

Macerator

TA3P-10

IB-401 R03 (03/2016)

ORIGINAL INSTRUCTIONS/TRANSLATION OF ORIGINAL INSTRUCTIONS
READ AND UNDERSTAND THIS MANUAL PRIOR TO OPERATING OR SERVICING THIS
PRODUCT



Macerator Pump

The perfect disposer for the lavatory unit in boats and recreational vehicles

The SPX FLOW Johnson Pump macerator pump TA3P10-19 takes care of toilet waste.

A rotary cutter shreds waste before it is pumped out through the discharge hose.

The pump can be connected directly to the bowl discharge outlet or holding tank.

Note: Use unbleached lavatory paper only. Do not run pump dry. Must not be used for continuous duty.

Design features

| | |
|-------------|--|
| Body: | Phenol plastic (PF) |
| Impeller: | Nitrile |
| Housing: | Thermoplastic polyester (PET) |
| Shaft: | Stainless steel |
| Seal: | Lip seal, nitrile |
| Connection: | Inlet: 38 mm (1.1/2") hose, 1.1/2" BSP thread or 1.1/2"-1.1/2" NPTF thread Outlet: 25,4 mm (1") hose. |
| Motor: | 0,12 kW, 12/24 V DC |

The motor is ignition protected according to ISO 8846 (Small craft - Electrical devices - Protection against ignition of surrounding flammable gases).

Type designation

| Type | | Part No. |
|-----------|------|-------------|
| TA3P10-19 | 12 V | 10-24453-04 |
| TA3P10-19 | 24 V | 10-24453-05 |

Pressure and capacity data

(see page 15)

Installation recommendations

Installation

Pump may be mounted in any position with-out loss of efficiency; however, it is suggested that the pump head be down if vertical mounting is desired. The pump must be installed below the holding tank or bowl discharge outlet. Mount motor as close as possible to power source to obtain full voltage.

Note: Before installation with electrical control systems, check that equipment to be used is of sufficient rated capacity to accept ampere draw of motor. Low voltage will cause motor to overheat.



Electrical installation

The pump must be installed according to ISO 10133 (Small craft - Electrical system - Extra low voltage DC installation for continuous current). Note: The fuse must be ignition protected. The fuse works as over-current protection, and protects the motor from overloading and rotation. Incorrect fuse size may cause fire.

If the pump is connected with separate earth lead, this should be yellow/green and connected to the motor base.

See the wiring scheme for correct installation. Negative wire must be black.

Choose wire size in accordance with total wire length (see table).

Note: Before installation with electrical control systems, check that equipment to be used is of sufficient rated capacity to accept ampere draw of motor. Low voltage will cause motor to overheat.

> English

Wiring scheme

(see page 18- 19)

Wiring table

(based on 3 % voltage drop)

| Wire size | | Max wire length* | |
|---------------------|--------|------------------|--------|
| | | 12 V | 24 V |
| 1,5 mm ² | #16AWG | 2,5 m | 11,0 m |
| 2,5 mm ² | #14AWG | 4,2 m | 18,3 m |
| 4 mm ² | #12AWG | 6,8 m | 29,3 m |
| 6 mm ² | #10AWG | 10,1 m | |
| 10 mm ² | #6AWG | 16,9 m | |
| 16 mm ² | #4AWG | 27,0 m | |

* The wire length is the total distance from the battery to the pump and back to the battery.

Dry running

Do not run dry for more than 30 seconds. Lack of liquid will burn the impeller and damage the seals.



Caution

Do not pump gasoline, solvents, thinners, highly concentrated or organic acids. If corrosive fluids must be handled, pump life will be prolonged if flushed with water after each use or after each work day.

Temperature

Max ambient temperature + 60°C.

The pump can not be run continuously.

The motor is equipped with built in thermal protection to prevent the motor from overheating. The protection is automatically restored when the motor is cooled.

