



JOHNSON PUMP
AN SPX BRAND

MARINE CATALOGUE 2010 EDITION

pumps and accessories for marine applications



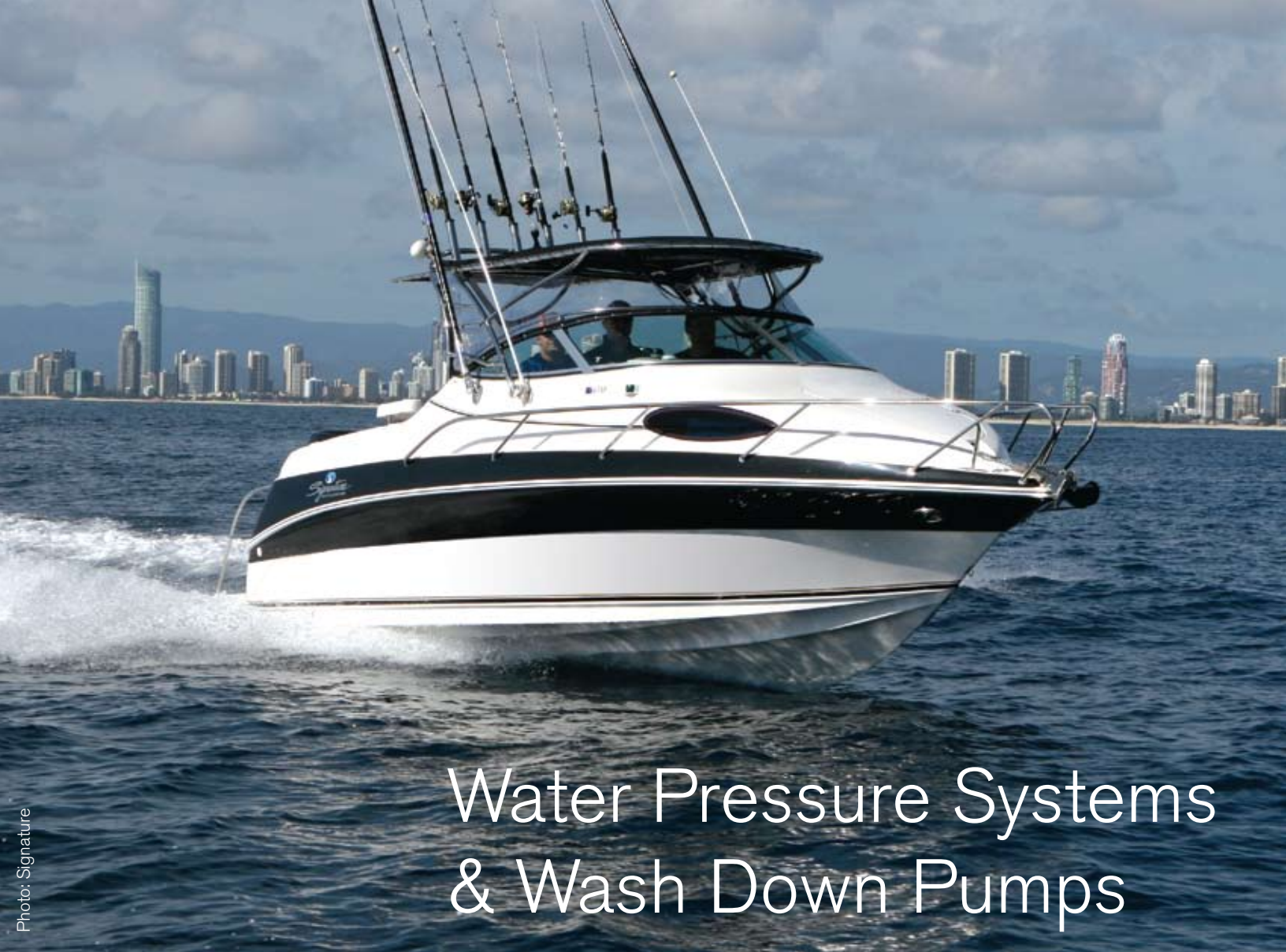
CONTENTS

Water Pressure Systems & Wash Down Pumps	3
Heavy Duty Submersible Bilge Pumps	9
Livewell Aerating Pumps	16
FIP DC Pumps	18
Circulation Pumps	21
Waste Water Handling & Marine Toilets	23
Radial Blowers & Marine Water Heaters	31
Impeller Pumps	34
Engine Cooling	39
Impeller Identification Guide	42

No matter whether you are an experienced boater looking for a replacement pump or a manufacturer looking for any 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 Johnson Pump Marine represented in every major industrial country of the world today and in more than fifty nations altogether.



Johnson Pump is a member of the Process Equipment division, in the SPX business segment Flow Technology. For further information about SPX, please visit www.spx.com.



Water Pressure Systems & Wash Down Pumps



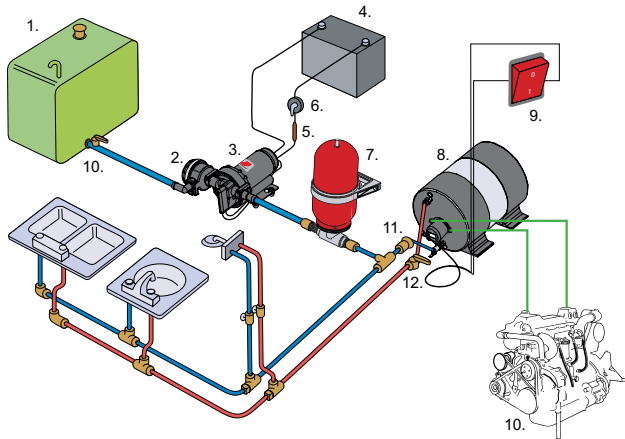
Quiet and pulsation-free even at low speeds, the Aqua Jet five chamber diaphragm pump provides the perfect water pressure or deck wash solution for both small and medium sized leisure and commercial boats. Efficient and compact, Aqua Jet pumps are particularly suitable where low amperage and sound levels in relation to water flow are placed at a premium - such as in shower and galley applications. 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

Fresh Water Handling



Components in a typical water pressure system

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

Aqua Jet Wash Down Pumps

As a wash down pump, the Aqua Jet offers much higher pressures than competitive models, making clean-up faster and easier than ever before.

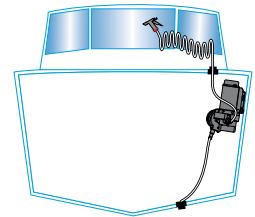


Aqua Jet Wash Down Pumps 2.9, 3.5 & 5.2

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
Motor WD 2.9 - 90 W, 12/24V DC
 WD 3.5 - 120 W, 12/24V DC
 WD 5.2 - 185 W, 12/24V DC
 (with built-in thermal protection)

Body PA/PPA
Valves Nitrile
Diaphragm Santoprene



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 x 1/2" barb / 1/2" NPT x 3/4" barb
10-24728-04	WD 2.9, 24V	11 l/min – 2.9 GPM	2.8 bar – 41 psi	5 A	3/8" BSP x 1/2" barb / 1/2" NPT x 3/4" barb
10-13399-03	WD 3.5, 12V	13 l/min – 3.5 GPM	5 bar – 70 psi	15 A	1/2" NPT / hose 3/4", GHT 3/4"; 3/8" BSP x 1/2" barb,
10-13399-04	WD 3.5, 24V	13 l/min – 3.5 GPM	5 bar – 70 psi	8 A	1/2" NPT / hose 3/4", GHT 3/4"; 3/8" BSP x 1/2" barb
10-13407-07	WD 5.2, 12V	20 l/min – 5.2 GPM	5 bar – 70 psi	20 A	1/2" NPT / hose 3/4", GHT 3/4"; 3/8" BSP x 1/2" barb
10-13407-08	WD 5.2, 24V	20 l/min – 5.2 GPM	5 bar – 70 psi	10 A	1/2" NPT / hose 3/4", GHT 3/4"; 3/8" BSP x 1/2" barb



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	Connection
64534	Aqua Jet 5.2 Wash Down Pump Kit, 12V	1/2" NPT / hose 3/4", 3/4" GHT, Hose 3/4" GHT
64534-24	Aqua Jet 5.2 Wash Down Pump Kit, 24V	Bulkhead fitting – Inlet 3/4" hose, outlet 3/4" GHT
64535	Aqua Jet 3.5 Wash Down Pump Kit, 12V	3/8" BSP x 1/2" barb

Accessories



Order No.	Description
09-10616	Bulkhead fitting 3/4" hose (pkgd)
61115	Bulkhead fitting 3/4" hose (bulk)

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.



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**
10-24604-103	Aqua Jet WPS 2.4, 12V	9 l/min – 2.4 GPM	2.8 bar – 41 psi	10 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose
10-24604-104	Aqua Jet WPS 2.4, 24V	9 l/min – 2.4 GPM	2.8 bar – 41 psi	5 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose
10-24677-03	2.4 GPM Baitwell, 12V	9 l/min – 2.4 GPM	N/A	10 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " - 14 NPSM

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**
10-13405-103	Aqua Jet WPS 2.9, 12V	11 l/min – 2.9 GPM	2.8 bar – 41psi	10 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose
10-13405-104	Aqua Jet WPS 2.9, 24V	11 l/min – 2.9 GPM	2.8 bar – 41psi	5 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose

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**
10-13395-103	Aqua Jet WPS 3.5, 12V	13L/min / 3.5 GPM	2.8 bar / 41psi	10 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT / hose $\frac{3}{4}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose
10-13395-104	Aqua Jet WPS 3.5, 24V	13L/min / 3.5 GPM	2.8 bar / 41psi	5 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT / hose $\frac{3}{4}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose
10-13252-103	3.5 GPM Baitwell, 12V	13L/min / 3.5 GPM	N/A	10 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT / hose $\frac{3}{4}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose

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**
10-13406-103	Aqua Jet WPS 4.0, 12V	15L/min / 4.0 GPM	2.8 bar / 41psi	10 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT / hose $\frac{3}{4}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose
10-13406-104	Aqua Jet WPS 4.0, 24V	15L/min / 4.0 GPM	2.8 bar / 41psi	5 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT / hose $\frac{3}{4}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose

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**
10-13406-107	Aqua Jet WPS 5.2, 12V	20L/min/ 5.2 GPM	2.8 bar / 41psi	15 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT / hose $\frac{3}{4}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose
10-13406-108	Aqua Jet WPS 5.2, 24V	20L/min/ 5.2 GPM	2.8 bar / 41psi	8 A	$\frac{3}{8}$ " NPT / hose $\frac{1}{2}$ "; $\frac{1}{2}$ " NPT / hose $\frac{3}{4}$ "; $\frac{1}{2}$ " NPT, $\frac{3}{4}$ " hose
10-13252-107	5.2 GPM Baitwell, 12V	20L/min/ 5.2 GPM	N/A	15 A	GHT, $\frac{1}{2}$ " NPT x $\frac{3}{4}$ " hose

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

** BSP-connection available on request



Aqua Jet Uno WPS 3.5 & 5.2

Medium demand 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
10-13281-05	WPS Uno 3.5, 12V	13 l/min – 3.4 GPM	2.8 bar – 41 psi	10 A	1/2" hose
10-13281-06	WPS Uno 3.5, 24V	13 l/min – 3.4 GPM	2.8 bar – 41 psi	5 A	1/2" hose

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



Aqua Jet Duo WPS 10.4

High demand 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

Medium demand 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 Flow Master 5.0 WPS

The ideal choice for pressurizing water in a closed system. 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
10-13329-103	WPS FM 5.0, 12V	19 l/min – 5 GPM	3.5 bar – 50 psi	15 A	3/8" NPT / hose 1/2"; 1/2" NPT / hose 3/4"; 1/2" NPT 3/4" hose 1/2 CTS
10-13329-104	WPS FM 5.0, 24V	19 l/min – 5 GPM	3.5 bar – 50 psi	8 A	3/8" NPT / hose 1/2"; 1/2" NPT / hose 3/4"; 1/2" NPT 3/4" hose 1/2 CTS

PUMProtector™ Strainer

The PUMProtector™ inlet and universal 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 connectors make it possible to remove the entire unit for thorough cleaning wherever it's most convenient.



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
09-24652-02-CN	Universal Strainer	40	+50°C – +120°F	+30°C – +85°F	2 x 1/2" hose / 3/8" NPT, 2 x 3/4" hose / 1/2" NPT
09-24652-04-CN	Universal Strainer	20	+50°C – +120°F	+30°C – +85°F	2 x 1/2" hose / 3/8" NPT, 2 x 3/4" hose / 1/2" NPT



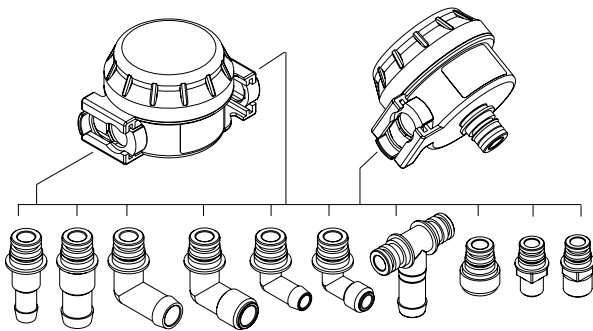
Inlet Strainer

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	20 or 40

Order No.	Description	Mesh	Max Liquid Temp.	Max Temp. for Drinking Water	KlickTite™ Connector
09-24653-02-CN	Inlet Strainer	40	+50°C – +120°F	+30°C – +85°F	Built-in KlickTite™ 1 x 1/2" hose / 3/8" NPT, 1 x 3/4" hose / 1/2" NPT
09-24653-03-CN	Inlet Strainer	40	+50°C – +120°F	+30°C – +85°F	Built-in KlickTite™, Bulk pack w/o connectors

KlickTite™ Port Connectors

KlickTite™ port connectors are available for virtually any hose diameter 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
09-46957	2	2 x 1/2" hose and 3/8" NPT
09-46958	2	2 x 3/4" hose and 1/2" NPT
09-46939	2	2 x 90°, 3/4" hose
09-47088	2	2 x 90°, 1/2" NPT
09-46938	2	2 x 90°, 1/2" hose
09-47089	2	2 x 90°, 3/8" NPT
09-47094	2	2 x Garden hose adapter
09-47087	2	2 x 90° 1/2" BSP / 3/4" hose
09-47098	2	2 x 1/2" BSP / 1/2"-14 NPSM
09-47092	1	1 x T-connection, 3/4" barb

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

Adapter kit quick connection to hose

In order to improve operation of the Aqua Jet pumps together with any type of quick connect tubing, a piece of flexible hose is recommended on the inlet and outlet of the pump. In order to facilitate these installations the Adapter kit is offered from either 15 mm tube to 1/2" hose or 22 mm tube to 3/4" hose.



