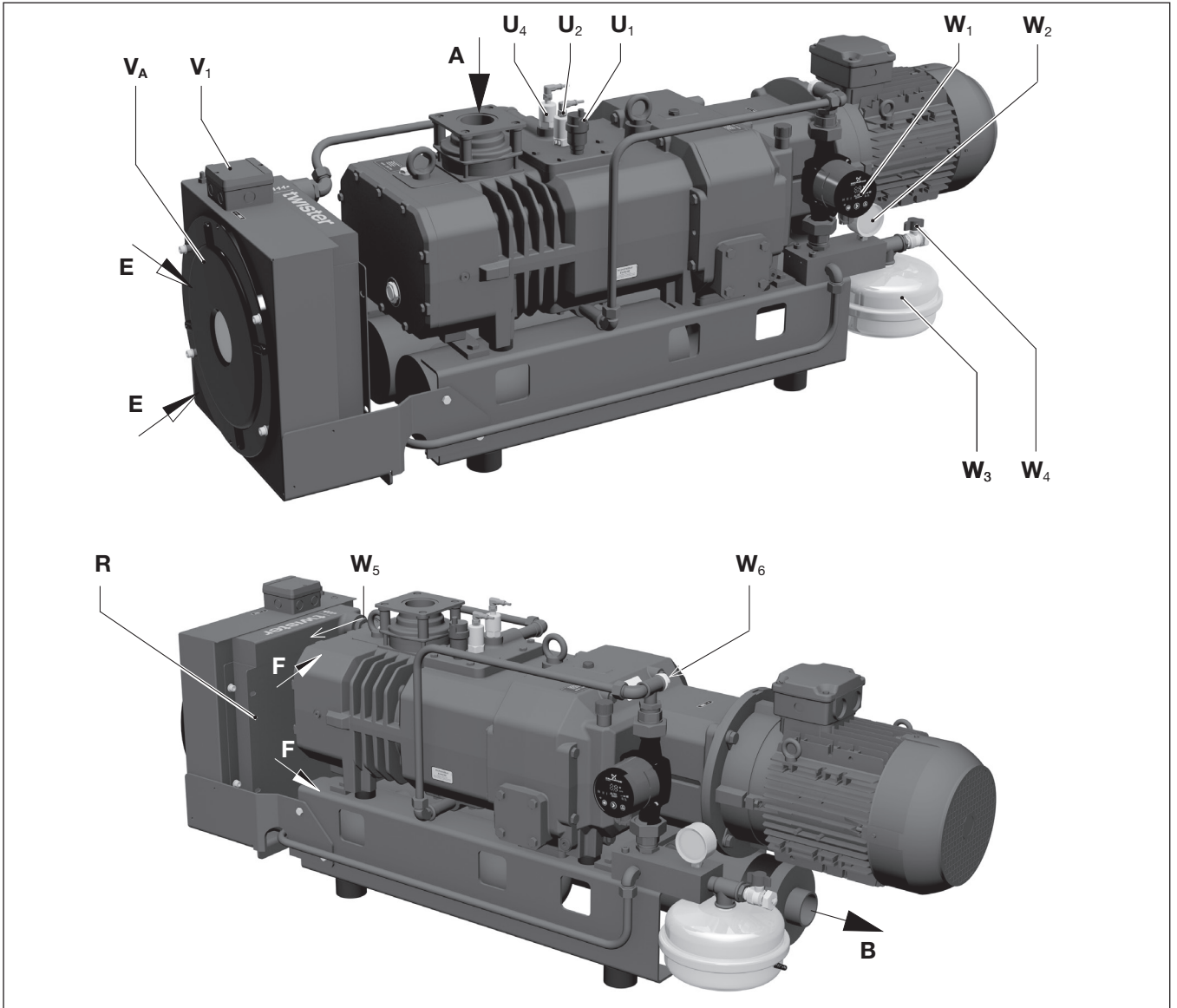




Screw vacuum pump S-VSI 300 (46) with water/air heat exchanger



- A** Vacuum connection
- B** Exhaust air outlet
- E** Cooling air inlet
- F** Cooling air outlet
- R** Heat exchanger
- U₁** Vent valve
- U₂** Temperature control
- U₄** Liquid level monitor
- V_A** Fan (IP 44)
- V₁** Terminal box fan
- W₁** Circulation pump (IP 42)
- W₂** Manometer
- W₃** Surge tank
- W₄** Ball cock (filling)
- W₅** De-aeration screw (heat exchanger)
- W₆** De-aeration screw (cooling water circulation)

