

SPXFLOW

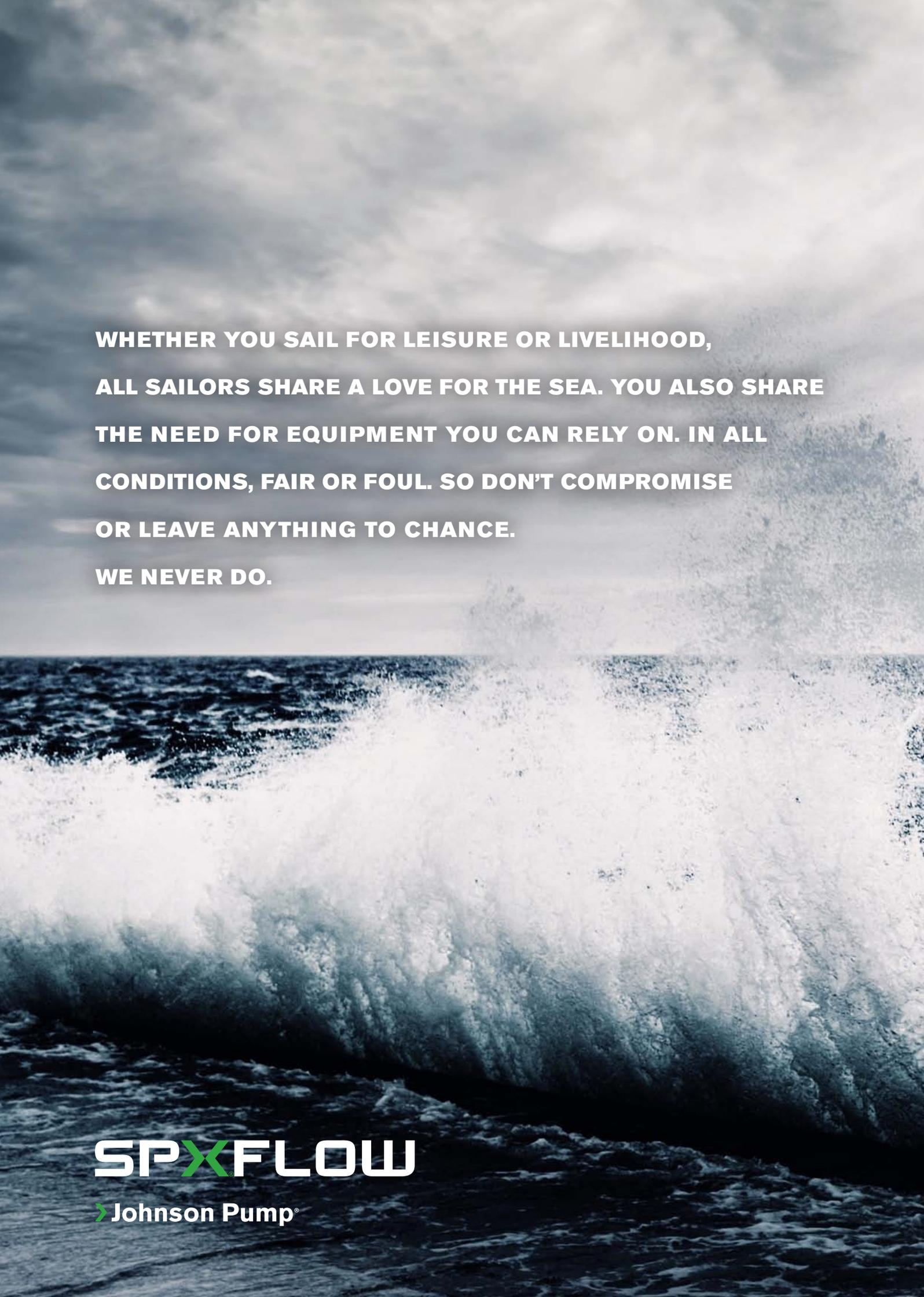
Marine Catalogue

Pumps and accessories
for marine application

➤ **Johnson Pump®**



www.spxflow.com/johnson-pump-marine



**WHETHER YOU SAIL FOR LEISURE OR LIVELIHOOD,
ALL SAILORS SHARE A LOVE FOR THE SEA. YOU ALSO SHARE
THE NEED FOR EQUIPMENT YOU CAN RELY ON. IN ALL
CONDITIONS, FAIR OR FOUL. SO DON'T COMPROMISE
OR LEAVE ANYTHING TO CHANCE.
WE NEVER DO.**

SPXFLOW

> Johnson Pump®



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Reliability on board

SPXFLOW

No matter whether you are an experienced boater looking for a replacement pump or a manufacturer specifying pumps for your marine application, we are prepared to provide you with the support you need. And no matter where you work or live, access to our products, services, spare parts and support are never far away. In fact, you will find SPX's Johnson Pump Marine Brand represented in every major industrial country of the world today and in more than sixty nations altogether.



Water Pressure Systems & Wash Down Pumps



The Aqua Jet five chamber diaphragm pump provides the perfect water pressure or deck wash solution for both small and medium sized leisure and commercial boats as well as for mobile homes, campers and summer homes. Quiet and pulsation-free even at low speeds. Efficient and compact, Aqua Jet pumps are particularly suitable where low amperage and sound levels in relation to water flow are placed at a premium - such as in shower and galley applications. Integrated pressure switch turns pump on and off automatically when tap is opened and closed. Operates in fresh or sea water. Self-priming.

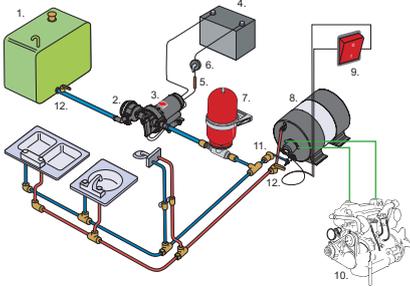


CE marked according to following standards:

- EN55014: 1993/Radio disturbance
- ISO8846: 1990/Electrical devices – Protection against ignition of surrounding flammable gases
- ISO10133: 1994/Electrical systems – Extra-low voltage DC installations

Aqua Jet Water Pressure Systems

The five chamber Aqua Jet WPS-series provides a reliable heart for small boat and recreational vehicle water pressure systems. Compared to conventional three or four-chamber diaphragm pumps, the Aqua Jet demonstrates dramatically lower noise and water pulsation characteristics. It is recommended to install the WPS-pumps with an accumulator tank. Always use a PUMProtector inlet strainer before the pump intake.



FRESH WATER HANDLING

Components included in a complete Water Pressure Systems

- | | |
|---------------------------------|--------------------------|
| 1. Water tank | 7. Accumulator tank |
| 2. PUMProtector inlet strainer | 8. Water heater |
| 3. Aqua Jet water pressure pump | 9. ON/OFF bipolar switch |
| 4. Battery | 10. Motor |
| 5. Fuse | 11. Check valve |
| 6. Switch | 12. Shut-off valve |

AQUA JET WPS 2.4

Diaphragm	Santoprene	Weight	1.6 kg/3.5 lbs
Valves	EPDM	Length	204 mm/8.02"
Body	PP/PPA	Width	197 mm/7.76"
Motor	85W	Height	110 mm/4.33"

Order No.	Description	Capacity	Pressure Cut Off*	Fuze Size	Connection**
10-24604-03	Aqua Jet WPS 2.4, 12V	9 l/min – 2.4 GPM	2.8 bar – 41 psi	10 A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"
10-24604-04	Aqua Jet WPS 2.4, 24V	9 l/min – 2.4 GPM	2.8 bar – 41 psi	5 A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"

AQUA JET WPS 2.9

Diaphragm	Santoprene	Weight	1.6 kg/3.5 lbs
Valves	EPDM	Length	204 mm/8.02"
Body	PP/PPA	Width	197 mm/7.76"
Motor	85W	Height	110 mm/4.33"

Order No.	Description	Capacity	Pressure Cut Off*	Fuze Size	Connection**
10-13405-03	Aqua Jet WPS 2.9, 12V	11 l/min – 2.9 GPM	2.8 bar – 41 psi	10 A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"
10-13405-04	Aqua Jet WPS 2.9, 24V	11 l/min – 2.9 GPM	2.8 bar – 41 psi	5 A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"

AQUA JET WPS 3.5

Diaphragm	Santoprene	Weight	2 kg /4.5 lbs
Valves	EPDM	Length	236,5 mm/9.31"
Body	PP/PPA	Width	210 mm/8.25"
Motor	85W	Height	116 mm/4.575"

Order No.	Description	Capacity	Pressure Cut Off*	Fuze Size	Connection**
10-13395-03	Aqua Jet WPS 3.5, 12V	13 l/min / 3.5 GPM	2.8 bar / 41psi	10A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"
10-13395-04	Aqua Jet WPS 3.5, 24V	13 l/min / 3.5 GPM	2.8 bar / 41psi	5A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"

Fitted with a built-in pulsation dampening by-pass valve

AQUA JET WPS 4.0

Diaphragm	Santoprene	Weight	2 kg /4.5 lbs
Valves	EPDM	Length	240 mm/9.46"
Body	PP	Width	214 mm/8.42"
Motor	100W	Height	110 mm/4.33"

Order No.	Description	Capacity	Pressure Cut Off*	Fuze Size	Connection**
10-13406-03	Aqua Jet WPS 4.0, 12V	15 l/min / 4.0 GPM	2.8 bar / 41psi	10A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"
10-13406-04	Aqua Jet WPS 4.0, 24V	15 l/min / 4.0 GPM	2.8 bar / 41psi	5A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"

AQUA JET WPS 5.2

Diaphragm	Santoprene	Weight	2 kg /4.5 lbs
Valves	EPDM	Length	240 mm/9.46"
Body	PP	Width	214 mm/8.42"
Motor	150W	Height	110 mm/4.33"

Order No.	Description	Capacity	Pressure Cut Off*	Fuze Size	Connection**
10-13406-07	Aqua Jet WPS 5.2, 12V	20 l/min/ 5.2 GPM	2.8 bar / 41psi	15A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"
10-13406-08	Aqua Jet WPS 5.2, 24V	20 l/min/ 5.2 GPM	2.8 bar / 41psi	8A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"

*Cut off pressure 2.1 bar/30 psi and 1.4 bar/20 psi available on request

** NPT-connection available on request

AQUA JET FLOW MASTER 5.0 WPS – VARIABLE FLOW

The whisper quiet Flow Master 5.0 incorporates state-of-the-art electronics to automatically control pump speed. The digital controller adjusts water flow as the demand is increased and decreased while maintaining a very smooth flow. The unique variable flow feature of the Flow Master pump allows the pump to be mounted without an accumulator tank and still maintain an even flow regardless if one or multiple taps are being used.

Dimensions	239 mm/9.4" long x 209 mm/8.22" wide x 113 mm/4.49" high	Body	Nylon/Polypropylene
Weight	2 kg/4.5 lbs	Valves	Santoprene/EPDM
Motor	WPS 5.0 – 150 W, 12/24V DC (with built-in thermal protection)	Diaphragm	Santoprene

Order No.	Description	Capacity	Pressure Cut Off*	Fuze Size	Connection**
10-13329-03	WPS FM 5.0, 12V	19 l/min – 5 GPM	3.5 bar – 50 psi	15 A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"
10-13329-04	WPS FM 5.0, 24V	19 l/min – 5 GPM	3.5 bar – 50 psi	8 A	3/8" BSP / hose 1/2", 1/2" BSP / hose 3/4"

Inlet Strainer included

INLET STRAINER

Order No. 09-24653-01

For more information see p 9.

AQUA JET UNO WPS 3.5 & 5.2 – COMPACT ALL IN ONE UNIT

Medium capacity unit with a single Aqua Jet WPS capacity 13 l/min or 20 l/min fixed on a base with PUMProtector inlet strainer and a 2 litres pre-pressurized accumulator tank.

Order No.	Description	Capacity	Pressure Cut Off*	Fuze Size	Connection**
10-13408-01	WPS Uno 3.5, 12V	13 l/min – 3.5 GPM	2.8 bar – 41 psi	10 A	3/4" hose
10-13408-02	WPS Uno 3.5, 24V	13 l/min – 3.5 GPM	2.8 bar – 41 psi	5 A	3/4" hose
10-13408-03	WPS Uno 5.2, 12V	20 l/min – 5.2 GPM	2.8 bar – 41 psi	15 A	3/4" hose
10-13408-04	WPS Uno 5.2, 24V	20 l/min – 5.2 GPM	2.8 bar – 41 psi	8 A	3/4" hose

*Cut off pressure 2.1 bar/30 psi and 1.4 bar/20 psi available on request

AQUA JET DUO WPS 10.4 – COMPACT ALL IN ONE UNIT

High capacity unit with two parallel-connected Aqua Jet WPS capacity 40 l/min fixed on a base with PUMProtector inlet strainers and a 2 litres pre-pressurized accumulator tank.

Order No.	Description	Capacity	Pressure Cut Off*	Fuze Size	Connection**
10-13409-01	WPS Duo 10.4, 12V	40 l/min – 10.4 GPM	2.8 bar – 41 psi	25 A	3/4" hose
10-13409-02	WPS Duo 10.4, 24V	40 l/min – 10.4 GPM	2.8 bar – 41 psi	15 A	3/4" hose

AQUA JET UNO MAX WPS 2.9 & 3.5 – COMPACT ALL IN ONE UNIT

Medium capacity unit with a single Aqua Jet WPS with capacity 11 or 13 l/min fixed on a wooden panel for easy and efficient installation. The unit includes a PUMProtector inlet strainer and a 2 litres pre-pressurized accumulator tank.

Order No.	Description	Capacity	Pressure Cut Off*	Fuze Size	Connection**
10-13410-01	WPS Uno-Max 2.9, 12V	11 l/min – 2.9 GPM	2.8 bar – 41 psi	10 A	3/4" hose
10-13410-02	WPS Uno-Max 2.9, 24V	11 l/min – 2.9 GPM	2.8 bar – 41 psi	5 A	3/4" hose
10-13411-01	WPS Uno-Max 3.5, 12V	13 l/min – 3.5 GPM	2.8 bar – 41 psi	10 A	3/4" hose
10-13411-02	WPS Uno-Max 3.5, 24V	13 l/min – 3.5 GPM	2.8 bar – 41 psi	5 A	3/4" hose



Aqua Jet Wash Down Systems

The quiet and pulsation-free Aqua Jet five-chamber diaphragm wash down pumps from SPX Johnson Pump brand, provide the perfect wash down solution for cleaning recreational equipment. With a higher pressure of up to 5 bar, clean-up is faster and easier than ever before. Complete with trigger nozzle, PUMProtector inlet strainer and hose connections for 1/2" hose. Both BSP and NPT connections included.

AQUA JET WASH DOWN PUMPS 2.9, 3.5 & 5.2

Complete with trigger nozzle, PUMProtector inlet strainer and hose connections for 1/2" hose. Both BSP and NPT connections included in package



Dimensions	See WPS 2.9, WPS 3.5 and WPS 5.2	Body	PA/PPA
Motor	WD 2.9 - 90 W, 12/24V DC	Valves	Nitrile
	WD 3.5 - 120 W, 12/24V DC	Diaphragm	Santoprene
	WD 5.2 - 185 W, 12/24V DC (with built-in thermal protection)		

Order No.	Description	Capacity	Pressure Cut Off	Fuze Size	Connection
10-24728-03	WD 2.9, 12V	11 l/min – 2.9 GPM	2.8 bar – 41 psi	10 A	3/8" BSP / hose 1/2"
10-24728-04	WD 2.9, 24V	11 l/min – 2.9 GPM	2.8 bar – 41 psi	5 A	3/8" BSP / hose 1/2"
10-13399-03	WD 3.5, 12V	13 l/min – 3.5 GPM	5 bar – 70 psi	15 A	3/8" BSP / hose 1/2"
10-13399-04	WD 3.5, 24V	13 l/min – 3.5 GPM	5 bar – 70 psi	8 A	3/8" BSP / hose 1/2"
10-13407-07	WD 5.2, 12V	20 l/min – 5.2 GPM	5 bar – 70 psi	20 A	3/8" BSP / hose 1/2"
10-13407-08	WD 5.2, 24V	20 l/min – 5.2 GPM	5 bar – 70 psi	10 A	3/8" BSP / hose 1/2"

AQUA JET WASH DOWN PUMP KIT 5.2

20 l/min (5.2 GPM) wash down kit conveniently includes a high capacity Aqua Jet WD 5.2, 5 bar (70 psi), PUMProtector inlet strainer, spray nozzle, bulk head fitting with valve, 7.5 meters (25') of coiled wash down hose and an illuminated panel switch – all in one package.



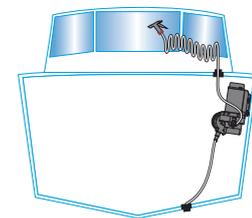
Order No.	Description
32-64534	Aqua Jet 5.2 Wash Down Pump Kit, 12V
32-64534R-24	Aqua Jet 5.2 Wash Down Pump Kit, 24V

AQUA JET WASH DOWN PUMP KIT 3.5

13 l/min (35 GPM) wash down kit conveniently includes a high capacity Aqua Jet WD 3.5, 5 bar (70 psi), PUMProtector inlet strainer, spray nozzle, 7.5 meters (25') of coiled wash down hose – all in one package.



Order No.	Description
10-13558-01	Aqua Jet 3.5 Wash Down Pump Kit, 12V
10-13558-02	Aqua Jet 3.5 Wash Down Pump Kit, 24V



ACCESSORIES

DECK WASH 316 STAINLESS STEEL QUICK CONNECT FITTING



- Flush mount
- Connect and disconnect under full pressure
- Positive lock bayonet connector
- Double Viton O-ring seals
- Large flow capacity
- 316 Stainless steel housing with BSP 1/2" thread
- Nylon 66 connection with BSP 3/4" thread

Order No.	Description
09-10616	Bulkhead fitting 3/4" hose
09-24653-01	Inlet Strainer 40 mesh
09-36012	Filter cover
09-10615	7.5 m black hose
34-82004	WD Panel Switch 12V
34-82004-24V	WD Panel Switch 24V
32-61121BSP	SS Bulk head fitting, complete
32-61126BSP	Connection for SS Bulk head fitting

PUMProtector™ Strainer

The PUMProtector™ Universal and Inlet strainers prevent debris and other particles from damaging the pump or passing through the system to the final outlet.

Both of these strainers feature transparent covers for simple inspection, a wide variety of KlickTite™ port connectors for simple installation and removal, and high quality materials for simple maintenance. The design and connectors make it possible to remove the entire unit for thorough cleaning wherever it's most convenient. We recommend 40 mesh for water pressure and wash down pumps and 20 mesh for general purpose pumps.

UNIVERSAL STRAINER

Materials	Strainer – Polyamide 66, black	Diameter	80 mm / 3.15"
	Cover – Acrylic, clear	Height	60 mm / 2.35"
	Screen – Stainless steel, 20 and 40 mesh	Weight	0.15 kg / 0.33 lbs
	O-rings – Silicone and EPDM	Mesh size	20 or 40



Order No.	Description	Mesh	Max Liquid Temp.	Max Temp. for Drinking Water	KlickTite™ Connector
09-24652-01	Universal Strainer	40	+50°C – +120°F	+30°C – +85°F	2 x 1/2" hose / 3/8" BSP, 2 x 3/4" hose / 1/2" BSP
09-24652-03	Universal Strainer	20	+50°C – +120°F	+30°C – +85°F	2 x 1/2" hose / 3/8" BSP, 2 x 3/4" hose / 1/2" BSP
09-36012	Strainer cover				

INLET STRAINER

Materials	Strainer – Polyamide 66, black	Diameter	80 mm / 3.15"
	Cover – Acrylic, clear	Height	60 mm / 2.35"
	Screen – Stainless steel, 20 and 40 mesh	Weight	0.15 kg / 0.33 lbs
	O-rings – Silicone and EPDM	Mesh size	40

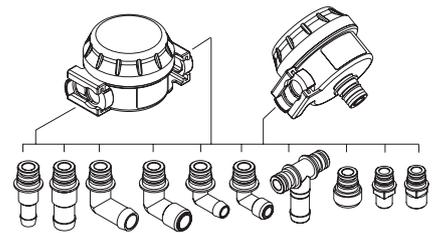


Order No.	Description	Mesh	Max Liquid Temp.	Max Temp. for Drinking Water	KlickTite™ Connector
09-24653-01	Inlet Strainer	40	+50°C – +120°F	+30°C – +85°F	Built-in KlickTite™, w/o connectors
09-36012	Strainer cover				

KLICKTITE™ PORT CONNECTORS

KlickTite™ port connectors are available in a variety of hose diameters and make it possible to remove the entire unit for thorough cleaning wherever it's most convenient. They also make it possible to drain the system quickly for effortless winterizing without the use of any tools.

