



SPXFLOW

> Johnson Pump®



Marine Catalogue

Pumps and Accessories
for Marine Applications



Johnson Pump - Marine Catalogue | EN v.1.1 | www.spxflow.com



The background of the slide is a photograph of ocean waves. The top half shows the surface of the water with white foam from breaking waves under a bright, slightly cloudy sky. The bottom half of the slide is a solid dark blue color, which serves as a backdrop for the company logo and text.

SPXFLOW

Based in Charlotte, North Carolina, SPX FLOW, Inc. (NYSE:FLOW) innovates with customers to help feed and enhance the world by designing, delivering and servicing high value solutions at the heart of growing and sustaining our diverse communities. The company's product offering is concentrated in rotating, actuating and hydraulic technologies, as well as turn-key systems, into the food and beverage, industrial and power and energy end markets. SPX FLOW has approximately \$2 billion in annual revenues with operations in more than 30 countries and sales in more than 150 countries. To learn more about SPX FLOW, please visit www.spxflow.com.

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50 **1968**
YEARS **2018** **> Johnson Pump®**

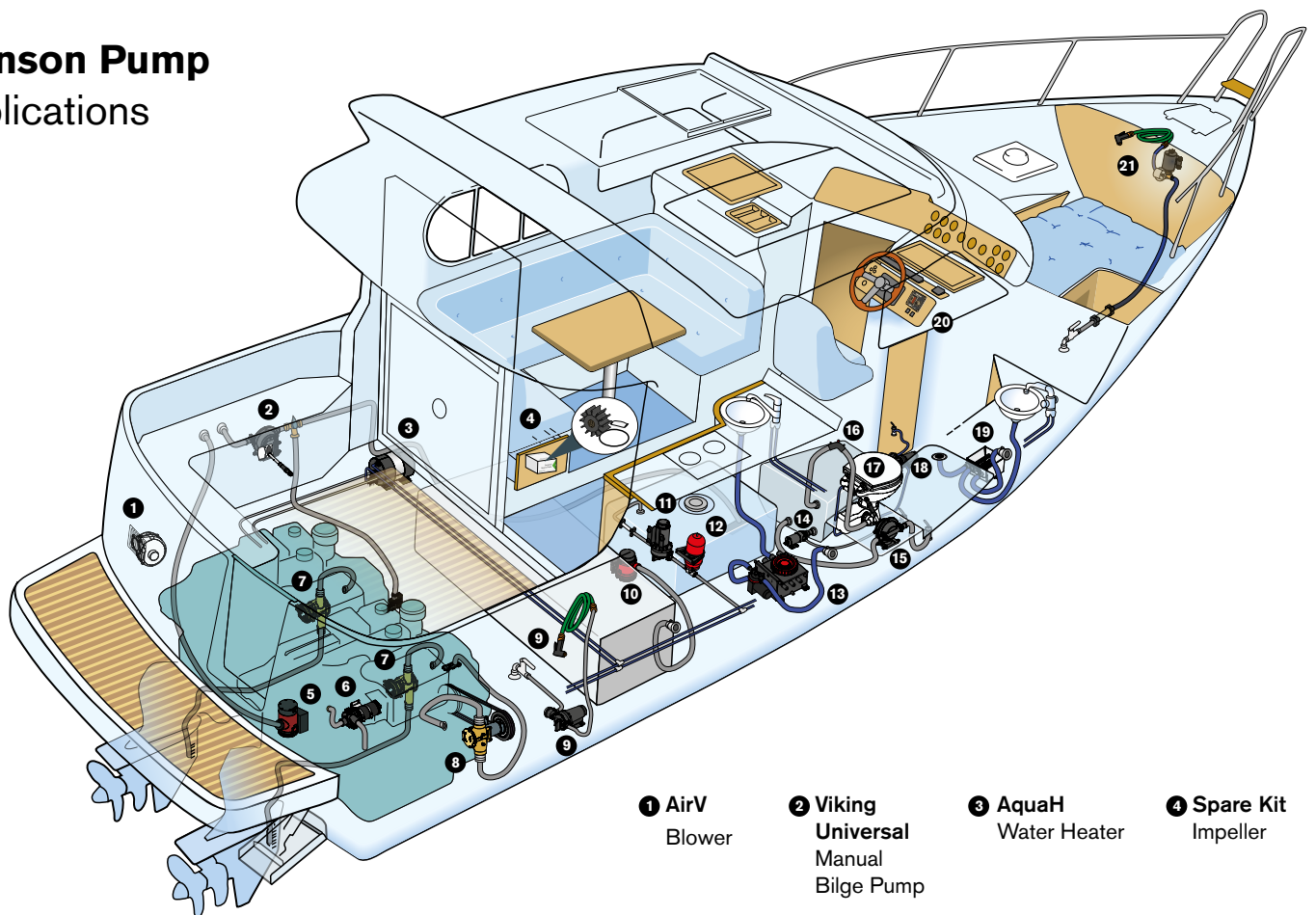
SPX FLOW Johnson Pump marine brand is one of the world's leading manufacturers of pumps for marine use. With 50 years of pump experience, we know the industry well.

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

Reliability on board since 1968.



Johnson Pump Applications



- | | | | |
|--|--|--|---|
| 1 AirV
Blower | 2 Viking
Universal
Manual
Bilge Pump | 3 AquaH
Water Heater | 4 Spare Kit
Impeller |
| 5 2200 GPH
+ Switch
Heavy Duty
Bilge Pump with
Electro-Magnetic
Float Switch | 6 CM90
Circulation
Pump | 7 Engine
Cooling
Customized
Engine Cooling
Pump | 8 F9B-5600
Extra Heavy Duty
Electro-Magnetic
Clutch Pump |
| 9 Aqua Jet
Wash Down 5.2
Wash Down
Pump Kit | 10 1600 GPH
+ Switch
Heavy Duty
Bilge Pump with
Ultima Switch | 11 Aqua Jet
WPS 4.0
Water
Pressure
System | 12 Accumulator
Tank |
| 13 Grey Water
Tank + Viking
Power 16
Waste Water
Tank & Pump
Solution | 14 TA3P10-19
Macerator | 15 Viking
Universal
Manual
Bilge Pump | 16 Vented
Loop |
| 17 AquaT
Silent Electric
Comfort
Marine Toilet | 18 Flush
Pump 3.5
For Silent
Electric
Toilet | 19 Shower
Sump
MultiPorts
Drain System | 20 Bilge Pump
Control +
Bilge Alert
Switch Panel for
bilge pumping +
High Water Alarm |
| | | | 21 F3B-19
DC Driven
Flexible
Impeller Pump |



Water Pressure Systems and Wash Down Pumps

Photo: X-Yachts



The Aqua Jet five-chamber diaphragm pump provides excellent water pressure onboard. This versatile pump also serves for deck wash solutions on both small and medium sized leisure and commercial boats, as well as for mobile homes, campers and summer cottages.

Quiet and pulsation-free even at low speeds. Efficient and compact, Aqua Jet pumps are particularly suitable where low amperage and sound levels in relation to water flow are placed at a premium - such as in shower and galley applications. Integrated pressure switch turns pump on and off automatically when tap is opened and closed.

Operates in fresh or sea water. Self-priming.



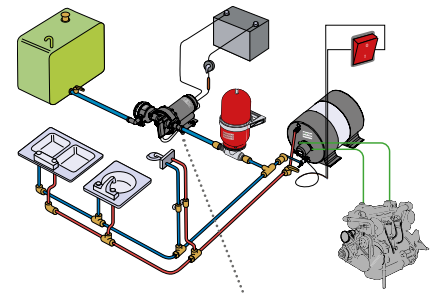
EN55014-1
ISO8846
ISO10133

Aqua Jet Water Pressure Systems

The five chamber Aqua Jet Water Pressure Pump "WPS" series provides a reliable heart for small boat and recreational vehicle water pressure systems. Compared to conventional three or four-chamber diaphragm pumps, the Aqua Jet demonstrates dramatically lower noise and water pulsation characteristics.

It is recommended to install the WPS-pumps with an accumulator tank. Always use a PUMProtector inlet strainer before the pump intake.

Fresh Water Handling



Aqua Jet WPS Water Pressure Pump



AQUA JET WPS 2.4

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

Part No.	Description	Capacity
10-24604-03	Aqua Jet WPS 2.4 12V	9 l/min – 2.4 GPM
10-24604-04	Aqua Jet WPS 2.4 24V	9 l/min – 2.4 GPM

Pressure Cut Off*	Fuse Size	Connection**
2.8 bar – 41 psi	10 A	3/8" BSP / hose 1/2", 1/2" BSP 3/4" hose
2.8 bar – 41 psi	5 A	3/8" BSP / hose 1/2", 1/2" BSP 3/4" hose



AQUA JET WPS 2.9

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

Part No.	Description	Capacity
10-13405-03	Aqua Jet WPS 2.9 12V	11 l/min – 2.9 GPM
10-13405-04	Aqua Jet WPS 2.9 24V	11 l/min – 2.9 GPM

Pressure Cut Off*	Fuse Size	Connection**
2.8 bar – 41 psi	10 A	3/8" BSP / hose 1/2", 1/2" BSP 3/4" hose
2.8 bar – 41 psi	5 A	3/8" BSP / hose 1/2", 1/2" BSP 3/4" hose



AQUA JET WPS 3.5

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

Part No.	Description	Capacity
10-13395-03	Aqua Jet WPS 3.5 12V	13 l/min / 3.5 GPM
10-13395-04	Aqua Jet WPS 3.5 24V	13 l/min / 3.5 GPM

Pressure Cut Off*	Fuse Size	Connection**
2.8 bar – 41 psi	10 A	3/8" BSP / hose 1/2", 1/2" BSP 3/4" hose
2.8 bar – 41 psi	5 A	3/8" BSP / hose 1/2", 1/2" BSP 3/4" hose

Aqua Jet 3.5 fitted with a built-in pulsation dampening by-pass valve



AQUA JET WPS 4.0

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

Part No.	Description	Capacity
10-13406-03	Aqua Jet WPS 4.0 12V	15 l/min / 4.0 GPM
10-13406-04	Aqua Jet WPS 4.0 24V	15 l/min / 4.0 GPM

Pressure Cut Off*	Fuse Size	Connection**
2.8 bar – 41 psi	10 A	3/8" BSP / hose 1/2", 1/2" BSP 3/4" hose
2.8 bar – 41 psi	5 A	3/8" BSP / hose 1/2", 1/2" BSP 3/4" hose



AQUA JET WPS 5.2

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

Part No.	Description	Capacity
10-13406-07	Aqua Jet WPS 5.2 12V	20 l/min/ 5.2 GPM
10-13406-08	Aqua Jet WPS 5.2 24V	20 l/min/ 5.2 GPM

Pressure Cut Off*	Fuse Size	Connection**
2.8 bar – 41 psi	15 A	3/8" BSP / hose 1/2", 1/2" BSP 3/4" hose
2.8 bar – 41 psi	8 A	3/8" BSP / hose 1/2", 1/2" BSP 3/4" hose

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

** NPT-connection available on request

ADDITIONAL ADD-ON'S FOR AQUA JET WPS



•INLET STRAINER

Part No. 09-24653-01
For more information see page 11.

•ACCUMULATOR TANK

Part No. 09-46839-01 and 09-46839-02
For more information see page 12.





AQUA JET FLOW MASTER WPS 5.0 – VARIABLE FLOW

The whisper quiet self-priming Aqua Jet Flow Master WPS 5.0 pump incorporates state-of-the-art electronics to automatically control pump speed. The digital controller adjusts water flow as the demand is increased and decreased while maintaining a very smooth flow. The unique variable flow feature of the Aqua Jet Flow Master WPS 5.0 pump makes it a smart choice for better flow, lower noise and less amp draw. PUMProtector Inlet Strainer included. Recommended to install with an accumulator tank.

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

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

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

** NPT-connection available on request



Install Water Pressure Systems
for perfect water pressure in
recreational vehicles, leisure boats,
trains, buses and summer homes.



Aqua Jet Uno WPS



Aqua Jet Duo WPS

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

Medium capacity unit with a single Aqua Jet WPS capacity 13 l/min or 20 l/min fixed on a base with PUMProtector Inlet Strainer and a 2 litre pre-pressurized Accumulator Tank.

Part No.	Description	Capacity	Pressure Cut Off*	Fuse Size	Connection**
10-13408-01	Aqua Jet Uno WPS 3.5 GPM 12V	13 l/min – 3.5 GPM	2.8 bar – 41 psi	10 A	3/4" hose
10-13408-02	Aqua Jet Uno WPS 3.5 GPM 24V	13 l/min – 3.5 GPM	2.8 bar – 41 psi	5 A	3/4" hose
10-13408-03	Aqua Jet Uno WPS 5.2 GPM 12V	20 l/min – 5.2 GPM	2.8 bar – 41 psi	15 A	3/4" hose
10-13408-04	Aqua Jet Uno WPS 5.2 GPM 24V	20 l/min – 5.2 GPM	2.8 bar – 41 psi	8 A	3/4" hose
09-46781-01	Switch Complete WPS 41 psi		41 psi		

AQUA JET DUO WPS 10.4 – COMPACT ALL IN ONE UNIT

High capacity unit with two parallel-connected Aqua Jet WPS capacity 40 l/min fixed on a base with PUMProtector Inlet Strainers and a 2 litre pre-pressurized Accumulator Tank.

Part No.	Description	Capacity	Pressure Cut Off*	Fuse Size	Connection**
10-13409-01	Aqua Jet Duo WPS 10.4 GPM 12V	40 l/min – 10.4 GPM	2.8 bar – 41 psi	25 A	3/4" hose
10-13409-02	Aqua Jet Duo WPS 10.4 GPM 24V	40 l/min – 10.4 GPM	2.8 bar – 41 psi	15 A	3/4" hose
09-46781-01	Switch Complete WPS 41 psi		41 psi		
09-46781-03	Switch Complete WPS 30 psi		30 psi		

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

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

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

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

** NPT-connection available on request

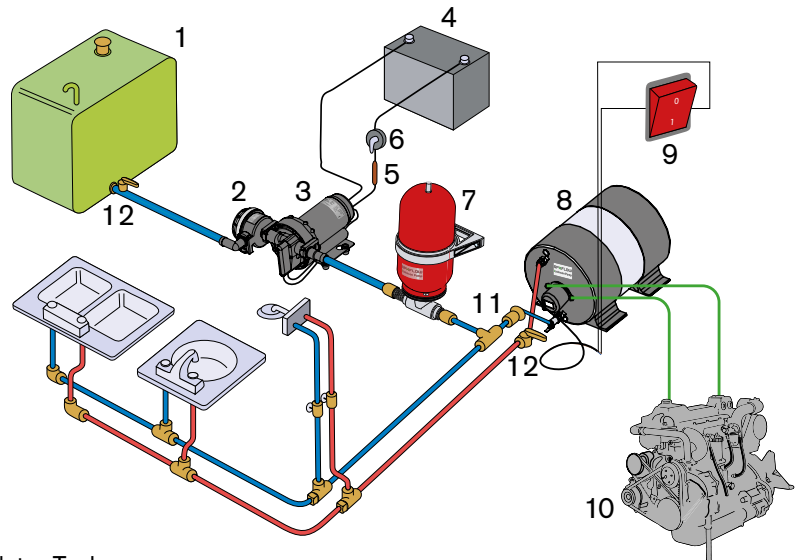


Aqua Jet Uno-Max WPS

FRESH WATER HANDLING

Components included in a complete Water Pressure Systems:

- | | |
|--|--------------------------|
| 1. Water Tank | 7. Accumulator Tank |
| 2. PUMProtector Inlet Strainer | 8. AquaH Water Heater |
| 3. Aqua Jet Water Pressure System Pump | 9. ON/OFF Bipolar Switch |
| 4. Battery | 10. Motor |
| 5. Fuse | 11. Check Valve |
| 6. Switch | 12. Shut-off Valve |

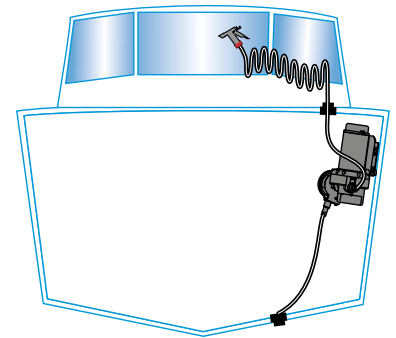


Aqua Jet Wash Down (WD) Pump Systems

The quiet and pulsation-free Aqua Jet five-chamber diaphragm wash down pumps provide the perfect wash down solution for cleaning recreational equipment.

With a higher pressure of up to 5 bar, clean-up is faster and easier than ever before. Complete with spray pistol, PUMProtector inlet strainer and hose connections for 1/2" hose.

Both BSP and NPT connections included.



AQUA JET WASH DOWN PUMP 2.9, 3.5 AND 5.2 GPM

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

Dimensions See Aqua Jet WPS 2.9, 3.5 and 5.2
Motor Aqua Jet WD 2.9 - 90 W, 12/24V DC
 Aqua Jet WD 3.5 - 120 W, 12/24V DC
 Aqua Jet WD 5.2 - 185 W, 12/24V DC (with built-in thermal protection)

Body PA/PPA
Valves Nitrile
Diaphragm Santoprene



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

Accessories

for Water Pressure Systems and Wash Down Pumps, see page 12.



Aqua Jet Wash Down Pump Kits

Discover the different wash down kits from SPX FLOW Johnson Pump.

The kits are equipped with a high capacity Aqua Jet WPS (3.5 or 5.2), PUMProtector inlet strainer, 2-way panel switch, spray nozzle and the relevant connections – all in one package.



AQUA JET WASH DOWN 3.5 GPM PUMP KIT

13 l/min (3.5 GPM) wash down kit conveniently includes a high capacity Aqua Jet WD 3.5, 5 bar (70 psi), PUMProtector inlet strainer, spray nozzle, 7.5 meters (25') of coiled wash down hose, 2-way panel switch – all in one package.

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



AQUA JET WASH DOWN 5.2 GPM PUMP KIT

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 a 2-way panel switch – all in one package.

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



AQUA JET WASH DOWN 5.2 GPM / 500 GPH LIVEWELL PUMP KIT

A wash down kit including a high capacity Aqua Jet Wash Down 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.

Part No.	Description
32-64634	Aqua Jet WD 5.2 GPM/500 GPH 12V Livewell



Enjoy fishing even more!
Install Wash Down Pumps for efficient cleaning of recreational equipment and boat decks.

PUMProtector Strainer

The PUMProtector Universal and Inlet Strainers prevent debris and other particles from damaging the pump or passing through the system to the final outlet. Both of these strainers feature transparent covers for simple inspection, a wide variety of KlickTite port connectors for simple installation and removal and high quality materials for simple maintenance.

The design and connectors make it possible to remove the entire unit for thorough cleaning wherever it is most convenient. It is recommended to use 40 mesh for water pressure and wash down pumps and 20 mesh for general purpose pumps.

UNIVERSAL STRAINER

The filter is recommended for installation together with a Water Pressure System (WPS) pump to protect the pump from debris, etc. Mounted between water tank and pump. The filter is easy to disassemble for cleaning.

Materials Strainer – Polyamide 66, black
Strainer Cover – Acrylic, clear (Part No. 09-36012)
Screen – Stainless steel, 20 and 40 mesh
O-rings – Silicone and EPDM

Diameter 80 mm / 3.15"
Height 60 mm / 2.35"
Weight 0.15 kg / 0.33 lbs
Mesh size 20 or 40

Part No.	Description	Mesh	Max Liquid Temp.	Max Temp. for Drinking Water	KlickTite Connector
09-24652-01	PUMProtector Universal Strainer	40	+50°C – +120°F	+30°C – +85°F	2 x 1/2" hose / 3/8" BSP, 2 x 3/4" hose / 1/2" BSP
09-24652-03	PUMProtector Universal Strainer	20	+50°C – +120°F	+30°C – +85°F	2 x 1/2" hose / 3/8" BSP, 2 x 3/4" hose / 1/2" BSP
09-36012	Strainer Cover (O-ring not included)				



INLET STRAINER

The filter is recommended for installation together with a Water Pressure System (WPS) pump to protect the pump from debris, etc. Mounted between water tank and pump. The filter is easy to disassemble for cleaning.

