

## Construction

The massage device consists of wall-assembled unit and an end unit. The wall-assembled unit consists of connection fittings with air regulator, piezo switch, steel

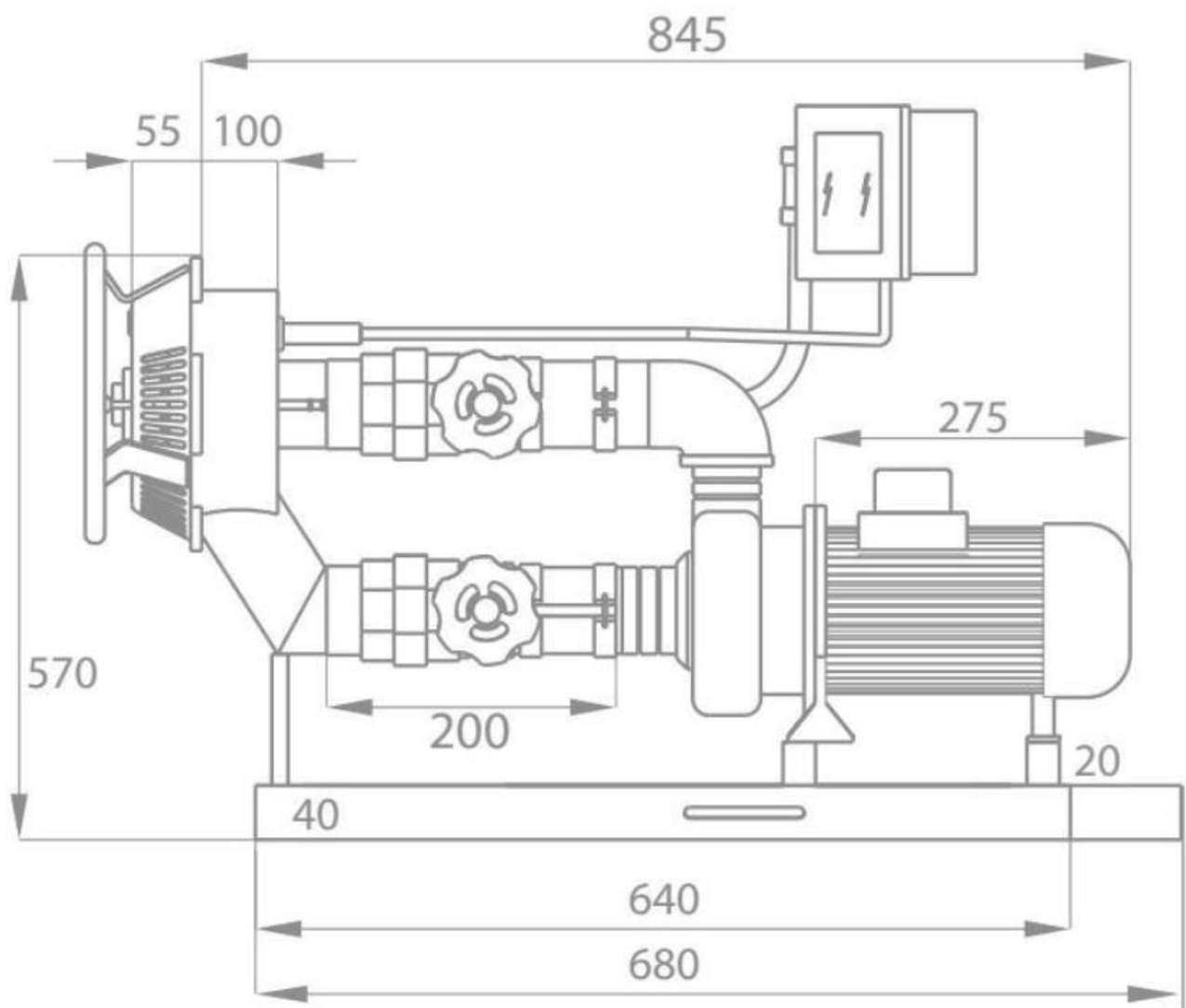
cover with half-round handle, water jet force regulator, 40mm nozzles with adjusted

flow direction and a suction and discharge manifold. The end unit consists of

stainless steel pump, control box, brass gate valve. The unit is mounted on a support

frame made of stainless steel. The device and its most important dimensions are

presented in the scheme below



## Material characteristics

The double counter current jet is made of AISI316L (1,4404) stainless steel. AISI 316L belongs to the family of austenite steel, it is a low-carbon variety of 316 steel. This steel is particularly corrosion resistant and therefore it is dedicated for use in welded structures. We have selected this material to guarantee long time of reliable operation and our customers' satisfaction.

