. Our RV pumps automatically overcome the pressure drops often caused by extensive plumbing and/or filtration systems.

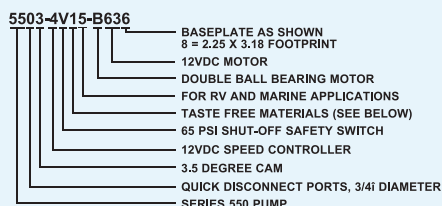
- **Virtually silent operation**

Due to our slower motor speeds and superior hydraulic energy transmission, the Aquajet Series is significantly quieter (as much as 90%) than competitive pumps at comparable performance levels.

AQUAJET RV

PERFORMANCE DATA				
DISCHARGE PRESSURE		FLOW		CURRENT
(PSI)	(BAR)	(GPM)	(LPM)	(AMPS)
65	4.4	0.70	2.65	10.00
60	4.0	1.00	3.78	10.00
50	3.4	1.50	5.78	10.00
40	2.7	2.20	8.32	10.00
30	2.0	2.80	10.50	10.00
20	1.4	3.80	14.36	9.70
10	0.7	4.50	17.01	8.40
OPEN	OPEN	5.00	18.90	7.20

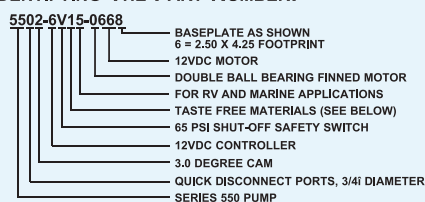
IDENTIFYING THE PART NUMBER:



AQUAJET ES

PERFORMANCE DATA				
DISCHARGE PRESSURE		FLOW		CURRENT
(PSI)	(BAR)	(GPM)	(LPM)	(AMPS)
65	4.4	0.60	2.27	6.50
60	4.0	0.70	2.65	6.50
50	3.4	1.00	3.78	6.50
40	2.7	1.60	6.05	6.50
30	2.0	2.30	8.70	6.50
20	1.4	2.70	10.22	5.80
10	0.7	3.00	11.35	4.60
OPEN	OPEN	3.40	12.87	3.60

IDENTIFYING THE PART NUMBER:



TECHNICAL SPECIFICATIONS:

MOTOR:

TYPE: 12VDC, permanent magnet, totally enclosed, non-ventilated

LEADS: 14 AWG, 12" long, Black negative, Red positive.

**TO AVOID PERMANENT ELECTRONIC DAMAGE,
DO NOT REVERSE POLARITY.**

SPEED CONTROLLER:

Factory set to approximately 10 Amps Max. Thermally protected to avoid component damage. Will reset automatically.

CAUTION:

Exterior surfaces (heat sink), may exceed 150°F after only 15 minutes of operation.

COMPONENT MATERIALS:

PUMP HOUSINGS: Polypropylene

CONTROLLER HOUSING: Nylon

VALVES: EPDM

DIAPHRAGM: Santoprene

FASTENERS: Stainless Steel

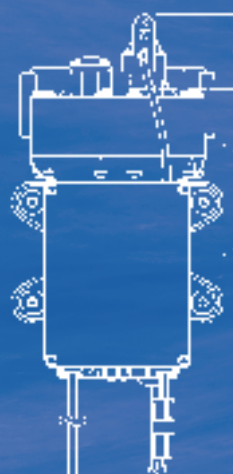
LIQUID TEMPERATURE: 140°F (60°C) Max.

PUMP CERTIFICATIONS: IAPMO, NSF

PRIMING CAPABILITIES: 13 Feet

FITTINGS:

TYPE	SHAPE	HOSE BARB SIZE		
		1/2"	5/8"	3/4"
HOSE BARB	STRAIGHT	QBS-554	QBS-555	QBS-556
HOSE BARB	ELBOW	QBE-554	QBE-555	QBE-556



DIAPHRAGM PUMPS

PERMEATE PUMPS (ERP 1000, ERP 500)

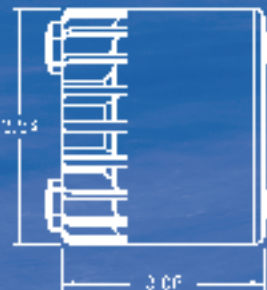


Aquatec's original Permeate Pump (ERP1000) is a simple, yet revolutionary, device. Powered only by the hydraulic energy of brine water usually lost to the drain (i.e. no electricity required), the Permeate Pump forces product water into the storage tank, reducing membrane back pressure and maximizing available feed pressure. These pumps dramatically improve the efficiency of R.O. water production, reducing wastewater by up to 80%. In other words, if your current system requires 10 gallons of tap

water to produce a gallon of pure water (10:1), adding a Permeate Pump should reduce this ratio below 3:1.

