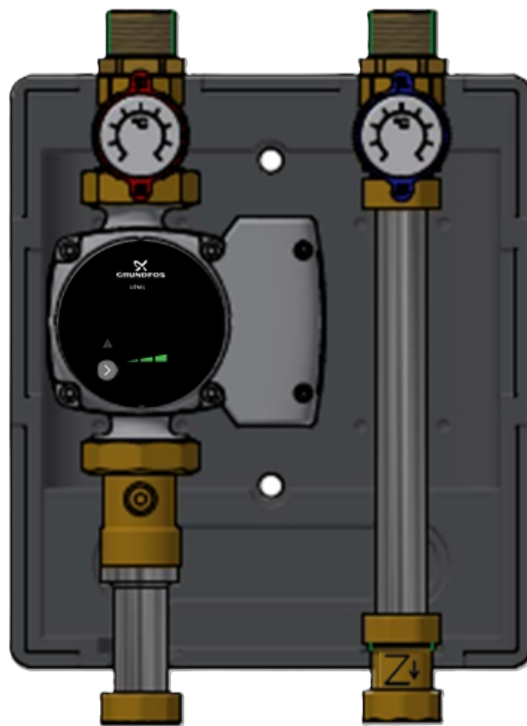


# Installation and Operation Instructions

VARIMIX PRO  
VAR 10  
direct flow module  
PN: 550633PNAIXL



## 1. General Information

Carefully read these instructions before installation and commissioning. Save these instructions in the vicinity of installation for future reference.

### 1.1 Scope of these instructions

These instructions describe the installation, commissioning, function and the operation of the **VARIMIX PRO VAR 10** direct flow module. For other components of the installation, such as the circulator, the controller or the modular distribution manifold, please follow the instructions of the corresponding manufacturer. The chapters titled [specialist] are intended for professional installers only.

### 1.2 Designated use

The **VARIMIX PRO VAR 10** may only be used in heating circuits, taking into consideration the technical limitations indicated in these instructions.

The **VARIMIX PRO VAR 10** must not be used in potable water applications.

Improper usage of VARIMIX PRO VAR 10 excludes any liability claims.

This product complies with the relevant directives and is therefore labelled with the CE mark.

The Declaration of Conformity is available upon request, please contact the manufacturer.

Only use IVAR accessories with the VARIMIX PRO VAR 10.

The packaging is made of recyclable materials and can be fully recycled.

## 2. Safety instructions

The installation and commissioning as well as the connection of electrical components require technical knowledge corresponding with a recognized qualification as a fitter for plumbing, heating and air conditioning technology, or a profession requiring a comparable level of knowledge [specialist].

The following must be observed during installation and commissioning:

- relevant local and national technical standards and regulations
- Health and Safety in Workplace regulations
- instructions and safety instructions of this manual



**CAUTION! Personal injury and damage to property! The VARIMIX PRO VAR 10 must only be used in heating circuits filled with heating water. VARIMIX VAR 10 must not be used in potable water applications.**

### **NOTICE Material damage due to mineral oils!**

Mineral oil products cause lasting damage to seals made of EPDM, whereby the sealant properties get lost. We do not assume liability nor provide warranty for damage to property resulting from sealants damaged in this way.

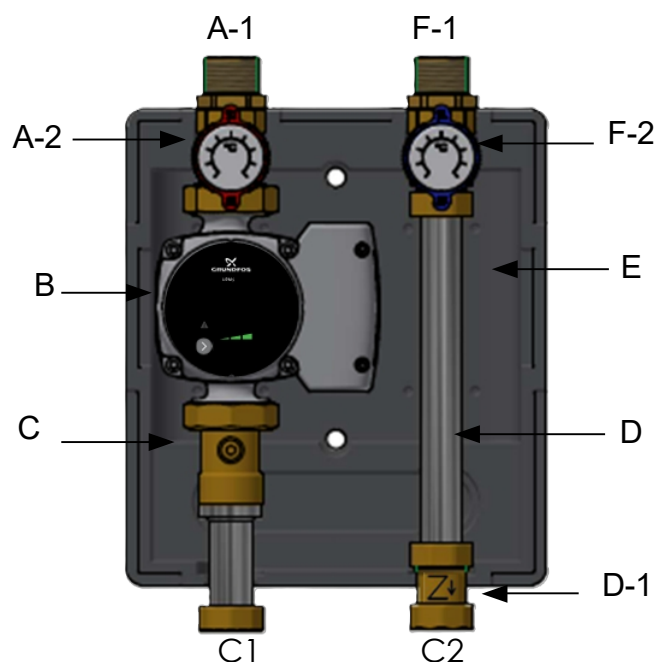
- It is imperative to avoid that EPDM gets in contact with substances containing mineral oils.
- Use a lubricant based on silicone liquid or spray free from mineral oils.

