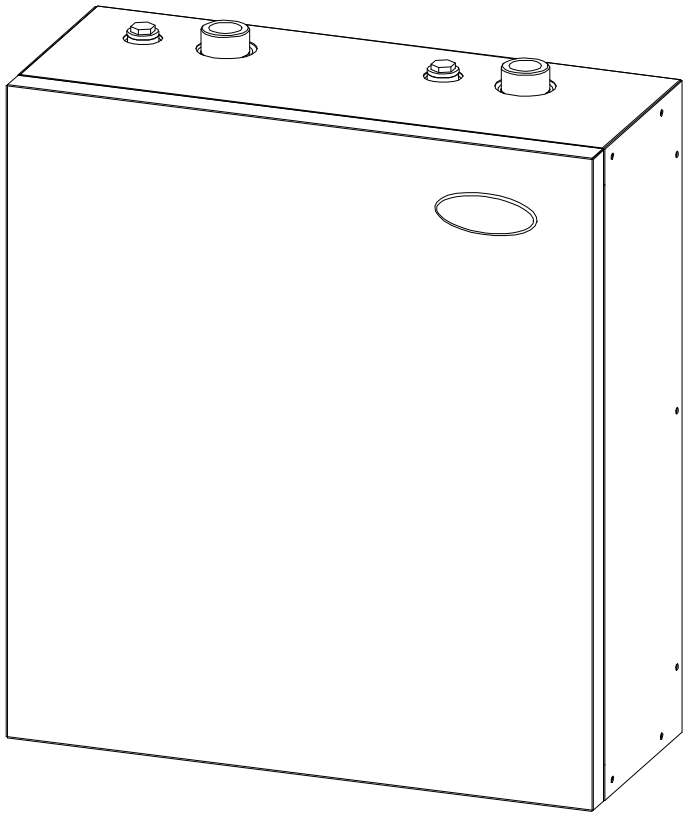
INSTALLATION AND OPERATING INSTRUCTIONS

➥ BIO DMt KIT



DOMUSA TEKNIK

Thank you for choosing a DOMUSA TEKNIK product. From the range of **DOMUSA TEKNIK** products, you have chosen the **DMt Underfloor Heating Kit**. With a suitable hydraulic installation, this accessory will provide the ideal level of comfort for your home.

This manual forms an essential part of the product and it must be given to the user. Read the warnings and recommendations in the manual carefully, as they contain important information on the safety, use and maintenance of the installation.

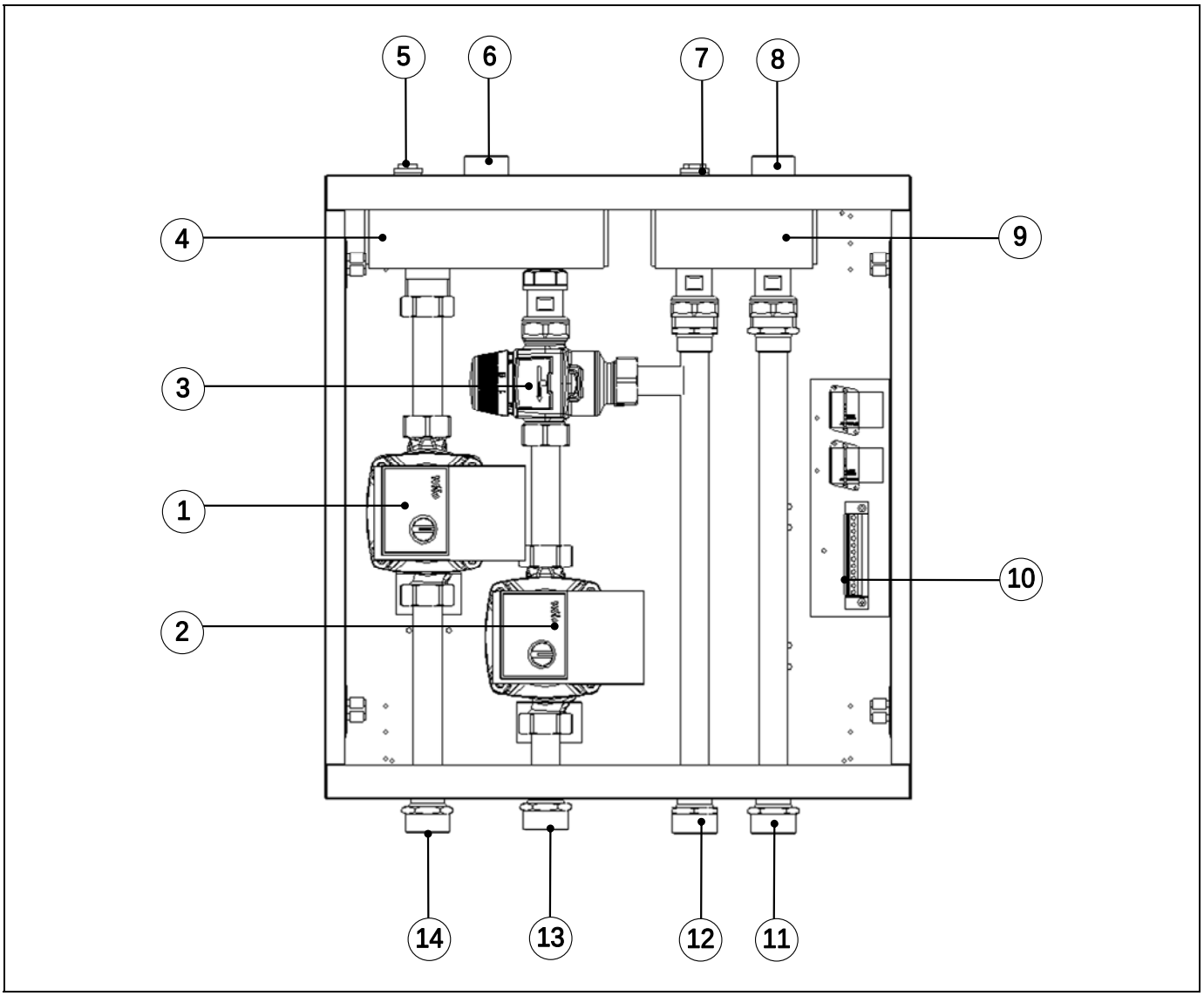
This accessory must be installed by qualified personnel only, in accordance with the legislation in force and following the manufacturer's instructions.