Freezing weather

Glycol based anti-freezes can be used but do not use petroleum based anti-freeze compounds.

Gasket

Use standard gasket. A thicker gasket will reduce priming ability. A thinner gasket will cause impeller to bind.

Service instructions

(see page 16-17)

Disassembly

1. Remove nut, washer and housing.
2. Remove cutter. Use a 7 mm open-ended spanner to hold shaft behind cutter. Turn cutter anti-clockwise.
3. Remove the wear plate, the O-ring and the gasket.
4. Withdraw impeller.
5. Remove screw (10) .
6. Separate body from motor.
7. Remove screw (13) and lip seal.

Assembly

1. Fit lip seal and screw (13) in the body.
Note! The spring of the seal must face towards the impeller.
2. Fit body to motor.
3. Fit screw (10).
4. Lubricate the impeller with vaseline to avoid dry running and fit it with a rotating movement in the intended direction of the impeller rotation (clockwise).
5. Fit the gasket and wear plate.*
6. Mount cutter on motor shaft. Use a 7 mm open-ended spanner to hold shaft and turn cutter clockwise.
7. Mount the O-ring in the housing.
8. Mount housing, washer and nut.*

* Note! Check that the inlet passage of the gasket, wear plate and housing are seated properly on the body.

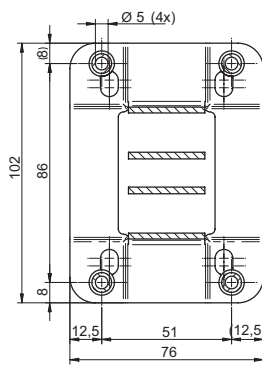
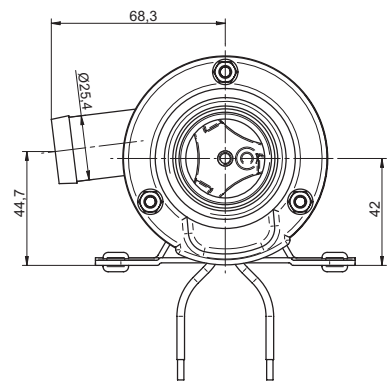
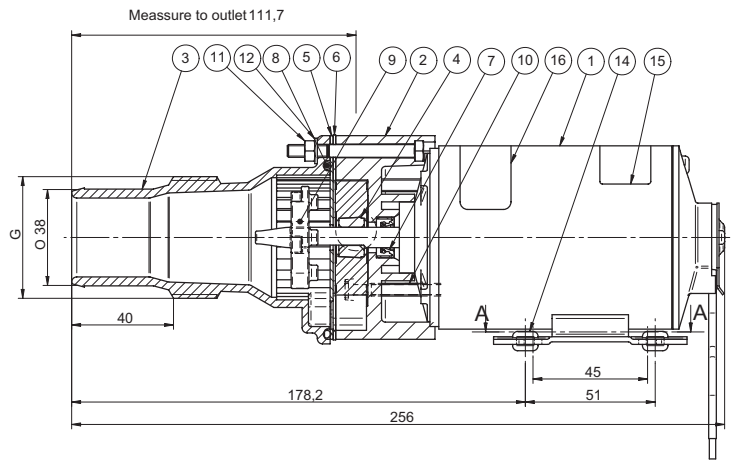
Waste handling material recycling

At the products end of life, please dispose of the product according to applicable law. Where applicable, please disassemble the product and recycle the parts material.