Permeate Pumps can also bring storage tanks up to line pressure and then shut the system down when these tanks reach capacity, eliminating the need for a hydraulic shut-off valve. Other benefits include higher delivery pressures, faster R.O. water production, superior water quality, and extended filter/membrane life.

Our newest Permeate Pump (ERP 500) is specifically designed for residential applications (less than 50 GPD) where overall system noise is a key concern. The ERP 500 includes a specially designed insert which helps the system operate in near silence, eliminating the occasional clicking or gurgling sounds that can otherwise occur. Both the ERP1000 and the ERP500 can easily be retrofitted to upgrade existing R.O. systems.



- **Requires no electricity, powered by energy from brine water**
- **Improves recovery rates by as much as 400%**
- **Reduces waste water by as much as 80%**
- **Enhances contaminant rejection**
- **Ideal for membranes rated from 10-100 GPD**
- **Effective for inlet water pressure as low as 30 psi**
- **Increases membrane life, lowers "TDS creep"**
- **Fills product tank up to 4 times more rapidly**
- **NSF approved (Standard 58)**
- **Two year manufacturer's warranty**

For Additional Information, Please See the Applications Guide on Page 22

Aquatec offers a specially designed, non-electric Automatic Shut-Off Valve (ASV2000) for R.O. systems using our Permeate Pumps and a hydropneumatic storage tank. They are particularly beneficial in low to moderate usage applications, as when water is drawn a glass at a time, because they prevent the system both from needless overuse and from "TDS creep". These valves shut off the feedwater when the storage tank pressure reaches 90% of the feed pressure, where standard valves are set at only 67%. This higher setting increases the overall amount of stored water and improves flow rates from the faucet. The ASV2000 includes 1/4" John Guest fittings for ease of installation, and are popular both with OEMs (system builders) and as aftermarket upgrades for non-manifolded R.O. systems.



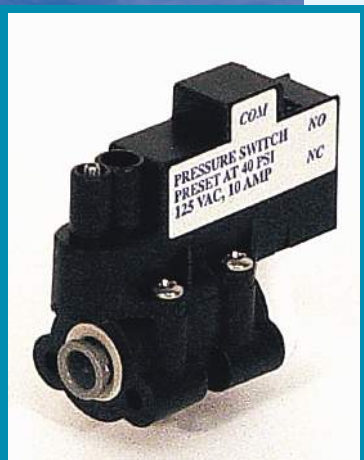
- **Designed specifically to maximize benefits associated with Aquatec's Permeate Pump**
- **Increases flow and pressure**
- **Increases storage tank capacity**
- **Improves water quality**
- **Extends membrane and diaphragm life**
- **Reduces TDS creep**



For Additional Information, Please See the Applications Guide on Page 22

FLOW CONTROL COMPONENTS

PRESSURE AND VACUUM SWITCHES (PSW/VSW SERIES)



Our Pressure and Vacuum Switches (PSW and VSW Series) provide a full range of in-line pressure sensing electrical switches. These switches, typically mounted near a hydropneumatic holding tank, automatically control the system pump and/or solenoid valve as required. They can also be used to enable hydraulic shut-off valves to operate reliably and positively.

Aquatec's Pressure and Vacuum Switches are normally closed and can be pre-set at various shut-off pressures.

If necessary, they can be adapted to operate as normally open switches through minor modifications to the wire terminal connector. The PSW/VSW Series also includes a modular connector for plug-and-play integration with Aquatec's other system components.