Materials Strainer – Polyamide 66, black
Strainer Cover – Acrylic, clear (Part No. 09-36012)
Screen – Stainless steel, 20 and 40 mesh
O-rings – Silicone and EPDM

Diameter 80 mm / 3.15"
Height 60 mm / 2.35"
Weight 0.15 kg / 0.33 lbs
Mesh size 20 or 40

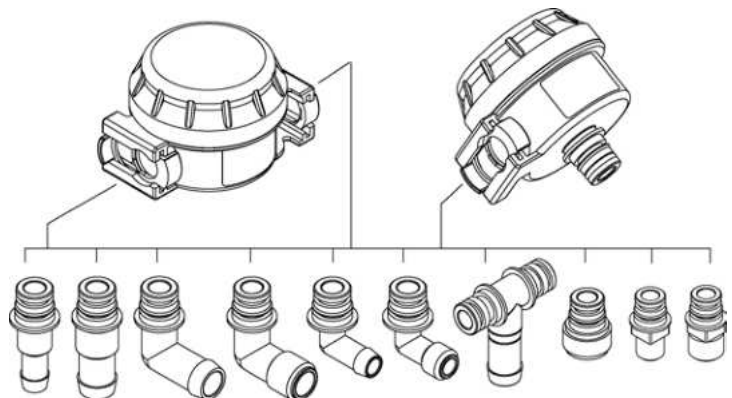
Part No.	Description	Mesh	Max Liquid Temp.	Max Temp. for Drinking Water	KlickTite Connector
09-24653-01	PUMProtector Inlet Strainer	40	+50°C – +120°F	+30°C – +85°F	1 x 1/2" hose / 3/8" BSP, 1 x 3/4" hose / 1/2" BSP
09-36012	Strainer Cover (O-ring not included)				



KLICKTITE - PORT CONNECTORS

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

Part No.	Ps/Package	KlickTite Connector
09-46783	2	2 x 1/2" hose and 3/8" BSP
09-46784	2	2 x 3/4" hose and 1/2" BSP
09-46939	2	2 x 90°, 3/4" hose
09-47087	2	2 x 90°, 1/2" BSP
09-46938	2	2 x 90°, 1/2" hose
09-47026	2	2 x 90°, 3/8" BSP
09-47096	2	2 x 3/8" BSP
09-47098	2	2 x 1/2" BSP
09-47092	1	1 x T-connection, 3/4" barb
09-47094	2	Garden Hose Adapter



INLINE STRAINER

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

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

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



Accessories - Water Pressure Systems and Wash Down Pumps



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. The benefit is 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.
Height	315 mm / 12.4"
Diameter	160 mm / 6.3"
Weight	1,2 kg / 2.7 lbs

Part No.	Description	Connection
09-46839-01	Accumulator Tank 2 lit 15 mm	1/2" hose connection
09-46839-02	Accumulator Tank 2 lit 19 mm	3/4" hose connection



09-10616

Part No.	Description
09-10616	Bulk head fitting 3/4" hose
09-60615	Black hose Bulk 7.5 m (25ft)
09-46781-01	Switch Complete 2.8 bar (40.6 psi)
09-46781-02	Switch Complete 5.0 bar (72.5 psi)
09-46781-03	Switch Complete 2.1 bar (30 psi)
34-82004	Wash Down Control Panel 12V 2-way ON OFF



09-60615



09-46781-01



34-82004



32-61121BSP

DECK WASH - QUICK CONNECT FITTING

- Flush Mount
- Connects and disconnects under full pressure
- Positive lock bayonet connector
- Double viton o-ring seals
- Large flow capacity
- 316 stainless steel
- Nylon 66 connections

Part No.	Description
32-61121BSP	Deck Wash Quick Connect



Submersible Bilge Pumps and Switches

Photo: Linder Aluminium Boats



The submersible pumps from SPX FLOW Johnson Pump Marine can handle most bilge pump applications. Heavy duty motors with stainless steel (SS2343/1.4436) shafts and tough thermoplastic bodies provide for a long pump life.

With an automatic switch installed, the pump automatically starts when there is water in the bilge and shuts off when it is dry.



EN55014-1
ISO8846
ISO8849
ISO10133

Heavy Duty Submersible Bilge Pumps

Designed to meet and exceed the tough demands of commercial and recreational duty. These pumps have a liquid cooled, 12-pole motor with double ball bearings for extended service life. The 1600 and 2200 GPH pumps are also available with a pre-wired Ultima Switch.



HEAVY DUTY BILGE PUMP 1600-4000 GPH - SUBMERSIBLE BILGE PUMP

1600 GPH

Shaft	SS2343/1.4436
Wire size	16 GA (1.3 mm ²)
Wire length	1.8 m – 6 ft
Max Ø	108 mm – 4.25"
Max height	149 mm – 5.86"
Weight	1.3 kg – 2.75 lbs

2200 GPH

Shaft	SS2343/1.4436
Wire size	16 GA (1.3 mm ²)
Wire length	1.8 m – 6 ft
Max Ø	108 mm – 4.25"
Max height	177 mm – 7"
Weight	2.25 kg – 4.96 lbs

4000 GPH

Shaft	SS2343/1.4436
Wire size	14 GA (2 mm ²)
Wire length	1.8 m – 6 ft
Max Ø	121 mm – 4.8"
Max height	216 mm – 8.5"
Weight	2.45 kg – 5.40 lbs

The 2200 GPH motor is sealed off by a mechanical seal design, while the 1600 GPH model has a lipseal. The 4000 GPH features a robust motor design, mechanical shaft seal, high impact ABS plastic, generous wire length and unique threaded port design.

The impeller is carefully designed and tested to maximize head and flow. The universal base plate and a choice of two different ports sizes makes for a simple installation. Removable check valve included.

Part No.	Description	Capacity 3 ft (0.9m) head (13.6V/27.2V)	Capacity straight (13.6V/27.2V)	Amp	Fuse Size	Connection
32-1600-01	Heavy Duty Bilge Pump 1600 GPH 12V	98 l/min – 1550 GPH	100 l/min – 1600 GPH	7 A	10 A	1 1/8" (28mm) and 1 1/4" (32mm)
32-1600-02	Heavy Duty Bilge Pump 1600 GPH 24V	98 l/min – 1550 GPH	100 l/min – 1600 GPH	3.5 A	6 A	1 1/8" (28mm) and 1 1/4" (32mm)
32-2200-01	Heavy Duty Bilge Pump 2200 GPH 12V	120 l/min – 1900 GPH	130 l/min – 2060 GPH	7.5 A	12 A	1 1/8" (28mm) and 1 1/4" (32mm)
32-2200-02	Heavy Duty Bilge Pump 2200 GPH 24V	120 l/min – 1900 GPH	130 l/min – 2060 GPH	4.5 A	6 A	1 1/8" (28mm) and 1 1/4" (32mm)
32-4000-01	Heavy Duty Bilge Pump 4000 GPH 12V	164 l/min – 2600 GPH	252 l/min – 4000 GPH	15 A	25 A	1 1/2" (38mm) and 2" (50mm)
32-4000-02	Heavy Duty Bilge Pump 4000 GPH 24V	164 l/min – 2600 GPH	252 l/min – 4000 GPH	7.5 A	15 A	1 1/2" (38mm) and 2" (50mm)



1600 GPH
32-1600UC-01(12V)
32-1600UC-02 (24V)



2200 GPH
32-2200UC-01 (12V)
32-2200UC-01 (24V)

HEAVY DUTY BILGE PUMP COMBO 1600-2200 GPH - AUTOMATIC SUBMERSIBLE BILGE PUMP

Pre-wired Heavy Duty Bilge Pumps with an Ultima Switch.

Part No.	Description	Capacity 3ft (0.9m) head (13.6V/27.2V)	Capacity straight (13.6V/27.2V)	Amp	Fuse Size	Connection
32-1600UC-01	Heavy Duty Bilge Pump 1600 GPH, Ultima 12V (with Ultima Switch)	98 l/min – 1550 GPH	100 l/min – 1600 GPH	7 A	10 A	1 1/8" (28mm) and 1 1/4" (32mm)
32-1600UC-02	Heavy Duty Bilge Pump 1600 GPH, Ultima 24V (with Ultima Switch)	98 l/min – 1550 GPH	100 l/min – 1600 GPH	3.5 A	6 A	1 1/8" (28mm) and 1 1/4" (32mm)
32-2200UC-01	Heavy Duty Bilge Pump 2200 GPH, Ultima 12V (with Ultima Switch)	120 l/min – 1900 GPH	130 l/min – 2060 GPH	7.5 A	12 A	1 1/8" (28mm) and 1 1/4" (32mm)
32-2200UC-02	Heavy Duty Bilge Pump 2200 GPH, Ultima 24V (with Ultima Switch)	120 l/min – 1900 GPH	130 l/min – 2060 GPH	4.5 A	6 A	1 1/8" (28mm) and 1 1/4" (32mm)

DISCOVER OUR RANGE OF HEAVY DUTY BILGE PUMPS



VIKING POWER 16

Part No. 10-13350-03
For more information see page 33.

F3B-19

Part No. 10-24516-01
For more information see page 25.



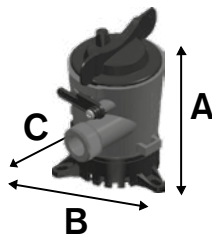
Submersible Cartridge Bilge Pumps

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

CARTRIDGE - SUBMERSIBLE BILGE PUMP

Our Cartridge Pumps incorporate some of the most advanced features in the industry, features developed from service in a wide variety of uses including racing, cruising, sport fishing, and demanding commercial duties. The 500 GPH, 750 GPH, and 1000 GPH pumps come with easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by over-tightened hose clamps. The pumps are delivered with both straight and a 90° smooth elbow Dura-Ports, as well as a removable check valve.

Body	Thermoplastic
Shaft seal	Lip seal
Motor Shaft	Stainless steel
Wire Size	16 GA (1.3mm ²)
Height (A)	4.41" (112 mm)
Width (B)	3.46" (88 mm)
Width (C)	3.15" (80 mm)



500 GPH – 1000 GPH

Weight 0.27 kg – 9.6 oz.

1250 GPH

Weight 0.32 kg – 10.4 oz.

Part No.	Description	Capacity 3 ft (0.9m) head (13.6V/27.2V)	Capacity straight (13.6V/27.2V)	Amp	Fuse Size	Connection
32-1450-01	Cartridge Bilge Pump 500 GPH 12V	33 l/min - 525 GPH	40 l/min - 630 GPH	2.5 A	5 A	3/4" (19mm)
32-1550-01	Cartridge Bilge Pump 750 GPH 12V	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4" (19mm)
32-1650-01	Cartridge Bilge Pump 1000 GPH 12V	50 l/min - 800 GPH	63 l/min - 1000 GPH	3.2 A	5 A	3/4" (19mm)
32-1650-01-24	Cartridge Bilge Pump 1000 GPH 24V	50 l/min - 800 GPH	63 l/min - 1000 GPH	2 A	3 A	3/4" (19mm)
32-1750-01*	Cartridge Bilge Pump 1250 GPH 12V	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1 1/8" (28mm)
32-1750-01-24*	Cartridge Bilge Pump 1250 GPH 24V	60 l/min - 952 GPH	73 l/min - 1150 GPH	2 A	3 A	1 1/8" (28mm)

* Does not include Dura-Port connection

Cartridge Bilge Pumps

encompass four compact pumps, each for a different capacity need. All of them use remarkably little electricity for the amount of water they pump.

Their motors also provide increased service life, thanks in part to an ingenious solution which circulates the discharge water around the motor for cooling.



500, 750 & 1000 GPH

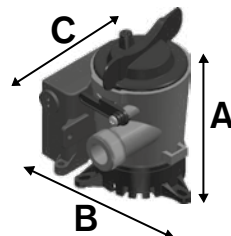


1250 GPH*

ULTIMA COMBO - AUTOMATIC SUBMERSIBLE BILGE PUMP

Ultima Combo bilge pump is equipped with the non-clogging electronic switch *Ultima Switch* for automatic operation. The 500 GPH -1000 GPH pumps have easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by overtightened hose clamps. The pumps are delivered with both straight and a 90° smooth elbow Dura-Ports, as well as a removable check valve.

Body	Thermoplastic
Shaft seal	Lip seal
Motor Shaft	Stainless steel
Wire size	16 GA (1.3 mm ²)
Height (A)	4.41" (112 mm)
Width (B)	4.25" (108 mm)
Width (C)	3.35" (85 mm)



500 GPH – 1000 GPH

Weight 0.40 kg – 14.4 oz.

1250 GPH

Weight 0.45 kg – 16 oz.

Part No.	Description	Capacity 3 ft (0.9m) head (13.6V/27.2V)	Capacity straight (13.6V/27.2V)	Amp	Fuse Size	Connection
32-1450UC-01	Ultima Combo 500 GPH 12V	33 l/min - 525 GPH	40 l/min - 630 GPH	2.5 A	5 A	3/4" (19mm)
32-1550UC-01	Ultima Combo 750 GPH 12V	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4" (19mm)
32-1650UC-01	Ultima Combo 1000 GPH 12V	50 l/min - 800 GPH	63 l/min - 1000 GPH	3.2 A	5 A	3/4" (19mm)
32-1650UC-01-24	Ultima Combo 1000 GPH 24V	50 l/min - 800 GPH	63 l/min - 1000 GPH	2 A	3 A	3/4" (19mm)
32-1750UC-01*	Ultima Combo 1250 GPH 12V	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1 1/8" (28mm)
32-1750UC-01-24*	Ultima Combo 1250 GPH 24V	60 l/min - 952 GPH	73 l/min - 1150 GPH	2 A	3 A	1 1/8" (28mm)

* Does not include Dura-Port connection



500, 750 & 1000 GPH



1250 GPH*

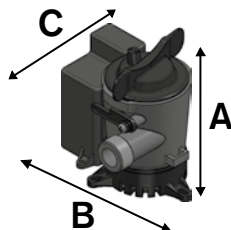


500, 750 & 1000 GPH

CARTRIDGE COMBO - AUTOMATIC SUBMERSIBLE BILGE PUMP

Cartridge Combo bilge pump is equipped with a non-clogging electro-magnetic float switch for automatic operation. The 500 GPH - 1000 GPH pumps have easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by overtightened hose clamps. The pumps are delivered with both straight and a 90° smooth elbow Dura-Ports, as well as a removable check valve.

Body	Thermoplastic
Shaft Seal	Lip seal
Motor Shaft	Stainless steel
Wire Size	16 GA (1.3mm ²)
Height (A)	4.41" (112 mm)
Width (B)	4.72" (120 mm)
Width (C)	3.3" (84 mm)

**500 GPH - 1000 GPH**

Weight 0.40 kg - 14.4 oz.

1250 GPH

Weight 0.45 kg - 16 oz.

Part No.	Description	Capacity 3 ft (0.9 m) head (13.6V)	Capacity straight (13.6V)	Amp	Fuse Size	Connection
32-05503-00	Cartridge Combo 500 GPH 12V	33 l/min - 525 GPH	40 l/min - 630 GPH	2.5 A	5 A	3/4" (19mm)
32-05703-00	Cartridge Combo 750 GPH 12V	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4" (19mm)
32-05903-00	Cartridge Combo 1000 GPH 12V	50 l/min - 800 GPH	63 l/min - 1000 GPH	3.2 A	5 A	3/4" (19mm)
32-06203-00*	Cartridge Combo 1250 GPH 12V	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1 1/8" (28mm)

* Does not include Dura-Port connection



750 GPH

LOW BOY - SUBMERSIBLE 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. Features our removable cartridge style.

The 750 GPH Low Boy Bilge pumps have easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by over-tightened hose clamps. The pumps include both a straight and a 90° smooth elbow. Use Electro-Magnetic Float Switch (Part No. 34-1900B-12V) only.

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

Part No.	Description	Capacity 3 ft (0.9 m) head (13.6V)	Capacity straight (13.6V)	Amp	Fuse Size	Connection
32-33703LB-01	Low Boy Bilge Pump 750 GPH 12V	44 l/min - 700 GPH	50 l/min - 800 GPH	3 A	5 A	3/4" (19mm)
32-33103LB-01*	Low Boy Bilge Pump 1250 GPH 12V	60 l/min - 952 GPH	73 l/min - 1150 GPH	3 A	5 A	1 1/8" (28mm)

* Does not include Dura-Port connection



1250 GPH*

SHOWER SUMP MULTIPORTS

This compact shower sump system is designed to meet the higher demands from today's boating industry, where more equipment is used. Efficiently handles the waste generated by water systems onboard, including showers, dishwashing machines, galley sinks, etc. The shower sump, equipped with electronic automatic switch, Ultima Switch turns on/off automatically using the 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.



Part No.	Description	Capacity 0.9 m head (13.6V/27.2V)	Capacity straight (13.6V/27.2V)	Amp	Fuse Size	Intake connection	Discharge connection
32-57151-01	Shower Sump Multiports 1000 GPH 12V	53 l/min - 844 GPH	61 l/min - 972 GPH	3.2 A	5 A	1x 3/4", 1x 3/4" or 1x 1"	3/4"
32-57151-02	Shower Sump Multiports 1000 GPH 24V	53 l/min - 844 GPH	61 l/min - 972 GPH	2 A	3 A	1x 1 1/8" or 1x 1 1/2"	3/4"

Length x Width (with connections)	290 x 211 mm 11.42 x 8.26"
Max Height	140 mm - 5.7"
Weight	1.04 kg - 2.3 lbs

Part No.	Spare Parts Shower Sump
32-54304	Clear Sump Cover for Shower Sump
34-28512	Cartridge Motor 1000 GPH 12V
34-36303	Electronic Automatic Switch - Ultima Switch, 12/24V

ULTIMA BILGE – AUTOMATIC SUBMERSIBLE BILGE PUMP WITH INTEGRATED SWITCH

Sleek, reliable and compact unit with integrated switch ready to install and run for years and years of reliable service. Available in 600, 800, 1000 and 1250 GPH versions. The Ultima Bilge 600 GPH to 1000 GPH, have easy-to-install Dura-Port discharge ports to eliminate stress cracking caused by over-tightened hose clamps. The pumps are delivered with both straight and 90 ° smooth elbow Dura-Ports and a removable check valve.

600, 800 AND 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.

Part No.	Description	Capacity 3 ft (0.9 m) head (13.6V)	Capacity straight (13.6V)	Amp	Fuse Size	Connection
32-47258-008	Ultima Bilge 600 GPH 12V with integrated switch	32 l/min - 500 GPH	38 l/min - 600 GPH	2.5 A	5 A	¾" (19mm)
32-47259-008	Ultima Bilge 800 GPH 12V with integrated switch	38 l/min - 600 GPH	51 l/min - 800 GPH	3 A	5 A	¾" (19mm)
32-47260-008	Ultima Bilge 1000 GPH 12V with integrated switch	44 l/min - 700 GPH	64 l/min - 1000 GPH	3.2 A	5 A	¾" (19mm)
32-47261-005*	Ultima Bilge 1250 GPH 12V with integrated switch	51 l/min - 800 GPH	79 l/min - 1250 GPH	3 A	5 A	1 ⅝" (28mm) and 1 ¼" (32mm)

*) Does not include 1250 GPH Dura-Port connection



600, 750 & 1000 GPH



1250 GPH*

FIRST MATE - SUBMERSIBLE BILGE PUMP

A lower price 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.

Part No.	Description	Capacity straight (13.6V)	Amp	Fuse Size	Connection
32-1015-01	First Mate 400 GPH 12V	30 l/min - 400 GPH	2.5 A	5 A	¾" (19mm)



Accessories and Spare Parts - Bilge Pumps

CARTRIDGE MOTOR - REPLACEMENT

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

Part No.	Description
34-28552	Cartridge Motor 500 GPH 12V
34-28572	Cartridge Motor 750 GPH 12V
34-28512	Cartridge Motor 1000 GPH 12V
34-42522	Cartridge Motor 1250 GPH 12V



BILGE PUMP COUNTER

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

Part No.	Description
34-83000	Bilge Pump Counter



BILGE PUMP CONTROL

The switch panel gives you full control of the 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 has an integrated fuse holder and operating light. *Note! Fuses are not included.*

Part No.	Description
34-1224	Bilge Pump Control 12V 3-Way ON AUTO OFF
34-1225	Bilge Pump Control 24V 3-Way ON AUTO OFF



3 Way Bilge Pump Control

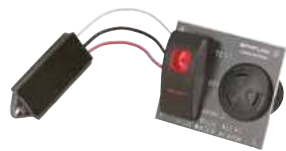


Bilge Alert with *Ultima Switch*

BILGE ALERT - HIGH WATER ALARM WITH ULTIMA SWITCH

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

Part No.	Description
34-72303-001	Bilge Alert, High Water Alarm with Ultima Switch 12V
34-72303-002	Bilge Alert, High Water Alarm with Ultima Switch 24V



Bilge Alert with sensor

BILGE ALERT - HIGH WATER ALARM WITH SENSOR

The Bilge Alert high water detection alarm utilizes field effect technology to detect the presence of liquid. The detector is highly reliable, durable and takes advantage of advanced sensor technology. The detector activates an alarm of 100 db after a delay of 8 seconds from being exposed to water.

