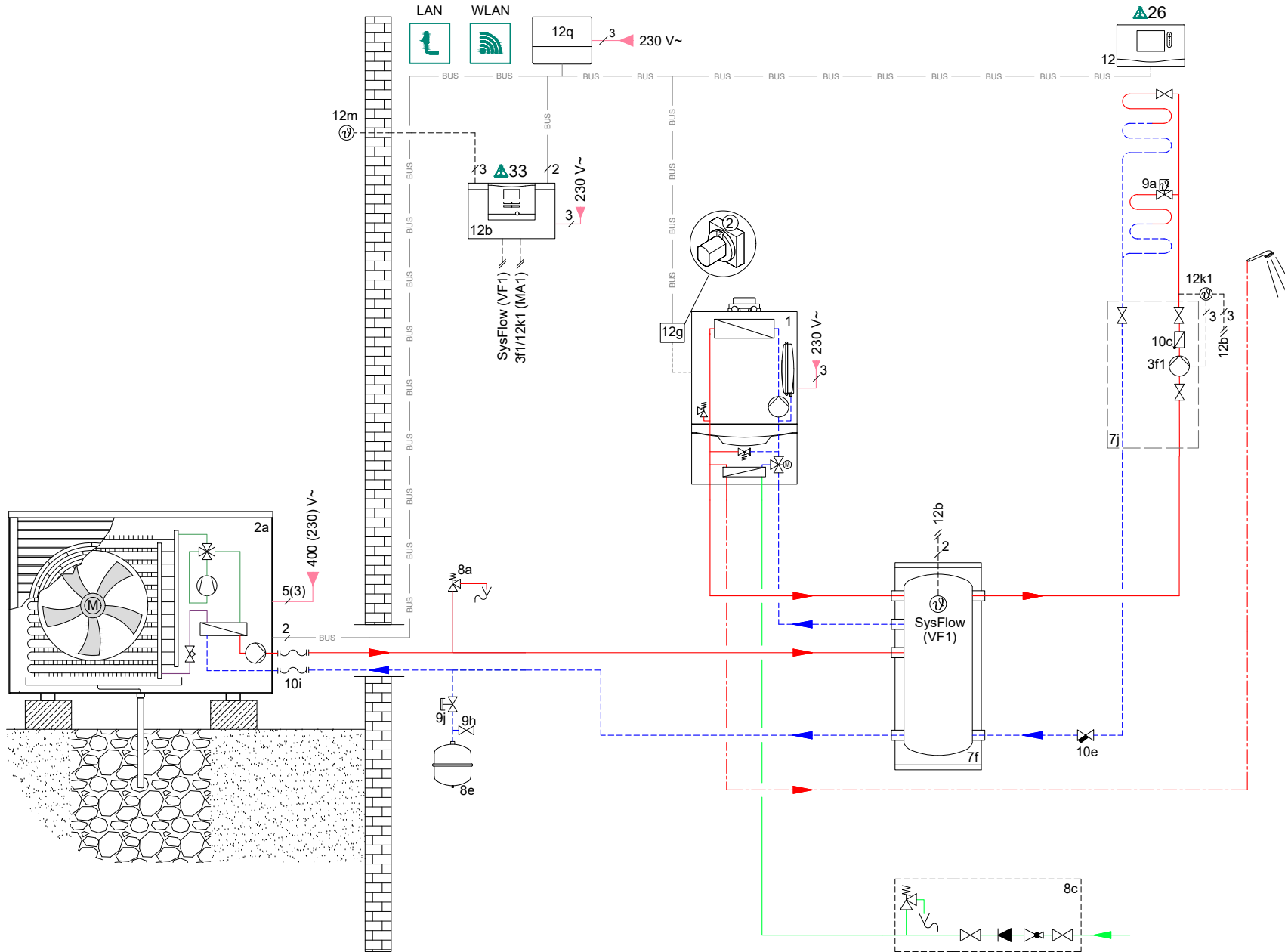




22: Electrical supply voltage depending on the installation and appliance: 230 V, 400 V  
 26: Also compatible with VRC 700.  
 33: VWZ AI compatible with VWL x/6 has to be used



Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

drawn: OV date: 08.07.2021  
 version no. 10.00 reference to

Appliances: aroTHERM plus VWL, ecoTEC plus VCW  
 VP RW 45/2 B  
 Controls: VRC720, VR921, VWZ AI (VWL x/6), VR32/3

