Marine Technic a/s

disperator

CE

Installation description for disperator with BS-assembly for sinks / washing lines

1. Included in delivery
2. Assembly
3. Flushing water
4. Water trap and drain pipe
5. Electrical connection
6. Operation instruction and final testing

1. Included in delivery

Documentation

- Product leaflet(s) including photos, dimensioned drawings and article descriptions for the delivered equipment as per the delivery note.
- Electrical connecting and wiring diagram.
- Operation instruction (in plastic).
- Service instruction including exploded view drawing with spare part list and recommendation for service package for preventive maintenance as well as articles subject to wear.

Products

- Disperator of the ordered model and motor voltage as per the delivery note and the product leaflet.
- Complete contactor with motor protector, no voltage release and control coil as per the delivery note.
- Complete solenoid valve ½" BSP, Female with control coil as per the delivery note.
- Line strainer ½" BSP, Female.
- Jam release wrench for freeing rotary grinder if non-grindable object becomes fastened. Please see the operation instruction and the product leaflet.
- 3 pcs. of adjustable legs for all disperator models having a motor power of 2.2 kW or more.

The motor power is specified on the serial number plate of your disperator.

- Disperator assembly model BS including:
  - protecting plate / cutlery trap / food waste feeder
  - flushing pipe or flushing nozzle ½" BSP, Male
  - BS - flange 3" BSP, Female
  - BS - nipple 3" BSP, Male

Please see the product leaflet.

2. Assembly

Please see the enclosed product leaflet(s) for drawings with article descriptions.

Assembly of disperator

The end of the BS-nipple 3" BSP, Male (without inner stop ring) shall **face downwards (i.e. towards the disperator)**.

The drain opening of the sink/washing line must be 80 mm (3,15 in.) in diameter.

Screw on the BS-flange to the nipple 3" BSP, Male in order to weld the nipple at **right angles** to the drain opening of the sink/washing line.

When a 3" ball valve has been ordered as an accessory between the sink and disperator, this is specified in the delivery note. In order to connect the lower outlet of the ball valve to the BS-flange and disposer, an extra nipple 3" BSP, Male (without inner stop ring) is delivered.

*** Mounting and support against floor / floor plate**

The weight of all disperator models having a motor power under 2.2 kW allows them in most cases **to be hung vertically** under the assembly (e.g. under a sink). To avoid injury before the disperator is fixed with the screws and nuts, these models should be **jacked up to the assembly attachment** by wooden blocks.

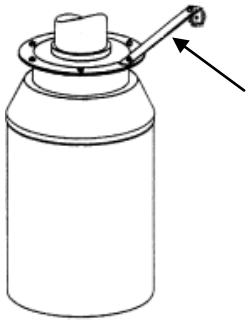
The three legs delivered with disperator models having a motor power of 2.2 kW or more have to be screwed to the bottom of the disperator.

Adjust all the legs of the machine assembly so they give a **proper support** against the floor / floor plate.

Place the 3 mm rubber gasket between the top flange of the disperator and the connection flange of the assembly before bolting together. Tighten the six screws with nuts evenly.

*** Fixing of disperator**

The disperator must **be fixed with a torque protection bar** fitted to the wall or bulkhead as per the figure below.



When starting or stopping quickly (e.g. if cutlery mistakenly jams the grinding unit) the torque of the motor will cause the disperator to turn. This may move the drain pipe / water trap from its position causing water leakage. A torque protection bar can be ordered, as an option, from Disperator if not available on installation site. When ordering please specify the distance between wall / bulkhead and suitable fixing screw on the upper disperator flange as per figure above.

*** Protecting plate / cutlery trap / feeder**

The assembly includes a combined and removable protection plate, cutlery trap and feeder which is placed in the inlet opening to the disperator. Please see the enclosed product leaflet. Chain this feeder to the wall / bulkhead so that it is always available.

3. Flushing water

Connection of the flushing water to the delivered disperator must only be done by an **authorised installer of water supply and in accordance to valid local regulations.**

*** Water pipe ½"**

In order to allow a free flow of water to the disperator, the incoming water pipe (incl. accessories in the piping system such as vacuum valve, cut-off valve etc.) must have the same dimension as the connection to the disperator assembly, **i.e. ½" through-out**.

*** Line strainer ½" and solenoid valve ½"**

The ½" line strainer is connected in the flow direction **before** the ½" solenoid valve in the incoming water pipe. Please **note the flow direction** marked by an arrow on the strainer and the valve, and also note that the strainer shall be fitted with its cleaning screw directed diagonally downward.