Part No.	Description
34-72303	Bilge Alert, High Water Alarm with sensor 12V



SIDE MOUNT BRACKET

For Cartridge bilge pumps.

Part No.	Description
34-900	90° Side Mount Bracket



STRAINER/ VALVE/ Y-CONNECTION

IN-LINE NON-RETURN VALVE

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

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

BILGE STRAINER WITH NON-RETURN VALVE

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

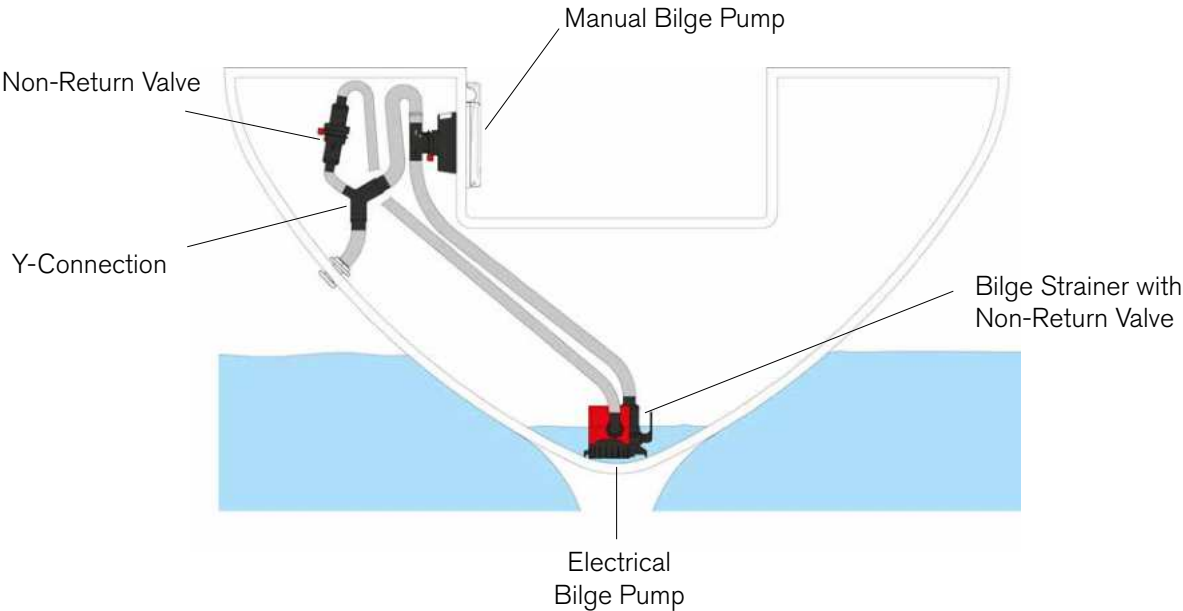
- Designed to prevent bilge debris from blocking the inlet suction line.
- Reduce the risk of debris entering and blocking the pump.
- Maintain prime in the suction line.
- Easy to maintain and clean without use of tools.

Y-CONNECTION

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

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

Bilge Pump Systems - Manual and electrical bilge pumps in combination



Manual Bilge Pumps

VIKING COMPACT - MANUAL HAND-POWERED BILGE PUMP

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

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

Body	Polypropylene	Maximum head	1.2 meters (4 feet)
Cover	ABS	Combined head/lift	3.3 meters (10.8 feet)
Diaphragm	Nitrile rubber	Connections included	KlickTite connectors for 1" (25 mm) or 1½" (38 mm) hose
Valves	Nitrile rubber (1 leaf and 1 tricuspid valve)	Max. liquid temp	+60°C (140°F)
Wetted parts	Polypropylene, PA66GF30 plastics and nitrile rubber	Weight	0.675 kg (1.5 pounds)
Maximum lift	2.1 meters (7 feet)		

Viking Compact - Flow at 10 kPa head and 45 strokes/min

Ø 25 mm connections	34,5 liters/minute (9.1 US gallons/minute)
Ø 38 mm connections	45 liters/minute (11.9 US gallons/minute)

Part No.	Description	Connection
10-24800-01	Viking Compact Manual Bilge Pump	Ø25 mm (1") and Ø38 mm (1½") ports



VIKING UNIVERSAL - MANUAL HAND-POWERED BILGE PUMP

Heavy duty, self-priming, hand-powered bilge pump for nearly any type of installation. Viking Universal's mounting bracket allows for vertical or horizontal surface mounting. With the optional Through Deck Kit the pump can be installed behind bulkheads or below the deck.

To minimize required space the Viking Universal excels at adaption. Easy to change the direction of flow. The KlickTite straight and The KlickTite straight and 90° hose connections (included in package) can be used in combination. The hose connections and even the pump housing can easily be rotated for optimal positioning.

While designed as a powerful bilge pump, the Viking Universal's large Ø38 mm (1½") hose connections enable the pump also to be used for pumping toilet waste. Fasteners are included for stowing the handle and the safety clasp ensures that the handle will not be lost while not in use or during an emergency situation.

Performance at 45 strokes/min and a 1 m (3.28') head (10 kPa/1.45 psi pressure), the Viking Universal has a flow of 60 l/min -16 GPM.

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

Part No.	Description	Connection
10-13530-01	Viking Universal Manual Bilge Pump	Ø38 mm (1½")
09-36250	Viking Universal, Through Deck Kit	

Accessories

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



09-36250





VIKING HAND PUMP - THRUDECK AND BULKHEAD - HAND POWERED DIAPHRAGM BILGE PUMP

When the power is out you can always depend on the hand operated diaphragm bilge pump. The pump is available in two models for various installation alternatives. It can be mounted behind walls, through deck and under bulkheads. Viking Thru Deck for installation behind vertical walls or under deck with sealing boot, complete with a cover plate. Viking Bulkhead for surface installation with horizontal lever. The Viking pump can also be used for pumping toilet waste due to the large hose connections.

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

Part No.	Description
70-50005	Viking Hand Pump Thru Deck 1 1/2"
70-50025	Viking Hand Pump Thru Deck 1"
70-50007	Viking Hand Pump Bulkhead 1 1/2"
70-50027	Viking Hand Pump Bulkhead 1"

Bilge Pump Switches

ULTIMA SWITCH - ELECTRONIC AUTOMATIC SWITCH

The electronic automatic switch, 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 make the Ultima Switch environmentally sensitive.

Ultima Switch activates at a 50 mm (2") fluid level and deactivates at a 20 mm (3/4") fluid level. A three second delay prevents false starts.

Ultima Switch is rated to handle pumps up to 20A at 12V or 24V.

Part No.	Description	Max Amp.
34-36303	Ultima Switch Electronic Automatic Switch 12/24V	20A

ELECTRO-MAGNETIC FLOAT SWITCH

Electro-magnetic float 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 3/4" water level.

The switch is designed to attach to the SPX FLOW Johnson Pump Cartridge bilge pumps. When attaching to other SPX FLOW Johnson Pump bilge pumps, use the adapter provided.

Part No.	Description	Max Amp.
34-1900B-12V	Electro-Magnetic Float Switch, 12V	15A
34-1900B-24V	Electro-Magnetic Float Switch, 24V	10A

AS888 - AUTOMATIC FLOAT SWITCH

The AS888 automatic float 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. For fully automatic bilge pumping operation, connect the automatic switch to your bilge pump. The AS888 attaches to any SPX FLOW Johnson Pump bilge pump through a clip on "T-slot" and can be used with 12, 24 or 32V systems.

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

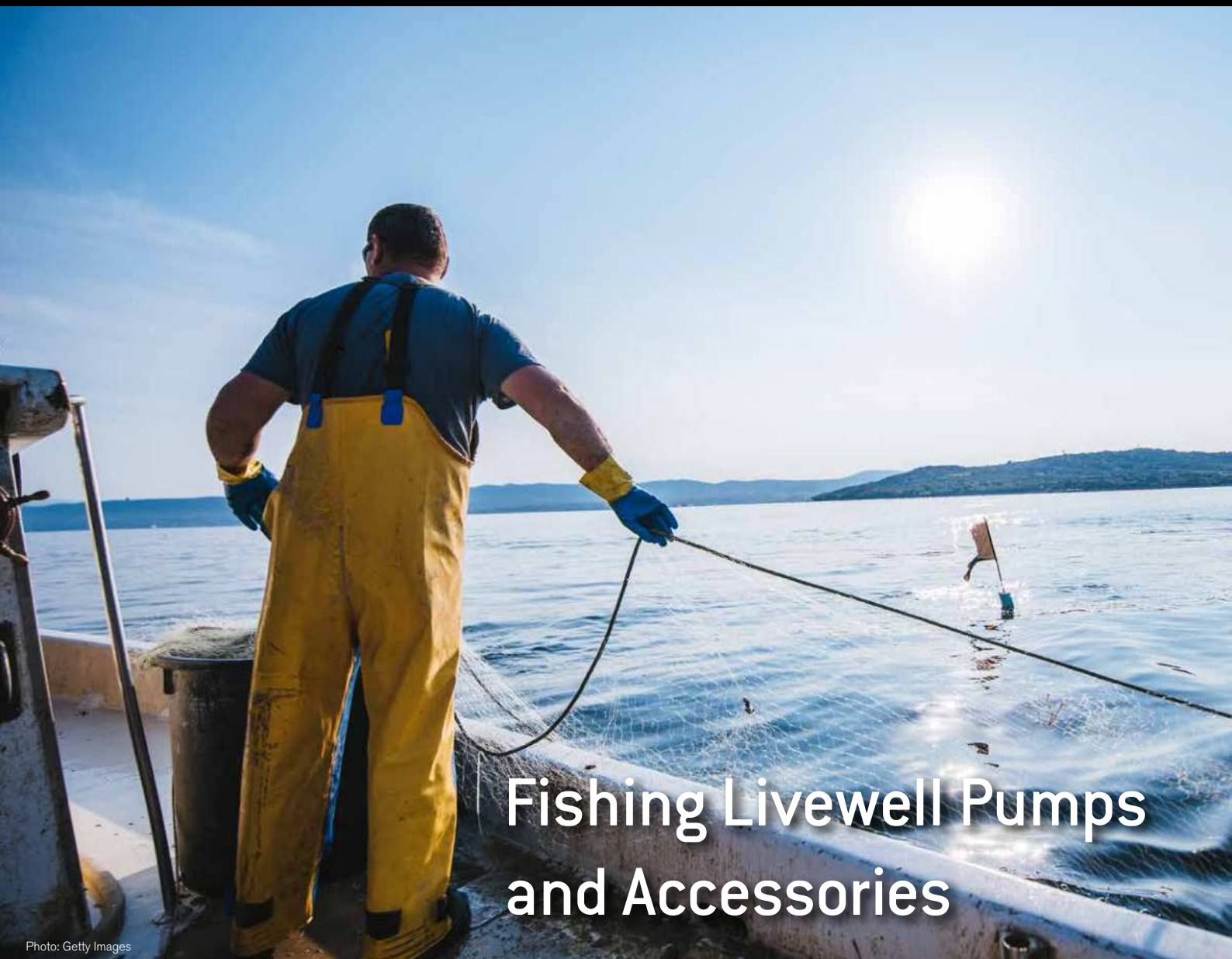


Photo: Getty Images

Fishing Livewell Pumps and Accessories



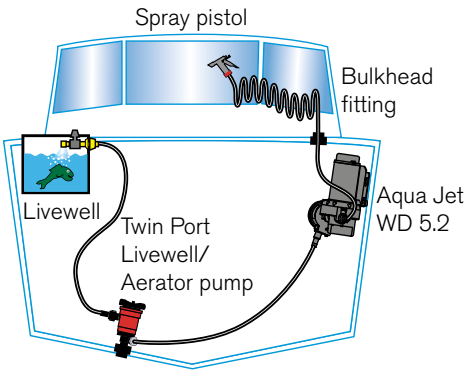
Leading the way, SPX FLOW Johnson Pump has a full assortment of Livewell and Aerator pumps to meet the demanding needs of recreational and professional fisherman worldwide.

Easy to clean and maintain replaceable motor cartridges. Pump styles in straight, 90 degree and seacock installations available in flow rates from 500 GPH to 1600 GPH.



EN55014
ISO8846
ISO10133

Fishing Livewell Pumps and Accessories



500 GPH

TWIN PORT - AERATOR PUMP

The Twin Port Aerator Pump offers 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" port. High pressure inlet seal easily handles the higher pressures created by high speed pickups commonly used.

Part No.	Description
32-48503	Twin Port Aerator Pump 500 GPH 12V
32-48703	Twin Port Aerator Pump 750 GPH 12V



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.

Part No.	Description
32-2850	Cartridge Aerator Pump 500 GPH 12V Straight
32-3850	Cartridge Aerator Pump 500 GPH 12V 90°
32-2870	Cartridge Aerator Pump 750 GPH 12V Straight
32-3870	Cartridge Aerator Pump 750 GPH 12V 90°



AQUA JET WASH DOWN 5.2 GPM/ 500 GPH LIVEWELL PUMP KIT

A wash down kit including a high capacity Aqua Jet Wash Down 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.

Part No.	Description
32-64634	Aqua Jet WD 5.2 500 GPH 12V Livewell

PRO SERIES LIVEWELL/BAITWELL - AERATOR PUMP

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.

Part No.	Description	Capacity straight (13.6V/27.2V)	Capacity 3 ft (0.9 m) head (13.6V/27.2V)	Amp	Fuse Size	Connection
32-16004B	Pro Series Aerator Pump 1600 GPH 12 V	1600 GPH	1550 GPH	7 A	10 A	1 1/8" (28mm) and 1 1/4" (32mm)
32-16004B-24	Pro Series Aerator Pump 1600 GPH 24 V	1600 GPH	1550 GPH	3.5 A	6 A	1 1/8" (28mm) and 1 1/4" (32mm)



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 or fresh catch alive even during the heat of the day. Includes a sturdy First Mate bilge 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.

Part No.	Description
32-24052	Ice Chest Aerator kit



IN-WELL - AERATOR KIT

The easiest way to add oxygen to your live bait well. Use it as your primary aerator, or to recirculate while you are making a long run across the bay, or if you are trailing the boat, you can stop for fuel and be aerating your catch while the boat is on the trailer. A dependable 500 GPH Cartridge 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, simply open the valve, activate the pump and water passes through a discharge fitting.

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



Photo: Linder Aluminium Boats

Flexible Impeller Pumps (FIP) DC

- Bilge, Deckwash and Refueling

Photo: Getty Images



With their high level of flexibility, these pumps are ideally suited for use in boats as bilge pumps, deckwash pumps, fresh water pumps and refuelling pumps for oil and diesel. These pumps may be combined with a vacuum switch for automatic operation.

Full range of capacities from 15 - 55 l/min.

All motors are heavy duty to provide long service life even under heavy use. Available in 12 or 24 volts.



F2P10-19, F3B-19, F4B-19, F4B-11
EN50082-1
EN55014-1
IEC801-2
IEC801-3
ISO8846
ISO8849
ISO10133
F5B-19 12/24V
EN55014
ISO8846

DC driven Flexible Impeller Pumps

F2P10-19 – CAPACITY 15 L/MIN 4 GPM

Perfect for bilge pumping, deckwash, water circulation, oil and diesel refuelling at dockside service, etc. The motor has a built-in thermal overload for added protection.

Part No.	Description	Body	Impeller*	Seal	Connection	Length	Width	Height	Weight
10-24886-01	F2P10-19 12V	PA	09-1077B-9	Lip seal	½" hose	172 mm – 6.8"	117 mm – 4.6"	78 mm – 3"	1,6 kg – 3.5 lbs
10-24886-02	F2P10-19 24V	PA	09-1077B-9	Lip seal	½" hose	172 mm – 6.8"	117 mm – 4.6"	78 mm – 3"	1,6 kg – 3.5 lbs

*Includes Nitrile impeller



F3B-19 – CAPACITY 21 L/MIN 5.5 GPM

Perfect for bilge pumping, deckwash, water circulation, oil and diesel refuelling at dockside service, etc. The motor has a built-in thermal overload for added protection.

Part No.	Description	Body	Impeller*	Seal	Connection	Length	Width	Height	Weight
10-24516-01	F3B-19 12V	Bronze	09-843S-9	Lip seal	¾" BSP	170 mm – 6.7"	113 mm – 4.4"	82 mm – 3.22"	2 kg – 4.5 lbs
10-24516-02	F3B-19 24V	Bronze	09-843S-9	Lip seal	¾" BSP	170 mm – 6.7"	113 mm – 4.4"	82 mm – 3.22"	2 kg – 4.5 lbs

*Includes Nitrile impeller



F3B-19 OIL CHANGE – CAPACITY 21 L/MIN 5.5 GPM

Designed to remove old oil from the engine/fill new oil back into the engine. Reversible rubber impeller pump with integrated quick reversing switch. The motor has a built-in thermal overload for added protection.

Part No.	Description	Body	Impeller*	Seal	Connection	Length	Width	Height	Weight
10-24760-01	F3B-19 Oil Change 12V	Bronze	09-843S-9	Lip seal	¾" BSP	70 mm – 6.7"	113 mm – 4.4"	115 mm – 4.5"	2,1 kg – 4.5 lbs
10-24760-02	F3B-19 Oil Change 24V	Bronze	09-843S-9	Lip seal	¾" BSP	70 mm – 6.7"	113 mm – 4.4"	115 mm – 4.5"	2,1 kg – 4.5 lbs

*Includes Nitrile impeller



F38B-19 – CAPACITY 35 L/MIN 9 GPM

Perfect for bilge pumping, deckwash, water circulation, oil and diesel refuelling at dockside service, etc. The motor has a built-in thermal overload for added protection.

Part No.	Description	Body	Impeller*	Seal	Connection	Length	Width	Height	Weight
10-24727-01	F38B-19 12V	Bronze	09-824P-9	Lip seal	Hose 1" / ½" BSP	180 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
10-24727-02	F38B-19 24V	Bronze	09-824P-9	Lip seal	Hose 1" / ½" BSP	180 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs

*Includes Nitrile impeller



F4B-19 – CAPACITY 48 L/MIN 12.5 GPM

Perfect for bilge pumping, deckwash, water circulation, oil and diesel refuelling at dockside service, etc. The motor has a built-in thermal overload for added protection.

Part No.	Description	Body	Impeller*	Seal	Connection	Length	Width	Height	Weight
10-24689-01	F4B-19 12V	Bronze	09-824P-9	Lip seal	Hose 1" / ½" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
10-24689-02	F4B-19 24V	Bronze	09-824P-9	Lip seal	Hose 1" / ½" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs

*Includes Nitrile impeller



F4B-11 ULTRA BALLAST – CAPACITY 52 L/MIN 13.5 GPM SKI/WAKEBOARD

Designed to quickly fill or, when reversed, drain a ballast tank. 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 (Part No. 09-47196) available as accessory.

Important! Only for use with water. If risk of dry-running over 30 sec. use Polyurethane impeller.