### 3. Product description

VARIMIX PRO VAR 10 is a pre-assembled group of fittings for heating and cooling circuits. The circulator can be conveniently maintained by isolating it using the ball valves.

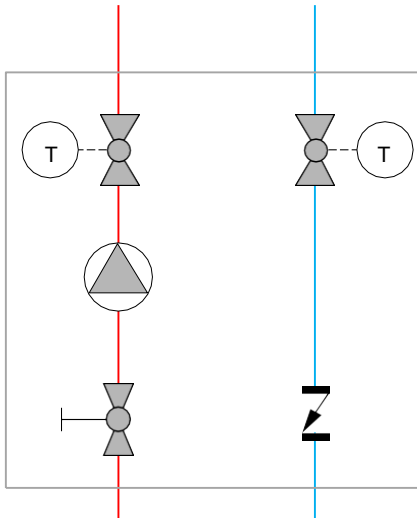
The VARIMIX PRO VAR 10 should be mounted on a modular VARIMIX PRO VAR 30 distribution manifold.

#### 3.1 Equipment



- A-1 Supply to the load circuit
- A-2 Plastic thermometer, integrated in the ball valve handle (supply)
- B Circulation pump, approved for cooling operation
- C Pump isolation ball valve
- C-1 Supply from the heat / cold generator
- C-2 Return to the heat / cold generator
- D-1 Integrated Check valve
- D Return pipe
- E Insulation shell
- F-2 Plastic thermometer, integrated in the ball valve handle (return)
- F-1 Return from the load circuit

## 4. Function



### VAR 10 - VARIMIX PRO direct flow module

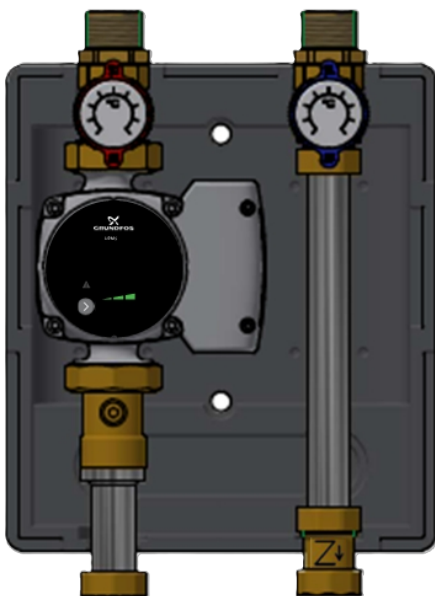
An integrated circulation pump transports fluid from the heat/cold generator to the consumers/loads.

The ball valves enable pump maintenance for both the boiler/heat generator-side circuit and the load-side circuit without shutting down the entire hydronic system.

Two thermometers display the temperatures of the supply and the return and allow thus a function control.

The integrated check valve avoids unwanted circulation/ heat migration.

The insulation shell prevents heat energy loss during heating operation. During cooling operation, the insulation reduces possible condensation.



Application range:

Heating and cooling circuits for modulating temperature operation.

## 5. Assembly and installation [specialist]

The mounting of VARIMIX PRO VAR 10 is thermally decoupled from the wall. Use the hardware and components included in the scope of delivery:

- 2 x Wall Screw Plug
- 2 x Round Spacer Nylon.
- 2 x Conical seat Washer aluminum.
- 2 x Flat Head Philips Screw.
- 2 x Nylon tie wrap 12" (300mm).
- 1x Combination temperature gauge /ball valve handle Red.
- 1x Combination temperature gauge /ball valve handle Blue.

**NOTICE:**

The resulting distance from the wall to Pipe Center - S: **2 3/16" (55 mm)**



Fig. 1

1. Carefully remove the insulating front shell of the VARIMIX PRO VAR 10. Do not break it. (see figure 1).



Fig.2

2. From accessories pack, use supplied spacers and put them in pre-punched openings. Punch out the holes at the marked areas in the insulation and insert supplied tie wraps as shown in Figure 2.