Start-up of these products and any maintenance operations must only be carried out by a **DOMUSA TEKNIK** Official Technical Assistance Service.

Incorrect installation of this appliance could result in damage to people, animals or property, and the manufacturer will hold no liability in such cases.

CONTENTS Page

1 LIST OF COMPONENTS



1. Direct circuit pump.
2. Mixed circuit pump.
3. Thermostatic mixing valve.
4. Flow manifold.
5. Drain valve socket.
6. Inlet from boiler.
7. Drain valve socket.
8. Outlet to boiler.
9. Return manifold.
10. Electrical board.
11. Direct circuit return.
12. Mixed circuit return.
13. Mixed circuit flow.
14. Direct circuit flow.

2 INSTALLATION INSTRUCTIONS

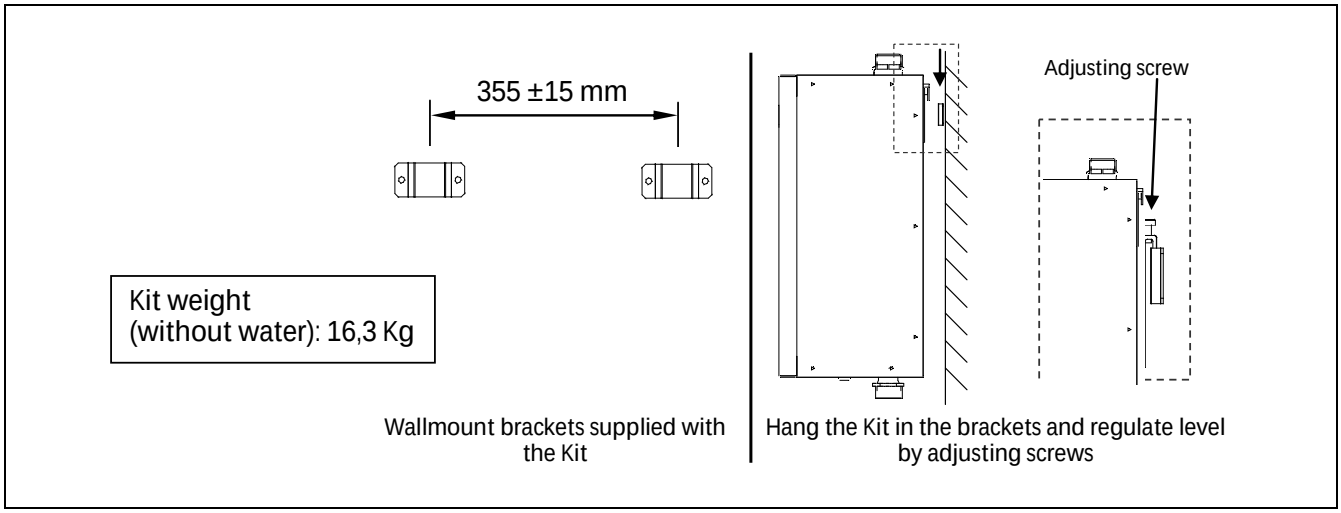
The **DM_t Underfloor Heating Kit** must be installed by personnel authorised by the Department of Industry in accordance with the applicable regulations and standards in force. However, the following recommendations must be complied with when installing the kit:

2.1 Wall-mounting the DM_t Underfloor Heating Kit

The Kit must be installed in a sufficiently ventilated site.

