



JOHNSON PUMP
AN SPX BRAND



MARINE CATALOGUE 2009 EDITION

pumps and accessories for marine applications

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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.

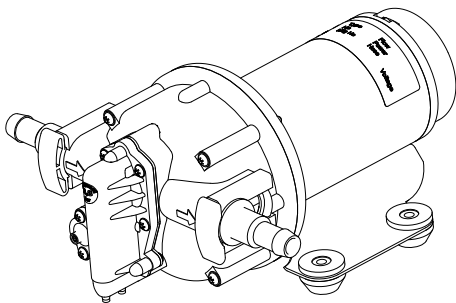


Since 2006 Johnson Pump is a member of the Process Equipment division, in the SPX business segment Flow Technology. For further information about SPX, please visit www.spx.com.



Photo: Jeanneau

Water Pressure Systems & Wash Down Pumps



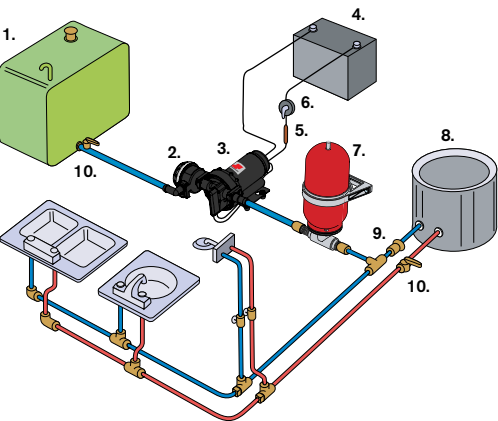
Quiet and pulsation-free even at low speeds, the Aqua Jet five chamber diaphragm pump provides the perfect water pressure or deck wash solution for both small and medium sized leisure and commercial boats. Efficient and compact, Aqua Jet pumps are particularly suitable where low amperage and sound levels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



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 Typical Water Pressure Systems

- 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. Check valve
- 10. 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.

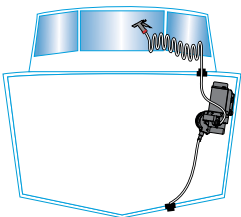


Aqua Jet Wash Down Pumps 2.9, 3.5 & 5.2

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" NPT 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" NPT 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"
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"
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"
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"



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	

Accessories

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



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	3/8" NPT / hose 1/2", 1/2" - 14 NPSM
10-24604-104	Aqua Jet WPS 2.4, 24V	9 l/min – 2.4 GPM	2.8 bar – 41 psi	5 A	3/8" NPT / hose 1/2", 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	3/8" NPT / hose 1/2", 1/2" - 14 NPSM
10-13405-104	Aqua Jet WPS 2.9, 24V	11 l/min – 2.9 GPM	2.8 bar – 41psi	5 A	3/8" NPT / hose 1/2", 1/2" - 14 NPSM

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	10A	3/8" NPT / hose 1/2", 1/2" NPT / hose 3/4", 1/2" - 14 NPSM
10-13395-104	Aqua Jet WPS 3.5, 24V	13L/min / 3.5 GPM	2.8 bar / 41psi	5A	3/8" NPT / hose 1/2", 1/2" NPT / hose 3/4", 1/2" - 14 NPSM

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	10A	3/8" NPT / hose 1/2", 1/2" NPT / hose 3/4", 1/2" - 14 NPSM
10-13406-104	Aqua Jet WPS 4.0, 24V	15L/min / 4.0 GPM	2.8 bar / 41psi	5A	3/8" NPT / hose 1/2", 1/2" NPT / hose 3/4", 1/2" - 14 NPSM

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	15A	3/8" NPT / hose 1/2", 1/2" NPT / hose 3/4", 1/2" - 14 NPSM
10-13406-108	Aqua Jet WPS 5.2, 24V	20L/min/ 5.2 GPM	2.8 bar / 41psi	8A	3/8" NPT / hose 1/2", 1/2" NPT / hose 3/4", 1/2" - 14 NPSM

*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

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
 Weight 2 kg/4.5 lbs
 Motor WPS 5.0 – 150 W, 12/24V DC
 (with built-in thermal protection)

Body Nylon/Polypropylene
 Valves Santoprene/EPDM
 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" - 14 NPSM
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" - 14 NPSM

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
09-24652-02CN	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
09-24652-04CN	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



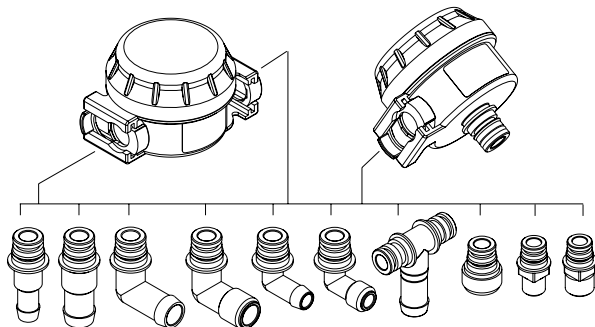
Inlet Strainer

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
09-24653-02CN	Universal 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
09-24653-03CN	Universal 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 / 1/2"-14 NPSM
09-47098	2	2 x 1/2" BSP / 1/2"-14 NPSM
09-47092	1	1 x T-connection, 3/4" barb

Inline Strainer



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

Order No.	Connection
48-80035	Inline strainer, 1/2" hose
48-80036	Inline strainer, 3/4" hose
48-80037	Inline strainer, 3/4" BSP

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.



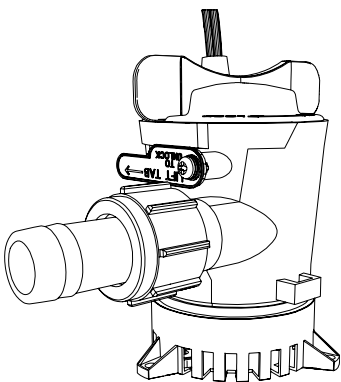
Order No.	Connection
09-36079-01	Adapter 15 mm quick conn 1/2" hose
09-36079-02	Adapter 22 mm quick conn 3/4" hose





Photo: Solemar

Heavy Duty Submersible Bilge Pumps



The SPX Johnson Pump Marine submersible pumps can handle most of the 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:

- | | |
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| 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 that eliminates shaft wear and allows for service and replacement, 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 1.1/2" 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	1.1/8" and 1.1/4"
16084	1600 24 V	98 l/min – 1550 GPH	100 l/min – 1600 GPH	3.5 A	6 A	1.1/8" and 1.1/4"
22004	2200 12 V	120 l/min – 1900 GPH	130 l/min – 2060 GPH	7.5 A	12 A	1.1/8" and 1.1/4"
22084	2200 24 V	120 l/min – 1900 GPH	130 l/min – 2060 GPH	4.5 A	6 A	1.1/8" and 1.1/4"
40004	4000 12 V	164 l/min – 2600 GPH	252 l/min – 4000 GPH	15 A	25 A	1.1/2" and 2"
40004-24	4000 24 V	164 l/min – 2600 GPH	252 l/min – 4000 GPH	7.5 A	15 A	1.1/2" and 2"

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	3/4"
32703	750 GPH	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4"
32903	1000 GPH	50 l/min - 800 GPH	63 l/min - 1000 GPH	3.2 A	5 A	3/4"
32903-24	1000 GPH	50 l/min - 800 GPH	63 l/min - 1000 GPH	2 A	3 A	3/4"
42123*	1250 GPH	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1.1/8"
42123-24*	1250 GPH	60 l/min - 952 GPH	73 l/min - 1150 GPH	2 A	3 A	1.1/8"

*) Do not include Dura-Port connection

Low Boy Bilge Pump

Low Profile pump design for ease of mounting and removal in tight bilge areas. Perfect for 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 Dura-Port as well as a removable check valve.



