

Self-priming Flexible Impeller Pumps

For Commercial Marine and Industrial Applications



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Johnson Pump – The One Choice for Marine and Industrial Applications

Johnson Pump develops, manufactures and markets pumps for marine and industrial use.

We belong to the market leaders in well-defined niches through focus on product development and marketing.

Johnson Pump has a decentralised, world-wide and experienced organisation always ready to offer the customers high quality products and aftersales service.

The group comprises five business units, 13 marketing companies and a world-wide net of distributors.

Johnson Pump AB in Örebro, Sweden, is the business unit responsible for all the marine and industrial impeller pumps from Johnson Pump Group.

Comprehensive understanding of the marine industry

Over a quarter century on the market, Johnson Pump has acquired a comprehensive understanding of the marine industry.

This knowledge always enables us to find the technical and financial solutions that meet the

specific needs of each customer.

That is why leading manufacturers of marine engines, commercial and pleasure boats have chosen Johnson Pump products year after year.

Join thousands of industrial customers

The moment you buy a pump from Johnson Pump, you join thousands of industrial customers who rely on our pump technology.

Their main interest is not the pump itself, but smooth, high-quality, uninterrupted production – at a lower cost.

Our aim is to work closely together with our customers to make this possible.

ISO 9001 – of course

Since high quality has always been the trademark of Johnson Pump, quality assurance requirements are nothing new to us.

Attention to quality has always been at base of what we do for a very simple reason.

To meet the needs of customers in today's market, a commitment to continued product development and constant improvement both of human resources and the production process is absolutely essential.



Self-priming Flexible Impeller Pumps

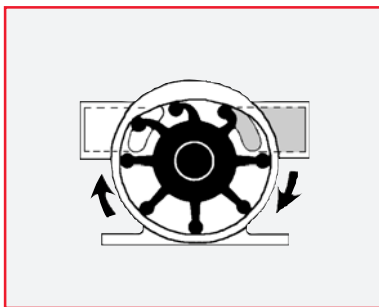
Flexible impeller pumps provide an efficient solution to most marine and industrial pumping needs. The primary advantage of a flexible impeller pump is its self-priming capability. As the vanes of the impeller are depressed and rebound, they create their own vacuum drawing fluid into the pump.

A dry pump can lift water up to as much as five metres. Thus a flexible impeller pump being used for bilges, deck washdown or engine cooling need not be located below the water line or manually primed. An added feature of flexible impeller pumps is that they can pass fairly large solids without clogging or damaging the pump. This reduces the need for filtering the incoming fluid.

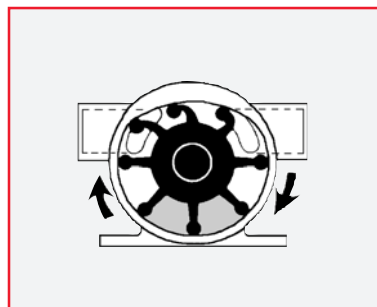
For most Johnson Pump flexible impeller pumps, two different impeller materials are available. For general raw or fresh water applications, the standard long lasting neoprene rubber impeller is used. However, for pumping fuels or oily water, the oil resistant nitrile impeller will provide better service.

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

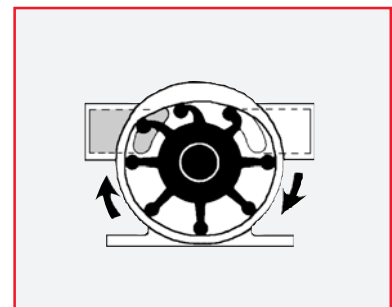
Operating Principle



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

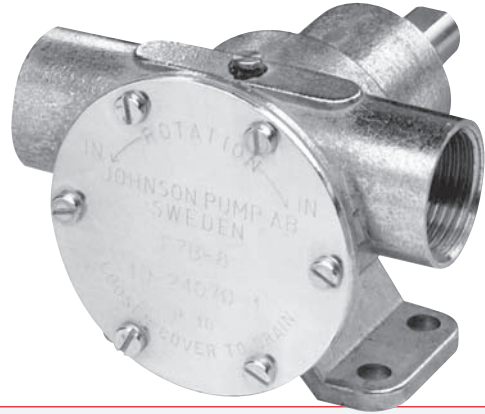


The rotating impellers carries liquid from the inlet to the outlet port. As a consequence of their design, flexible impeller pumps can pass fairly large solids.



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.

Compact Heavy Duty Multipurpose Bronze Pumps FB-8 series



Typical applications

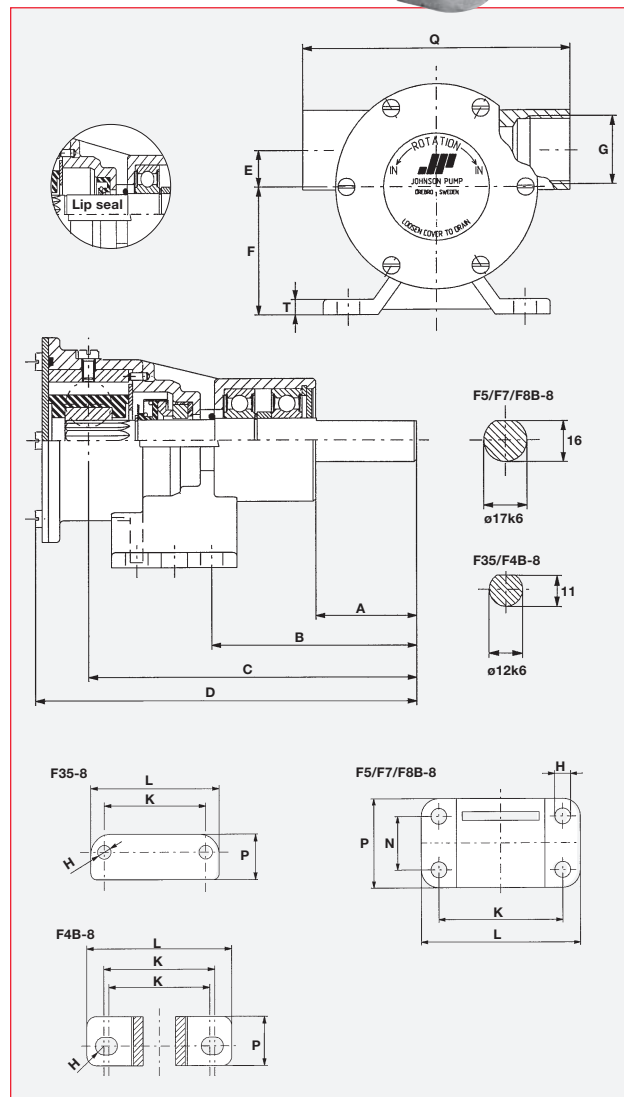
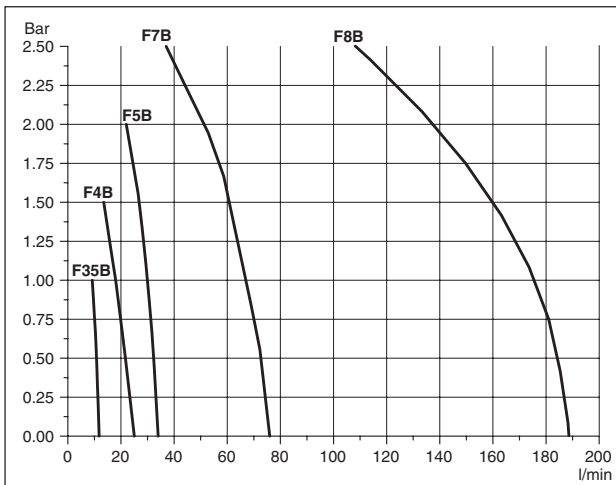
- **Marine**
Engine cooling, bilge pumping, wash-down, emptying holding tanks.
- **Industry**
Liquid circulation and transfer, emptying tanks and sump drainage, handling of solids in suspension.