S-VSI 300 (46)	
Weight	380 kg
Length	1588 mm
Width	457 mm
Height	591 mm
Vacuum connection	G 2

Installing and commissioning



The screw vacuum pump S-VSI 300 (46) with water/air heat exchanger must be connected by a qualified specialist.

For operating and installation follow any relevant national standards that are in operation.



Please read first the operating instructions BA 832-42-EN and pay attention to the sections “Installation, Commissioning and Maintenance”.

With any work observe the safety instructions described in section “Safety notes for installation, commissioning and maintenance.”

The cooling air inlet (E) must be at least 30 cm away from adjacent wall.

1. Fill surge tank (W_3) with air to 0.5 bar (g).
2. Remove the de-aeration screws (W_5) and (W_6) on the heat exchanger (R) as well as on the cooling water circulation.
3. Fill cooling circulation with a water-glysantine mixture in a ratio of (70:30) at the ball cock (W_4).
4. When the heat exchanger (R) is filled, close the opening (W_5) with the de-aeration screw.
5. Continue filling of the cooling circulation until the cooling medium discharge at the opening (W_6), afterwards close this opening with the de-aeration screw.
6. After that fill the cooling circulation up to a pressure of 1.2 bar (g) (check by means of manometer (W_2)).
7. Connect circulation pump (W_1) and let run at the highest level (level III) - (use the included plug, see enclosed connection diagram).
▷ Voltage: 1 ~ 230V (50Hz/60Hz)
8. Please check the water pressure at the manometer (W_2) and if necessary refill cooling medium.
▷ The water pressure must not exceed 1 bar (g) and underrun 0.6 bar (g).
The water pressure should be checked weekly.
9. Connect the fan (V_A) at the terminal box (V_1) - (see connection diagram).
▷ Voltage: 1 ~ 230V (50 Hz/60 Hz)



Danger of death if the electrical installation has not been done professionally!

The electrical installation may only be done by a specialist electrician observing EN 60204. The operating company has to provide the main switch.

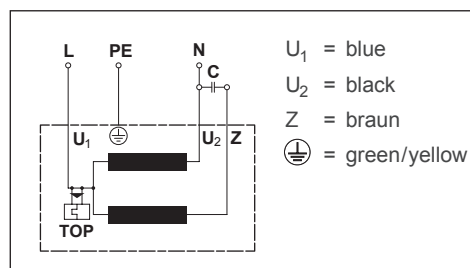


While operating the screw vacuum pump S-VSI 300 (46) it must be guaranteed, that the fan (V_A) and the circulation pump (W_1) are also enabled.

When power-down of the machine it must be guaranteed, that the fan (V_A) and the circulation pump (W_1) are also switched off.

Connection diagram fan (V_A)

- ▷ Voltage: 1 ~ 230V (50Hz/60Hz)



Maintenance

Check the orifices for the cooling air inlet (E) and the protective grid of the fan (V_A) regularly and clean them by blowing off. It is also required regularly to inspect the cooling air outlet (F) on the grid of the heat exchanger (R) and to clean it by blowing off.



Danger of injury when dealing with compressed air

When blowing through with compressed air, solid particles may be carried along or powder dust swirling around may cause injury to the eyes.

Therefore, when cleaning with compressed air always wear goggles and a dust mask.

