

three-way mixing valve, thermostatically operated or motor-driven (without having to replace the insert)
 1a. thermostatic head with remote immersion probe, adjustment field 30÷50°C
 1b. electro-thermal head 24 VAC proportional 0-10 V
 1c. axial servo-motor 24 VAC proportional 0-10 V

三通混合阀，温控阀或电驱动阀（无需替换插头）
 1a. 温控头 带沉浸式远程探头，调节范围30°C—50°C
 1b. 电驱动20 VAC 均衡电压0-10 V
 1c. 电驱动控制24 VAC 均衡电压0-10 V

1	
2	primary bypass for high temperature circuit 用于高温回路的主要旁通阀
3	balance valve (bypass for secondary circuit) 均压阀（用于二次回路的旁通阀）
4	pit for the thermostatic head immersion probe 用于温控头沉浸式探头的元件
5	temperature/pressure gauge 温度表/压力表
6	automatic air vent valve 自动排气阀
7	cut-out valves on delivery (7a) and return (7b) 截流阀
8	fill-empty cock 排污阀
9	manual air breather valve 手动放气阀
10	circulator (not supplied) 循环水泵
11	high temperature distribution kit with simple manifolds (11a) or with shutoff manifolds including: 高温分水元件 带简单分水器（11a）或开闭式分水器，包括：
12	adjustable over-pressure bypass 0.2 - 0.6 bar 可调节超压旁通阀0.2-0.6巴
13	fill-empty cock 排污阀
14	safety thermostat with adjustable immersion probe 20÷60°C 安全调温器 带可调节沉浸式探头20°C—60°C
14a	fixed calibration safety thermostat (55°C) 固定式安全调温器(55°C)

T1 - T2 Thermometers 温度表

UNIMIX

UNIMIX is an innovation in the panorama of floor-mounted system adjustment groups. This mixing system sets the temperature of the fluid in the primary circuit (boiler) to the adjustable value required in the secondary circuit (heating panel).

UNIMIX is a modular group that can be connected directly and easily to our manifolds for panelled plant. Using a circulator with 130 mm centres allows connection to our manifolds mounted on supports with 200 mm centres, while a circulator with 180 mm centres requires the use of 250 mm brackets (Article AC 611). The system can be easily powered from below or from the side by means of our angle ball valves AC 655, thereby

ensuring for installation technicians convenient assembly in all possible configurations.

The versatility of this group is highlighted in the case of mixed-circuit systems: high temperature (radiator system) and low temperature (panelled heating system).

This is the classic example in homes with floor general heating and bathroom radiators (towel warmers, etc.). To implement this system, simply connect to the UNIMIX inlet the new high temperature distribution kit including fill-empty cocks, delivery and return manifolds with simple branches for radiators, the over-pressure differential valve.

There are two different high temperature systems:

1. High temperature kit with micrometric balancing valves and electro-thermal heads driven inserts with M24x1.5 or Eurokonus off-takes. Those kits are also available complete of straight or angle ball valves for the connections to the primary circuit.

2. High temperature simple distribution manifold with M24x1.5 or Eurokonus off-takes. Those kits are available also complete of straight or angle ball valves for the connections to the primary circuit.

The UNIMIX system can operate in the following two ways:

- a. with fixed-point adjustment using a thermostatic head with immersion probe and adjustable temperature (30°C - 50°C)

- b. with adjustment of the delivery temperature in relation to thermal load variations. The System can be equipped with 24 VAC axial movement motors (Article SRV 24) with pilot voltage of 0-10 V or with a 24 VAC 0-10V electro-thermal motor (Article TE 3061), both of which can be piloted through the DHCC100 or the WLM2-1FS electronic adjustment control units with offsets for external temperature.