Design features

- Body: Bronze
 Impeller: Neoprene or nitrile
 Shaft: Stainless steel
 The shaft is mounted with two permanently lubricated double ball bearings
 Shaft seal: F35B-8 – F7B-8: Lip or mechanical seal
 F8B-8: Mechanical seal
 Cam: Full or reduced
 Connection: See dimensional table
 (NPTF ports on request)

Capacity range

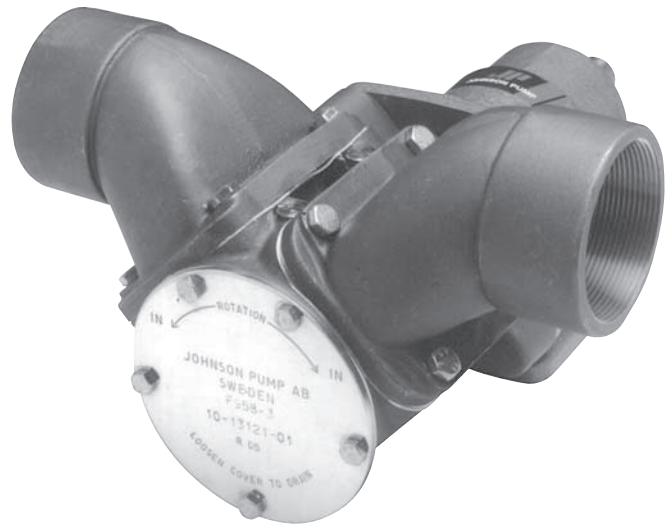
Neoprene impeller – 1400 rpm – Full cam – Water at 20°C



Dimensional table

Pump	Art. No.	Shaft seal	A	B	C	D	E	F	G	H	K	L	N	P	Q	Weight
F35B-8	10-24569-01	Mech. Seal	30	53.7	93.7	108.5	11	30	BSP 3/8"	ø7 (2x)	53	66	-	23	80	0.5 kg
F35B-8	10-24569-13	Lip seal	30	53.7	93.7	108.5	11	30	BSP 3/8"	ø7 (2x)	53	66	-	23	80	0.5 kg
F4B-8	10-24570-01	Mech. Seal	30	76.7	94.2	110.5	17.5	50	BSP 3/8"	ø8.6 (2x)	52/57.2	75	-	25	80	0.8 kg
F4B-8	10-24570-13	Lip seal	30	76.7	94.2	110.5	17.5	50	BSP 3/8"	ø8.6 (2x)	52/57.2	75	-	25	80	0.8 kg
F5B-8	10-24571-01	Mech. Seal	40	81	130	151	14.3	50	BSP 3/4"	ø9 (4x)	70	90	30	50	106	1.6 kg
F5B-8	10-24571-13	Lip seal	40	81	130	151	14.3	50	BSP 3/4"	ø9 (4x)	70	90	30	50	106	1.6 kg
F7B-8	10-24572-01	Mech. Seal	40	81	138.2	170	14.3	50	BSP 1"	ø9 (4x)	70	90	30	50	120	1.9 kg
F7B-8	10-24572-13	Lip seal	40	81	138.2	170	14.3	50	BSP 1"	ø9 (4x)	70	90	30	50	120	1.9 kg
F8B-8	10-13001-1	Mech. seal	50	81.5	177.5	217	27	65	BSP 1 1/2"	ø10.5 (4x)	80	105	45	70	160	5.9 kg

Extra Heavy Duty Multipurpose Bronze Pumps FB-3000 series



Typical applications

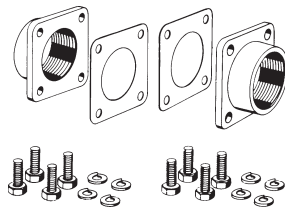
- **Marine**
Engine cooling, bilge pumping, wash-down, emptying holding tanks.
- **Industry**
Liquid circulation and transfer, emptying tanks and sump drainage, handling of solids in suspension.

Design features

- Body: Bronze
- Impeller: Neoprene or nitrile
- Shaft: Stainless steel
The shaft is mounted with two permanently lubricated double ball bearings
- Shaft seal: Mechanical seal
- Cam: Full or reduced
- Connection: See dimensional table
(NPTF ports on request)

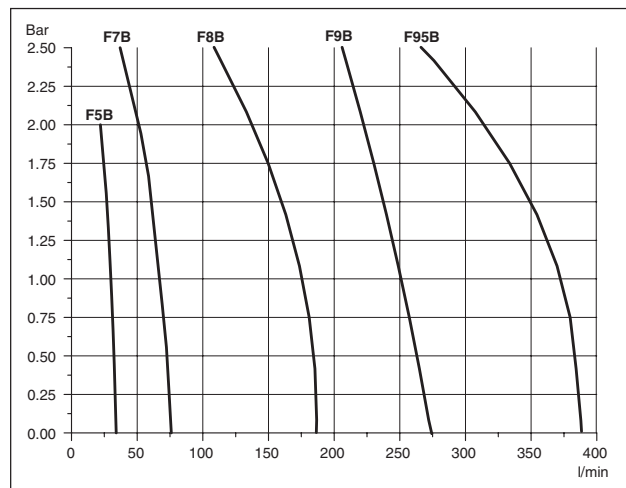
Port adaptor kit for VF and TSS

- 09-43112
F8B-3000-TSS, BSP 1½"
- 09-46557-01
F9B-3000-TSS, BSP 2"