Part No.	Description	Body	Impeller	Seal	Connection	Length	Width	Height	Weight
10-24690-01	F4B-11 Ultra Ballast 12V	Bronze	09-824P-1*	Lip seal	Hose 1" / ½" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
10-24690-02	F4B-11 Ultra Ballast 24V	Bronze	09-824P-1*	Lip seal	Hose 1" / ½" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
10-24690-09	F4B-12 Ultra Ballast 12V	Bronze	09-824P-2**	Lip seal	Hose 1" / ½" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs
10-24690-10	F4B-12 Ultra Ballast 24V	Bronze	09-824P-2**	Lip seal	Hose 1" / ½" BSP	202 mm – 8"	120 mm – 4.72"	90 mm – 3.54"	3 kg – 6.6 lbs

*Includes MC97/EPDM-impeller. **Includes Polyurethane Impeller (orange)



**F5B-19 – CAPACITY 55 L/MIN 14.5 GPM**

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

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

*Includes Nitrile impeller

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	2.0	0.5	15.8	7.1
Fuse Required					15 A	8 A

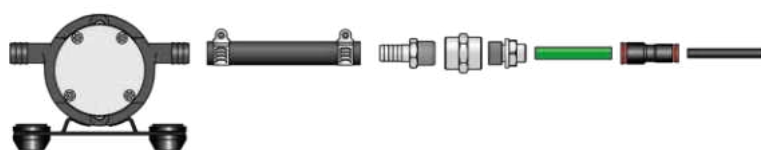
F4B-19					Ampere Draw	
Bar	kPa	psi	l/min	GPM	12 V	24 V
Count. Duty						
0	0	0	48.0	12.7	12.2	6.5
0.1	10	1.45	45.0	11.9	12.3	6.7
0.2	20	2.9	44.5	11.7	12.2	6.8
0.3	30	4.35	41.0	10.8	13.1	7.1
0.6	60	8.7	34.0	9.0	14.9	7.5
Intermittent Duty						
0.9	90	13.0	25.0	6.6	16.5	7.8
1.2	120	17.4	11.0	2.9	18.3	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					50 A	25 A
Recommended wire size					16 mm ²	6 mm ²

OIL CHANGE KIT

Suitable for both F2P10-19 (connection 1/2" hose) and F3B-19 (connection 3/8", BSP). Complete with oil dip stick extraction tube 6 and 8 mm. Total hose length 240 cm (120 cm + 120 cm).

Part No.	Description
09-47616	Oil Change Kit

**F2P10****F3B-19****Accessories****POLARITY REVERSING SWITCH KIT FOR ULTRA BALLAST PUMP F4B-11**

Part No.	Description
09-47196	Polarity Reversing Switch Kit

**DECKWASH KIT F4B-19**

Part No.	Description
09-46553	Deckwash Kit for F4B-19 (incl. pressure switch, check valve and trigger nozzle)

**VACUUM SWITCH**

Part No.	Description
09-45053	Vacuum Switch

Flexible Impeller Pumps (FIP) AC

- Wash Down, Fire Fighting, Septic Handling and Circulation Pump

Photo: Marimarmatur



FIP-series
Contact us for
information about
latest standards.

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

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

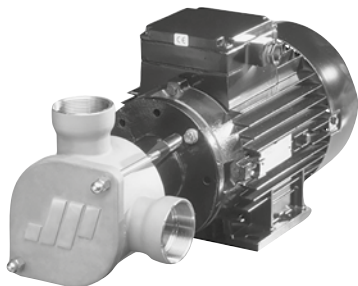


ADVANTAGES OF FIP

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

Flexible Impeller Pumps (FIP) AC

Contact your sales representative to help configure the right FIP pump for your needed requirement.



THE FIP STAINLESS STEEL VERSION

The FIP Stainless Steel line allows for a wide range of pump capacities for both hygienic and non-hygenic applications.

FIP40SI

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

Part No.	Description	Body	Connection	Impeller	Shaft	Shaft seal	Shaft end
To be Configured	FIP40SI-BSP02M01F90	Stainless steel	BSP	Neoprene	Double flat	Mechanical	Flange

THE FIP BRONZE VERSION

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

FIP25B

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

Part No.	Description	Body	Connection	Impeller	Shaft	Shaft seal	Shaft end
To be Configured	FIP25B-BSP00M01F80	Bronze	BSP	Neoprene	Double flat	Mechanical	Flange

FIP40B

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

Part No.	Description	Body	Connection	Impeller	Shaft	Shaft seal	Shaft end
To be Configured	FIP40B-BSP00M01F90	Bronze	BSP	Neoprene	Double flat	Mechanical	Flange

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

FIP MODEL SPECIFICATIONS

Example: **FIP** **20** **SH** - **DIN** **4** **2** **M01** **P80**
 1 2 3 4 5 6 7 8

1. Family name

FIP = Flexible Impeller Pump

2. Pump size

20 25 40 50 65

Average inlet and outlet port diameter, mm

3. Material of pump body and cover

SH = Stainless steel, hygienic version
 SI = Stainless steel, industrial version
 B = Bronze

4. Port/connection

FIP 20/25SI, FIP 25/40B

BSP = BSP thread/hose combination

NPTF = NPTF thread/hose combination*

FIP 40/50/65SI

BSP = BSP thread

NPTF = NPTF thread*

* NPTF available on request.

FIP 20/25/40/50/65SH

DIN = DIN 11851

SMS = SMS 1145

PLN = Plain without threaded ports

CLP = Clamp according to SMS 3017 (TriClamp)

5. Impeller code*

0 = Neoprene industrial version – standard pressure
 3 = EPDM, FDA, food grade – high pressure
 4 = Neoprene, FDA, milk grade
 6 = Neoprene, industrial version – high/intermediate pressure
 7 = EPDM, FDA, food grade – standard pressure
 9 = Nitrile, splined drive – standard pressure

* Impeller options are dependent on pump.

6. Shaft

Bronze

0 = Splines – Stainless steel

Stainless steel pumps

0 = Splines – Stainless steel

2 = Double flat – Stainless steel

7. Shaft seals

M = Single mechanical seal

L = Lip seal

Material of single mechanical seals

01 = Carbon/ceramic/nitrile

03 = Silicon carbide/silicon carbide/FPM (DIN/ISO) / FKM (ASTM) (on request only)

06 = FDA Approved mechanical seal

8. Shaft end

P = Pedestal

F = Flange for IEC motor

80 = FIP 20/25 – Pedestal; shaft height, mm
 Flange; IEC motor size

90 = FIP 40 – Pedestal; shaft height, mm
 Flange; IEC motor size

100 = FIP 50 – Pedestal; shaft height, mm
 Flange; IEC motor size

112 = FIP 65 – Pedestal only; shaft height, mm

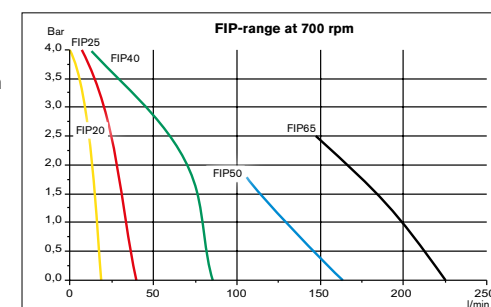
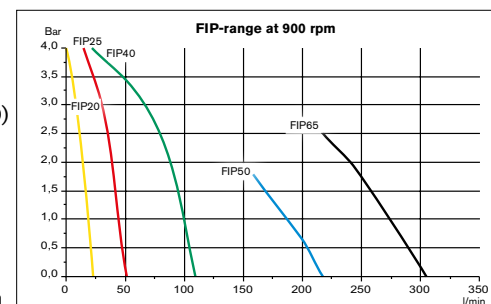
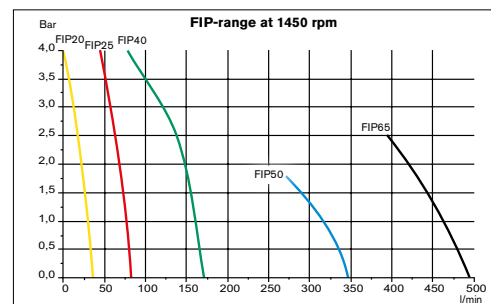




Photo: Grovfjord Mek. Verksted AS/ 154-VINNIES

Circulation Pumps



Discover the Circulation Pumps from Johnson Pump that meet the demands for heating and cooling systems on boats, trains, buses, commercial vehicles, recreational vehicles and motorhomes.

Type	Key Features	Benefits and Advantages
CM100, CM90BL	Brushless Motor	<ul style="list-style-type: none"> Designed for long life expectancy of 40 000 hours (20 000+ hours CM90BL) Potted electronics (electronics submerged in compound) Conformal coating on electric components
CM100, CM90BL, CM90, CM30, CM10	Magnetically driven	<ul style="list-style-type: none"> No leakage, which is common from mechanical seal pumps Long life expectancy Dry running protection (CM100 and CM90BL)
CM100	Higher IP classification: IP6K9K and IP67	<ul style="list-style-type: none"> Reliable function in toughest environments Water-proof as well as dust-proof Withstands high pressure/steam jet cleaning
CM90BL, CM90, CM30, CM10	Higher IP classification: IP67	<ul style="list-style-type: none"> Reliable function in toughest environments Water-proof as well as dust-proof Withstands powerful water jets used during maintenance and even submersion up to 30 minutes
CM100, CM90BL, CM90, CM30, CM10	UN R10 - EMC	<ul style="list-style-type: none"> Reliable function in toughest environments Complies with relevant EMC regulations and directive(s) Increased reliability, reduced warranty issues and service costs
CM100, CM90BL, CM90, CM30, CM10	Superior permanently lubricated bearings	<ul style="list-style-type: none"> Allows continual operation of 20 000+ hours (CM100, CM90BL) Allows continual operation up to 10 000 hours (CM90) Allows continual operation up to 5 000 hours (CM10/CM30)
CM30, CM10	Small footprint	<ul style="list-style-type: none"> Direct replacement for OE intercooler circulation pump Perfect for Turbocharged or Supercharged Intercooler applications



Contact us for information about latest standards for Circulation pumps.

DC driven Circulation Pumps

Johnson Pump offers a high quality range of circulation pumps to meet the demands for heating and cooling systems on boats, trains, buses, commercial vehicles, recreational vehicles and motorhomes.



Ø25 mm

Ø25 mm
Length 186 mm - 7.3"
Width 135 mm - 5.3"
Height 179 mm - 7"
Weight 3.9 kg (8.6 lbs)

Ø38 mm
Length 191 mm - 7.5"
Width 135 mm - 5.3"
Height 179 mm - 7"
Weight 3.9 kg (8.6 lbs)

CM100HP - CIRCULATION PUMP HIGH PRESSURE WITH BRUSHLESS MOTOR

Pump Body Aluminium, black anodized
Impeller PPS GF
Shaft Stainless Steel, hardened
Motor Permanent magnet brushless motor with ball bearings and electronics included (IP6K9K)
Liquid Tap water/glycol mixture; max. 60% glycol

Liquid temp. Min. -40°C to Max. +102°C
(Min. -40°F to Max. +216°F)

System pressure Max 2,5 bar
Port size Ø25 and Ø38
Dry running Max. 25 minutes
Input Power Max. 475W
Mounting Separate universal bracket for flat surfaces

Ø25 mm (1")

Part No.	Description	Capacity 1 bar (33.5 ftH ₂ O)*
10-13576-02	CM100HP AL-1BL 27.2V D25	85 l/min at 1 bar (22.5 GPM)

Ø38 mm (1½")

Part No.	Description	Capacity 1 bar (33.5 ftH ₂ O)*
10-13577-02	CM100HP AL-1BL 27.2V D38	85 l/min at 1 bar (22.5 GPM)

*Further information on flow and capacities are available upon request.



Ø38 mm

Ø38 mm
Length 191 mm - 7.5"
Width 135 mm - 5.3"
Height 176 mm - 6.9"
Weight 3.9 kg (8.6 lbs)

CM100HF - CIRCULATION PUMP HIGH FLOW WITH BRUSHLESS MOTOR

Pump Body Aluminium, black anodized
Impeller PPS GF
Shaft Stainless Steel, hardened
Motor Permanent magnet brushless motor with ball bearings and electronics included (IP6K9K)
Liquid Tap water/glycol mixture; max. 60% glycol
Liquid temp. Min. -40°C to Max. +102°C
(Min. -40°F to Max. +216°F)

System Pressure Max 2,5 bar
Port Size Ø38
Dry running Max. 25 minutes
Input Power Max. 410W
Mounting Separate universal bracket for flat surfaces

Ø38 mm (1½")

Part No.	Description	Capacity 0.4 bar (13.38 ftH ₂ O)*
10-13578-02	CM100HF AL-1BL 27.2V D38	135 l/min at 0.4 bar (35.6 GPM)

*Further information on flow and capacities are available upon request.



Ø38 mm

Ø20 mm
Length 273.5 mm - 10.8"
Width 121 mm - 4.8"
Height 141 mm - 5.6"
Weight 3.0 kg (6.6 lbs)

Ø38 mm
Length 272 mm - 10.7"
Width 121 mm - 4.8"
Height 150 mm - 5.9"
Weight 3.0 kg (6.6 lbs)

CM90BL - CIRCULATION PUMP WITH BRUSHLESS MOTOR

Pump Body PPA
Impeller PA12
Shaft Stainless Steel
Motor Brushless 12/24 V DC enclosed (as per IP67)
permanent magnet, ball bearing mounted motor
Liquid Tap water/glycol mixture; max. 60% glycol
Liquid temp. Min. -40°C to Max. +100°C (Min. -40°F to Max. +212°F)

System pressure Max. 2,5 bar
Port size Ø20 mm (¾") and Ø38 mm (1¼")
Dry running Max. 30 minutes
Input Power Max. 125W
Mounting Separate universal bracket for flat surfaces

Ø20 mm (¾")

Part No.	Description	Capacity 0.1 bar (3.4 ftH ₂ O)	Capacity 0.25 bar (8.4 ftH ₂ O)
10-24901-01	CM90P7-1 BL 13.6V D20	55 l/min at 0.1 bar (14.5 GPM)	50 l/min at 0.25 bar (13.2 GPM)
10-24901-02	CM90P7-1 BL 27.2V D20	55 l/min at 0.1 bar (14.5 GPM)	50 l/min at 0.25 bar (13.2 GPM)

Ø38 mm (1½")

Part No.	Description	Capacity 0.1 bar (3.4 ftH ₂ O)	Capacity 0.25 bar (8.4 ftH ₂ O)
10-24898-01	CM90P7-1 BL 13.6V D38	115 l/min at 0.1 bar (30.4 GPM)	90 l/min at 0.25 bar (23.8 GPM)
10-24898-02	CM90P7-1 BL 27.2V D38	115 l/min at 0.1 bar (30.4 GPM)	90 l/min at 0.25 bar (23.8 GPM)

CM90 - CIRCULATION PUMP

Pump Body	PPA, glass-fiber reinforced
Impeller	PA12
Shaft	Stainless steel
Motor	12/24V DC enclosed (as per IP67) permanent magnet, ball bearing mounted motor, designed for continuous operation
Liquid	Tap water/glycol mixture; max. 60% glycol
Liquid temp.	Min. -40°C to Max. +100°C (Min. -40°F to Max. + 212°F)

System pressure	Max 2,5 bar
Port Size	Ø20 mm and Ø38 mm
Dry running	30 minutes
Input power	Max. 125W
Mounting	Separate universal bracket for flat surfaces



Ø38 mm

Ø20 mm (¾")

Part No.	Description	Capacity 0.1 bar (3.4 ftH ₂ O)	Capacity 0.25 bar (8.4 ftH ₂ O)
10-24750-09	CM90P7-1 13.6V D20	65 l/min (17.2 GPM)	50 l/min (13.2 GPM)
10-24750-10	CM90P7-1 27.2V D20	65 l/min (17.2 GPM)	50 l/min (13.2 GPM)

Length	Ø20 mm
Width	255 mm
Height	120 mm
Weight	140.5 mm 3.0 kg (6.6 lbs)

Ø38 mm (1½")

Part No.	Description	Capacity 0.1 bar (3.4 ftH ₂ O)	Capacity 0.25 bar (8.4 ftH ₂ O)
10-24664-09	CM90P7-1 13.6V D38	90 l/min (23.7 GPM)	65 l/min (17.2 GPM)
10-24664-10	CM90P7-1 27.2V D38	90 l/min (23.7 GPM)	65 l/min (17.2 GPM)

Length	Ø38 mm
Width	253 mm
Height	120 mm
Weight	149.5 mm 3.9 kg (8.6 lbs)

C090 - CIRCULATION PUMP WITH MECHANICAL SEAL

Pump Body	PA66 thermoplastic
Impeller	PA66 thermoplastic
Shaft	Stainless steel
Motor	12/24 V DC enclosed (as per IP31) permanent magnet, ball bearing mounted motor, designed for continuous operation

Shaft seal	Mechanical seal
Liquid	Tap water/glycol mixture; max. 60% glycol
Liquid temp.	Min. -30°C, Max. +100°C
System Pressure	Max 2,0 bar
Port size	Ø38 mm (1 ½") hose

**Ø38 mm (1½")**

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

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

CM10 & CM30 - CIRCULATION PUMP

Pump Body	PPA, Thermoplastic
Impeller	PPA, Thermoplastic
Shaft	Stainless Steel
Motor	12/24V DC enclosed (as per IP67) permanent magnet, ball bearing mounted motor, designed for continuous operation
Liquid	Tap water/glycol mixture; max. 60% glycol
Liquid temp.	Min. -40°C Max. +100°C

System pressure	Max 2,5 bar
Port size	Ø16 mm (⅝") or Ø20 mm (¾") hose
Dry running	Max. 30 minutes
Input Power	Max. 14W (CM10) 27W (CM30)
Mounting	Separate universal bracket for flat surfaces

**CM10**

Part No.	Voltage	Description	Port Size	Capacity 0.1 bar (3.4 ftH ₂ O)	Flexible Cord - Spare Part
10-24501-03	12V	CM10P7-1	Ø16 mm (⅝")	15 l/min (4 GPM)	
10-24501-04	24V	CM10P7-1	Ø16 mm (⅝")	15 l/min (4 GPM)	
10-24502-03	12V	CM10P7-1	Ø20 mm (¾")	18,5 l/min (5 GPM)	
10-24502-04	24V	CM10P7-1	Ø20 mm (¾")	18,5 l/min (5 GPM)	
10-24486-03	12V	CM10P7-1 with flexible cord	Ø16 mm (⅝")	15 l/min (4 GPM)	04-36245-01 (12/24V)
10-24486-04	24V	CM10P7-1 with flexible cord	Ø16 mm (⅝")	15 l/min (4 GPM)	04-36245-01 (12/24V)
10-24487-03	12V	CM10P7-1 with flexible cord	Ø20 mm (¾")	18,5 l/min (5 GPM)	04-36245-01 (12/24V)
10-24487-04	24V	CM10P7-1 with flexible cord	Ø20 mm (¾")	18,5 l/min (5 GPM)	04-36245-01 (12/24V)

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

CM30

Part No.	Voltage	Description	Port Size	Capacity 0.1 bar (3.4 ftH ₂ O)	Flexible Cord - Spare Part
10-24503-03	12V	CM30P7-1	Ø16 mm (⅝")	20 l/min (5.3 GPM)	
10-24503-04	24V	CM30P7-1	Ø16 mm (⅝")	20 l/min (5.3 GPM)	
10-24504-03	12V	CM30P7-1	Ø20 mm (¾")	26 l/min (6.9 GPM)	
10-24504-04	24V	CM30P7-1	Ø20 mm (¾")	26 l/min (6.9 GPM)	
10-24488-03	12V	CM30P7-1 with flexible cord	Ø16 mm (⅝")	20 l/min (5.3 GPM)	04-46249-01 (12V) 04-36245-01 (24V)
10-24488-04	24V	CM30P7-1 with flexible cord	Ø16 mm (⅝")	20 l/min (5.3 GPM)	04-46249-01 (12V) 04-36245-01 (24V)
10-24489-03	12V	CM30P7-1 with flexible cord	Ø20 mm (¾")	26 l/min (6.9 GPM)	04-46249-01 (12V) 04-36245-01 (24V)
10-24489-04	24V	CM30P7-1 with flexible cord	Ø20 mm (¾")	26 l/min (6.9 GPM)	04-46249-01 (12V) 04-36245-01 (24V)



With Flexible Cord



Photos: Delta Powerboats



Waste Water Handling and Marine Toilets



From a name you can trust, the AquaT toilet provides comfort and convenience at sea.

Our marine toilets comes with a soft close seat and lid. Choose between electric powered or manual model, and comfort or compact seat sizes.

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



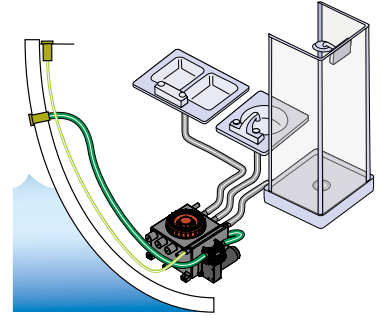
Viking Power
ISO8846
ISO10133
ISO8849
EN55014

AquaT Silent Electric and Standard Electric
ISO8846
EN55014



Waste Water Pumps Solutions

SPX FLOW Johnson Pump offers waste water pump solutions, designed to meet the rigorous demands of the leading manufacturers of boats, recreational vehicles and buses.



Grey Water Tank with Viking Power 16

VIKING POWER 16 - COMPACT SHOWER DRAIN, BILGE AND WASTE WATER PUMP

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.