Order No.	pcs/package	KlickTite™ Connector
09-46783	2	2 x 1/2" hose and 3/8" BSP
09-46784	2	2 x 3/4" hose and 1/2" BSP
09-46939	2	2 x 90°, 3/4" hose
09-47087	2	2 x 90°, 1/2" BSP
09-46938	2	2 x 90°, 1/2" hose
09-47026	2	2 x 90°, 3/8" BSP
09-47096	2	2 x 3/8" BSP
09-47098	2	2 x 1/2" BSP
09-47092	1	1 x T-connection, 3/4" barb
09-47094	2	Garden hose adapter



INLINE STRAINER

The Inline Strainer is recommended to be installed together with water pressure pumps to protect the pump from impurities. It is easy to disassemble for cleaning.



Total Length	230 mm / 9.05"
Diameter	32 mm / 1.25"

Order No.	Connection
48-80035	Inline strainer, 1/2" hose
48-80036	Inline strainer, 3/4" hose

ACCUMULATOR TANK

The use of an accumulator tank is recommended to ensure effective and reliable system function. With an accumulator tank incorporated in the system, the intervals between cut-in and cut-out will be longer when only small amounts of water are drawn off. Less wear and tear on the pump with fewer starts and stops. Pre-pressurized at 0.8 bar / 12 psi.



Volume	2 l / 0.5 gal.
Port connections	1/2" or 3/4" hose
Height	315 mm / 12.4"
Diameter	160 mm / 6.3"
Weight	1.2 kg / 2.7 lbs

Order No.	Connection
09-46839-01	1/2" hose connection
09-46839-02	3/4" hose connection



Photo: Buster

Heavy Duty Submersible Bilge Pumps



The SPX Johnson Pump Marine submersible pumps can handle most bilge pump applications. Heavy duty motors with stainless steel (SS2343) shaft and tough thermoplastic bodies provide for a long pump life. With an automatic switch installed, the pump automatically starts on when there is water in the bilge and shuts off when it is dry. Salt water tested - salt water tough.



CE marked according to following standards:

- EN55014: 1993/Radio disturbance
- ISO8846: Small Craft – Electrical devices
 - Protection against ignition of surrounding flammable gases
- ISO8849: Small craft – Electrically operated bilge pumps
- ISO10133: Small Craft – Electrical systems
 - Extra-low voltage DC installations

Heavy Duty Bilge Pumps



HEAVY DUTY BILGE PUMP – L1600 - L4000 SERIES

Designed to meet and exceed the tough demands of commercial and recreational duty. This pump has a liquid cooled, 12-pole motor with double ball bearings for extended service life. The L2200 motor is sealed off by a mechanical seal design, while the L1600 model has lipseal. The impeller is carefully designed and tested to maximize head and flow. The L4000 features a robust motor design, mechanical shaft seal, high impact ABS plastic and unique threaded port design. Universal base plate and a choice of 1½" or 2" ports makes for a simple installation. Removable check valve included.

L1600

Shaft SS2343
 Wire size 1.3 mm² – 16 GA
 Wire length 1.8 m – 6 ft
 Max Ø 108 mm – 4.25"
 Max height 149 mm – 5.86"
 Weight 1.3 kg – 2.75 lbs

L2200

Shaft SS2343
 Wire size 1.3 mm² – 16 GA
 Wire length 1.8 m – 6 ft
 Max Ø 108 mm – 4.25"
 Max height 177 mm – 7"
 Weight 2.7 kg – 6 lbs

L4000

Shaft SS2343
 Wire size 2 mm² – 14 GA
 Wire length 1.8 m – 6 ft
 Max Ø 121 mm – 4.8"
 Max height 216 mm – 8.5"
 Weight 2.45 kg – 5.4 lbs

Order No.	Description	Capacity 1.0 m head (13.6 V/27 V)	Capacity straight (13.6 V/27 V)	Amperage	Fuze Size	Connection
32-1600-01	L1600, 12V	98 l/min – 1550 GPH	100 l/min – 1600 GPH	7 A	10 A	1½" and 1¼"
32-1600-02	L1600, 24V	98 l/min – 1550 GPH	100 l/min – 1600 GPH	3.5 A	6 A	1½" and 1¼"
32-2200-01	L2200, 12V	120 l/min – 1900 GPH	130 l/min – 2060 GPH	7.5 A	12 A	1½" and 1¼"
32-2200-02	L2200, 24V	120 l/min – 1900 GPH	130 l/min – 2060 GPH	4.5 A	6 A	1½" and 1¼"
32-4000-01	L4000, 12V	164 l/min – 2600 GPH	252 l/min – 4000 GPH	15 A	25 A	1½" and 2"
32-4000-02	L4000, 24V	164 l/min – 2600 GPH	252 l/min – 4000 GPH	7.5 A	15 A	1½" and 2"



VIKING POWER 16

Order No. 10-13350-03
 For more information see p. 31.



F3B-19

Order No. 10-24516-01
 For more information see p. 22.

Cartridge Bilge Pump concept

Bilge pump cleaning and maintenance no longer call for complete disassembly. You can now leave the pump casing attached to both the boat and the hoses. The cartridge bilge pumps can be removed for cleaning or replacement without the use of a single tool. Lift a tab on the top, give the cartridge a twist and pull it out; that's all there is to it. The cartridge contains an all-in-one motor/impeller unit with no loose parts.

The cartridge pumps encompass four compact pumps, each for a different capacity need. All of them use remarkably little electricity for the amount of water they pump. Their improved, more efficient motors also provide increased service life, thanks in part to an ingenious solution which circulates the discharge water around the motor for cooling.

CARTRIDGE BILGE PUMPS L450 - L750 SERIES

Our Cartridge pumps incorporate some of the most advanced features in the industry, features developed from service in a wide variety of uses including racing, cruising, sport fishing and demanding commercial duties. For L450, L550, and L650, we have improved the design with easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by over-tightened hose clamps. Where applicable the pumps are delivered including both a straight and a 90° smooth elbow Dura-Port as well as a removable check valve.



L450 - L650

Max Ø 70 mm - 2.75"
 Max height 112 mm - 4.4"
 Weight 0.27 kg - 9.6 oz.

L750

Max Ø 70 mm - 2.75"
 Max height 112 mm - 4.4"
 Weight 0.32 kg - 10.4 oz.

Order No.	Description	Capacity 3 ft (0.9 m) head(13.6 V)	Capacity straight (13.6 V)	Amperage	Fuze Size	Connection
32-1450-01	L450 - 600 GPH, 12V	33 l/min - 525 GPH	40 l/min - 630 GPH	2.5 A	5 A	3/4"
32-1550-01	L550 - 800 GPH, 12V	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4"
32-1650-01	L650 - 1000 GPH, 12V	50 l/min - 800 GPH	63 l/min - 1000 GPH	3.2 A	5 A	3/4"
32-1650-01-24	L650 - 1000 GPH, 24V	50 l/min - 800 GPH	63 l/min - 1000 GPH	2 A	3 A	3/4"
32-1750-01*	L750 - 1150 GPH, 12V	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1 1/8"
32-1750-01-24*	L750 - 1150 GPH, 24V	60 l/min - 952 GPH	73 l/min - 1150 GPH	2 A	3 A	1 1/8"

*) Do not include Dura-Port connection

ULTIMA COMBO

Cartridge Bilge pumps equipped with the Ultima Switch water level sensor for automatic operation. Voltage 12V DC as well as 24V DC for L650 UC and L750 UC. For L450 UC - L650 UC, we have easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by over-tightened hose clamps. Where applicable the pumps are delivered including both a straight and a 90° smooth elbow Dura-Port as well as a removable check valve.



L450 UC - L650 UC

Max Ø 100 mm - 3x4"
 Max height 112 mm - 4.4"
 Weight 0.4 kg - 14.4 oz.

L750 UC

Max Ø 70 mm - 2.75"
 Max height 112 mm - 4.4"
 Weight 0.45 kg - 16 oz.

Order No.	Description	Capacity 3 ft (0.9 m) head(13.6 V)	Capacity straight (13.6 V)	Amperage	Fuze Size	Connection
32-1450UC-01	L450 UC - 600 GPH, 12V	33 l/min - 525 GPH	40 l/min - 630 GPH	2.5 A	5 A	3/4"
32-1550UC-01	L550 UC - 800 GPH, 12V	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4"
32-1650UC-01	L650 UC - 1000 GPH, 12V	50 l/min - 800 GPH	63 l/min - 1000 GPH	3.2 A	5 A	3/4"
32-1650UC-01-24	L650 UC - 1000 GPH, 24V	50 l/min - 800 GPH	63 l/min - 1000 GPH	2 A	3 A	3/4"
32-1750UC-01*	L750 UC - 1150 GPH, 12V	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1 1/8"
32-1750UC-01-24*	L750 UC - 1150 GPH, 24V	60 l/min - 952 GPH	73 l/min - 1150 GPH	2 A	3 A	1 1/8"

*) Does not include Dura-Port connection



CARTRIDGE – COMBO SERIES

Combines the line of cartridge bilge pumps with automatic operation. Equipped with a non-clogging electronic float switch. Delivered including both a straight and 90° smooth elbow Dura-Port as well as a removable check valve.

Max Ø	100 mm – 3x4"	Max Ø	70 mm – 2.75"
Max height	112 mm – 4.4"	Max height	112 mm – 4.4"
Weight	0.4 kg – 14.4 oz.	Weight	0.45 kg – 16 oz.

Order No.	Description	Capacity 3 ft (0.9 m) head (13.6 V)	Capacity straight (13.6 V)	Amperage	Fuze Size	Connection
32-05503-00	500 GPH Cartridge Combo, 12V	33 l/min - 525 GPH	40 l/min - 630 GPH	2.5 A	5 A	3/4"
32-05703-00	750 GPH Cartridge Combo, 12V	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4"
32-05903-00	1000 GPH Cartridge Combo, 12V	50 l/min - 800 GPH	63 l/min - 1000 GPH	3.2 A	5 A	3/4"
32-06203-00*	1250 GPH Cartridge Combo, 12V	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1 1/8"

*) Does not include Dura-Port connection

LOW BOY BILGE PUMP

Low profile pump design for ease of mounting and removal in tight bilge areas. Perfect for boats where bilge pumps are mounted beneath inboard or I/O engines. Removable cartridge style. For L550 LB we have easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by over-tightened hose clamps. The pumps are delivered including both a straight and a 90° smooth elbow Dura-Port.



Max length	146 mm – 5.75"
Width	81 mm – 3.2"
Height	72 mm – 2.82"
Wire size	1.3 mm ² – 16 GA

Order No.	Description	Capacity 3 ft (0.9 m) head (13.6 V)	Capacity straight (13.6 V)	Amperage	Fuze Size	Connection
32-33703LB-01	L550 LB - 800 GPH, 12V	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4"
32-33103LB-01*	L750 LB - 1150 GPH, 12V	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1 1/8"

*) Does not include Dura-Port connection

ULTIMA BILGE – PUMP WITH INTEGRATED SWITCH

Sleek, reliable and compact unit with integrated switch (Ultima Switch™) ready to install and run for years of unerring service. Available in 600-800-1000-1250 GPH versions. Voltage 12V DC. For UltimaBilge™ 600 GPH-1000 GPH, we have easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by over-tightened hose clamps. Where applicable the pumps are delivered including both a straight and a 90° smooth elbow Dura-Port and a removable check valve.



600, 800 & 1000 GPH 1250 GPH

Length	142 mm – 6"	Length	142 mm – 6"
Width	82 mm – 3.2"	Width	82 mm – 3.2"
Height	105 mm – 4.1"	Height	117 mm – 4.6"
Weight	0.66 kg – 23.3 oz.	Weight	0.66 kg – 23.3 oz.

Order No.	Description	Capacity 3 ft (0.9 m) head (13.6 V)	Capacity straight (13.6 V)	Amperage	Fuze Size	Connection
32-47258-008	600 GPH, 12V	32 l/min - 500 GPH	38 l/min - 600 GPH	2.5 A	5 A	3/4"
32-47259-008	800 GPH, 12V	38 l/min - 600 GPH	51 l/min - 800 GPH	3 A	5 A	3/4"
32-47260-008	1000 GPH, 12V	44 l/min - 700 GPH	64 l/min - 1000 GPH	3.2 A	5 A	3/4"
32-47261-005*	1250 GPH, 12V	51 l/min - 800 GPH	79 l/min - 1250 GPH	3 A	5 A	1 1/8" and 1 1/4"

*) Do not include Dura-Port connection

FIRST MATE

Designed as a low budget alternative for boat owners who nonetheless are looking for a quality product.



Max Ø 115 mm – 4.5"
 Max height 100 mm – 4"
 Weight 0.35 kg – 12 oz.

Order No.	Description	Capacity straight (13.6 V/27 V)	Amperage	Fuze Size	Connection
32-1015-01	First Mate, 12V	30 l/min - 400 GPH	2.5 A	5 A	3/4"

BILGE PUMP CONTROL

Order No.
 34-1224 12V
 34-1225 24V
 For more information see p. 17.



SPARE MOTOR FOR CARTRIDGE

Upgrade the output of your bilge pump in a matter of a few minutes by replacing the cartridge. Cleaning debris from the impeller has never been simpler or easier.



Order No.	Description
34-28552	Motor for L450 GPH pumps, 12V
34-28572	Motor for L550 GPH pumps, 12V
34-28512	Motor for L650 GPH pumps, 12V
34-42522	Motor for L750 GPH pumps, 12V

MULTIPLE PORT SHOWER SUMP

This compact shower sump system is designed to meet the higher demands from today's boating industry for additional installed comfort. This also includes the fresh water system onboard and involves showers, dish-washing machines, galley sinks, etc. The shower sump turns on/off automatically using our Ultima switch technology and has multiple inlet ports for handling waste water from more than one tapping point. The check valve on the outlet stops water from flowing back into the tank. The tank has a tight-fitting lid to minimize splashing and odors. To further aid in cleaning, the system includes an easily removable mesh filter.

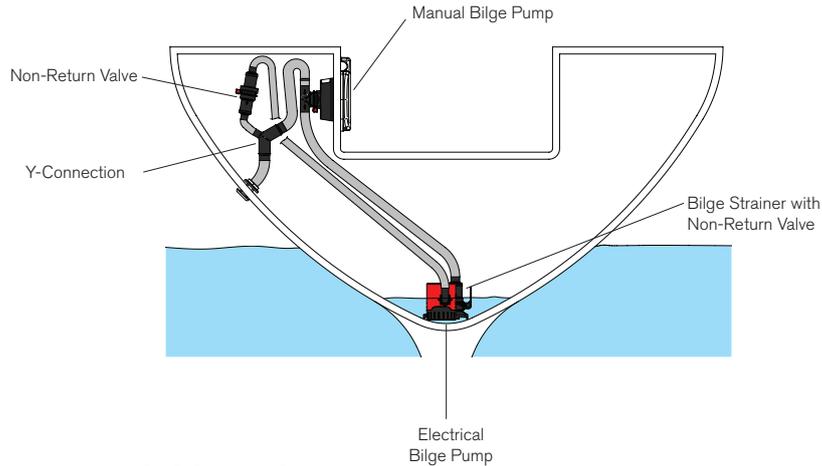


LxW 280x210 mm – 11.42x8.26"
 Max height 140 mm – 5.7"
 Weight 0.9 kg – 2 lbs

Order No.	Description	Capacity 1.0 m head (13.6 V/27 V)	Capacity straight (13.6 V/27 V)	Amperage	Fuze Size	Intake connection	Discharge connection
32-57151-01	Multiple Port Shower Sump, 12V	53 l/min - 844 GPH	61 l/min - 972 GPH	3.4 A	5 A	1x3/4", 1x3/4" or 1x1"	3/4"
32-57151-02	Multiple Port Shower Sump, 24V	53 l/min - 844 GPH	61 l/min - 972 GPH	2 A	3 A	1x1 1/8" or 1x1 1/2"	3/4"
32-54304	Clear Sump Cover						

Bilge Pump systems

BILGE PUMP SYSTEM, MANUAL AND ELECTRICAL IN COMBINATION



VIKING COMPACT

Full-capacity, hand-powered bilge pump perfect for installation in tight spaces.

This rugged, yet sleekly designed, single-chamber diaphragm pump provides first-rate performance and is a snap to install. It can be fitted in minutes from one side of the bulkhead with just four screws, self-sealing against the surface with a durable, watertight gasket. With the pump house recessed behind the bulkhead, only the handle is visible from the cabin or cockpit.

The Viking Compact's inlet and outlet ports can be swiveled 360° and are delivered in two sizes with every pump, Ø25mm (1") and Ø38mm (1½"). Naturally, the Viking Compact has KlickTite™ connectors fitted as standard, literally making hose connections a snap!



Body	Polypropylene	Flow at 1 m head and 45 strokes/min	
Cover	ABS	Ø25mm connections	34,5 liters/minute (9.1 US gallons/minute)
Diaphragm	Nitrile rubber	Ø38mm connections	45 liters/minute (11.9 US gallons/minute)
Valves	Nitrile rubber (1 leaf and 1 tricuspid valve)		
Wetted parts	Polypropylene, PA66GF30 plastics and nitrile rubber		
Maximum lift	2.1 meters (7 feet)		
Maximum head	1.2 meters (4 feet)		
Combined head/lift	3.3 meters (10.8 feet)		
Connection	KlickTite™ connectors for 1" (25 mm) or 1½" (38 mm) hose. Both options included		
Max. liquid temp	+60°C (140°F)		
Weight	0.675 kg (1.5 pounds)		

Order No.	Description
10-24800-01	Viking Compact w. dia. 25 mm (1") and dia. 38 mm (1½") ports.

VIKING UNIVERSAL

Heavy duty, self-priming, hand-powered bilge pump for nearly any type of installation.

Viking Universal's mounting bracket allows for vertical or horizontal surface mounting. With the optional Through Deck kit the pump can be installed behind bulkheads or below the deck. To minimize required space the Viking Universal excels at adaption. The simple switching of the valves together with the connections allows you to choose flow direction. The included KlickTite™ straight and 90° hose connections can be used in combination. The hose connections and even the pump housing can easily be rotated for optimal positioning. While designed as a powerful bilge pump, the Viking Universal's large Ø38 mm (1 ½") valves enable the pump to also be used for pumping toilet waste.

Fasteners are included for stowing the handle and the safety clasp ensures that the handle cannot be lost while not in use or during an emergency situation. Viking Universal meets ISO 15083, "Bilge pumping systems". At 45 strokes/min and a 1 m (3.28') head (10 kPa (1.45 psi) pressure) the Viking Universal has a flow of 60 l/min - 16 GPM.



VIKING UNIVERSAL

Body and cover	Polypropylene plastic reinforced with 30% fiberglass
Diaphragm and valves	Nitrile rubber
Wetted parts	PP30GF, PA66 GF30, POM, stainless steel, nitrile rubber
Maximum suction	3 meters (10')
Maximum head	4 meters (13')
Combined suction/head	7 meters (23')
Connection	KlickTite™ connectors 38 mm (1½") hose. Both straight and 90° bends are included
Max. liquid temp	+60°C (140°F)
Weight	1.5 kg (3.3 lbs)

Order No.	Description
10-13530-01	Viking Universal with connection diameter 38 mm (1½")
09-36250	Viking Universal Through Deck Kit



ACCESSORIES

Order No.	Description	Connection
09-47493	Connection, 90° In/Out	Ø38 mm
09-47495	Connection, 90° In/Out	Ø25 mm
09-47543	Connection, straight In/Out	Ø38 mm
09-47544	Connection, straight In/Out	Ø25 mm



MANUAL & ELECTRIC BILGE PUMP ACCESSORIES

In-Line Non-Return Valve

- Designed to install in-line
- Maintains prime in a suction or discharge line
- Easy to maintain and clean without any tools

Order No.	Description	Connection
09-24792	In-Line Non-Return Valve	25/38 mm (1" / 1½")
09-24818	In-Line Non-Return Valve	19/32 mm (¾" / 1¼")



Bilge Strainer With Non-Return Valve

- Designed to prevent bilge debris blocking the inlet suction line
- Reduce the risk of debris entering and blocking the pump
- Maintain prime in the suction line
- Easy to maintain and clean without any tools

Order No.	Description	Connection
09-24794	Strainer	19/32 mm (¾" / 1¼"), 25/38 mm (1" / 1½")



Y-connections

- Y-connections enable two pumps to discharge through a single line. Diverter valve is not required.