Capacity range

Neoprene impeller – 1400 rpm – Full cam – Water at 20°C

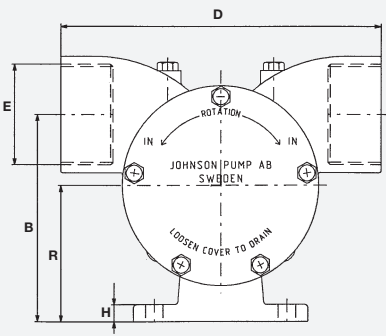


Dimensional table

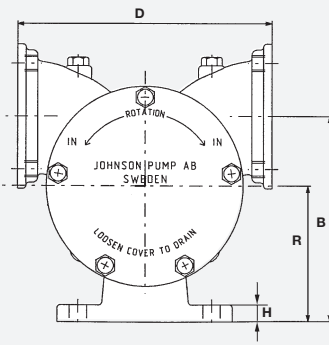
Pump	Art.No.	A	B	C	D	E	F	G	H	J	K	L	M	P	Q	R	S	Weight
F5B-3000	10-24210-1	93	64	195	106	BSP 3/4"	70	90	8	ø9 (4x)	81	30	50	40	-	50	-	2.9 kg
F7B-3000	10-24209-1	101	64	213	120	BSP 1"	70	90	8	ø9 (4x)	81	30	50	40	-	50	-	3.1 kg
F8B-3000-VF	10-13024-1	136	112	255	152	Flange/ BSP 1½"	80	105	10	ø10.5 (4x)	82	45	70	50	-	80	-	7.6 kg
F8B-3000-TSS	10-13175-01	136	151	255	200	Flange/ BSP 1½"	80	105	10	ø10.5 (4x)	82	45	70	50	114	80	-	7.6 kg
F9B-3000	10-13026-1	148	122	282	192	BSP 2"	80	105	10	ø10.5 (4x)	82	45	70	50	-	80	-	9.3 kg
F9B-3000-VF	10-13225-01	148	122	282	152.4	Flange/ BSP 2"	80	105	10	ø10.5 (4x)	82	45	70	50	-	80	-	9.3 kg
F9B-3000-TSS	10-13177-01	148	151	282	200	Flange/ BSP 2"	80	105	10	ø10.5 (4x)	82	45	70	50	114	80	-	9.3 kg
F95B-3000	10-13121-01	199	158	354	246/295	BSP 2½" *)	80	105	12	ø11(4x)	81	70	110	49	161	80	201/226	17.2 kg

*) Port adaptor kit included.

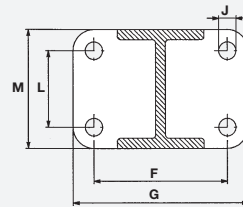
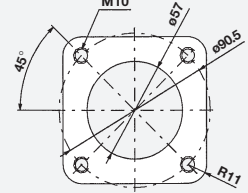
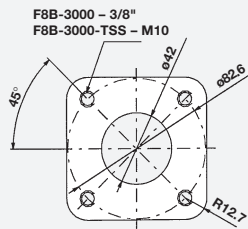
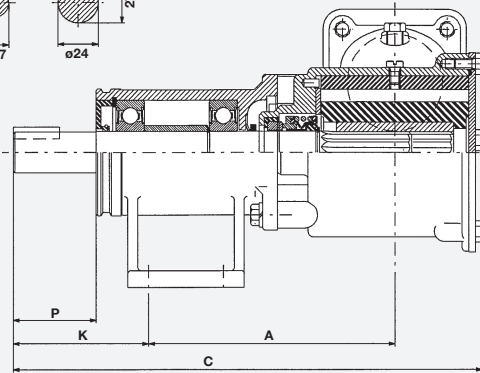
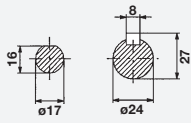
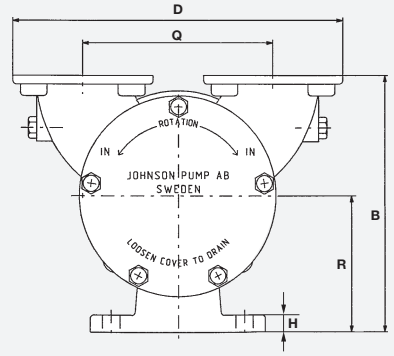
F5/F7/F8/F9B-3000



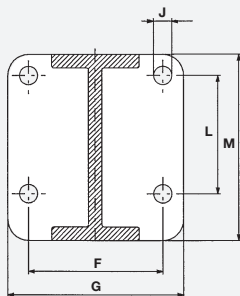
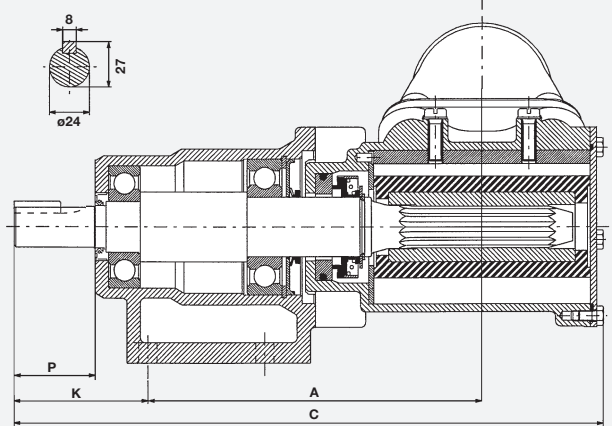
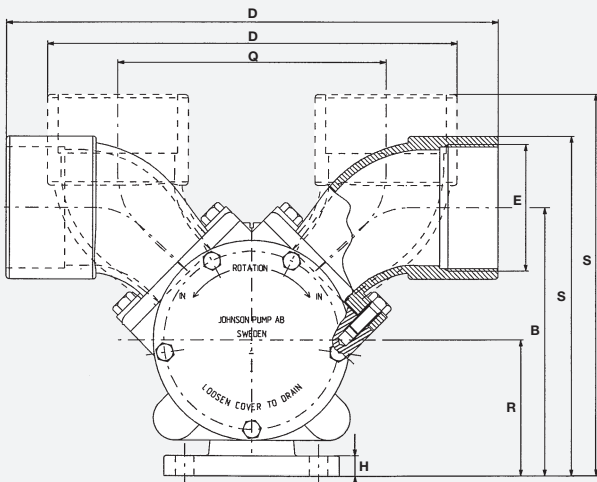
F8B/F9B-3000-VF