For further maintenance works see operating instructions **BA 832-42-EN**

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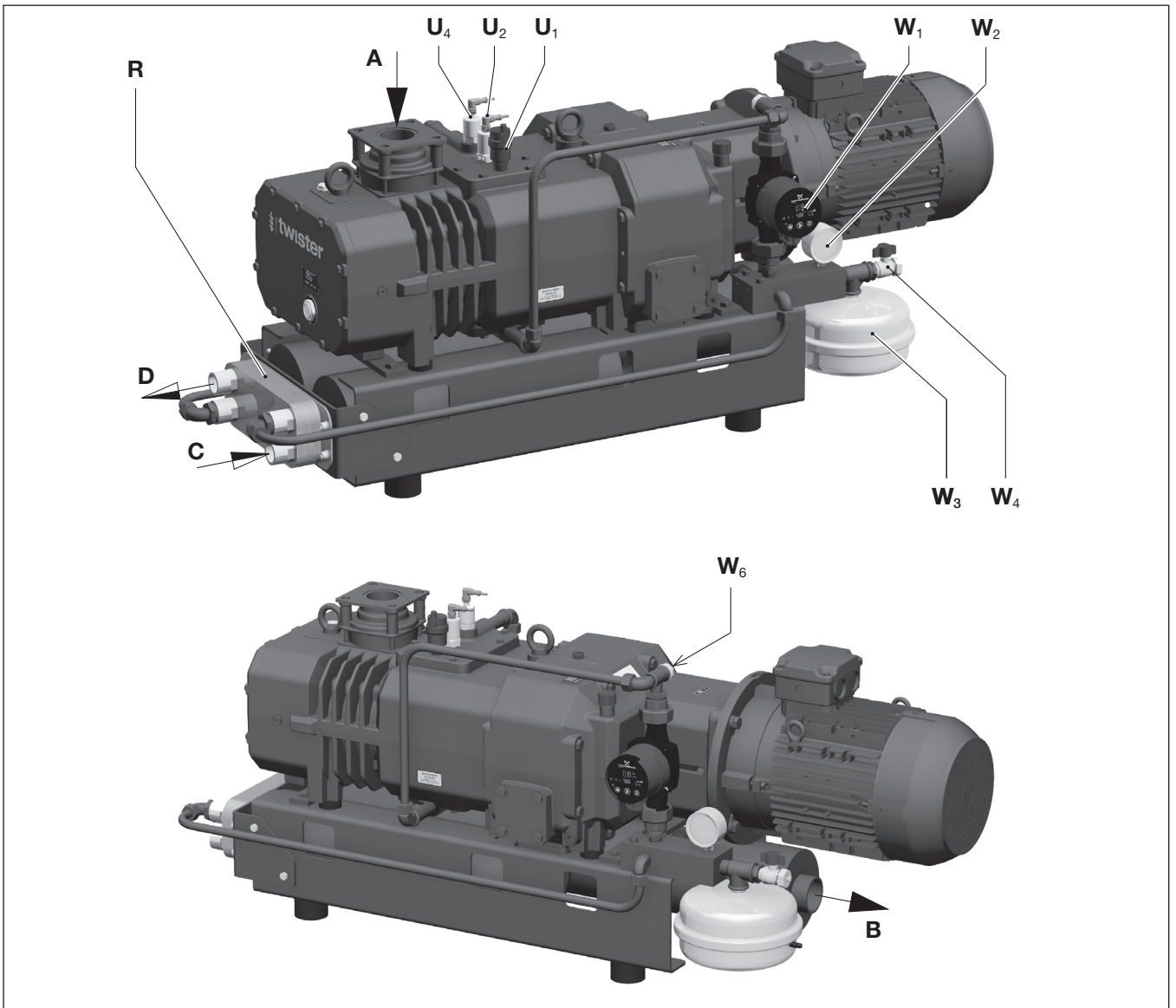
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Screw vacuum pump S-VSI 300 (51) with water/water exchanger



- A** Vacuum connection
- B** Exhaust air outlet
- C** Cooling water inlet
- D** Cooling water outlet
- R** Heat exchanger
- U₁** Vent valve
- U₂** Temperature control
- U₄** Liquid level monitor
- W₁** Circulation pump (IP 42)
- W₂** Manometer
- W₃** Surge tank
- W₄** Ball cock (filling)
- W₆** De-aeration screw (cooling water circulation)

S-VSI 300 (51)	
Weight	360 kg
Length	1453 mm
Width	455 mm
Height	591 mm
Vacuum connection	G 2

Installing and commissioning



The screw vacuum pump S-VSI 300 (51) with water / water heat exchanger must be connected by a qualified specialist.

For operating and installation follow any relevant national standards that are in operation.