The Viking Power 16 is self-priming up to a height of three meters. With its low pulse and muffled rubber bracket, this pump offers quiet operation. Specifically designed to pump waste water, with double check valves for improved pumping action, 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.

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. Delivered with 1" and 3/4" KlickTite XL connectors. 90° KlickTite XL connectors available as extra accessory.

Motor	2.3 amp (12V), 1.2 amp (24V) at 0.1 bar 12/24V DC (with built-in thermal protection)
Body	Nylon, glass-fiber reinforced
Valves	Nitrile rubber
Diaphragm	Reinforced nitrile rubber

Length	186 mm – 7.3"
Width	227/181 mm – 8.9"/7.1"
Height	117/204 mm – 4.6"/8"
Weight	2.6 kg – 5.7 lbs



Part 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	1" and 3/4" KlickTite XL connectors, 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	

Part No.	Description
09-47491	Fittings 3/4" barb with outlet non-return valve
09-47492	Fittings 1" barb with outlet non-return valve



VIKING POWER 32 - COMPACT SHOWER DRAIN, BILGE AND WASTE WATER PUMP

This pump has been engineered with a ball-bearing supported transmission for long service life. The pump can be run dry, and it can also handle a mixture of air and water without difficulty. The Viking Power 32 provides maximum flow of 32 l/min and is self-priming up to a height of 2.5 m (8.2 ft). Although powered by an electric motor, this pump can also be cranked by hand in case of an emergency. Naturally, pumping ordinary shower or sink drain water or bilge water is no problem for this pump.

Motor	3.3 amp (12V), 1.6 amp (24V) at 0.1 bar 12/24V DC (with built-in thermal protection)
Body	Nylon
Valves	Nitrile rubber
Diaphragm	Reinforced nitrile rubber

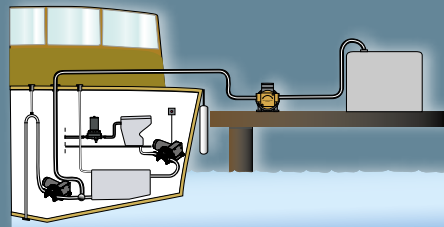
Length	277 mm – 10.9"
Width	264 mm – 10.4"
Height	192 mm – 7.6"
Weight	5.0 kg – 11.0 lbs

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



Crank for manual handling

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 buses. 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.



VIKING POWER VACUUM



Crank for manual handling

Engineered with a ball-bearing supported transmission for long service life. The Viking Power Vacuum pump can be run dry, and it can also handle a mixture of air and water without difficulty. The Viking Power Vacuum provides maximum flow of 24 l/min and is self-priming up to a height of 5 m/16.4 ft. Although powered by an electric motor, this pump can also be cranked by hand in case of an emergency. 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 this pump.

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

Part 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"



Image shown with Viking Power 16 attached to a Grey Water Tank.

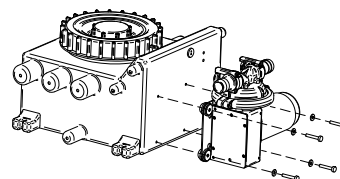
GREY WATER TANK

The Grey Water Tank is designed to be used as a collection tank for waste water from showers, sinks, dishwashing machines, etc. with 19mm, 25mm and 38mm inlet ports and 19mm and 25mm 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.

Note: The Viking Power 16 pump is to be ordered separately.

Height:	185mm – 7.3"
L x W - with pump:	L: 397mm – 15.6" W: 340mm – 13.4"
L x W - without pump:	L: 280mm – 11" W: 340mm – 13.4"

Part No.	Description
09-13384	Grey Water Tank (excl. Viking Power 16)



TA3P10-19 - 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. *Note! Use unbleached lavatory paper only.*



Motor	12/24V DC (with built-in thermal protection)	Length	256 mm – 10.08"
Body	Phenol Plastic (PF)	Width	119,5 mm – 4.70"
Impeller	Nitrile 09-1052S-9	Height	85 mm – 3.35"
Housing	Thermoplastic Polyester (PET)	Weight	1.9 kg – 4.2 lbs
Shaft	Stainless Steel		
Seal	Lip Seal		

SPARE PARTS

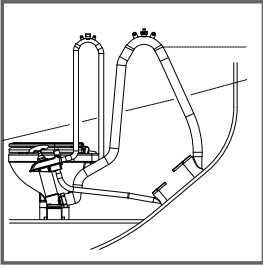
Part No.	Description
09-45595	Service Kit TA3P10



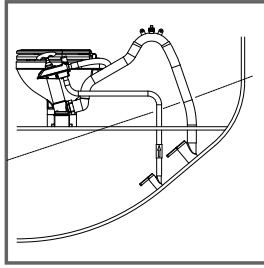
09-1052S-9

Part No.	Description	Capacity at 0.2 bar (6.7 ft)	Inlet Connection	Amp	Fuse size	Outlet Connection
10-24453-04	TA3P10-19 12V Macerator	37 l/min – 10 GPM	1½" (Ø38 mm) hose or 1½" BSP	15 A	20 A	1" (25.4 mm) hose
10-24453-05	TA3P10-19 24V Macerator	37 l/min – 10 GPM	1½" (Ø38 mm) hose or 1½" BSP	7 A	12 A	1" (25.4 mm) hose

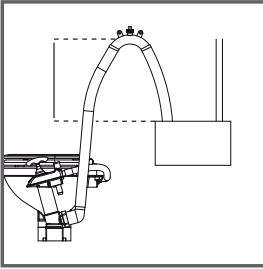
Marine Toilets



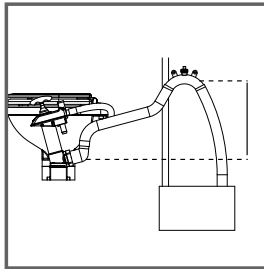
Toilet mounted below the waterline and discharging overboard.



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.

Available in a selected variety of versions marketed under three basic models — Manual, Standard Electric and Silent Electric. The AquaT marine toilet, available in electric or manual versions, has been designed to meet virtually every conceivable lavatory installation situation onboard.

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

It is probably fair to think of most toilets as commonplace products, but look at the features and you are sure to see that the AquaT is far from ordinary.

Quiet, hygienic and reliable, the AquaT marine toilet is perfect for almost any marine toilet room.

- The AquaT bowls are available in three executions:
 - Comfort bowl with a larger comfortable oval seat
 - Compact bowl with a round seat - when installation space is limited
 - Super Compact bowl - smaller and lighter bowl, requiring less space
- All models of AquaT toilets are equipped with soft closing, durable and hygienic plastic seats



AquaT Manual Super Compact
80-47625-01



AquaT Manual Compact
80-47229-01



AquaT Manual Comfort
80-47230-01

AquaT Manual

Incorporates an ergonomically designed, hand-powered piston pump that can be mounted for either left-hand or right-hand use. Available in three models: Super Compact, Compact and Comfort.



AquaT Standard Electric Super Compact
80-47626-01, 12V



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



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

AquaT Standard Electric

Equipped with combined 12V or 24V pump for disposal and flushing. Centrifugal pump with macerator function for disposal and an impeller pump for filling water. Available in three models: Super Compact, Compact and Comfort.



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



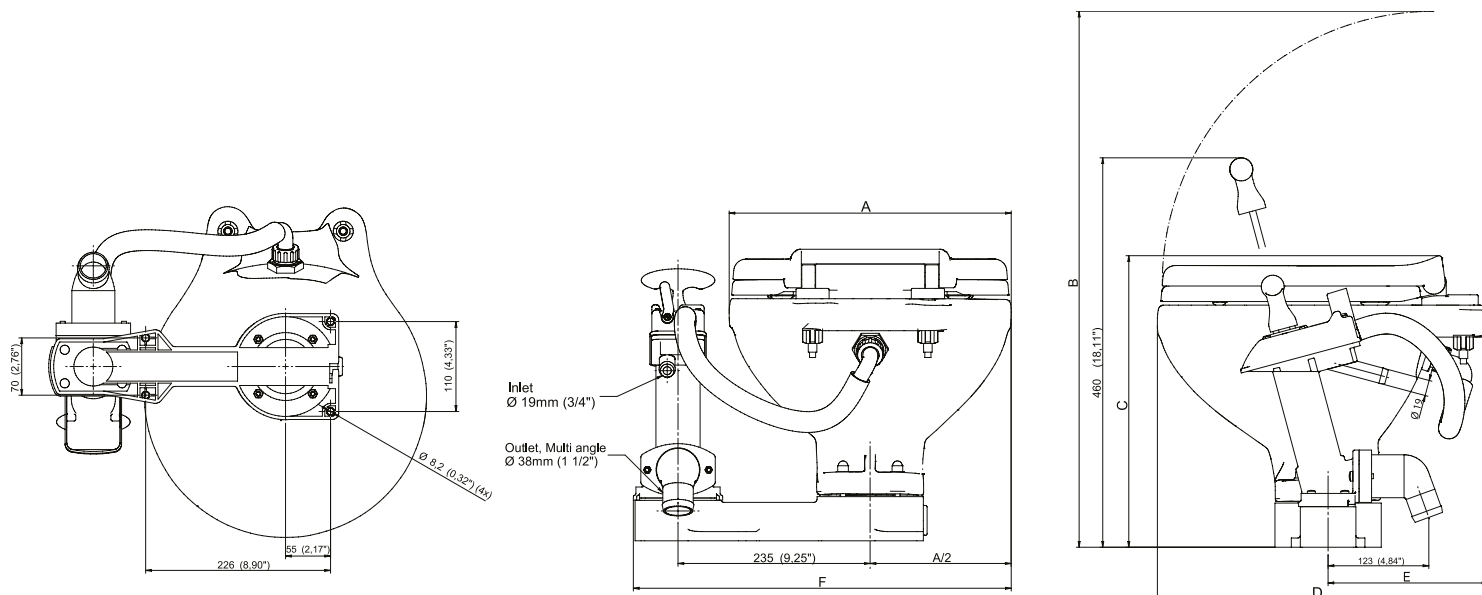
AquaT Silent Electric Comfort
80-47232-01, 12V
80-47232-02, 24V

AquaT Silent Electric

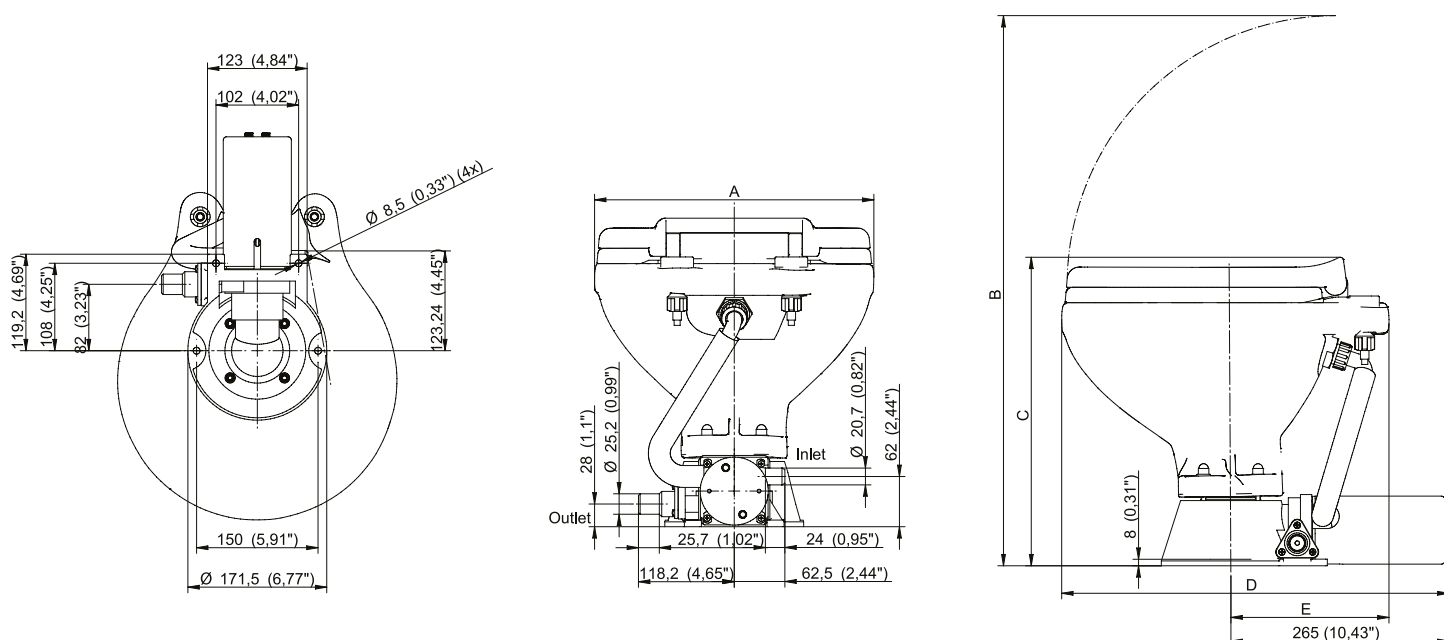
Designed for silent flush and built-in pump for disposal. Centrifugal pump with macerator function and a well-proven Aqua Jet diaphragm pump. Controlled with a three-way control panel. Available in 12V/24V and two models: Compact and Comfort.

AquaT MANUAL - TOILET

Part. nr.	Description	Net weight		A	B	C	D	E	F	mm/ inch
80-47625-01	AquaT Toilet Manual Super Compact	8,5	kg	340	605	300	400	215	460	mm
		19	lbs	13,39	23,82	11,81	15,75	8,46	18,11	inch
80-47229-01	AquaT Toilet Manual Compact	8,3	kg	340	650	350	400	215	455	mm
		18	lbs	13,39	25,59	13,78	15,75	8,46	17,91	inch
80-47230-01	AquaT Toilet Manual Comfort	11	kg	365	725	330	470	250	465	mm
		24	lbs	14,37	28,54	12,99	18,50	9,84	18,31	inch

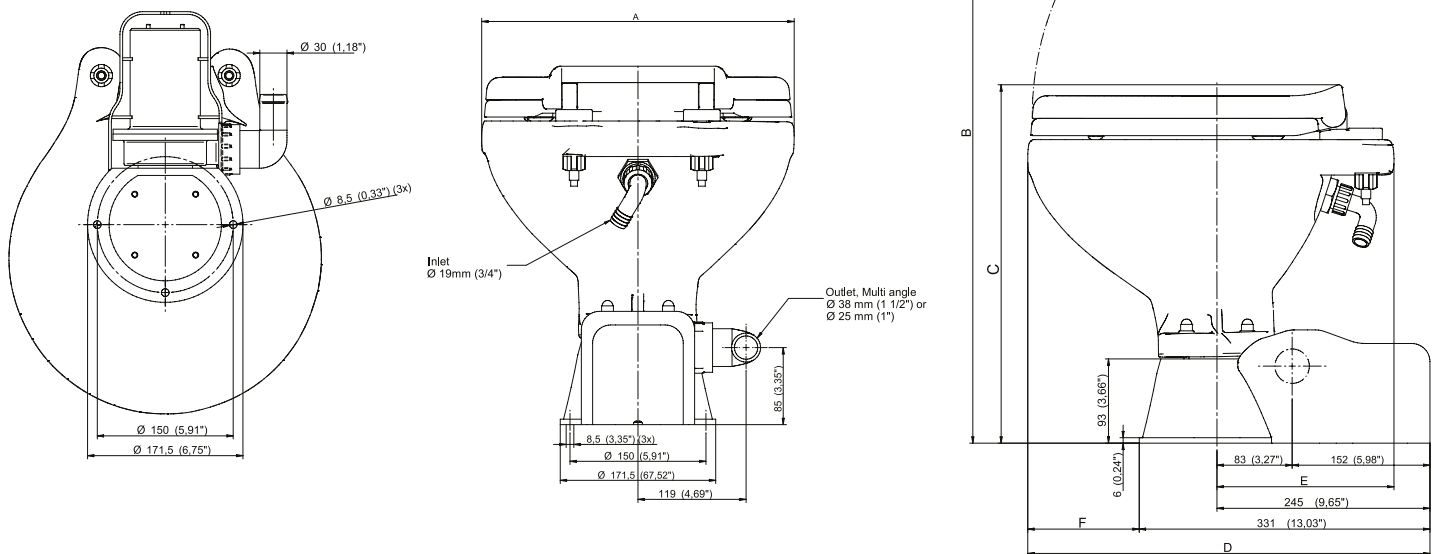
**AquaT STANDARD ELECTRIC - TOILET**

Part No.	Description	Net weight		A	B	C	D	E	mm/ inch
80-47626-01	AquaT Standard Electric Super Compact, 12V	9,2	kg	340	635	330	450	215	mm
		20	lbs	13,39	25,00	12,99	17,72	8,46	inch
80-47435-01	AquaT Standard Electric Compact, 12V	9,5	kg	340	680	380	450	215	mm
80-47435-02	AquaT Standard Electric Compact, 24V	21	lbs	13,39	26,77	14,96	17,72	8,46	inch
80-47436-01	AquaT Standard Electric Comfort, 12V	11	kg	365	755	360	475	260	mm
80-47436-02	AquaT Standard Electric Comfort, 24V	24	lbs	14,37	29,72	14,17	18,70	10,24	inch



AquaT SILENT ELECTRIC - TOILET

Part. nr.	Description	Weight		A	B	C	D	E	F	mm/ inch
80-47231-01	AquaT Silent Electric Compact, 12V	9,2	kg	340	695	395	441	215	110	mm
80-47231-02	AquaT Silent Electric Compact, 24V	20	lbs	13,39	27,36	15,55	17,36	8,46	4,33	inch
80-47232-01	AquaT Silent Electric Comfort, 12V	10,8	kg	365	770	375	456	260	125	mm
80-47232-02	AquaT Silent Electric Comfort, 24V	24	lbs	14,37	30,31	14,76	17,95	10,24	4,92	inch

**Spare Parts - AquaT Toilets**

Part No.	Description
81-47241-04	Soft Close Plastic Seat Compact Toilet
81-47241-05	Soft Close Plastic Seat Comfort Toilet
81-47242-01	Gasket Kit (all gaskets for Manual)
81-47243-01	Plastic Base with Tap and Ring (Manual)
81-47244-01	Plastic handle kit (Manual)
81-47246-01	Intake elbow - inlet pipe complete (Manual and Silent Electric)
81-47246-02	Outlet elbow - outlet pipe complete (Manual and Silent Electric)
81-47247-01	Base group (Silent Electric)

Part No.	Description
81-47248-01	Motor group 12V (Silent Electric)
81-47248-02	Motor group 24V (Silent Electric)
81-47268-01	Base Gasket Kit (Manual)
81-47269-01	Flush Handle kit (Manual)
81-47273-01	Outlet elbow (Silent Electric)
81-47274-01	Bowl gasket (Silent Electric)
81-47519	Impeller kit (Silent Electric)
81-47640-01	Intake elbow Flush 90° Flexible



81-47246-02



81-47248-01



81-47268-01

Accessories - Waste Water Handling and Marine Toilets



VENTED LOOP

Part No.	Description
81-47237-01	Vented Loop, 3/4" (19mm)
81-47237-02	Vented Loop, 1" (25mm)
81-47237-03	Vented Loop, 1 1/2" (38mm)

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

Y-VALVE

Part No.	Description
81-47238-01	Y-valve 1 1/2" Inner diameter, 1" Straight

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

CONVERSION KIT - AquaT SILENT ELECTRIC

Part No.	Description
81-47240-01	Conversion kit AquaT Assembly 12V (Silent Electric)
81-47240-02	Conversion kit AquaT Assembly 24V (Silent Electric)

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

CONVERSION KIT - AquaT STANDARD ELECTRIC

Part No.	Description
81-47442-01	Conversion Kit 12V (Standard Electric)
81-47442-02	Conversion Kit 24V (Standard Electric)

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

REPAIR PUMP KIT - AquaT MANUAL

Part No.	Description
81-47239-01	Conversion kit AquaT (Manual)

This manual toilet pump assembly pairs with any AquaT Manual Marine Toilet. It incorporates an ergonomically designed, hand-powered piston pump that can be mounted for either left handed or right handed use.