散热器和地板采暖混水系统组件

是改进过后的落地安装系统。这一混合系统把一次回路（锅炉）中水的温度调到与二次回路（散热板）调节阀所需的温度一样。

是组装式系统，可以直接与用于镶板设备的分水器连接。循环泵（带130 mm中枢）可以与装在支架（带200 mm中枢）上的分水器连接，但是带180 mm中枢的循环泵要求使用250 mm托架（Article AC 611）的分水器连接。

这个系统的电驱动调节装置都是在角球阀AC 655的底部或侧面，因此要确保安装人员将元件安装在正确的位置。就混合循环系统来说，需特别强调的是它的多功能性：高温（散热系统）和低温（地板采暖系统）。

在房间里通常安装地板采暖系统，在浴室通常安装散热器（毛巾架散热器等等）。为了运行这个系统，需要与进口高温分水器（包括水龙头、输送总管和回水总管，带用于散热器、超压差动阀的简单支路）连接。

有两种不同类型的高温系统：

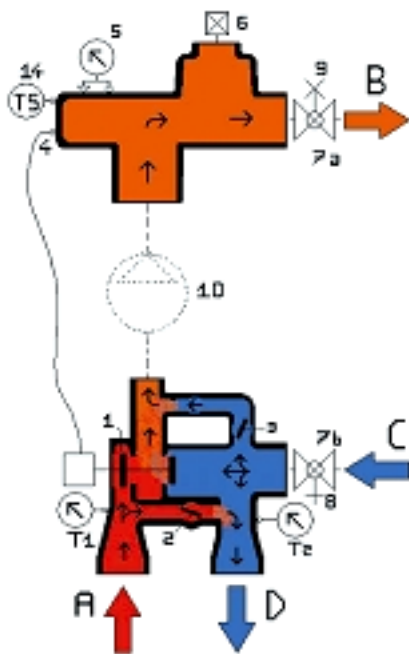
1. 高温元件，带测微平衡阀和电驱动阀（带M24x1.5或Eurokonus泄水口）。这些元件带有直球阀和角球阀，与一次回路相连接。

2. 高温分配集管，带M24x1.5或Eurokonus泄水口。这些元件可买到，有整套的直球阀和角球阀，用于一次回路连接。

UNIMIX可以通过下列两种方式运行：

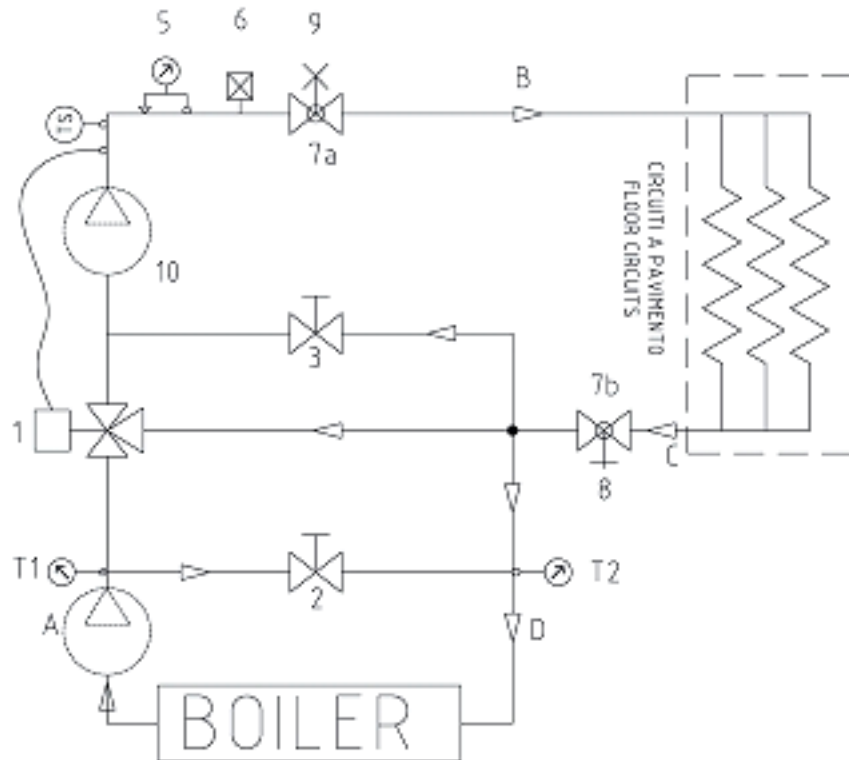
- a. 用温控头（带沉浸式探针，可调节温度范围30°C - 50°C）进行定点调节。

