Instructions for installation and operation of the zone hydraulic unit

THERM SIM 3Z.H-2xLT, 1xHT
THERM SIM 2Z.H-1xLT, 1xHT
THERM SIM 2Z.H-2xLT

Content

1. BASIC CHARACTERISTIC

- control of up to three independent heating circuits (THERM SIM 3Z.H-2xLT, 1xHT versions)
- the possibility of controlling the floor heating circuit in combination with the radiator circuit
- simple installation
- the possibility of connecting gas or electric boilers up to 30 Kw
- compact design and dimensions - hydraulic and control elements integrated in the unit
- built-in zone control unit SZ10004vestavěná ekvitermní regulace
- built-in energy-saving circulating pumps
- connection to the boiler using the OpenTherm+ communication protocol
- simple setup and commissioning of the system

2. DESCRIPTION OF THE SYSTEM

The zone hydraulic unit ensures a simple and elegant connection of the heat source with the heating circuits. The built-in automatic regulation system ensures trouble-free operation of the multi-circuit heating system. It is especially useful when combining circuits with heating elements and underfloor heating, which is a requirement of most modern heating systems. As a heat source, we can use Thermona gas boilers, Thermona electric boilers.

THERM SIM 3Z.H-2xLT, 1xHT

The THERM SIM 3Z.H-2xLT, 1xHT unit allows you to regulate three independent heating zones (2x mixed + 1x non-mixed). Each zone can be controlled by a room controller.

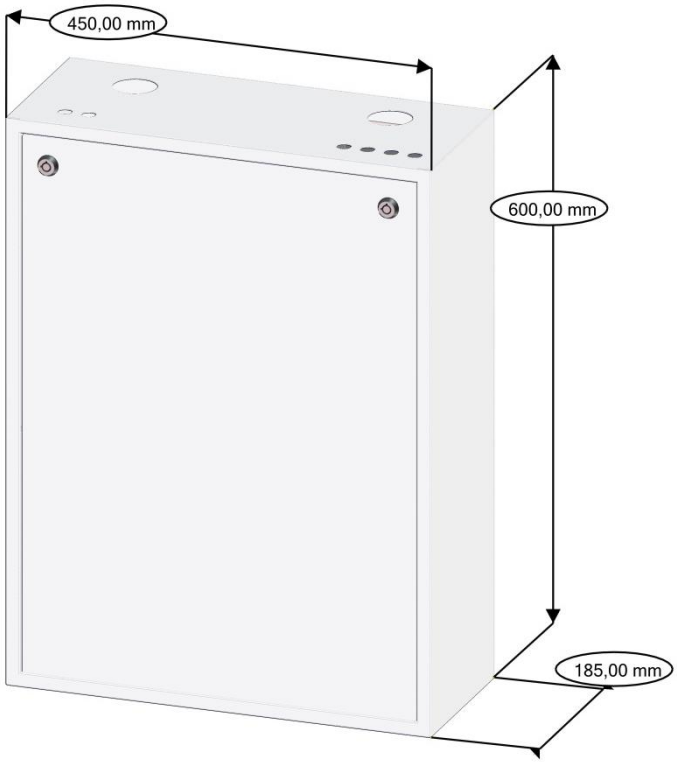
THERM SIM 2Z.H-1xLT, 1xHT

The SIM 2Z.H-1xLT, 1xHT unit allows you to control two independent heating zones (1x mixed + 1x non-mixed). Both zones can be controlled by a room controller.

THERM SIM 2Z.H-2xLT

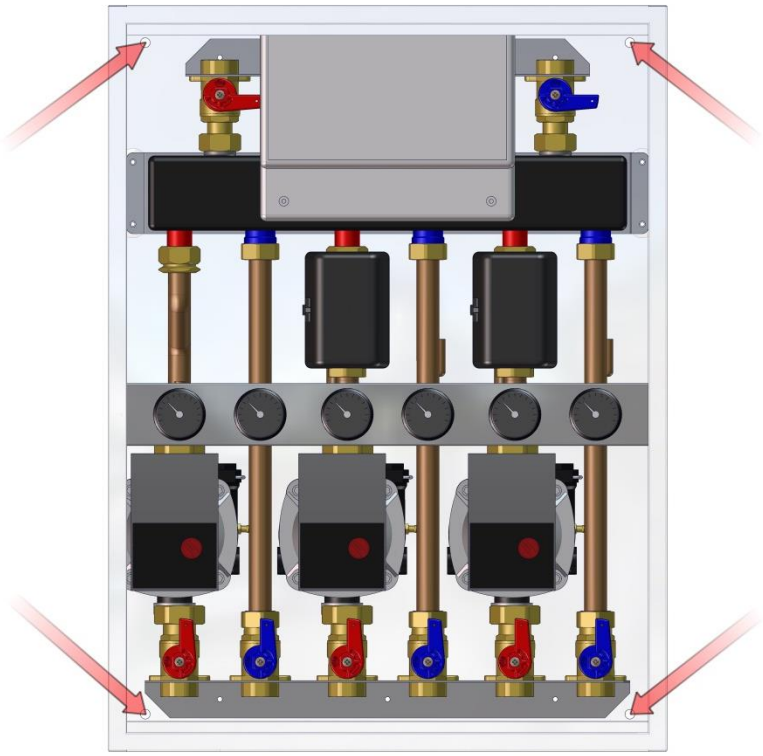
The SIM 2Z.H-2xLT unit allows you to control two independent heating zones (2x mixed). Both zones can be controlled by a room controller.

3. MAIN DIMENSIONS



4. FIXING THE DEVICE

The SIM unit is designed to be hung on the wall. For this purpose, two so-called mounting kits are delivered together with the unit. We attach the unit to the wall using the supplied anchoring material. Anchorage locations are shown in the image below.