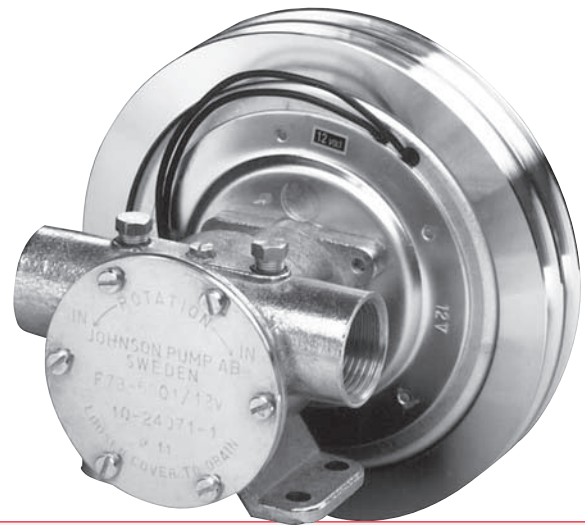
F8B/F9B-3000-TSS



F95B-3000



Automatically Controlled Heavy Duty Bronze Pumps FB-5001 series



Typical applications

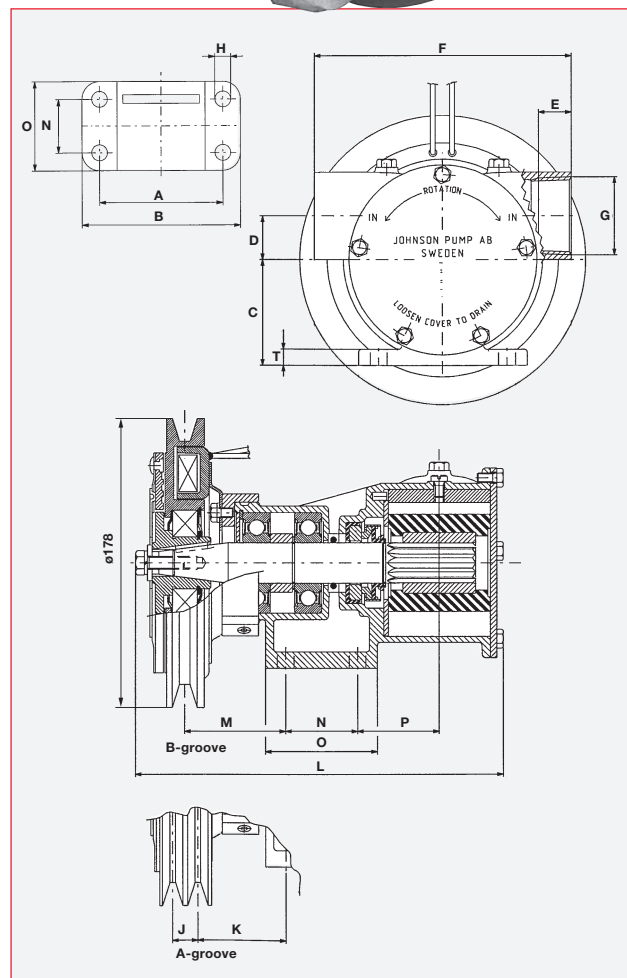
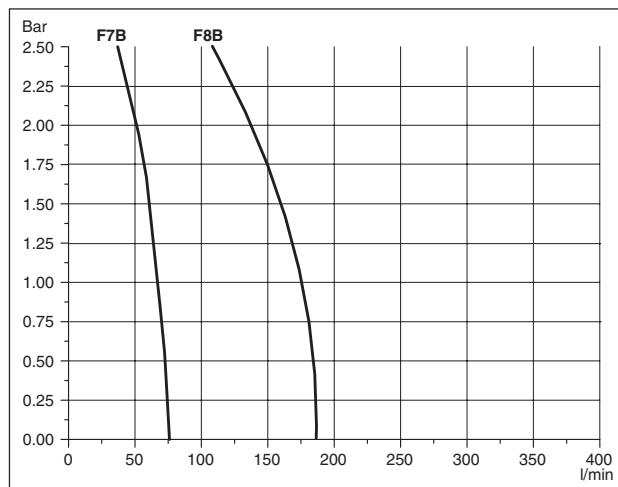
- **Marine**
Bilge pumping, wash-down for decks and equipment, emergency fire-fighting, fish tank circulation, fish washing.
- **Industry and agriculture**
For circulation and transfer of liquids where the drive unit operates continuously and the pump is only required for intermittent duty.
Also ideal for mounting at the power take-off of tractors and road graders for irrigation and washing.

Design features

- Body: Bronze
 Impeller: Neoprene
 Shaft: Stainless steel
 The shaft is mounted with two permanently lubricated double ball bearings
 Shaft seal: Mechanical seal
 Cam: Full or reduced
 Clutch: Electro-magnetic 12 or 24 V DC, 2xA or 1xB pulley
 Connection: See dimensional table
 (NPTF ports on request)

Capacity range

Neoprene impeller – 1400 rpm – Full cam – Water at 20°C



Choice of electro-magnetic clutch

Electro-magnetic clutch	New Art. No.	Old Art. No.
12 V, 2xA pulley	0.3454.001	05-32-1
24 V, 2xA pulley	0.3454.002	05-32-2
12 V, 1xB pulley	0.3454.003	05-32-3
24 V, 1xB pulley	0.3454.004	05-32-4

Dimensional table *) Article No. refers to pump without clutch

Pump	Art. No. *)	Shaft seal	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	T	Weight
F7B-5001	10-24577-99	Mech. Seal	70	90	50	14.3	20	120	BSP 1"	ø9 (4x)	15.75	56	182	64	30	50	27	6	5.8 kg
F8B-5001	10-13022-99	Mech. Seal	80	105	65	27	25	160	BSP 1 1/2"	ø10.5 (4x)	15.75	55	229	63	45	70	51	10	9.9 kg

Manually Controlled Heavy Duty Bronze Pumps FB-5001-MC series



Typical applications

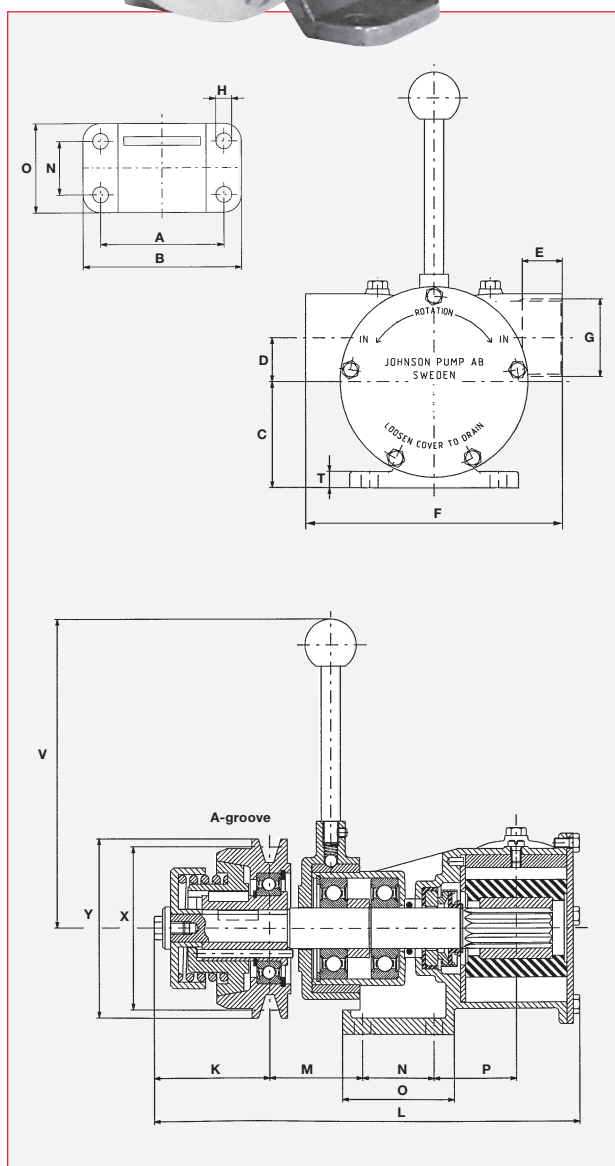
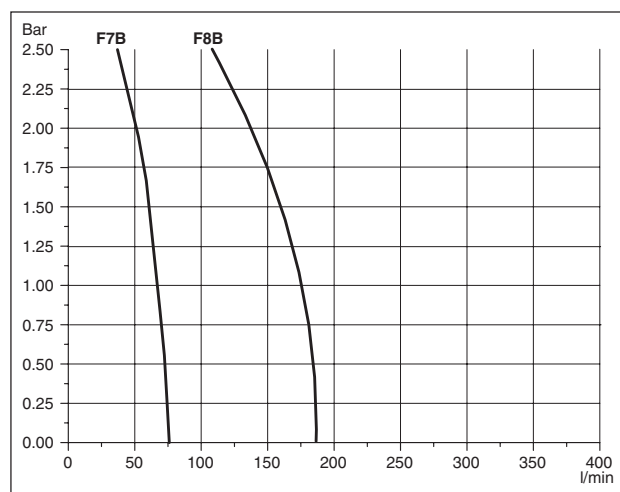
- **Marine**
Bilge pumping, wash-down for decks and equipment, emergency fire-fighting, fish tank circulation, fish washing.
- **Industry and agriculture**
For circulation and transfer of liquids where the drive unit operates continuously and the pump is only required for intermittent duty.
Also ideal for mounting at the power take-off of tractors and road graders for irrigation and washing.