- b. 随着热负荷的改变调节输送温度。这个系统带有24 VAC电驱动控制(Article SRV 24)，标准电压是0-10 V，带24 VAC 0-10V热电发动机(Article TE 3061)，可以通过DHCC100或WLM2-1FS电子调节元件来调节外界温度。



-  stop valve 截止阀
-  manual air vent valve 手动排气阀
-  automatic air vent valve 自动放气阀
-  drainage valve 排污阀
-  temperature sensor 温度传感器
-  thermo-manometer 热压计(温度/压力表)
-  thermometer 温度表
-  pump 泵
-  balancing valve 均压阀
-  thermostatically operated or motorizable 3-ways mixing valve
温控阀或电动3通混合阀
-  safety thermostat 安全调温器

分水器



Principle of operating

Unimix is a mixing system involving the hydraulic circuit shown in Figure 2a-2b. The group is distinguished by completeness (all necessary accessories for correct adjustment and optimal operation are included) as well as simple maintenance and very compact overall dimensions (total length including pump and motor: 250 mm; depth: 110 mm) High temperature water from the boiler reaches UNIMIX inlet (A) fitted with a 3-way mixer valve that can be controlled by means of a thermostatic head, for fixed-point 30+50°C adjustment, or motor-driven for modulated adjustment. This valve regulates mixing to ensure delivery (B) of the set temperature (manually or electronically). UNIMIX was designed to ensure that the mixer valve can work at full load in maximum opening conditions on the straight line, thereby limiting the pressure drop at its heads: the high KV balance bypass (3) ensures, when required, important recycling of the return water from the panels, thereby ensuring correct mixing even if traditional high temperature boilers are used. The mixed water is controlled by the temperature sensor and sent to utilities through outlet B. Point C is the branch return and from here water can be branched in three directions and variable capacities over three branches depending on the adjustment position of the 3-way valve and the balance bypass (3):

- branch 1: direct return to the boiler at point D
- branch 2: return on the third line of the mixer valve
- branch 3: return on the mixed line through the bypass (3)

工作原理:

是混合系统，如图2a-2b所示采用液压回路。这个系统不同于维修简单的系统（包括所有必须优化运行和正确调节的元件），有非常紧凑的外形尺寸（总长度包括泵和电驱动：250 mm；深度：110 mm）。从锅炉而来的高温水到达 进水口(A)，进水口处有3通混合阀（由调温头控制），用于30°C—50°C定点调节。混合阀也可以由电驱动控制来控制。调节混合阀需设置（手动设置或电子设置）送水温度。UNIMIX能确保混合阀在满载时运行，因此要在UNIMIX顶部限制压降：高KV平衡阀（3）要确保控制板中的回水重复循环，如果使用传统高温锅炉，需确保水的正确混合。混合水由温度感应器控制，经过出水口B进入设备。点C是回水支路，在这里水被分成三条支路，依靠三通阀和平衡旁通阀（3）调节流量：

- 支路1：在点D处水直接回到锅炉。
- 支路2：回到混合阀的三路中另一回路。
- 支路3：通过旁通阀（3）回到混流处。

The UNIMIX system is also equipped with a primary bypass (2) to recirculate boiler fluid. This element is particularly useful with centralised plant having a single boiler supplying several UNIMIX units, since it allows hydraulic separation of the various utilities, ensuring that they are independent and avoiding phenomena of reciprocal interference between the pumps on secondary circuits, or in applications where the boiler requires minor recirculation for correct operation.