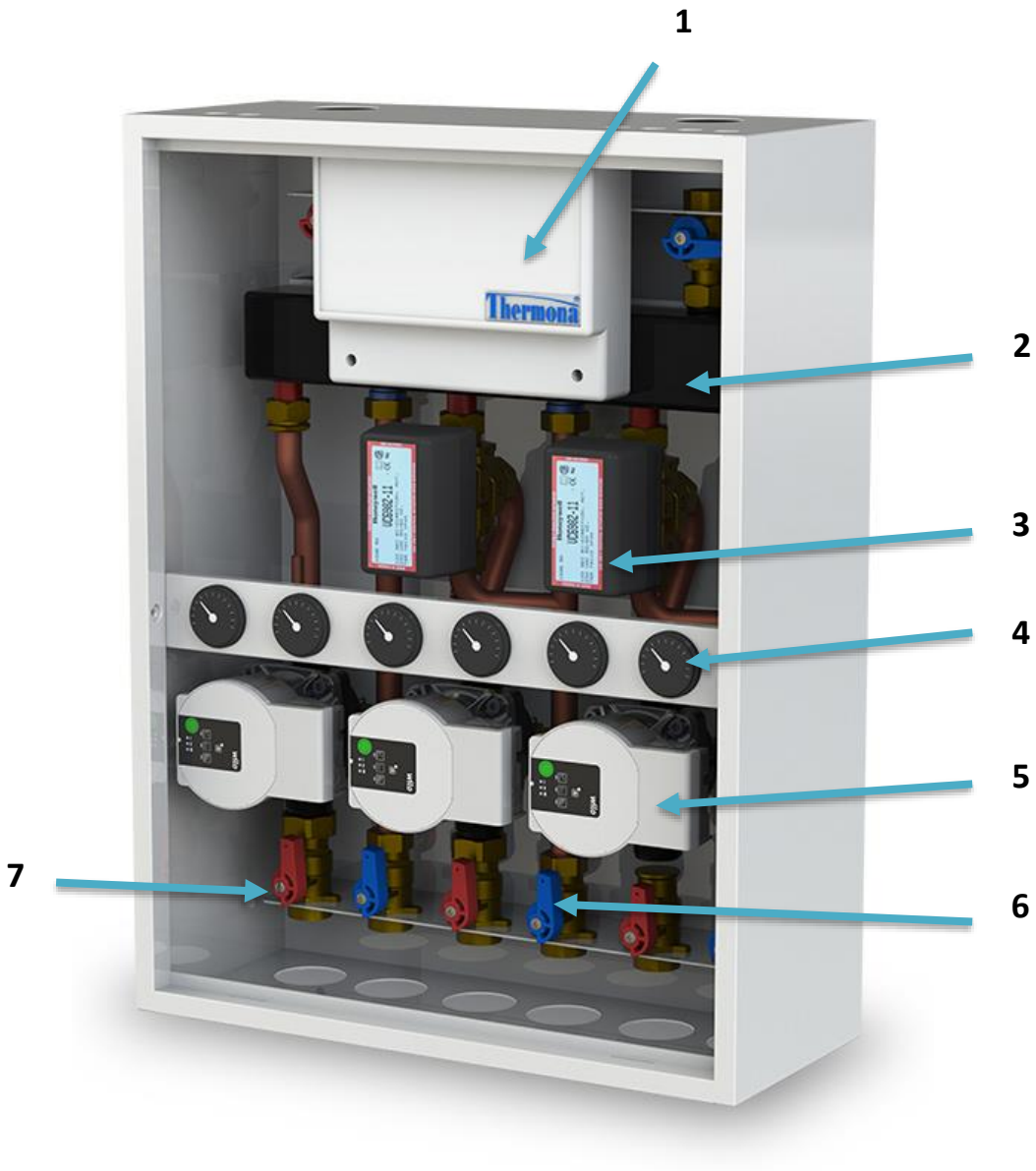


5. TECHNICAL PARAMETERS

	Unit	SIM 3Z.H-2xLT, 1xHT	SIM 2Z.H-1xLT, 1xHT	SIM 2Z.H-2xLT
Maximum pressure of the heating system	bar	3	3	3
Maximum operating temperature	°C	85	85	85
Volume of water	l	2,5	1,9	1,7
Rated supply voltage / frequency	V / Hz	230 / 50 ~	230 / 50 ~	230 / 50 ~
Electrical coverage		IP 41	IP 41	IP 41
Max. electricity input power	W	145	95	100
height / width / depth	mm	600/450/185	600/450/185	600/450/185