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

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"

Multiple Port Shower Sump

This compact shower sump system is designed to meet the higher demands from today's boating industry where more and 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 A	3 A	3/4"

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.



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

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

Bilge Alert™

High water alarm featuring digital technology using the patented Mirus field effect cell. 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 (8 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, 12V
72303-002	Bilge Alert, High Water Alarm, 24V

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



Ultima Switch™

Digital technology 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



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
82004	Bilge Pump Control, 12V
82004-24	Bilge Pump Control, 24V



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



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
28512	Motor for 1000 GPH pumps
42522	Motor for 1250 GPH pumps



Livewell Aerating pumps

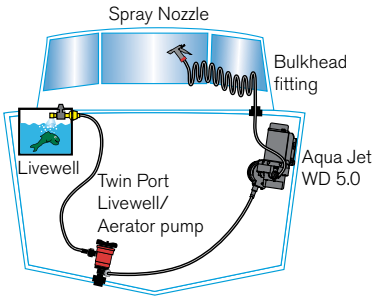
Twin Port Pumps

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	550 GPH
48703	750 GPH
48903	950 GPH
48103	1250 GPH*

*1 1/8" discharge to livewell



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
38103	1000 GPH 90°

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 550 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
64634	Aqua Jet 5.2 WD/ 550 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 at 13.6 V (0' head 100 l/min)	Capacity straight (3' head 98 l/min)	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"



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

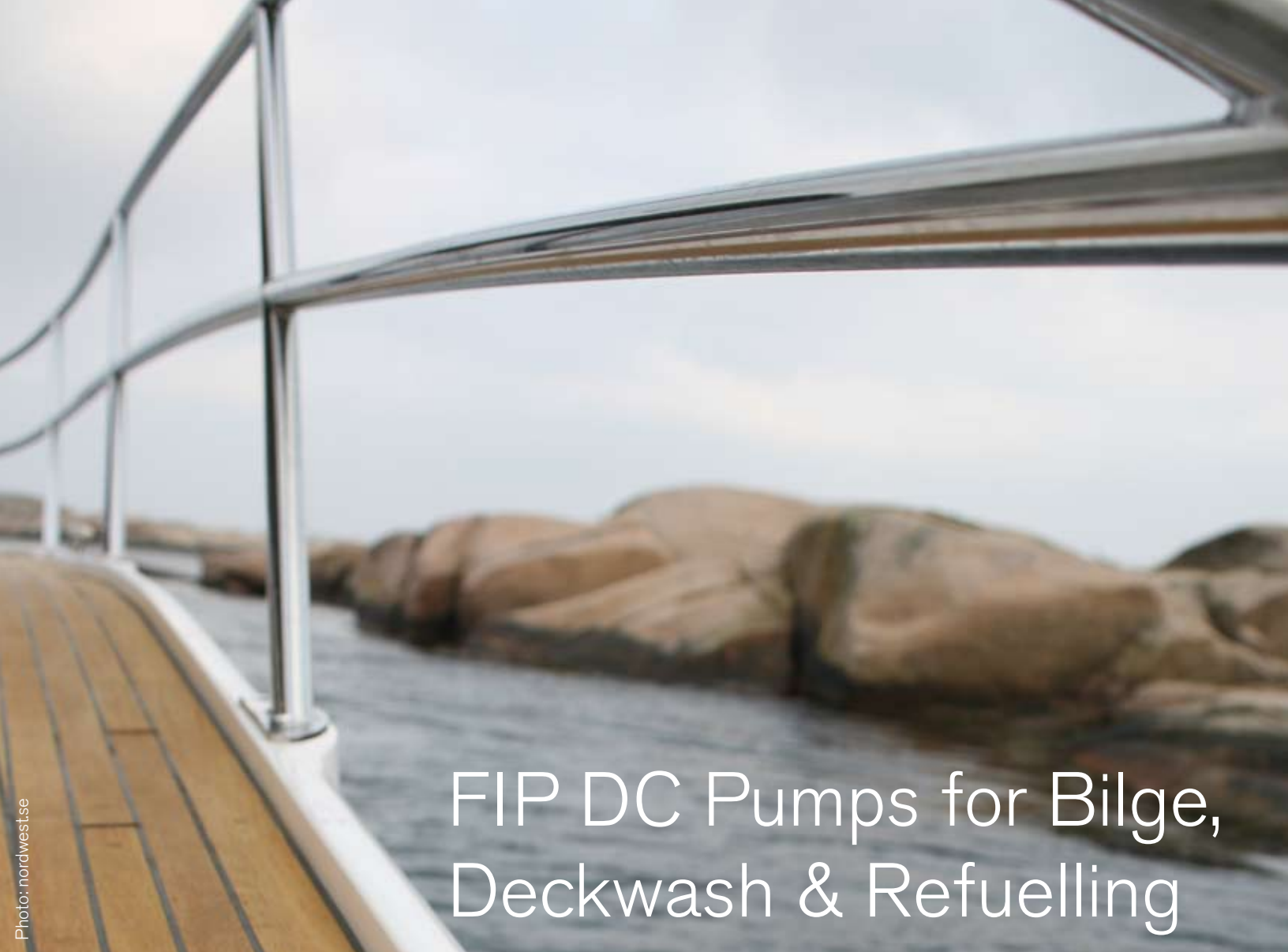


In-well Aerator kit

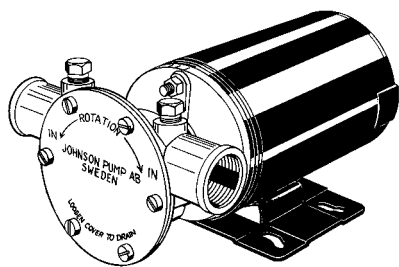
The easiest way to add oxygen to your live bait well. Use it as your primary aerator, or to recirculate while you are making a long run across the bay, or if you are trailing the boat, you can stop for fuel and be aerating your catch while the boat is on the trailer.

A dependable 500 GPH 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



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

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

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

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

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

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

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. 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" / ½" 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" / ½" NPT	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs



F5B-19

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	¾" 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	¾" 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. ½" 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

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

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	12.0	3.2	15.8	7.1
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

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

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)

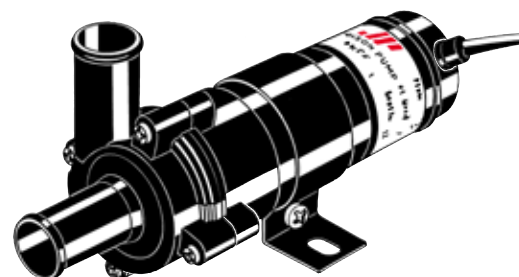
Order No.	Description
09-46553	Deckwash Kit for F4B-19



Photo: Hallberg-Rassy by Peter Szamer

Circulation Pumps

A line of compact magnetic driven centrifugal pumps, CM-series, which combine high flow rates with very low electric current consumption, making them ideally suited for circulating fresh water in live fish tanks, heating and cooling systems. C090 with mechanical seal and a motor designed for continuous operation. Designed also for fresh water handling



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 temp.	Min -40°C Max +100°C
Hose connection	Ø 16 mm (5/8") or 20 mm (3/4") hose. Note! CM30P7-1 only available with 20 mm (3/4") hose connection.

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)



CM90

System pressure	-0.3 to +3.0 bar; stationary max. 4.0 bar
Liquid	water/glycol mixture; max. 60% glycol
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 38 mm (1 1/2")
Weight	3.0 kg (6.6 pounds)
Body	PPA, glass-fiber reinforced
Mounting	Separate universal bracket for flat surfaces

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



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 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)

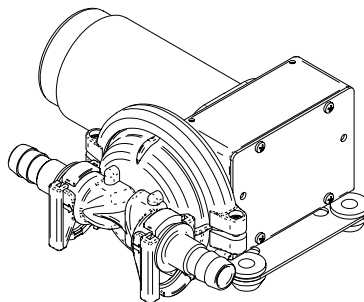
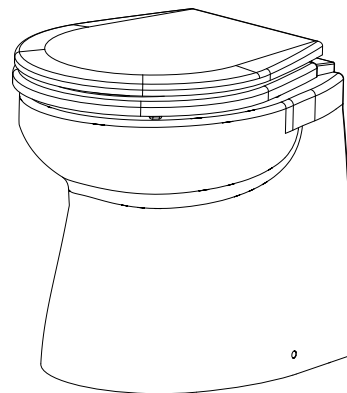


Photo: Jeanneau

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.