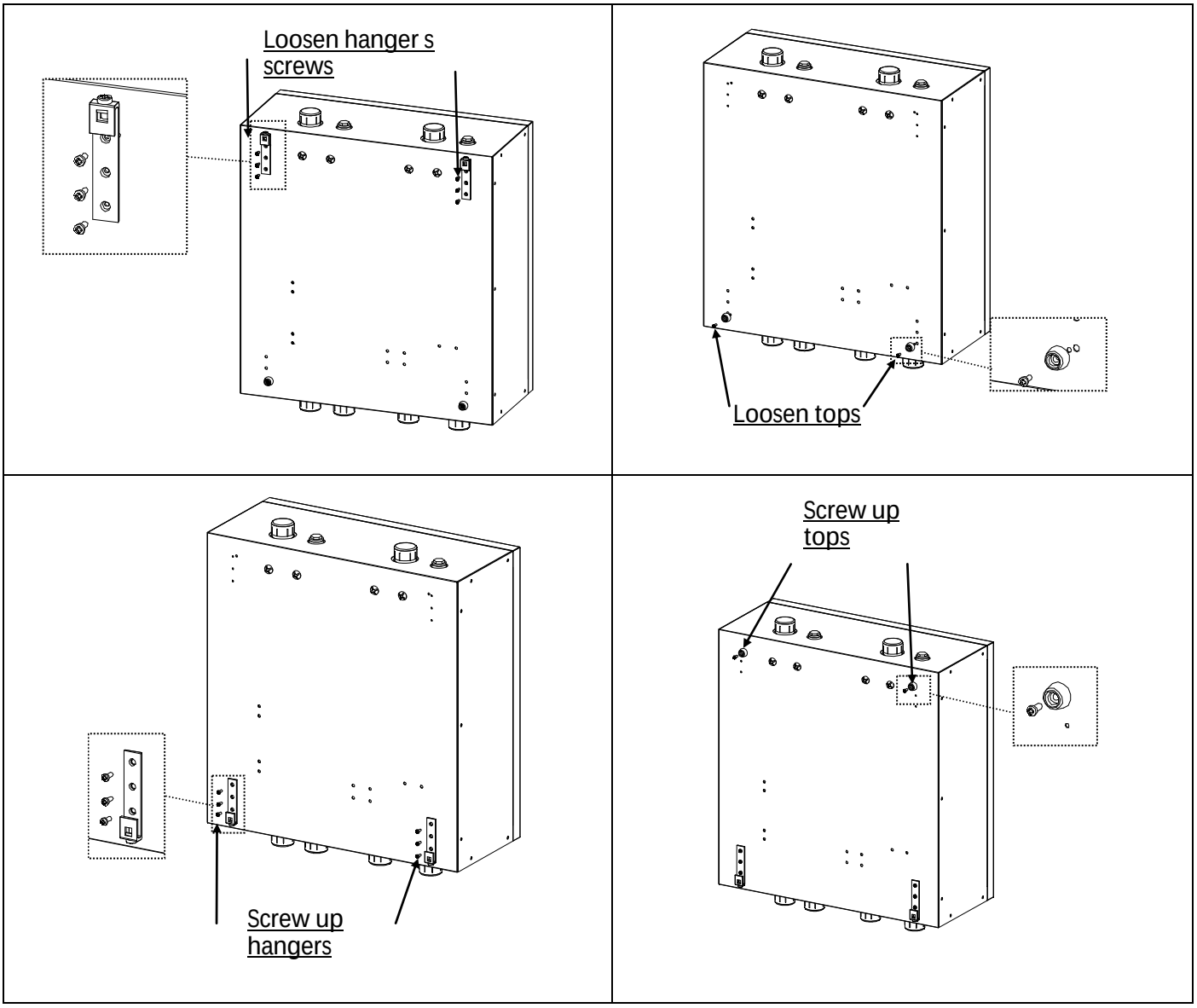
A space must be left at the front for access, and the kit must therefore not be installed opposite any obstacles that would prevent this access.

Wall-fixing system:



DMt Kit

To assemble the Kit, with the flow and return boiler outlets on the bottom part, follow these steps:



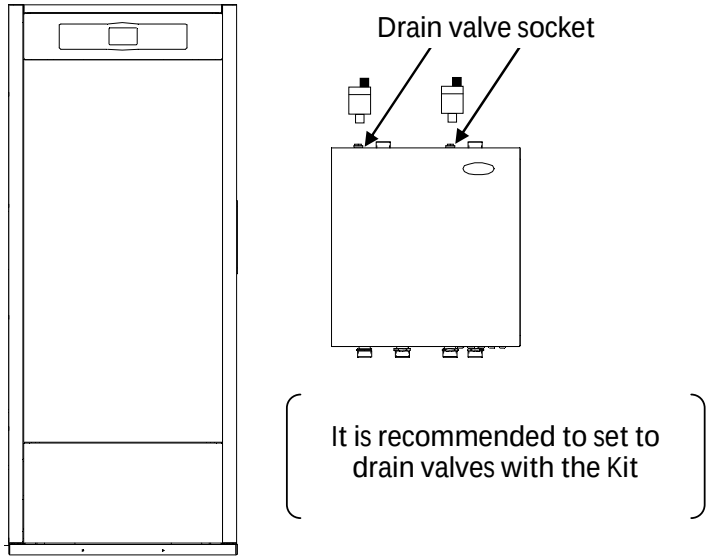
Nota In this case, the drain valve outlets are not used.

2.2 Hydraulic Installation

The hydraulic installation must be made by personnel authorised by the Department of Industry, in accordance with the applicable legislation. However, we would recommend the following:

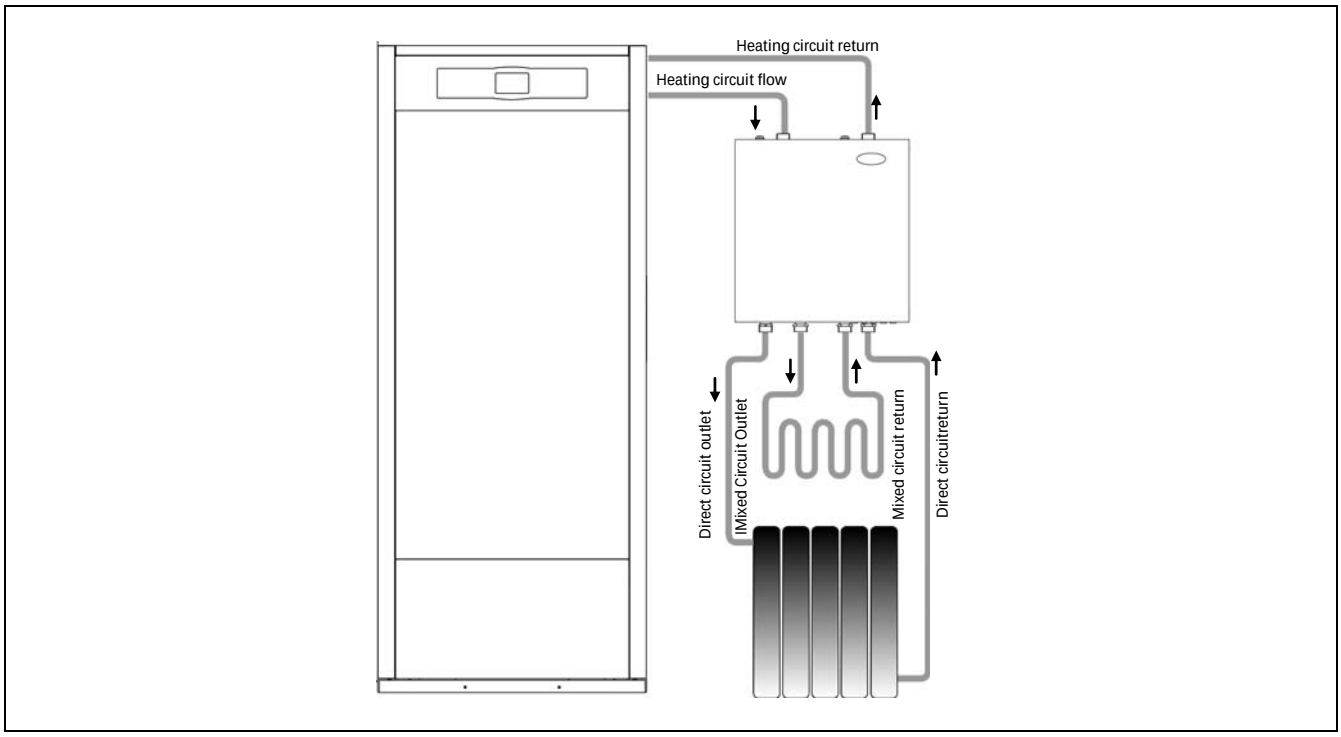
- Before making the hydraulic connection, the inside of the heating installation pipes should be thoroughly cleaned.
- It is recommended to fit shut-off valves to the heating installation flow and return pipes, to avoid having to drain the installation when maintenance work is carried out.
- Bleed the air from the kit and the heating installation. Ensure there is no air in the heating circuit.