Please read first the operating instructions BA 832-42-EN and pay attention to the sections “Installation, Commissioning and Maintenance”.

With any work observe the safety instructions described in section “Safety notes for installation, commissioning and maintenance.”

1. Fill surge tank (W_3) with air to 0.5 bar (g).
2. Remove the de-aeration screw (W_6) on the cooling water circulation.
3. Fill cooling circulation with a water-glysantine mixture in a ratio of (70:30) at the ball cock (W_4).
4. Fill cooling circulation until the cooling medium discharge at the opening (W_6), afterwards close this opening with the de-aeration screw.
5. After that fill the cooling circulation up to a pressure of 1.2 bar (g) (check by means of manometer (W_2)).
6. Connect circulation pump (W_1) and let run at the highest level (level III) - (use the included plug, see enclosed connection diagram).
 - ▷ Voltage: 1 ~ 230V (50 Hz/60 Hz)
7. Please check the water pressure at the manometer (W_2) and if necessary refill cooling medium.
 - ▷ The water pressure must not exceed 1 bar (g) and underrun 0.6 bar (g).
The water pressure should be checked weekly.
8. Connect the plate heat exchanger (PWT) to the cooling water circulation (see connection diagram).
When connecting the plate heat exchanger (PWT), pay attention to the following items:



Lay the piping in a way that no vibrations, impacts or pulsations can impact the connections and the whole PWT.

Shut-off valves should be installed in the pipes to be able to put the PWT out of operation without disturbing the connected systems. It is also required to install vent valves in the pipes to ensure the proper venting of the PWT.

Wash out the pipe systems before putting the PWT into operation.

Design the piping and the arrangement of valves in a way that the PWT cannot run empty if it is switched off for a short time (operational) to avoid pressure blows when it is started again.

To prevent pollution we recommend installing appropriate filters (mesh size max. 0.1 mm) in the media inlets.



Caution! Pollutions in the PWT can cause corrosion and, in some applications, also freezing of the device can occur.



Danger of death if the electrical installation has not been done professionally!

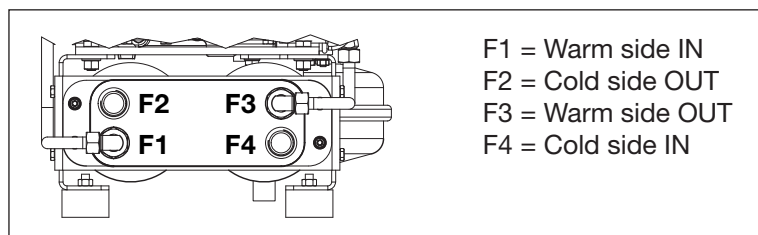
The electrical installation may only be done by a specialist electrician observing EN 60204. The operating company has to provide the main switch.



While operating the screw vacuum pump S-VSI 300 (51) it must be guaranteed, that the circulation pump (W_1) is also enabled.

When power-down of the machine it must be guaranteed, that the circulation pump (W_1) is also switched off.

Connection diagram plate heat exchanger (R)



Maintenance and Cleaning

If incrustation is expected in the flow gaps due to the water or media quality (e.g. higher degree of hardness or stronger pollution), clean it regularly.

Cleaning of the PWT can be performed by washing out, mainly in the backflow, i.e. in the opposite direction of the actual flow direction.



If chemicals are used for cleaning, make sure that they are compatible with stainless steel, copper or nickel. Nonobservance can cause the destruction of the PWT!

Please read the following general cleaning recommendations.

For calcareous sediments or similar incrustation:

Cleaning agent: Phosphate acid

Concentration: max. 2 %

Temperature: max. 20 °C

Recommended duration of action: ca. 1 h

For oil, grease, biofouling, e.g. by algae or bacteria:

Cleaning agent: Caustic soda solution

Concentration: max. 4 %

Temperature: 85 °C

Recommended duration of action: up to 24 h

With this, strictly observe the safety instructions and recommendations issued by the manufacturers of the cleaning agents! Use chloride-free or low-chloride water with low hardness for all cleaning works!

Finally rinse with sufficient water until the acid has completely been washed out of the PWT and the adjacent pipes.

For further maintenance works see operating instructions **BA 832-42-EN**

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