Order No.	Description
01-24814	Y-connection 38X38X25 mm
01-24815	Y-connection 29/32X29/32X19 mm



BILGE PUMP CONTROL

Switch panel that gives full control of your equipment. Just push the button for manual or automatic bilge pumping. The automatic feature operates in combination with the automatic bilge switches or the electronic float switch. The three-position switch panel in matt black finish has an integrated fuse holder and operating light. Fuses included.

Size: 73 mm/2.99" x60 mm/2.17", 40 mm/ 1.57" depth.

Order No.	Description
34-1224	Bilge Pump Control, 12V - 3 way, on, auto, off
34-1225	Bilge Pump Control, 24V - 3 way, on, auto, off





ULTIMA SWITCH™

Digital technology using the patented Mirus field effect detector cells producing micro-electrical fields that detect disruptions caused by water and fluids. The solid state electronics and field detectors of the Ultima switch contain no moving parts or mercury, are totally sealed and are never in contact with the water, will not corrode and are not affected by oil or foreign debris. Ultima activates at a 50 mm (2") fluid level and deactivates at a 20 mm (¾") fluid level. A 3 second delay prevents false starts. Ultima switch is rated to handle pumps up to 20 amps at 12 or 24 volts.

Order No.	Description	Max Amp.
34-36303	Ultima Switch, 12/24V	20 A

ELECTRONIC FLOAT SWITCH

Compact mechanical switch offers a combination of reliable solid state electronics and a sealed float switch. False start prevention, no mercury, high impact plastic and encapsulated electronics adds up to dependability. Activates pump at 2" water level, deactivates pump at ¾" water level. 12 or 24V.



Order No.	Description	Max Amp.
34-1900B-12V	Electronic Float Switch, 12V	15 A
34-1900B-24V	Electronic Float Switch, 24V	8 A

AUTOMATIC SWITCH AS888

For full automatic bilge pumping operation, connect the automatic switch to your bilge pump. The AS888 automatic switch has a time-proven micro switch without mercury. When water exceeds the acceptable level, the pump is turned on by a rolling steel ball, which changes the pressure on the micro switch. The AS888 attaches to any of SPX's Johnson Pump Marine Brand bilge pump through the clip on "T-slot" and can be used with 6, 12, 24 or 32 V systems.



Order No.	Description	Max Amp.
34-888	Automatic Switch AS888	15 A

BILGE ALERT™

High water alarm featuring digital technology using the patented Mirus field effect cell. Totally sealed fluid detectors are never in contact with water, will not corrode and are not affected by oil or debris. Bilge Alert detects water and sends a signal (3 seconds delay) to the alarm and switch conveniently mounted on a panel. Three way rocker switch allows alarm to be tested, turned off and armed.



Order No.	Description
34-72303-001	Bilge Alert, High Water Alarm, 12V
34-72303-002	Bilge Alert, High Water Alarm, 24V

SIDE MOUNT BRACKET

Gives opportunity to mount the pump on a wall. Suitable for Cartridge and Cartridge Duo.



Order No.	Description
34-900	Side Mount Bracket

BILGE PUMP COUNTER

Easy to read and resettable bilge pump counter. Check frequency of bilge pump operation to head off potential issues down the road.



Order No.	Description
34-83000	Bilge pump counter 12V and 24V

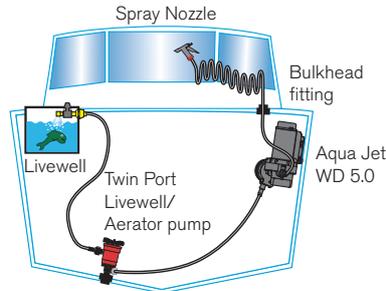
Fishing Livewell - Aerator pumps

TWIN PORT PUMPS

Offer the convenience of using only one intake for both the livewell and raw water wash down pump. The 3/4" tapered inlet connects directly to the sea cock and the upper outlet port provides a continuous flow of water through the 3/4" discharge to the livewell while the lower outlet port connects to the wash down pump through either a 1/2" or 3/4" ports. New high pressure inlet seal easily handles the higher pressures created by high speed pickups commonly used.



Order No.	Description
32-48503	500 GPH
32-48703	750 GPH



CARTRIDGE AERATOR PUMP

Livewell pumps in 500 GPH and 750 GPH capacities with two different intake configurations of straight and 90°. Smaller profiles to fit in more confined spaces. Easy to change motor cartridge.

Order No.	Description
32-2850	500 GPH straight
32-3850	500 GPH 90°
32-2870	750 GPH straight
32-3870	750 GPH 90°



PRO SERIES 1600 GPH LIVEWELL/BAITWELL

Features heavy duty bronze bottom inlet, 1600 GPH of pumping power, dual port capability, mega torque motor, double ball bearings, quiet running design, 1" NPT female intake. Built for the serious fisherman!

Order No.	Description	Capacity straight (13.6 V)	Capacity 3 ft (0.9 m) head (13.6 V)	Amperage	Fuze Size	Connection
32-16004B	1600 GPH, 12 V	1600 GPH	1550 GPH	7 A	10 A	1 1/8" and 1 1/4"
32-16004B-24V	1600 GPH, 24 V	1600 GPH	1550 GPH	3.5 A	6 A	1 1/8" and 1 1/4"



ICE CHEST AERATOR KIT



Converts any good sized ice chest (Esky) into your own portable live bait tank. The Ice Chest Aerator will keep your live bait alive, or catch fresh, even during the heat of the day. Includes a sturdy Bilge Mate pump, hose, spray bar, press on clamp, battery clamps and clear-cut instructions. Since there are no holes to drill the chest can always be returned to its original purpose.

Order No.	Description
32-24052	Ice Chest Aerator kit

IN-WELL AERATOR KIT



The easiest way to add oxygen to your live bait well. Use it as your primary aerator, or to recirculate while you are making a long run across the bay, or if you are towing the boat, you can stop for fuel and be aerating your catch while the boat is on the trailer.

A dependable 500 GPH forces water through the aerating head to provide vital oxygen for respiration ensuring your bait stays fresh longer. To empty the well at the end of the day, merely open the valve, activate the pump and water passes through a discharge fitting.

Order No.	Description
32-24014	In-well Aerator kit

AQUA JET WD/LIVEWELL PUMP KIT 5.2



A wash down kit including a high capacity Aqua Jet WD 5.2, 5 bar (70 psi) pump, a 500 GPH Twin Port livewell pump, PUMProtector inlet strainer, spray nozzle, bulk head fitting with valve, 7.5 meters (25') of coiled wash down hose and two illuminated panel switches all in one package. Aqua Jet wash down/livewell pump kit makes it easy to add a wash down and livewell pump to any boat.

Order No.	Description
32-64634	WD 5.0/550 Livewell Pump Kit



Photo: Cranchi



FIP DC Pumps for Bilge, Deckwash & Refueling



With their high level of flexibility, these pumps are ideally suited for use in boats as bilge and deckwash pumps, fresh water pumps, refuelling pumps for oil and diesel. These pumps may be combined with a vacuum switch for automatic operation. Capacities vary from max 15 l/min to 55 l/min, allowing the proper matching of the pump to the application. All motors are heavy duty to provide long service life even under heavy use. Available in 12 or 24 volts.

CE CE marked according to following standards:

- F2P10-19, F3B-19, F4B-19, F4B-11**
- EN50082-1: 1992/Generic EMS Standard
- EN55014: 1993/Radio disturbance
- IEC801-2: 1984/Electrostatic Discharge
- IEC801-3: 1984/Radiated Immunity Test
- ISO8846: Small Craft – Electrical devices – Protection against ignition of surrounding flammable gases
- ISO8849: Small Craft – Electrically operated bilge pumps
- ISO10133: Small Craft – Electrical systems – Extra-low voltage d.c. installations
- F5B-19 12/24 V**
- EN55014: 1993/Radio disturbance

Johnson Pump®



F2P10-19 – CAPACITY 15 L/MIN

Fully equipped, self-priming multipurpose pump operating on a simple and uncomplicated principle. Ideal for pumping water, oils and chemicals.

Order No.	Description	Body	Impeller	Seal	Connection	Length	Width	Height	Weight
10-24886-01	F2P10-19, 12V	PA	09-1077B-9	Lip seal	1/2" hose	172 mm – 6.8"	117 mm – 4.6"	78 mm – 3.1"	1,6 kg – 3.5 lbs
10-24886-02	F2P10-19, 24V	PA	09-1077B-9	Lip seal	1/2" hose	172 mm – 6.8"	117 mm – 4.6"	78 mm – 3.1"	1,6 kg – 3.5 lbs

Includes Nitrile impeller

F3B-19 – CAPACITY 21 L/MIN

Perfect for bilge pumping, deckwash, water circulation, oil and diesel refuelling at dockside service, etc.



Order No.	Description	Body	Impeller	Seal	Connection	Length	Width	Height	Weight
10-24516-01	F3B-19, 12V	Bronze	09-843S-9	Lip seal	3/8" BSP	170 mm – 6.7"	113 mm – 4.4"	82 mm – 3.22"	2 kg – 4.5 lbs
10-24516-02	F3B-19, 24V	Bronze	09-843S-9	Lip seal	3/8" BSP	170 mm – 6.7"	113 mm – 4.4"	82 mm – 3.22"	2 kg – 4.5 lbs

Includes Nitrile impeller

F3B-19 – OIL CHANGE – CAPACITY 21 L/MIN

Reversible rubber impeller pump with integrated quick reversing switch. Designed to remove old oil from the engine/fill new oil back into the engine.



Order No.	Description	Body	Impeller	Seal	Connection	Length	Width	Height	Weight
10-24760-01	F3B-19 Oil change, 12V	Bronze	09-843S-9	Lip seal	3/8" BSP	170 mm – 6.7"	113 mm – 4.4"	115 mm – 4.5"	2,1 kg – 4.5 lbs
10-24760-02	F3B-19 Oil change, 24V	Bronze	09-843S-9	Lip seal	3/8" BSP	170 mm – 6.7"	113 mm – 4.4"	115 mm – 4.5"	2,1 kg – 4.5 lbs

Includes Nitrile impeller

F38B-19 – CAPACITY 35 L/MIN

Perfect for bilge pumping, deckwash, water circulation, oil and diesel refuelling at dockside service, etc.



Order No.	Description	Body	Impeller	Seal	Connection	Length	Width	Height	Weight
10-24727-01	F38B-19, 12V	Bronze	09-824P-9	Lip seal	Hose 1" / 1/2" BSP	180 mm – 7"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
10-24727-02	F38B-19, 24V	Bronze	09-824P-9	Lip seal	Hose 1" / 1/2" BSP	180 mm – 7"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs

Includes Nitrile impeller

F4B-19 – CAPACITY 48 L/MIN

Perfect for bilge pumping, deckwash, water circulation, oil and diesel refuelling at dockside service, etc.

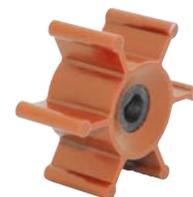


Order No.	Description	Body	Impeller	Seal	Connection	Length	Width	Height	Weight
10-24689-01	F4B-19, 12V	Bronze	09-824P-9	Lip seal	Hose 1" / 1/2" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
10-24689-02	F4B-19, 24V	Bronze	09-824P-9	Lip seal	Hose 1" / 1/2" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs

Includes Nitrile impeller

F4B-11 ULTRA BALLAST – CAPACITY 52 L/MIN SKI/WAKEBOARD

Designed to quickly fill or, when reversed, drain a ballast tank at a rate of more than 45 l/min (12 GPM). Capable of pumping fresh or sea water the pump's robust design can handle the rigors of continuous duty usage, is reversible and has a built in thermal overload for added protection. Polarity reversing switch kit available as accessory. Care not to run dry for extended periods of time will increase the pump longevity and ensure reliable performance for many years. *Note! Only for waterhandling.*



Order No.	Description	Body	Impeller	Seal	Connection	Length	Width	Height	Weight
*10-24690-01	F4B-11 Ultra Ballast, 12 V	Bronze	09-824P-1	Lip seal	Hose 1" / 1/2" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
*10-24690-02	F4B-11 Ultra Ballast, 24 V	Bronze	09-824P-1	Lip seal	Hose 1" / 1/2" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
**10-24690-09	F4B-12 Ultra Ballast, 12 V	Bronze	09-824P-2 (Orange)	Lip seal	Hose 1" / 1/2" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
**10-24690-10	F4B-12 Ultra Ballast, 24 V	Bronze	09-824P-2 (Orange)	Lip seal	Hose 1" / 1/2" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs

*Includes EPDM-impeller. **Includes Polyurethane Impeller orange

F5B-19 – CAPACITY 55 L/MIN

For bilge pumping, deckwash, water circulation, oil and diesel refuelling at dockside service, etc.

Order No.	Description	Body	Impeller	Seal	Connection	Length	Width	Height	Weight
10-24188-1	F5B-19, 12 V	Bronze	09-1027B-9	Mech. seal	3/4" BSP	258 mm – 10.15"	131 mm – 5.15"	120 mm – 4.72"	8kg/ 17.5lbs
10-24188-2	F5B-19, 24 V	Bronze	09-1027B-9	Mech. seal	3/4" BSP	258 mm – 10.15"	131 mm – 5.15"	120 mm – 4.72"	8kg/ 17.5lbs

Includes Nitrile impeller



OIL CHANGE KIT

Suitable for both F2P10-19 (connection 1/2" hose) and F3B-19 (connection 3/8") (BSP).

Complete with oil dip stick extraction tube 6 and 8 mm. Total hose length 240 cm (120 cm + 120 cm). Order No. 09-47616



IMPELLER KITS

For more information about impeller kits for these pumps see p. 49-51.

PRESSURE AND CAPACITY DATA (BASED ON WATER AT 20°C/68°F)

F2P10-19					Ampere Draw	
Bar	kPa	psi	l/min	GPM	12 V	24 V
Count. Duty						
0	0	0	15.0	4.0	5.6	4.0
0.1	10	1.45	14.5	3.8	5.7	4.0
0.2	20	2.90	14.0	3.7	5.8	4.1
0.3	30	4.35	13.5	3.6	5.9	4.1
0.6	60	8.7	11.0	2.9	6.1	4.2
Intermittent Duty						
0.75	75	10.8	9.6	2.5	6.5	4.3
0.9	90	13.0	7.0	1.8	6.5	4.8
Fuse Required					15 A	8 A

F4B-19					Ampere Draw	
Bar	kPa	psi	l/min	GPM	12 V	24 V
Count. Duty						
0	0	0	48.0	12.7	12.2	6.5
0.1	10	1.45	45.0	11.9	12.3	6.7
0.2	20	2.9	44.5	11.7	12.2	6.8
0.3	30	4.35	41.0	10.8	13.1	7.1
0.6	60	8.7	34.0	9.0	14.9	7.5
Intermittent Duty						
0.9	90	13.0	25.0	6.6	16.5	7.8
1.2	120	17.4	11.0	2.9	18.3	8.8
Fuse Required					25 A	15 A

F3B-19					Ampere Draw	
Bar	kPa	psi	l/min	GPM	12 V	24 V
Count. Duty						
0	0	0	21.0	5.5	8.4	4.0
0.1	10	1.45	20.5	5.4	8.5	4.0
0.2	20	2.9	20.0	5.3	8.6	4.1
0.3	30	4.35	19.5	5.2	8.8	4.1
0.6	60	8.7	17.8	4.7	9.0	4.2
Intermittent Duty						
0.9	90	13.0	15.6	4.1	9.6	4.3
1.2	120	17.4	12	3.2	10.3	4.8
Fuse Required					15 A	8 A

F5B-19					Ampere Draw	
Bar	kPa	psi	l/min	GPM	12 V	24 V
Count. Duty						
0	0	0	55.0	14.5	23.2	11.9
0.3	30	4.35	49.4	13.1	24.2	12.8
0.6	60	8.7	39.9	10.5	25.1	13.3
0.9	90	13.0	30.1	8.0	26.2	14.0
1.2	120	17.4	19.3	5.1	28.0	14.7
1.5	150	21.76	9.3	2.4	29.8	15.3
Fuse Required					50 A	25 A
Recommended wire size					16 mm ²	6 mm ²

F38B-19					Ampere Draw	
Bar	kPa	psi	l/min	GPM	12 V	24 V
Count. Duty						
0	0	0	35.0	9.2	10.9	5.0
0.1	10	1.45	33.8	8.9	11.0	5.1
0.2	20	2.9	32.2	8.5	11.0	5.1
0.3	30	4.35	31.0	8.2	11.1	5.2
0.6	60	8.7	25.5	6.7	11.9	5.4
Intermittent Duty						
0.9	90	13.0	15.3	4.0	13.6	6.0
1.2	120	17.4	2.0	0.5	15.8	7.1
Fuse Required					20 A	10 A

ACCESSORIES

Polarity Reversing Switch Kit for Ultra Ballast Pump F4B-11

Order No.	Description
09-47196	Polarity Reversing Switch Kit

Vacuum Switch see page 40

Order No.	Description
09-45053	Vacuum Switch

09-47196

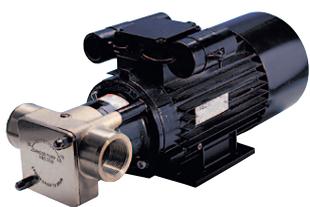


09-45053





FIP AC wash down, fire fighting, septic handling & circulation pump



Through their versatility and flexible design, these AC-powered Flexible Impeller Pumps can be customized uniquely for each area of application. The pumps handle most liquids and slurries. In the marine environment the pumps are specially suitable for bilge, wash down, fire fighting, septic handling and water circulation duties.

The capacities range from 20 l/min to 490 l/min. The pumps are characterized by their ease of service and maintenance. For 3-phase power source we offer the FIP20, FIP25, FIP40, FIP40, FIP50 and the FIP65. Additionally, the FIP20, FIP25 and the FIP40 are available for single-phase power.



CE marked according to following standards:

FIP-series

Machine directive 2006/42/EG, Annex IIA / I
FIP-series SH; FIP 20SH, FIP 25SH, FIP 40SH, FIP 50SH, FIP 65SH
Regulation (EC) No 1935/2004 of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC.

ADVANTAGES OF FIP

- Excellent self-priming capacity A dry pump has a suction lift up to 5 meters within a few seconds.
- Pulsation free and reversible flow The FIP-pump gives a uniform flow without pulsation
- Compact design The FIP has minimal outer dimensions compared to its capacity, which simplifies space and installation requirements.
- Easy maintenance and fast to clean Unique 3 piece design reduces maintenance and cleaning time to a minimum.



THE FIP STAINLESS STEEL INDUSTRIAL VERSION

316 stainless steel pump with BSP threads suitable for non hygienic applications. Available in either close coupled flange or conventional pedestal mount.

FIP40SI

Suitable for discharge of septic tank. Motor sold separately.*



Order No.	Description	Body	Connection	Impeller	Shaft	Shaft seal	Shaft end
10-13214-000	FIP40SI-BSP02M01F90	Stainless steel	BSP	Neoprene	Double flat	Mech.	Flange

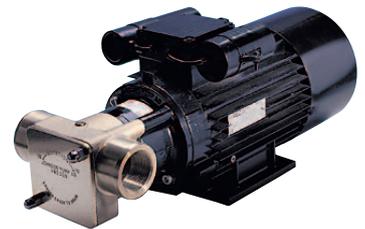
THE FIP BRONZE VERSION

Bronze pump with BSP threads for liquids such as saltwater, mineral oils, slurries, additives or abrasive products.