## Control

The counter current is controlled from a control panel located in the pool area. The panel controls full scope of the device parameters, i.e.: switching the device on/off, flow rate adjustment, flow direction adjustment and aeration intensity. The panel is equipped with a handy holder.



Counter current control panel:

1. Piezo switch ON/OFF
2. Aeration intensity adjustment
3. Flow rate adjustment
4. Outlet nozzle 40mm (with water flow adjustment)
5. Holder

## Assembly instructions

Counter current is dedicated for assembly in pools or in the utility rooms. A part of the device is mounted onto the pool wall and the outlet nozzle with the operation panel is located directly in the pool. The end unit of the counter current, mounted on a support base

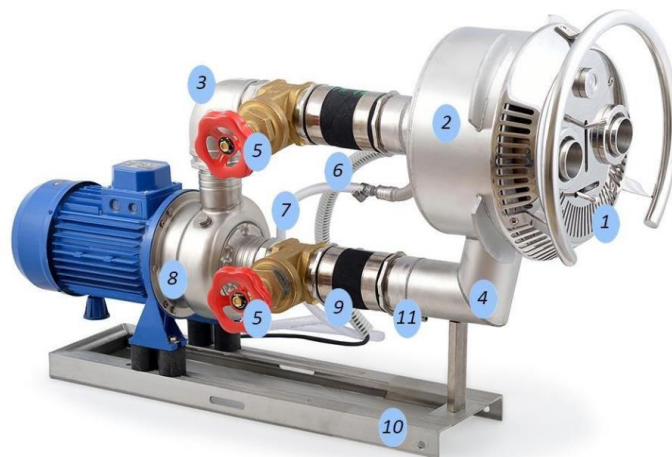
should be screwed with anchor bolts to the foundation, wall or floor. In case of installation in a utility room good ventilation must be provided.

The suction and discharge manifold is embedded into the pool wall. The control panel is attached to the manifold on the pool side, and on the other side, on the external side of the pool wall the end unit with connection fittings, pump and electric motor.

The manifold is equipped with four connection pipes: suction, discharge, air and signal cable.

Connection to water pipeline consists in connecting the suction and discharge connection pipes of the manifold to the connection fittings of the end unit. The air is provided in the system by means of an elastic tube with an end valve. The signal cable is led from the electric cabinet through the choke to the airtight housing where the piezo switch is located. The suction and discharge pipes are equipped with closing fittings, i.e. brass gate valves. An electric connection must be made by an authorised person in accordance with local standards and regulations and in accordance with EVU or VDE regulations for the devices with DWO or 3LM pumps .

- Always before disassembly of the counter current pumps disconnect all mains power supply and close all water connections.  
In case of three-phase current engines the pumps should be connected with an additional connector ( in case of one phase for engine disconnection). It is necessary to fill the pumps with water and carry out venting before start-up



#### **Double counter current:**

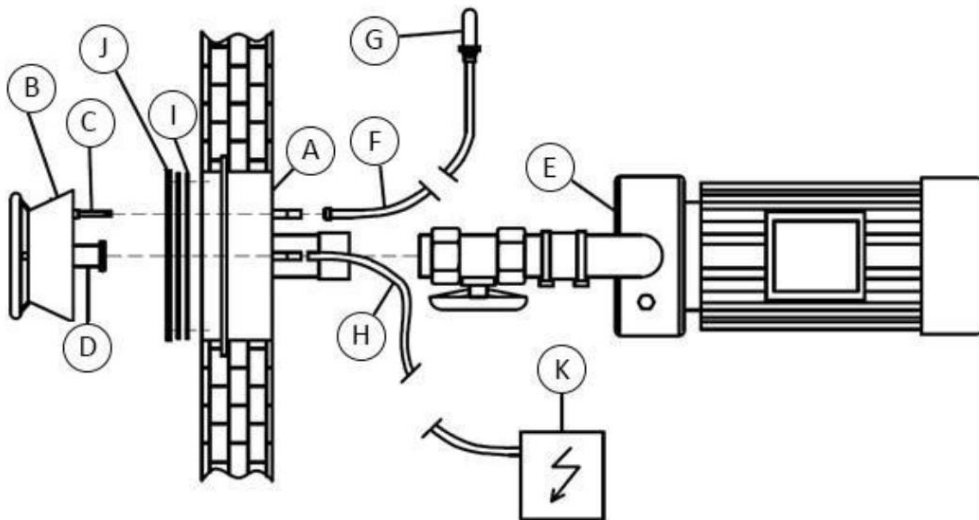
1. Front control panel
2. Suction/discharge manifold
3. Discharge connection pipe
4. Suction connection pipe
5. Cut-off valve
6. Signal cable for piezo switch
7. Air tube
8. Pump
9. Flexible connector/vibration damper