If the kit is installed on a higher level than the lower part of the boiler, it is recommendable to install a drain valve in the socket provided for this purpose on the kit manifold, to prevent the creation of any siphons in the installation.



DMt Kit

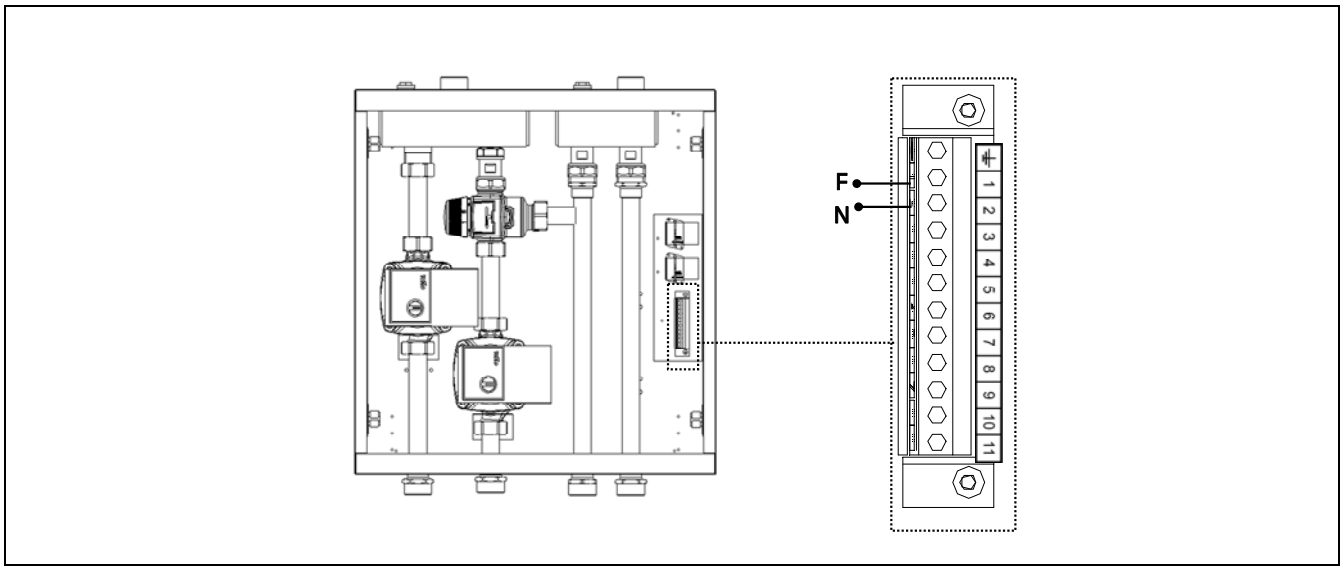
To correctly connect the **DM_t Underfloor Heating M Kit** proceed as shown in the diagram below:



2.3 Electrical Connection

The **DM_t Underfloor Heating Kit** is designed for electrical connection to terminals **1** and **2** on the terminal strip, at a voltage of 230 V~ / 50Hz. **An earth connection is essential.**

For the **DM_t Underfloor Heating Kit** to function correctly in combination with a boiler, the room thermostat input terminals must be connected to connection terminals no **3** and **4** (**TA_{cald}**) on the **DM_t Underfloor Heating Kit** terminal strip. The Underfloor Heating Kit will then be able to activate the boiler heating function demand.



The **DM_t Underfloor Heating Kit** also includes terminals **5** and **6** for connecting a room thermostat or chronothermostat, **TA_{CD}**, to manage the heating demand for the direct circuit and, in turn, incorporate terminals **7** and **8** for connecting a room thermostat, **TA_{CM}**, to manage the heating demand for the mixed circuit (see "*Electrical Diagram*").

If any metal hydraulic pipes are installed (copper, iron, etc.) an earth connection must be made.

The electrical installation must comply with all national and local laws and regulations concerning electrical installations applicable at the time and place of installation.

Nota **The power supply must be connected so that the kit can be totally isolated and disconnected for safely carrying out any maintenance operations.**

3 OPERATION

The **DM_t Underfloor Heating Kit** is equipped to manage the 2 circuits built in to the Kit.