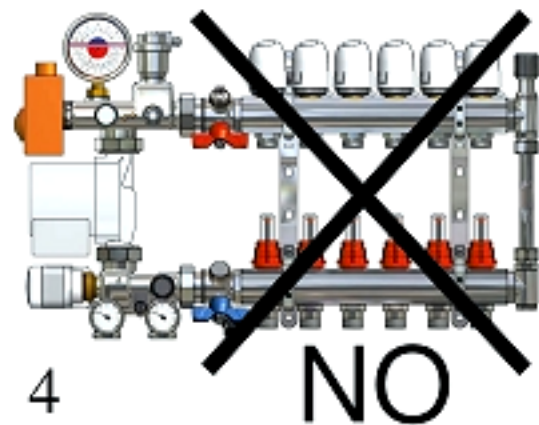
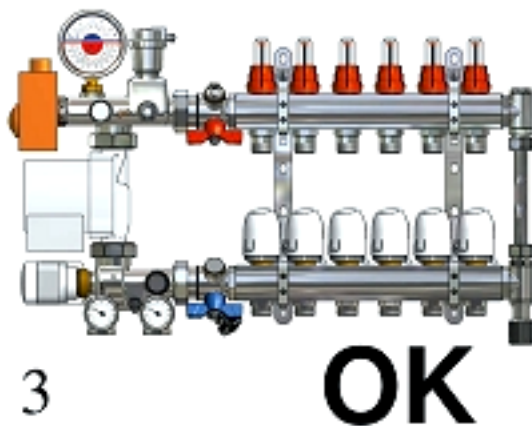
UNIMIX 系统也配备有主旁通阀（2），以使锅炉中的水重复循环。这一元件对于中枢设备十分有用，锅炉能提供一些 UNIMIX 元件，因为它允许水力分级，所以要避免二次回路中泵之间的互相干扰，也要避免锅炉中的水重复循环时在装置中产生的干扰。

Operating conditions:

Maximum temperature in the primary circuit: 90°C
Maximum operating pressure: 10 bar

运行条件:

主回路的最大运行温度: 90°C
最大运行压力: 10 巴



Connection of UNIMIX to low temperature distribution manifolds (floor):

floor-type distribution manifolds should be positioned with DELIVERY AT THE TOP and RETURN AT THE BOTTOM: this differs from the systems generally supplied by IVAR. See images 3 and 4 for more details.

It is also possible to assemble on the secondary circuit any differential bypass valves there are in the catalogue, being very careful on the assembling due to the specific direction of the flow.

与低温分水器（座地式）的连接

座地式分水器应当在顶部输水和在底部回水：这与 IVAR 所提供的系统不同。想要获得更多细节，请参阅图 3 和图 4。

这同样也能装在二次回路上，由于水流方向已确定，所以需要十分仔细地安装任何一个差动旁通阀。

Selecting the wall box: IVAR offers a broad range of wall boxes for mounting the UNIMIX system. These boxes offer adjustable depth of 110 mm- 160 mm, an adjustable height of 690 a 790 mm and width that varies in relation to the article code as listed in the following tables.

Recommended dimensions for wall boxes are given below in relation to the number of branches on the floor type

distribution manifolds. In order to minimise overall box dimensions, the following outline suggestions are provided

(yet installation experts may adopt different solutions provided that they do not compromise correct operation of the system):

Fixed point adjustment (TAB. A): on the return line, it is advised to fit on-off electro-thermal heads with four leads and 230 VAC power supply (code. 500808). These devices have an auxiliary contact to switch off the circulation pump and if they are all connected in parallel they switch off the pump if supplies to all areas are satisfactory. It is alternatively possible to use 24 VAC electro-thermal heads with two leads (code. 501524) with wiring centre ZC 100 (code 580004) that switch off the pump in the event of closing of all zones. Electrical wiring for the heads must be performed by qualified personnel. For more information, refer directly to the instruction booklet included in the packaging of the heads.