PSW



VSW



VSW



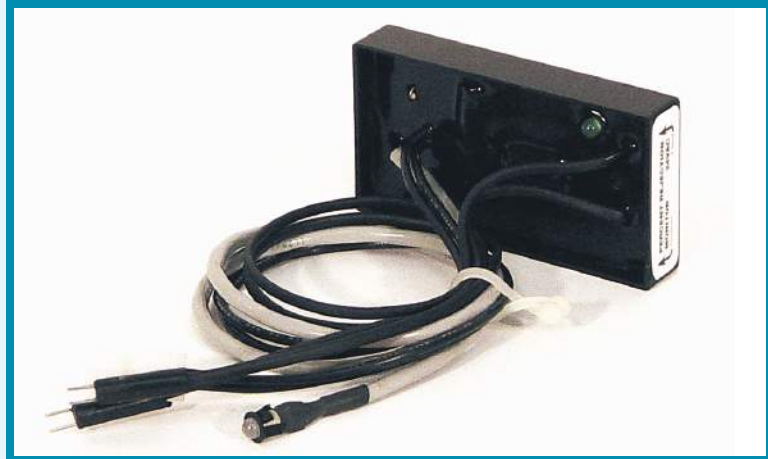
- **NSF Approved**
- **Flow Through Design (i.e. no "Dead Legs")**
- **Switching Capabilities of 4-15 amps, 0-230 volts**
- **Single Pole, Double Throw**
- **Adjustable within 3-6 defined ranges (full vacuum to 150 psi)**

MODEL NUMBER	NOMINAL SETTING	RANGE ADJUSTMENT
VSW X10	10 inHg	0-30 inHg
PSW X20	20 psi	15-30 psi
PSW X40	40 psi	30-60 psi
PSW X60	60 psi	50-90 psi
PSW X80	80 psi	70-110 psi
PSW X100	100 psi	90-150 psi

TECHNICAL SPECIFICATIONS:

WETTED MATERIALS	Polypropylene, Santoprene, EPDM
SWITCH RATING:	250 VAC, 15 amp, UL listed
AVAILABLE SIZES (PSW):	1/4", 3/8", 5/16" (8mm) John Guest
AVAILABLE SIZE (VSW):	5/16" (8mm) John Guest
AVAILABLE SIZE (LPS):	1/4" NPT
ELECTRICAL CONNECTION:	AMP Mate-N-Lok

Our PRM Series helps insure your filtration system is functioning properly and alerts you whenever servicing is required. They've become popular among a growing range of Aquatec customers, from sophisticated labwater system manufacturers to basic aquarium owners. They provide extra level of insurance that is oftentimes required.



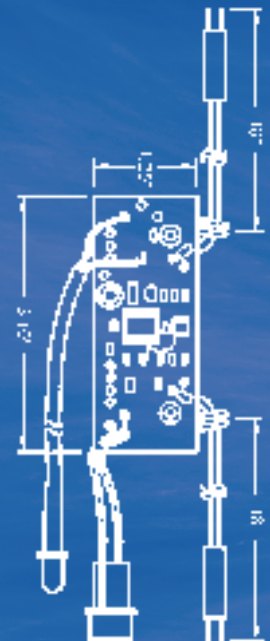
These monitors are actually comparative circuits that continually monitor membrane performance. LED output indicates whenever the membrane needs service or replacement. The PRM Series incorporates logic output which is suitable for interface with alarms or other external controls.

The PRM Series includes two (2) sensor probes which fit into standard 1/4" John Guest or Jaco fittings. The PRM Series is available in several different electrical configurations, including 24VAC, 24VDC, 12VDC, 5VDC and 3VDC (24VAC version shown above). Our miniaturized 3VDC circuit is compact enough to be mounted on the backside of a standard, 3V battery holder.

- **Compares conductivity of feed vs. product water**
- **Monitors against predetermined TDS rejection ratio (75%-95%)**
- **Auto sampling at predetermined intervals (5 sec to 15 min)**
- **Dual color LED indicators and logic output**
- **Low energy sensing circuit for extended probe and battery life**
- **Hermetically sealed circuitry**

TECHNICAL SPECIFICATIONS:

WETTED MATERIALS	Polypropylene, Stainless Steel (316 Series)
POWER REQUIREMENTS:	24 VAC, 50/60 Hz, 15 mA, 3-24 VDC
OUTPUT MODE, 12-24V:	Dual color, continuous LED output
OUTPUT MODE, 3-5V:	Dual color, flashing LED output
OPTIONAL ATTACHMENTS:	Mini stereo jack for custom displays



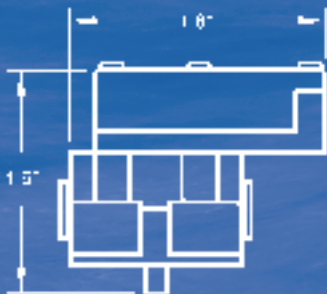


Whenever you need to know actual operating pressure, Aquatec's stand-alone Pressure Transducers provide an effective, economical solution. These devices offer true linear pressure sensing capabilities in a compact, robust housing. They can either be used with a digital display, connected to a circuitboard, or connected directly to a controller card.