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

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

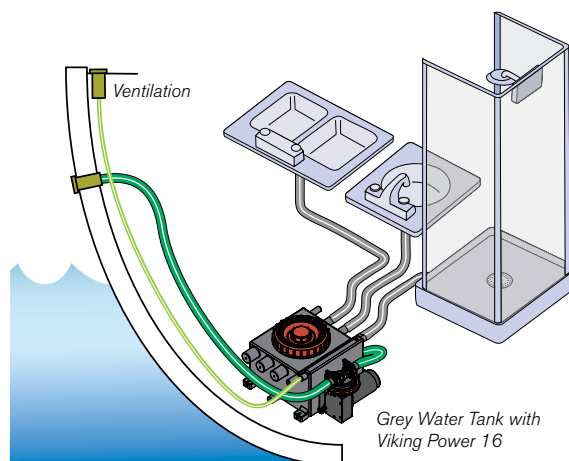
Grey Water Tank

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



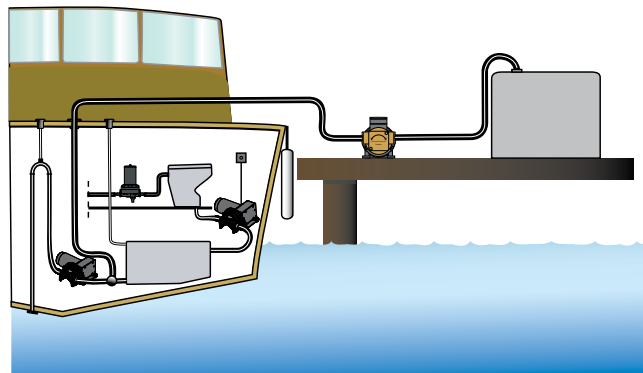
Viking Power 32 & Viking Power Vacuum

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 – 11.5 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 – 11.5 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	2.3 amp (12V), 1.2 amp (24V) at 0.1 bar 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)	Amperage	Fuze Size	Inlet Connection	Outlet Connection
10-24453-04	TA3P10-19, 12V	37 l/min – 10 GPM	15	20	1½" (dia 38 mm) hose or 1½"NPT	1" (25.4 mm) hose
10-24453-05	TA3P10-19, 24V	37 l/min – 10 GPM	9	10	1½" (dia 38 mm) hose or 1½"NPT	1" (25.4 mm) hose



AquaT™ Marine toilets

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

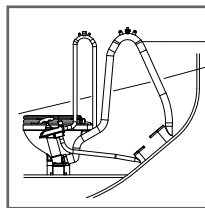
Priced competitively, the fine finish and well thought-through design of these toilets is remarkable. Made from white vitreous porcelain, and with corrosion resistant parts throughout, the AquaT™ marine toilet, is quiet, robust and easy to clean.

Using the AquaT™ marine toilet, water inlet and outlet takes place in two distinct steps. First the bowl is filled with clear water, and then the waste is flushed, leaving the bowl empty and clean, with no liquids sloshing about. Naturally, automatic back-flow prevention is incorporated into the design.

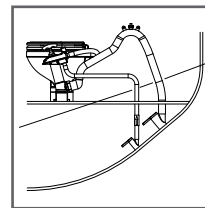
Most models can be ordered with standard, bevelled or low profiles in order to fit almost any hull and bulkhead configuration, and all are available in either compact or comfort versions so you can outfit your marine lavatory with the perfect-sized toilet, no matter what the layout.

Power 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.

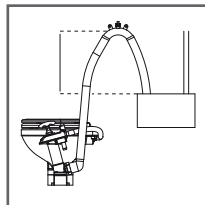
It is probably fair to think of most toilets as commonplace products, but look at the features and you are sure to see that the AquaT™ is far from ordinary. Quiet, hygienic and reliable, the AquaT™ marine toilet is perfect for almost any marine toilet room.



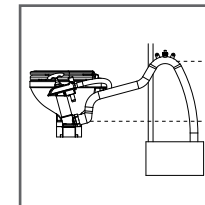
Toilet mounted below the waterline and discharging overboard.



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



Std. Bidé
80-47317 Std. Bidé



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



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



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



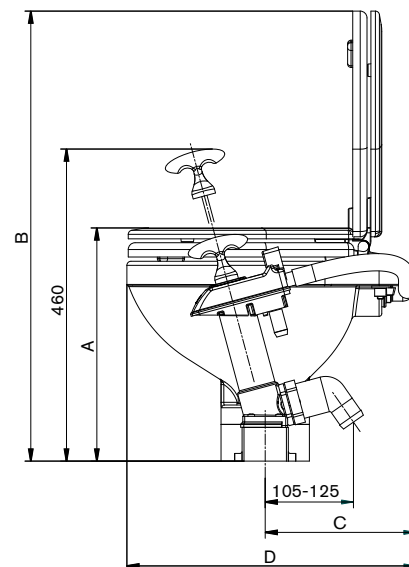
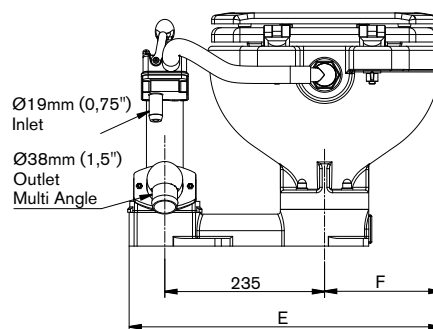
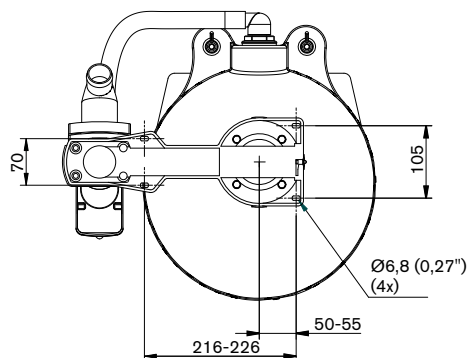
Premium Std.
80-47235-01, 12V
80-47235-02, 24V



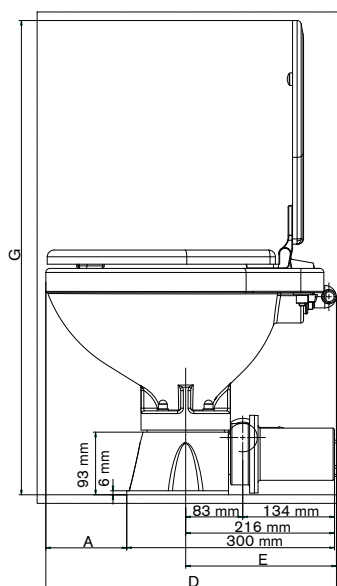
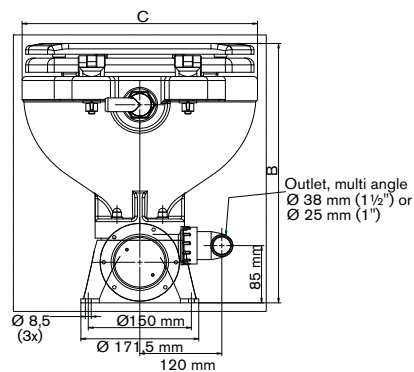
Premium Std. Bevelled
80-47236-01, 12V
80-47236-02, 24V