6. COMPOSITION OF THERM SIM UNIT

THERM SIM 3Z.H-2xLT, 1xHT

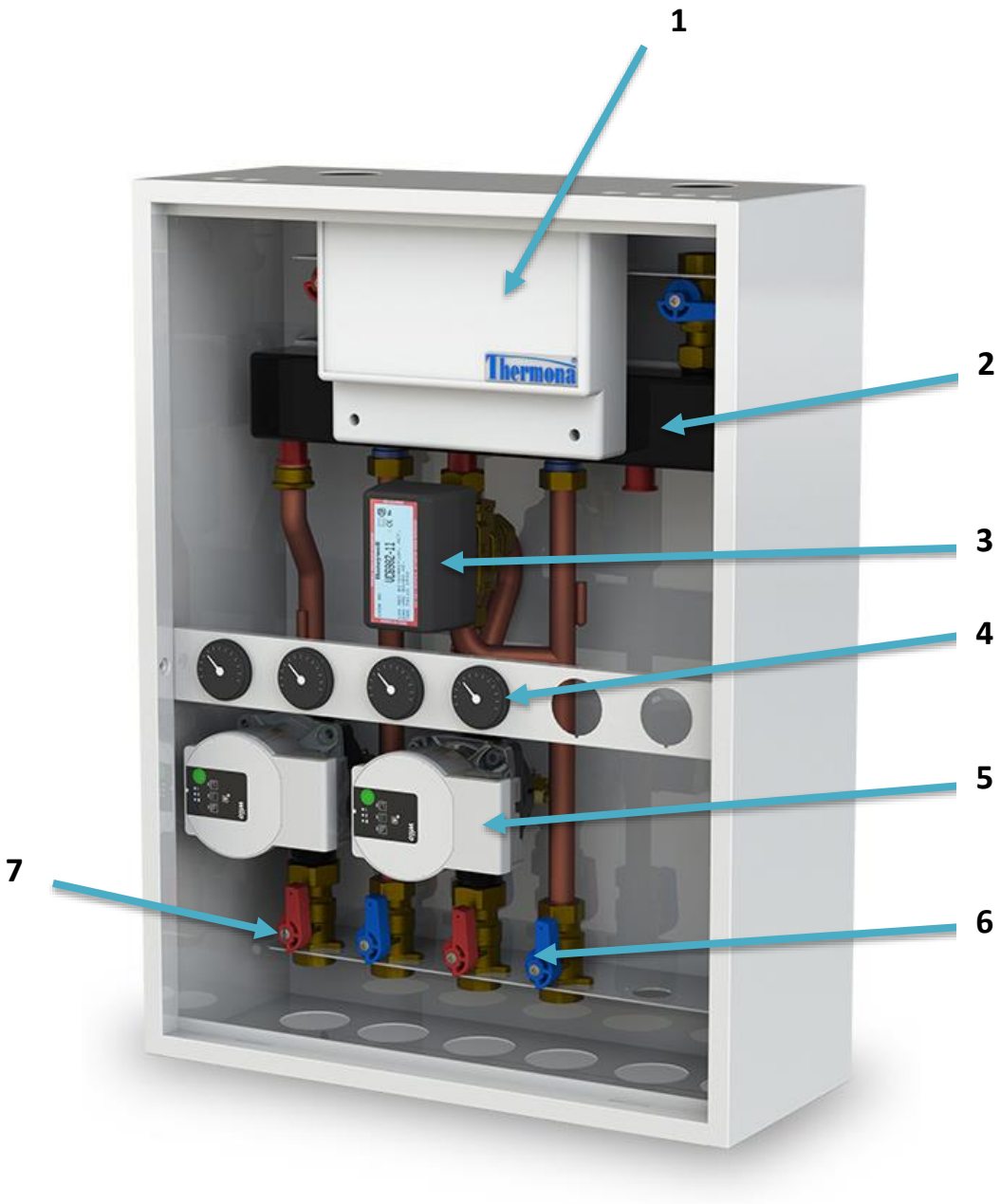


Legend:

1. Control unit SZ 10004
2. Hydraulic balancer + distributor
3. Mixing valve servo drive
4. Thermometer
5. Circulation pump
6. Shut-off valve - return water
7. Shut-off valve - heating water

Dimensions of all connections – ¾´´

THERM SIM 2Z.H-1xLT, 1xHT



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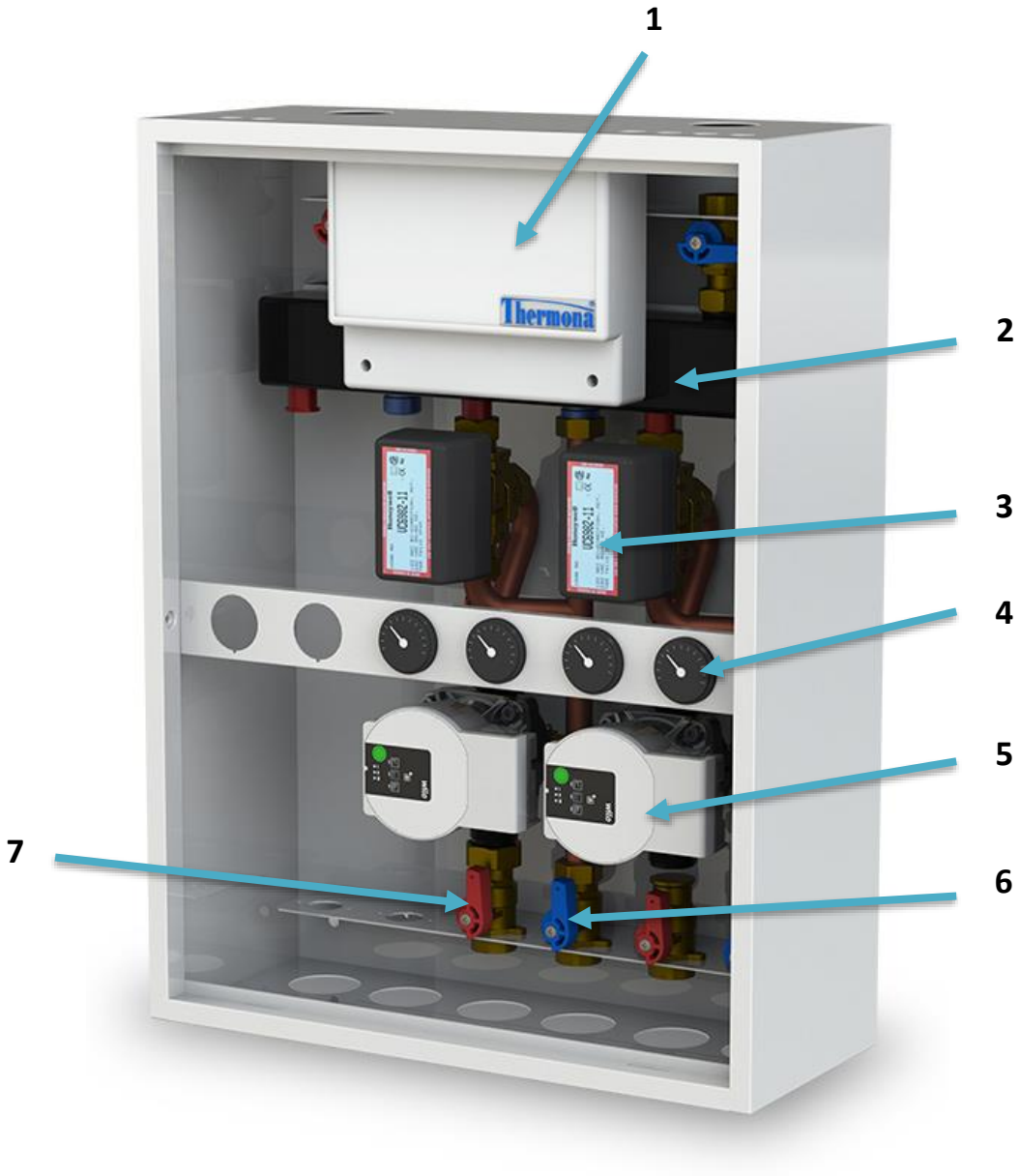
THERM SIM 2Z.H-2xLT