Modulating adjustment (TAB. B): it is advised to fit the conditioning adjustment control units in a vertical position

to reduce overall dimensions. In this case, fit electro-thermal heads to the return manifolds with two leads with power supply 230 VAC: consent to switch off the secondary pump is given directly by the control panel to which

the heads are connected. For more information, refer to the conditioning control unit manual.

选择壁箱: 系统提供了各种各样的安装壁盒。这些盒子深度为 110 mm- 160 mm，可调整；高度为 690 mm- 790 mm，可调整，宽度根据下表所列的元件代码而改变。

壁盒的推荐规格依据座地式分水器的支路数量而定。为了使盒子规格最小化，请参考如下建议（然而安装专家可能对于系统操作采用不同的解决办法）：

固定点调节(TAB. A):建议在回路上安装开-闭电驱动阀，带 4 条导线和 230 VAC 电源（代码：500808）。这些装置带有辅助触点，切断循环泵，如果泵里的水能输送到各个区域的话，那么装置平行连接时它们能切断泵。当关闭所有的区域时，可以用带两条电缆中枢（代码：501524)的 24 VAC 电驱动阀经过 ZC100（代码：580004）来关闭泵。用于电驱动阀的电缆必须由合格的工作人员安装。要获得更多的信息，请参阅包装里的说明书。

可变调节(TAB. B):建议在竖直位置安装调节控制元件，以减小外形尺寸。这样的话，应当将电驱动阀安装在回水分水器上（带电源是 230 VAC 的两根导线）。想要获得更多的信息，请参阅调节控制元件手册。

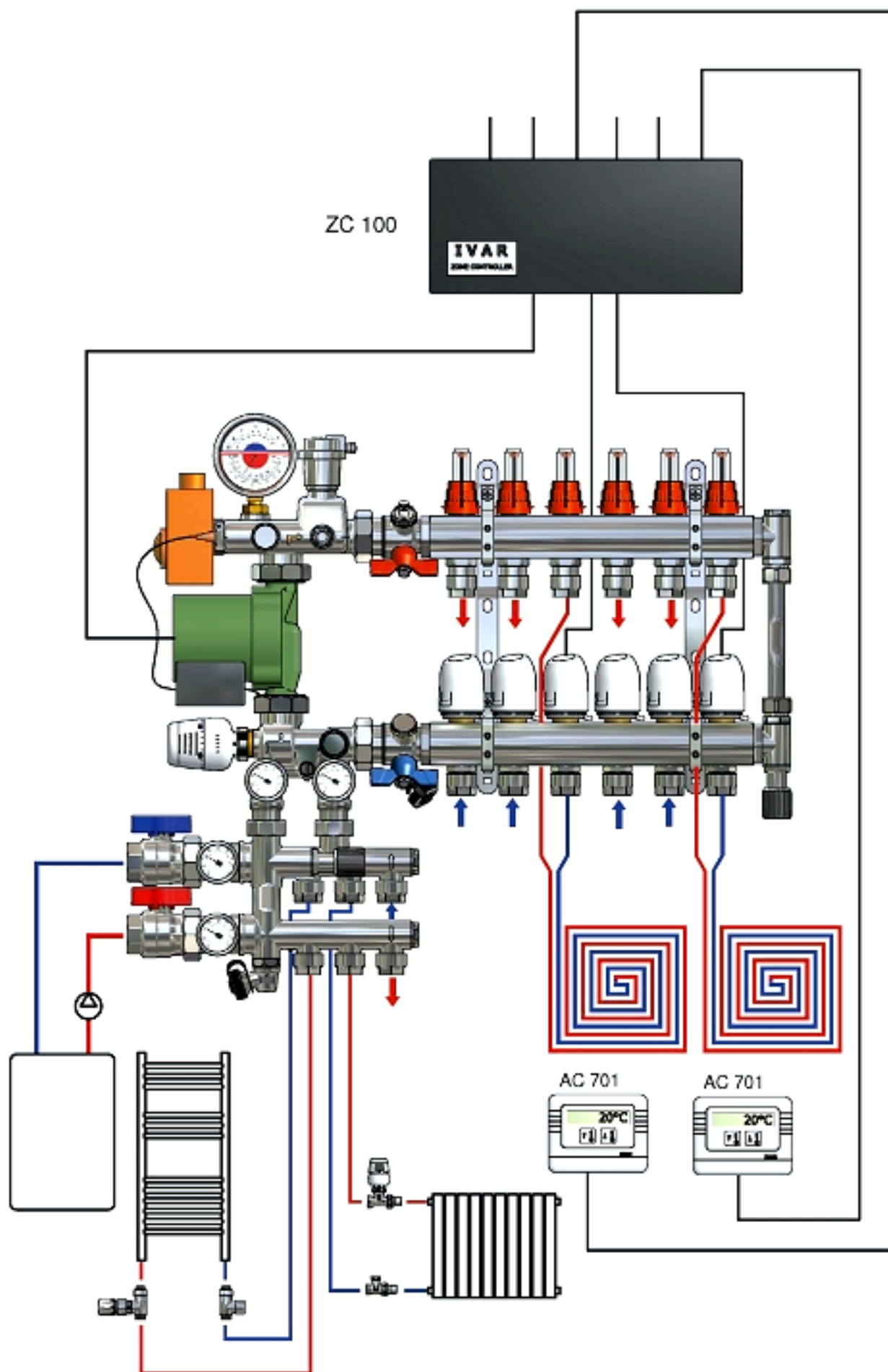
Number of outputs 输出设备数		Box width 箱子宽度	Code 代码
High Temp. 高温	Low Temp. 低温		
3	3	680 mm	540032
3	4		
3	5		
3	6	830 mm	540033
3	7		
3	8		
3	9	1030 mm	540034
3	10		
3	11		
3	12	1130 mm	540035
3	13		