FIP25B

Suitable for wash down, bilge, water circulation, etc. Motor sold separately.*

Order No.	Description	Body	Connection	Impeller	Shaft	Shaft seal	Shaft end
10-45874-01	FIP25B-BSP00M01F80	Bronze	BSP	Neoprene	Double flat	Mech.	Flange



FIP40B

Suitable for wash down, bilge, water circulation, fire fighting reserve, etc. Motor sold separately.*

Order No.	Description	Body	Connection	Impeller	Shaft	Shaft seal	Shaft end
10-45880-01	FIP40B-BSP00M01F90	Bronze	BSP	Neoprene	Double flat	Mech.	Flange

* Motors for the FIP pumps are available as 4-, 6- or 8-pole with speeds between 700-1450 rpm.

MODEL SPECIFICATIONS

Example: $\frac{FIP}{1} \frac{20}{2} \frac{SH}{3} - \frac{DIN}{4} \frac{4}{5} \frac{2}{6} \frac{M01}{7} \frac{P80}{8}$

1. Family name
FIP = Flexible Impeller Pump

2. Pump size
20 25 40 50 65
20 25 40 50 65
Average inlet and outlet port diameter, mm

3. Material of pump body and cover
SH = Stainless steel, hygienic version
SI = Stainless steel, industrial version
B = Bronze

4. Port/connection
FIP 20/25SI, FIP 25/40B
BSP = BSP thread/hose combination
NPTF = NPTF thread/hose combination*

FIP 40/50/65SI
BSP = BSP thread
NPTF = NPTF thread*
* NPTF available on request.

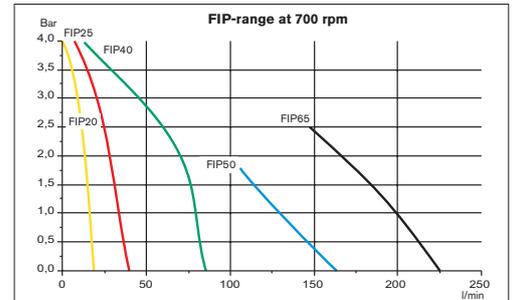
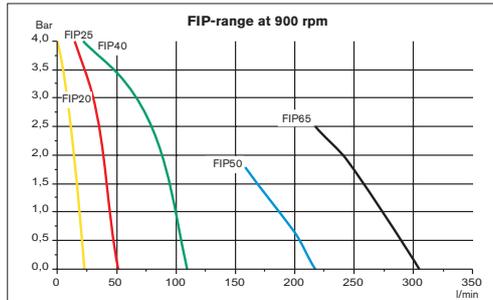
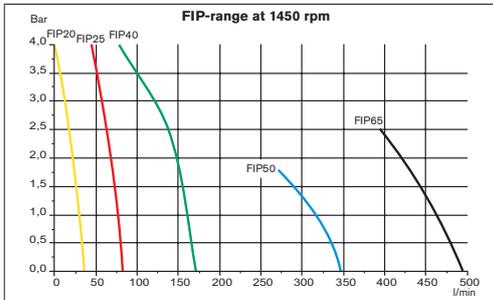
FIP 20/25/40/50/65SH
DIN = DIN 11851
SMS = SMS 1145
PLN = Plain without threaded ports
CLP = Clamp according to SMS 3017 (TriClamp)

5. Impeller code*
0 = Neoprene industrial version – standard pressure
3 = EPDM, FDA, food grade – high pressure
4 = Neoprene, FDA, milk grade
6 = Neoprene, industrial version – high/intermediate pressure
7 = EPDM, FDA, food grade – standard pressure
9 = Nitrile, splined drive – standard pressure
* Impeller options are dependent on pump.

6. Shaft
Bronze
0 = Splines – Stainless steel
Stainless steel pumps
0 = Splines – Stainless steel
2 = Double flat – Stainless steel

7. Shaft seals
M = Single mechanical seal
L = Lip seal
Material of single mechanical seals
01 = Carbon/ceramic/nitrile
03 = Silicon carbide/silicon carbide/FPM (DIN/ISO) / FKM (ASTM) (on request only)
06 = FDA Approved mechanical seal

8. Shaft end
P = Pedestal
F = Flange for IEC motor
80 = FIP 20/25 – Pedestal; shaft height, mm
Flange; IEC motor size
90 = FIP 40 – Pedestal; shaft height, mm
Flange; IEC motor size
100 = FIP 50 – Pedestal; shaft height, mm
Flange; IEC motor size
112 = FIP 65 – Pedestal only; shaft height, mm





Circulation Pumps



CM-series – a line of compact magnetic driven centrifugal pumps which combine high flow rates with very low electric current consumption. Suitable for fresh water and ethylene glycol.

C090 – mechanical sealed pumps with a motor designed for continuous operation. Suitable for fresh water and ethylene glycol circulation.

CM90BL-series – magnetic driven centrifugal pump, fitted with a brushless electric motor with fewer wear parts for continuous operation with extra long service life. Suitable for circulation of glycol mixture or fresh water.



CE marked according to following standards:

CM10P7-1, CM30P7-1, CM90, *C090P5-1, CM90BL

Recreational Craft Directive 94/25/EEC

ISO 8846: 1990/Small Craft - Electrical devices - Protection against ignition of surrounding flammable gases

(ISO 10133: 1994/Small Craft -Electrical systems - Extra low-voltage DC installations)

Electromagnetic Compatibility Directive 2004/108/EC

EN55014-1: 2006 Electromagnetic compatibility –

Requirements for household appliances, electric tools and similar apparatus – Part 1:Emission

EN55014-2: 1997 +A1: 2001 Electromagnetic compatibility –

Requirements for household appliances, electric tools and similar apparatus – Part 2:Immunity.

EN61000-6-3: 2007 Electromagnetic compatibility (EMC) –

Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments.

2004/104/EC: 2004 Annex1; paragraph 6.5, 6.6, 6.8 and 6.9.

*Not ISO 8846 (ISO10133)



CM10 & CM30

Pump Body	PPA, Thermoplastic	Dry running	Max 30 minutes
Impeller	PPA, Thermoplastic	Input Power	Max 14W (CM10) 27W (CM30)
Shaft	Stainless Steel	Mounting	Separate universal bracket for flat surfaces
Motor	12/24V DC enclosed (as per IP67) permanent magnet, ball bearing mounted motor, designed for continuous operation	Dimensions and weight	
Liquid	Water/glycol mixture; max. 60% glycol, fresh water	Length	CM10P7-1 177 mm – 6.97" CM30P7-1 177 mm – 6.97"
Liquid temp	Min -40°C Max +100°C	Width	68 mm – 2.68"
System pressure:	2,5 bar max	Height	85 mm – 3.35"
Port size	Ø 16 mm (5/8") or 20 mm (3/4") hose	Weight	0.53 kg – 1.2 lbs 0.6 kg – 1.3 lbs

Order No.	Description	Hose connection	Back pressure			Flow	
			Bar	kPa	ft	l/min	USGPM
10-24501-03/-04	CM10P7-1, 12V/24V	Ø 16 mm (5/8")	0.1	10	3.3	15.0	4.0
			0.15	15	4.9	12.0	3.2
10-24502-03/-04	CM10P7-1, 12V/24V	Ø 20 mm (3/4")	0.1	10	3.3	18.5	5.0
			0.15	15	4.9	14.5	3.9

Order No.	Description	Hose connection	Back pressure			Flow	
			Bar	kPa	ft	l/min	USGPM
10-24503-03/-04	CM30P7-1, 12V/-24V	Ø 16 mm (5/8")	0.1	10	3.3	20.0	5.3
			0.15	15	6.6	17.5	4.2
10-24504-03/-04	CM30P7-1, 12V/-24V	Ø 20 mm (3/4")	0.1	10	3.3	26.0	6.9
			0.15	15	6.6	22.5	5.2



C090

Pump Body	PA66, Thermoplastic	Dry running	No
Impeller	PA66, Thermoplastic	Input Power	100W
Shaft	Stainless steel	Mounting	Separate universal bracket for flat surfaces
Shaft seal	Mechanical seal	Dimensions and weight	
Motor	12/24 V DC enclosed (as per IP31) permanent magnet, ball bearing mounted motor, designed for continuous operation	Length	211 mm – 8.3"
Liquid	Water/glycol mixture; max. 60% glycol, fresh water	Width	117 mm – 4.6"
Liquid temp	Min -30°C Max +100°C	Height	110 mm – 4.56" from baseplate (totally 116 mm – 4.8")
System pressure:	2 bar max	Weight	1.75 kg – 3.8 lbs
Port size	Ø 38 mm (1 1/2") hose		

Order No.	Description	Capacity 0,1 bar	Capacity 0,15 bar
10-24190-01	C090P5-1, 12V	100 l/min at 0.1 bar (26.4 GPM at 3.3 ft)	90 l/min at 0.15 bar (23.7 GPM at 4.9 ft)
10-24190-02	C090P5-1, 24V	100 l/min at 0.1 bar (26.4 GPM at 3.3 ft)	90 l/min at 0.15 bar (23.7 GPM at 4.9 ft)



CM90

Pump Body	PPA, Thermoplastic	Dry running	Max 30 minutes
Impeller	PA12, Thermoplastic	Input Power	Max. 125W
Shaft	Stainless Steel	Mounting	Separate universal bracket for flat surfaces (included)
Motor	12/24 V DC enclosed (as per IP67) permanent magnet, ball bearing mounted motor, designed for continuous operation	Dimensions and weight	
Liquid	Water/glycol mixture; max. 60% glycol, fresh water	Ø 20 mm	Ø 38 mm
Liquid temp	Min -30°C Max +100°C	Length	255 mm 253 mm
System pressure:	2 bar max	Width	120 mm 120 mm
Port size	Ø 20 mm (3/4") & Ø 38 mm (1 1/4")	Height	140.5 mm 149.5 mm
		Weight	3.0 kg – 6.6 lbs 3.0 kg – 6.6 lbs

Ø 20 mm (3/4")

Order No.	Description	Capacity 0,1 bar	Capacity 0,25 bar
10-24750-09	CM90P7-1, 12V	65 l/min (17.2 GPM) at 0.1 bar	50 l/min (13.2 GPM) at 0.25 bar
10-24750-10	CM90P7-1, 24V	65 l/min (17.2 GPM) at 0.1 bar	50 l/min (13.2 GPM) at 0.25 bar

Ø 38 mm (1 1/2")

Order No.	Description	Capacity 0,1 bar	Capacity 0,25 bar
10-24664-09	CM90P7-1, 12V	115 l/min at 0.1 bar (30.4 GPM at 8.2 ft)	90 l/min at 0.25 bar (23.8 GPM at 8.2 ft)
10-24664-10	CM90P7-1, 24V	115 l/min at 0.1 bar (30.4 GPM at 8.2 ft)	90 l/min at 0.25 bar (23.8 GPM at 8.2 ft)

CM90BL

Pump Body	PPA, Thermoplastic	Dry running	Max 30 minutes
Impeller	PA12, Thermoplastic	Input Power	Max. 125W
Shaft	Stainless Steel	Mounting	Separate universal bracket for flat surfaces (included)
Motor	Brushless 12/24 V DC enclosed (as per IP67) permanent magnet, ball bearing mounted motor, designed for continuous operation	Dimensions and weight	
Liquid	Water/glycol mixture; max. 60% glycol, fresh water	Length	Ø 20 mm Ø 38 mm
Liquid temp	Min -40°C Max +100°C	Width	273.5 mm 272 mm
System pressure:	2,5 bar max	Height	121 mm 121 mm
Port size	Ø 20 mm (¾") & Ø 38 mm (1½")	Weight	141 mm 150 mm
			3.0 kg (6.6 lbs) with 3.0 kg (6.6 lbs) with
			bracket, 2.8 kg (6.2 bracket, 2.8 kg (6.2
			lbs) without bracket lbs) without bracket



Ø 20 mm (¾")

Order No.	Description	Capacity 0,1 bar	Capacity 0,25 bar
10-24901-01	CM90P7-1 BL, 12V	55 l/min at 0.1 bar (14.5 GPM at 8.2 ft)	50 l/min at 0.25 bar (13.2 GPM at 8.2 ft)
10-24901-02	CM90P7-1 BL, 24V	55 l/min at 0.1 bar (14.5 GPM at 8.2 ft)	50 l/min at 0.25 bar (13.2 GPM at 8.2 ft)

Ø 38 mm (1½")

Order No.	Description	Capacity 0,1 bar	Capacity 0,25 bar
10-24898-01	CM90P7-1 BL, 12V	115 l/min at 0.1 bar (30.4 GPM at 8.2 ft)	90 l/min at 0.25 bar (23.8 GPM at 8.2 ft)
10-24898-02	CM90P7-1 BL, 24V	115 l/min at 0.1 bar (30.4 GPM at 8.2 ft)	90 l/min at 0.25 bar (23.8 GPM at 8.2 ft)



Waste Water Handling & Marine Toilets



From a name you can trust, the AquaT™ toilet provides the comfort and convenience of a land-based lavatory at sea — a marine toilet that flushes as quietly as a toilet on land.

In combination with the Viking Power 16 or 32 and a Grey Water Tank you will have a complete waste water handling system.



CE marked according to following standards:

Viking Power

Recreational Craft Directive 94/25/EEC

ISO8846: Small Craft – Electrical devices – Protection against ignition of surrounding flammable gases

ISO10133: Small Craft – Electrical systems – Extra-low voltage d.c. installations

ISO8849: Small Craft – Electrically operated bilge pumps

Electromagnetic Compatibility Directive 89/336/EEC

EN55014: 1993/Radio disturbance

AquaT Silent Electric, Standard Electric & Premium

Recreational Craft Directive 94/25/EEC

ISO8846: Small Craft – Electrical devices – Protection against ignition of surrounding flammable gases

Electromagnetic Compatibility Directive 89/336/EEC

EN55014: 1993/Radio disturbance

VIKING POWER 16

The Viking Power 16 is self-priming up to a height of 3 meters.

With its low pulse and muffled rubber bracket, this pump offers quiet operation. Specifically designed to pump waste (grey) water, the Viking Power 16 has been built to last, and engineered for easy maintenance. When it comes time to replace the premium grade reinforced nitrile rubber diaphragm, you can put in a spare without even removing the pump from the system. Delivered with 1" hose and 3/4" hose 1/2" BSP KlickTite™ XL connectors. 90° KlickTite™ XL connectors available as extra accessory.



Motor	2.3 amp (12V), 1.2 amp (24V) at 0.1 bar 12/24V DC (with built-in thermal protection)
Body	Nylon, glass-fiber reinforced
Valves	Nitrile rubber
Diaphragm	Reinforced nitrile rubber
Length	186 mm – 7.3"
Width	235/181 mm – 9.3"/7.1"
Height	118/204 mm – 4.6"/8"
Weight	2.6 kg – 5.7 lbs

Now with double check valves
for improved pumping action



09-47491 Fittings 3/4" barb with outlet non-return valve
09-47492 Fittings 1" barb with outlet non-return valve

Order No.	Description	Capacity, open flow	Capacity at 0.1 bar	Max lift	Max head	Connection
10-13350-03	Viking Power 16, 12V	16 l/min – 4.2 GPM	15 l/min – 4.0 GPM	3 m – 9.8 ft	3 m – 9.8 ft	KlickTite™ XL connectors for 1" hose or 3/4" hose and 1/2" BSP threads; straight and 90° (optional)
10-13350-04	Viking Power 16, 24V	16 l/min – 4.2 GPM	15 l/min – 4.0 GPM	3 m – 9.8 ft	3 m – 9.8 ft	

VIKING POWER 32

The Viking Power 32 and Viking Power Vacuum diaphragm pumps have been designed to meet the rigorous demands of the world's leading manufacturers of boats, recreational vehicles and busses.

Thanks to its single-chamber design and non-choke valves, the Viking Power 32 can be used to pump un-macerated sewage to a holding tank or transfer it onwards to a septic tank.



Motor	3.3 amp (12V), 1.6 amp (24V) at 0.1 bar 12/24V DC (with built-in thermal protection)
Body	Nylon
Valves	Nitrile rubber
Diaphragm	Reinforced nitrile rubber
Length	277 mm – 10.9"
Width	264 mm – 10.4"
Height	192 mm – 7.6"
Weight	5.0 kg – 11.0 lbs



Order No.	Description	Capacity, open flow	Capacity at 0.1 bar	Max lift	Max head	Connection
10-13373-03	Viking Power 32, 12V	32 l/min – 8.5 GPM	30 l/min – 7.9 GPM	2.5 m – 8.2 ft	4 m – 13.1 ft	38 mm / 1 1/2"
10-13373-04	Viking Power 32, 24V	32 l/min – 8.5 GPM	30 l/min – 7.9 GPM	2.5 m – 8.2 ft	4 m – 13.1 ft	38 mm / 1 1/2"

VIKING POWER VACUUM

The Viking Power Vacuum has double check-valves and can therefore also be used in vacuum toilet systems. Naturally, pumping ordinary shower or sink drain water or bilge water is no problem for either pump.

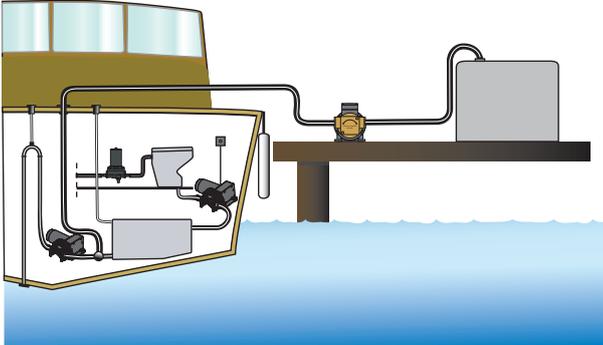
Motor	3.3 amp (12V), 1.6 amp (24V) at 0.1 bar 12/24V DC (with built-in thermal protection)
Body	Nylon
Valves	Nitrile rubber
Diaphragm	Reinforced nitrile rubber
Length	357 mm – 14"
Width	271 mm – 10.7"
Height	192 mm – 7.6"
Weight	5.1 kg – 11.2 lbs



Order No.	Description	Capacity, open flow	Capacity at 0.1 bar	Max lift	Max head	Connection
10-13373-07	Viking Power Vacuum, 12V	24 l/min – 6.3 GPM	22 l/min – 5.8 GPM	5 m – 16.4 ft	4 m – 13.1 ft	38 mm / 1 1/2"
10-13373-08	Viking Power Vacuum, 24V	24 l/min – 6.3 GPM	22 l/min – 5.8 GPM	5 m – 16.4 ft	4 m – 13.1 ft	38 mm / 1 1/2"

VIKING POWER 32 / VACUUM

Like the Viking Power 16, this pump has been engineered with a ball-bearing supported transmission for long service life. The pump cannot only be run dry, it can also handle a mixture of air and water without difficulty. The Viking Power 32/Vacuum provides maximum flow of 32 l/min and is self-priming up to a height of 2.5 m for VP 32 or 5 m for VP Vacuum. Although powered by an electric motor, this pump can also be cranked by hand in case of an emergency.



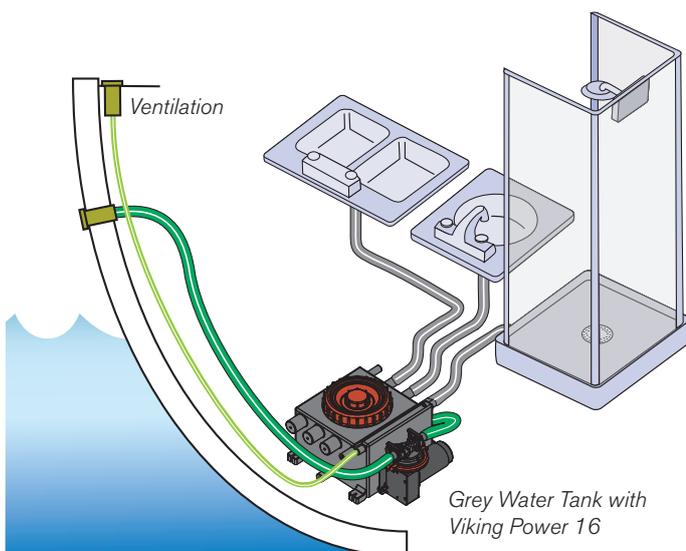
GREY WATER TANK

The Grey Water Tank is designed to be used as a collection tank for waste water from showers, sinks, dishwashing machines, etc with 19 mm, 25 mm and 38 mm inlet ports, and 19 mm and 25 mm outlet ports. The tank includes an Ultima Switch for automatic operation and is easy to connect to any 12V/24V pump up to 20 amp. The tank is prepared for Viking Power 16, with pre-drilled holes for the pump.