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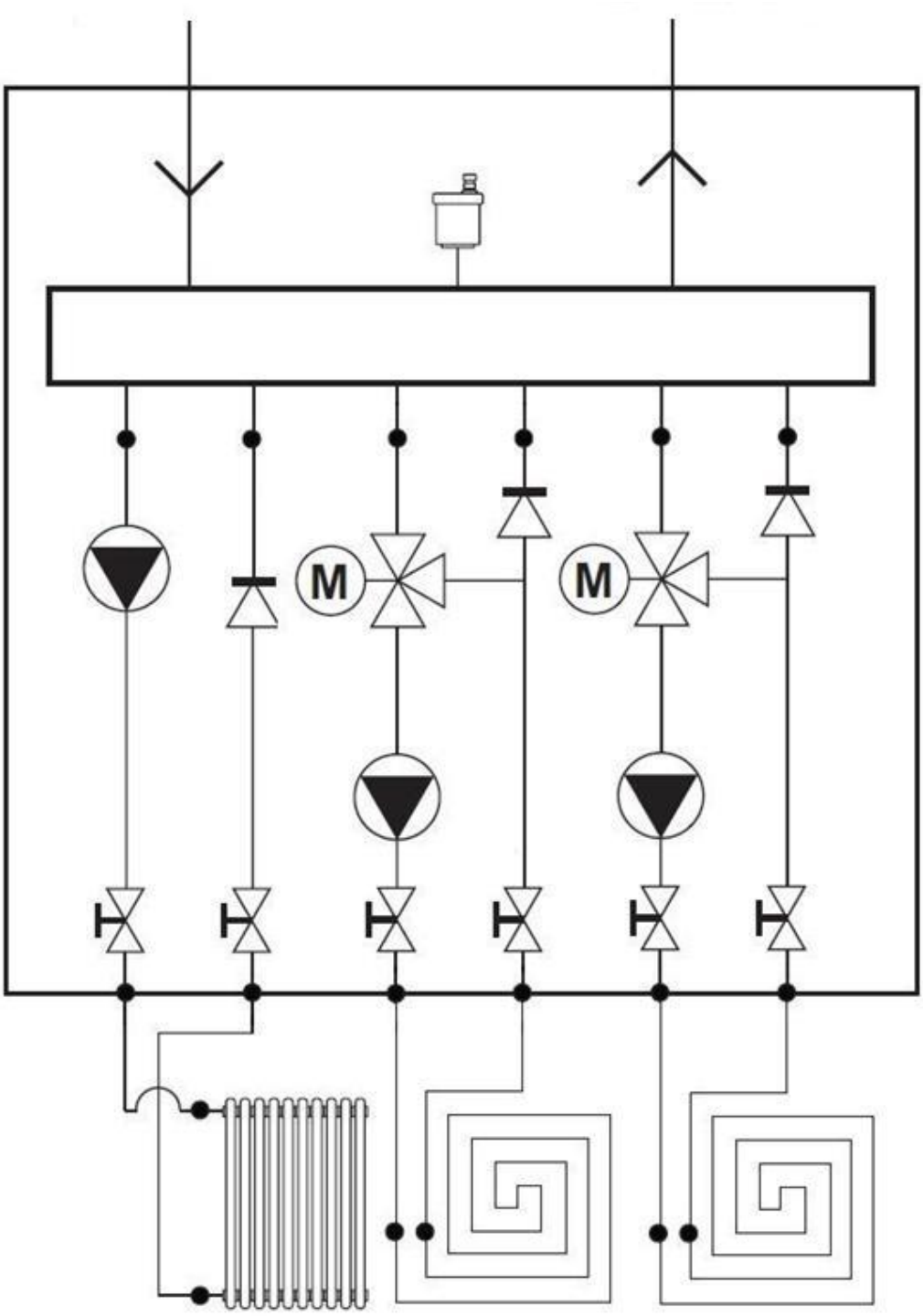
Dimensions of all connections – ¾´´