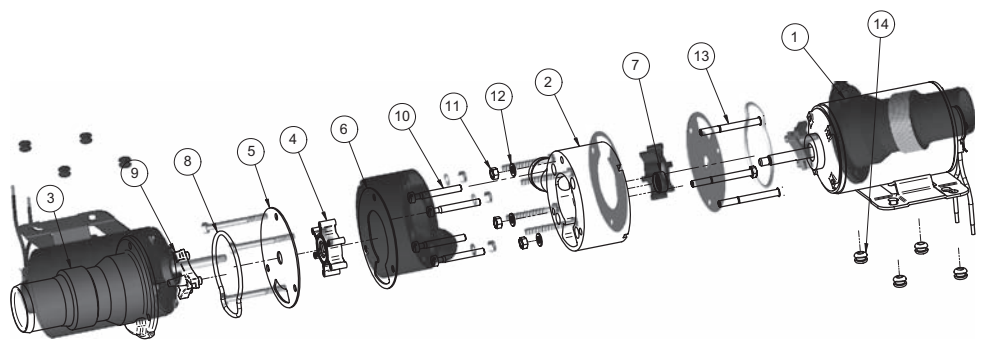
Pressure and capacity data

(based on water at 20°C/68°F)

| Bar | kPa | ft | l/min | USGPM | Ampere draw | |
|------|-----|------|-------|-------|-------------|------|
| | | | | | 12 V | 24 V |
| 0,2 | 20 | 6,7 | 37 | 10,0 | 13 A | 7 A |
| 0,4 | 40 | 13,4 | 34 | 9,0 | 14 A | 7 A |
| 0,6 | 60 | 20,1 | 30 | 8,0 | 14 A | 7 A |
| 0,8 | 80 | 26,8 | 28 | 7,5 | 15 A | 8 A |
| 1,0 | 100 | 33,5 | 22 | 6,0 | 15 A | 8 A |
| Fuse | | | | | 20 A | 12 A |



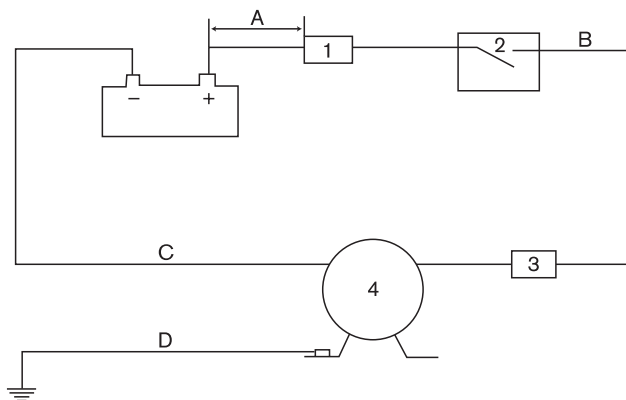
SECTION A-A



1,9 kg
Dim. mm
Weight

Parts list

| Pos | Nos | No | Description |
|-----|-----|-------------|---------------|
| 1 | 1 | 01-24466-01 | Motor 12V |
| | 1 | 01-24466-02 | Motor 24V |
| 2 | 1 | 01-35275-2 | Body |
| 3 | 1 | 01-35719-1 | Mill housing |
| 4* | 1 | 09-1052S-9 | Impeller |
| 5 | 1 | 37-3206221 | Wear plate |
| 6* | 1 | 37-3206217 | Gasket |
| 7* | 1 | 05-29-135 | Lip seal |
| 8* | 1 | 05-06-583 | O-ring |
| 9 | 1 | 37-3206218 | Cutter |
| 10 | 4 | 05-04-577 | Screw |
| 11* | 3 | 05-05-511 | Nut |
| 12 | 3 | 05-01-520 | Washer |
| 13 | 3 | 05-04-643 | Screw |
| 14 | 1 | 05-17-535 | Fuse 15A, 12V |
| | 1 | 05-17-550 | Fuse 10A, 24V |
| * | 1 | 09-45595 | Service kit |



Wiring scheme

- 1 Terminal fuse
- 2 Switch
- 3 Fuse (overload protection)
- 4 Pump

- A Max 0,2 m
- B Red
- C Black
- D Green/yellow

Electrical installation must be according to ISO 10133.

Other electrical devices, eg switch, circuit breaker, must be installed between the pump and the positive (+) lead on the battery (on the red wire).