Order No.	Connection
09-36079-01	Adapter 15 mm quick conn 1/2" hose
09-36079-02	Adapter 22 mm quick conn 3/4" hose

Deck Wash 316 Stainless Flush Mount

- Flush mount
- Connects and disconnects under full pressure.
- Positive lock bayonet connector.
- Double viton o-ring seals.
- Large flow capacity.
- 316 stainless steel.
- Connections made of Nylon 66.
- Two connector versions: American standard garden hose (blue)



Order No.	Connection
61121	Single outlet, single flush
61122	Double outlet, 2 way flush

Biosok

Order No.	Connection
58001	Biosok, 1 foot
58005	Fuel sorber - Fuel collar
58008	Oil sorb powder
58003	10 ft Bio boom
58004	4 ft Bio boom



AC Pump

Sump pump rated for continuous duty – 24 hours a day, 365 days a year. Strong and dependable with extended pump life if used intermittently in a sump application. 1" threaded discharge, 10 ft cord.

Order No.	Capacity (115V AC at 60 Hz)	Connection
10-10216-01	2000 GPH	110V AC Pump 2000 GPH





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 comes on when there is water in the bilge and shuts off when it is dry. Submersible bilge pumps are not self-priming and must be installed in the deepest part of the bilge.



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 Pump – 1600-4000 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 2200 motor is sealed off by a mechanical seal design, while the 1600 model has lipseal. The impeller is carefully designed and tested to maximize head and flow. The 4000 features a robust motor design, mechanical shaft seal, high impact ABS plastic and unique threaded port design. Universal base plate and a choice of 1.½" or 2" ports makes for a simple installation. Removable check valve included.



1600

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

2200

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

4000

Shaft SS2343
Wire size 2 mm² – 14 GA
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
16004	1600 12 V	98 l/min – 1550 GPH	100 l/min – 1600 GPH	7 A	10 A	1.½" and 1.¼"
16084	1600 24 V	98 l/min – 1550 GPH	100 l/min – 1600 GPH	3.5 A	6 A	1.½" and 1.¼"
22004	2200 12 V	120 l/min – 1900 GPH	130 l/min – 2060 GPH	7.5 A	12 A	1.½" and 1.¼"
22084	2200 24 V	120 l/min – 1900 GPH	130 l/min – 2060 GPH	4.5 A	6 A	1.½" and 1.¼"
40004	4000 12 V	164 l/min – 2600 GPH	252 l/min – 4000 GPH	15 A	25 A	1.½" and 2"
40084	4000 24 V	164 l/min – 2600 GPH	252 l/min – 4000 GPH	7.5 A	15 A	1.½" and 2"

Accessories

Order No.	Description
50102	L1600/2200 check valve washer
50511	L1600/2200 check valve flapper
51192	L4000 check valve washer
50581	L4000 check valve flapper

Order No.	Description
54061-22	1.½" port, fits 1600/2200 models
54061-23	1.¼" port, fits 1600/2200 models
54061-24	1" port, fits 1600/2200 models

Cartridge Bilge Pumps 500-1250 Series

1000 GPH and 1250 GPH 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 500 GPH, 750 GPH, and 1000 GPH, we have improved the design with 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 as well as a removable check valve.



500 GPH – 1000 GPH

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

1250 GPH

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
32503	500 GPH	33 l/min - 525 GPH	40 l/min - 630 GPH	2.5 A	5 A	¾"
32703	750 GPH	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	¾"
32903	1000 GPH	50 l/min - 800 GPH	63 l/min - 1000 GPH	3.2 A	5 A	¾"
32903-24	1000 GPH	50 l/min - 800 GPH	63 l/min - 1000 GPH	2 A	3 A	¾"
42123*	1250 GPH	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1.½"
42123-24*	1250 GPH	60 l/min - 952 GPH	73 l/min - 1150 GPH	2 A	3 A	1.½"

*) Do not include Dura-Port connection

Accessories, 500–1000 GPH Only

Order No.	Description
50533	Check valves, 500–1000 GPH
92101	DuraPort, straight
54061-90	DuraPort, 90°

Options, 500–1000 GPH Only

Order No.	Description
51123	Flow Rite, straight
51124	Flow Rite, 90°

Low Boy Bilge Pump

Low Profile pump design for ease of mounting and removal in tight bilge areas. Perfect for vessels with bilge pumps mounted beneath inboard or I/O engines. Removable cartridge style. For 750 GPH Low Boy Bilge pumps we have easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by over-tightened hose clamps. The pumps will be delivered including both a straight and a 90° smooth elbow. Use 36152 magnetic switch only.



Max length 146 mm – 5.75"
 Width 81 mm – 3.2"
 Height 72 mm – 2.82"
 Wire size 1.3 mm² – 16 GA

Order No.	Description	Capacity 3 ft (0.9 m) head (13.6 V)	Capacity straight (13.6 V)	Amperage	Fuze Size	Connection
33703	750 GPH Low Boy Bilge Pump, 12V	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4"
33103	1250 GPH Low Boy Bilge Pump, 12V	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1.1/8"

Ultima Combo

Pump with automatic operation equipped with the Ultima switch. Voltage 12 V DC as well as 24 V DC for 1000 GPH UC and 1250 GPH UC. For 500 GPH UC - 1000 GPH UC, we have easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by over-tightened hose clamps. The pumps will be delivered including both a straight and a 90° smooth elbow Dura-Port as well as a removable check valve.



500 UC – 1000 UC

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

1250 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
07503	500 GPH Ultima Combo, 12V	33 l/min - 525 GPH	40 l/min - 630 GPH	2.5 A	5 A	3/4"
07703	750 GPH Ultima Combo, 12V	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4"
07903	1000 GPH Ultima Combo, 12V	50 l/min - 800 GPH	63 l/min - 1000 GPH	3.2 A	5 A	3/4"
07904-24	1000 GPH Ultima Combo, 24V	50 l/min - 800 GPH	63 l/min - 1000 GPH	2 A	3 A	3/4"
08203*	1250 GPH Ultima Combo, 12V	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1.1/8"
08204-24*	1250 GPH Ultima Combo, 24V	60 l/min - 952 GPH	73 l/min - 1150 GPH	2 A	3 A	1.1/8"

*) Do 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.

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



Proline Bilge

Order No.	Description	Capacity 3 ft (0.9 m) head (13.6 V)	Capacity straight (13.6 V)	Amperage	Fuze Size	Connection
22502*	500 GPH Proline Bilge, DuraPorts	33 l/min - 525 GPH	40 l/min - 630 GPH	2.5 A	5 A	3/4"
22702*	750 GPH Proline Bilge, DuraPorts	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4"
22102	1250 GPH Proline Bilge, DuraPorts	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1.1/8"

*) Do not include Dura-Port connection

Ultima Bilge Pump

Sleek, reliable and compact unit with integrated switch ready to install and run for years and years of unerring service. Available in 600-800-1000-1250 GPH versions. Voltage 12 V 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. The pumps are delivered including both a straight and a 90° smooth elbow Dura-Port and a removable check valve.



600, 800 & 1000 GPH

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

1250 GPH

Length 142 mm – 6"
 Width 82 mm – 3.2"
 Height 117 mm – 4.6"
 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
32-47258-003	600 GPH, 12 V	32 l/min - 500 GPH	38 l/min - 600 GPH	2.5 A	5 A	3/4"
32-47259-003	800 GPH, 12 V	38 l/min - 600 GPH	51 l/min - 800 GPH	3 A	5 A	3/4"
32-47260-003	1000 GPH, 12 V	44 l/min - 700 GPH	64 l/min - 1000 GPH	3.2 A	5 A	3/4"
32-47261-002	1250 GPH, 12 V	51 l/min - 800 GPH	79 l/min - 1250 GPH	3 A	5 A	1.1/8" and 1.1/4"

Spare Parts, 1250 GPH Only

Order No.	Description
54061-22	1.1/8" thread discharge port
54061-23	1.1/4" thread discharge port

Order No.	Description
50533	3/4" Check valve
50102	1.1/8" Check valve washer
50511	1.1/8" Check valve flapper

Multiple Port Shower Sump

This compact shower sump system is designed to meet the higher demands from today's boating industry where more equipment is used. 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 290x210 mm – 11.42x8.26"
 Max height 145 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
57151	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"
57151-24	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"
54304	Clear Sump Cover						

Bilge Mate

A low budget alternative designed for long life and high performance capacity. The low cost choice for boat owners who still look for quality.

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
21405	Bilge Mate, 12V	30 l/min - 400 GPH	2.5 A	5 A	3/4"

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 (1.½"). Naturally, the Viking Compact has KlickTite™ connectors fitted as standard, literally making hose connections a snap!

Flow at 10 kPa head and 45 strokes/min

Ø25mm connections	34,5 liters/minute (9.1 US gallons/minute)
Ø38mm connections	45 liters/minute (11.9 US gallons/minute)

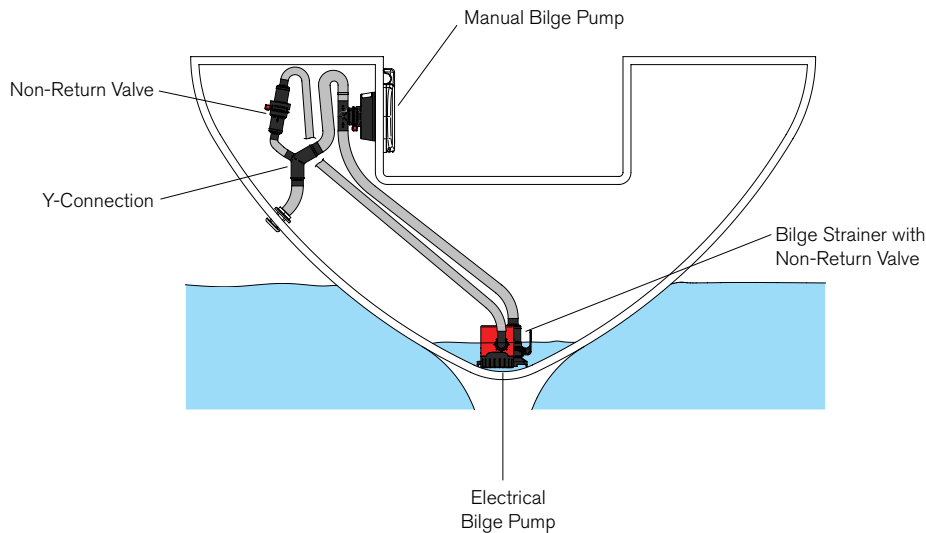
Body	Polypropylene
Cover	ABS
Diaphragm	Nitrile rubber
Valves	Nitrile rubber (1 leaf and 1 tricuspid valve)
Wetted parts	Polypropylene, PA66GF30 plastics and nitrile rubber
Maximum lift	2.1 meters (7 feet)
Maximum head	1.2 meters (4 feet)
Combined head/lift	3.3 meters (10.8 feet)
Connection	KlickTite™ connectors for 1" (25 mm) or 1.½" (38 mm) hose. Both options included
Max. liquid temp	+60°C (140°F)
Weight	0.675 kg (1.5 pounds)



Dependability in the grasp of your hand!

Order No.	Description
10-24800-01	Viking Compact w. dia. 25 mm (1") and dia. 38 mm (1½") ports. Consumer pack
10-24800-10	Viking Compact w. dia. 38 mm (1½") ports Bulk pack.
10-24800-11	Viking Compact w. dia. 25 mm (1") ports Bulk pack.
10-24800-12	Viking Compact w. dia. 38 mm (1½") ports and 25 mm (1") ports. Bulk pack

Bilge Pump System



Manual & Electric Bilge Pump Accessories



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

In-Line Non-Return Valve

Order No.	Description	Connection
10-24792	In-Line Non-Return Valve	25/38 mm (1" / 1.1/2")
10-24818	In-Line Non-Return Valve	19/32 mm (3/4" / 1.1/4")



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

Bilge Strainer With Non-Return Valve

Order No.	Description	Connection
10-24794	Strainer	19/32 mm (3/4" / 1.1/4"), 25/38 mm (1" / 1.1/2")



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

Y-connections

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

Viking Thrudeck and Bulkhead

When the power is out you can always depend on the hand operated diaphragm bilge pump. The Viking pump can also be used for pumping toilet waste due to the large valve openings. The pump is available in two models for various installation alternatives. It can be mounted behind walls, through deck and under bulkheads.