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 inch	650 mm 25.6 inch	215 mm 8.5 inch	425 mm 16.7 inch	450 mm 17.7 inch	170 mm 6.7 inch
80-47230-01	Comfort	11 kg 24 lbs	340 mm 13.4 inch	705 mm 27.8 inch	275 mm 10.8 inch	490 mm 19.3 inch	470 mm 18.5 inch	185 mm 7.3 inch



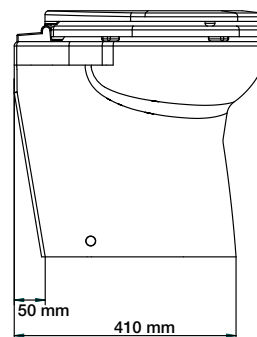
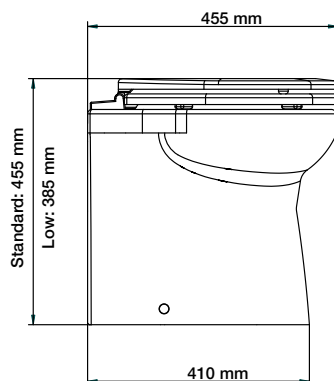
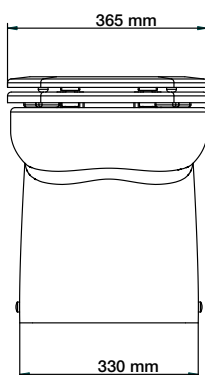
AquaT™ Silent Electric



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 inch	390 mm 15.4 inch	335 mm 13.2 inch	420 mm 16.5 inch	215 mm 8.5 inch	290 mm 11.4 inch	700 mm 27.6 inch
80-47231-02	Compact, 24V	9,6 kg 21 lbs	120 mm 4.7 inch	390 mm 15.4 inch	335 mm 13.2 inch	420 mm 16.5 inch	215 mm 8.5 inch	290 mm 11.4 inch	700 mm 27.6 inch
80-47232-01	Comfort, 12V	11 kg 24 lbs	190 mm 7.5 inch	385 mm 15.2 inch	365 mm 14.4 inch	490 mm 19.3 inch	275 mm 10.8 inch	280 mm 11.0 inch	755 mm 29.7 inch
80-47232-02	Comfort, 24V	11 kg 24 lbs	190 mm 7.5 inch	385 mm 15.2 inch	365 mm 14.4 inch	490 mm 19.3 inch	275 mm 10.8 inch	280 mm 11.0 inch	755 mm 29.7 inch

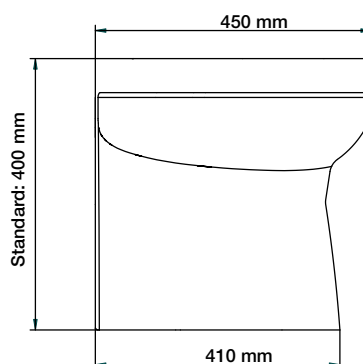
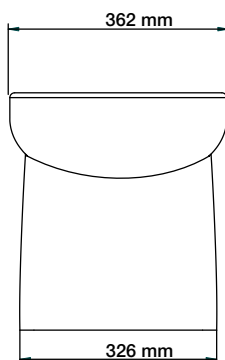
AquaT™ Premium

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



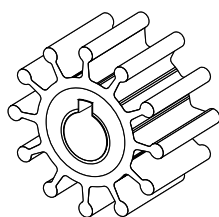
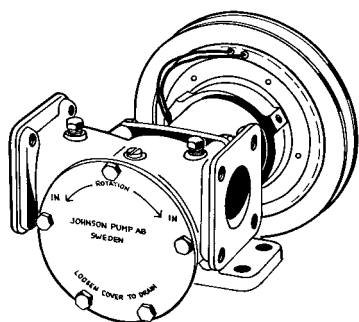
Flush 2.4 Pump

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





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
Connection for vacuum switch:
Shaft: Stainless steel
 The shaft is mounted with permanently lubricated double ball bearings
Seal: Mechanical seal
Cam: Full or reduced
Connection: BSP or NPTF

Clutch: Electro-magnetic 12/24 V DC
Pulley: 2xA or 1xB-groove
Pulley dia: ø178 mm / 7"



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	2" NPT	290 mm – 11.42"	192 mm – 7.56"	157 mm – 6.18"	13.2 kg – 29 lbs
		09-802B					
10-13226-99	F9B-5600 VF	09-814B	2" NPT	290 mm – 11.4"	152 mm – 5.98"	175 mm – 6.88"	13.2 kg – 27 lbs
		09-802B					
10-13178-99	F9B-5600 TSS	09-814B	2" NPT	290 mm – 11.4"	200 mm – 7.87"	151 mm – 5.94"	13.2 kg – 27 lbs
		09-802B					



Extra Heavy Duty, High Flow Electro-Magnetic Clutch Pump

Order No.	Description	Impeller	Connection	Length	Width	Height	Weight
10-13143-98	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 2½" 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 2½" (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
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
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



Vacuum Switch

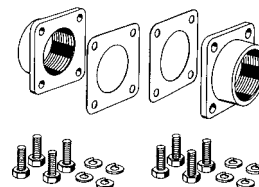
For automatic shut off operation to prevent pump damage

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" NPT
09-46557-01	2" BSP for F9B-3000-VF and F9B-3000-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

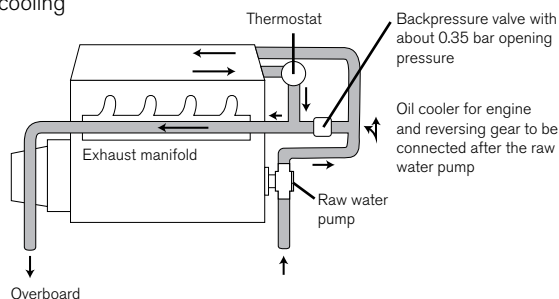
Flexible impeller pumps, F-series, provide an efficient solution to most raw water pumping needs. The primary advantage of a flexible impeller pump is its self-priming ability. As the vanes of the impeller are depressed and rebound, they create their own vacuum drawing fluid into the pump. A dry pump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

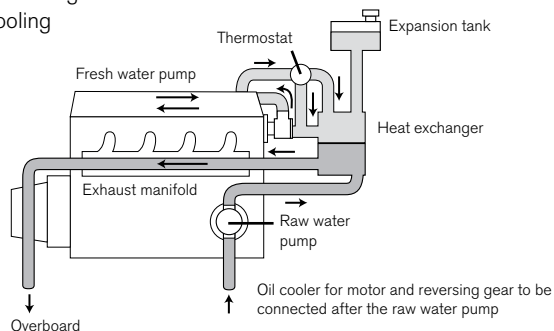
Different types of cooling systems

Direct cooling

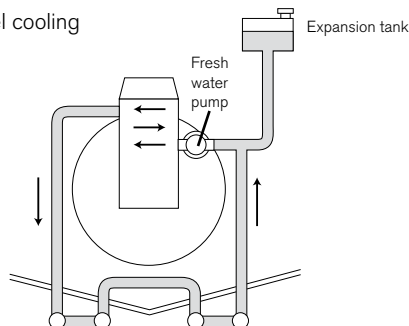


Indirect cooling

Inter cooling

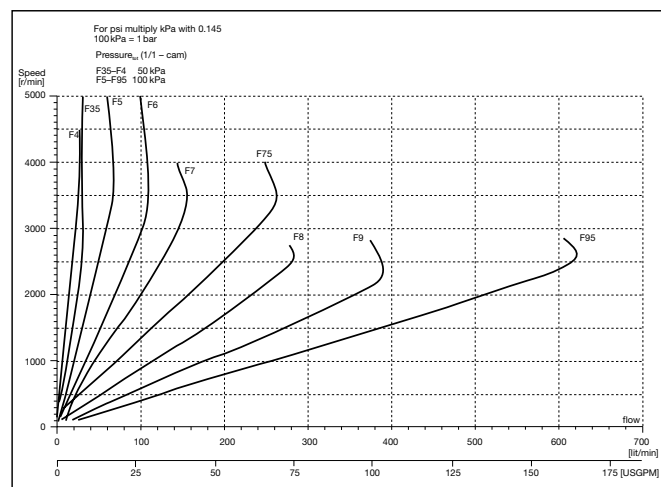


Keel cooling



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. For some engines an adaptor kit for the engine crank shaft pulley is available. 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.