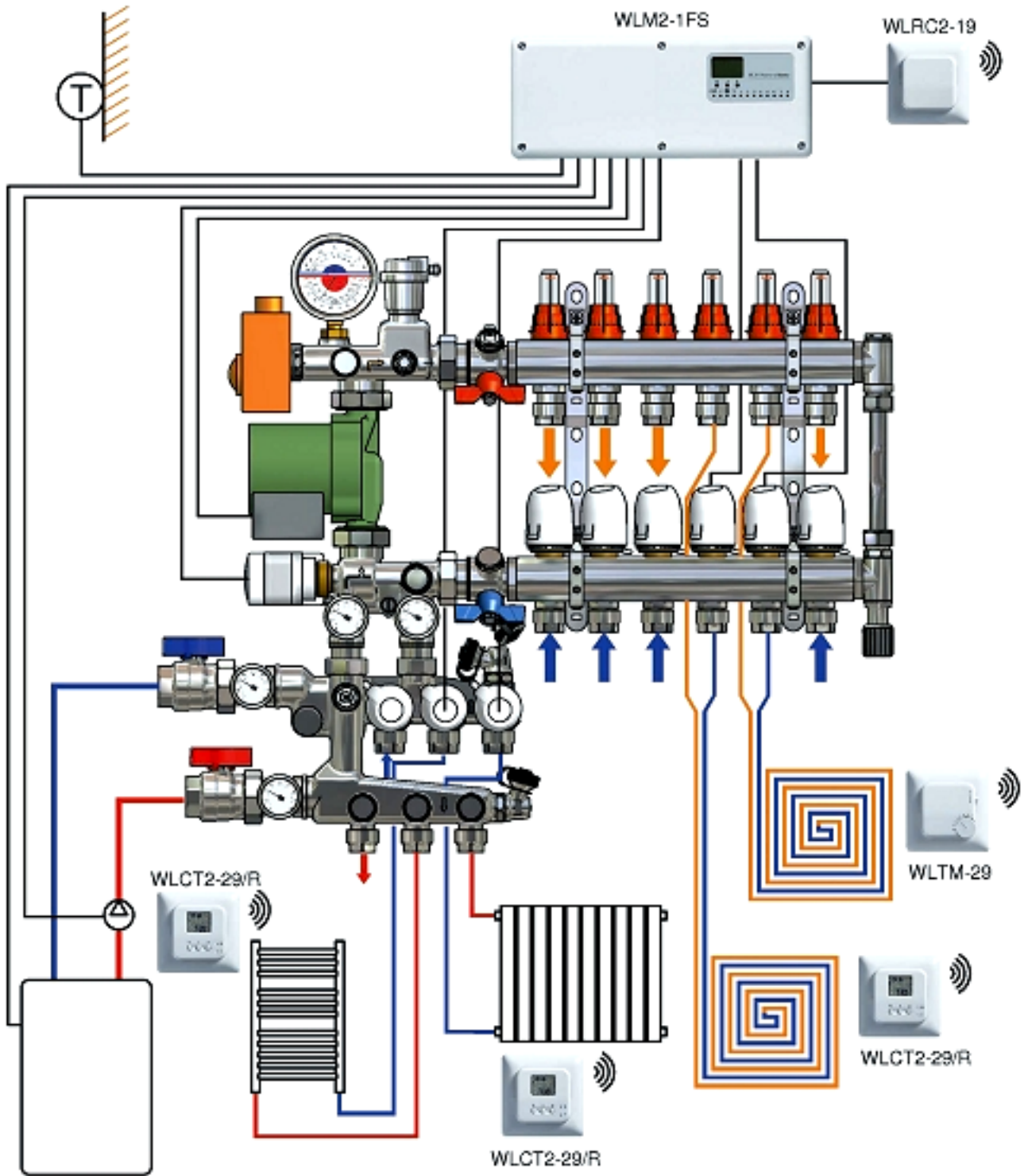
TAB. B

Number of outputs 输出设备数		Box width 箱子宽度	Code 代码
High Temp. 高温	Low Temp. 低温		
3	3	1030 mm	540034
3	4		
3	5		
3	6		
3	7		
3	8	1130 mm	540035
3	9		
3	10		
3	11	1330 mm	540036
3	12		
3	13		

The use or not of the high temperature kit does not modify the box dimension.
使用或不使用高温配套元件并不能修改箱子尺寸。

分水器





分水器



- DESCRIPTION
UNIMIX regulator unit.

UNIMIX混水系统混水装置。

ART.	COD.	SIZE	□	⊗	⊙
UM 01	500438	130 mm - 180 mm		/	1



- DESCRIPTION
UNIMIX regulator unit complete with straight (D) orange (S) ball valves.

UNIMIX混水系统装置 带有球形直阀 (D) 或球形角阀 (S)。

ART.	COD.	SIZE	□	⊗	⊙
UM 01D	500438D	130 mm - 180 mm		/	1
UM 01S	500438S	130 mm - 180 mm		/	1



- DESCRIPTION
High temperature kit for the UNIMIX system with shutoff manifolds.

高温配套组件 用于UNIMIX系统 带分水器。

ART.	COD.	SIZE	□	⊗	⊙
AUM 02	500635	M241,5		/	1
AUM 02	500586	EUROKONUS		/	1



- DESCRIPTION
High temperature kit for the UNIMIX system with shut off manifolds complete with straight (D) or angle (S) ball valves.