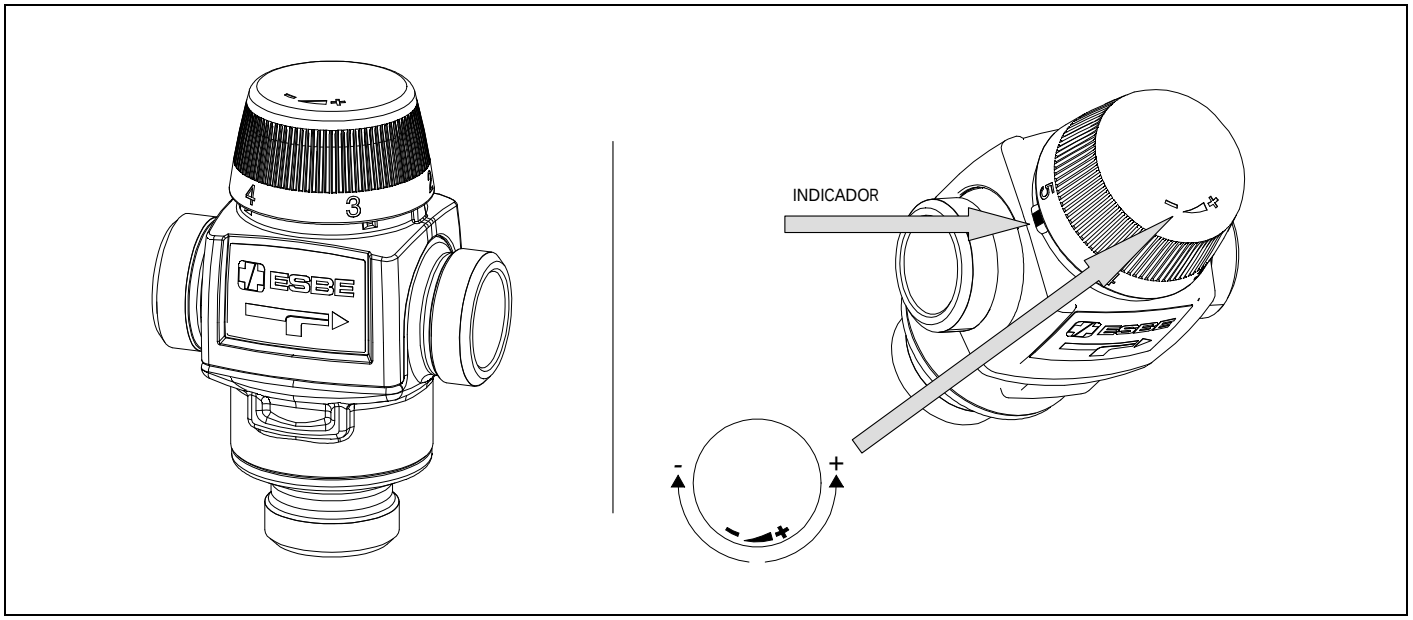
The Kit can independently regulate 2 heating areas; a direct circuit no 1 (e.g. radiators); and a circuit no 2 with a thermostatic mixing valve (e.g. underfloor heating). The mixing valve offers constant control of the temperature at the established value.

The value **k_{vs}** of the valve (capacity in m^3/h with a pressure loss of 1 bar) is 4.5.

3.1 Mixed temperature selection.

The valve includes a temperature gradient in the valve itself. By turning it, you can adjust the system temperature.

In order to establish the mixed water temperature, set the desired value on the valve indicator.



Position	*1*	*2*	*3*	*4*	*5*	*6*
Temperature	20ºC	30ºC	34ºC	38ºC	41ºC	50ºC

4 CIRCULATION PUMPS

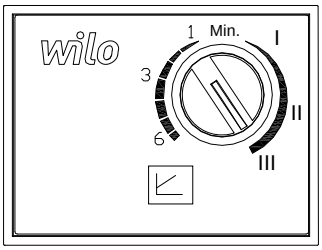
The **DM_t Underfloor Heating Hydraulic Kit** pumps are high efficiency circulation pumps which allow savings of up to 70 % in energy consumption in comparison to conventional pumps.

4.1 Characteristic curves of the pumps.

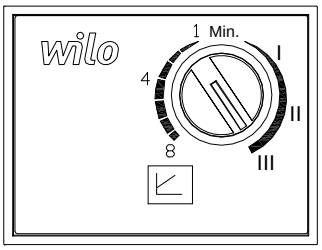
The **DM_t Underfloor Heating Kit** has two different pumps:

- The Yonos Para RKC 15/6 circulation pump for the direct heating circuit.
- The Yonos Para RKC 15/7.5 circulation pump for the mixed heating circuit.

Direct circuit pump



Mixed circuit pump



Each pump can be adjusted in two ways:

1-Constant speed I, II, III (traditional mode):

The pump operates at a constant, pre-set speed.

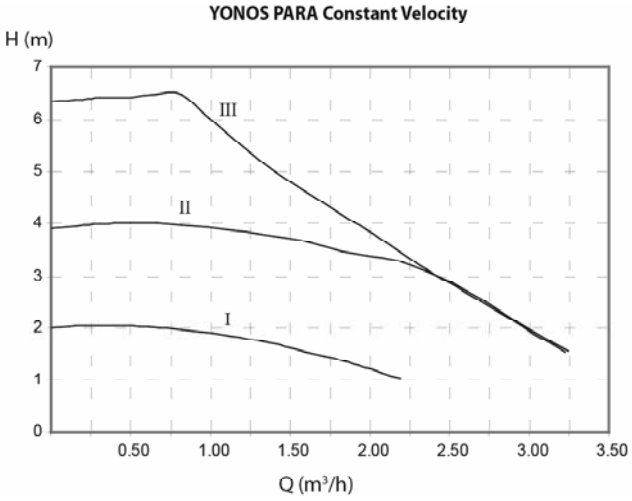
2-Variable differential pressure (Δp-v):

The setpoint value of the differential pressure H increases in a straight line between ½H and H within the permitted flow margin. The differential pressure generated by the pump is adjusted to the appropriate setpoint value of differential pressure.