Our Transducers come with a strained relief, 6 foot long leadwire and have a typical operating range of 0-100 PSI.

Porting is a flow-through design and available with John Guest "quick connect" fittings for 1/4", 5/16" (8mm), and 3/8" tubing. The 4 wire system provides linear low level output from a piezoresistive strain gauge. A proportional voltage output is generated which represents the measured pressure.

- **NSF Approved**
- **Flow-Through Design (i.e. no "Dead Legs")**
- **1-100 PSI Sensing Capability**
- **0-150 mV Output**



TECHNICAL SPECIFICATIONS:

WETTED MATERIALS:	Polypropylene, Santoprene, EPDM
POWER REQUIREMENTS	3-12VDC
DIMENSIONS AND WEIGHT:	Approx 2" x 1" x 1", 4 oz.
PROOF PRESSURE	150 psi
SENSITIVITY:	.25mV/V/psi
LINEARITY AND HYSTERESIS:	5%
INPUT RESISTANCE:	4.1 kOHMs

LEAK DETECTION SENSORS (LDS SERIES) TANK LEVEL CONTROLLERS (TLC SERIES)

FLOW CONTROL COMPONENTS

Aquatec's Leak Detection Sensors and Tank Level Controllers allow you to monitor fluid levels using multiple sensors. These sensors are placed either in the projected path of leaking water (LDS Series) or attached to a non-metallic holding tank (TLC Series).

Our LDS Series has been engineered to prevent serious water damage in the event of a system malfunction. Whenever water is detected, the LDS valve closes automatically and the auxiliary output is immediately de-energized.

Our TLC Series utilizes a switch/valve combination which automatically shuts off feed water at a predetermined "full level" and then reopens the integral feed water valve at a second "refill level". The TLC Series provides a switched output to control a pump or other accessory.

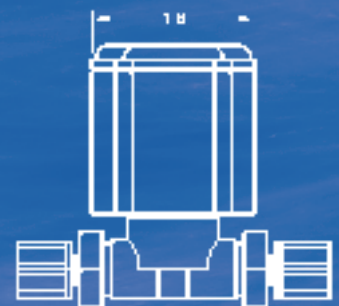
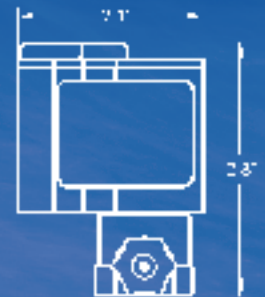
Both the TLC and LDS Series are powered by Aquatec's patented, energy saving 24V coil, which operates without heat build-up or AC coil noise. Both products are powerful enough to open against pressures up to 100 PSI. All integrated control circuitry is hermetically sealed for extended life and maximum reliability under severe operating conditions.

These devices can include a modular connector for plug-and-play integration with Aquatec's other system components.

- **Helps prevent costly water-related damage**
- **Provides automatic water shut-off when required**
- **Provides positive level control for vented tanks**
- **Separate output can either stop operation or control secondary device**
- **Hermetically sealed circuitry**

TECHNICAL SPECIFICATIONS:

WETTED MATERIALS:	Polypropylene, EPDM, Stainless Steel (300/400 Series)
POWER REQUIREMENTS:	24 VAC, 50/60 Hz, 130 mA
SWITCHED OUTPUT POWER:	24 VAC, 1 amp
INLET PRESSURE/ORIFICE:	Maximum 100 psi, .093" diameter orifice
STANDARD FITTINGS:	John Guest 1/4" built-in ports, Jaco 1/4" black inlet, 1/4" white outlet
OPTIONAL FITTINGS:	John Guest 3/8" grey
SENSORS/SENSITIVITY:	Stainless Steel, up to 250 kilo-ohms for water with TDS greater than 3 parts per million.
ELECTRICAL CONNECTION:	AMP Mate-N-Lok, custom sensor harness



FLOW CONTROL COMPONENTS



Aquatec's ESO Series (ESO 460, ESO DC100, ESO High Flow) are normally closed, precision solenoid valves that positively shut off feed water. They are activated by a pressure switch to either open or close at predetermined holding tank pressure settings. The ESO Series can either be used independently or mounted inline on the inlet side of a pump. Our ESO Series also includes a modular connector for plug-and-play integration with Aquatec's other system components.