CONTROL PANEL - AquaT SILENT ELECTRIC 12V/24V

Part No.	Description
81-36105-01	Control Panel - AquaT Silent Electric Toilets 12V/24V

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



CONTROL PANEL - AquaT STANDARD ELECTRIC 12V/24V

Part No.	Description
81-47520-01	Control Panel - AquaT Standard Electric and Super Compact Toilets 12V/24V

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

FLUSH PUMP 3.5

Part No.	Description
10-13399-05	Flush Pump 3.5 GPM with strainer 12V
10-13399-06	Flush Pump 3.5 GPM with strainer 24V

An efficient and robust flush pump to be used with on-off switch for any marine 12V/24V toilet with external flushing pump system. Fits with all Silent Electric models. Delivers 13 l/min/3.5 GPM.

VIKING POWER VACUUM

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

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

VIKING UNIVERSAL

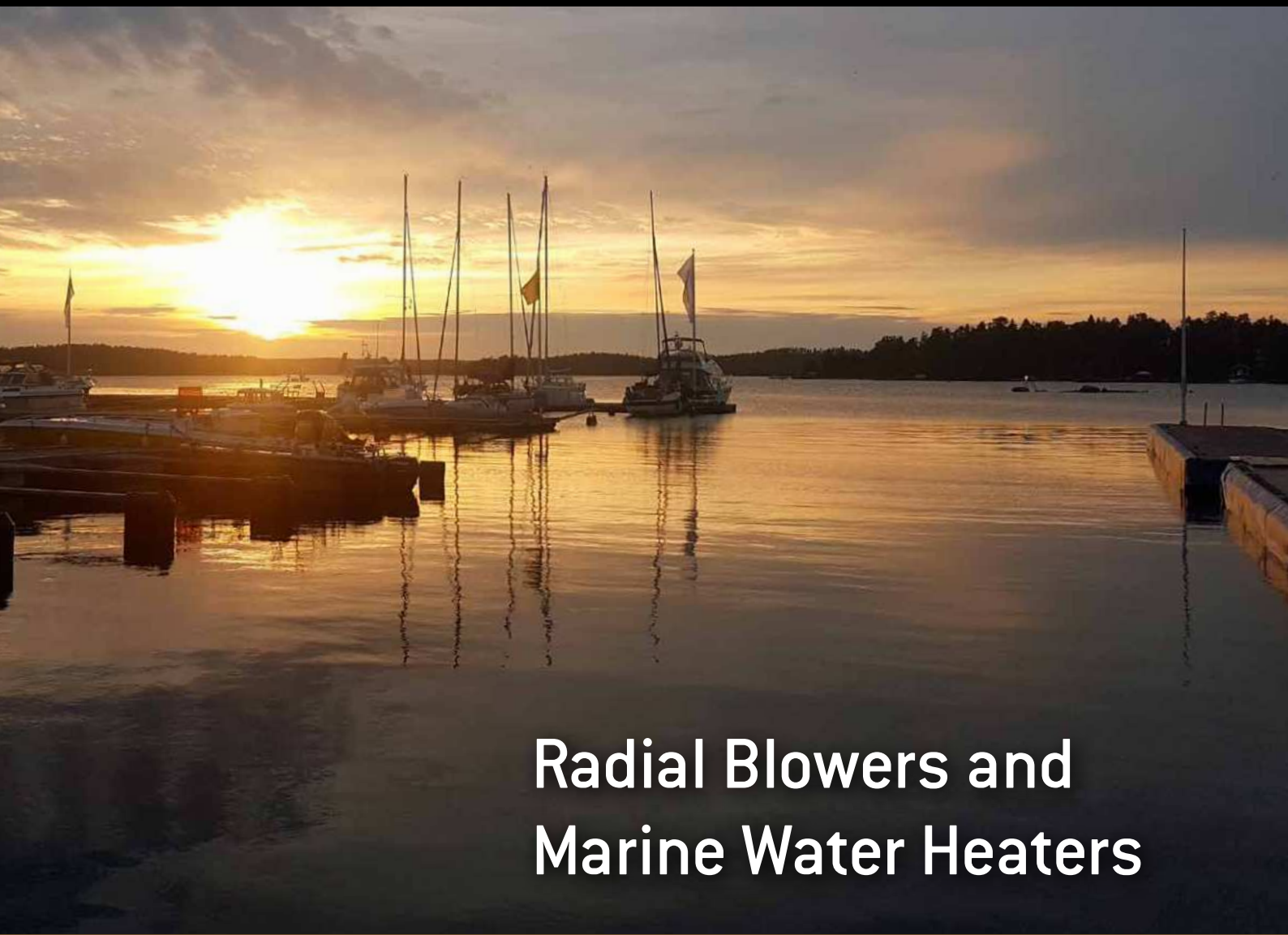
Part No.	Description
10-13530-01	Viking Universal with connection Ø38 mm (1 1/2")
09-36250	Viking Universal Through Deck Kit

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

SOLENOID

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

Electric valve to be used with centralized fresh water system.



Radial Blowers and Marine Water Heaters



AirV – Extra Heavy Duty Radial Blowers

ISO 9097
ISO 8846
ISO 10133
EN 55014-1

AquaH - Marine Water Heaters

EN 60335-1
EN 60335-2-21 + A1 + EC
EN 55014-1 + A1 + A2
EN 55014-2 + A1

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





80-47616-01



80-47420-01



80-47417-01

Extra Heavy Duty Radial Blowers

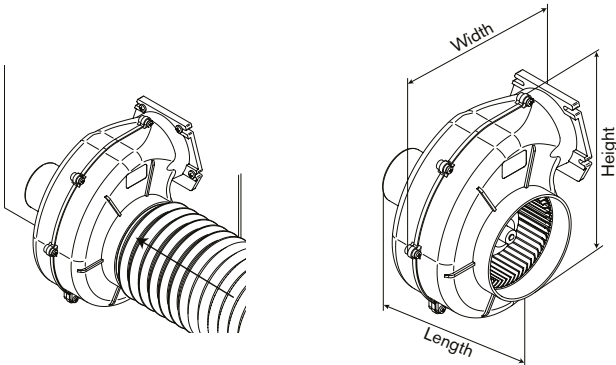
Marine radial blowers designed for engine compartment ventilation prior to start up. Suitable for air intake or extraction in bilges, galleys, accommodation and other compartments.

Flange Mount and Flex Mount design with double ball bearing motor, high-impact anti-shock ABS body with shaft and screws in stainless steel.

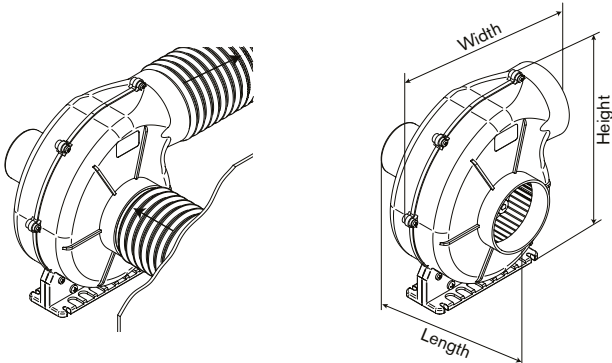
AirV – MARINE RADIAL BLOWERS

Part No.	Description	Capacity	Dimensions H x W x L	Port Connections		Current [Amp]
				Inlet	Flange Outlet	
80-47416-01	AirV 3-280 Flange Mount, 12V	280 m³/h, 163 CFM	198 x 171 x 195 mm / 6.89 x 6.3 x 7.68"	Ø 75 mm / Ø 3"	92 x 80 / 3,62 x 3,15"	3.9
80-47416-02	AirV 3-280 Flange Mount, 24V	280 m³/h, 163 CFM	197 x 173 x 195 mm / 6.89 x 6.3 x 7.68"	Ø 75 mm / Ø 3"	92 x 80 / 3,62 x 3,15"	2.5
80-47417-01	AirV 4-550 Flange Mount, 12V	550 m³/h, 324 CFM	277 x 259 x 160 mm / 10.91 x 10.08 x 6.61"	Ø 100 mm / Ø 4"	146 x 118 / 5,75 x 4,65"	12.5
80-47417-02	AirV 4-550 Flange Mount, 24V	550 m³/h, 324 CFM	277 x 259 x 160 mm / 10.91 x 10.08 x 6.61"	Ø 100 mm / Ø 4"	146 x 118 / 5,75 x 4,65"	7
80-47418-01	AirV 4-750 Flange Mount, 12V	750 m³/h, 441 CFM	277 x 257 x 181 mm / 10.91 x 10.08 x 6.73"	Ø 150 mm / Ø 6"	146 x 118 / 5,75 x 4,65"	14.5
80-47418-02	AirV 4-750 Flange Mount, 24V	750 m³/h, 441 CFM	277 x 257 x 181 mm / 10.91 x 10.08 x 6.73"	Ø 150 mm / Ø 6"	146 x 118 / 5,75 x 4,65"	8.5
80-47419-02	AirV 4-1000 Flange Mount, 24V	1000 m³/h, 589 CFM	278 x 258 x 203 mm / 10.91 x 10.08 x 8.19"	Ø 150 mm / Ø 6"	146 x 118 / 5,75 x 4,65"	15.5
Part No.	Description	Capacity	Dimensions H x W x L	Port Connections		Current [Amp]
				Inlet	Outlet	
80-47420-01	AirV 4-550 Flex Mount, 12V	550 m³/h, 324 CFM	296 x 257 x 161 mm / 11.61 x 10.08 x 6.61"	Ø 100 mm / Ø 4"	Ø 110 mm / Ø 4,33"	12.5
80-47420-02	AirV 4-550 Flex Mount, 24V	550 m³/h, 324 CFM	296 x 257 x 161 mm / 11.61 x 10.08 x 6.61"	Ø 100 mm / Ø 4"	Ø 110 mm / Ø 4,33"	7
80-47421-01	AirV 4-750 Flex Mount, 12V	750 m³/h, 441 CFM	297 x 257 x 182 mm / 11.61 x 10.08 x 6.61"	Ø 150 mm / Ø 6"	Ø 110 mm / Ø 4,33"	14.5
80-47421-02	AirV 4-750 Flex Mount, 24V	750 m³/h, 441 CFM	297 x 257 x 182 mm / 11.61 x 10.08 x 6.61"	Ø 150 mm / Ø 6"	Ø 110 mm / Ø 4,33"	8.5
80-47422-02	AirV 4-1000 Flex Mount, 24V	1000 m³/h, 589 CFM	296 x 257 x 201 mm / 11.61 x 10.08 x 8.19"	Ø 150 mm / Ø 6"	Ø 110 mm / Ø 4,33"	15.5

Flange Mount



Flex Mount



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 – MARINE WATER HEATER

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 are provided with a sturdy compact plastic end cover which also includes the mounting brackets.

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

Part No.	Description
56-47455-01	AquaH Marine Water Heater 1200W / 22L BSP 230V
56-47455-03	AquaH Marine Water Heater 500W / 22L BSP 230V
56-47456-01	AquaH Marine Water Heater 1200W / 30L BSP 230V
56-47456-03	AquaH Marine Water Heater 500W / 30L BSP 230V
56-47457-01	AquaH Marine Water Heater 1200W / 45L BSP 230V
56-47457-03	AquaH Marine Water Heater 500W / 45L BSP 230V
56-47458-01	AquaH Marine Water Heater 1200W / 60L BSP 230V
56-47458-03	AquaH Marine Water Heater 500W / 60L BSP 230V
56-47459-01	AquaH Marine Water Heater 1200W / 80L BSP 230V
56-47459-03	AquaH Marine Water Heater 500W / 80L 230V

Accessories

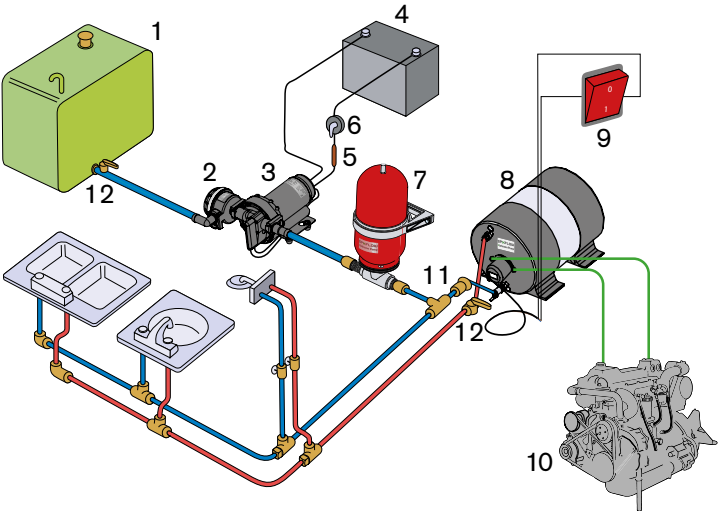
Part No.	Description
56-47464-01	AquaH Thermostat Water Mixer Kit 1/2" BSP

Spare Parts

Part No.	Description
56-A.100-0086	AquaH Gasket
56-A.280-0014	AquaH Heater Element 500W 230V

Typical Water Heater Application

1. Water Tank
2. PUMProtector Inlet Strainer
3. Aqua Jet Water Pressure System Pump
4. Battery
5. Fuse
6. Switch
7. Accumulator Tank
8. AquaH Water Heater
9. ON/OFF Bipolar Switch
10. Motor
11. Check Valve
12. Shut-off Valve

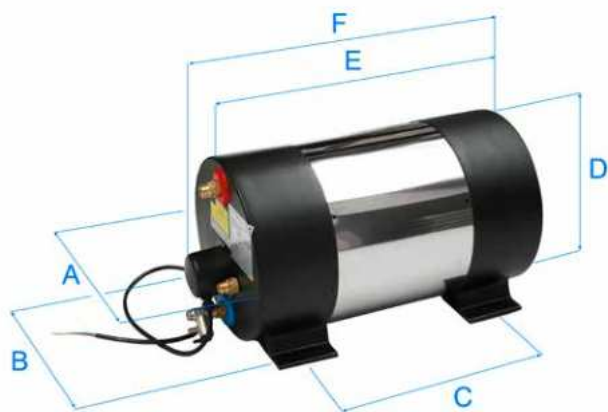


56-47456-01



56-47457-01



AquaH - DIMENSIONS

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

Electric supply 220-240 V ~ 50 Hz

Water connections 1/2"

AquaH - HEATING TIME**1200W**

Part 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

Table shows time in minutes

500W

Part 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

Table shows time in minutes

Flexible Impeller Pumps and Impellers



Flexible impeller pumps provide an efficient solution to most raw water pumping needs. The pumps are self-priming and can pass fairly large solids without clogging or damaging the pumps.

Our engine cooling pumps are designed to the demands of engine manufacturers and are built to take rough treatment.

We supply engine cooling pumps to the world's leading marine motor manufacturers, not just because of our renowned pumps; but also because of our advanced original impeller design and technology - the heart of an engine cooling pump.

Benefits with SPX FLOW Johnson Pump Original Impellers:

- Ensures correct cooling flow
- Significantly longer service life
- Excellent self-priming capability
- Ensures sufficient cooling directly at start up
- Our impellers are manufactured in different compounds to strict tolerances for optimal functionality
- Correct impeller dimensions

The Unique MC97 rubber compound in many of our impellers provides maximum life, especially for applications where the end user doesn't run the engine on a regular basis:

- Stable pressure delivery over time
- Minimized failures due to fatigue
- Minimized swelling

Self-Priming Flexible Impeller Pumps

Heavy Duty Impeller Pumps



F35B-8

The Heavy Duty range of multi-purpose bronze pumps are raw water resistant and have a compact design. These pumps are designed for a number of applications onboard and have gained a time-tested reputation for quality and reliability.

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. These pumps are also ideally suited on shore for emptying septic tanks and for flushing clean and filling water tanks.

Available in sizes from 3/8" to 1 1/2" (4 l/min to 279 l/min).

Vacuum switch (see page 45) as extra accessory for F8B-8007 only.

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

HEAVY DUTY IMPELLER PUMPS - FB-8

Part No.	Description*	Impeller	Connection	Total Length	Total Width	Height to Shaft	Weight	Drive Shaft Ø
10-24569-01	F35B-8	09-808B-1	3/8" BSP	108 mm	108.5 mm	30 mm	0.5 kg – 1.2 lbs	12 mm
10-24570-01	F4B-8	09-810B-1 (09-810B-9**)	3/8" BSP	110.5 mm	80 mm	50 mm	0.8 kg – 1.8 lbs	12 mm
10-24571-01	F5B-8	09-1027B-1 (09-1027B-9**)	3/4" BSP	151 mm	106 mm	50 mm	1.6 kg – 3.5 lbs	17 mm
10-24572-01	F7B-8	09-1028BT-1 (09-1028B-9**)	1" BSP	169.6 mm	120 mm	50 mm	1.9 kg – 4 lbs	17 mm
10-13021-1	F8B-8	09-819B (09-819B-9**)	1 1/2" BSP	217 mm	160 mm	65 mm	5.9 kg – 13 lbs	24 mm

*See page 56 for pump type specification system

**Pump with nitrile impeller available on request



10-24569-01
F35B-8



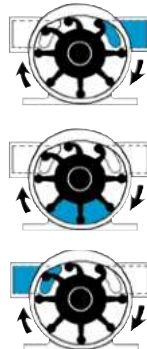
10-24572-01
F7B-8



10-13021-1
F8B-8

FLEXIBLE IMPELLERS - 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.



EXTRA HEAVY DUTY IMPELLER PUMPS - FB-3000

Whenever you need greater strength or service from a pump, use an extra heavy duty flexible impeller pump with separate bearing housing and mechanical seal for less wear and longer life. These pumps cover the entire range of marine applications and may be used as cooling water pumps, bilge pumps, deckwash pumps, emergency and fire fighting pumps, etc.

Available in sizes from 3/4" to 2 1/2" (13 l/min to 625 l/min). Wear parts are easily replaceable and service kits are available for all standard models. **Vacuum switch as extra accessory, see below.**

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

Part No.	Description*	Impeller	Connection	Length	Width	Height to Shaft	Weight	Drive Shaft Ø
10-24210-1	F5B-3000	09-1027B-1 (09-1027B-9**)	3/4" BSP	195 mm	106 mm	50 mm	2,9 kg – 6,5 lbs	17 mm
10-24209-1	F7B-3000	09-1028BT-1 (09-1028B-9**)	1" BSP	213 mm	120 mm	50 mm	3,1 kg – 6,9 lbs	17 mm
10-13024-1	F8B-3000 VF	09-819B (09-819B-9**)	Port Adaptor Kit	255 mm	152 mm	80 mm	7,6 kg – 16,5 lbs	24 mm
10-13026-1	F9B-3000	09-802B (09-814B***)	2" BSP	282 mm	192 mm	80 mm	9,3 kg – 21 lbs	24 mm
10-13175-01	F8B-3000 TSS	09-819B (09-819B-9**)	Port Adaptor Kit	255 mm	198 mm	80 mm	7,6 kg – 16,5 lbs	24 mm
10-13225-01	F9B-3000 VF	09-802B (09-814B***)	Port Adaptor Kit	282 mm	152 mm	80 mm	9,3 kg – 21 lbs	24 mm
10-13177-01	F9B-3000 TSS	09-802B (09-814B***)	Port Adaptor Kit	282 mm	200 mm	80 mm	9,3 kg – 21 lbs	24 mm

*See page 56 for pump type specification system

**Pump with nitrile impeller available on request

***Pump with alternative impeller available on request

EXTRA HEAVY DUTY, HIGH FLOW, IMPELLER PUMPS - F95B-3000

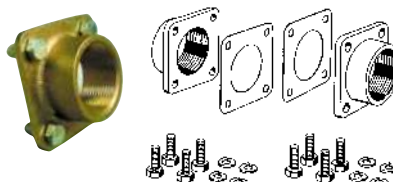
Part No.	Description*	Impeller	Connection	Length	Width	Height to Shaft	Weight	Drive Shaft Ø
10-13121-01	F95B-3000	09-820B	2 1/2" BSP	354 mm	246/295 mm	80 mm	17,2 kg – 38 lbs	24 mm

*See page 56 for pump type specification system

PORT ADAPTOR KIT

Part No.	Description*
09-43112	1 1/2" BSP for F8B-3000/5000-VF, F8B-3000/5000-TSS
09-46557-01	2" BSP for F9B-3000/5600-VF and F9B-3000/5600-TSS
09-45562	1 1/2" NPT for F8B-3000/5000-VF, F8B-3000/5000-TSS
09-46557-02	2" NPT for F9B-3000/5600-VF and F9B-3000/5600-TSS

*See page 56 for pump type specification system



10-24210-1
F5B-3000



10-24209-1
F7B-3000



10-13024-1
F8B-3000 VF



10-13026-1
F9B-3000



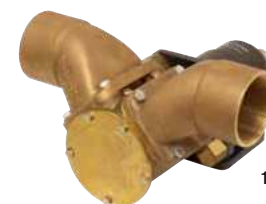
10-13175-01
F8B-3000 TSS



10-13225-01
F9B-3000 VF



10-13177-01
F9B-3000 TSS



10-13121-01
F95B-3000

VACUUM SWITCH

For automatic shut-off operation to prevent pump damage. The vacuum switch works with all self-priming impeller pumps to prevent dry running when emptying tanks or bilge pumping. The vacuum switch automatically shuts the pump off when the bilge/tank is dry. With the switch fitted, you can start the pump by a remote push button or manually by depressing a lever on the switch.