F7B-8
Belt driven pump



F8B-3000
Belt driven pump



F6B-9
Crank shaft pulley mounted



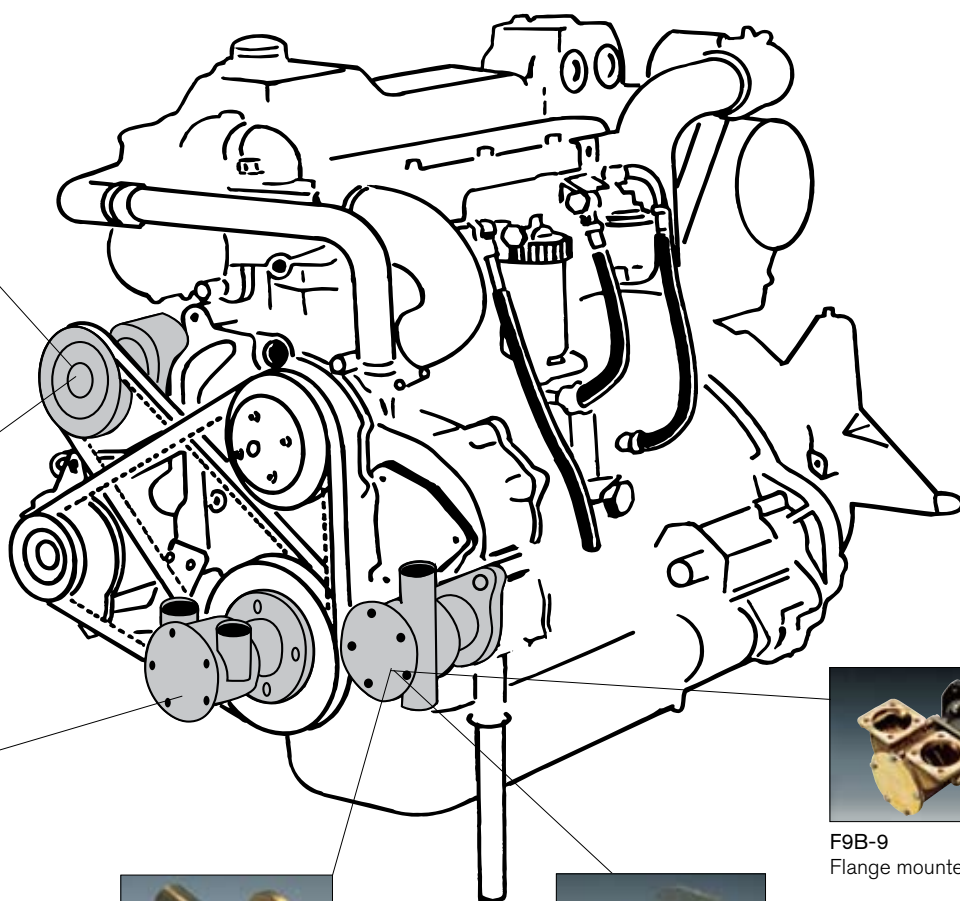
F4B-9
Flange mounted pump



F7B-9
Flange mounted pump



F9B-9
Flange mounted pump



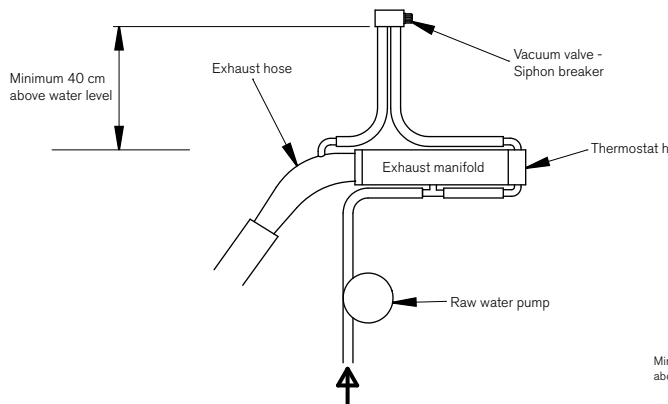


Vacuum valve - Siphon breaker

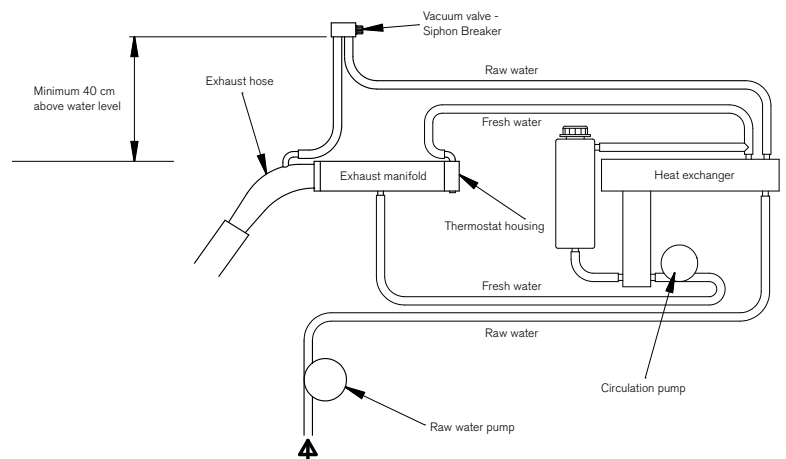
A vacuum valve is a cheap insurance against water intrusion in a engine with expensive repairs as a consequence.

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

Raw Water Cooled Engine



Fresh Water Cooled Engine



Take good care of the cooling system – change to a new impeller every year!

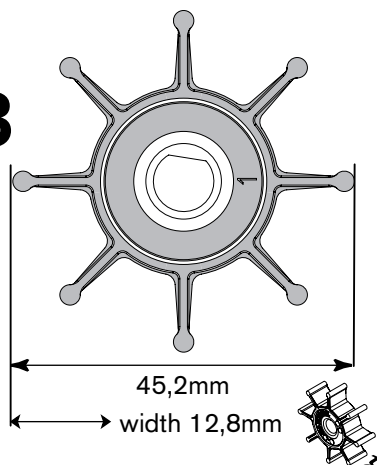
The impeller is a very important security device. Its task is to pump the water through the cooling system of the engine. But remember that the impeller should be replaced every year. And always make sure you get a Johnson Pump Brand original impeller. Then you'll know that it matches your pump exactly.