Fig.3



3. Connect the VAR 10 Pump module to the distribution manifold using supplied EPDM gaskets.

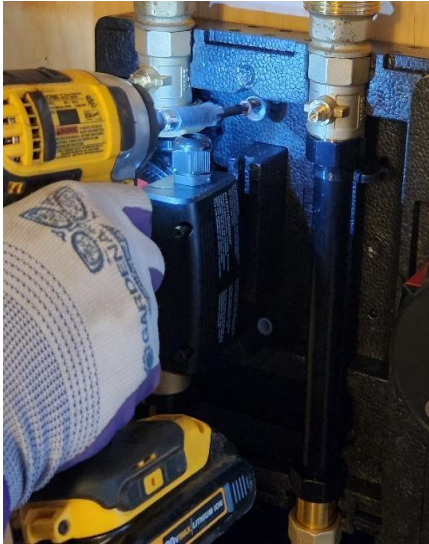
C-1 Union - Pump branch to Supply port  
C-2 Union - Return branch to return port  
(see figure 3).

Fig. 4



4. Slide the back shell insulation behind the pump module and center it in the final position (see figure 4).

Fig.5



5. Fasten the back shell to the wall using supplied Flat Head Philips Screws and Conical seat Washers (see figure 5).

6. Pull together Nylon tie wraps and secure piping and insulation together.

7. Connect the system piping to VARIMIX PRO VAR 10 using the field supplied G-union pipe adaptors. The installation to the piping must be carried out without any tension.

Fig.6



8. Connect the control wiring to the pump.

9. Carry out a pressure test and check all thread and union connections.

10. Mount the insulation in the following order:

- Open split of the front shell and slide around the pump cable and pump motor. See Fig.6

- Install the temperature gauges on the valves.

- Install pump cover shell. Slide the pump cable through the slot in insulation, then slide the shell down as shown in Fig.7

Fig.7



## 6. Scope of supply [specialist]

### NOTICE:

Complaints and requests/orders of spare parts will only be processed with information on the serial number is placed on the return pipe of the heating/cooling\* circuit.

### 6.1 Spare parts VAR10 Part Number 550633PNAIXL



Pump: Grundfos UPMS 25/78-130		Part Number:
High-efficiency ECM, Constant curve (I, II, III)		<b>GRUN10NA</b>

## 7. Technical Data

### Dimensions

Centre distance (A)	4 15/16"	125 mm
High insulation (B)	12 3/8"	314 mm
Width insulation (C)	9 13/16"	250 mm
Depth insulation (D)	8 1/4"	210 mm
wall to Pipe Center (S)	2 3/16"	55 mm

### Connections

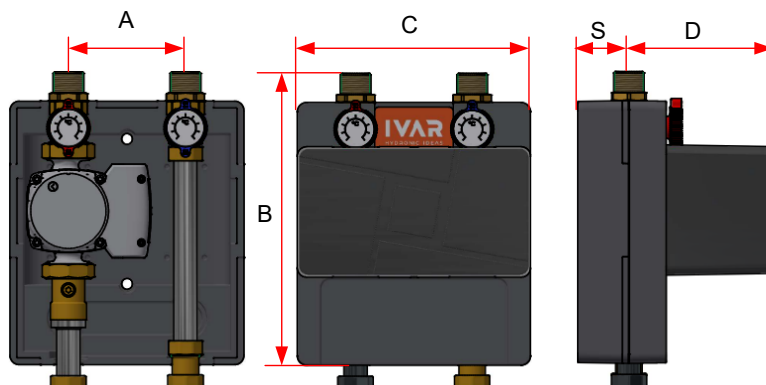
Inlet	1" int. G1	
Outlet	1" ext. G1	(optional G1.25)