Part No.	Description
09-45053	Vacuum Switch





10-13022-99



10-24577-99



10-24116-99



10-13025-99



10-13226-99



10-13027-99



10-13176-99



10-13178-99



10-13143-99

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 NPT
Clutch	Electro-Magnetic 12/24V DC
Pulley	2xA or 1xB-groove
Pulley Ø	Ø178 mm / 7"

HEAVY DUTY ELECTRO-MAGNETIC CLUTCH PUMPS - FB-5001

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 2½" (20 l/min to 625 l/min), with clutches in 12 or 24 volts. Wear parts are easily replaceable and service kits are available for all standard models. Vacuum Switch as extra accessory, see page 46. *Note! Clutch to be ordered separately.*

Part No.	Description*	Impeller	Connection	Length	Width	Height to Shaft	Weight
10-24577-99	F7B-5001	09-1028B	1" BSP	156 mm	120 mm	50 mm	5.8 kg – 12.7 lbs
10-13022-99	F8B-5001*	09-819B	1½" BSP	225 mm	160 mm	65 mm	9.9 kg – 22 lbs

* See page 56 for pump type specification system

CHOICE OF CLUTCH

Part No.	Description
0.3454.001	Electro-Magnetic Clutch, 12V 2xA 7" Pulley
0.3454.002	Electro-Magnetic Clutch, 24V 2xA 7" Pulley
0.3454.003	Electro-Magnetic Clutch, 12V 1xB 7" Pulley
0.3454.004	Electro-Magnetic Clutch, 24V 1xB 7" Pulley
0.3454.050	Coil 12V
0.3454.051	Coil 24V



EXTRA HEAVY DUTY ELECTRO-MAGNETIC CLUTCH PUMPS - FB-5000

Note! Clutch to be ordered separately.

Part No.	Description*	Impeller	Connection	Length	Width	Height to Shaft	Weight
10-24116-99	F7B-5000	09-1028B	1" BSP	226 mm	120 mm	50 mm	6.9 kg – 15 lbs
10-13025-99	F8B-5000 VF	09-819B	Port Adaptor Kit	265 mm	152 mm	80 mm	11.9 kg – 26 lbs
10-13176-99	F8B-5000 TSS	09-819B	Port Adaptor Kit	265 mm	198 mm	80 mm	11.9 kg – 26 lbs
10-13027-99	F9B-5600	09-802B (09-814B**)	2" BSP	290 mm	192 mm	80 mm	13.2 kg – 29 lbs
10-13226-99	F9B-5600 VF	09-802B (09-814B**)	Port Adaptor Kit	290 mm	152 mm	80 mm	13.2 kg – 27 lbs
10-13178-99	F9B-5600 TSS	09-802B (09-814B**)	Port Adaptor Kit	290 mm	200 mm	80 mm	13.2 kg – 27 lbs

*See page 56 for pump type specification system

**Pump with alternative impeller available on request

EXTRA HEAVY DUTY, HIGH FLOW ELECTRO-MAGNETIC CLUTCH PUMP - F95B-5000

Part No.	Description*	Impeller	Connection	Length	Width	Height	Weight
10-13143-99	F95B-5000	09-820B	2½" BSP	358 mm	246/295 mm	226/201 mm	21 kg – 46 lbs

The Port Adaptors can be fitted either vertically or horizontally.

*See page 56 for pump type specification system

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	23.0	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	21.1	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	19.3	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.

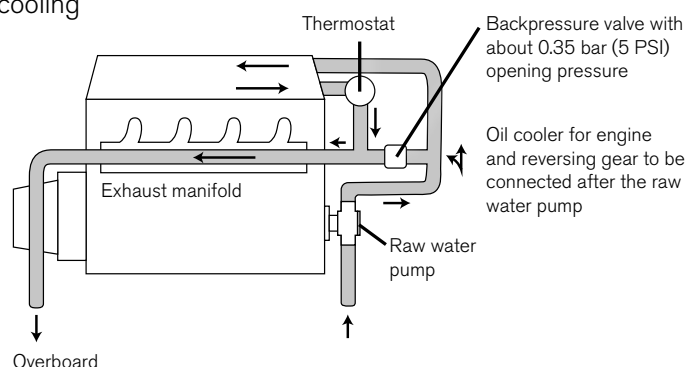
A dry pump can lift water up to as much as 3 meters. Thus a flexible impeller pump being used for engine cooling does not need to be located below the water line or manually primed. An added feature of flexible impeller pumps is that they can pass fairly large solids without clogging or damaging the 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.

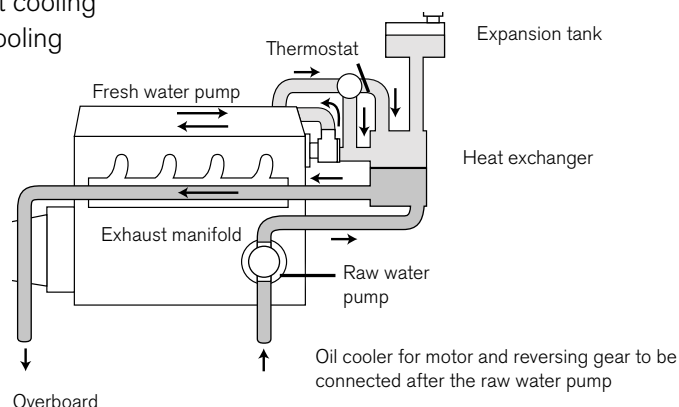
A general feature of all flexible impeller pumps is that they cannot be permitted to run dry for more than 30 seconds. Both the impeller and the seals depend upon the water for lubrication and will soon fail if run dry. Wear parts are easily replaceable, and service kits are available for all standard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

DIFFERENT TYPES OF COOLING SYSTEMS

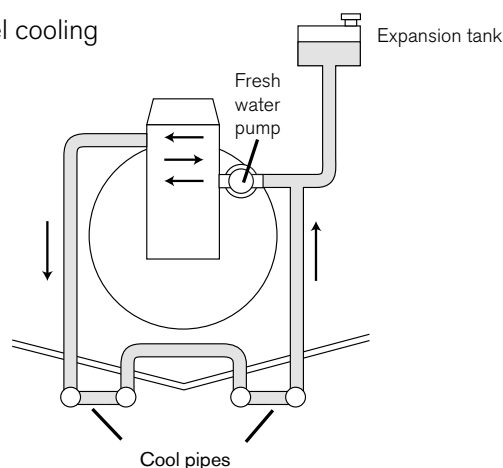
Direct cooling

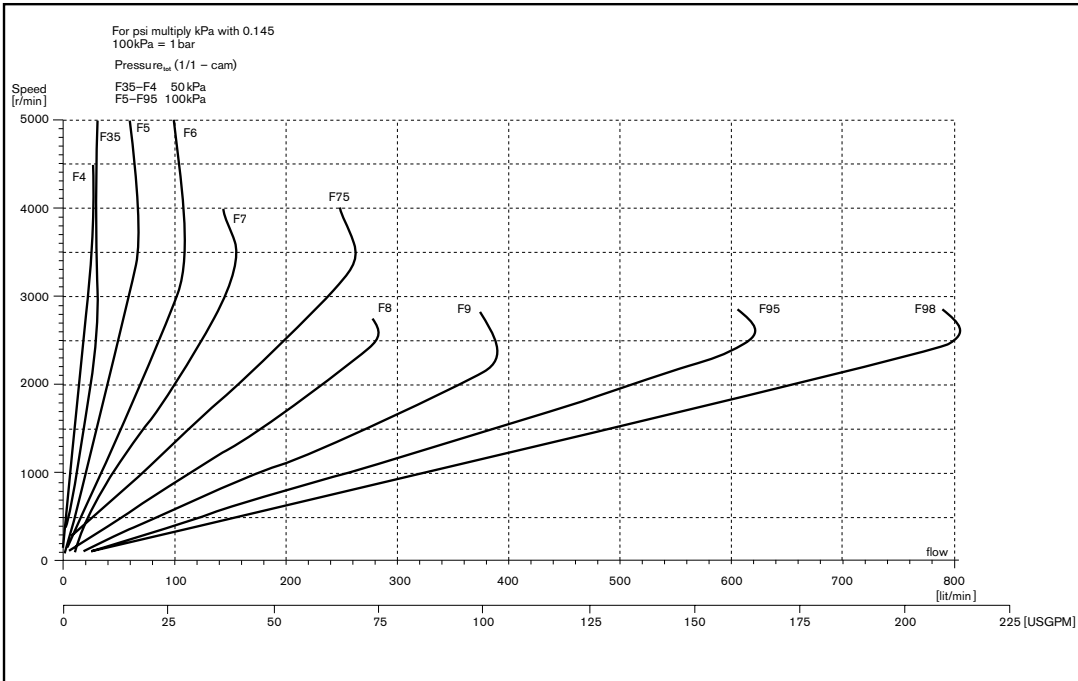


Indirect cooling
Inter cooling



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 FLOW Johnson Pump can offer a number of alternatives in its DC driven Circulation Pump series (see page 29 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/ 131°F). 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 a water and anti-freeze mixture.

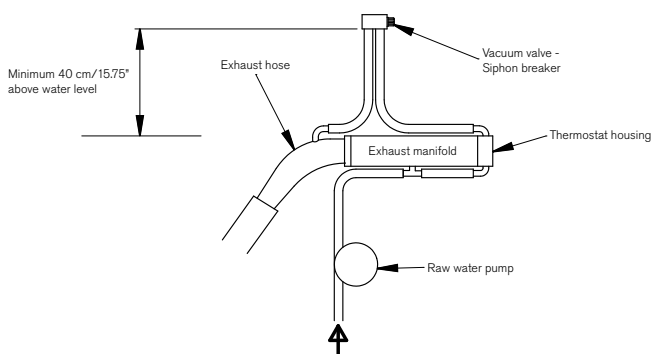
COOLING CAPACITY

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

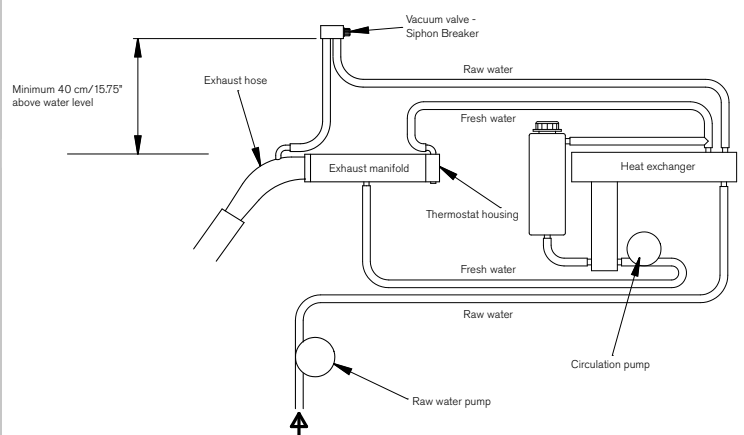
- Engine size and type (gasoline or diesel)
- Type of cooling system (size of heat exchanger)
- Water cooled engine oil, reverse gear, exhaust system

Contact your local dealer for more information, or for indirect cooling systems your supplier of heat exchangers.

Raw Water Cooled Engine



Fresh Water Cooled Engine



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 FLOW Johnson Pump is one of the original equipment pump suppliers to the largest manufacturers world-wide of inboard engines. Both flange mounted and pulley driven pedestal pumps can be used to provide cooling with a maximum of ease and flexibility. Pump ports are available in sizes from $\frac{3}{8}$ " to 2 $\frac{1}{2}$ ".

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 BSP/ FB-8007 NPT

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 $\frac{1}{2}$ ", all with permanently lubricated double ball bearings and mechanical seal.

• FB-3000 BSP OR FLANGE/ FB-3007 NPT

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-8007
Belt driven pump



F8B-5000
Belt driven pump



F6B-9
Crank shaft pulley mounted



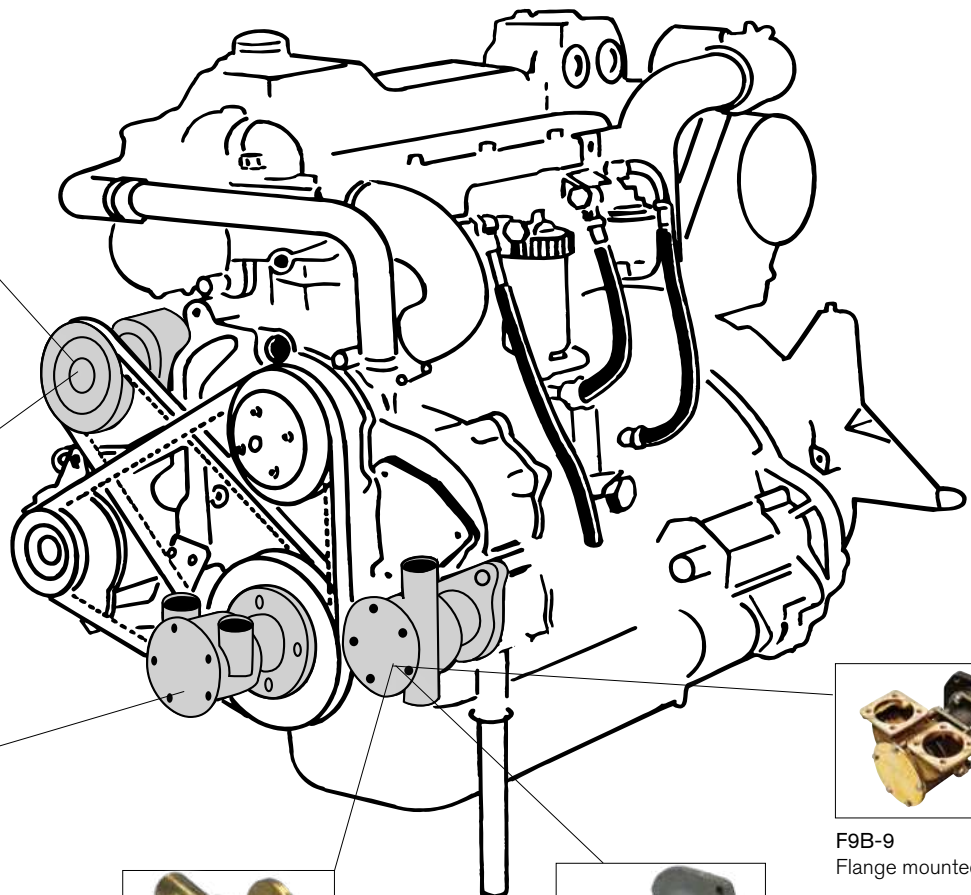
F4B-9
Flange mounted pump



F7B-9
Flange mounted pump



F9B-9
Flange mounted pump



Accessories Impeller Pumps and Impellers

VACUUM VALVE - SIPHON BREAKER

A vacuum valve is an inexpensive form of insurance against water intrusion in an engine, which could lead to expensive repairs. The maximum ambient temperature should not exceed 60 °C (140°F).

The valve opens at a pressure which is equivalent to 30-50mm (7.47-12.45 mbar) Water Column. The materials used are resistant to sea water, 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.



Part No.	Description
09-47316-01	Vacuum Valve 12 mm
09-47316-02	Vacuum Valve 16 mm
09-47316-03	Vacuum Valve 19 mm

Part No.	Description
09-47316-04	Vacuum Valve 22 mm
09-47316-05	Vacuum Valve 25 mm
09-47316-06	Service Kit Vacuum Valve

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

IMPULLERS

Removal tools for impellers.

Part No.	Description
09-47165-01	Puller for 09-1028BT
09-47163-01	Puller for 09-821BT
09-36166-01	Puller for 09-820B
09-47154-01	Puller for 09-812BT and 09-1027BT
09-950-9300	JP Impuller*

*Universal impuller used for all sizes and executions with or without threads



09-47165-01



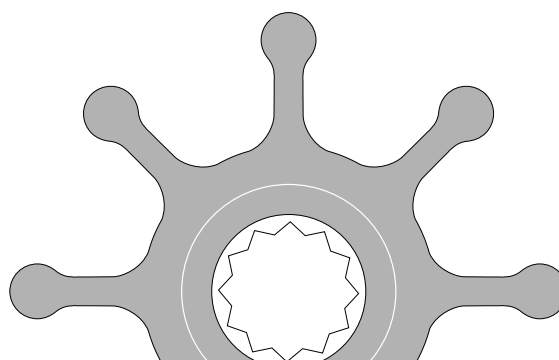
09-36166-01



09-47163-01



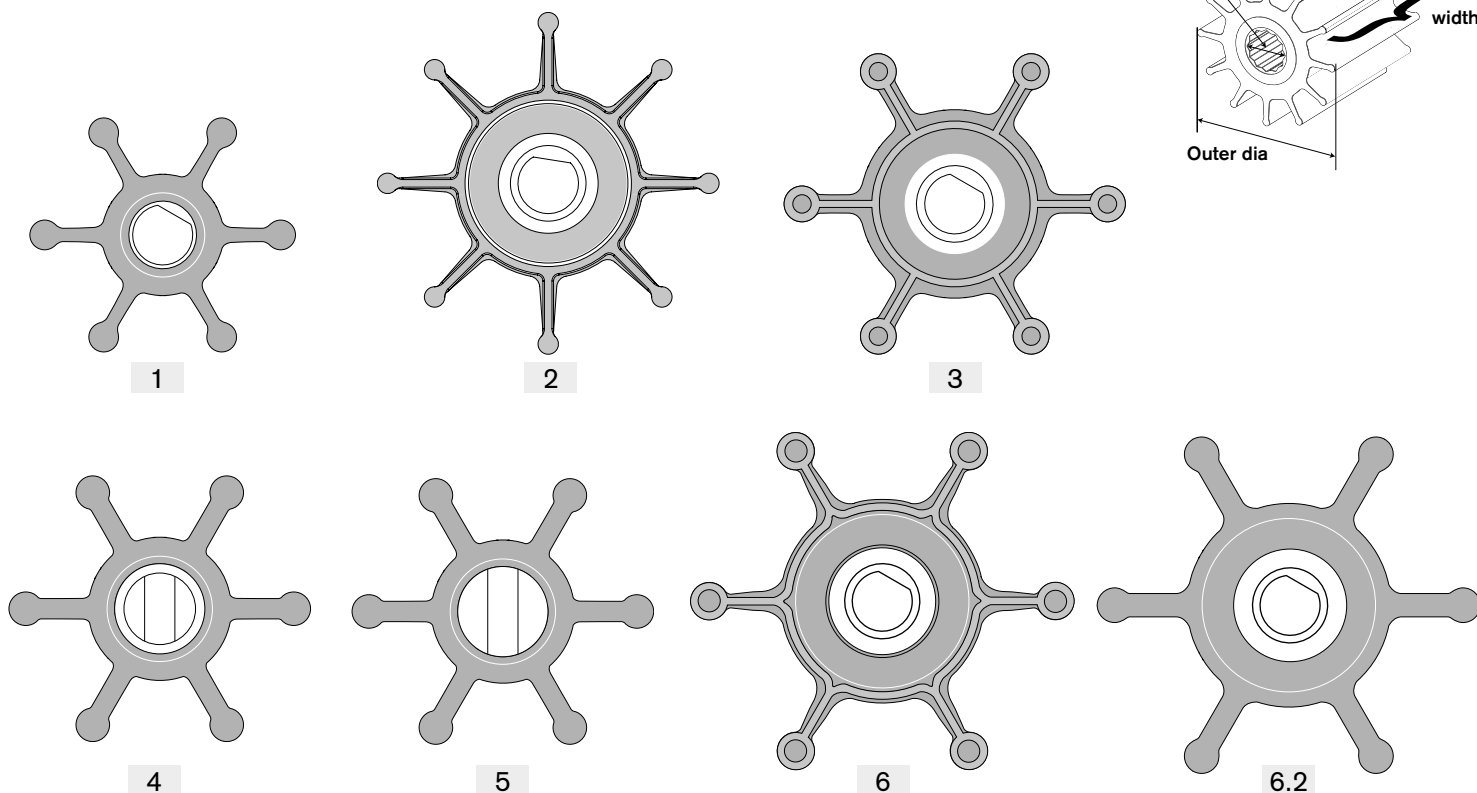
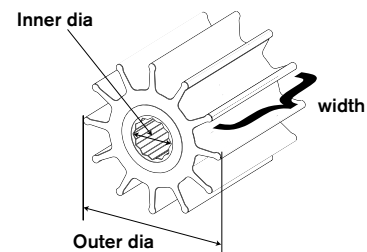
09-950-9300



Take good care of the cooling system
- Change to a new impeller every year!

