

Wondering how to install **Vivoil flow dividers**? Here is an **installation guide** to help you perform all the important steps.

In the next few paragraphs, you will find the steps you need to follow to install your [Vivoil flow divider](#), whether it is a **valveless, multivalve, or single-valve component**.

You will see that the preliminary operations and start-up will be identical for all types of dividers. In the case of dividers with valves, you will only have to perform one more operation: their calibration.

## **Before installation**

Before installing the divider, it is important to check that the pipes are clean and of the right size and that the fluid chosen is appropriate.

### **Component cleaning**

First, we advise you to check that the inlet and connecting **pipe sections** to the actuators are **clean**. In fact, dust, metal burrs, and rubber fragments left behind by fittings can affect the operation of the flow divider.

### **Checking the pipes**

We suggest that the pipes be as much of the same length as possible, or at least as similar as possible. This is important to minimize load differences generated by the different branches that could affect the division accuracy.

### **Fluid control**

Before proceeding with installation, it is a good idea to check that the **system fluid** is clean, suitable for the flow divider, and has the same viscosity as recommended in the [catalogue](#). In fact, using a fluid other than the one suggested would cause malfunctions in the component and shorten the life of the divider.

# Connect the pipes to the flow divider

Now, you can proceed with the connections. To perform these operations, we recommend that you place the component on a **clean table**, ideally an unpainted metal shelf.

## **Cap removal**

Remove the **plastic caps**, being careful not to break them, lest any fragments enter the divider and impair its operation.

## **Screwing**

Hand-tighten the **pipe fittings** and then complete the screwing by tightening them with a suitable wrench, without using extensions.

**CAUTION – Do not use tapered fittings that deform and damage the divider.**

Now the divider is connected to the system and you can proceed with the startup .

# Startup of the divider

The first thing to do is to purge the air from the system, especially from the piping leading from the divider to the uses.

For the divider to achieve its intended performance, it must first work for about an hour. During this initial phase, **check the fittings for leaks**. If you notice any leaks, it means that the fittings are not tightened sufficiently and therefore need to be tightened a little more.

If the flow divider is with valves, the procedure remains the same, but with one more step: the phase-correction valves must be calibrated.

# Calibration of phase-correction valves

Phase-correction valves intervene at the end of the stroke to eliminate any errors and must be carefully adjusted to open at the appropriate time. Incorrect adjustment could cause a number of problems, including rupture of the flow divider. To do this correctly, it is first necessary to properly connect the drainage pipe.

## External and internal drainage

In flow dividers with phase-correction valves, whenever the valve in an element is opened, the flow in that element goes to drain. This flow is then directed to the outside, through a drain port, to which a pipe must be connected, which sends the flow into drainage inside the tank. In this way, external drainage is achieved.

In single-valve series (RV-S) components, by removing the grub screw located inside the drain port and fitting a BSP plug in the same port, the flow is sent to the inlet of the divider, thus achieving internal drainage.

We generally recommend **external drainage**. In fact, **internal drainage** is possible, but it puts more stress on the divider than external drainage and makes valve calibration more complex.

For proper operation in the case of RV-V dividers, it is necessary for the drainage pipe to be connected to the tank under the head to ensure that the pipe is always full of oil.

To ensure that a multivalve flow divider operates at peak performance and avoid installation errors, the first thing to do is to calibrate the **phase correction valve**. This step is very important because, if the adjustment is not done correctly, numerous problems can arise, including component failure.

In fact, the phase correction valves **intervene at the end of the stroke** to reset the error and therefore need to be properly adjusted to open at the right time.

# How to adjust the phase correction valves of a multivalve flow divider

Unlike [single-valve flow dividers](#), in which calibration is faster because it allows all elements to be adjusted simultaneously, in the case of multi-valve dividers, **separate calibration of each element** is required.

Starting with the first of the elements, the steps to be performed are as follows:

1. Remove the cylindrical plug with washer covering the 1/8" BSP port located on the valve.
2. Mount a pressure gauge on the port.
3. Put a plug in the outlet of the element you are adjusting, leaving the outlets of all other elements unloaded.
4. Get the pump running.
5. Adjust the valve until the pressure gauge indicates a pressure of about 20-30 bar above the maximum use pressure and in any case below the set pressure of the system relief valve.
6. Unscrew the pressure gauge and screw back the previously removed end cap.

Repeat the same operation, following the same steps, for all other valves.

**Flow dividers** are much more complex products than pumps and motors, so it is important to know how they work and know their characteristics to avoid installation mistakes that can lead to problems such as, for example, equipment failure.

To let a flow divider work at its best performances, it is extremely important it is correctly adjusted: in this article we'll see together how to **adjust the pressure valve** in the flow dividers of the **RV-0S and RV-1S series**.

First, however, a brief overview of this product.

## Flow dividers with single phase correction valve: functions and features.

The **single valve model** is used to divide the oil flow, or to unify the flows to regulate the different oil flow rates.

Compared to the model with multiple valves, **it is easier to adjust** as we will see shortly, in fact, it is enough to act on the only valve present to regulate all the elements.

## **How to adjust the valve on RV-0S and RV-1S series dividers**

These series of flow divider have a **single valve** that allows you to adjust all the elements at the same time, in a simple way.

To avoid mistakes, follow these steps:

1. Mount the pressure gauge on the pressure outlet.
2. Plug an out port of the flow divider and leave the other elements unloaded.
3. Remove the protection nut on the valve and loosen the locknut.
4. Adjust the maximum pressure using the hexagonal set screw

**Important:** before proceeding make sure that the set pressure is lower at least 10-20 bar than the pressure of the main relief of the circuit

1. Tighten the locknut, being careful not to change the position of the adjusting screw
2. Screw the blind nut back on.
3. Remove the pressure gauge and plug this thread.
4. Your valve is adjusted at the required working pressure!