Design features

Body:	Bronze
Impeller:	Neoprene
Shaft:	Stainless steel
	The shaft is mounted with two permanently lubricated double ball bearings
Shaft seal:	Mechanical seal
Cam:	Full or reduced
Clutch:	Manual, 1xA pulley
Connection:	See dimensional table (NPTF ports on request)

Capacity range

Neoprene impeller – 1400 rpm – Full cam – Water at 20°C

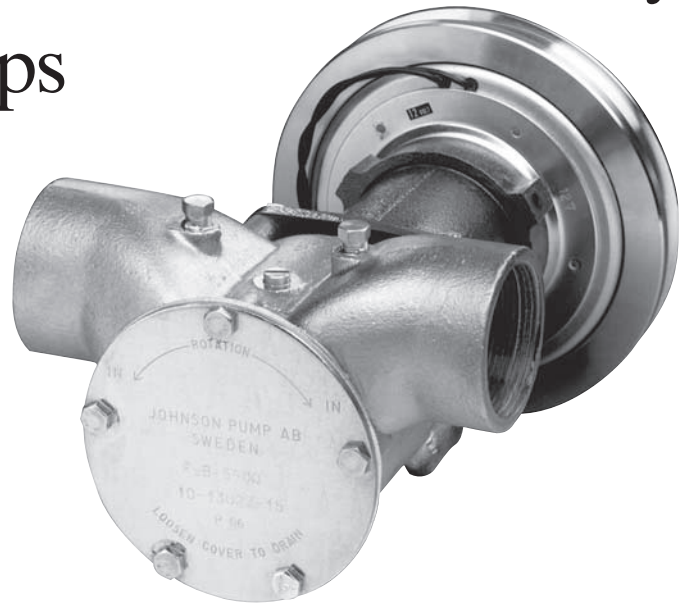


Dimensional table

Pump	Art. No.	Shaft seal	A	B	C	D	E	F	G	H	K	L	M	N	O	P	T	V	X	Y	Weight
F7B-5001-MC	10-24578-03	Mech. Seal	70	90	50	14.3	20	120	BSP 1"	ø9 (4x)	72	228	67	30	50	5	6	191	ø100	ø110	5.5 kg
F8B-5001-MC	10-24559-01	Mech. Seal	80	105	65	27	25	160	BSP 1 1/2"	ø10.5 (4x)	72	265	58	45	70	51	10	191	ø100	ø110	9.5 kg

Automatically Controlled Extra Heavy Duty Bronze Pumps

FB-5000 series



Typical applications

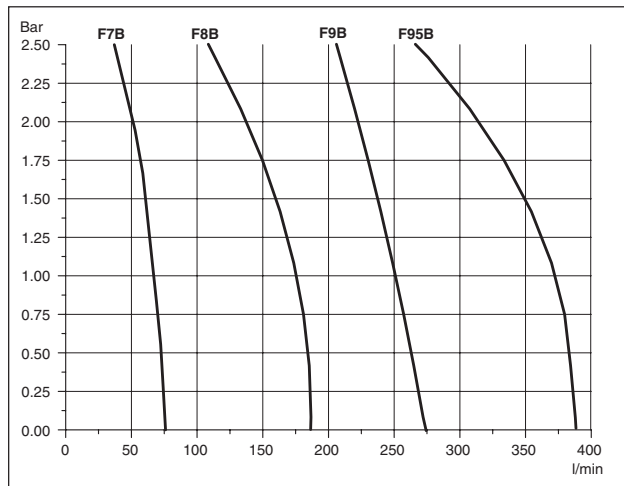
- **Marine**
Bilge pumping, wash-down for decks and equipment, emergency fire-fighting, fish tank circulation, fish washing.
- **Industry and agriculture**
For circulation and transfer of liquids where the drive unit operates continuously and the pump is only required for intermittent duty.
Also ideal for mounting at the power take-off of tractors and road graders for irrigation and washing.

Design features

Body:	Bronze
Impeller:	Neoprene
Shaft:	Stainless steel The shaft is mounted with two permanently lubricated double ball bearings
Shaft seal:	Mechanical seal
Cam:	Full or reduced
Pedestal:	Cast iron bearing house with permanently lubricated double ball bearings
Clutch:	Electro-magnetic 12 or 24 V DC, 2xA or 1xB groove
Connection:	See dimensional table (NPTF ports on request)

Capacity range

Neoprene impeller – 1400 rpm – Full cam – Water at 20°C

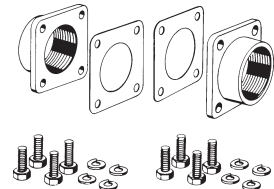


Choice of electro-magnetic clutch

Electro-magnetic clutch	New Art. No.	Old Art. No.
12 V, 2xA pulley	0.3454.001	05-32-1
24 V, 2xA pulley	0.3454.002	05-32-2
12 V, 1xB pulley	0.3454.003	05-32-3
24 V, 1xB pulley	0.3454.004	05-32-4

Port adaptor kit for VF and TSS

- 09-43112
F8B-3000-TSS, BSP 1 1/2"
- 09-46557-01
F9B-3000-TSS, BSP 2"