The ESO 460 Series is a conventional, 24VAC solenoid valve. It is our most economical solenoid offering.

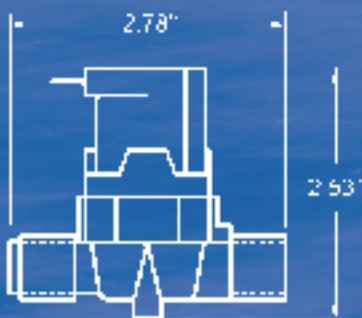
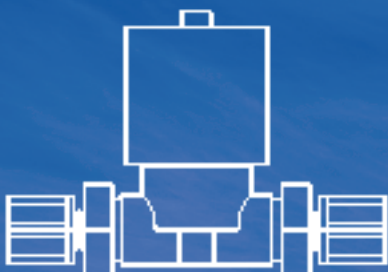
The ESO DC100 utilizes our patented, energy saving 24V coil, which operates without heat build-up or AC coil noise. All integrated control circuitry is hermetically sealed for extended life and maximum reliability under severe operating conditions. The ESO DC100 can be powered by either AC or DC voltage.

The ESO High Flow (ESO HF), our newest solenoid valve, is specifically designed for large flow (up to 10 LPM) requirements. It is a compact, highly efficient valve and is a perfect complement to our smaller solenoid offerings.

- **Conserves both water and energy**
- **Provides positive water shut-off**
- **Low power, cool running**
- **Hermetically sealed circuitry**
- **Compact design, plastic valve body**

TECHNICAL SPECIFICATIONS:

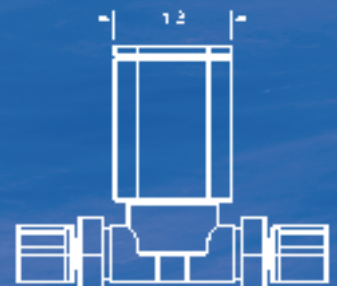
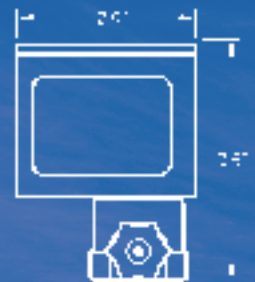
WETTED MATERIALS:	Polypropylene, EPDM, Stainless Steel (300/400 Series)
POWER REQUIREMENTS:	ESO 460 - 24 VAC, 50/60 Hz, 150 mA ESO DC100 - 24 VAC or VDC, 120 mA
INLET PRESSURE/ORIFICE:	ESO 460 - Maximum 45 psi, .093" diameter orifice ESO 460 - Maximum 100 psi, .062" diameter orifice ESO DC - Maximum 100 psi, .093" diameter orifice
STANDARD FITTINGS:	John Guest 1/4" built-in ports, Jaco 1/4" black inlet, 1/4" white outlet
OPTIONAL FITTINGS:	John Guest 3/8" grey (High Flow)
ELECTRICAL CONNECTION:	AMP Mate-N-Lok



FLOW CONTROL COMPONENTS

- ### TECHNICAL SPECIFICATIONS:

WETTED MATERIALS:	Polypropylene, EPDM, Stainless Steel
POWER REQUIREMENTS:	24 VAC/24 VDC, 120 mA - flushing, 40mA – off cycle
INLET PRESSURE/ORIFICE:	Maximum 100 psi, .093" diameter orifice
FLOW RESTRICTOR ORIFICES:	300mL – 700mL orifices available
STANDARD FITTINGS:	John Guest 1/4" built-in ports, Jaco 1/4" black inlet, 1/4" white outlet
OPTIONAL FITTINGS:	John Guest 3/8" grey
ELECTRICAL CONNECTION:	AMP Mate-N-Lok





TRANSFORMERS

Aquatec transformers are specifically designed to power the products in this catalog.

Nominal primary voltages/frequencies, line voltage variations, and system related feed or back pressures may influence your ultimate selection. Our transformers are both current and temperature protected for additional safety protection.