Viking Thrudeck for installation behind vertical wall or under deck with sealing boot, complete with a cover plate. Viking Bulkhead for surface installation with horizontal lever.



Order No.	Description
70-50005	Thrudeck 1.1/2"
70-50025	Thrudeck 1"
70-50007	Bulkhead 1.1/2"
70-50027	Bulkhead 1"

Capacity data
(At 1 m/3.28" suction height : 0.9 l/stroke)

60 strokes/min 54 l/min – 14.5 GPM
80 strokes/min 72 l/min – 19 GPM
100 strokes/min 90 l/min – 24 GPM

Max suction height 4 m – 13 ft

Diameter 164 mm – 6.45"
Handle length 285 mm – 11.22"
Width 253 mm – 9.96"
Height 133 mm – 5.23"
Weight 2 kg – 4.5 lbs

Hand Pumps

Light tough durable easy handling, extra fast pumping hand pumps are ideal stow aboards. Comfortable handle grip and extra large capacity makes manual pumping somewhat less of a chore. Ideal for emergency pumping and where electrical current is not available.

Order No.	Description
20195	Eighteen inch, 8 strokes per gallon
20255	Twenty five inch, 6 strokes per gallon
20375	Thirty six inch, 4 strokes per gallon

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
28552	Motor for 500 GPH pumps
28572	Motor for 750 GPH pumps, 12V
28512	Motor for 1000 GPH pumps, 12V
42522	Motor for 1250 GPH pumps, 12V

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
82044	3 Way Bilge Pump Control, 12V
82044-24	3 Way Bilge Pump Control, 24V
82004	2 Way Bilge Pump Control, 12V
82004-24V	2 Way Bilge Pump Control, 24V



3 Way Bilge Pump Control

Ultima Switch™

Uses the patented Mirus field effect detector cells producing micro-electrical fields that detect disruptions caused by water and fluids. Detector cells are totally sealed and are never in contact with the water, will not corrode and are not affected by oil or foreign debris. No moving parts, totally sealed solid state electronics and field detectors, no mercury and no exposed sensors eliminate corrosion possibilities and makes the Ultima switch environmentally sensitive. 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.
36303	Ultima Switch, 12/24V	20 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 SPX Johnson Pump Marine bilge pump through the clip on "T-slot" and can be used with 6, 12, 24 or 32 V systems. Use AS888 for a better and safer life afloat!



Order No.	Description	Max Amp.
26014	Automatic Switch AS888	15 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. 12V. Handles up to 15 amps.



Order No.	Description	Max Amp.
36152	Electronic Float Switch, 12V	15 A
36252	Electronic Float Switch, 24V	8 A

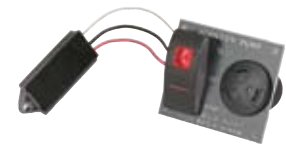
Bilge Alert™

High water alarm featuring digital technology using the patented Mirus field effect. Totally sealed fluid detector 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
72303-001	Bilge Alert, High Water Alarm, w/ Ultima, 12V
72303-002	Bilge Alert, High Water Alarm, w/ Ultima, 24V
72303	Bilge Alert, High Water Alarm, w/ sensor, 12V
72303-24V	Bilge Alert, High Water Alarm, w/ sensor, 24V



Bilge Alert w/ Ultima



Bilge Alert w/ sensor

Side Mount Bracket

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

Order No.	Description
10605	90° Side Mount Bracket
54311	110° Angled Side Bracket



Livewell Aerating pumps

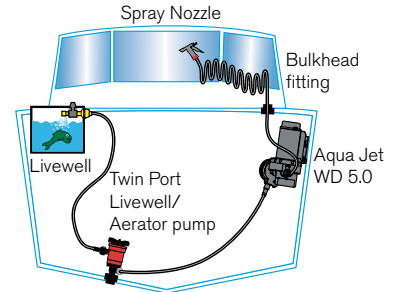
Twin Port Pumps

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
48503	500 GPH
48703	750 GPH, 12V
48903	1000 GPH, 12V
48103	1250 GPH, 12V*

*1 1/8" discharge to livewell. Does not include Dura-Port.



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
28503	500 GPH straight
38503	500 GPH 90°
28703	750 GPH straight
38703	750 GPH 90°
28103	1000 GPH straight, 12V
38103	1000 GPH 90°, 12V

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
64535	Aqua Jet 3.5 WD / 500 Livewell Pump Kit, 12V
64634	Aqua Jet 5.2 WD / 500 Livewell Pump Kit, 12V



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
1600B	1600 GPH, 12 V	1600 GPH	1550 GPH	7 A	10 A	1.1/8" and 1.1/4"
1600B-24	1600 GPH, 24 V	1600 GPH	1550 GPH	3.5 A	6 A	1.1/8" and 1.1/4"

Spare Parts

Order No.	Description
54061-22	1.1/8" Discharge Port
54061-23	1.1/4" Discharge Port



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
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 trailing the boat, you can stop for fuel and be aerating your catch while the boat is on the trailer.

A dependable 500 GPH pump 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
34024	In-well Aerator kit

Aerating Heads

Spray head assemblies can be custom made to required fit, size and flow capacity. A variety of shapes, configuration and options allow us to build these aerating heads to your specifications. Prototyping kits available. Shown here are some of the more popular sizes and configurations.

Order No.	Description
70195	Valve Assembly – overall length 5 $\frac{3}{4}$ " , two $\frac{3}{4}$ " barbs, shut off valve
90061	Aerator Head – overall length 9"
90191	Aerator Head – overall length 13 $\frac{3}{4}$ " thru-hull, one shut off valve
90261	Aerator head – 2 piece assembly, 8" spray bar with $\frac{3}{4}$ " barb and 6" shut off assembly with $\frac{3}{4}$ " barb and $\frac{3}{4}$ " thru-hull
90331	Aerator Head – overall length 12 $\frac{3}{4}$ " , $\frac{3}{4}$ " thru-hull, one shut off valve
90511	Aerator head – overall length 9 $\frac{3}{4}$ " , $\frac{3}{4}$ " thru-hull, one shut off valve
90681	Aerator head – overall length 10 $\frac{1}{2}$ " , $\frac{3}{4}$ " barb, shut off valve w/bracket
90791	Aerator head – overall length 6 $\frac{3}{4}$ " , $\frac{3}{4}$ " thru-hull, shut off valve



Thru-Hulls

Super tough and durable molded UV stabilized glass coupled polypropylene thru-hulls will not corrode or discolor and are not susceptible to electrolysis.

Order No.	Description
75035	$\frac{3}{4}$ " 90° – white
75045	$\frac{3}{4}$ " 90° – black
75095	$\frac{3}{4}$ " white
75105	$\frac{3}{4}$ " black
75125	1. $\frac{1}{8}$ " white
75135	1. $\frac{1}{8}$ " black
75155	1. $\frac{1}{2}$ " white
75165	1. $\frac{1}{2}$ " black



Assecories

Order No.	Description
71245	Transom Shims



Order No.	Description
74105	Strainer



Order No.	Description
77125	Intake Filter





Photo: Jeanneau

FIP DC Pumps for Bilge, Deckwash & Refuelling



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 14 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 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

DC Driven Flexible Impeller Pumps

Pumps suited for use in boats as bilge and deckwash pumps, fresh water pumps, refuelling pumps for oil and diesel. Can be combined with a vacuum switch for automatic operation. Capacities vary from max 14 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.



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
10-24180-1	F2P10-19, 12V	PTMT	09-1077B-9	Lip seal	1/2" hose	172 mm – 6.8"	117 mm – 4.6"	78 mm	1,6 kg – 3.5 lbs
10-24180-2	F2P10-19, 24V	PTMT	09-1077B-9	Lip seal	1/2" hose	172 mm – 6.8"	117 mm – 4.6"	78 mm	1,6 kg – 3.5 lbs



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
10-24516-03	F3B-19, 12V	Bronze	09-1052S-9	Lip seal	3/8" NPT	170 mm – 6.7"	113 mm – 4.4"	82 mm – 3.22"	2 kg – 4.5 lbs
10-24516-04	F3B-19, 24V	Bronze	09-1052S-9	Lip seal	3/8" NPT	170 mm – 6.7"	113 mm – 4.4"	82 mm – 3.22"	2 kg – 4.5 lbs



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
10-24760-03	F3B-19 Oil change, 12V	Bronze	09-843S-9	Lip seal	3/8" NPT	70 mm – 6,7"	113 mm – 4.4"	115 mm – 4.5"	2,1 kg – 4.5 lbs
10-24760-04	F3B-19 Oil change, 24V	Bronze	09-843S-9	Lip seal	3/8" NPT	70 mm – 6,7"	113 mm – 4.4"	115 mm – 4.5"	2,1 kg – 4.5 lbs



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
10-24727-03	F38B-19, 12V	Bronze	09-824P-9	Lip seal	Hose 1" / 1/2" NPT	180 mm – 7"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
10-24727-04	F38B-19, 24V	Bronze	09-824P-9	Lip seal	Hose 1" / 1/2" NPT	180 mm – 7"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs



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
10-24689-03	F4B-19, 12V	Bronze	09-824P-9	Lip seal	Hose 1" / 1/2" NPT	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
10-24689-04	F4B-19, 24V	Bronze	09-824P-9	Lip seal	Hose 1" / 1/2" NPT	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs



F4B-11 Ultra Ballast – Capacity 52 l/min

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 09-47196 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
10-24690-03	F4B-11 Ultra Ballast, 12 V	Bronze	09-824P-1	Lip seal	Hose 1" / 1/2" NPT	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
10-24690-04	F4B-11 Ultra Ballast, 24 V	Bronze	09-824P-1	Lip seal	Hose 1" / 1/2" NPT	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs



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
10-24188-4	F5B-19, 12 V	Bronze	09-1027B-9	Mech. seal	3/4" NPT	258 mm – 10.15"	131 mm – 5.15"	120 mm – 4.72"	8kg/17.5lbs
10-24188-5	F5B-19, 24 V	Bronze	09-1027B-9	Mech. seal	3/4" NPT	258 mm – 10.15"	131 mm – 5.15"	120 mm – 4.72"	8kg/17.5lbs



F3P10 Mini pump

Portable selfpriming pump suitable for chemicals, oils, diesel fuel and water. Selfpriming up to 2 m. 17 litre/minute at 2800 RPM. 1/2" hose connections. Fits any standard drilling-machine. Do not run dry for more than 10 seconds. Do not use for gasoline or other highly flammable liquids.

Order No.	Description
10-32579-1	F3P10 Mini Pump

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					15 A	8 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	1.45	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					15 A	8 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					15 A	8 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 32

Order No.	Description
09-45053	Vacuum Switch



Deckwash Kit for F4B-19 (incl. pressure switch, check valve and trigger nozzle)

Order No.	Description
09-46553	Deckwash Kit for F4B-19



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, ethylene glycol and salt water circulation.

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



CE marked according to following standards:

CM10P7-1, CM30P7-1, CM90

EN55014: 1993/Radio disturbance
ISO8846: Small Craft – Electrical devices – Protection against ignition of surrounding flammable gases
ISO10133: Small Craft – Electrical systems - Extra-low voltage d.c. installations
72/245/EEG, 95/54/EG Electromagnetic compatibility

C090P5-1

EN55014: 1993/Radio disturbance
72/245/EEG, 95/54/EG Electromagnetic compatibility



CM10 & CM30

Pump body PPA thermoplastic
Impeller PPS thermoplastic
O-ring EPDM
Shaft Stainless steel
Magnet housing PSU
Motor 12/24V DC enclosed (as per IP67)
 permanent magnet, ball bearing mounted
 motor, designed for continuous operation
Liquid water/glycol mixture; max. 60% glycol,
 fresh and salt water
Liquid temp. Min -40°C Max +100°C
Hose connection Ø 16 mm (5/8") or 20 mm (3/4") hose.
 Note! CM30P7-1 with Ø 16 mm (5/8")
 available on request

Dimensions and weight

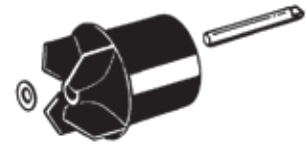
	CM10P7-1	CM30P7-1
Length	177 mm – 6.97"	177 mm – 6.97"
Width	68 mm – 2.68"	68 mm – 2.68"
Height	85 mm – 3.35"	85 mm – 3.35"
Weight	0.53 kg – 1.2 lbs	0.6 kg – 1.3 lbs

Ø 16 mm (5/8")

Order No.	Description	Capacity
10-24501-03	CM10P7-1, 12V	15 l/min at 0.1 bar (4 GPM at 3.3 ft)
10-24501-04	CM10P7-1, 24V	15 l/min at 0.1 bar (4 GPM at 3.3 ft)
10-24503-03	CM30P7-1, 12V	20 l/min at 0.1 bar (5.2 GPM at 3.3 ft)
10-24503-04	CM30P7-1, 24V	20 l/min at 0.1 bar (5.2 GPM at 3.3 ft)

Ø 20 mm (3/4")

Order No.	Description	Capacity
10-24502-03	CM10P7-1, 12V	18.5 l/min at 0.1 bar (5 GPM at 3.3 ft)
10-24502-04	CM10P7-1, 24V	18.5 l/min at 0.1 bar (5 GPM at 3.3 ft)
10-24504-03	CM30P7-1, 12V	26 l/min at 0.1 bar (6.9 GPM at 3.3 ft)
10-24504-04	CM30P7-1, 24V	26 l/min at 0.1 bar (6.9 GPM at 3.3 ft)