Dimensions 185x280x340 mm

Order No.	Description
09-13384	Grey Water Tank, excl. Viking Power 16



TA3P10-19 – MACERATOR

The TA3P10-19 macerator pump takes care of toilet waste. A rotary cutter shreds waste before it is pumped into or out from the holding tank. The pump should be connected as close as possible to the holding tank discharge outlet or the bowl discharge outlet. Note! Use unbleached lavatory paper only.

Motor	12/24V DC (with built-in thermal protection)	Length	230 mm – 9.06"
Body	Phenol Plastic (PF)	Width	108 mm – 4.25"
Impeller	Nitrile	Height	82 mm – 3.23"
Housing	Thermoplastic Polyester (PET)	Weight	1.9 kg – 4.2 lbs
Shaft	Stainless Steel		
Seal	Lip Seal		

Order No.	Description	Capacity at 0.2 bar (6.7 ft)	Inlet Connection	Outlet Connection
10-24453-04	TA3P10-19, 12V	37 l/min – 10 GPM	1½" (dia 38 mm) hose or 1½" BSP	1" (25.4 mm) hose
10-24453-05	TA3P10-19, 24V	37 l/min – 10 GPM	1½" (dia 38 mm) hose or 1½" BSP	1" (25.4 mm) hose



09-10525-9

SPARE PARTS

Order No.	Description
09-45595	Service Kit



AQUAT™ MARINE TOILETS

Available in a selected variety of versions marketed under three basic models — manual, standard electric and silent electric - electric powered or manual — the AquaT™ marine toilet has been designed to meet virtually every conceivable lavatory installation situation onboard.

Priced competitively, the fine finish and well thought-through design of these toilets is remarkable. Made from white vitreous porcelain, and with corrosion resistant parts throughout, the AquaT™ marine toilet is quiet, robust and easy to clean.

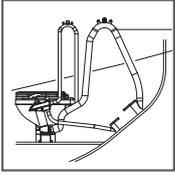
The standard electric model is equipped with a combined pump 12V/24V unit for disposal and flushing. It is easy to install and an economical choice of electrical toilet.

The silent electric model are shipped with well-proven Aqua Jet diaphragm pumps in either 12V or 24V versions, and the manual version incorporates an ergonomically designed, hand-powered piston pump that can be mounted for either left-hand or right-hand use.

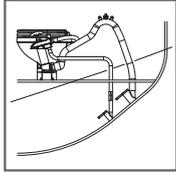
It is probably fair to think of most toilets as commonplace products, but look at the features and you are sure to see that the AquaT™ is far from ordinary. Quiet, hygienic and reliable, the AquaT™ marine toilet is perfect for almost any marine toilet room.

The bowls are available in two executions, Comfort bowl with a larger comfortable oval seat, Compact bowl with a round seat, for installations where installation space is limited.

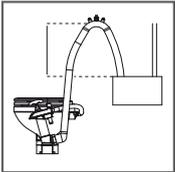
All toilets are equipped with soft closing, durable and hygienic plastic seats.



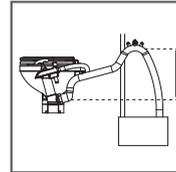
Toilet mounted below the waterline and discharging overboard.



Toilet mounted above the waterline and discharging overboard.



Toilet waste discharging into holding tank, discharging elbow below top of the holding tank at any time.



Toilet waste discharging into holding tank, discharging elbow always above top of the holding tank.



Manual Compact
80-47229-01



Manual Comfort
80-47230-01



Standard Electric Compact
80-47435-01, 12V
80-47435-02, 24V



Standard Electric Comfort
80-47436-01, 12V
80-47436-02, 24V



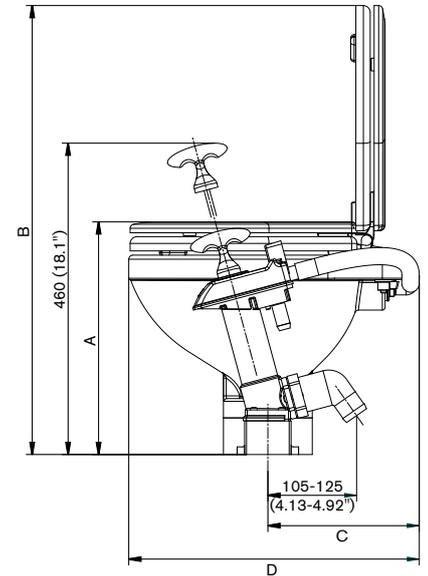
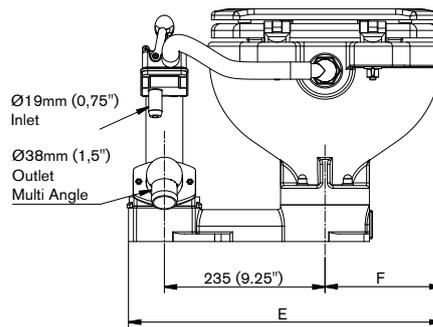
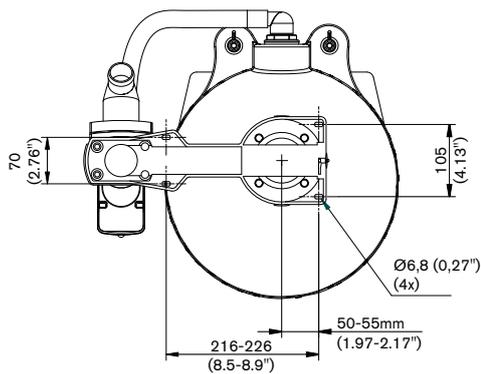
Silent Electric Compact
80-47231-01, 12V
80-47231-02, 24V



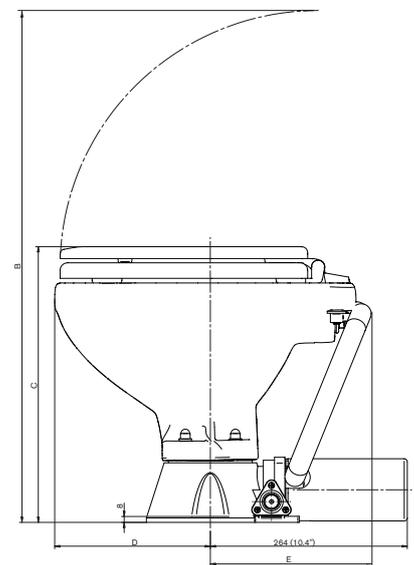
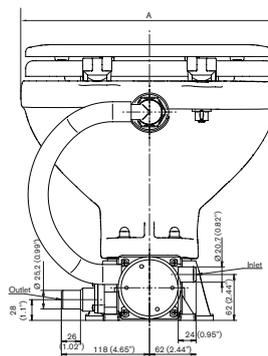
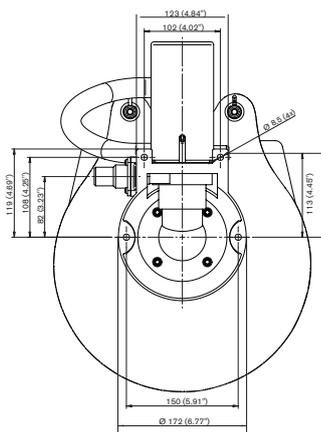
Silent Electric Comfort
80-47232-01, 12V
80-47232-02, 24V

AQUAT™ MANUAL

Order No.	Description	Net Weight	A	B	C	D	E	F
80-47229-01	Compact	9.6 kg	345 mm	650 mm	215 mm	425 mm	450 mm	170 mm
		21 lbs	13.6 inch	25.6 inch	8.5 inch	16.7 inch	17.7 inch	6.7 inch
80-47230-01	Comfort	11 kg	340 mm	705 mm	275 mm	490 mm	470 mm	185 mm
		24 lbs	13.4 inch	27.8 inch	10.8 inch	19.3 inch	18.5 inch	7.3 inch

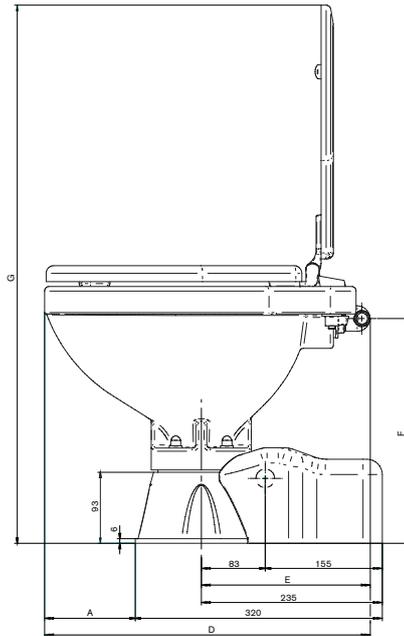
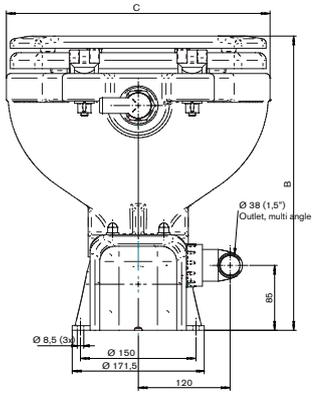


AQUAT™ STANDARD ELECTRIC



Order No.	Description	A	B	C	D	E
80-47435-01	Std. electric compact, 12V	345 /	692 /	373 /	209 /	216 /
80-47435-02	Std. electric compact, 24V	13.6"	27.2"	14.7"	8.23"	8.5"
80-47436-01	Std. electric comfort, 12V	366 /	747 /	380 /	220 /	275 /
80-47436-02	Std. electric comfort, 24V	14.4"	29.4"	15"	8.66"	10.8"

AQUAT™ SILENT ELECTRIC



Order No.	Description	Net Weight	A	B	C	D	E	F	G
80-47231-01	Compact, 12V	9.6 kg	110 mm	395 mm	335 mm	435 mm	215 mm	290 mm	705 mm
		21 lbs	4.7 inch	15.4 inch	13.2 inch	17.2 inch	8.5 inch	11.4 inch	27.7 inch
80-47231-02	Compact, 24V	9.6 kg	110 mm	395 mm	335 mm	435 mm	215 mm	290 mm	705 mm
		21 lbs	4.7 inch	15.4 inch	13.2 inch	17.2 inch	8.5 inch	11.4 inch	27.7 inch
80-47232-01	Comfort, 12V	11 kg	110 mm	385 mm	365 mm	490 mm	275 mm	280 mm	760 mm
		24 lbs	7.5 inch	15.2 inch	14.4 inch	19.3 inch	10.8 inch	11.0 inch	29.7 inch
80-47232-02	Comfort, 24V	11 kg	110 mm	385 mm	365 mm	490 mm	275 mm	280 mm	760 mm
		24 lbs	7.5 inch	15.2 inch	14.4 inch	19.3 inch	10.8 inch	11.0 inch	29.7 inch

ACCESSORIES

The vented loop is available in different sizes and with its inverted U-shape with a vent at the top it allows the air to escape. Vented loops are found in toilet discharge lines or in systems which are mounted below the waterline. Vented loops are to prevent back siphoning.

Designed for installation in waste discharge and bilge pump-out systems. Allows waste to be pumped directly into holding tank or diverted to another discharge.

One push button on the control panel for combined rinse and discharge pump.

Two switch control panel to allow for separate rinse and discharge when using an external flush pump or solenoid.

Manual pump kit for compact and comfort sized bowls of most marine toilets with 4 bolt fixation where bolt centers on base 95mm (3 3/4") diameter.

Standard Electric conversion kit/spare kit for compact or comfort sized bowls. To convert a manual model to electric, or to replace an existing electrical system with a "one-push" flush and discharge system. Includes pump, base, hose, fittings and the "one- push" control panel. Fits with compact and comfort bowls, and all standard electric models.

Silent Electric conversion kit/spare kit for compact or comfort sized bowls. For separate external flush system with flush pump or by existing centralized fresh water system using solenoid. Controls the rinse and discharge with two separate buttons on the control panel. Includes discharge pump, base, connectors and the "two switch" control panel.

An efficient and robust flush pump to be used with on-off switch for any marine 12V/24V toilet with external flushing pump system. Fits with all Silent Electric models. Delivers 9l/min.

Electric valve to be used with centralized fresh water system.

Heavy duty manual pump to fill and discharge waste water holding tanks. Compact to minimize required space, can be installed bulkhead or through. Equipped with large 38mm connectors to manage all kinds of waste water.

Electrical 12V/24V diaphragm pump to manage all types of wastewater. Can pump un-macerated sewage to a holding tank or transfer it onwards to a septic tank. Equipped with double check valves to secure operation at all times. To be used also with vacuum toilet systems.

Vented Loop

Order No.	Description
81-47237-01	Vented Loop, 3/4"
81-47237-02	Vented Loop, 1"
81-47237-03	Vented Loop, 1 1/2"

Y-valve

Order No.	Description
81-47238-01	Y-valve

Standard Electric Control Panel

Order No.	Description
81-47520-01	Std Electric Control Panel, 12V & 24V

Control Panel

Order No.	Description
81-36105-01	Control Panel, 12V & 24V

Pump Kit Manual Compact/Comfort

Order No.	Description
81-47239-01	Pump Kit Manual

Conversion Kit Standard Electric

Order No.	Description
81-47442-01	Conversion kit, 12V
81-47442-02	Conversion kit, 24V

Standard Electric Control Panel included

Conversion Kit Silent Electric

Order No.	Description
81-47240-01	Conversion kit, 12V
81-47240-02	Conversion kit, 24V

Control Panel included

Flush 3.5 Pump

Order No.	Description
10-13399-05	Flush 3.5 Pump, 12V
10-13399-06	Flush 3.5 Pump, 24V

Solenoid

Order No.	Description
81-47301-01	Solenoid valve, 12V
81-47301-02	Solenoid valve, 24V

Viking Universal

Order No.	Description
10-13530-01	Viking Universal with connection diameter 38 mm (1 1/2")
09-36250	Viking Universal Through Deck Kit

Viking Power Vacuum

Order No.	Description
10-13373-07	Viking Power Vacuum, 12V
10-13373-08	Viking Power Vacuum, 24V





Photo: Sargoboats

Radial Blowers & Marine Water Heaters



CE marked according to following standards:

AirV – Extra Heavy Duty Radial Blowers

ISO 9097:1991 Marine (Small craft, Electrical fans)
 ISO 8846:1990 (Ignition protection)
 ISO 10133: 2000 (Electrical systems)
 EN 55014-1:2006 (2004/108EC)

AquaH - Marine Water Heaters

LOW VOLTAGE (LVD) DIRECTIVE 2006/95/EC

- EN 60335-1 (2008):
 - EN 60335-2-21 (02-2004) + A1 (07-2005) + EC (01-2008):
- ELECTROMAGNETIC COMPATIBILITY (EMC) DIRECTIVE - 2004/108/EC
- EN 55014 - 1 (1999) + A1 (2000) + A2 (2003)
 - EN 55014 - 2 (1998) + A1 (2002)

AirV extra heavy duty radial blowers for marine engine compartment ventilation prior to start up. The blowers can be used for air intake or extraction in bilges, galleys, accommodation and other compartments.

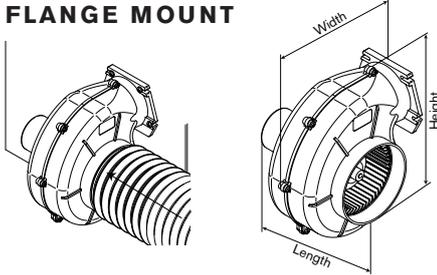
AquaH is an innovative series of AISI 316 stainless steel water heaters, with a storage capacity of 22 up to 80 litres (5.3 to 19.3 gal.). Dual heating as standard - electrical heating and indirect heating based on a second heat source, for example the cooling system from the Marine engine or generator set.

AIRV – EXTRA HEAVY DUTY RADIAL BLOWERS

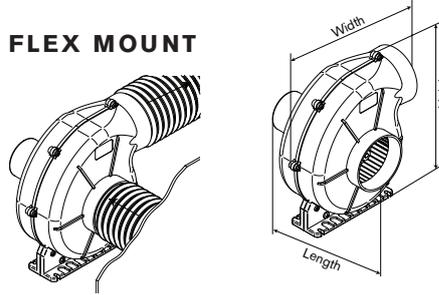
Marine radial blowers designed for engine compartment ventilation prior to start up. AirV heavy duty blowers are designed for air intake or extraction in bilges, galleys, accommodation and other compartments. Flange Mount and Flex Mount design with double ball bearing motor, high-impact anti-shock ABS body for AirV 3 and Nylon, glass-fiber reinforced body for AirV 4. Shaft and screws in Stainless steel.



FLANGE MOUNT



FLEX MOUNT

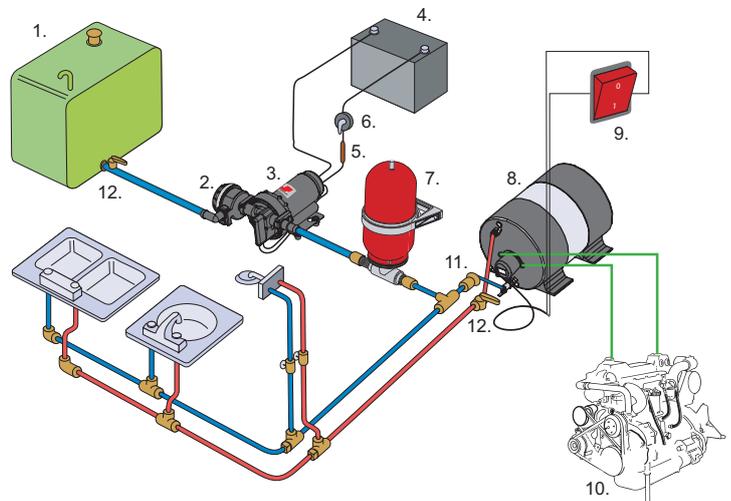


Order No.	Description	Capacity	Dimensions H x W x L	Port Connections		Current [Amp]
				Inlet	Outlet	
80-47416-01	AirV 3-280 Flange Mount, 12V	280 m ³ /h, 163 cfm	198 x 171 x 195 mm / 6.89 x 6.3 x 7.68"	Ø75 mm	92 x 80	3.9
80-47416-02	AirV 3-280 Flange Mount, 24V	280 m ³ /h, 163 cfm	197 x 173 x 195 mm / 6.89 x 6.3 x 7.68"	Ø75 mm	92 x 80	2.5
80-47417-01	AirV 4-550 Flange Mount, 12V	550 m ³ /h, 324 cfm	277 x 259 x 160 mm / 10.91 x 10.08 x 6.61"	Ø100 mm	146 x 118	12.5
80-47417-02	AirV 4-550 Flange Mount, 24V	550 m ³ /h, 324 cfm	277 x 259 x 160 mm / 10.91 x 10.08 x 6.61"	Ø100 mm	146 x 118	7
80-47418-01	AirV 4-750 Flange Mount, 12V	750 m ³ /h, 441 cfm	277 x 257 x 181 mm / 10.91 x 10.08 x 6.73"	Ø150 mm	146 x 118	14.5
80-47418-02	AirV 4-750 Flange Mount, 24V	750 m ³ /h, 441 cfm	277 x 257 x 181 mm / 10.91 x 10.08 x 6.73"	Ø150 mm	146 x 118	8.5
80-47419-02	AirV 4-1000 Flange Mount, 24V	1000 m ³ /h, 589 cfm	278 x 258 x 203 mm / 10.91 x 10.08 x 8.19"	Ø150 mm	146 x 118	15.5
80-47420-01	AirV 4-550 Flex Mount, 12V	550 m ³ /h, 324 cfm	296 x 257 x 161 mm / 11.61 x 10.08 x 6.61"	Ø100 mm	Ø110 mm	12.5
80-47420-02	AirV 4-550 Flex Mount, 24V	550 m ³ /h, 324 cfm	296 x 257 x 161 mm / 11.61 x 10.08 x 6.61"	Ø100 mm	Ø110 mm	7
80-47421-01	AirV 4-750 Flex Mount, 12V	750 m ³ /h, 441 cfm	297 x 257 x 182 mm / 11.61 x 10.08 x 6.61"	Ø150 mm	Ø110 mm	14.5
80-47421-02	AirV 4-750 Flex Mount, 24V	750 m ³ /h, 441 cfm	297 x 257 x 182 mm / 11.61 x 10.08 x 6.61"	Ø150 mm	Ø110 mm	8.5
80-47422-02	AirV 4-1000 Flex Mount, 24V	1000 m ³ /h, 589 cfm	296 x 257 x 201 mm / 11.61 x 10.08 x 8.19"	Ø150 mm	Ø110 mm	15.5

AquaH - Marine Water Heaters

TYPICAL APPLICATION

1. Water tank
2. PUMProtector inlet strainer
3. Aqua Jet water pressure pump
4. Battery
5. Fuse
6. Switch
7. Accumulator tank
8. Water heater
9. ON/OFF bipolar switch
10. Motor
11. Check valve
12. Shut-off valve





AQUAH – MARINE WATER HEATERS

Stainless steel water heaters with dual heating as standard - electrical heating and indirect heating based on a second heat source, for example based on the cooling system from the Marine engine or generator set. AquaH is an innovative series of AISI 316 stainless steel water heaters, with a storage capacity of 22 up to 80 litres (5.3 to 19.3 gal.). The heaters are cased in AISI 304 stainless steel and is provided with a sturdy compact plastic end cover which also includes the mounting brackets.