### Materials

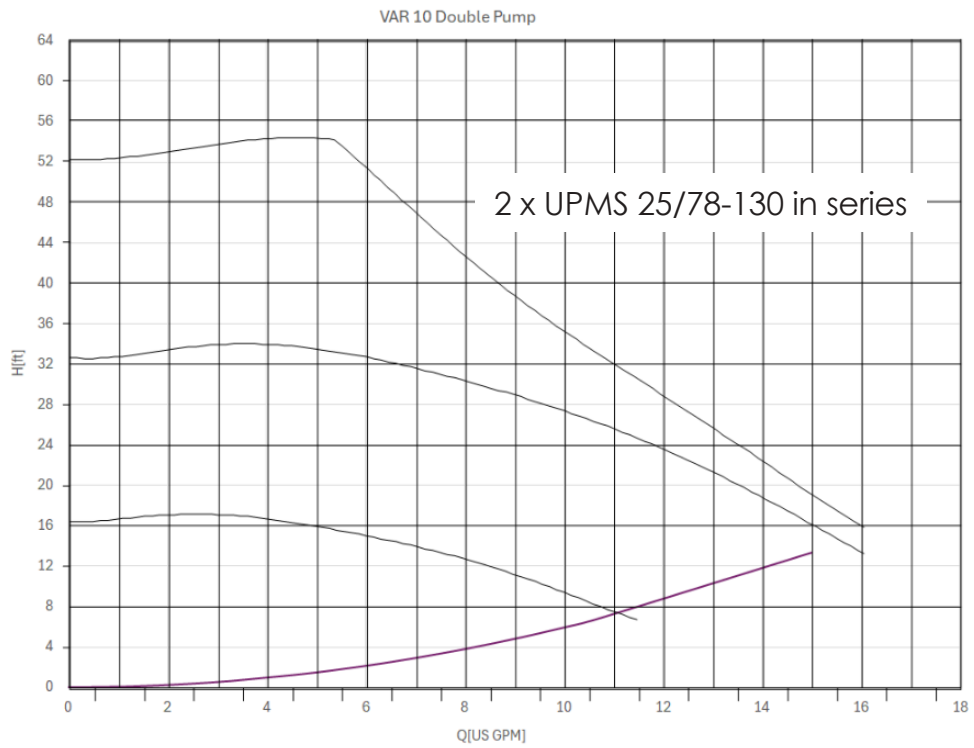
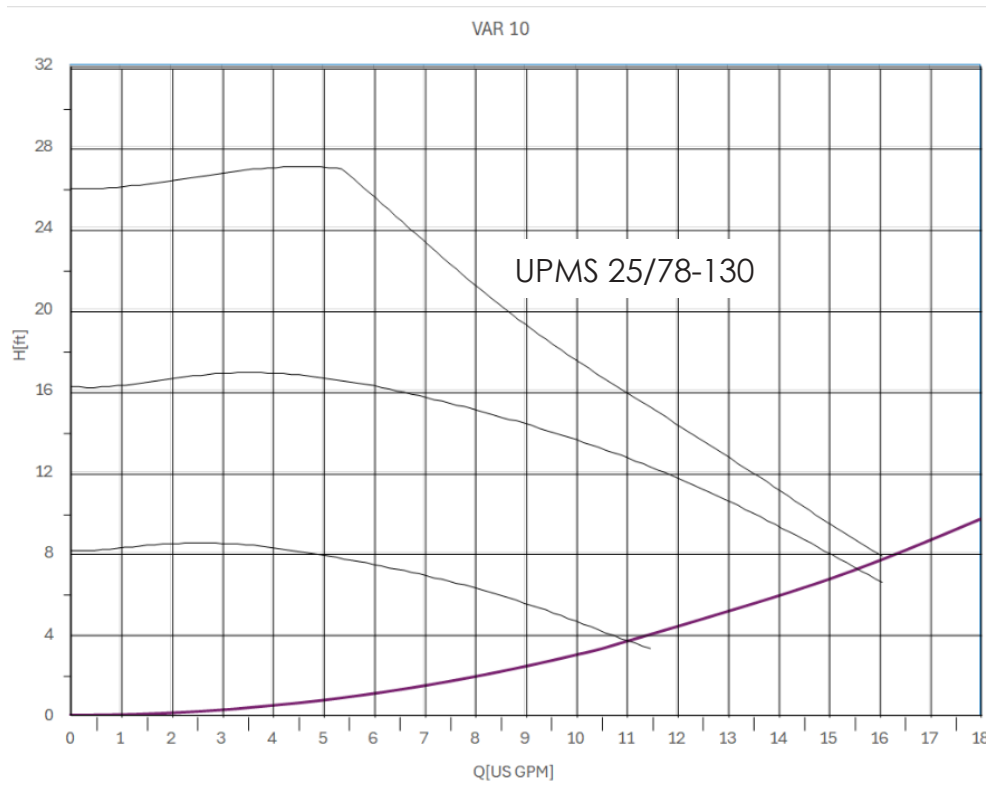
Valves and fittings	Brass
Pipes	Stainless Steel
Gaskets	EPDM
Insulation	EPP