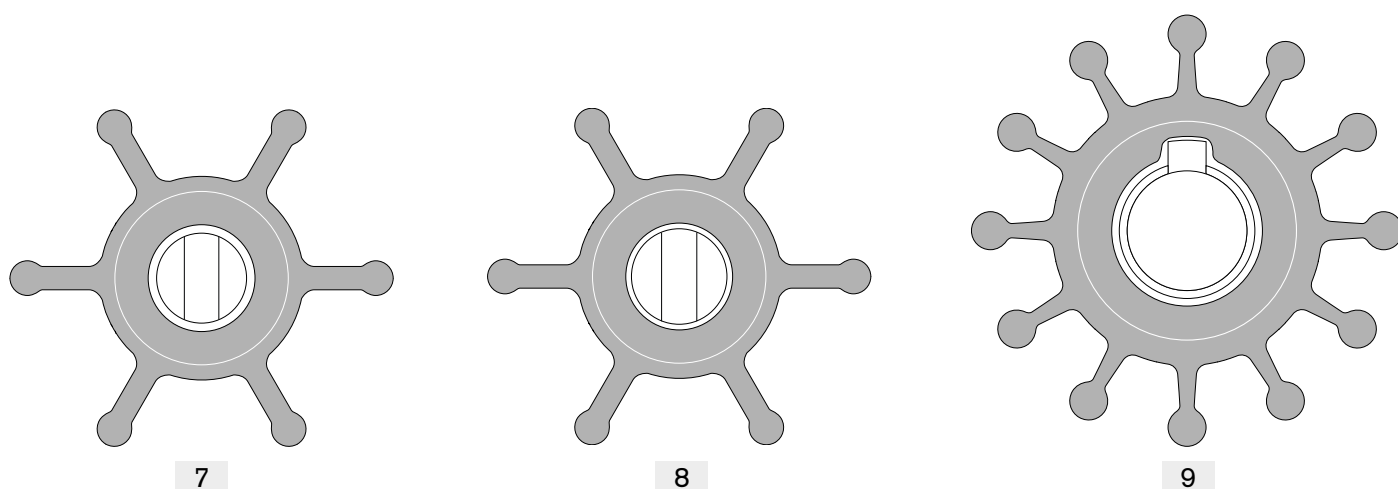
SPX FLOW Johnson Pump Marine Brand Original Impellers

SCALE 1:1



Ref.	Pump	Impeller Kit	Material *	Outer dia		Inner dia		Width		Replaces Jabsco No	
				mm	inch	mm	inch	mm	inch	Europe	USA
1	F2	09-1077B-9	Nitrile	35.2	1.29	8.0 / Flat	0.31 / Flat	12.7	0.50		
2	F3	09-843S-9	Nitrile	45.2	1.78	8.0 / Flat	0.31 / Flat	12.8	0.50		
3	TA3P10	09-1052S-9	Nitrile	45.2	1.78	8.0 / Flat	0.31 / Flat	12.8	0.50		
4	F35	09-806B-1	MC97/EPDM	40.0	1.58	9.5	0.37	19.0	0.75	4528-0001	
5	F35	09-808B-1	MC97/EPDM	40.0	1.58	12.0	0.47	19.0	0.75	22405-0001	
6	F4	09-824P-1	MC97/EPDM	50.8	2.00	8.0 / Flat	0.31 / Flat	22.0	0.87		
6	F4	09-824P-9	Nitrile	50.8	2.00	8.0 / Flat	0.31 / Flat	22.0	0.87	6303-0003	
6.2	F4	09-824P-2	Polyurethane	50.8	2.00	8.0 / Flat	0.31 / Flat	22.0	0.87	6303-007-P "Green Impeller"	

* MC97/EPDM and Neoprene - for cooling, Nitrile - oil resistant

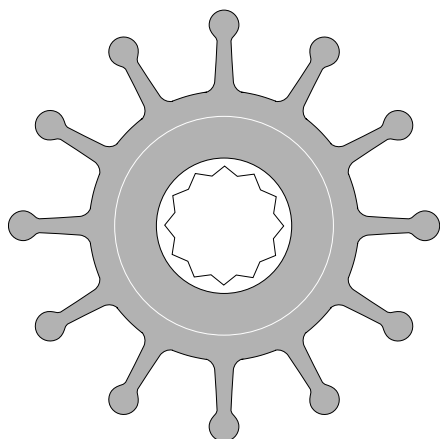


Ref.	Pump	Impeller Kit	Material *	Outer dia		Inner dia		Width		Replaces Jabsco No	
				mm	inch	mm	inch	mm	inch	Europe	USA
7	F4	09-810B-1	MC97/EPDM	50.8	2.00	12.0	0.47	22.0	0.87	18653-001	
7	F4	09-810B-9	Nitrile	50.8	2.00	12.0	0.47	22.0	0.87		
8	F4	09-1026B-1	MC97/EPDM	50.8	2.00	12.7	0.50	22.0	0.87	673-0001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

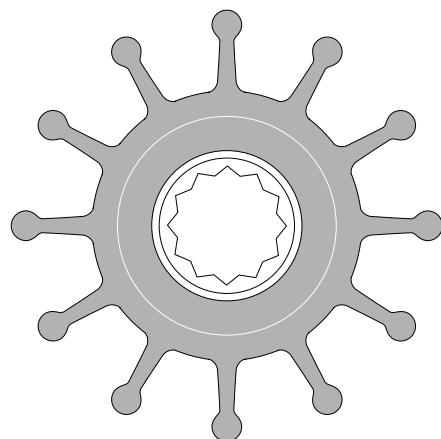
* MC97 and Neoprene - for cooling, Nitrile - oil resistant

SPX FLOW Johnson Pump Marine Brand Original Impellers

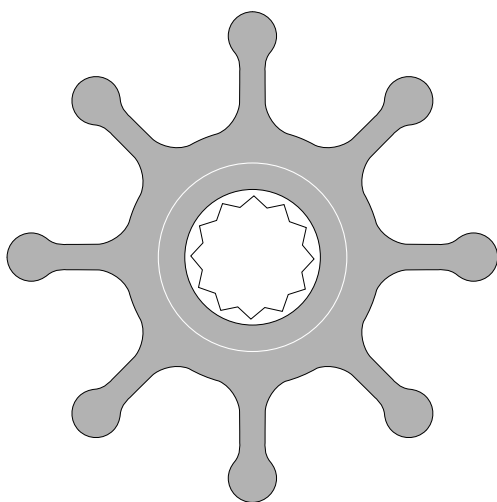
SCALE 1:1



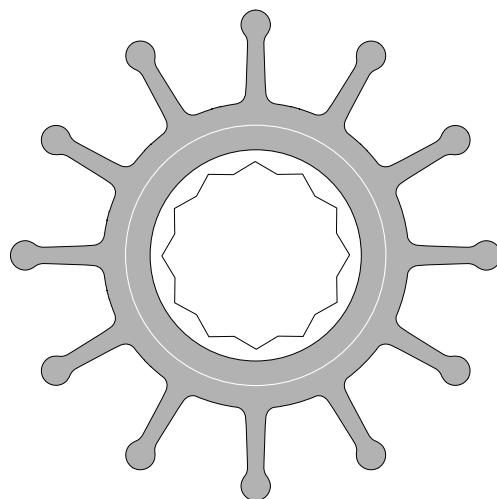
10



11



12



13

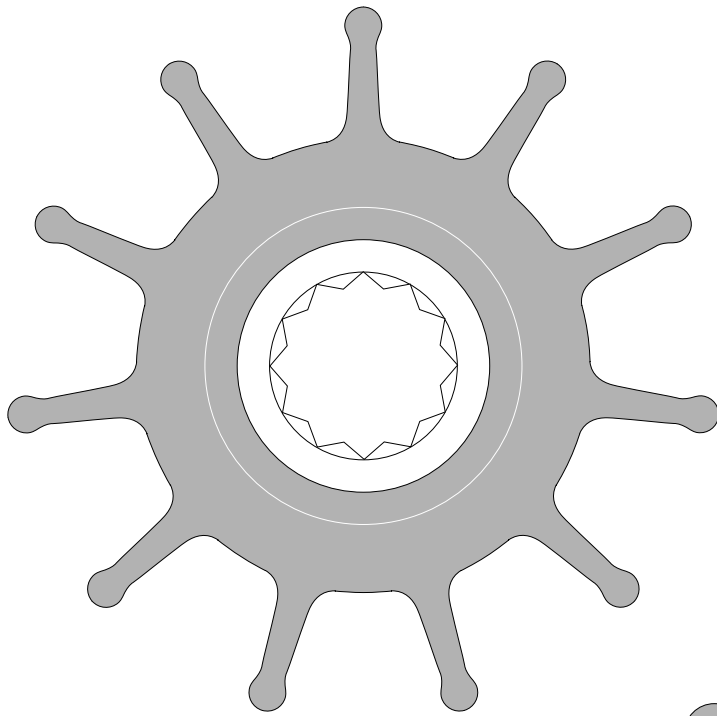
Ref.	Pump	Impeller Kit	Material *	Outer dia		Inner dia		Width		Replaces Jabsco No	
				mm	inch	mm	inch	mm	inch	Europe	USA
10	F5	09-1027B-1	MC97/EPDM	57.1	2.25		Splines	31.5	1.24		1210-0001
10	F5	09-1027B-10	MC97/EPDM	57.1	2.25		Splines	31.85	1.24		
10	F5	09-1027B-9	Nitrile	57.1	2.25		Splines	31.5	1.24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

* MC97/EPDM and Neoprene - for cooling, Nitrile- oil resistant

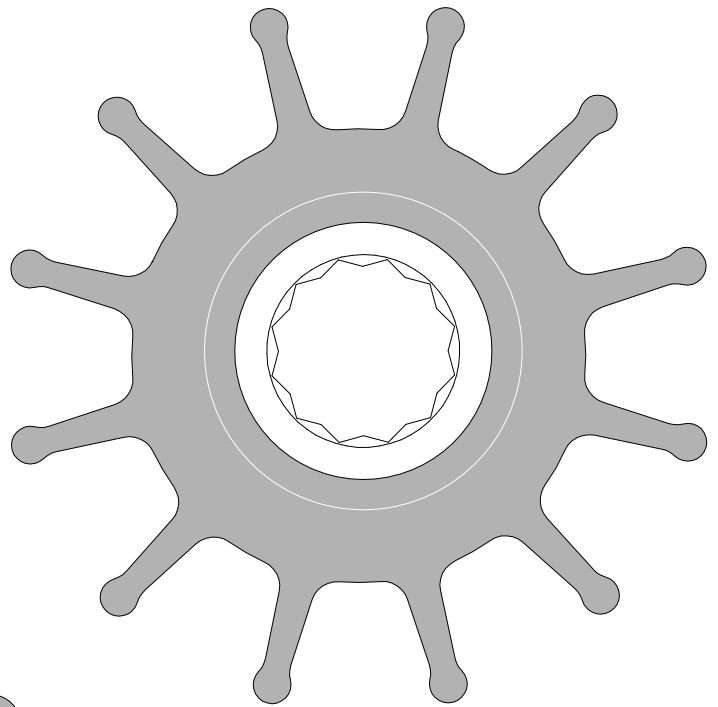
** BT-1 replaces B

SPX FLOW Johnson Pump Marine Brand Original Impellers

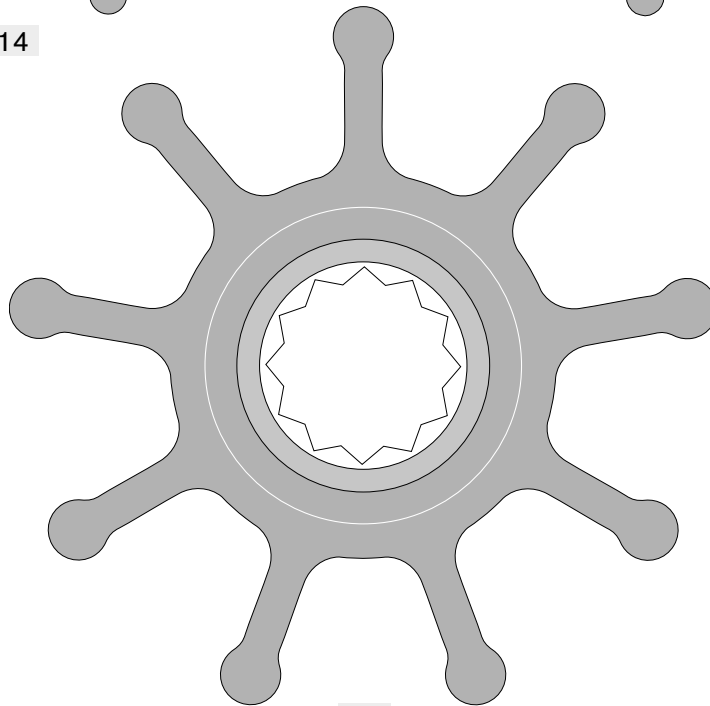
SCALE 1:1



14



15



16

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

¹⁾ Alternative impeller 09-819B

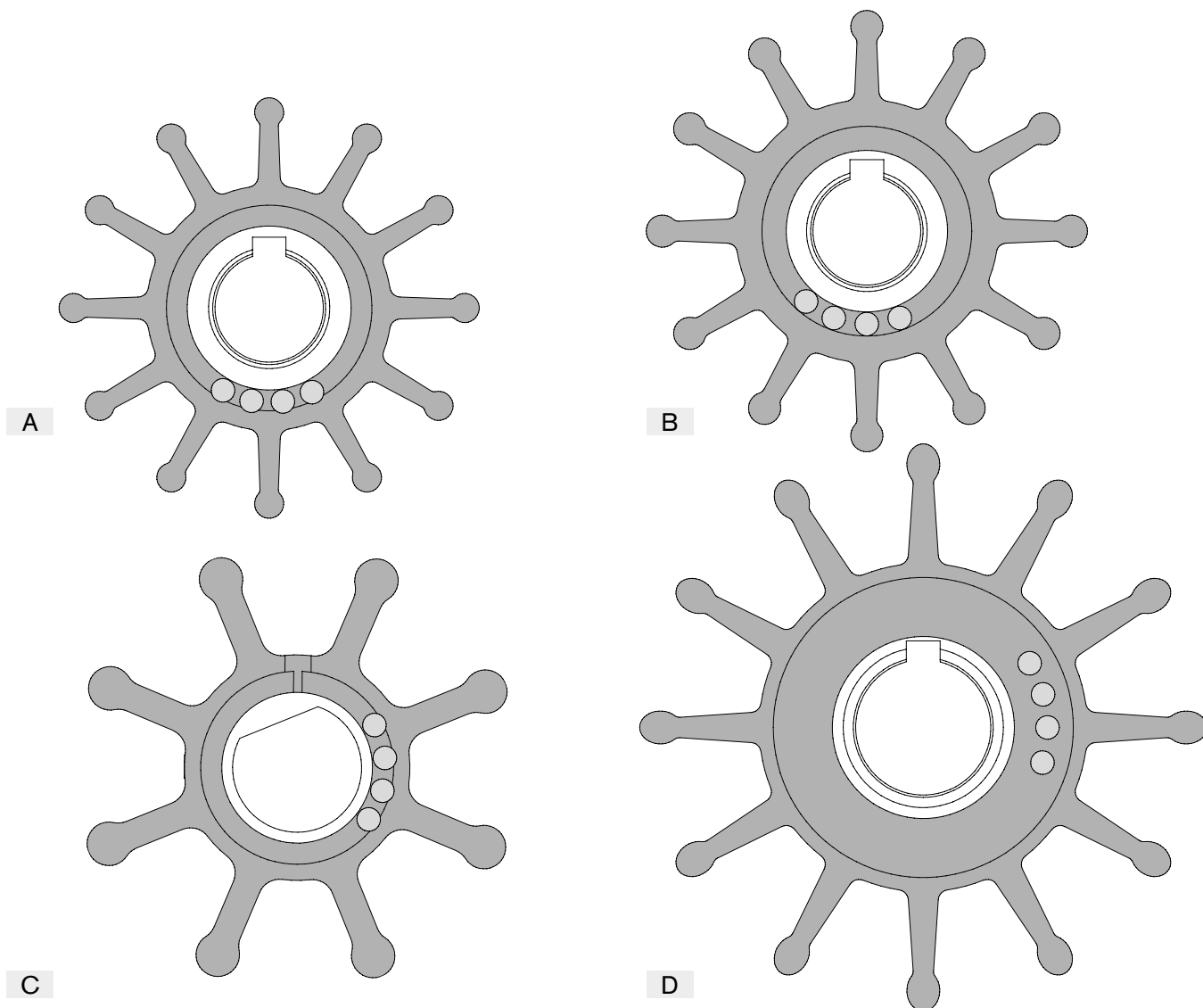
* MC97/EPDM and Neoprene - for cooling, Nitrile - oil resistant

Sherwood / Mercruiser Impeller replacement program

SCALE 1:1

Sherwood / Mercruiser owners can now take advantage of premium replacement impellers from SPX FLOW Johnson Pump Marine.

- Manufactured from our MC97/EPDM rubber compound



Ref.	Pump	Impeller Kit	Material*	Outer dia		Inner dia		Width		Replaces Jabsco No	
				mm	inch	mm	inch	mm	inch	Europe	USA
A		09-701B-1	MC97/EPDM	62.3	2.45			31.8	1.25	18838-0001	
B		09-702B-1	MC97/EPDM	65.4	2.57			41.4	1.63	18948-0001	
C		09-703P-1	MC97/EPDM	66.7	2.63			51	2.01	17954-0001	
D		09-704BT-1	MC97/EPDM	84.1	3.31			73.4	2.89	18958-0001	

* MC97/EPDM and Neoprene - for cooling, Nitrile - oil resistant

IMPELLER REPLACEMENT KITS

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

Key to SPX FLOW Johnson Pump type specification system

Pump types F2-F98

Example:

F 7 B - 3 0 0 0

Pump type

F = Flexible Impeller

Port connection

0 = BSP thread

7 = NPT thread (on request)

Pump size

2
3/35/38
4
5
6
7
75
8
9
95
98

Generally increasing size
↓

Body material

B = Bronze

P = Plastic

Cam size

0 = 1/1 - Standard

2 = 1/2

3 = 2/3

Impeller material

0 = Neoprene

1 = MC97/EPDM

2 = Polyurethane

5 = Neoprene - Intermediate pressure

6 = Neoprene - High pressure

9 = Nitrile

Mounting

1 = Flange mounted to the motor

3 = Pedestal mounted with double ball bearings and mech. seal.

5 = Pedestal mounted with double ball bearings and mech. seal, magnetic clutch operated.

5001 = Compact unit with lip seal *

8 = General purpose with double ball bearings and lip seal *

9 = Custom, follows customer's specification

* F8B-5001, F8B-8 also available with mechanical seal

TSS The Space Saver

VF Vertical Flange

Benefits with flexible impellers from Johnson Pump®

- Stable pressure delivery over time
- Significantly longer service life
- Excellent self-priming capability
- Minimized swelling
- Minimized failures due to fatigue
- Correct impeller dimensions
- Correct cooling flow & sufficient cooling directly at start up

SPXFLOW
Johnson Pump®

RELIABILITY ON BOARD
- SINCE 1968 -

Original Impellers

Johnson
Pump®

MORE FLOW- BETTER PERFORMANCE



www.spxflow.com

Art.No	Page	Art.No	Page	Art.No	Page
0.3454.001	46	09-46781-01	8,12	10-13405-03	7
0.3454.002	46	09-46781-02	12	10-13405-04	7
0.3454.003	46	09-46781-03	8,12	10-13406-03	7
0.3454.004	46	09-46783	11	10-13406-04	7
0.3454.050	46	09-46784	11	10-13406-07	7
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