Electrical heating elements are available in Incoloy at 500 & 1200 Watts allowing hot water production when engine heat is not available but when 230 volts AC is. Delivered with an adjustable safety thermostat for temperature adjustment while on electrical heating.

Order No.	Description
56-47455-01	AquaH Marine Water Heater 1200W / 22L 220V
56-47455-03	AquaH Marine Water Heater 500W / 22L 220V
56-47456-01	AquaH Marine Water Heater 1200W / 30L 220V
56-47456-03	AquaH Marine Water Heater 500W / 30L 220V
56-47457-01	AquaH Marine Water Heater 1200W / 45L 220V
56-47457-03	AquaH Marine Water Heater 500W / 45L 220V
56-47458-01	AquaH Marine Water Heater 1200W / 60L 220V
56-47458-03	AquaH Marine Water Heater 500W / 60L 220V
56-47459-01	AquaH Marine Water Heater 1200W / 80L 220V
56-47459-03	AquaH Marine Water Heater 500W / 80L 220V

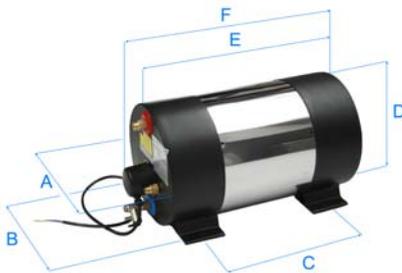
ACCESSORIES

Order No.	Description
56-47464-01	AquaH Thermostat Water Mixer Kit

DIMENSIONS

Order no	Electrical supply	Storage capacity	Weight empty	A	B	C	D	E	F
	w	lt (gallons)	kg (lbs)	mm	mm	mm	mm	mm	mm
56-47455-01	1200	22	10	322	290	235	325	410	485
56-47455-03	500	(5.81)	(22)	12.7"	11.4"	9.25"	12.8"	16.1"	19.1"
56-47456-01	1200	30	11,5	322	290	370	325	545	620
56-47456-03	500	(7.93)	(25.4)	12.7"	11.4"	14.6"	12.8"	21.5"	24.4"
56-47457-01	1200	45	15	322	290	625	325	805	880
56-47457-03	500	(11.9)	(33.1)	12.7"	11.4"	24.6"	12.8"	31.7"	34.6"
56-47458-01	1200	60	17,3	322	290	810	325	990	1065
56-47458-03	500	(15.9)	(38.1)	12.7"	11.4"	31.9"	12.8"	39"	41.9"
56-47459-01	1200	80	20	322	290	1090	325	1270	1345
56-47459-03	500	(21.1)	(44.1)	12.7"	11.4"	42.9"	12.8"	50"	53"

Electric supply 220-240 V ~ 50 Hz
Water connections 1/2"



HEATING TIME

1200W

Order no	Electrical supply	Storage capacity	Water temperature in °C (°F)							
			20 (68)	25 (77)	30 (86)	35 (95)	40 (104)	45 (113)	50 (122)	55 (131)
56-47455-01	1200	22 (5.81)	6	12	19	25	31	38	44	51
56-47456-01	1200	30 (7.93)	8	17	26	34	43	52	61	69
56-47457-01	1200	45 (11.9)	13	26	39	52	65	78	91	104
56-47458-01	1200	60 (15.9)	17	34	52	69	87	104	122	139
56-47459-01	1200	80 (21.1)	23	46	69	93	116	139	162	186

Initial temperature 15°C

500W

Order no	Electrical supply	Storage capacity	Water temperature in °C (°F)							
			20 (68)	25 (77)	30 (86)	35 (95)	40 (104)	45 (113)	50 (122)	55 (131)
56-47455-03	500	22 (5.81)	15	30	46	61	76	92	107	122
56-47456-03	500	30 (7.93)	20	41	62	83	104	125	146	167
56-47457-03	500	45 (11.9)	31	62	94	125	156	188	219	251
56-47458-03	500	60 (15.9)	41	83	125	167	209	251	293	334
56-47459-03	500	80 (21.1)	55	111	167	223	279	334	390	446

Initial temperature 15°C

Impeller Pumps & Impellers



Flexible impeller pumps provide an efficient solution to most raw water pumping needs. The pumps are self-priming and can pass fairly large solids without clogging or damaging the pumps. Our engine cooling pumps are designed to the demands of engine manufacturers and are built to take rough treatment. We supply engine cooling pumps to the world's leading marine motor manufacturers, not just because of our renowned pumps; but also because of the heart of an engine cooling pump: the impeller.

With SPX Johnson Pump Marine Original Impellers you get:

Stable pressure delivery over time

- Ensures correct cooling flow
- Significantly longer service life
- Excellent self-priming capability
- Ensures sufficient cooling directly at start up
- Correct impeller dimensions

- Our impellers are manufactured to strict tolerances for optimal functionality unique MC 97 rubber compound in many of our impellers
- Optimized to provide maximum life, especially for applications where the end user doesn't run the engine on a regular basis:
- Stable pressure delivery over time
- Minimized failures due to fatigue
- Minimized swelling

➤ **Johnson Pump®**

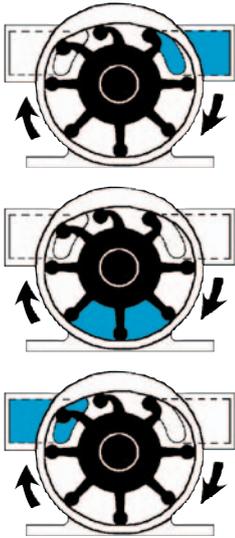
Self-Priming Flexible Impeller Pumps

OPERATING PRINCIPLE

A vacuum is created as the flexible impeller vanes straighten upon leaving the cam, drawing liquid into the pump.

The rotating impeller carries liquid from the inlet to the outlet port. As a consequence of their design, flexible impeller pumps can pass fairly large solids.

When the flexible impeller vanes regain contact with the cam, they bend and the liquid is discharged from the pump in a uniform flow. Liquids can be pumped in the opposite direction by reversing the rotation of the pump.



HEAVY DUTY IMPELLER PUMP

A range of multipurpose bronze pumps. Compact design, raw water resistant pumps at an attractive price – with the renowned SPX's Johnson Pump Marine Brand quality. These pumps are designed for a number of applications on board.

With excellent self-priming capability, these pumps are ideal as cooling water pumps for marine engines, bilge pumps, deckwash pumps, fresh water pumps, fuel transfer pumps and other applications. Also ideally suited on shore to empty septic tanks, to flush clean and to fill water tanks. Available in sizes from 3/8" to 1 1/2" (4 l/min to 279 l/min).

Vacuum switch (see page 42) as extra accessory for F8B-8 only.

Technical Specifications, Heavy Duty Impeller Pumps

Pump body	Bronze
Shaft	Stainless steel The shaft is mounted with permanently lubricated double ball bearings
Seal	Mechanical seal
Cam	Full or reduced
Connection	BSP or NPTF

HEAVY DUTY IMPELLER PUMPS

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight	Drive Shaft Ø
10-24569-01	F35B-8	09-808B-1	3/8" BSP	109 mm – 4.29"	80 mm – 3.14"	30 mm – 1.18"	0.5 kg – 1.2 lbs	3/8"
10-24570-01	F4B-8	09-810B-1 09-810B-9	3/8" BSP	111 mm – 4.37"	80 mm – 3.15"	50 mm – 1.97"	0.8 kg – 1.8 lbs	3/8"
10-24571-01	F5B-8	09-1027B-1 09-1027B-9	3/4" BSP	151 mm – 5.95"	106 mm – 4.17"	50 mm – 1.97"	1.6 kg – 3.5 lbs	5/8"
10-24572-01	F7B-8	09-1028BT-1 09-1028B-9	1" BSP	170 mm – 6.69"	120 mm – 4.72"	50 mm – 1.97"	1.9 kg – 4 lbs	5/8"
10-13021-1	F8B-8	09-819B 09-819B-9	1 1/2" BSP	217 mm – 8.54"	160 mm – 6.3"	65 mm – 2.56"	5.9 kg – 13 lbs	1"



EXTRA HEAVY DUTY IMPELLER PUMPS

Whenever you need greater strength or service from a pump, use an extra heavy duty flexible impeller pump with separate bearing housing and mechanical seal for less wear and longer life. These pumps cover the entire range of marine applications and may be used as cooling water pumps, bilge pumps, deckwash pumps, emergency and fire fighting pumps, etc. Available in sizes from 3/4" to 2 1/2" (13 l/min to 625 l/min). Wearing parts are easily replaceable and service kits are available for all standard models.

Vacuum switch as extra accessory, see below.

Technical Specifications, Extra Heavy Duty Impeller Pumps

Pump body	Bronze. Connection for vacuum switch
Shaft	Stainless steel
Seal	Mechanical seal
Cam	Full or reduced
Pedestal	Cast iron with permanently lubricated double ball bearings
Connection	BSP or NPTF

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight	Drive Shaft Ø
10-24210-1	F5B-3000	09-1027B-1	3/4" BSP	195 mm – 7.68"	106 mm – 4.17"	88 mm – 3.46"	2.9 kg – 6.5 lbs	17 mm
10-24209-1	F7B-3000	09-1028BT-1	1" BSP	213 mm – 8.38"	120 mm – 4.72"	93 mm – 3.66"	3.1 kg – 6.9 lbs	17 mm
10-13024-1	F8B-3000 VF	09-819B	1 1/2" BSP	255 mm – 10.04"	152 mm – 5.98"	154 mm – 6.06"	7.6 kg – 16.5 lbs	24 mm
10-13026-1	F9B-3000	09-802B	2" BSP	282 mm – 11.1"	192 mm – 7.56"	157 mm – 6.18"	9.3 kg – 21 lbs	24 mm
10-13175-01	F8B-3000 TSS	09-819B	1 1/2" BSP	255 mm – 10.04"	198 mm – 7.79"	151 mm – 5.94"	7.6 kg – 16.5 lbs	24 mm
10-13225-01	F9B-3000 VF	09-802B	2" BSP	282 mm – 11.1"	152 mm – 5.98"	175 mm – 6.89"	9.3 kg – 21 lbs	24 mm
10-13177-01	F9B-3000 TSS	09-802B	2" BSP	282 mm – 11.1"	200 mm – 7.87"	151 mm – 5.94"	9.3 kg – 21 lbs	24 mm



EXTRA HEAVY DUTY, HIGH FLOW, IMPELLER PUMPS

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight	Drive Shaft Ø
10-13121-01	F95B-3000	09-820B	2 1/2" BSP	354 mm – 13.93"	246/295 mm 9.68"/11.61"	226/201 mm 8.89"/7.91"	17.2 kg – 38 lbs	24 mm



VACUUM SWITCH

For automatic shut off operation to prevent pump damage.

The vacuum switch works with all self-priming impeller pumps and should be used for e.g. bilge pumping/emptying of tanks to prevent the pump from dry running. The vacuum switch automatically shuts the pump off when the bilge/tank is dry. With the switch fitted, you can start the pump by remote push button or manually by depressing lever on the switch.

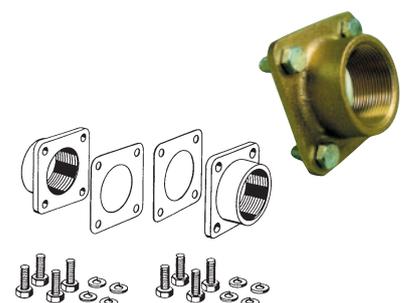
Order No.	Description
09-45053	Vacuum Switch



PORT ADAPTOR KIT

Order No.	Description
09-43112*	1 1/2" BSP for F8B-3000/5000-VF, F8B-3000/5000-TSS
09-46557-01*	2" BSP for F9B-3000/5600-VF and F9B-3000/5600-TSS

* NPTF available on request





HEAVY DUTY ELECTRO-MAGNETIC CLUTCH PUMPS

With an electro-magnetic clutch you will have pumping power whenever needed, at a push of a button, without being at the pump. Combined with a vacuum switch (recommended for bilge pump application), the clutch will automatically disengage whenever the pump starts priming air, thereby preventing dry running and pump damage. Automatically controlled pumps are available in sizes from 1" to 2 1/2" (20 l/min to 625 l/min), with clutches in 12 or 24 volts. Wearing parts are easily replaceable and service kits are available for all standard models. Vacuum Switch as extra accessory, see page 42. Clutch to be ordered separately.

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight
10-24577-99	F7B-5001	09-1028B	1" BSP	156 mm – 6.14"	120 mm – 4.72"	93 mm – 3.66"	5.8 kg – 12.7 lbs
10-13022-99	F8B-5001	09-819B	1 1/2" BSP	225 mm – 8.85"	160 mm – 6.29"	124 mm – 4.88"	9.9 kg – 22 lbs



EXTRA HEAVY DUTY ELECTRO-MAGNETIC CLUTCH PUMPS

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight
10-24116-99	F7B-5000	09-1028B	1" BSP	226 mm – 8.9"	120 mm – 4.72"	93 mm – 3.66"	6.9 kg – 15 lbs
10-13025-99	F8B-5000 VF	09-819B	1 1/2" BSP	265 mm – 10.43"	152 mm – 5.98"	154 mm – 6"	11.9 kg – 26 lbs
10-13176-99	F8B-5000 TSS	09-819B	1 1/2" BSP	265 mm – 10.43"	198 mm – 7.79"	151 mm – 5.94"	11.9 kg – 26 lbs
10-13027-99	F9B-5600	09-814B	2" BSP	290 mm – 11.42"	192 mm – 7.56"	157 mm – 6.18"	13.2 kg – 29 lbs
		09-802B					
10-13226-99	F9B-5600 VF	09-814B	2" BSP	290 mm – 11.4"	152 mm – 5.98"	175 mm – 6.88"	13.2 kg – 27 lbs
		09-802B					
10-13178-99	F9B-5600 TSS	09-814B	2" BSP	290 mm – 11.4"	200 mm – 7.87"	151 mm – 5.94"	13.2 kg – 27 lbs
		09-802B					



EXTRA HEAVY DUTY, HIGH FLOW ELECTRO-MAGNETIC CLUTCH PUMP

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight
10-13143-99	F95B-5000	09-820B	2 1/2" BSP	358 mm – 14.09"	246/295 mm	226/201 mm	21 kg – 46 lbs
					9.68"/11.61"	8.89"/7.91"	

Flange with 2 1/2" BSP port adaptors (NPTF available on request)
The port adaptors can be fitted either vertically or horizontally

Technical Specifications, Clutch Pumps

Pump body	Bronze	Connection	BSP or NPTF
	Connection for vacuum switch	Clutch	Electro-magnetic 12/24 V DC
Shaft	Stainless steel	Pulley	2xA or 1xB-groove
	The shaft is mounted with permanently lubricated double ball bearings	Pulley dia	ø178 mm / 7"
Seal	Mechanical seal		
Cam	Full or reduced		

CHOICE OF CLUTCH

Order No.	Description
0.3454.001	Electro-magnetic clutch, 12 V 2xA pulley
0.3454.002	Electro-magnetic clutch, 24 V 2xA pulley
0.3454.003	Electro-magnetic clutch, 12 V 1xB pulley
0.3454.004	Electro-magnetic clutch, 24 V 1xB pulley

Electro-magnetic clutch, 12/24 V



Pulley

Bronze Impeller Pump Performance Tables

Note! Reduced cam - 30-40% lower capacity
Impeller of nitrile - adjust total head approx. 30% down

F35B			700 rpm			900 rpm			1400 rpm			1750 rpm			2000 rpm			2500 rpm		
Bar	kPa	ft	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM
0.3	30	10.1	0.06	5.2	1.4	0.09	6.8	1.8	0.13	11.2	3.0	0.16	14.0	3.7	0.18	16.0	4.2	0.18	20.5	5.4
0.6	60	20.1	0.09	4.6	1.2	0.09	6.2	1.6	0.13	10.6	2.8	0.16	13.7	3.6	0.18	15.8	4.1	0.18	19.6	5.2
1.0	100	33.5	0.09	4.0	1.1	0.09	5.6	1.5	0.18	9.2	2.4	0.18	11.8	3.1	0.18	13.6	3.6	0.18	17.0	4.5

F4B			700 rpm			900 rpm			1400 rpm			1750 rpm			2000 rpm			2500 rpm		
Bar	kPa	ft	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM
0.3	30	10.1	0.06	12.0	3.2	0.09	15.0	4.0	0.13	23.0	6.0	0.17	27.0	7.1	0.18	30.5	8.1	0.18	34.5	9.1
0.6	60	20.1	0.09	11.0	2.9	0.09	14.0	3.7	0.13	21.0	5.4	0.17	25.0	6.6	0.18	28.0	7.4	0.18	33.0	8.7
1.0	100	33.5	0.09	9.0	2.4	0.09	11.0	2.9	0.18	18.0	4.8	0.18	22.0	5.8	0.18	25.0	6.6	0.18	29.5	7.8
1.5	150	50.3	0.09	4.5	1.2	0.09	7.0	1.8	0.18	13.5	3.6	0.18	17.0	4.5	0.18	20.0	5.3	0.24	25.0	6.6

F5B			700 rpm			900 rpm			1400 rpm			1750 rpm			2000 rpm					
Bar	kPa	ft	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM
0.3	30	10.1	0.13	16.0	4.2	0.18	21.0	5.5	0.37	33.0	8.7	0.37	41.0	10.8	0.37	46.0	12.2	0.37	46.0	12.2
0.6	60	20.1	0.13	15.0	4.0	0.18	20.0	5.3	0.37	32.0	8.5	0.37	39.5	10.4	0.37	45.0	11.9	0.37	45.0	11.9
1.0	100	33.5	0.13	14.0	3.7	0.18	19.0	5.0	0.37	30.0	7.9	0.37	37.0	9.8	0.37	42.0	11.1	0.37	42.0	11.1
1.5	150	50.3	0.13	13.0	3.4	0.18	17.0	4.5	0.37	27.0	7.1	0.37	33.5	8.9	0.37	38.0	10.0	0.37	38.0	10.0
2.0	200	67.1	-	-	-	-	-	-	0.37	22.0	5.8	0.37	28.5	7.5	0.37	33.0	8.07	0.37	33.0	8.07

F7B			700 rpm			900 rpm			1400 rpm			1750 rpm			2000 rpm					
Bar	kPa	ft	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM
0.3	30	10.1	0.37	36.0	9.5	0.37	46.0	12.2	0.75	74.0	19.6	0.75	98.0	25.9	0.75	107.0	28.3	0.75	107.0	28.3
0.6	60	20.1	0.37	34.0	9.0	0.37	44.0	11.6	0.75	72.0	19.0	0.75	96.0	25.4	0.75	104.0	27.5	0.75	104.0	27.5
1.0	100	33.5	0.37	29.0	7.7	0.37	40.0	10.6	0.75	67.0	17.7	0.75	87.0	23.0	0.75	98.0	25.9	0.75	98.0	25.9
1.8	180	60.4	0.37	21.0	5.5	0.37	30.0	7.9	0.75	57.0	15.1	0.75	73.0	19.3	0.75	84.0	22.2	0.75	84.0	22.2
2.5	250	83.8	-	-	-	-	-	-	0.75	37.0	9.8	1.1	52.0	13.7	1.1	63.0	16.6	1.1	63.0	16.6