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

Order No.	Description
09-950-9300	JP Impuller

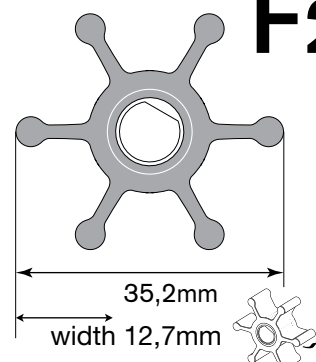
Impeller identification guide, scale 1:1

F3



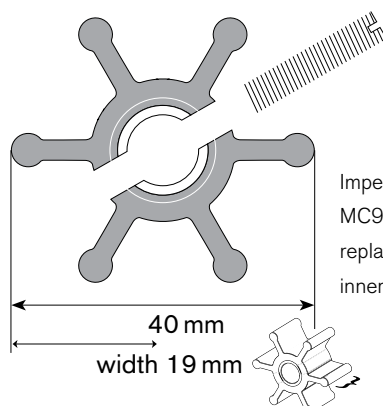
Impeller article number 09-843S-9
Nitrile (oil resistant)

F2



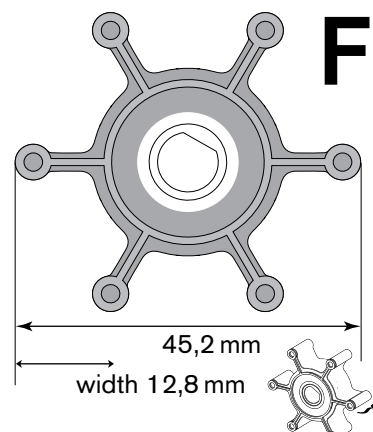
Impeller article number 09-1077B-9
Nitrile (oil resistant)

F35



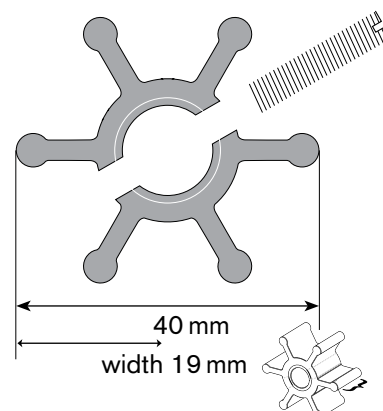
Impeller article number 09-806B-1
MC97 (for cooling)
replaces Jabsco 4528-0001 Europe & USA
inner diameter 9,5 mm

F3



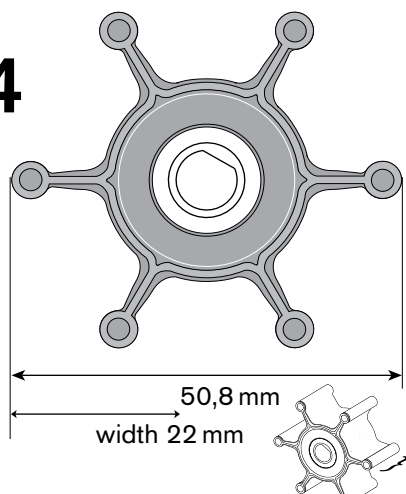
Impeller article number 09-1052S-9
Nitrile (oil resistant)

F35



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

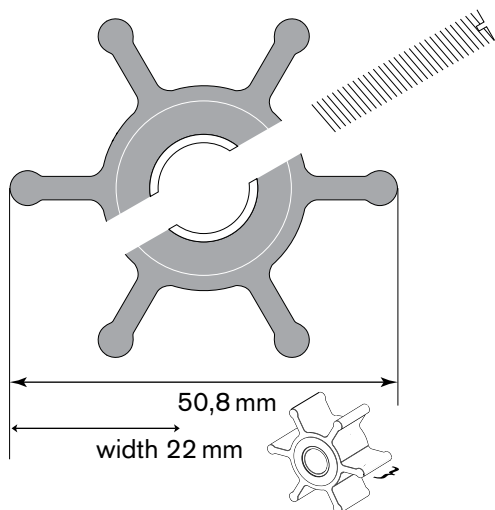
F4



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

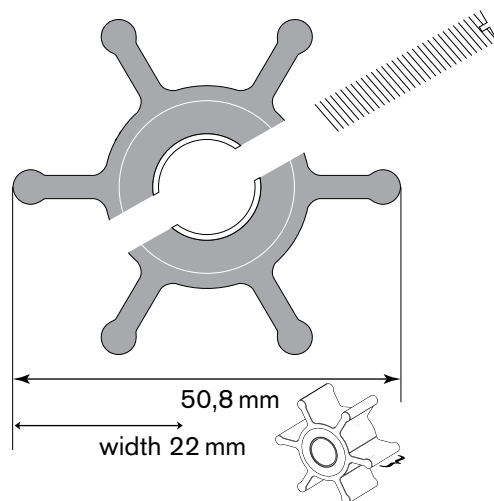
Impeller article number 09-824P-1
MC97 (Ultra Ballast)

F4



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

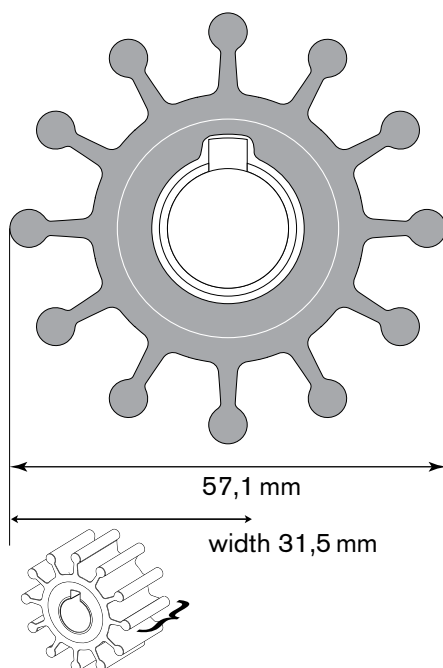
Impeller article number 09-810B-9
Nitrile (oil resistant)
inner diameter 12 mm



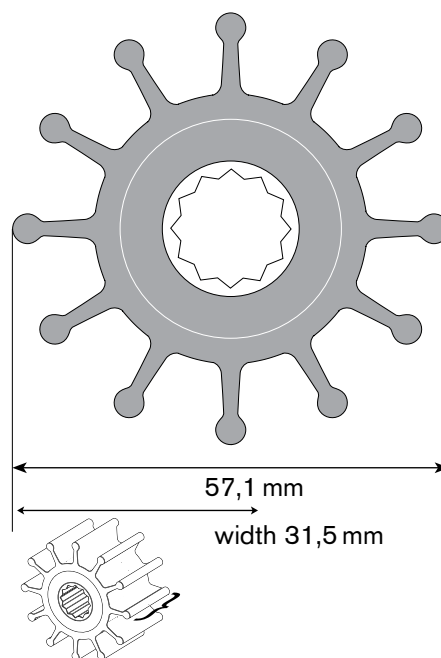
Impeller article number 09-1026B-1
MC97 (for cooling)
replaces Jabsco 673-0001 Europe & USA

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

F5

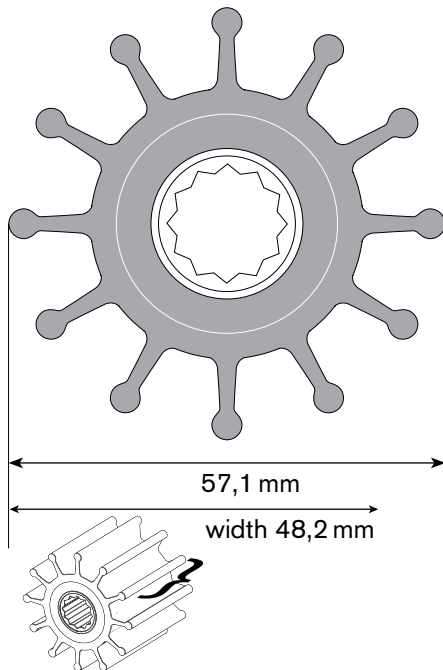


Impeller article number 09-801B
Neoprene (for cooling)
replaces Jabsco 4568-0001 Europe & USA
inner diameter 15,9 mm/key