CM10 & CM30 Rebuild Kit

Order No.	Description
09-46551	Impeller cpl. CM10/30



CM90

System pressure -0.3 to +3.0 bar; stationary max. 4.0 bar
Liquid water/glycol mixture; max. 60% glycol, fresh and salt water
Motor service life More than 5,000 hours at nominal voltage
 10,000 start/stops. Interchangeable motor.
Motor, voltage Nominal 13.6V DC for use between 10-16V
 Nominal 27.2V DC for use between 20-32V
Input power Max. 125W
Dry running 30 minutes
Dimensions 244 mm long x 120 mm wide x 150 mm high
Ports Ø 20 mm (3/4") & Ø 38 mm (1.1/2")
Weight 3.0 kg (6.6 pounds)
Body PPA, glass-fiber reinforced
Mounting Separate universal bracket for flat surfaces

Ø 20 mm (3/4")

Order No.	Description	Capacity
10-24750-01	CM90P7-1, 12V	65 l/min (17.2 GPM) at 0.25 bar
10-24750-02	CM90P7-1, 24V	65 l/min (17.2 GPM) at 0.25 bar

Ø 38 mm (1.1/2")

Order No.	Description	Capacity
10-24664-01	CM90P7-1, 12V	90 l/min (23.7 GPM) at 0.25 bar
10-24664-02	CM90P7-1, 24V	90 l/min (23.7 GPM) at 0.25 bar



C090

Pump body PA66 thermoplastic
Impeller PA66 thermoplastic
Shaft Stainless steel
Shaft seal Mechanical seal
Motor 12/24 V DC enclosed (as per IP31)
 permanent magnet, ball bearing mounted
 motor, designed for continuous operation
Liquid water/glycol mixture; max. 60% glycol,
 fresh water
Liquid temp. Min -30°C Max +100°C
Hose connection Ø 38 mm (1.1/2") hose

Dimensions and weight

Length	211 mm – 8.3"
Width	117 mm – 4.6"
Height	110 mm – 4.56" from baseplate (totally 116 mm – 4.8")
Weight	1.75 kg – 3.8 lbs

Order No.	Description	Capacity
10-24190-1	C090P5-1, 12V	100 l/min at 0.1 bar (26.4GPM at 3.4 ft)
10-24190-2	C090P5-1, 24V	100 l/min at 0.1 bar (26.4GPM at 3.4 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

A modern, single-chamber, self-priming diaphragm pump that can be set up in several different pump/motor configurations. It is easy to install anywhere after the drain outlet in the wastewater system or as a bilge pump in any leisure craft – new or used. Its non-choke valves mean that no in-line filters are necessary. The pump can be run dry, and it can also handle a mixture of air and water without difficulty. 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 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.



Viking Power 16

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

Order No.	Description	Capacity, open flow	Capacity at 0.1 bar	Max lift	Max head	Connection
10-13528-03	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)
10-13528-04	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	

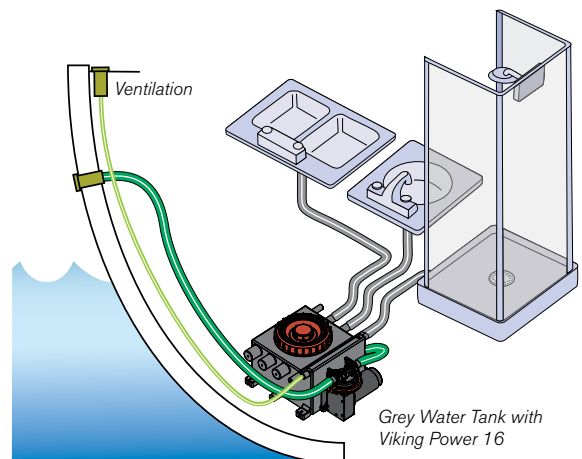
Grey Water Tank

The Grey Water Tank is designed to be used as 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



Grey Water Tank with Viking Power 16

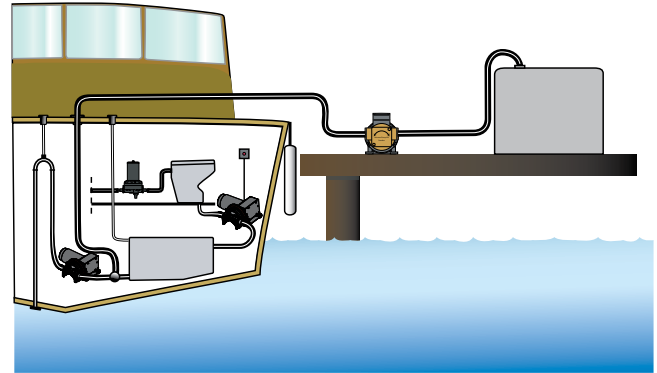
Viking Power 32 & Viking Power Vacuum

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.

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.

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.



Viking Power 32

- 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



Crank for manual handling

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 / 1½"
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 / 1½"



Viking Power Vacuum

- 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



Crank for manual handling

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 / 1½"
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 / 1½"



Macerator Pump

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.



TA3P10-19

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	Amperage	Fuse size	Outlet Connection
10-24453-01	TA3P10-19, 12V	37 l/min – 10 GPM	1½" (dia 38 mm) hose or 1½"NPT	15 A	20 A	1" (25.4 mm) hose
10-24453-02	TA3P10-19, 24V	37 l/min – 10 GPM	1½" (dia 38 mm) hose or 1½"NPT	7 A	12 A	1" (25.4 mm) hose

Spare Parts

Order No.	Description
09-45595	Rebuild kit



AquaT™ Marine toilets

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

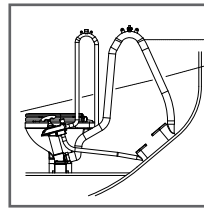
Priced competitively, the fine finish and well thought-through design of these toilets is remarkable. Made from white vitreous porcelain, and with corrosion resistant parts throughout, the AquaT™ marine toilet, is quiet, robust and easy to clean.

Most models can be ordered with standard, bevelled or low profiles in order to fit almost any hull and bulkhead configuration, and all are available in either compact or comfort versions so you can outfit your marine lavatory with the perfect-sized toilet, no matter what the layout.

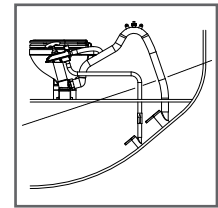
The standard electric model is equipped with a combined pump unit for disposal and flushing. It is easy to install and an economical choice of electrical toilet.

The silent and premium electric models 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.

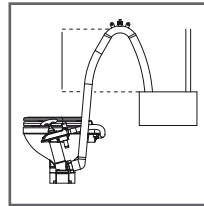
It is probably fair to think of most toilets as commonplace products, but look at the features and you are sure to see that the AquaT™ is far from ordinary. Quiet, hygienic and reliable, the AquaT™ marine toilet is perfect for almost any marine toilet room.



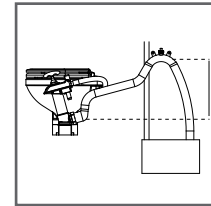
Toilet mounted below the waterline and discharging overboard.



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



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



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



Premium Low
80-47233-01, 12V
80-47233-02, 24V



Premium Low, Bevelled
80-47234-01, 12V
80-47234-02, 24V



Premium Std.
80-47235-01, 12V
80-47235-02, 24V



Premium Std. Bevelled
80-47236-01, 12V
80-47236-02, 24V



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



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



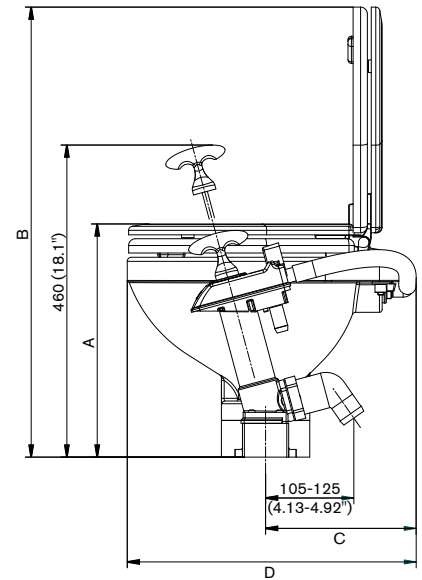
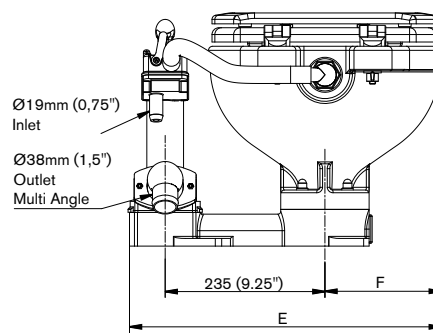
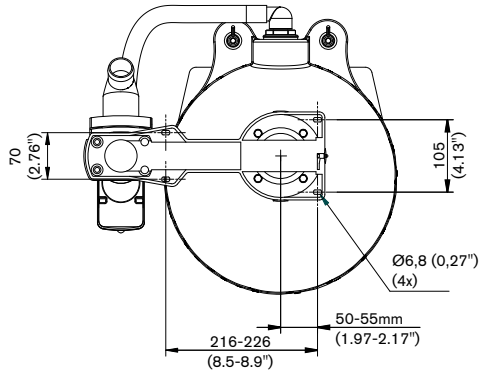
Solenoid Low, Bevelled
80-47234-03, 12V
80-47234-04, 24V



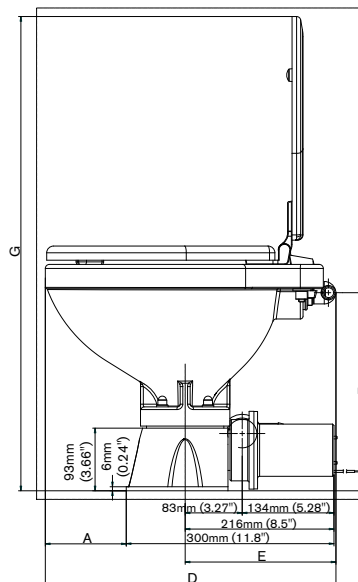
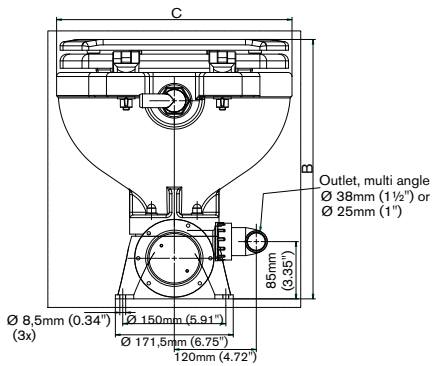
Std. Bidé
80-47317 Std. Bidé

AquaT™ Manual

Order No.	Description	Net Weight	A	B	C	D	E	F
80-47229-01	Compact	9,6 kg 21 lbs	345 mm 13.6"	650 mm 25.6"	215 mm 8.5"	425 mm 16.7"	450 mm 17.7"	170 mm 6.7"
80-47230-01	Comfort	11 kg 24 lbs	340 mm 13.4"	705 mm 27.8"	275 mm 10.8"	490 mm 19.3"	470 mm 18.5"	185 mm 7.3"

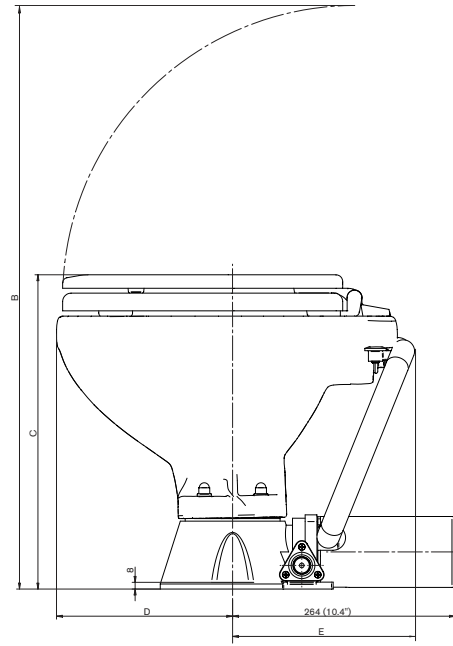
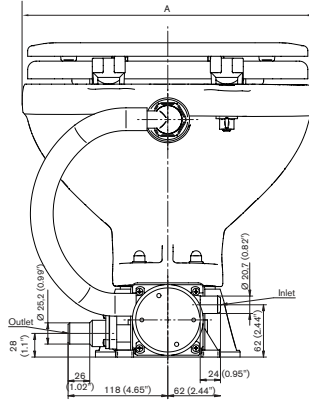
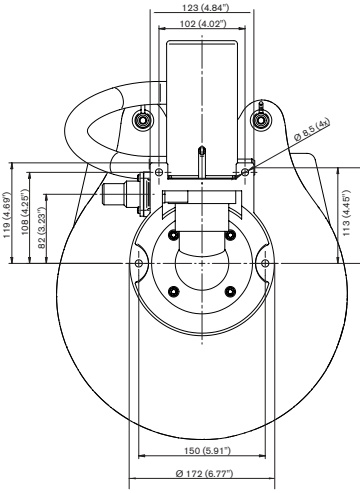