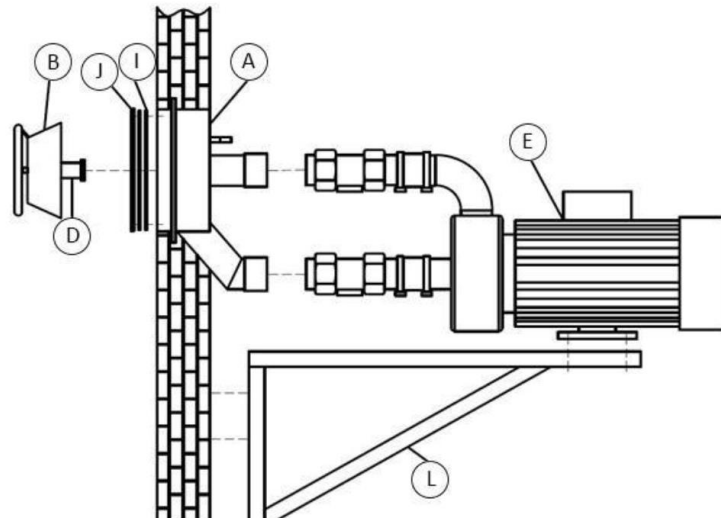
10. Support structure

11. Grounding clamp

**Assembly sequence:**

1. Embed the suction/discharge manifold (A) with concrete into the pool wall, attach grounding to the manifold,
2. Make accurate measurements and attach the support structure (L) to the wall or foundation by means of expansion joints or chemical anchors,
3. Mount the end unit (E) on the support structure (the pump and the connection fittings),
4. Attach the connection fittings to the connection pipes of the manifold,
5. Level the pump using regulation on the support structure,
6. Check the plastic sleeves (C) and (D) screwed in the nozzle and the air inlet, both located in the rear part of the control panel,
7. Check the o-rings on plastic sleeves: one on the large sleeve for water (D) and two o-rings on small sleeve for air (C),
8. Mount the flange (J) and two EPDM seals (I) on the manifold, the flange should be screwed with six M6x20 screws,
9. Pull the signal cable through the connection pipe on the manifold (A) and attach a plastic electrical conduit DN19 to protect the cable (H),
10. Mount the panel (B) with the nozzle in the manifold so that the plastic sleeves (C) and (D) match the holes on the manifold (A), screw the complete unit to the manifold housing with 4 M6x80 screws,
11. Connect the hose 8x2,5 (F) and the air return valve (G) and secure them with stainless steel clamps. It is important to place the air valve above the water level.
12. Connect the signal cable with the electric control cabinet (K) of the counter current,





### Operation conditions

The double counter current is basically a maintenance-free device. The only adjustable parameter is the flow rate, controlled on the panel and the device has to be switched on/off manually.

The operation guidelines for the double counter current are limited to:

- periodical control of tightness of the threaded connections
- control of required operation parameters of the device.

During the start-up the pump should be vented by means of loosening the screw in the vent located in the top part of the pump body. Venting should be carried out until the flowing water does not contain any air bubbles, as it proves that the pump has been correctly vented and primed.

During operation the control panel should be kept clean. Avoid any small elements that may penetrate into the system. Pump engines should be regularly checked and kept clean.

Failure-free operation of the delivered device concerns only the intended use of the device.

It is forbidden to rebuild and modify its structure because it may result in improper operation of the device.

Further information concerning the pumps installed in the counter current device is included in the documentation of the pump attached hereto.

**In case of any divergence between the information given in this manual and the attached pump documentation, the documentation provided by the pump manufacturer is prevailing.**

### 6. OHS issues

**The counter current is a device equipped with electrical drive, so it is necessary maintain utmost care during any maintenance works. It is not allowed to implement any modifications in the device or its electrical or mechanical circuits as it may lead to improper operation of the device and may result in accidents.**

**It is forbidden to dismantle the front panel cover and other elements of the device, and to put one's hands or other objects into the device while it is connected to the power supply network.**