*** Flushing nozzle or flush pipe with air gap to sink**

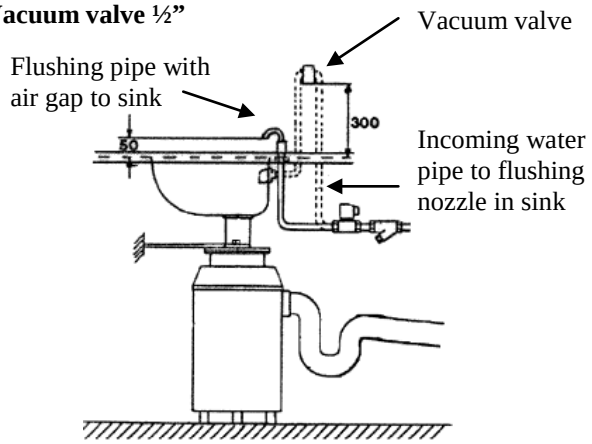
When a flushing nozzle is fitted in a sink / washing line, position the nozzle as high up as possible and above the spillway. Please refer also to the text below regarding installation of a vacuum valve.
Place the flushing nozzle **as far from the inlet to the disposer as possible**. This will allow a larger flushing area in the bottom of the sink basin.

*** Reinforced flexible hose ½" for flushing water**

A reinforced flexible hose ½" must be fitted between the incoming water pipe mounted on the wall / bulkhead and the connection for flushing water on the disperator assembly. The hose **absorbs the compressive push** in the pipe when the flushing water is turned on, and **absorbs any small vibrations** which may occur during the grinding process of the disperator.

The reinforced flexible hose is not included as standard with the disperator but is available as an option from Disperator. Please specify when ordering the distance between the water connections on the wall / bulkhead and the disperator.

*** Vacuum valve ½"**



The figure above shows the positioning of a vacuum valve above a sink assembly. In your case the assembly used may be of another type (not a sink). The positioning of the vacuum valve will however remain the same

When a flushing nozzle is fitted in a sink / washing line or other type of assembly, **a vacuum valve must be installed** at the top of a lyre-shaped incoming water pipe as shown in figure above.

This protects the water pipe from re-suction during a possible overflow. The vacuum valve is not included as standard delivery.

When a flush pipe with air gap to sink / washing line or other type of assembly, is fitted, no vacuum valve is needed.

4. Water trap and drain pipe

The drain connection of the delivered disperator must only be made by an **authorised installer of sewer supply and in accordance to valid local regulations.**

*** Dimensions**

The water trap and the drain pipe must have **the same dimension as the outlet flange of the disperator**, (i.e. 2" for all models having a motor power under 2.2 kW, and 2½" for all models having a motor power of 2.2 kW or more) in order to allow free waste water flow from the disperator. Larger dimensions than those given above shall also be avoided as this would reduce the speed of the waste water flowing from the disperator.

*** Depth and threshold of water trap**

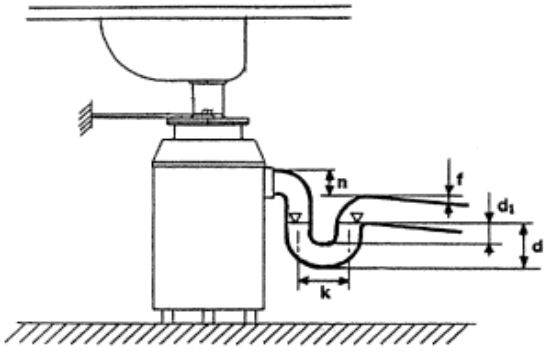
The depth of the water trap (measurement "d" in figure below) shall be **as small as possible** in order to obtain the best possible flow with the largest amounts of food waste. The water trap must also be deep enough so that the **water threshold "d1" is approximately 50 mm.**

*** Curves and bends**

The water trap and all bends in the drain pipe must be **drawn without sharp bends and curves** according to local standards. The distance "k" in the figure below for models having a motor power under 2.2 kW should be 100-150 mm and for models having a motor power of 2.2 kW or more the distance "k" should be 150-200 mm.

*** Level difference**

The level difference (measurement "n" in the figure below) must be **at least equal to the inner drain pipe diameter**, i.e. 2" for disperator models having a motor power under 2.2 kW, and 2 ½" for models having a motor power of 2.2 kW or more.



The figure above shows slope of the drain pipe. For specific installations the disposer may not be of the type shown above. The slope of the drain pipe will however remain the same.