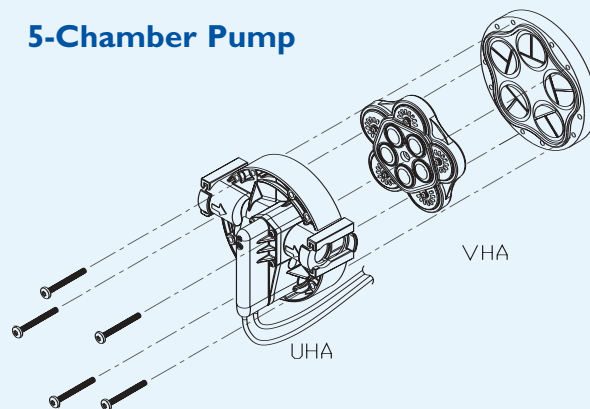
Aquatec pump-transformer combinations are designed to operate at maximum efficiency under a wide range of voltage conditions without overheating or overloading. This can save the end-user thousands of kilowatt hours per year compared to less efficient pumps.

Part No.	Input Voltage	Output Voltage Max. Current	Primary Input Cord Length	Secondary Output Cord Length	Overload Protection
TACS 104-48	100 VAC, 50/60 Hz	24 VAC, 2 A	6 ft.	6 ft.	Thermal Fuse
TACS 114-48	115-120 VAC, 60 Hz	24 VAC, 2 A	6 ft.	6 ft.	Thermal Fuse
TACS 234-48RF	230 VAC, 50 Hz	24 VAC, 2 A	6 ft.	6 ft.	Circuit Breaker, Auto-Reset
TAS 104-19*	100 VAC, 50/60 Hz	24 VAC, 800 mA	None, Plug-In	6 ft.	Circuit Breaker, Auto-Reset
TAS 114-19EP	116-120 VAC, 50 Hz	24 VAC, 800 mA	None, Plug-In	6 ft.	Circuit Breaker, Auto-Reset
TAS 234-19EP	230 VAC, 50 Hz	24 VAC, 800 mA	None, Plug-In	6 ft.	Circuit Breaker, Auto-Reset

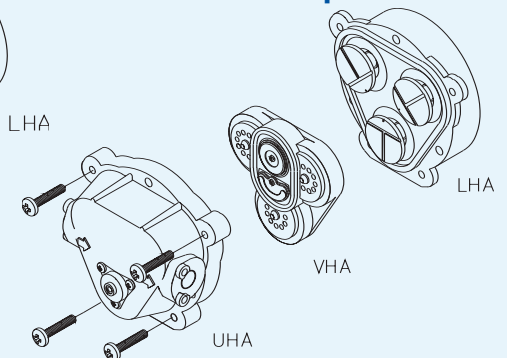
REPLACEMENT KITS

Aquatec and its distributors can provide fully assembled replacement kits to allow you to further extend the life of our pump products. These kits are available in three different configurations: upper housing assembly, valve housing assembly and lower housing assembly

5-Chamber Pump



3-Chamber Pump
















UHA: Upper Housing Assembly • **VHA:** Valve Housing Assembly • **LHA:** Lower Housing Assembly

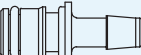



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Aquatec provides a wide array of fittings to allow for maximum operational flexibility. Below you'll find a graphical sampling of our offerings, grouped according to the Pump Series where commonly used.