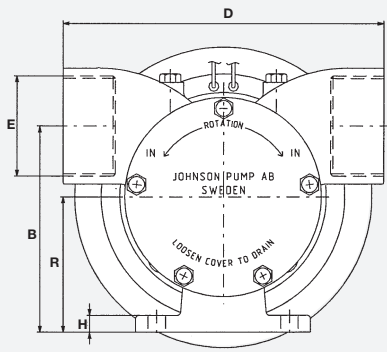


Dimensional table

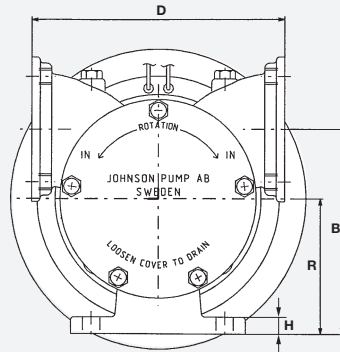
Pump	Art.No. *)	A	B	C	D	E	F	G	H	J	L	M	Q	R	S	Weight
F7B-5000	10-24116-99	101	64	226	120	BSP 1"	70	90	8	ø9 (4x)	30	50	-	50	-	6.9 kg
F8B-5000-VF	10-13025-99	136	112	265	152	Flange/ BSP 1 1/2"	80	105	10	ø10.5 (4x)	45	70	-	80	-	11.9 kg
F8B-5000-TSS	10-13176-99	136	151	266	200	Flange/ BSP 1 1/2"	80	105	10	ø10.5 (4x)	45	70	114	80	-	11.9 kg
F9B-5600	10-13027-99	148	122	290	192	BSP 2"	80	105	10	ø10.5 (4x)	45	70	-	80	-	13.2 kg
F9B-5600-VF	10-13226-99	148	122	290	152	Flange/ BSP 2"	80	105	10	ø10.5 (4x)	45	70	-	80	-	13.2 kg
F9B-5600-TSS	10-13178-99	148	151	290	200	Flange/ BSP 2"	80	105	10	ø10.5 (4x)	45	70	114	80	-	13.2 kg
F95B-5000	10-13143-99	191	158	358	246/295	BSP 2 1/2" **)	80	105	12	ø11 (4x)	70	110	161	80	201/226	21 kg

*) Article No. refers to pump without clutch. **) Port adaptor kit Included.

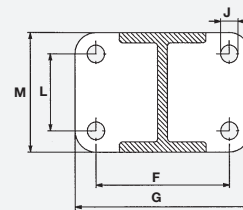
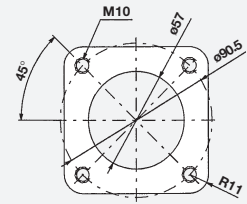
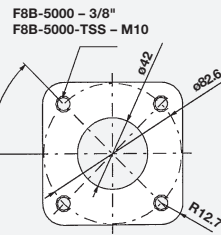
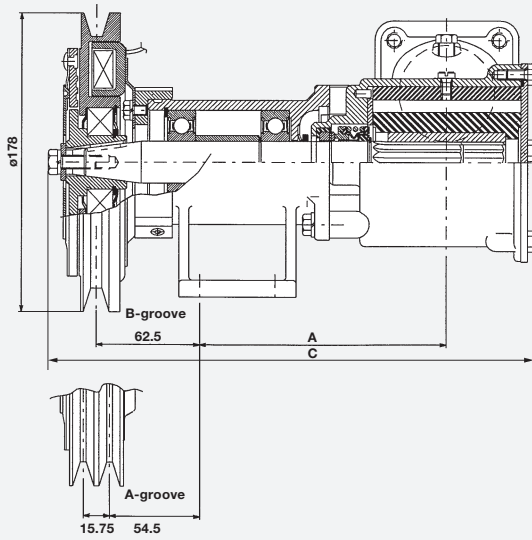
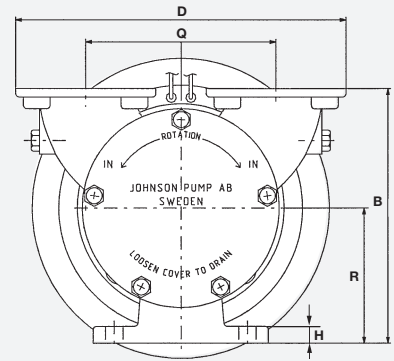
F7/F8-5000, F9B-5600



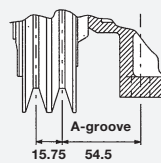
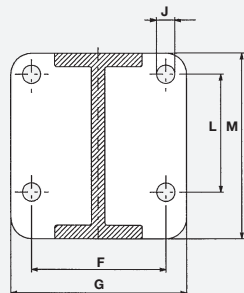
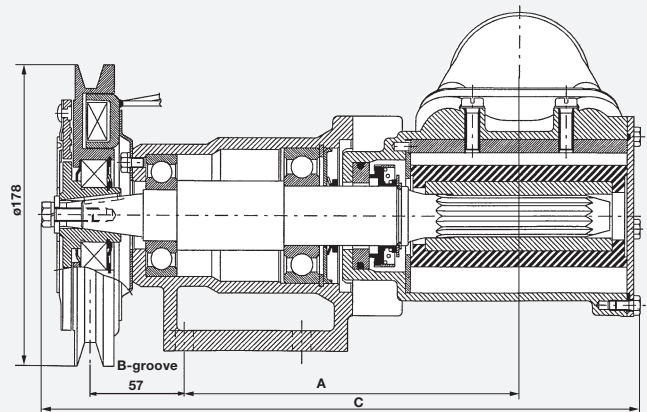
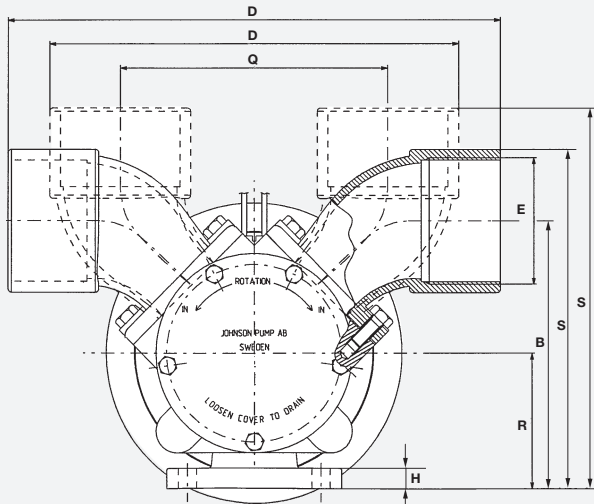
F8B-5000-VF, F9B-5600-VF