高温配套组件 用于UNIMIX系统 带分水器 (带有球形直阀 (D) 或球形角阀 (S))。

ART.	COD.	SIZE	□	⊗	⊙
AUM 12D	500635D	M241,5		/	1
AUM 12D	500586D	EUROKONUS		/	1
AUM 12S	500635S	M241,5		/	1
AUM 12S	500586S	EUROKONUS		/	1

分水器



- DESCRIPTION
High temperature kit for the UNIMIX system with simple manifolds.
高温配套组件 用于UNIMIX系统 带简单分水器。

ART.	COD.	SIZE	□	⊗	⊕
AUM 01	500783	M241,5		/	1
AUM 01	500456	EUROKONUS		/	1



- DESCRIPTION
High temperature kit for the UNIMIX system with simple manifolds complete with straight (D) or angle (S) ball valves.
高温配套组件 用于UNIMIX系统 带简单分水器（带有球形直阀（D）或球形角阀（S））。

ART.	COD.	SIZE	□	⊗	⊕
AUM 11D	500783D	M241,5		/	1
AUM 11D	500456D	EUROKONUS		/	1
AUM 11S	500783S	M241,5		/	1
AUM 11S	500456S	EUROKONUS		/	1



- DESCRIPTION
Thermostatic head with incorporate command and remote immersion sensor. Range of ajustement 30 ÷ 50°C
沉浸式远程控制感应温控头 温度调节范围30 — 50°C。

ART.	COD.	SIZE	□	⊗	⊕
T 5011U	501175U	/		/	1



- DESCRIPTION
Built-in manifold box with adjustable height (705 ÷ 805 mm) and depth (110 ÷ 160 mm). With increased height of the door.
内置式分水箱 可调节高度（705 — 805 mm）和深度（110 — 160 mm）

ART.	COD.	SIZE	□	⊗	⊕
AC 830	540030	450 mm		/	1
AC 830	540031	530 mm		/	1
AC 830	540032	680 mm		/	1
AC 830	540033	830 mm		/	1
AC 830	540034	1030 mm		/	1
AC 830	540035	1130 mm		/	1
AC 830	540036	1330 mm		/	1

分水器



- DESCRIPTION
Electro-thermal head normally closed 0 - 10V (24 V).
电驱动头 通常关闭电压是**0 - 10V (24 V)**

ART.	COD.	SIZE	☐	🔌	🔌
TE 3061	500887	24 V / 0-10 V		1	100



- DESCRIPTION
Axial servo motor.
电驱动控制器

ART.	COD.	SIZE	☐	🔌	🔌
NRV 230	501008	230 V		1	/
SRV 24	501267	24 V / 0-10 V		1	/
NRV 24	501266	24 V		1	/



- DESCRIPTION
Pre-wired security contact thermostat.
预制安全触头调温器（与泵连接控制）

ART.	COD.	SIZE	☐	🔌	🔌
AC 613 C	580000U	/		1	8



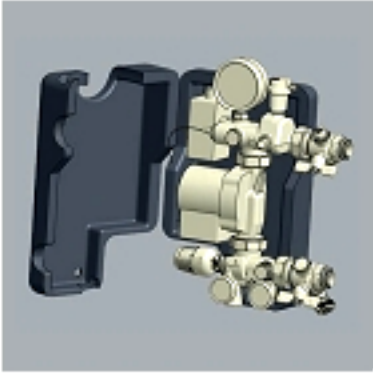
- DESCRIPTION
Pre-wired security thermostat with immersion probe.
预制安全调温器 带沉浸式探头

ART.	COD.	SIZE	☐	🔌	🔌
AC 613 S	580001U	/		1	8



- DESCRIPTION
Fixed setting safety thermostat (60°C) pre-wired.
固定式预制安全调温器(安全温度**60°C**)

ART.	COD.	SIZE	☐	🔌	🔌
AC 613 F	580014U	/		1	8



- DESCRIPTION
Insulating cover for Unimix.
用于Unimix的绝缘罩

ART.	COD.	SIZE	☒		
AUM 03	506256	/		1	/



- DESCRIPTION
Electrothermal head normally closed with limit switch contact (4 wires).
电驱动头 通常带有限位开关触头（4根电缆）

ART.	COD.	SIZE	☒		
TE 3050M	50808M	230 V		1	100
TE 3051M	500028M	24 V		1	100