7. SIMPLIFIED HYDRAULIC SCHEME

THERM SIM 3Z.H-2xLT, 1xHT

HEATING WATER FROM THE BOILER

RETURN WATER TO THE BOILER



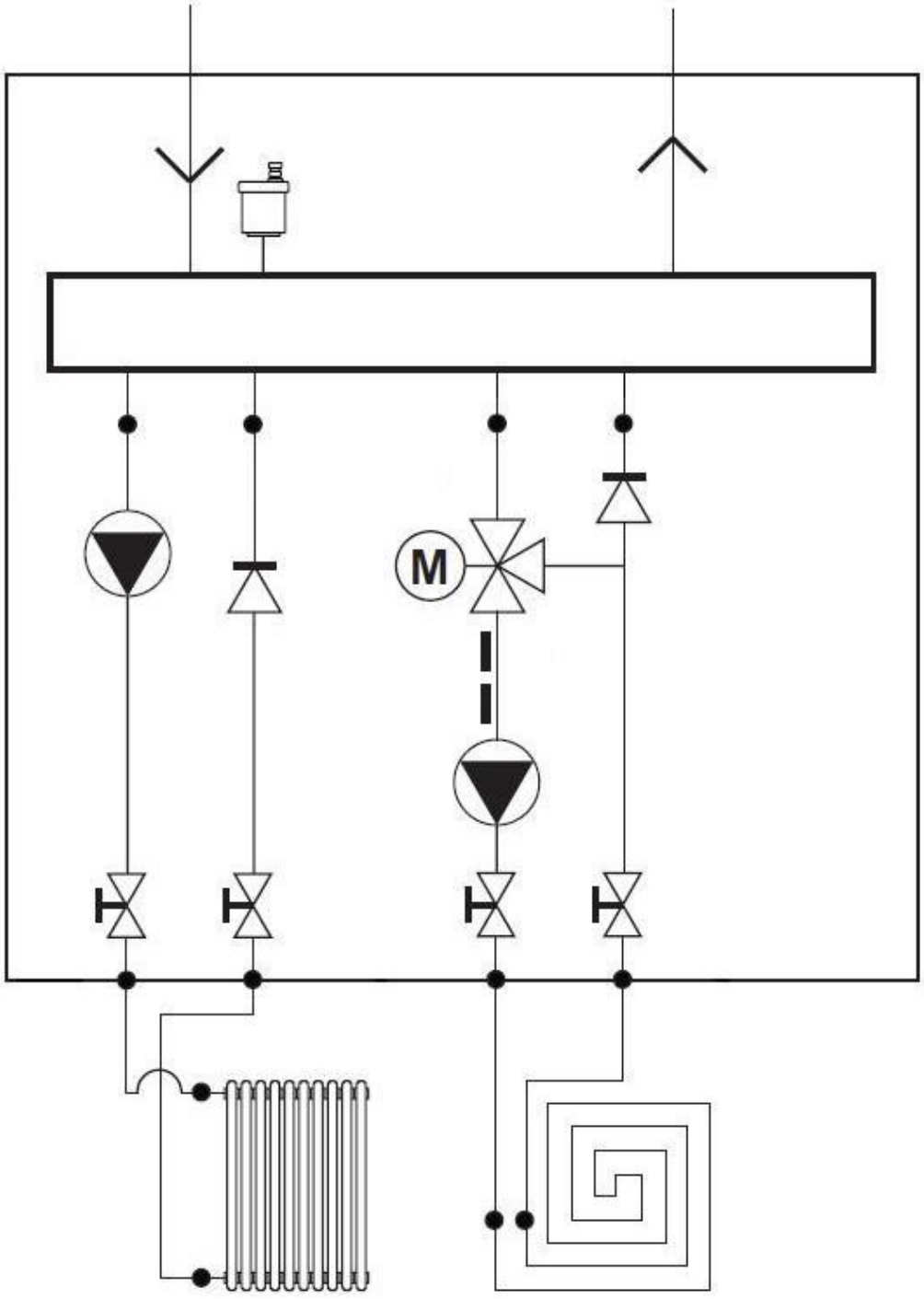
CIRCUIT 3 **CIRCUIT 2** **CIRCUIT 1**

Dimensions of all connections – ¾´´

THERM SIM 2Z.H-1xLT, 1xHT

HEATING WATER FROM THE BOILER

RETURN WATER TO THE BOILER



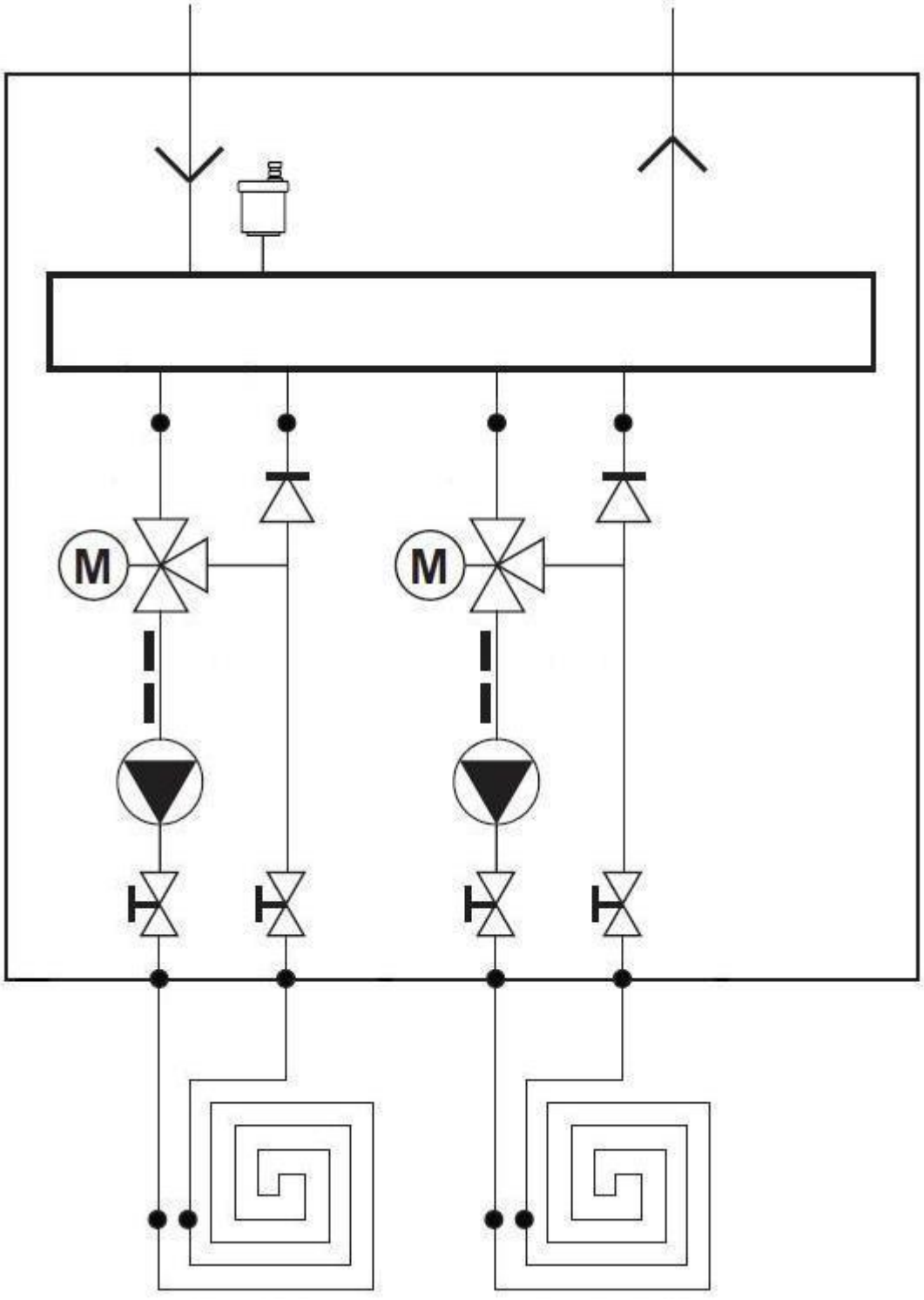
CIRCUIT 3 **CIRCUIT 2 (1)**

Dimensions of all connections – ¾´´

THERM SIM 2Z.H-2xLT

HEATING WATER FROM THE BOILER

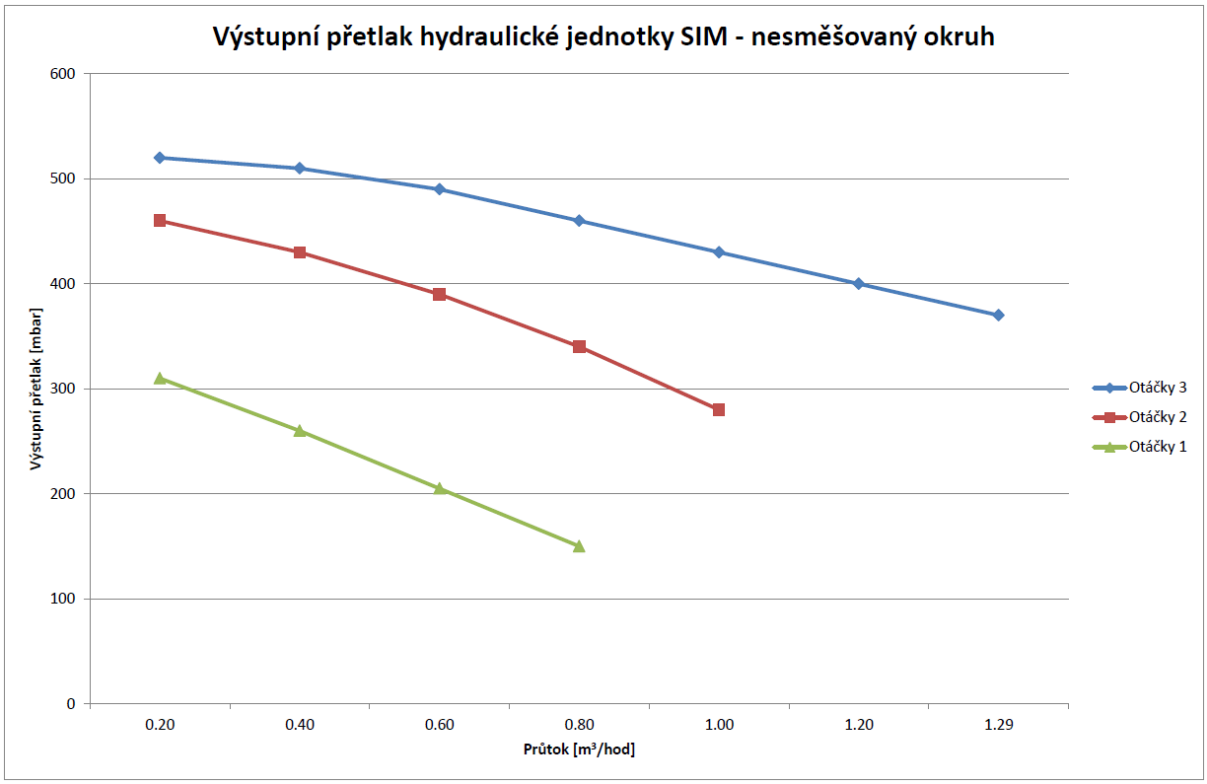