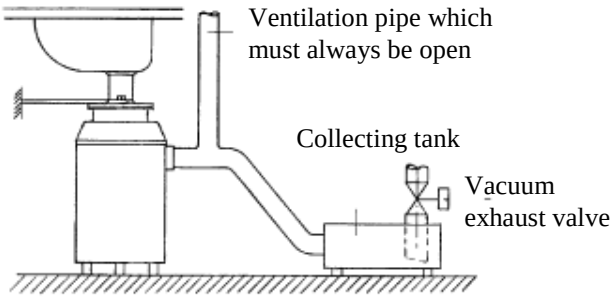
*** Slope of drain pipe**

The slope of the drain pipe ("f" in the figure above) must **not be less than 2:100**. When the rate of flow of food waste is large and / or where the distance from the disperator to the floor drain is great, a slope of **not less than 5:100 should be maintained.**

Installation of horizontal drain pipes must be avoided at all times.

As an option, water traps are available from Disperator.

*** Vacuum Evacuation**



In installations where the disperator is evacuated by means of a vacuum, **no water trap** shall be connected to the outlet of the disperator. Instead, the disperator is connected directly to the collection tank of the vacuum system. It is **important** that the drain pipe between the disperator and the collection tank has a **ventilation pipe that is always open** as shown in the figure above. A ventilation pipe must be fitted even if the collecting tank has automatic airing.

5. Electrical connection

The electrical connection of the delivered disperator must only be done by **authorised electrician and according to local regulations.**

The electrical connection and wiring to be done is shown on the enclosed diagram. Please note also the following:

*** Supply voltage**

Check that the supply voltage corresponds to the specified voltage on the disperator serial number plate.

*** Mains fuses**

Check that the supply voltage for the delivered model is fused as specified in the enclosed product leaflet.

*** Line breaker**

A separate line breaker shall be connected if it is required by local regulations. The line breaker is not included as standard delivery for the disperator, but can be supplied as an option.

*** Cable dimension**

Use connection cable having 1.5 mm² wire area for disperators with rated current **up to 14A**. For disperators with rated current **above 14A** use cable having 2.5 mm² wire area. The

rated voltage and current for the disperator is given on the disperator serial number plate.

*** Cable protection**

All electrical cable must be **protected against damage** by being securely fastened, for example to the assembly frame work and wall / bulkhead.

If there is a risk that the cables can be damaged, for example, by passing trolleys then the cables must be **protected by flexible sleeving or conduit.**

*** Earth wire**

The earth wire shall be longer than main voltage wires when connecting to the cable terminal block. This gives earthing protection if the voltage wires become insecure in the cable nipple allowing them to be pulled from their terminals.

*** The disperator's direction of rotation**

The disperator's grinding and pumping operations **function correctly irrespective of the motor's rotational direction**. It is therefore irrelevant in which sequence the electrical phases are connected.

*** Control voltage**

Check that the control voltage of the contactor and valve, as shown on their coils, **corresponds** to each other, the delivery note and the electrical connection diagram.

*** Contactor with motor protector**

Check that the **motor protector is adjusted** to the rated current which is specified on the serial number plate of the disperator. The rated current at the voltage to be connected to the delivered disperator model is also given in the enclosed product leaflet.

The motor protector must **never** be adjusted to a greater value than the rated current.

*** Placing of contactor & motor protector**

For the best possible protection against electrical faults caused by high pressure water flushing, and damage by knocks and bumps, the contactor & motor protector should be placed **within comfortable reach** for kitchen / galley personnel but as **high up** as possible on the wall / bulkhead.

*** Cable securing nipples**

Cable securing nipples used in the contactor casing must be dimensioned so that they enable the **cable to be sealed and secured tightly.**

When a flexible conduit is used to protect the cable**, remove the flexible conduit through the nipple so securing the cable** to the contactor casing. Water can otherwise leak into the casing through the nipple, especially when the kitchen is flushed clean with high pressure water. Securing the cable in this manner will make a good fixture.

When cabling is completed, extra sealing in the cable securing nipples using a **rubber sealing compound** around the cable is recommended.

*** Contactor casing**

Check that the top half of the contactor casing (with protection class IP55) **fits properly and is tightened** in order to seal from damp.

The operation of the start and stop buttons is dependent upon the top half of the contactor casing fitting correctly.

6. Operation instruction and final testing

Secure the operation instruction (enclosed in plastic) **by screwing** it to the wall / bulkhead in a position where it is easily seen by the operator before starting the disperator.

Check that the rotary shredder in the inlet opening of the disperator turns freely in both directions by hand, and make sure that no foreign object has been dropped into the grinding unit during the installation.

Start the disperator and determine that the rotary shredder revolves and that flushing water flows automatically.

Check assembly, flushing water connections and plumbing connections for possible leaks.

If the disperator fails to operate, please refer to the section on "Trouble shooting" in the instruction for operation.

Instruct the person responsible for the machines in the galley / kitchen about the operation of the disperator before handing over the remaining documentation and the jam release wrench.