F8B-5000-TSS, F9B-5600-TSS



F95B-5000



Heavy Duty Stainless Steel and Bronze Pumps with AC-motor

FIP-series

Typical applications

- **Marine**

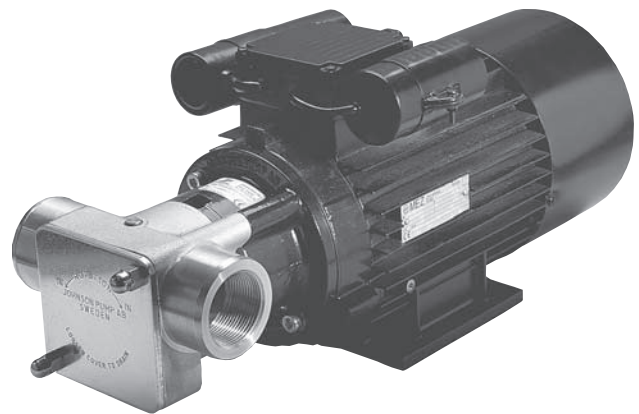
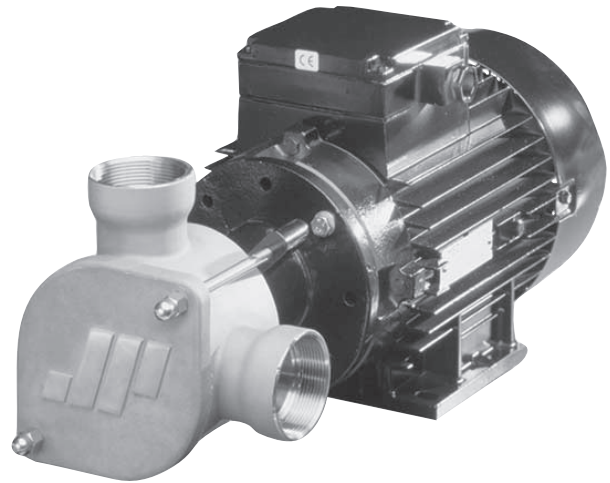
Stainless steel pumps are the ideal choice for emptying holding tanks onboard or on shore side, and for applications which are best served with a stainless steel pump.

Bronze version is used for saltwater applications such as bilge pumping, wash-down for decks and equipment, emergency fire-fighting, fish tank circulation, fish washing.

- **Industry**

Stainless steel pumps for general purpose, non-hygienic applications, such as transferring of liquid soap, pastes, glues, glycerine, lotions, brine, etc.

Bronze version for mineral oil, slurries and abrasive liquids and applications where chemical resistance is of less importance.



Design features

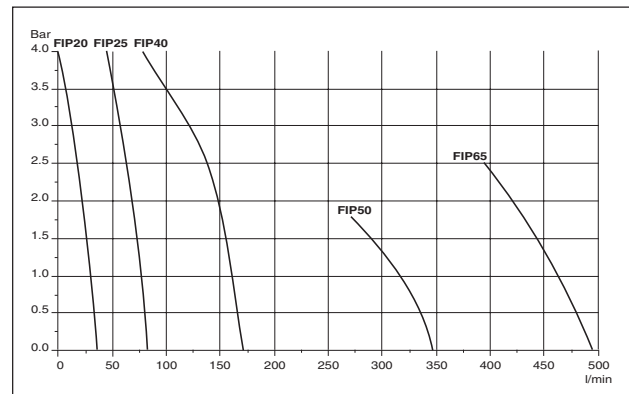
- Body: Bronze or SS
- Impeller: Neoprene with splined bronze hub in bronze version or double flat SS hub in SS version
- Shaft: Stainless steel
- Shaft seal: Mechanical seal
- Cam: Full
- Mounting: Flange or pedestal
- Motor: Flanged version to be closed coupled to standard IEC motor, 220 V 1-ph or 220/380 V, 3-ph
Pedestal version for attachment to external power unit
- Connection: See dimensional table

Motor recommendations at 1400 rpm

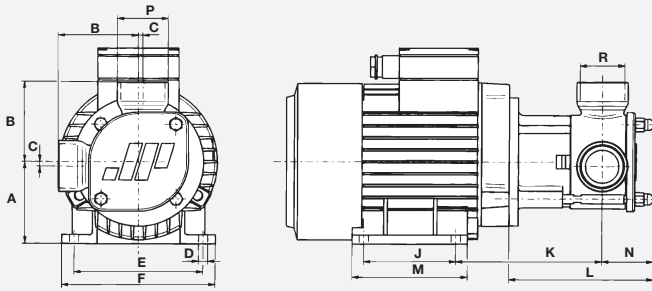
Pump	IEC motor size	
	Flanged versions B3/B4	kW
FIP20	80	0.75
FIP25	80	0.75
FIP40	90	1.5
FIP50	100	5.5
FIP65	Pedestal Motor only	

Capacity range

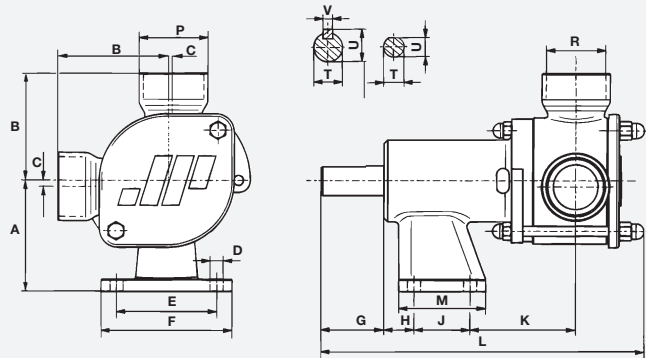
Neoprene impeller – 1400 rpm – Full cam – Water at 20°C



Stainless steel Industrial Version (SI) – Flange



Stainless steel Industrial Version (SI) – Pedestal



FIP SI – Flange versions

Pump	Art. No. *)	A	B	C	D	E	F	J	K	L	M	N	P	R	IEC motor size	Weight pump + motor
FIP20SI	10-13211-000	80	70	2.5	ø10	125	150	100	123	114	126	41	ø31.8	BSP 3/4"	80	10.5 kg
FIP25SI	10-13212-000	80	76	2	ø10	125	150	100	133	133	126	50	ø38	BSP 1"	80	11.8 kg
FIP40SI	10-13214-000	90	87	5	ø10	140	167	100	157	155.5	127	55	ø55	BSP 1 1/2"	90	16.7 kg
FIP50SI	10-13218-000	100	110	6.5	ø12	160	188	140	208	214	167	69	ø67	BSP 2"	100	29.5 kg

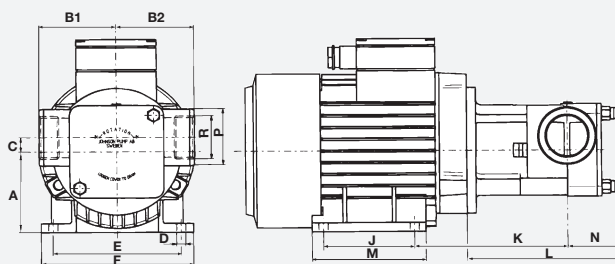
*) Art. No. for pump only. Motor requirements to be specified for pump/motor unit