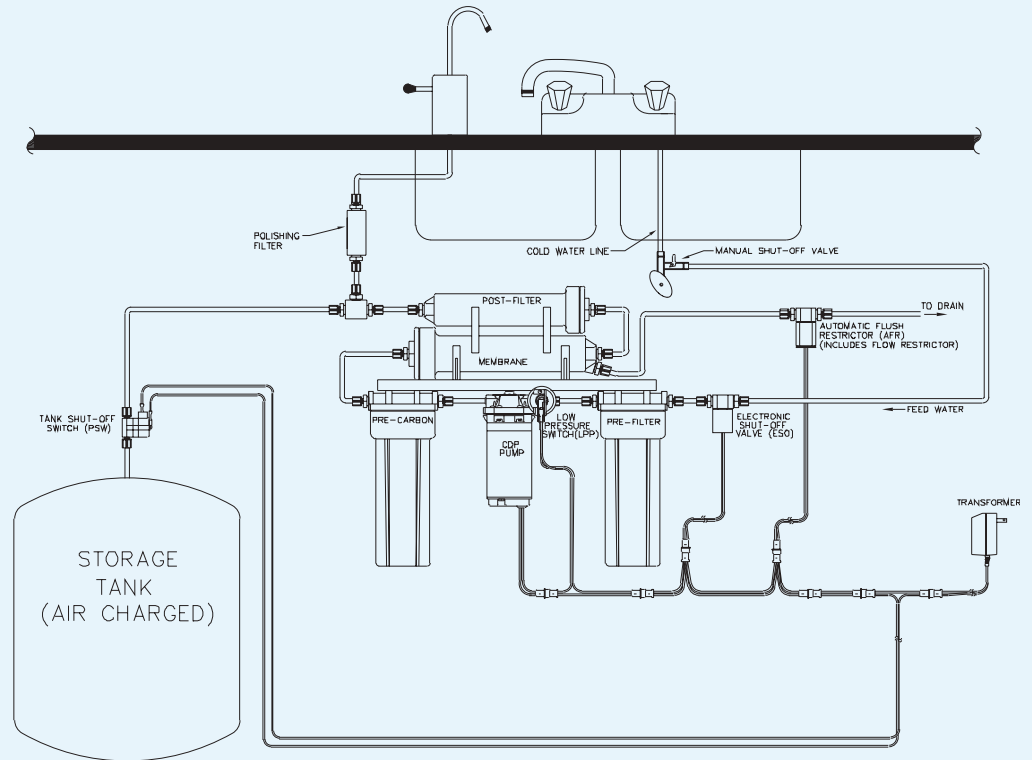
550 Series (5-Chamber Pumps)

 <p>QBS-553 (BUNA N O-RING) QBS-553-V (VITON O-RING) 3/8" HOSE BARB TO 3/4" QUICK DISCONNECT, STRAIGHT * NOT TO BE USED FOR FLOWS GREATER THAN 1.5 LPM</p>	 <p>QBS-554 (BUNA N O-RING) QBS-554-V (VITON O-RING) 1/2" HOSE BARB TO 3/4" QUICK DISCONNECT, STRAIGHT</p>	 <p>QBS-555 (BUNA N O-RING) QBS-555-V (VITON O-RING) 5/8" HOSE BARB TO 3/4" QUICK DISCONNECT, STRAIGHT</p>
 <p>QBE-553 (BUNA N O-RING) QBE-553-V (VITON O-RING) 3/8" HOSE BARB TO 3/4" QUICK DISCONNECT, ELBOW * NOT TO BE USED FOR FLOWS GREATER THAN 1.5 LPM</p>	 <p>QBE-554 (BUNA N O-RING) QBE-554-V (VITON O-RING) 1/2" HOSE BARB TO 3/4" QUICK DISCONNECT, ELBOW</p>	 <p>QBE-555 (BUNA N O-RING) QBE-555-V (VITON O-RING) 5/8" HOSE BARB TO 3/4" QUICK DISCONNECT, ELBOW</p>
 <p>QJE-553 (BUNA N O-RING) QJE-553-V (VITON O-RING) 3/8" JOHN GUEST TO 3/4" QUICK DISCONNECT, ELBOW</p>	 <p>QJE-554 (BUNA N O-RING) QJE-554-V (VITON O-RING) 1/2" JOHN GUEST TO 3/4" QUICK DISCONNECT, ELBOW</p>	 <p>QJS-553 (BUNA N O-RING) QJS-553-V (VITON O-RING) 3/8" JOHN GUEST TO 3/4" QUICK DISCONNECT, STRAIGHT</p>
 <p>QBS-556 (BUNA N O-RING) QBS-556-V (VITON O-RING) 3/4" HOSE BARB TO 3/4" QUICK DISCONNECT, STRAIGHT</p>	 <p>QTS-556 (BUNA N O-RING) QTS-556-V (VITON O-RING) 1/2" MALE QST THREAD TO 3/4" QUICK DISCONNECT, STRAIGHT</p>	 <p>QBE-556 (BUNA N O-RING) QBE-556-V (VITON O-RING) 3/4" HOSE BARB TO 3/4" QUICK DISCONNECT, ELBOW</p>
 <p>QJS-554 (BUNA N O-RING) QJS-554-V (VITON O-RING) 1/2" JOHN GUEST TO 3/4" QUICK DISCONNECT, STRAIGHT</p>		