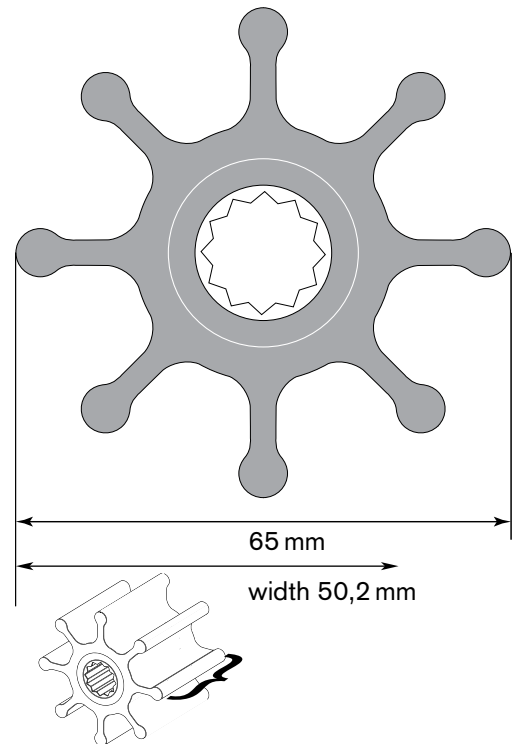
Impeller article number 09-1027B-1
MC97 (for cooling)
replaces Jabsco 1210-0001 Europe & USA
Impeller article number 09-1027B-9
Nitrile (oil resistant)
replaces Jabsco 1210-0003 Europe&USA

F6



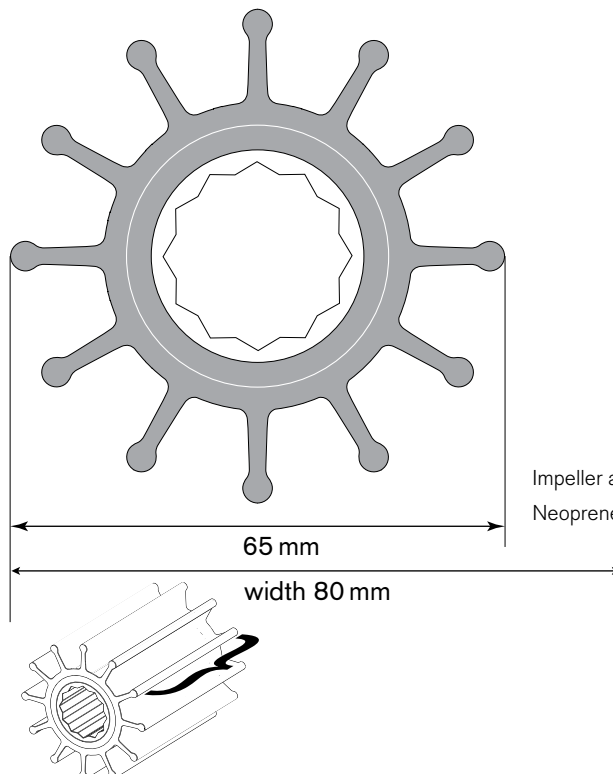
Impeller article number 09-812B-1
MC97 (for cooling)
replaces Jabsco 13554-0001 USA

F7



Impeller article number 09-1028B
Neoprene (for cooling)
replaces Jabsco 17937-0001 Europe&USA
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

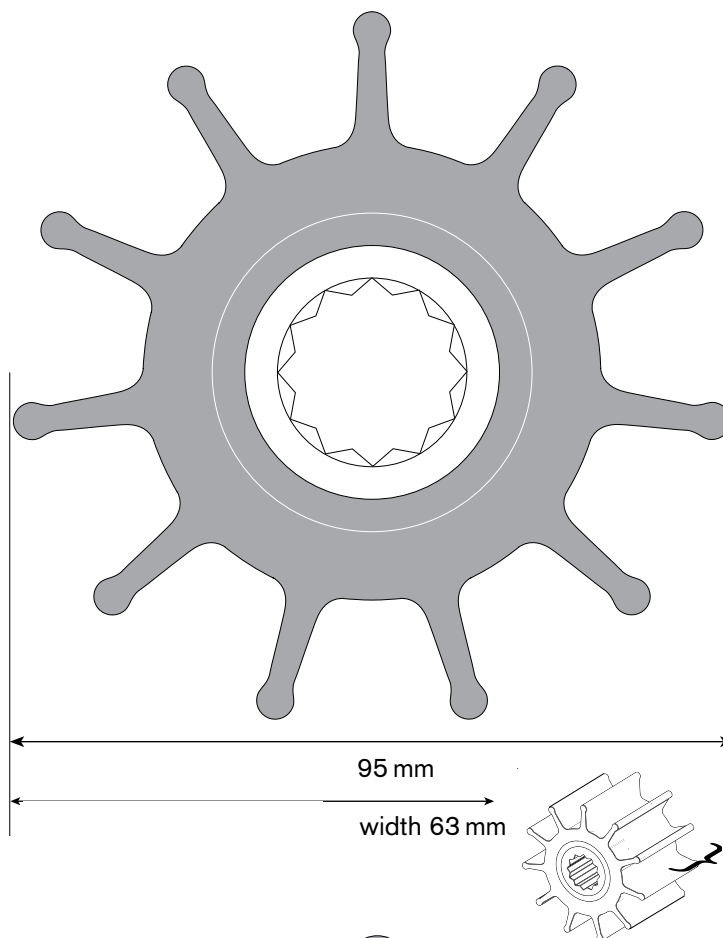
F75



Impeller article number 09-821B
Neoprene (for cooling)