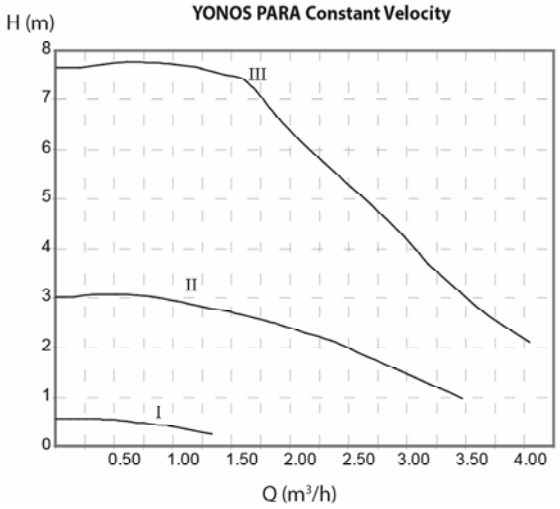
The graphs below show the operating curves for the pumps integrated in the kit. These graphs show the curves, corresponding to the different options of the circulating pump.

Characteristic curves of the circulation pumps for the constant speed mode I, II, III:

Direct circuit pump

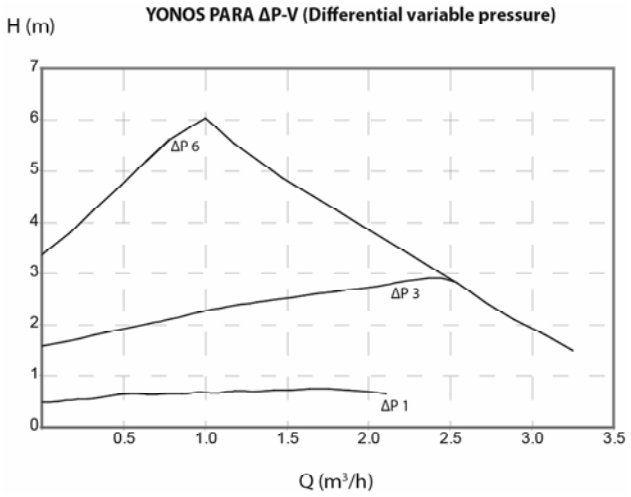


Mixed circuit pump

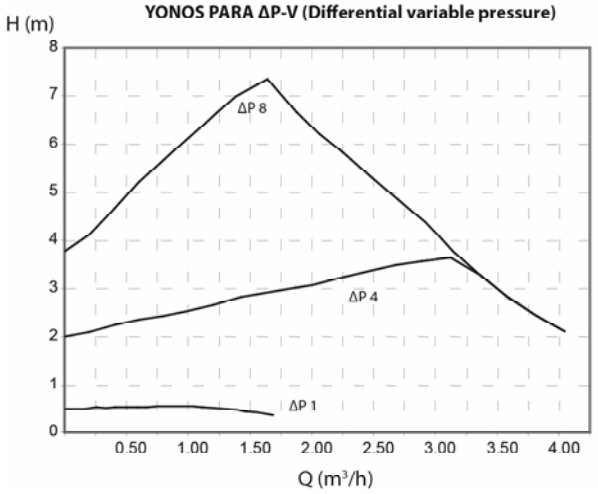


Characteristic curves of the circulation pumps for the variable differential pressure mode:

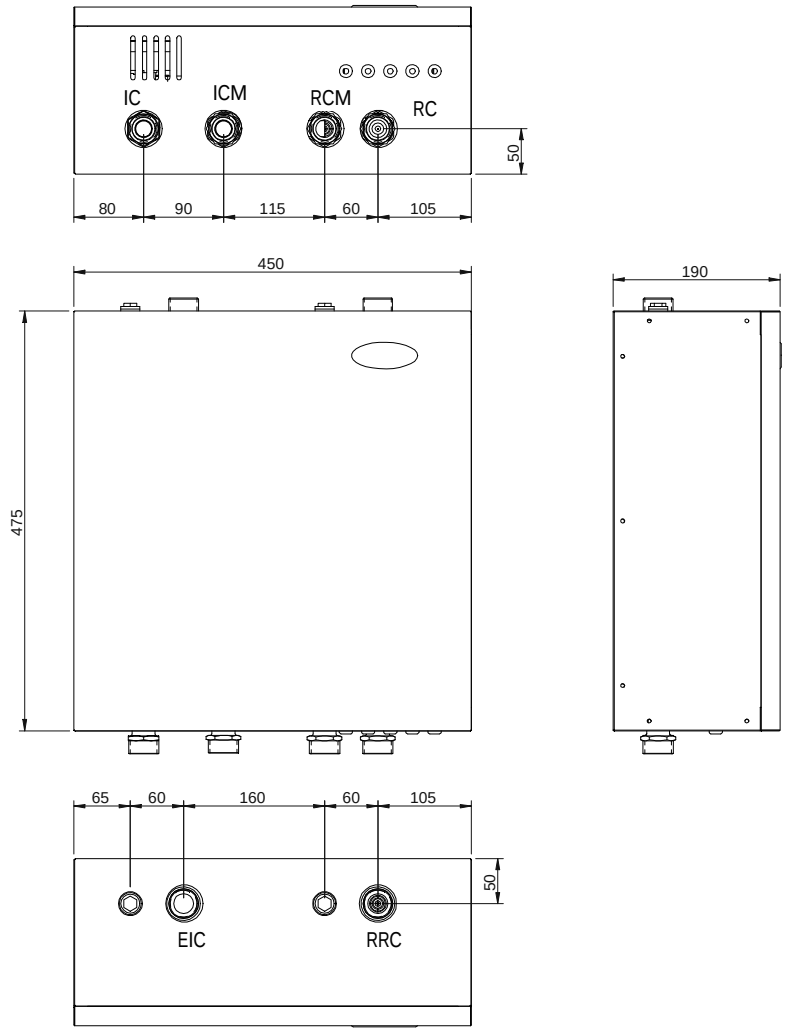
Direct circuit pump



Mixed circuit pump

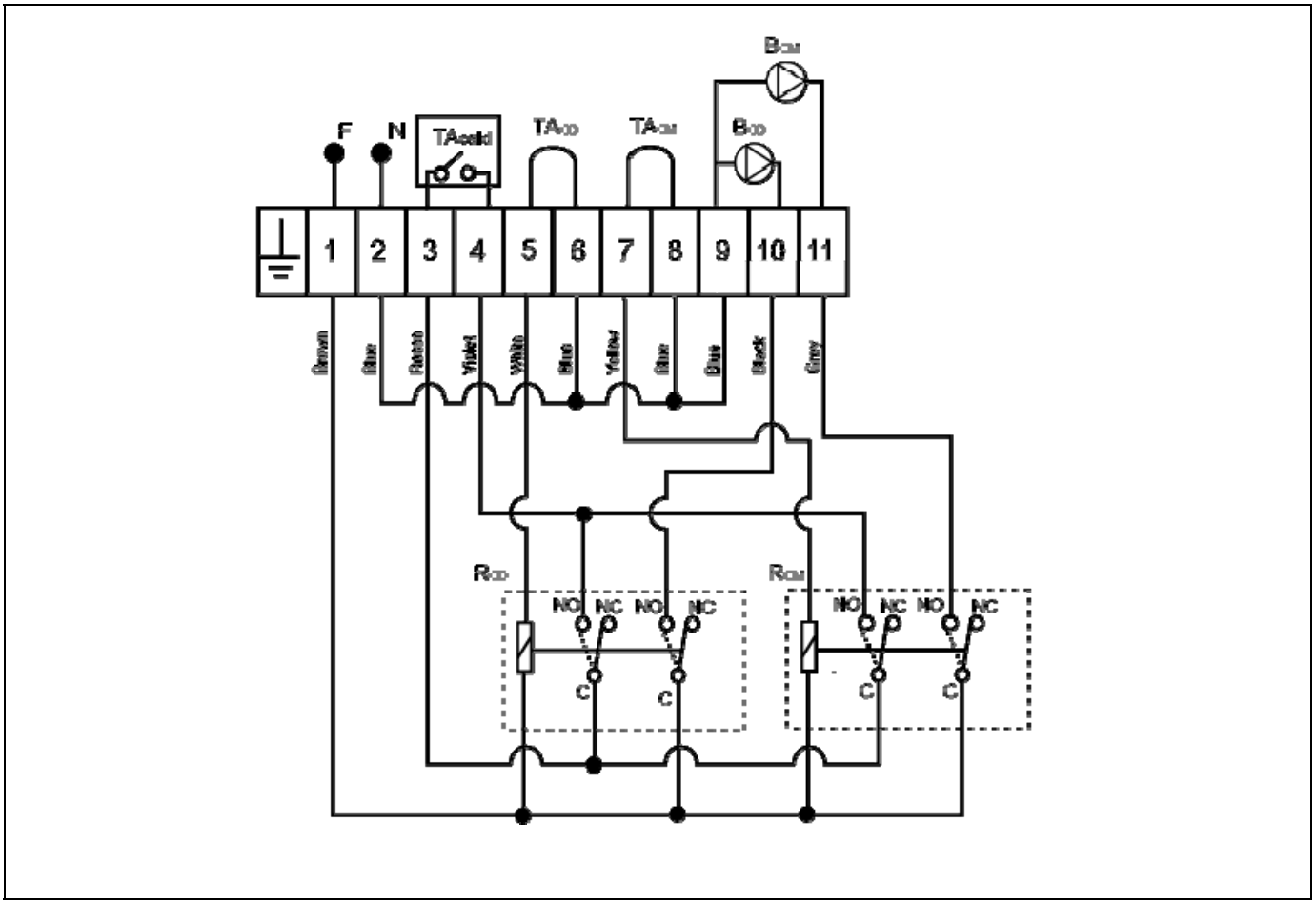


5 DIAGRAMS AND MEASUREMENTS



IC: Direct circuit no 1 Heating flow (1” M).
RC: Direct circuit no 1 Heating return (1” M).
ICM: Mixed circuit no 2 Heating flow (1” M).
RCM: Mixed circuit no 2 Heating return (1” M).
EIC: Inlet from Boiler Flow (1” M).
RRC: Return from Boiler Return (1” M).

6 ELECTRICAL DIAGRAM



F: Phase.

N: Neutral.