RETURN WATER TO THE BOILER

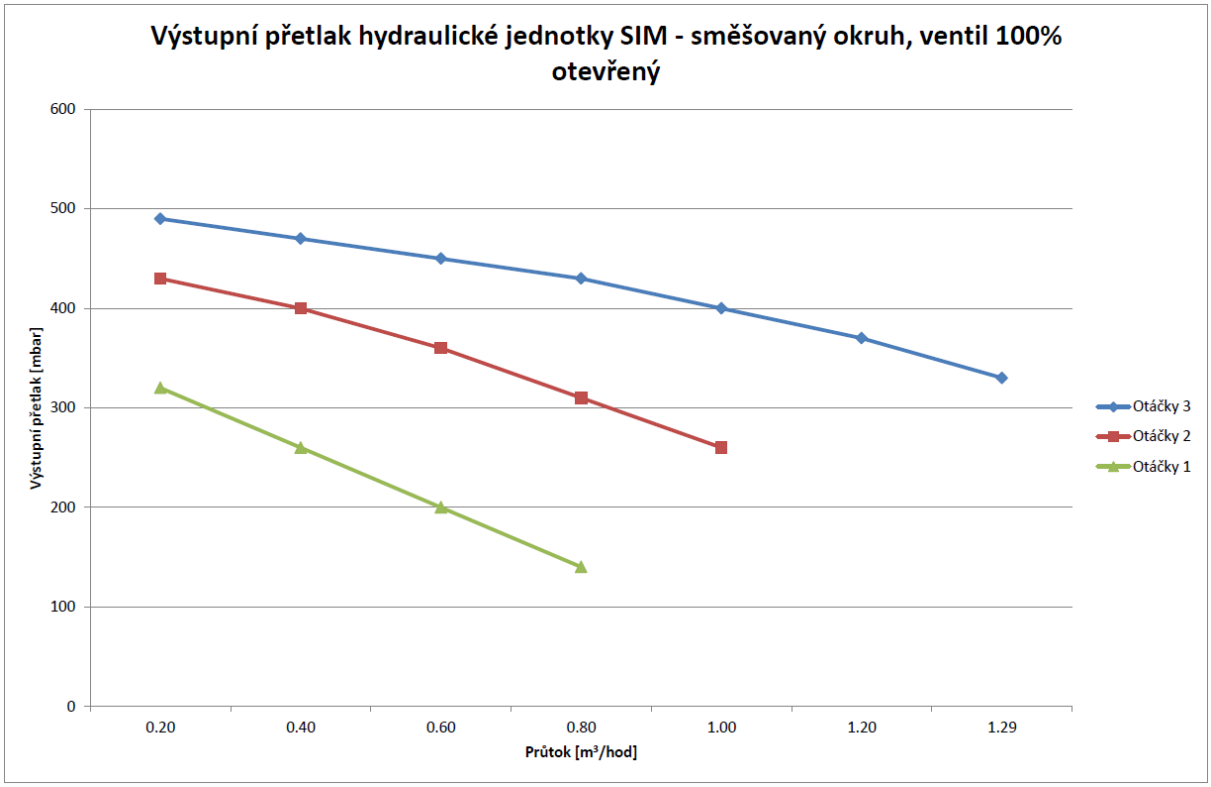


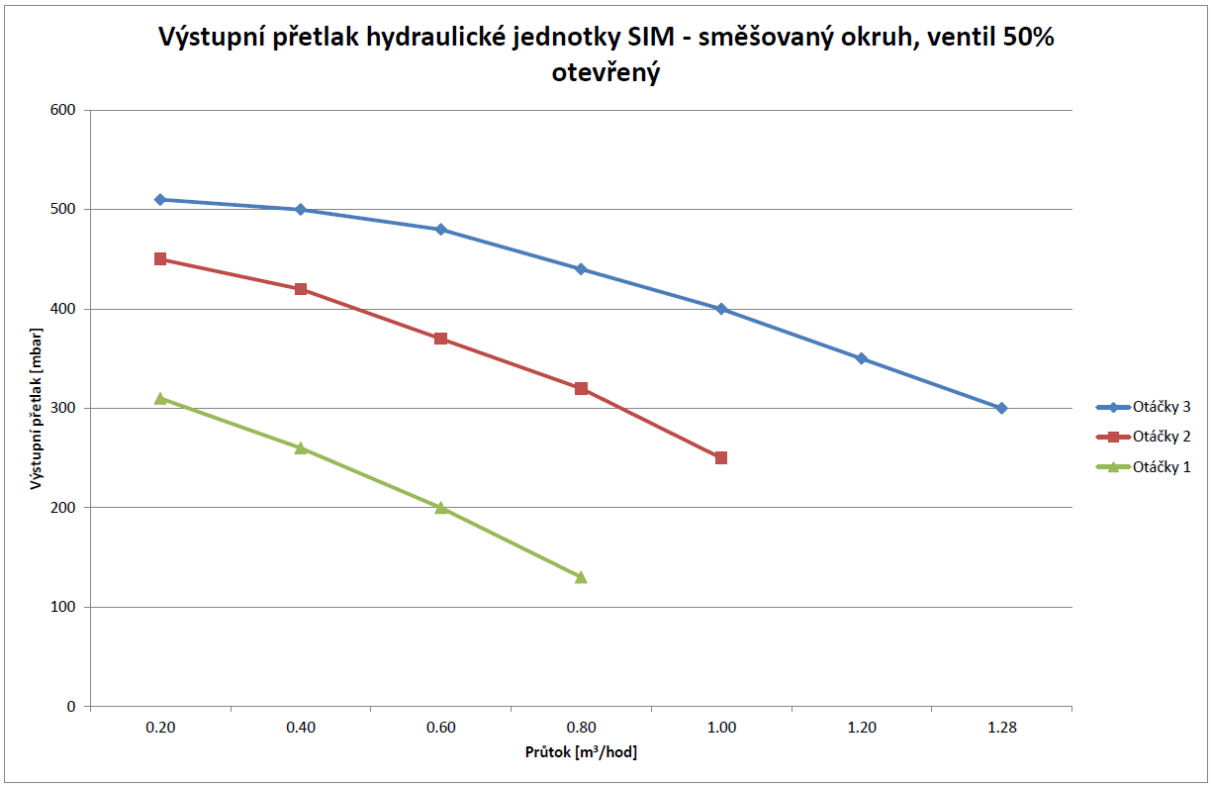
CIRCUIT 2 **CIRCUIT 1**

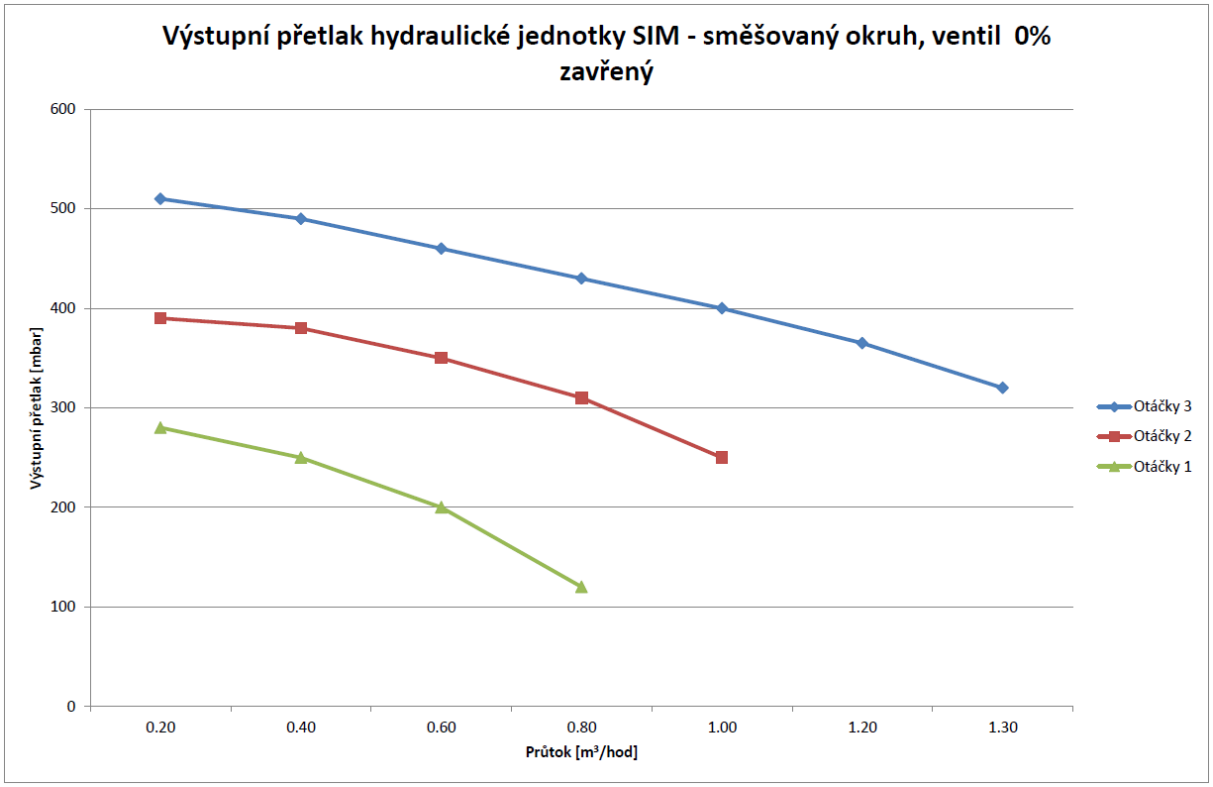
Dimensions of all connections – ¾´´

8. GRAPHS OF HEATING WATER CONNECTION OVERPRESSURES






Výstupní přetlak hydraulické jednotky SIM - směšovaný okruh, ventil 50% otevřený
600
500
400
300
200
100
0
Výstupní přetlak [mbar]
0.20
0.40
0.60
0.80
1.00
1.20
1.28
Průtok [m³/hod]
Otáčky 3
Otáčky 2
Otáčky 1


Výstupní přetlak hydraulické jednotky SIM - směšovaný okruh, ventil 0% zavřený
600
500
400
300
200
100
0
Výstupní přetlak [mbar]
0.20
0.40
0.60
0.80
1.00
1.20
1.30
Průtok [m³/hod]
Otáčky 3
Otáčky 2
Otáčky 1

9. PUTTING THE EQUIPMENT INTO OPERATION

After completion of assembly and connection of the device, the unit including the boiler and subsequent heating system must be gradually filled with water. According to aplicable standards, the water used for impregnation and subsequent possible admission must be clear, colorless, without suspended substances, oil and chemically aggressive additives, must not be acidic (PH must not be lower than 7), with minimum carbonate hardness (max. 3.5 mval/l). In the case of hardness adjustment, it is necessary to use preparations approved by the manufacturer.

After filling the system, it is possible to connect the unit to the electrical outlet. network and proceed to adjust the regulation so that the pumps start and the mixing valves rotate. The regulation setting procedure is described in a separate, attached manual.

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