F8B			700 rpm			900 rpm			1400 rpm			1750 rpm			2000 rpm					
Bar	kPa	ft	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM
0.3	30	10.1	0.37	87.0	9.5	0.75	114.0	30.1	1.1	188.0	50.0	1.5	241.0	63.7	1.5	279.0	73.7	1.5	279.0	73.7
0.6	60	20.1	0.37	80.0	9.0	0.75	107.0	28.3	1.1	180.0	47.6	1.5	233.0	61.6	1.5	270.0	71.3	1.5	270.0	71.3
1.0	100	33.5	0.37	73.0	7.7	0.75	101.0	26.7	1.1	177.0	46.8	1.5	228.0	60.2	1.5	264.0	69.7	1.5	264.0	69.7
1.8	180	60.4	-	-	-	1.1	70.0	18.5	1.1	148.0	39.1	2.2	203.0	53.6	2.2	242.0	63.4	2.2	242.0	63.4
2.5	250	83.8	-	-	-	-	-	-	1.1	108.0	28.5	2.2	166.0	43.9	2.2	208.0	55.0	2.2	208.0	55.0

F9B-5000			700 rpm			900 rpm			1400 rpm			1750 rpm			2000 rpm					
Bar	kPa	ft	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM
0.3	30	10.1	0.75	129.0	34.1	0.75	170.0	44.9	1.5	268.0	70.8	1.5	331.0	87.5	2.2	388.8	102.7	2.2	388.8	102.7
0.6	60	20.1	0.75	124.0	32.8	0.75	161.0	42.5	1.5	260.0	68.9	2.2	323.0	85.3	2.2	383.1	101.2	2.2	383.1	101.2
1.0	100	33.5	0.75	118.8	31.4	1.1	156.0	41.2	1.5	255.6	67.5	2.2	315.2	83.3	3.0	379.2	100.2	3.0	379.2	100.2
1.8	180	60.4	1.1	105.0	27.7	1.1	140.0	37.0	1.5	235.0	62.1	2.2	286.1	75.6	3.0	351.3	92.8	3.0	351.3	92.8
2.5	250	83.8	1.1	83.7	22.1	1.5	102.0	26.9	2.2	208.0	55.2	3.0	266.0	70.3	3.0	304.1	80.3	3.0	304.1	80.3

F9B-5600			700 rpm			900 rpm			1400 rpm			1750 rpm			2000 rpm					
Bar	kPa	ft	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM
0.3	30	10.1	0.75	129.0	34.1	1.1	170.0	44.9	1.5	270.0	71.3	1.5	331.0	87.5	2.2	376.0	99.3	2.2	376.0	99.3
0.6	60	20.1	0.75	126.0	32.8	1.1	165.0	43.6	1.5	266.0	70.3	2.2	323.0	85.3	2.2	368.0	97.2	2.2	368.0	97.2
1.0	100	33.5	0.75	123.0	32.5	1.1	161.1	42.6	2.2	260.0	68.7	2.2	314.0	83.3	3.0	361.0	95.4	3.0	361.0	95.4
1.8	180	60.4	0.75	110.0	29.1	1.5	153.0	40.4	2.2	242.0	63.9	2.2	291.0	76.9	3.0	340.0	89.8	3.0	340.0	89.8
2.5	250	83.8	1.1	90.0	23.8	1.5	130.0	34.3	2.2	218.0	57.6	3.0	269.0	71.1	3.0	312.0	82.4	3.0	312.0	82.4
3.0	300	100.6	1.5	61.0	16.1	2.2	102.0	26.9	3.0	190.0	50.2	3.0	242.0	63.9	3.5	284.0	75.0	3.5	284.0	75.0
3.5	350	117.4	-	-	-	-	-	-	3.0	160.0	42.3	3.5	205.0	54.2	3.5	235.0	62.1	3.5	235.0	62.1

F95B			700 rpm			900 rpm			1400 rpm			1750 rpm			2500 rpm					
Bar	kPa	ft	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM	kW	l/min	GPM
0.5	50	16.8	0.75	182.6	48.2	1.1	236.5	62.5	1.5	384.2	101.5	2.2	483.6	127.8	4.0	626.7	165.5	4.0	626.7	165.5
1.0	100	33.5	1.1	172.7	45.6	1.1	231.3	61.1	1.5	372.0	98.3	3.0	472.9	124.9	5.5	617.9	163.2	5.5	617.9	163.2
1.5	150	50.3	1.1	160.1	42.3	1.5	214.5	56.7	2.2	350.4	92.6	3.0	444.1	117.3	5.5	583.8	154.2	5.5	583.8	154.2
2.0	200	67.1	1.1	132.3	35.0	1.5	181.0	47.8	3.0	315.4	83.3	3.5	406.2	107.3	5.5	553.1	146.1	5.5	553.1	146.1
2.5	250	83.8	1.5	79.5	21.0	2.2	137.8	36.4	3.0	267.6	70.7	4.0	361.3	95.5	7.5	506.4	133.8	7.5	506.4	133.8

Engine Cooling – Raw Water Handling

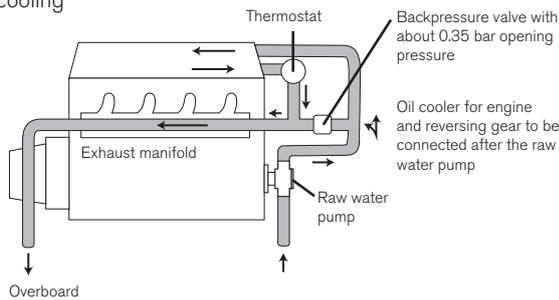
Flexible impeller pumps, F-series, provide an efficient solution to most raw water pumping needs. The primary advantage of a flexible impeller pump is its self-priming ability. As the vanes of the impeller are depressed and rebound, they create their own vacuum drawing fluid into the pump. A dry pump can lift water up to as much as 3 meters. Thus a flexible impeller pump being used for engine cooling needs not be located below the water line or manually primed. An added feature of flexible impeller pumps is that they can pass fairly large solids without clogging or damaging the pump. This reduces the need for filtering the incoming fluid.

For general raw or fresh water applications, the standard long lasting neoprene rubber impeller is used.

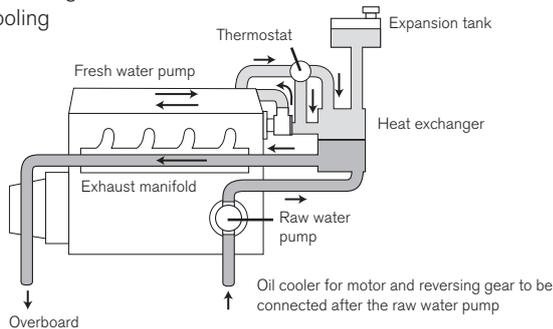
A general feature of all flexible impeller pumps is that they cannot be permitted to run dry for more than 30 seconds. Both the impeller and the seals depend upon the water for lubrication and will soon burn out if run dry. Wearing parts are easily replaceable, and service kits are available for all standard models.

DIFFERENT TYPES OF COOLING SYSTEMS

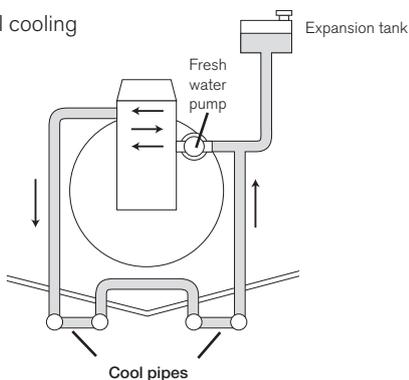
Direct cooling



Indirect cooling Inter cooling

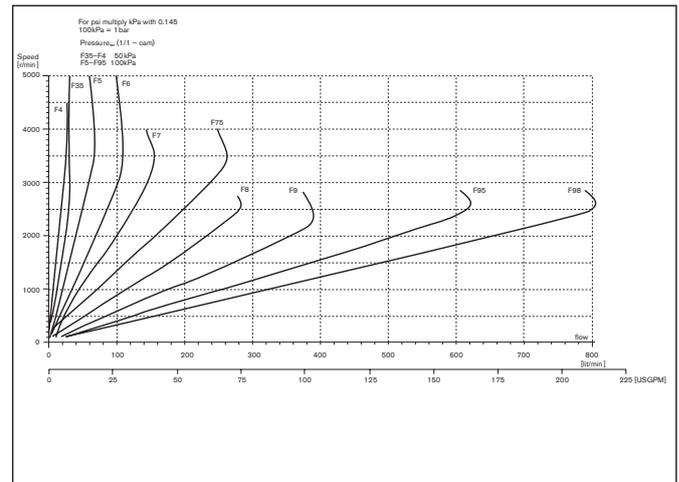


Keel cooling



CAPACITY RANGE

(based on water at 20°C/68°F)



FRESH WATER HANDLING

For circulation of the internal, closed, fresh water circuit of the cooling system SPX's Johnson Pump Marine Brand can offer a number of alternatives in its DC driven CM- and C0-series (see page 26 for further information). It is also common to use a flexible impeller pump for this purpose if it is located on the cold side of the system (max. 55°C). Other types of belt-driven centrifugal pumps may also be useful. The closed circuit normally transfers heat from the engine to the heat exchanger. The liquid is water and anti-freeze.

COOLING CAPACITY

The required output of the cooling pump – raw water as well as fresh water handling – is related to

- engine size and type (gasoline or diesel)
 - type of cooling system (size of heat exchanger)
 - water cooled engine oil, reverse gear, exhaust system
- Contact your local dealer for more information, or for indirect cooling systems your supplier of heat exchangers.

PUMP MOUNTING

Engine cooling pumps, the F-series, are available in several different styles and sizes to satisfy different cooling system needs. Flanged pumps which mount directly to the engine and crank shaft pulley mounted pumps are available for a wide variety of engines. SPX's Johnson Pump Marine Brand is one of the original equipment pump suppliers to the largest manufacturers world-wide of inboard engines. Both flange mounted and pulley driven pedestal pumps can be used to provide cooling with a maximum of ease and flexibility. Pump ports are available in sizes from 3/8" to 2 1/2".

FLANGE MOUNTED PUMPS

Flanged pumps are normal pumps produced in high volumes, customer designed for flange-mounting at a power take off of the engine. Different types of drives can be used but mainly gears or any type of driving members are used.

CRANK SHAFT PULLEY MOUNTED

These pumps are designed for direct installation on the engine crank shaft pulley. Max. revs. 5,000 per minute.

To prevent the pump from rotating, a torque bracket from the fastening point on the pump body to a suitable point on the engine has to be used.

PEDESTAL MOUNTED PUMPS

Pulley driven pedestal mounted pumps are used when a free driving pulley is available on the engine.

Two different types of pedestal mounted pumps are supplied:

FB-8

A range of bronze pumps in compact design. Ideal as cooling water pumps in marine engines. Available in sizes from 3/8" to 1 1/2", all with permanently lubricated double ball bearings and mechanical seal.

FB-3000

A range of extra heavy duty pedestal mounted pumps excellent for cooling purpose in commercial vessels. The design means separate bearing housings with permanently lubricated double ball bearings, mechanical shaft seal for extended service life. Wetted parts as wear plate, cam and endcover are easily replaceable.



F7B-8
Belt driven pump



F8B-3000
Belt driven pump



F6B-9
Crank shaft pulley mounted



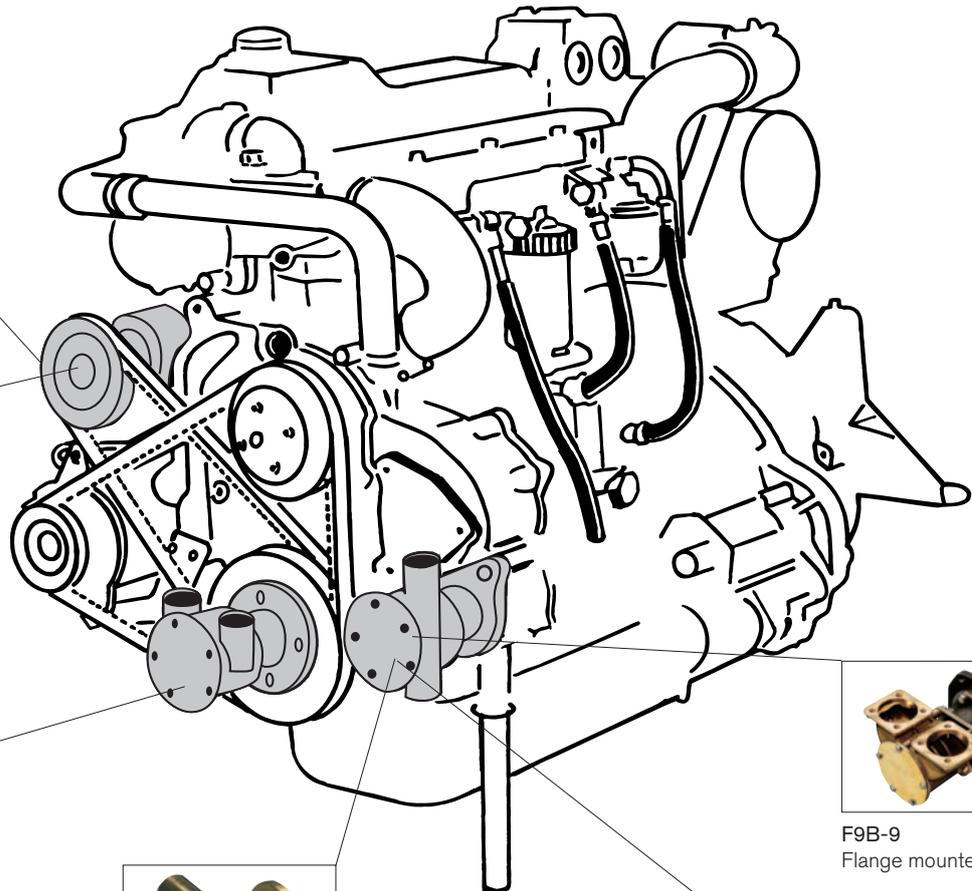
F4B-9
Flange mounted pump



F7B-9
Flange mounted pump



F9B-9
Flange mounted pump



VACUUM VALVE - SIPHON BREAKER

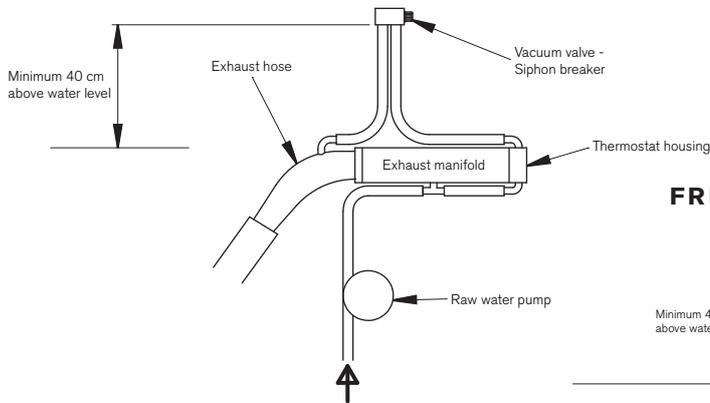


A vacuum valve is a cheap insurance against water intrusion in a engine with expensive repairs as a consequence. The maximum ambient temperature should not exceed 60 °C. The valve opens at a pressure which is equivalent to 3-5 cm Water Column. The materials which are used are resistant to sea water and fresh water, and to glycol compounds in appropriate concentrations. Avoid exposing the valve to oil and grease. If it has been in contact with such substances, please clean or replace it.

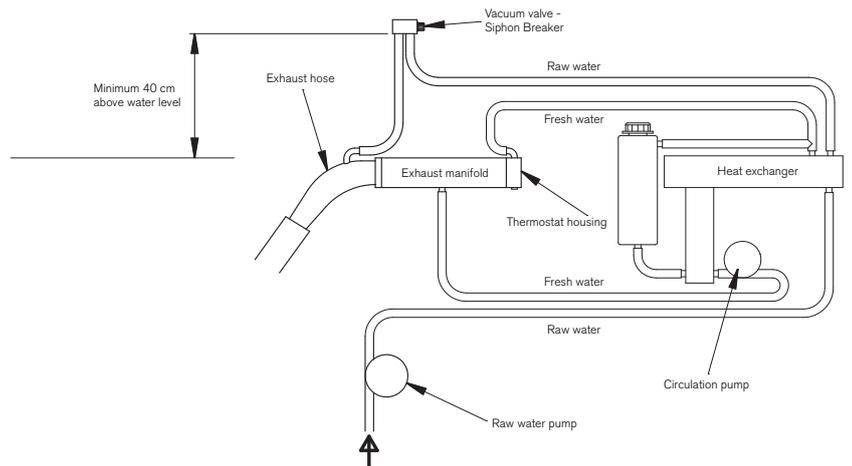
Order No.	Description
09-47316-01	Siphon Breaker, Spud Size 12 mm
09-47316-02	Siphon Breaker, Spud Size 16 mm
09-47316-03	Siphon Breaker, Spud Size 19 mm
09-47316-04	Siphon Breaker, Spud Size 22 mm
09-47316-05	Siphon Breaker, Spud Size 25 mm
09-47316-06	Service Kit

- Non corrosive
- Easy to install
- Does not leak
- High quality plastic
- 5 spud sizes

RAW WATER COOLED ENGINE



FRESH WATER COOLED ENGINE



TAKE GOOD CARE OF THE COOLING SYSTEM – CHANGE TO A NEW IMPELLER EVERY YEAR!

The impeller is a very important security device. Its task is to pump the water through the cooling system of the engine. But remember that the impeller should be replaced every year. And always make sure you get a Johnson Pump Brand original impeller. Then you'll know that it matches your pump exactly.

Remove the impeller with a slip joint plier or an Impeller.