AquaT™ Silent Electric



Order No.	Description	Net Weight	A	B	C	D	E	F	G
80-47231-01	Compact, 12V	9,6 kg 21 lbs	120 mm 4.7"	390 mm 15.4"	335 mm 13.2"	420 mm 16.5"	215 mm 8.5"	290 mm 11.4"	700 mm 27.6"
80-47231-02	Compact, 24V	9,6 kg 21 lbs	120 mm 4.7"	390 mm 15.4"	335 mm 13.2"	420 mm 16.5"	215 mm 8.5"	290 mm 11.4"	700 mm 27.6"
80-47232-01	Comfort, 12V	11 kg 24 lbs	190 mm 7.5"	385 mm 15.2"	365 mm 14.4"	490 mm 19.3"	275 mm 10.8"	280 mm 11.0"	755 mm 29.7"
80-47232-02	Comfort, 24V	11 kg 24 lbs	190 mm 7.5"	385 mm 15.2"	365 mm 14.4"	490 mm 19.3"	275 mm 10.8"	280 mm 11.0"	755 mm 29.7"

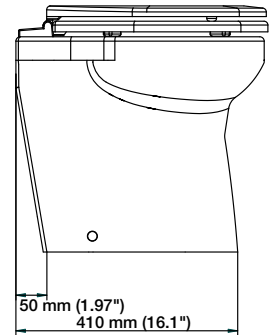
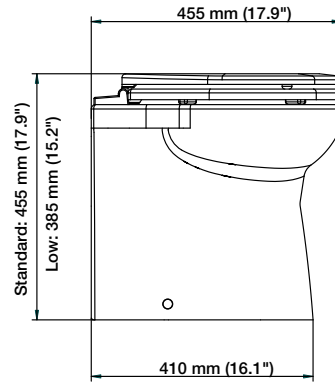
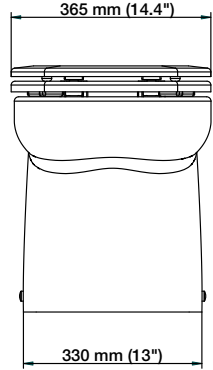
AquaT™ Standard Electric



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"

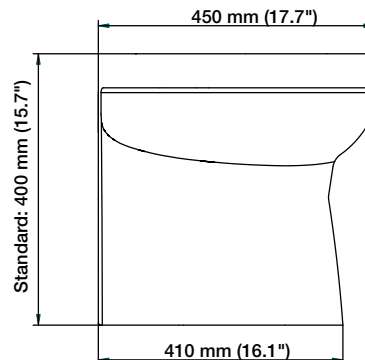
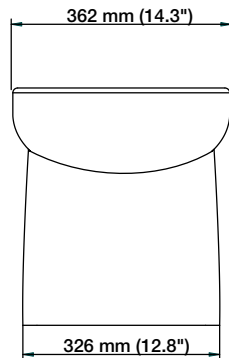
AquaT™ Premium

Order No.	Description
80-47233-01	Low, 12V
80-47233-02	Low, 24V
80-47234-01	Low, bevelled, 12V
80-47234-02	Low, bevelled, 24V
80-47234-03	Solenoid, Low, bevelled, 12V
80-47234-04	Solenoid, Low, bevelled, 24V
80-47235-01	Std., 12V
80-47235-02	Std., 24V
80-47236-01	Std. bevelled, 12V
80-47236-02	Std. bevelled, 24V



AquaT™ Bidet

Order No.	Description
80-47317	Std. Bidé



Accessories

Control Panel

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



Viking Power 32

Order No.	Description
10-13373-03	Viking Power 32, 12V
10-13373-04	Viking Power 32, 24V



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"



Conversion Kit

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



Y-valve

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



Solenoid

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



Flush 2.4 Pump

Order No.	Description
10-24677-01	Flush 2.4 Pump, 12V
10-24677-02	Flush 2.4 Pump, 24V



Spare Parts

Order No.	Description
81-47239-01	Manual pump assembly
81-47241-01	Wooden Seat Compact
81-47241-02	Wooden Seat Comfort & Premium
81-47242-01	Gasket kit, all gaskets in the manual toilet
81-47243-01	Plastic base, plastic base and tap with the ring for manual toilet
81-47244-01	Plastic handle kit, only the plastic handle for manual toilet
81-47245-01	Bowl Compact
81-47245-02	Bowl Comfort
81-47245-03	Bowl Low
81-47245-04	Bowl Low. Bev
81-47245-05	Bowl Std.
81-47245-06	Bowl Std. Bev
81-47246-01	Intake elbow, inlet pipe gasket and nut for manual and silent electric versions
81-47246-02	Outlet elbow, outlet pipe gasket and plastic nut
81-47246-03	Intake elbow, inlet pipe gasket and plastic nut for Premium versions
81-47247-01	Base group (silent electric and premium versions)
81-47248-01	12V Motor group (silent electric and premium versions)
81-47248-02	24V Motor group (silent electric and premium versions)
81-47267-01	Hinge set
81-47268-01	Base gasket kit
81-47269-01	Flush handle kit
81-47273-01	Outlet elbow, Silent & Premium
81-47274-01	Bowl gasket



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 are made for continuous duty and can therefore be used for air intake or extraction in bilges, galleys, accommodation and other compartments.

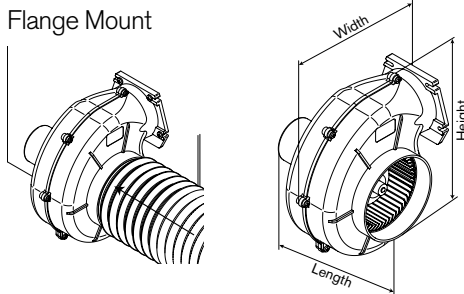
AquaH is an innovative series of AISI 316 stainless steel water heaters, with a storage capacity of 22 up to 80 litres (5.3 to 19.3 gal.). Dual heating as standard - electrical heating and indirect heating based on a second heat source, for example the cooling system from the Marine engine or generator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

AirV – Extra Heavy Duty Radial Blowers

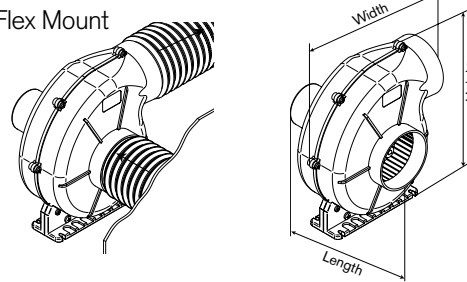
Marine radial blowers designed for engine compartment ventilation prior to start up. Made for continuous duty and is therefore suitable for air intake or extraction in bilges, galleys, accommodation and other compartments. Flange Mount and Flex Mount design with double ball bearing motor, high-impact anti-shock ABS body and 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 m³/h, 163 cfm	200 x 165 x 195 mm / 7.87 x 6.5 x 7.68"	75 mm / 2.95"	72 mm / 2.83"	3,9
80-47416-02	AirV 3-280 Flange Mount, 24V	280 m³/h, 163 cfm	200 x 165 x 195 mm / 7.87 x 6.5 x 7.68"	75 mm / 2.95"	72 mm / 2.83"	2,5
80-47417-01	AirV 4-550 Flange Mount, 12V	550 m³/h, 324 cfm	290 x 257 x 150 mm / 11.4 x 10.1 x 5.91"	110 mm / 4.33"	103 mm / 4.06"	12,5
80-47417-02	AirV 4-550 Flange Mount, 24V	550 m³/h, 324 cfm	290 x 257 x 150 mm / 11.4 x 10.1 x 5.91"	110 mm / 4.33"	103 mm / 4.06"	7
80-47418-01	AirV 4-750 Flange Mount, 12V	750 m³/h, 441 cfm	290 x 257 x 150 mm / 11.4 x 10.1 x 5.91"	150 mm / 5.91"	103 mm / 4.06"	14,5
80-47418-02	AirV 4-750 Flange Mount, 24V	750 m³/h, 441 cfm	290 x 257 x 150 mm / 11.4 x 10.1 x 5.91"	150 mm / 5.91"	103 mm / 4.06"	8,5
80-47419-02	AirV 4-1000 Flange Mount, 24V	1000 m³/h, 589 cfm	290 x 257x 180 mm / 11.4 x 10.1 x 7.09"	150 mm / 5.91"	103 mm / 4.06"	15,5
80-47420-01	AirV 4-550 Flex Mount, 12V	550 m³/h, 324 cfm	290 x 257 x 150 mm / 11.4 x 10.1 x 5.91"	110 mm / 4.33"	103 mm / 4.06"	12,5
80-47420-02	AirV 4-550 Flex Mount, 24V	550 m³/h, 324 cfm	290 x 257 x 150 mm / 11.4 x 10.1 x 5.91"	110 mm / 4.33"	103 mm / 4.06"	7
80-47421-01	AirV 4-750 Flex Mount, 12V	750 m³/h, 441 cfm	290 x 257 x 150 mm / 11.4 x 10.1 x 5.91"	150 mm / 5.91"	103 mm / 4.06"	14,5
80-47421-02	AirV 4-750 Flex Mount, 24V	750 m³/h, 441 cfm	290 x 257 x 150 mm / 11.4 x 10.1 x 5.91"	150 mm / 5.91"	103 mm / 4.06"	8,5
80-47422-02	AirV 4-1000 Flex Mount, 24V	1000 m³/h, 589 cfm	290 x 257x 180 mm / 11.4 x 10.1 x 7.09"	150 mm / 5.91"	103 mm / 4.06"	15,5

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

Control Panel

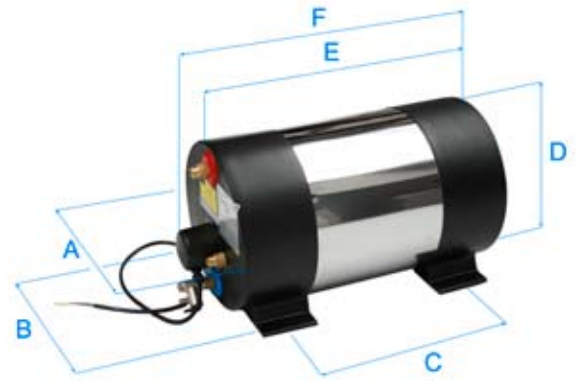
Order No.	Description
56-47464-01	AquaH Thermostat Water Mixer Kit



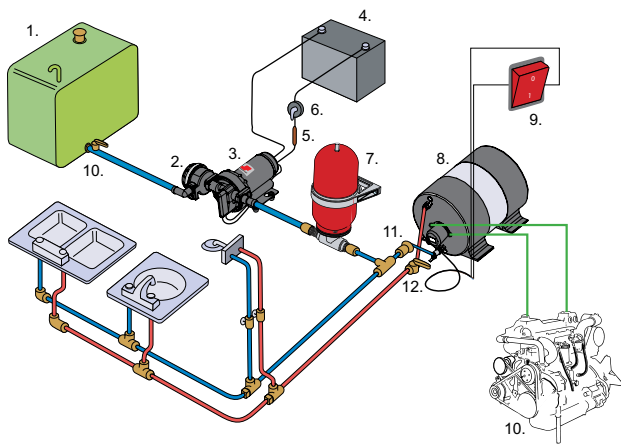
Dimensions

Order no	Electrical supply	Storage capacity lt (gallons)	Weight empty kg (lbs)	A	B	C	D	E	F
	w			mm	mm	mm	mm	mm	mm
56-47455-01	1200	22 (5.81)	10 (22)	322	290	235	325	410	485
56-47455-03	500			12.7"	11.4"	9.25"	12.8"	16.1"	19.1"
56-47456-01	1200	30 (7.93)	11,5 (25.4)	322	290	370	325	545	620
56-47456-03	500			12.7"	11.4"	14.6"	12.8"	21.5"	24.4"
56-47457-01	1200	45 (11.9)	15 (33.1)	322	290	625	325	805	880
56-47457-03	500			12.7"	11.4"	24.6"	12.8"	31.7"	34.6"
56-47458-01	1200	60 (15.9)	17,3 (38.1)	322	290	810	325	990	1065
56-47458-03	500			12.7"	11.4"	31.9"	12.8"	39"	41.9"
56-47459-01	1200	80 (21.1)	20 (44.1)	322	290	1030	325	1210	1285
56-47459-03	500			12.7"	11.4"	40.6"	12.8"	47.6"	50.6"

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



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

Heating time

1200W

Order no	Electrical supply w	Storage capacity lt (gallons)	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 w	Storage capacity lt (gallons)	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



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. Designed for a number of applications on board.

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.

Automatically Controlled 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 32.

Technical Specifications, Clutch Pumps

Pump body	Bronze	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		
Connection	BSP or NPTF		



Heavy Duty Electro-Magnetic Clutch Pumps

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight
10-24577-98	F7B-50017	09-1028B	1" NPT	156 mm – 6.14"	120 mm – 4.72"	93 mm – 3.66"	5.8 kg – 12.7 lbs
10-13022-98	F8B-50017	09-819B	1 1/2" NPT	225 mm – 8.85"	160 mm – 6.29"	124 mm – 4.88"	9.9 kg – 22 lbs
10-13022-95	US version 1 1/4" ports*						
10-13022-96	US version 1 1/2" ports**						



Extra Heavy Duty Electro-Magnetic Clutch Pumps

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight
10-24116-98	F7B-5007	09-1028B	1" NPT	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" NPT	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" NPT	265 mm – 10.43"	198 mm – 7.79"	151 mm – 5.94"	11.9 kg – 26 lbs
10-13027-98	F9B-5607	09-814B 09-802B	2" NPT	290 mm – 11.42"	192 mm – 7.56"	157 mm – 6.18"	13.2 kg – 29 lbs
10-13226-99	F9B-5600 VF	09-814B 09-802B	2" NPT	290 mm – 11.4"	152 mm – 5.98"	175 mm – 6.88"	13.2 kg – 27 lbs
10-13178-99	F9B-5600 TSS	09-814B 09-802B	2" NPT	290 mm – 11.4"	200 mm – 7.87"	151 mm – 5.94"	13.2 kg – 27 lbs



Extra Heavy Duty, High Flow Electro-Magnetic Clutch Pump

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight
10-13143-98	F95B-5000	09-820B	2½" NPT	358 mm – 14.09"	246/295 mm 9.68"/11.61"	226/201 mm 8.89"/7.91"	21 kg – 46 lbs

Flange with 2.½" BSP port adaptors (NPTF available on request)
The port adaptors can be fitted either vertically or horizontally

Choice of Clutch

Order No.	Description
05-32-1	Electro-magnetic clutch, 12 V 2xA pulley
05-32-2	Electro-magnetic clutch, 24 V 2xA pulley
05-32-3	Electro-magnetic clutch, 12 V 1xB pulley
05-32-4	Electro-magnetic clutch, 24 V 1xB pulley

Heavy Duty Impeller Pump

A range of multipurpose bronze pumps. Compact design, raw water resistant pumps at an attractive price – with the renowned Johnson Pump 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 ¾" to 1½" (4 l/min to 279 l/min).