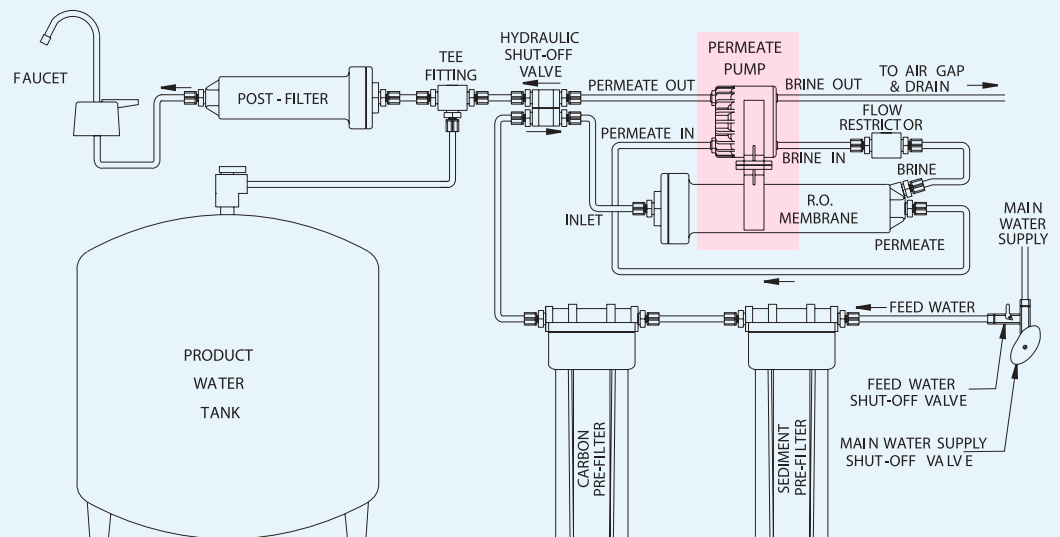
7800 Series (3-Chamber Pumps)

 <p>QBS-783 (BUNA N O-RING) QBS-783-V (VITON O-RING) 3/8" HOSE BARB TO 5/8" QUICK DISCONNECT, STRAIGHT * NOT TO BE USED FOR FLOWS GREATER THAN 1.5 LPM</p>	 <p>QBS-784 (BUNA N O-RING) QBS-784-V (VITON O-RING) 1/2" HOSE BARB TO 5/8" QUICK DISCONNECT, STRAIGHT</p>
 <p>QBE-783 (BUNA N O-RING) QBE-783-V (VITON O-RING) 3/8" HOSE BARB TO 5/8" QUICK DISCONNECT, ELBOW * NOT TO BE USED FOR FLOWS GREATER THAN 1.5 LPM</p>	 <p>QBE-784 (BUNA N O-RING) QBE-784-V (VITON O-RING) 1/2" HOSE BARB TO 5/8" QUICK DISCONNECT, ELBOW</p>

Typical Undercounter R.O. System Installation with Storage Tank, PSW, LPS, ESO and AFR Components



Typical R.O. System Configuration with Permeate Pump (ERP1000, ERP500) and Automatic Shut-Off Valve (ASV2000)



CONTACT INFORMATION

U.S. MANUFACTURING FACILITY

All manufacturing and assembly takes place at our Irvine, California production facility. Aquatec welcomes plant visits but requires advanced arrangements.

We are located approximately 45 minutes from Los Angeles International Airport (LAX) and approximately 5 minutes from Orange County Airport (SNA or “John Wayne”).

**Aquatec Water Systems
17422 Pullman Avenue
Irvine, California 92614**

Phone: **(949) 225-2200**
Facsimile: **(949) 225-2222**

All e-mail correspondence should be forwarded to one of the following addresses:

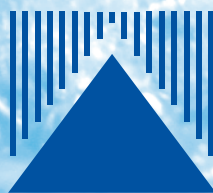
Sales: **sales@aquatec.com**
Engineering: **engineering@aquatec.com**
Tech Support: **techsupport@aquatec.com**

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Our European headquarters is located within the UK at the following address:

**Aquatec Europe
5 Pier Point Mews
Silver Wharf
Sovereign Harbour North
Eastborne
East Sussex BN23 5NL**

Phone/Facsimile: **(44) 1323 472798**
Email: **aquatec.eu@btinternet.com**



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