09-47165-01



09-47163-01



09-36166-01



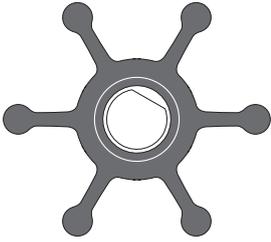
09-950-9300

Order No.	Description
09-47165-01	Puller for 09-1028BT
09-47163-01	Puller for 09-821BT
09-36166-01	Puller for 09-820B
09-47154-01	Puller for 09-812BT and 09-1027BT

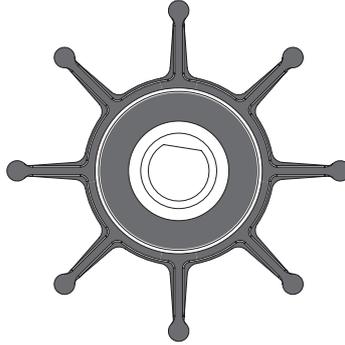
Order No.	Description
09-950-9300	JP Impeller

SPX's Johnson Pump Marine Brand Original Impellers

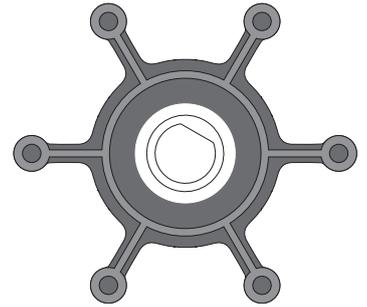
SCALE 1:1



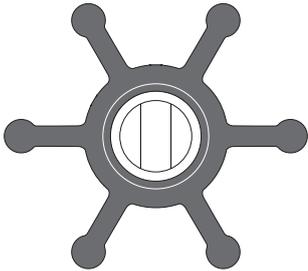
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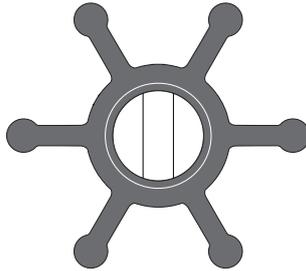
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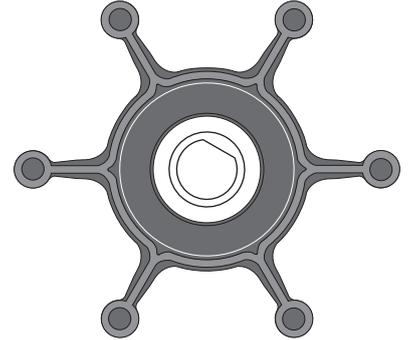
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4

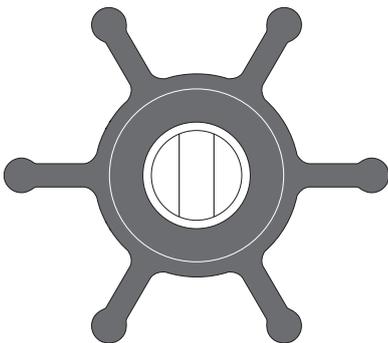


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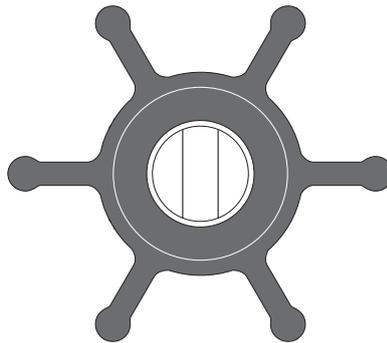


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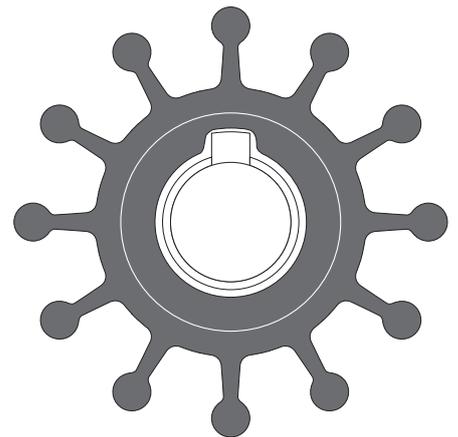
Ref.	Pump	Impeller	Material*	Outer dia		Inner dia		Width		Replaces Jabsco No	
				mm	inch	mm	inch	mm	inch	Europe	USA
1	F2	09-1077B-9	Nitrile	35.2	1.29	8.0 / Flat	0.31 / Flat	12.7	0.50		
2	F3	09-843S-9	Nitrile	45.2	1.78	8.0 / Flat	0.31 / Flat	12.8	0.50		
3	TA3P10	09-1052S-9	Nitrile	45.2	1.78	8.0 / Flat	0.31 / Flat	12.8	0.50		
4	F35	09-806B-1	MC97	40.0	1.58	9.5	0.37	19.0	0.75	4528-0001	
5	F35	09-808B-1	MC97	40.0	1.58	12.0	0.47	19.0	0.75	22405-0001	
6	F4	09-824P-1	MC97	50.8	2.00	8.0 / Flat	0.31 / Flat	22.0	0.87		
6	F4	09-824P-2	Polyurethane	50.8	2.00	8.0 / Flat	0.31 / Flat	22.0	0.87	6303-0007	
6	F4	09-824P-9	Nitrile	50.8	2.00	8.0 / Flat	0.31 / Flat	22.0	0.87	6303-0003	



7

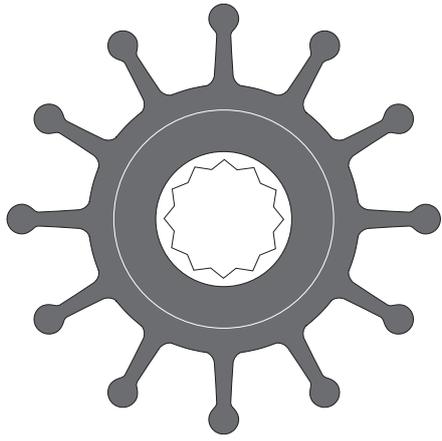


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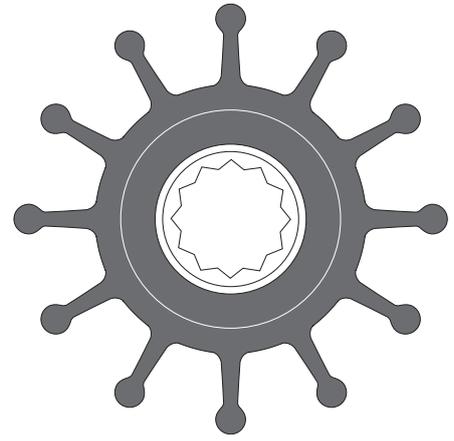


9

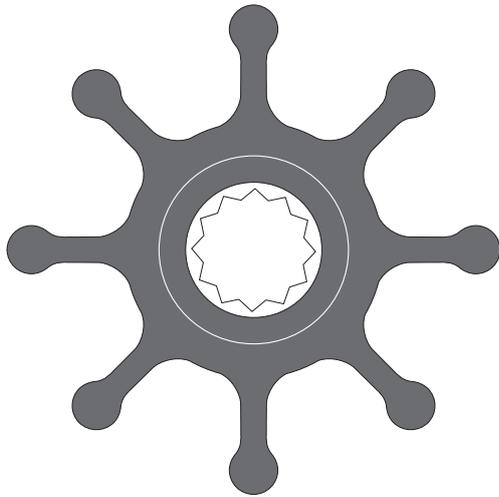
Ref.	Pump	Impeller	Material*	Outer dia		Inner dia		Width		Replaces Jabsco No	
				mm	inch	mm	inch	mm	inch	Europe	USA
7	F4	09-810B-1	MC97	50.8	2.00	12.0	0.47	22.0	0.87	18653-001	
7	F4	09-810B-9	Nitrile	50.8	2.00	12.0	0.47	22.0	0.87		
8	F4	09-1026B-1	MC97	50.8	2.00	12.7	0.50	22.0	0.87	673-0001	
8	F4	09-1026B-9	Nitrile	50.8	2.00	12.7	0.50	22.0	0.87	673-0003	
9	F5	09-801B	Neoprene	57.1	2.25	15.9 Key	0.63 / Key	31.5	1.24	4568-0001	



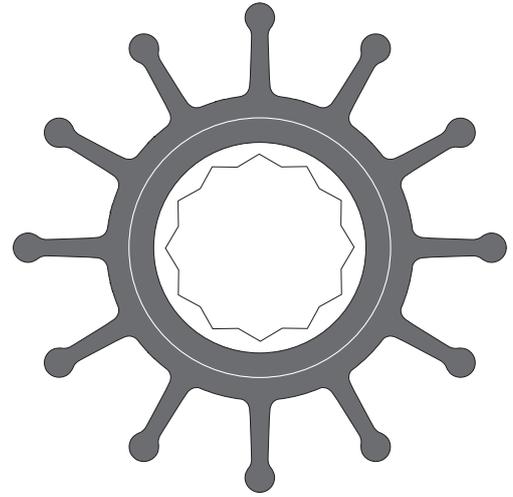
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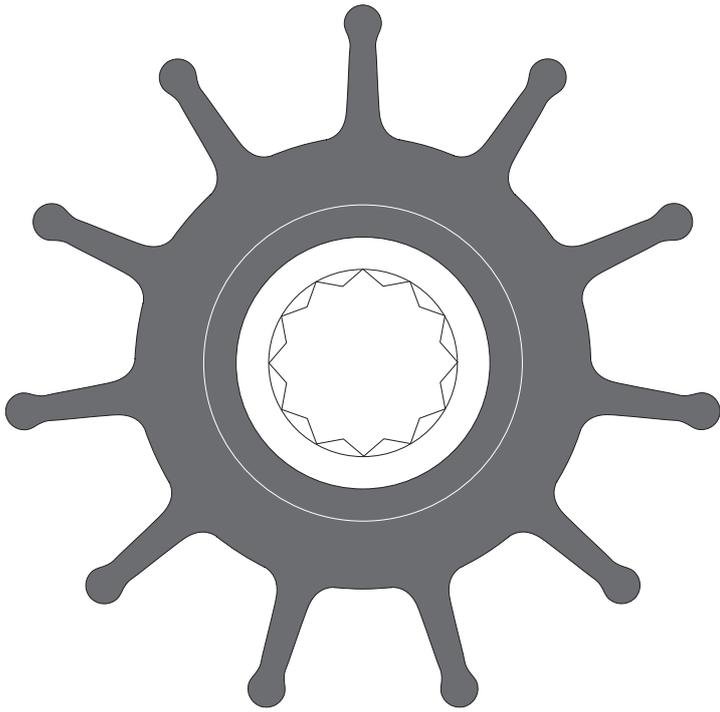


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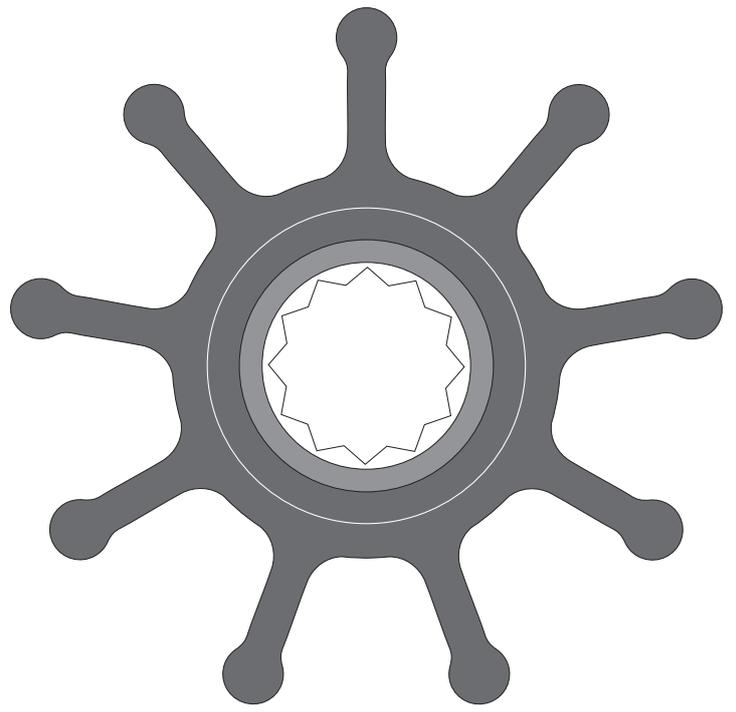


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Ref.	Pump	Impeller	Material*	Outer dia		Inner dia		Width		Replaces Jabsco No	
				mm	inch	mm	inch	mm	inch	Europe	USA
10	F5	09-1027B-1	MC97	57.1	2.25	Splines		31.5	1.24	1210-0001	
10	F5	09-1027B-10	MC97	57.1	2.25	Splines		31.85	1.24		
10	F5	09-1027B-9	Nitrile	57.1	2.25	Splines		31.5	1.24	1210-0003	
11	F6	09-812B-1	MC97	57.1	2.25	Splines		48.2	1.90	13554-0001	
12	F7	09-1028BT-1**	MC97	65	2.56	Splines		50.2	1.98	17937-0001	
12	F7	09-1028B-9	Nitrile	65	2.56	Splines		50.2	1.98	17937-0003	
13	F75	09-821BT-1**	MC97	65	2.56	Splines		80	3.15		

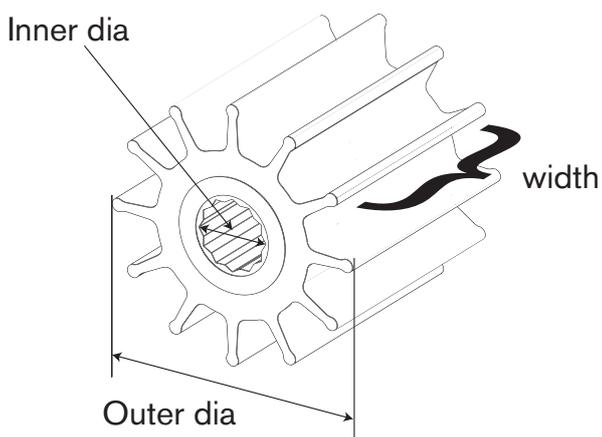


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Ref.	Pump	Impeller	Material*	Outer dia		Inner dia		Width		Replaces Jabsco No	
				mm	inch	mm	inch	mm	inch	Europe	USA
14	F8	09-819B	Neoprene	95	3.74	Splines		63	2.48	836-0001	17935-0001
14	F8	09-819B-9	Nitrile	95	3.74	Splines		63	2.48	836-0003	17935-0003
14	F8	09-1029B ¹⁾	Neoprene	95	3.74	Splines		63	2.48	836-0001	17935-0001
14	F9	09-814B	Neoprene	95	3.74	Splines		88.5	3.48	21676-0001	17936-0001
14	F95	09-820B	Neoprene	95	3.74	Splines		130	5.12		
14	F98	09-842B	Neoprene	95	3.74	Splines		180	7.09		
15	F9	09-802B	Neoprene	95	3.74	Splines		88.5	3.48	6760-0001	

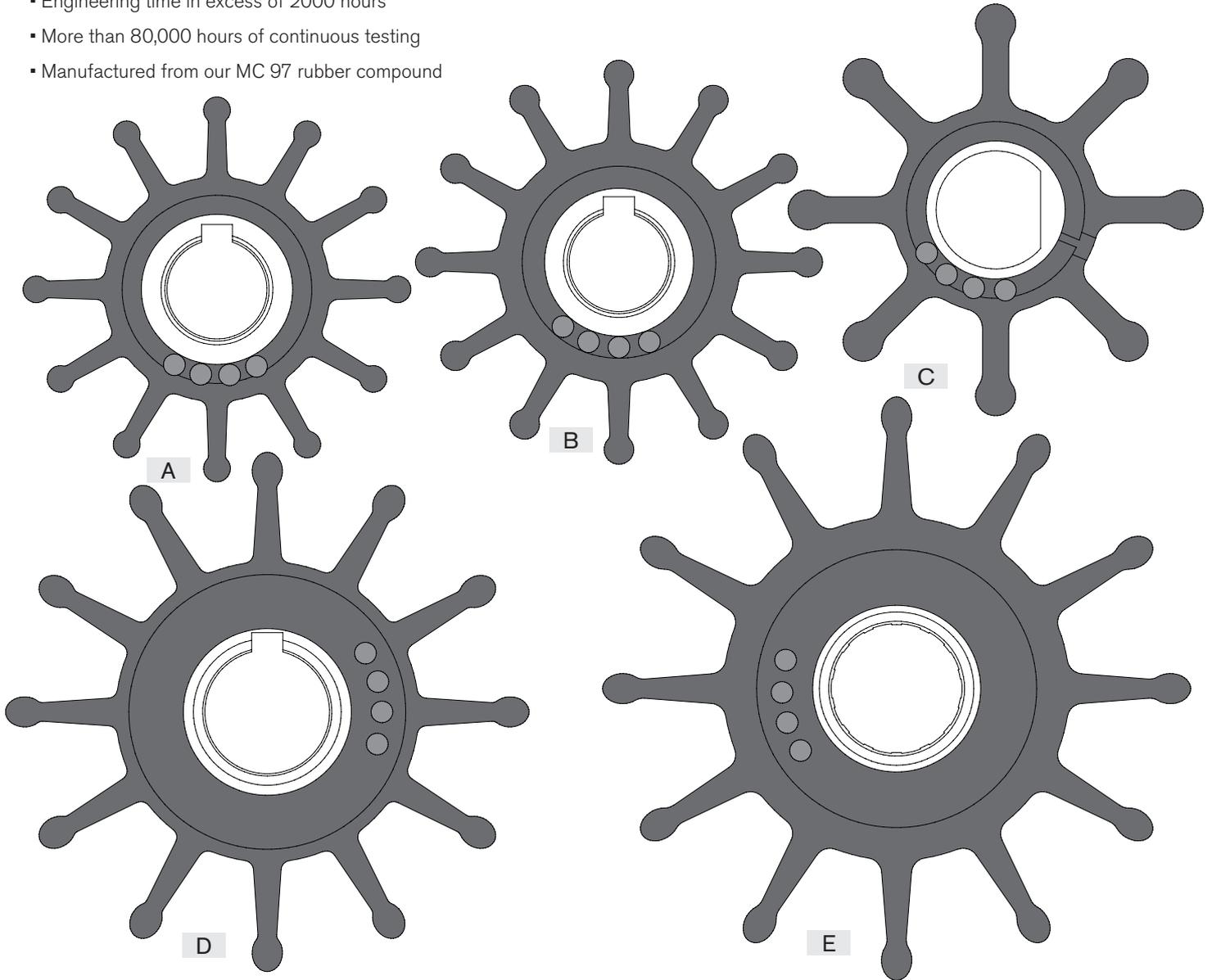


Sherwood / Mercruiser Impeller replacement program

SCALE 1:1

Sherwood / Mercruiser owners can now take advantage of premium replacement impellers from SPX Johnson Pump Marine; documented superior to the competition. We do not venture into this market lightly. We have prepared ourselves well.

- Engineering time in excess of 2000 hours
- More than 80,000 hours of continuous testing
- Manufactured from our MC 97 rubber compound



Ref.	SPX Johnson Pump part no.	Sherwood part no.	Mercruiser part no.	Jabsco part no.	Engines / Pumps
A	09-701B-1	9959K	-	18838-0001	Chris Craft; Chrysler Marine; Commander; Crusader; Glastron Boat Co.; Gray Marine; Interceptor; Onan; OMC; Pathfinder VolksWagon Eng.; Perkins Eng. U.S.; Plesurecraft Marine; Universal Medalist; Volvo Penta; Yamaha; Westerbeke 24102; Sherwood 11353; Pleasure Craft 302&351; Chris Craft 350; Onan MDL3,4
B	09-702B-1	10615K	-	18948-0001	Chris Craft; Chrysler Marine; Commander; Crusader; Escort (Skiitec); Gray Marine; Isuzu; Lenco; Marine Power; North American Engine; Onan; Osco Motors; OMC; Perkins Engine U.S.; Plesurecraft Marine; Volvo Penta; J.H. Westerbeke Corp; Crusader 97179; Chrysler 3675763; Chrysler 4142878; Cummins 4B; Onan MDL6; Chris Craft 454; Pleasure Craft 454
C	09-703P-1	-	47-59362T	17954-0001	Pump Quicksilver Model 46-72774 A32
D	09-704BT-1	17000K	-	18958-0001	Cummins 6B 300Hp B Series; Cummins C Series; CAT 3208; CAT 3116; CAT 3126; Deere 6076; Sherwood Pump P17 series
E	09-705BT-1	18000K	-	-	Sherwood Pump P18 Series

IMPELLER REPLACEMENT KITS

Ref.	SPX Johnson Pump part no.	Sherwood part no.	Mercruiser part no.	Jabsco part no.	Engines / Pumps
A	09-701B-1	9959K	-	18838-0001	Chris Craft; Chrysler Marine; Commander; Crusader; Glastron Boat Co.; Gray Marine; Interceptor; Onan; OMC; Pathfinder VolksWagon Eng.; Perkins Eng. U.S.; Plesurecraft Marine; Universal Medalist; Volvo Penta; Yamaha; Westerbeke 24102; Sherwood 11353; Pleasure Craft 302&351; Chris Craft 350; Onan MDL3,4
B	09-702B-1	10615K	-	18948-0001	Chris Craft; Chrysler Marine; Commander; Crusader; Escort (Skiitec); Gray Marine; Isuzu; Lenco; Marine Power; North American Engine; Onan; Osco Motors; OMC; Perkins Engine U.S.; Plesurecraft Marine; Volvo Penta; J.H. Westerbeke Corp; Crusader 97179; Chrysler 3675763; Chrysler 4142878; Cummins 4B; Onan MDL6; Chris Craft 454; Pleasure Craft 454
C	09-703P-1	-	47-59362T	17954-0001	Pump Quicksilver Model 46-72774 A32
D	09-704BT-1	17000K	-	18958-0001	Cummins 6B 300Hp B Series; Cummins C Series; CAT 3208; CAT 3116; CAT 3126; Deere 6076; Sherwood Pump P17 series
E	09-705BT-1	18000K	-	-	Sherwood Pump P18 Series

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Reliability on board



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