### Hydraulics

Max. Pressure	87 psi	6 bar
Minimum Temperature	41°F	+ 5°C
Maximum Temperature	230°F	110°C
Maximum Flow Rate	13.2 gpm	3000 l/h
Cv	8	



## 7.1 Pressure Drop and Pump curve

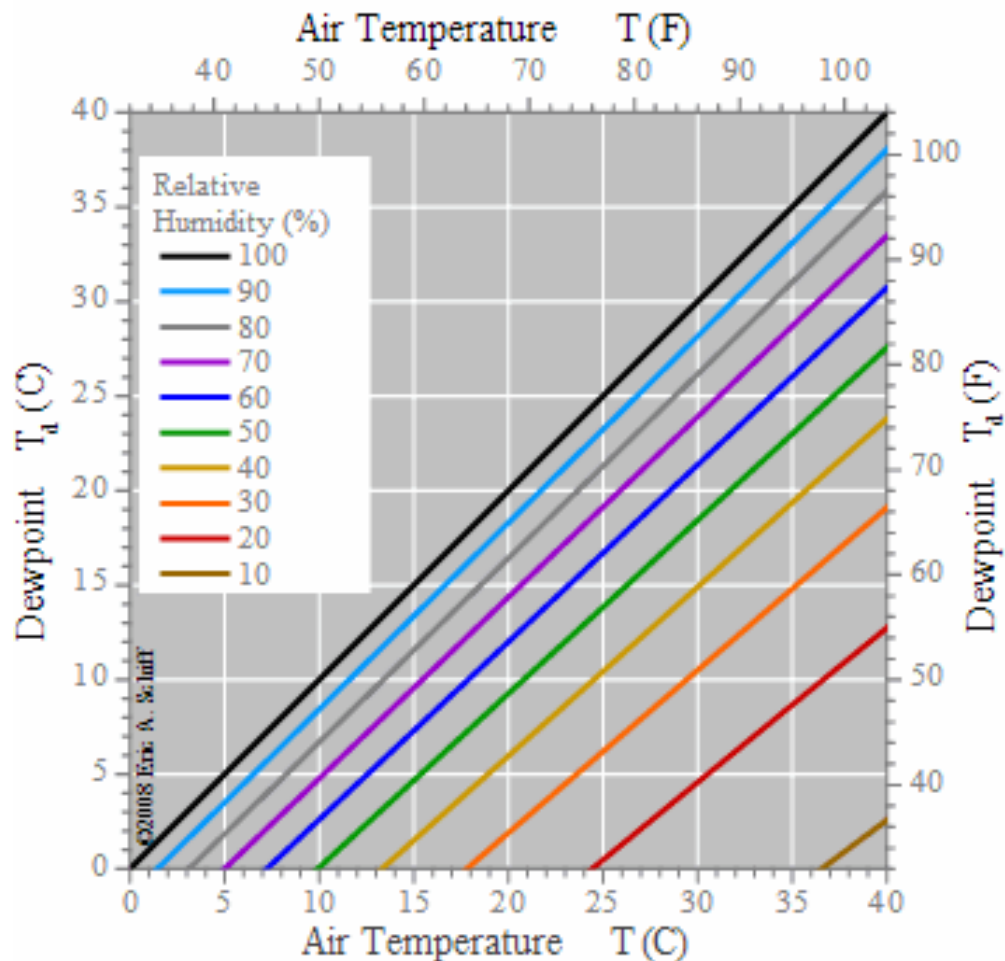


## 7.2 Determination of the dew point

\* Generally, the cooling water temperature should not drop below 50 - 59°F (15 - 16°C) to prevent condensation formation at system components due to falling below the dew point temperature. The diagram below provides a rough estimation to determine if the dew point temperature has been undershot.

### Example:

Room air temperature 70 °F, relative air humidity 50%, dew point temperature 50 °F.





[www.modularhydronics.com](http://www.modularhydronics.com)

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