FIP SI - Pedestal versions

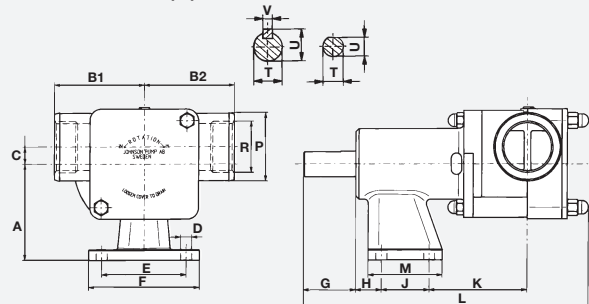
Pump	Art. No. **)	A	B	C	D	E	F	G	H	J	K	L	M	P	R	T	U	V	Weight pump
FIP20SI	10-24544-000	80	70	2.5	ø9	70	90	40	41	30	48	200	50	ø31.8	BSP 3/4"	ø17	16	-	2.4 kg
FIP25SI	10-24546-000	80	76	2	ø9	70	90	40	41	30	58	219	50	ø38	BSP 1"	ø17	16	-	2.7 kg
FIP40SI	10-24548-000	90	87	5	ø10.5	80	105	50	24.5	45	84	259	70	ø55	BSP 1 1/2"	ø24	27	8	5 kg
FIP50SI	10-13219-000	100	110	6.5	ø11	75	105	70	25	75	91.5	331	105	ø67	BSP 2"	ø28	31	8	9 kg
FIP65SI	10-13220-000	112	115	10	ø11	100	130	70	45	70	97.5	357	100	ø84	BSP 2 1/2"	ø28	31	8	13.5 kg

**) Art. No. for pump only

Bronze Version (B) – Flange



Bronze Version (B) – Pedestal



FIP Bronze – Flange versions

Pump	Art. No. *)	A	B1	B2	C	D	E	F	J	K	L	M	N	P	R	IEC motor size	Weight pump + motor
FIP25B	10-45874-01	80	68	75	13	ø10	125	150	100	140	140	126	50	ø38	BSP 1"	80	12.8 kg
FIP40B	10-45880-01	90	85	85	16	ø10	140	167	100	165	167	127	58	ø63	BSP 1 1/2"	90	18.2 kg

*) Art. No. for pump only. Motor requirements to be specified for pump/motor unit

FIP SI - Pedestal

Pump	Art. No. **)	A	B1	B2	C	D	E	F	G	H	J	K	L	M	P	R	T	U	V	Weight pump
FIP25B	10-45875-01	80	68	75	13	ø9	70	90	40	41	30	66	227	50	ø38	BSP 1"	ø17	16	-	3.4 kg
FIP40B	10-45881-01	90	85	85	16	ø10.5	80	105	50	24.5	45	93	270	70	ø63	BSP 1 1/2"	ø24	24	8	6.4 kg

**) Art. No. for pump only

Accessories

Vacuum Switch 09-45053

- For automatic shut off operation.
- To prevent pump damage.

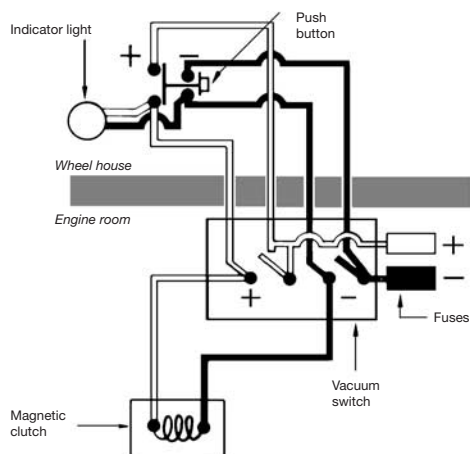
The vacuum switch works with all self-priming impeller pumps and should be used for e.g. bilge pumping/ emptying of tanks to prevent the pump from running dry.

The vacuum switch will automatically shut the pump off when the bilge/tank is dry.



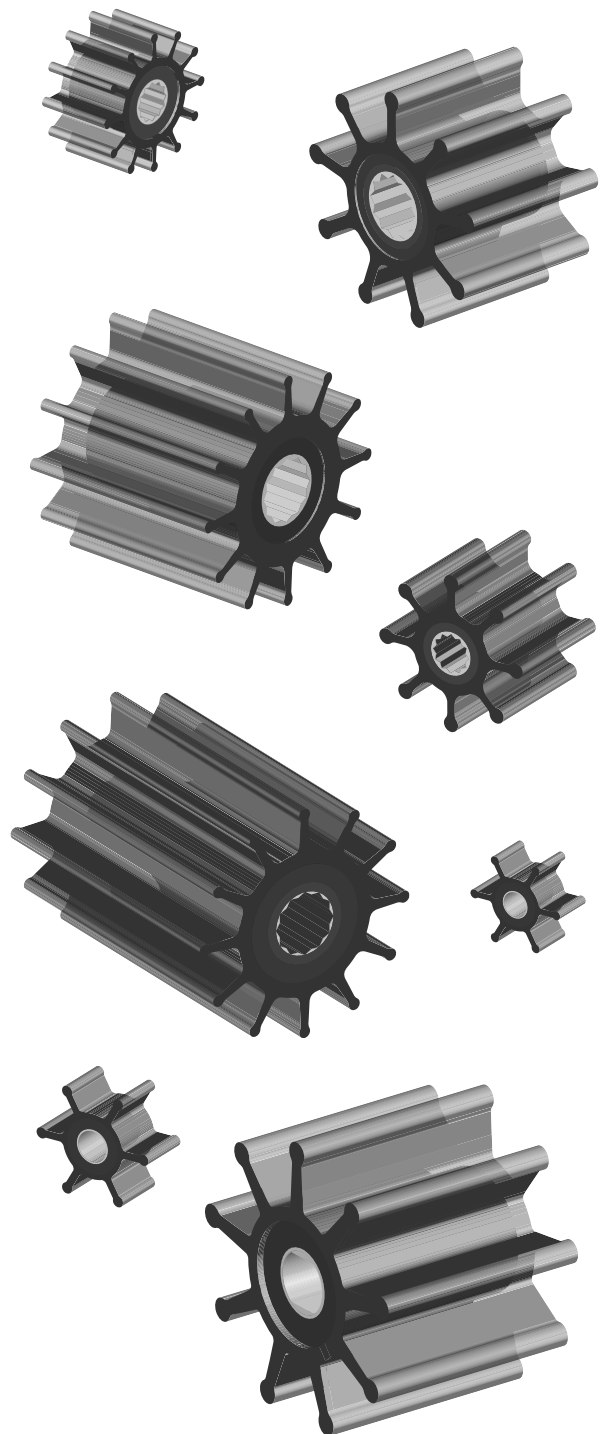
With the switch fitted, you can start the pump by remote push button or manually by depressing lever on the switch.

Wiring diagram



Spare Impellers

A worn or damaged impeller can cause system failure or engine breakdown. Johnson Pump impellers are developed and manufactured for maximum flow and long life. With a genuine spare impeller from Johnson Pump, you can also be sure that you are getting the quality required.





JOHNSON PUMP

Johnson Pump Orebro AB