Vacuum switch (see page 32) 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
10-24569-51	F35B-8007	09-808B-1	¾" NPT	109 mm – 4.29"	80 mm – 3.14"	30 mm – 1.18"	0,5 kg – 1.2 lbs	¾"
10-24570-51	F4B-8007	09-810B-1	¾" NPT	111 mm – 4.37"	80 mm – 3.15"	50 mm – 1.97"	0,8 kg – 1.8 lbs	¾"
10-24571-51	F5B-8007	09-810B-9						
		09-1027B-1	¾" NPT	151 mm – 5.95"	106 mm – 4.17"	50 mm – 1.97"	1,6 kg – 3.5 lbs	5/8"
		09-1027B-9						
10-24572-51	F7B-8007	09-1028B	1" NPT	170 mm – 6.69"	120 mm – 4.72"	50 mm – 1.97"	1,9 kg – 4 lbs	5/8"
		09-1028B-9						
10-13021-9	F8B-8007	09-819B	1½" NPT	217 mm – 8.54"	160 mm – 6.3"	65 mm – 2.56"	5,9 kg – 13 lbs	1"
		09-819B-9						
10-13021-95	US version 1¼" ports, 1" shaft keyed							
10-13021-96	US version 1½" ports, 1" shaft keyed							

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 ¾" to 2.½" (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 page 32.

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



Extra Heavy Duty Impeller Pumps

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight	Drive Shaft Ø
10-24210-5	F5B-3007	09-1027B-1 09-1027B-9	¾" NPT	195 mm – 7.68"	106 mm – 4.17"	88 mm – 3.46"	2,9 kg – 6.5 lbs	17 mm
10-24209-7	F7B-3007	09-1028B 09-1028B-9	1" NPT	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 09-819B-9	1½" NPT	255 mm – 10.04"	152 mm – 5.98"	154 mm – 6.06"	7,6 kg – 16.5 lbs	1"
10-13026-7	F9B-3007	09-802B 09-814B	2" NPT	282 mm – 11.1"	192 mm – 7.56"	157 mm – 6.18"	9,3 kg – 21 lbs	1"
10-13175-01	F8B-3000 TSS	09-819B 09-819B-9	1½" NPT	255 mm – 10.04"	198 mm – 7.79"	151 mm – 5.94"	7,6 kg – 16.5 lbs	1"
10-13225-01	F9B-3000 VF	09-802B 09-814B	2" NPT	282 mm – 11.1"	152 mm – 5.98"	175 mm – 6.89"	9,3 kg – 21 lbs	1"
10-13177-01	F9B-3000 TSS	09-802B 09-814B	2" NPT	282 mm – 11.1"	200 mm – 7.87"	151 mm – 5.94"	9,3 kg – 21 lbs	1"



Extra Heavy Duty, High Flow, Impeller Pumps

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight	Drive Shaft Ø
10-13121-04	F95B-3007	09-820B	2½" NPT	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

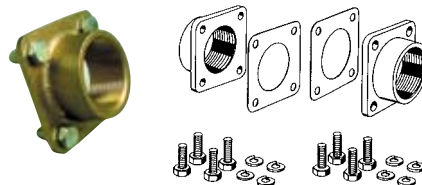
For automatic shut off operation to prevent pump damage

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
09-45562	1½" 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



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
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
0.6	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
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
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
2.0	200	67.1	-	-	-	-	-	-	0.37	22.0	5.8	0.37	28.5	7.5	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
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
0.6	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
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
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
2.5	250	83.8	-	-	-	-	-	-	0.75	37.0	9.8	1.1	52.0	13.7	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
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
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
1.0	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
1.8	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
2.5	250	83.8	-	-	-	-	-	-	1.1	108.0	28.5	2.2	166.0	43.9	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
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
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
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
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
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

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
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
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
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
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
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	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	350	117.4	-	-	-	-	-	-	3.0	160.0	42.3	3.5	205.0	54.2	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
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
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
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
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
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

Engine Cooling – Raw Water Handling

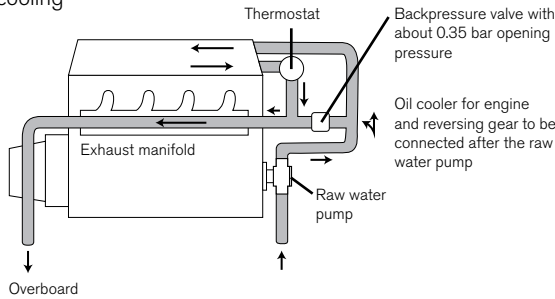
Flexible impeller pumps, F-series, provide an efficient solution to most raw water pumping needs. The primary advantage of a flexible impeller pump is its self-priming ability. As the vanes of the impeller are depressed and rebound, they create their own vacuum drawing fluid into the pump. A dry pump 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.

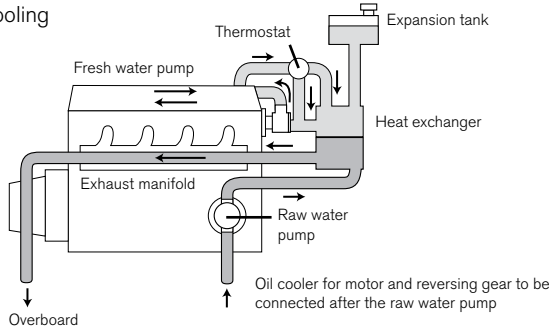
A general feature of all flexible impeller pumps is that they cannot be permitted to run dry for more than 30 seconds. Both the impeller and the seals depend upon the water for lubrication and will soon burn out if run dry. Wearing parts are easily replaceable, and service kits are available for all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

Different types of cooling systems

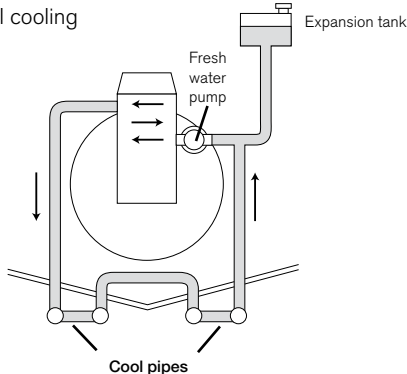
Direct cooling



Indirect cooling Inter cooling

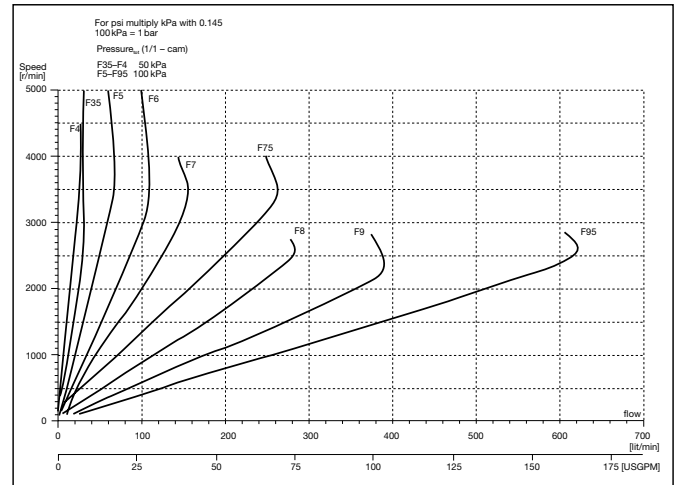


Keel cooling



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 Johnson Pump Marine can offer a number of alternatives in its DC driven CM- and C0-series (see page 21 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 Johnson Pump Marine is the original equipment pump supplier 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 $\frac{3}{8}$ " 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.

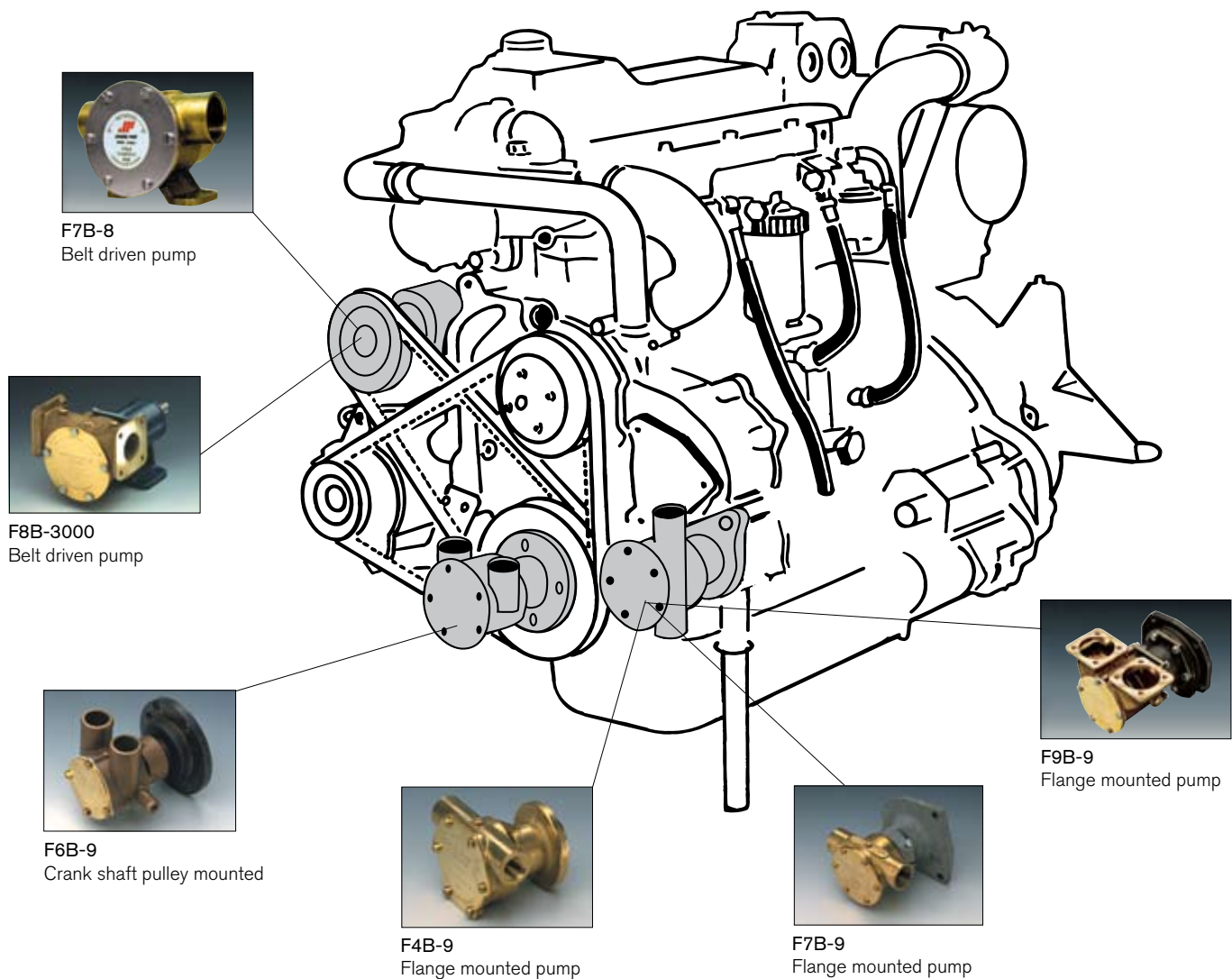
Two different types of pedestal mounted pumps are supplied:

FB-8

A range of bronze pumps in compact design. Ideal as cooling water pumps in marine engines. Available in sizes from $\frac{3}{8}$ " 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.





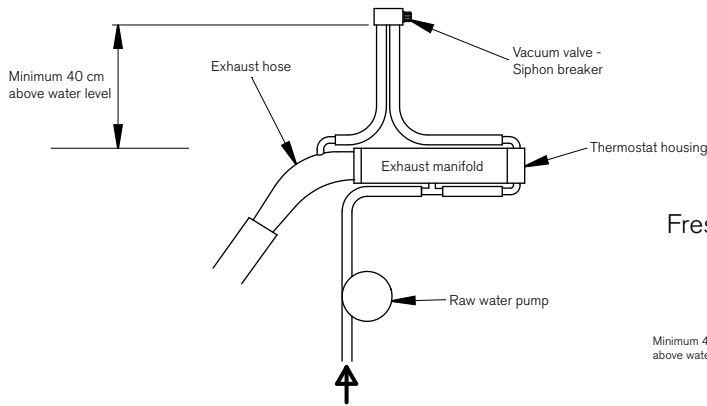
Vacuum valve - Siphon breaker

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.