TA_{CALD}: Room Thermostat Connection

TA_{CD}: Room thermostat connection direct circuit

TA_{CM}: Room Thermostat Connection mixed circuit

R_{CM}: Direct circuit relay

R_{CM}: Mixed circuit relay

B_{CM}: Mixed circuit pump

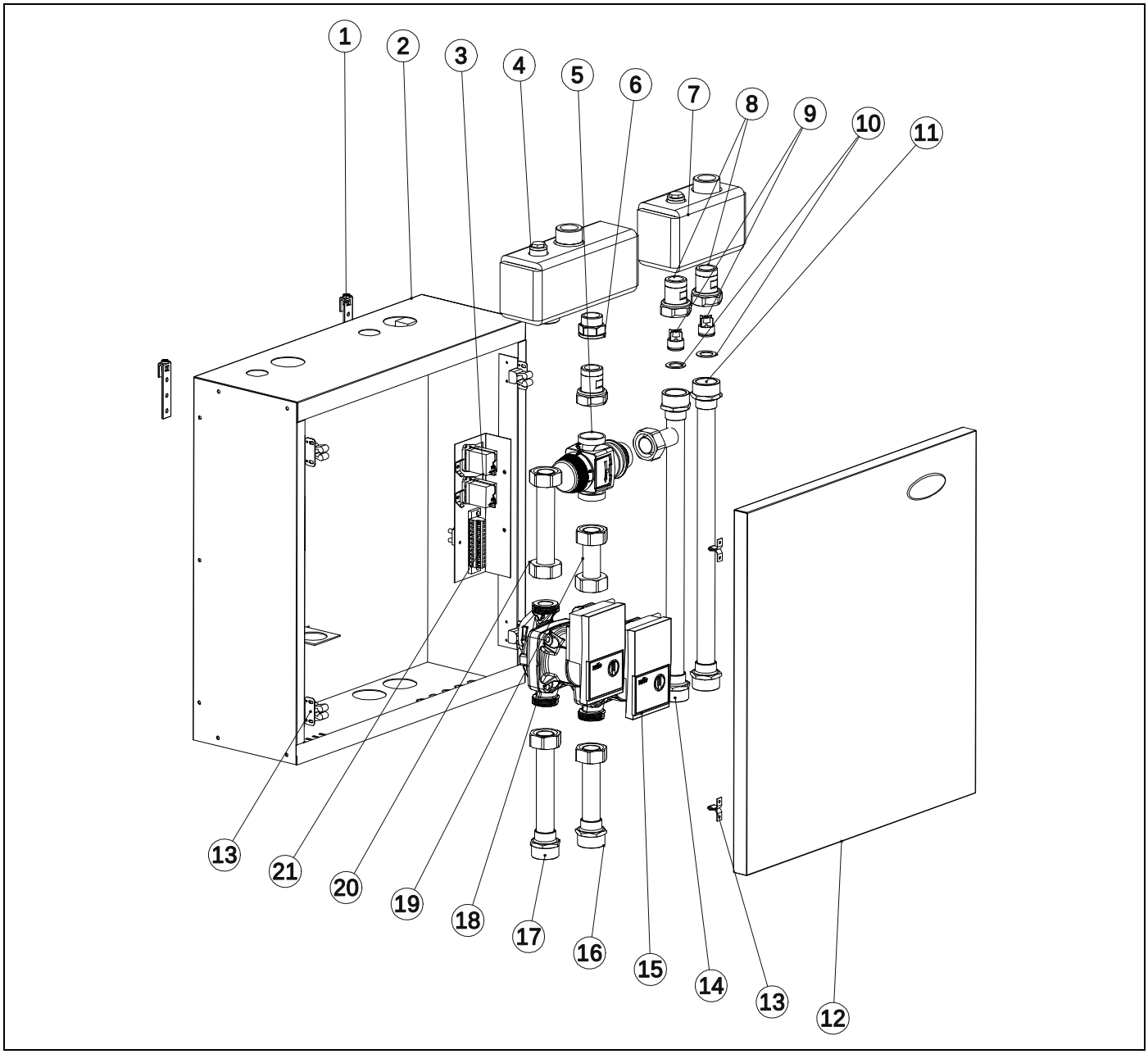
B_{CD}: Direct circuit pump

7 DESCRIPTION OF THE STATUSES OF THE PUMP

The high efficiency pumps of the **Bio DM$_t$ Underfloor Heating Hydraulic Kit** include a Led (light) which displays their status.

PUMP LIGHT	DESCRIPTION	STATUS	CAUSE	SOLUTION
It is lit green	The pump is functioning	The pump operates according to its setting	Standard functioning	
It flashes red/green	The pump is ready for service but is not functioning	The pump will start up again automatically once the error has been solved	1. Low voltage U<160 V or Excess voltage U>253 V	1. Check the power supply 195 V<U<253 V
			2. Excess temperature of the module: the temperature of the motor is too high	2. Check the room temperature and that of the fluid
Flashes red	The pump is out of order	The pump is stopped (blocked)	The pump does not start up automatically.	Change the pump. Please contact your nearest official technical assistance service to have it replaced
Light off	There is no power supply	The electrical system is not receiving power supply	1. The pump is not connected to the power supply	1. Check the connection of the cable
			2. The LED is faulty	2. Check if the pump works
			3. The electrical system is faulty	3. Change the Pump. Change the pump. Please contact your nearest official technical assistance service to have it replaced

8 SPARE PARTS LIST



Nº	Code	Description
1	CFER000041	Hanger
2	RKITBIO009	Case
3	CELC000006	Relay
4	RKITBIO010	Manifold outlet
5	CVAL000050	Thermostatic mixing valve
6	CFOL000039	Hexagonal union ¾”
7	RKITBIO011	Manifold return
8	122-P	Brass fittings pump
9	CVAL000006	Non-return valve ¾
10	CTOR000053	Nylon washer
11	SCOB012638	Direct return

Nº	Code	Description
12	SEPO001749	Door
13	CFER000045	Closure
14	SCOB012646	Mixed return
15	CFOV000144	Pump 15/7,5
16	SCOB012712	Mixed outlet
17	SCOB012715	Direct outlet
18	CFOV000143	Pump 15/6
19	SCOB012713	Mixed outlet
20	SCOB012713	Direct outlet
21	CELC000042	Weidmuller strip 12 poles

NOTES:

NOTES:

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