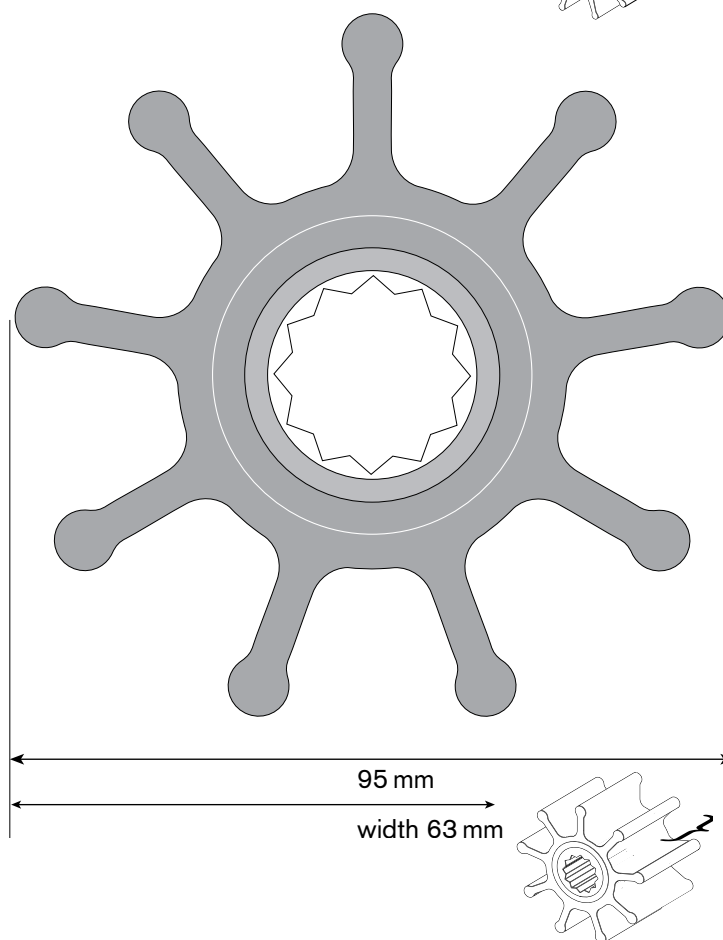
F8

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

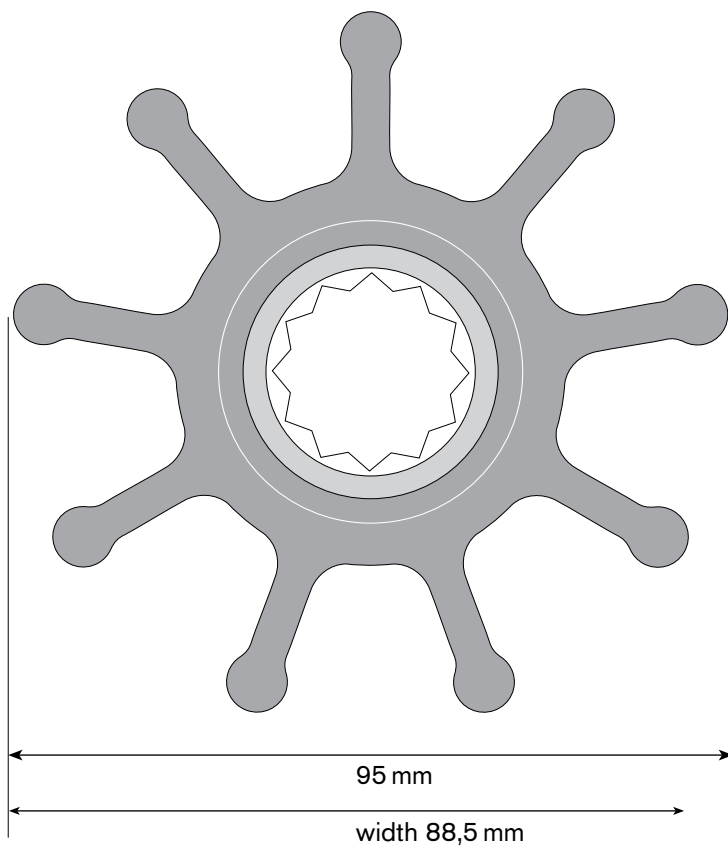


F8

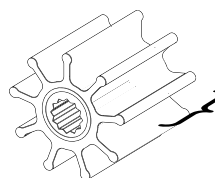
Impeller article number 09-1029B
 Neoprene (for cooling)
 replaces Jabsco 836-0001 Europe &
 17935-001 USA



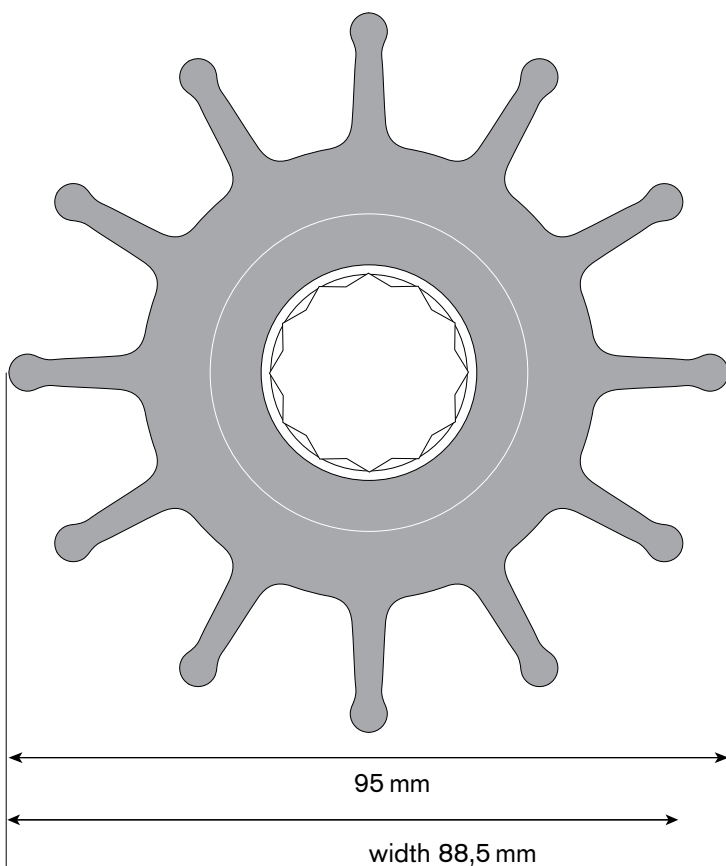
F9



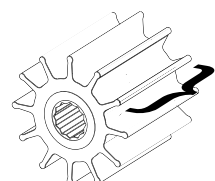
Impeller article number 09-802B
Neoprene (for cooling)
replaces Jabsco 6760-0001 Europe & USA



F9

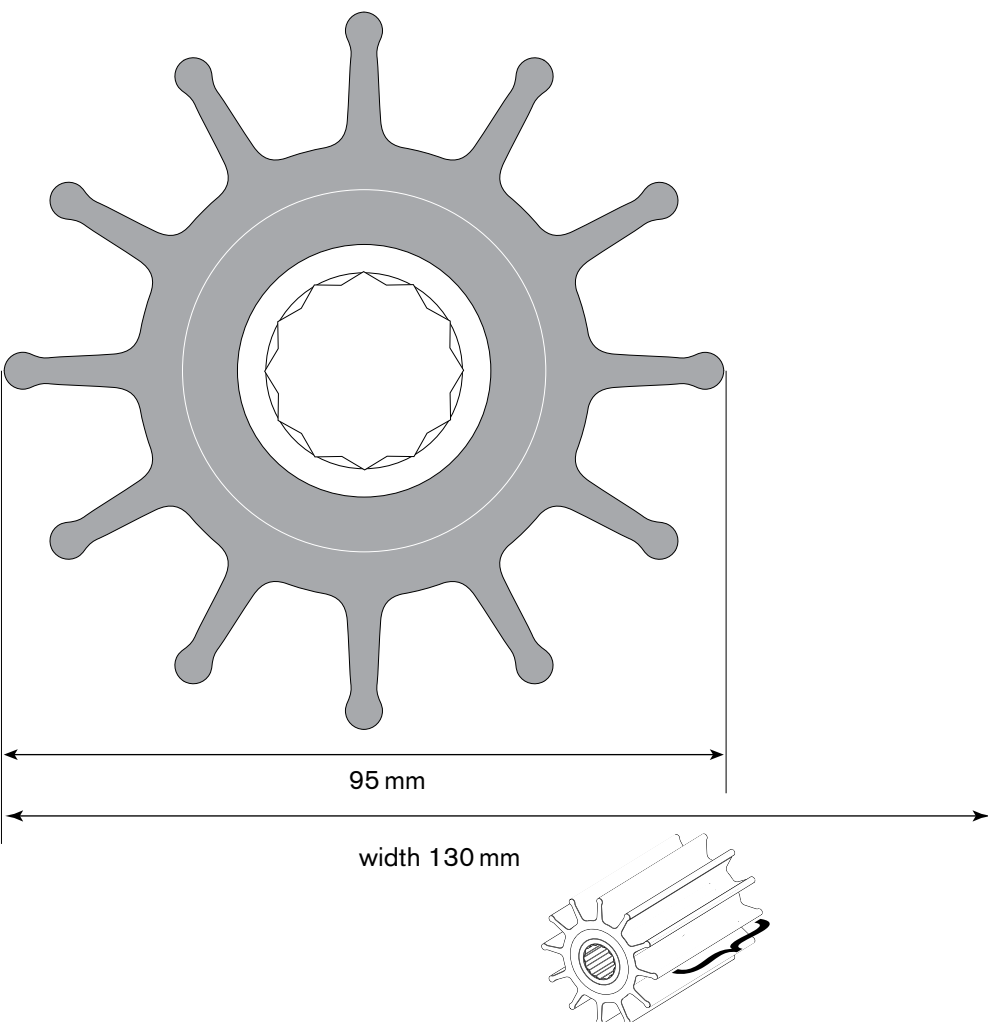


Impeller article number 09-814B
Neoprene (for cooling)
replaces Jabsco 21676-0001 Europe &
17936-0001 USA



F95

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



A Better Life Afloat



JOHNSON PUMP
AN SPX BRAND



PROCESS EQUIPMENT

Your local contact:



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Johnson Pump (Australia) Pty. Ltd. P.O. Box 427, Cannon Hill, QLD. 4170, Australia



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