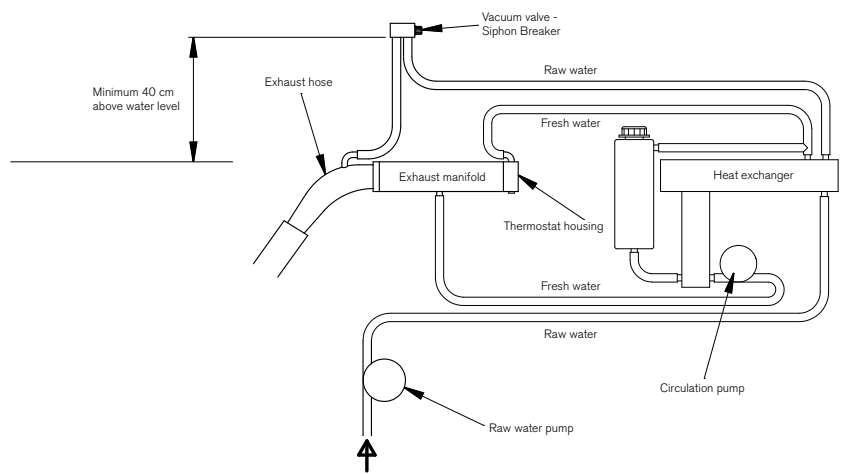
Order No.	Description
09-47316-01	Siphon Breaker, Spud Size 12 mm
09-47316-02	Siphon Breaker, Spud Size 16 mm
09-47316-03	Siphon Breaker, Spud Size 19 mm
09-47316-04	Siphon Breaker, Spud Size 22 mm
09-47316-05	Siphon Breaker, Spud Size 25 mm
09-47316-06	Service Kit

- 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.

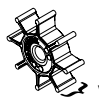
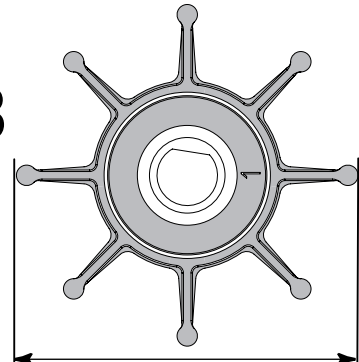
Remove the impeller with a slip joint plier or an Impuller.



Order No.	Description
09-950-9300	JP Impuller

Impeller identification guide, scale 1:1

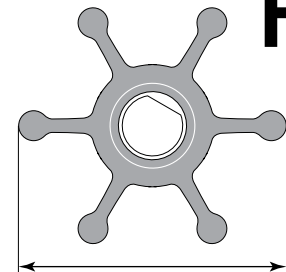
F3



width 12,8mm (0.51")

Impeller article number 09-843S-9
Nitrile (oil resistant)
F3B-19

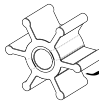
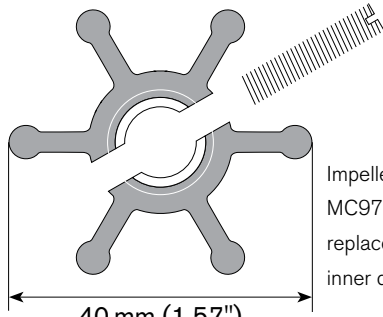
F2



width 12,7mm (0.5")

Impeller article number 09-1077B-9
Nitrile (oil resistant)

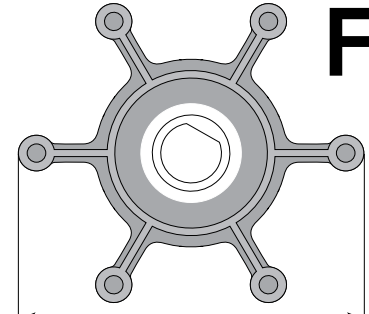
F35



width 19 mm (0.75")

Impeller article number 09-806B-1
MC97 (for cooling)
replaces Jabsco 4528-0001 Europe & USA
inner diameter 9,5 mm

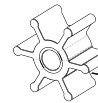
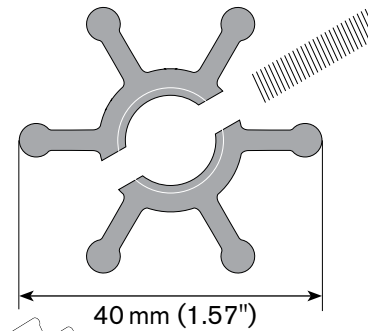
F3



width 12,8 mm (0.51")

Impeller article number 09-1052S-9
Nitrile (oil resistant)
TA3P10/F3P10

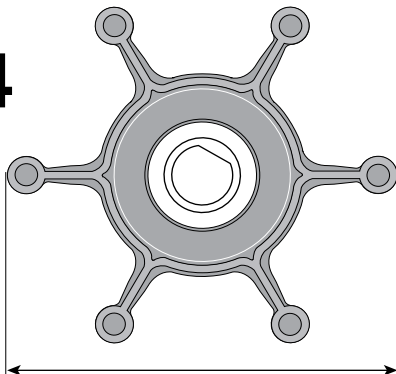
F35



width 19 mm (0.57")

Impeller article number 09-808B-1
MC97 (for cooling)
replaces Jabsco 22405-0001 Europe & USA
inner diameter 12 mm

F4

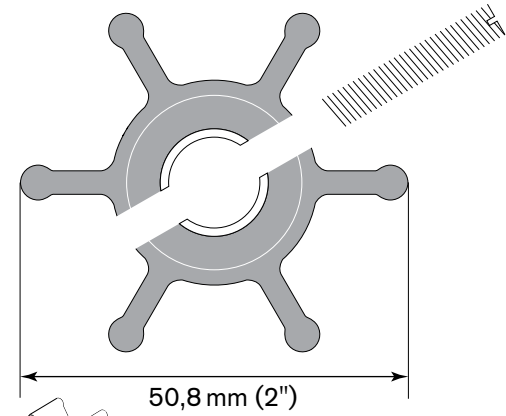


width 22 mm (0.87")

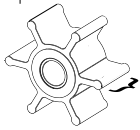
Impeller article number 09-824P-9
Nitrile (oil resistant)
replaces Jabsco 6303-0003 Europe & USA

Impeller article number 09-824P-1
MC97 (Ultra Ballast)

F4



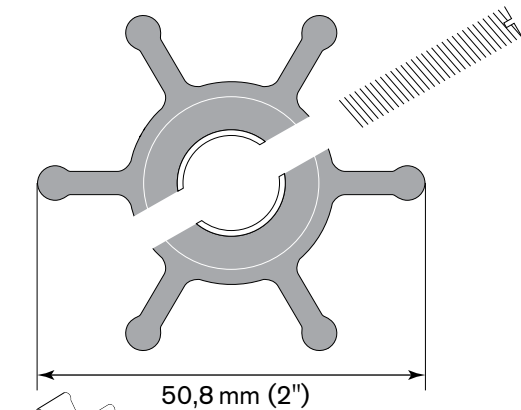
50,8 mm (2")



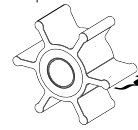
width 22 mm (0.87")

Impeller article number 09-810B-1
MC97 (for cooling)
replaces Jabsco 18653-0001 Europe & USA

Impeller article number 09-810B-9
Nitrile (oil resistant)
inner diameter 12 mm



50,8 mm (2")

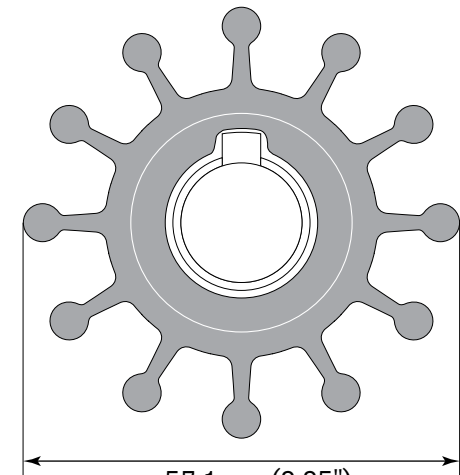


width 22 mm (0.87")

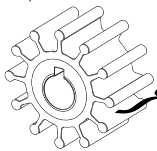
Impeller article number 09-1026B-1
MC97 (for cooling)
replaces Jabsco 673-0001 Europe & USA

Impeller article number 09-1026B-9
Nitrile (oil resistant)
replaces Jabsco 673-0003 Europe & USA
inner diameter 12,7 mm

F5

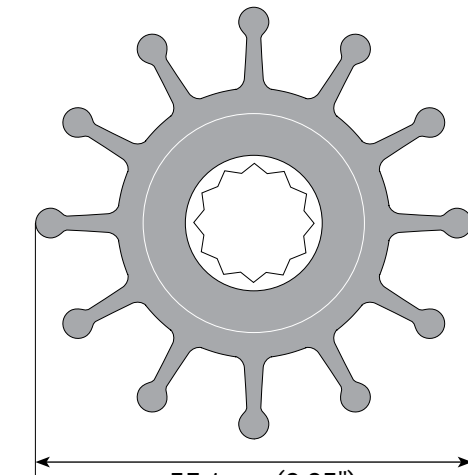


57,1 mm (2.25")

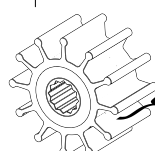


width 31,5 mm (1.24")

Impeller article number 09-801B
Neoprene (for cooling)
replaces Jabsco 4568-0001 Europe & USA
inner diameter 15,9 mm/key



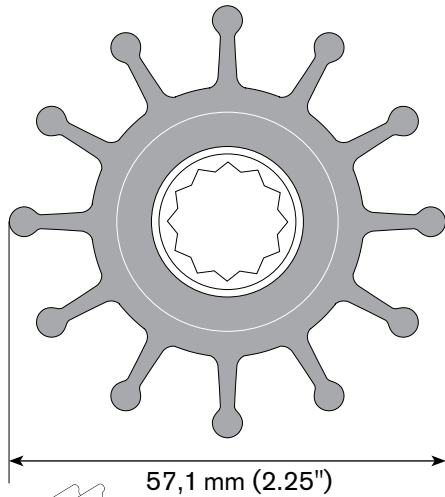
57,1 mm (2.25")



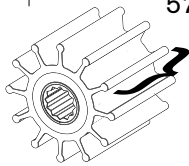
width 31,5 mm (1.24")

Impeller article number 09-1027B-1
MC97 (for cooling)
replaces Jabsco 1210-0001 Europe & USA
Impeller article number 09-1027B-9
Nitrile (oil resistant)
replaces Jabsco 1210-0003 Europe & USA
Impeller article number 09-1027B-10
MC97 (for cooling)

F6



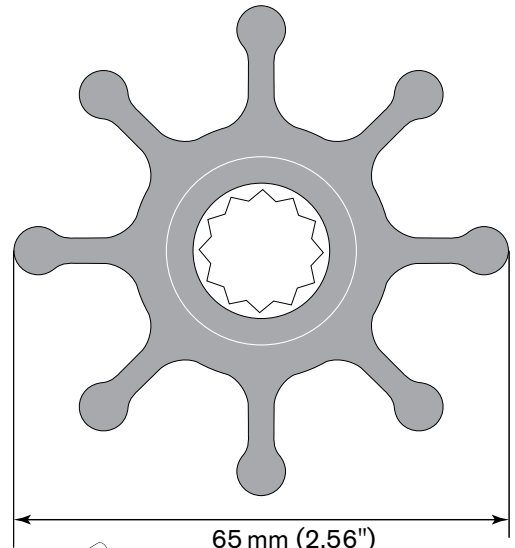
57,1 mm (2.25")



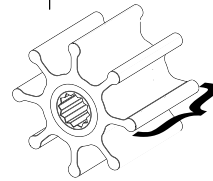
width 48,2 mm (1.9")

Impeller article number 09-812B-1
MC97 (for cooling)
replaces Jabsco 13554-0001 USA

F7



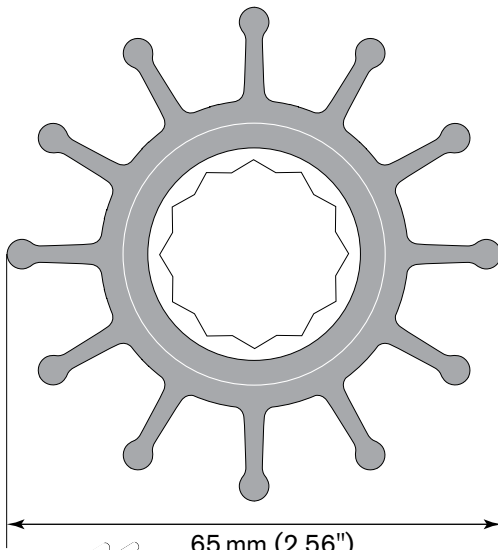
65 mm (2.56")



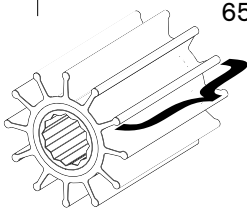
width 50,2 mm (1.98")

Impeller article number 09-1028BT-1
MC97 (for cooling)
replaces Jabsco 17937-0001 Europe&USA
Impeller article number 09-1028B-9
Nitrile (oil resistant)
replaces Jabsco 17937-0003 Europe&USA

F75



65 mm (2.56")

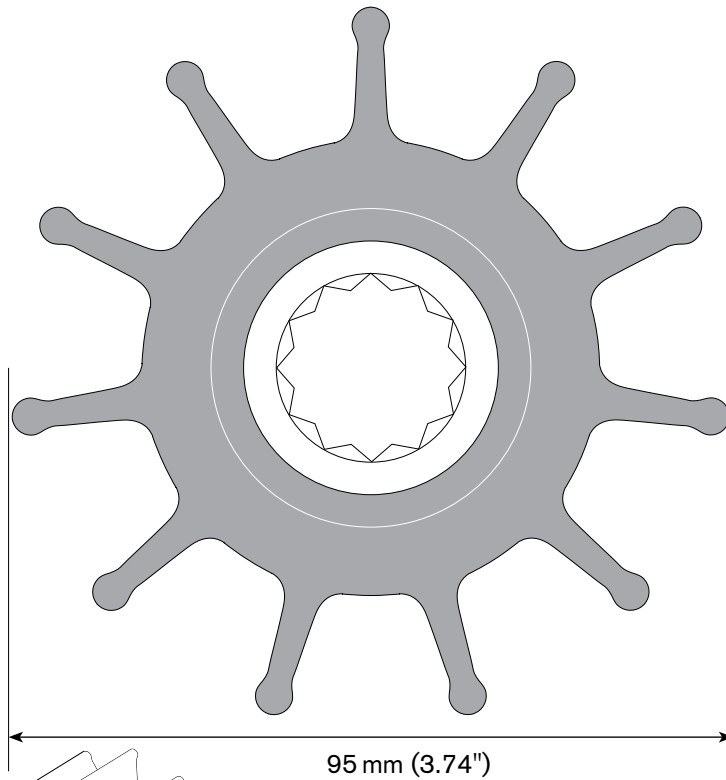


width 80 mm (3.15")

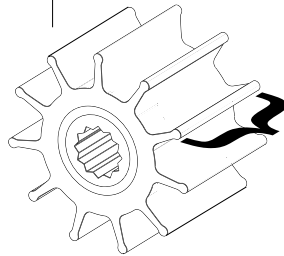
Impeller article number 09-821BT-1
Neoprene (for cooling)

F8

Impeller article number 09-819B
Neoprene (for cooling)
replaces Jabsco 836-0001 Europe &
17935-0001 USA
Impeller article number 09-819B-9
Nitrile (oil resistant)
replaces Jabsco 836-0003 Europe &
17935-0003 USA



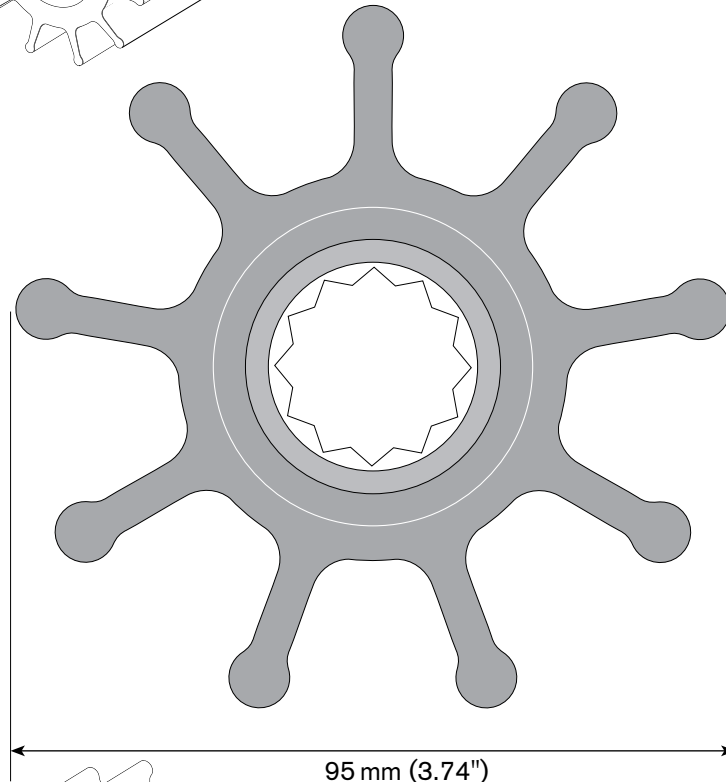
95 mm (3.74")



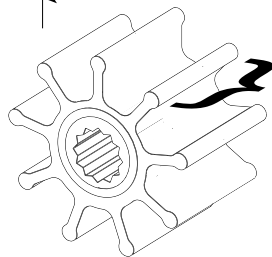
width 63 mm (2.48")

F8

Impeller article number 09-1029B
Neoprene (for cooling)
replaces Jabsco 836-0001 Europe &
17935-001 USA

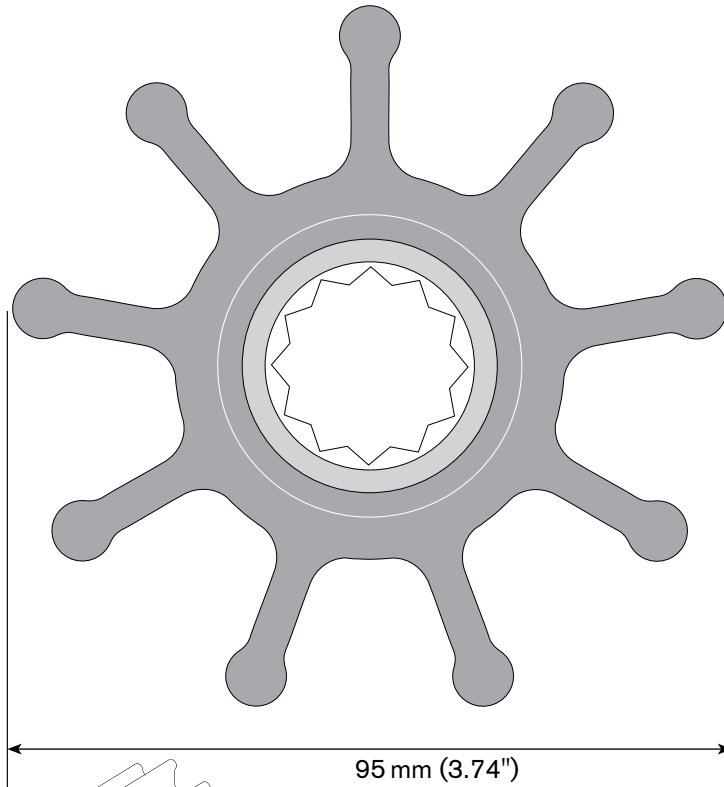


95 mm (3.74")

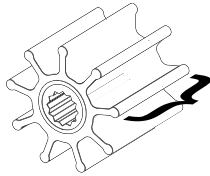


width 63 mm (2.48")

F9

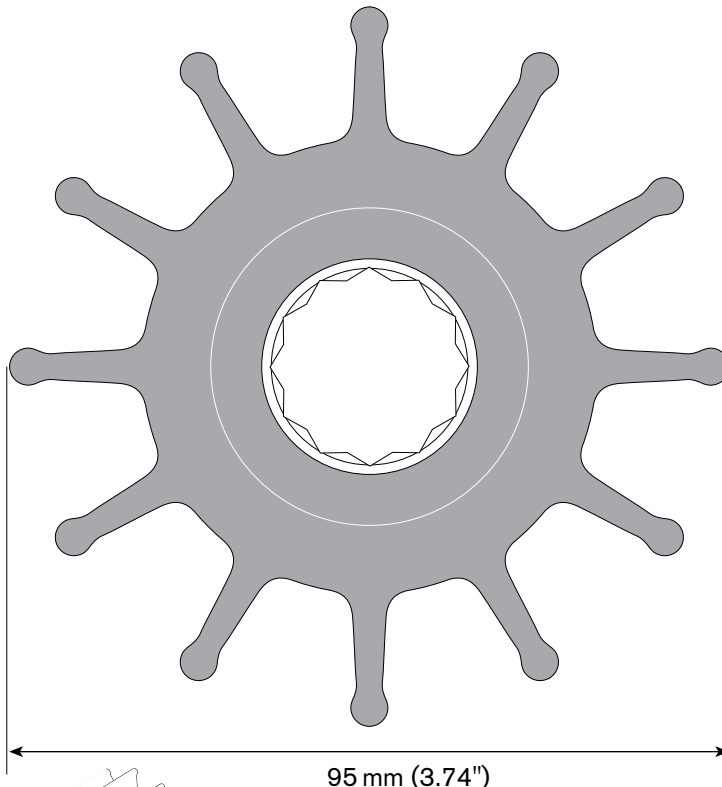


Impeller article number 09-802B
Neoprene (for cooling)
replaces Jabsco 6760-0001 Europe & USA

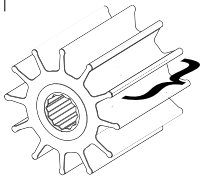


width 88,5 mm (3.48")

F9

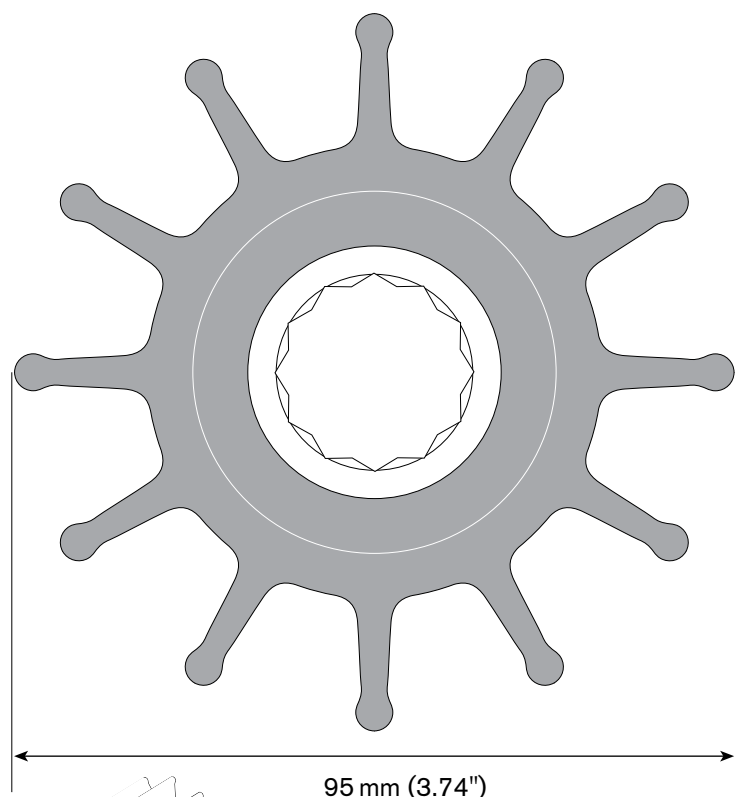


Impeller article number 09-814B
Neoprene (for cooling)
replaces Jabsco 21676-0001 Europe &
17936-0001 USA



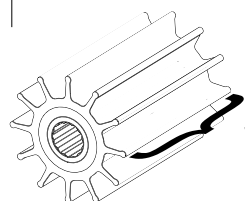
width 88,5 mm (3.48")

F95



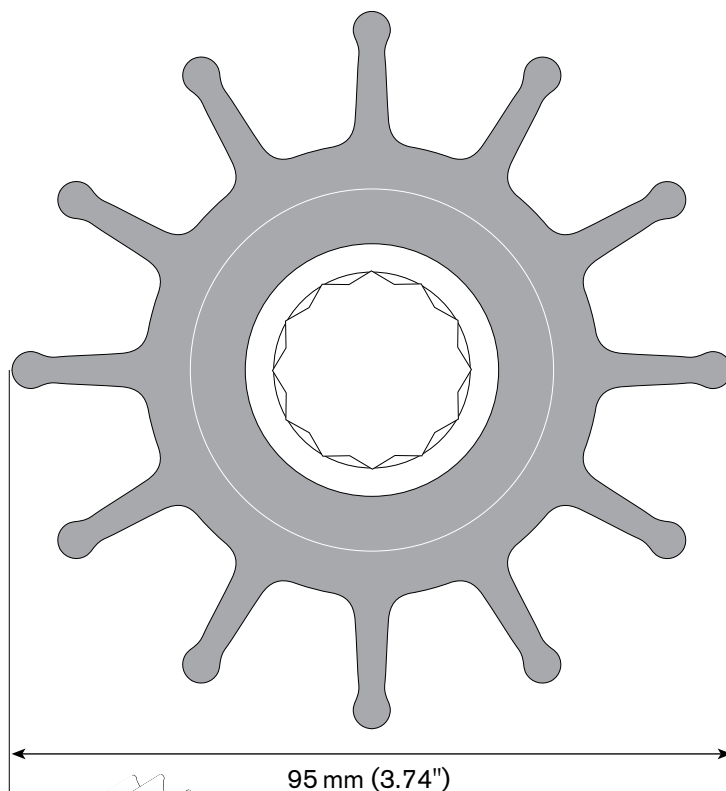
Impeller article number 09-820B
Neoprene (for cooling)

95 mm (3.74")



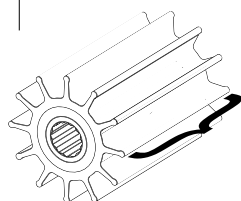
width 130 mm (5.12")

F98



Impeller article number 09-842B
Neoprene (for cooling)

95 mm (3.74")



width 180 mm (7.09")



Your local contact:



SPX Johnson Pump Marine AB, Nastagatan 19, P.O. Box 1436, SE-701 14 Örebro, Sweden.
Johnson Pumps of America, Inc., 1625 Hunter Road, Suite B, Hanover Park, Illinois, 60133
Johnson Pump (Australia) Pty. Ltd. P.O. Box 427, Cannon Hill, QLD. 4170, Australia



For more information about our worldwide locations, approvals, certifications, and local representatives, please visit www.johnson-pump.com.

SPX Corporation reserves the right to incorporate our latest design and material changes without notice or obligation. Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing.

Issued: 11/2009 JP-2010/01 US

Copyright © 2009 SPX Corporation