Circuits: 1 x direct underfloor

**Necessary Settings**

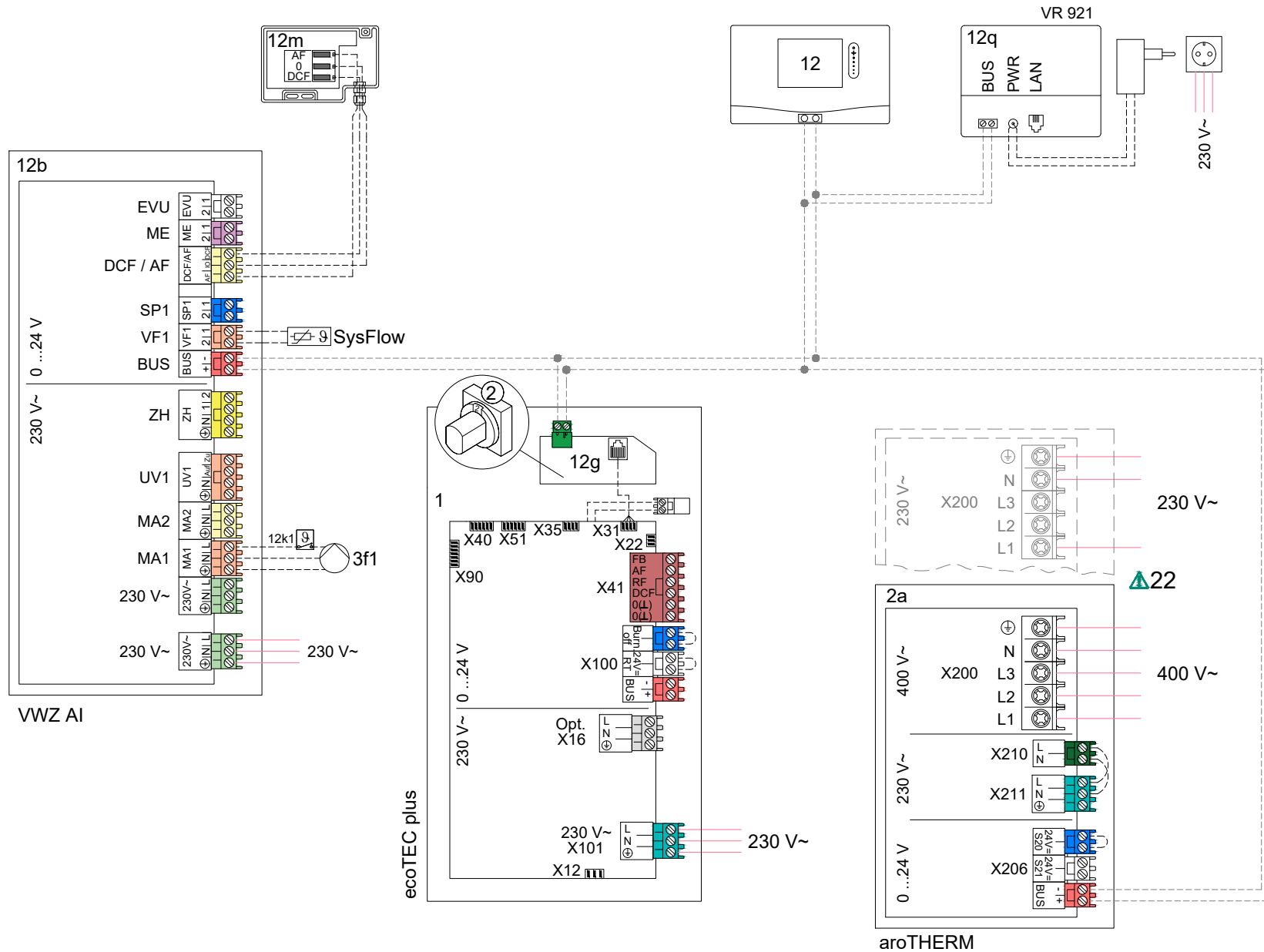
Heat pump:  
- Cooling technology : **Active cooling**

Control | Basic system diagram config.:

- Basic system diagram code : **10**

eBUS coupler (boiler):

- Address : **2**



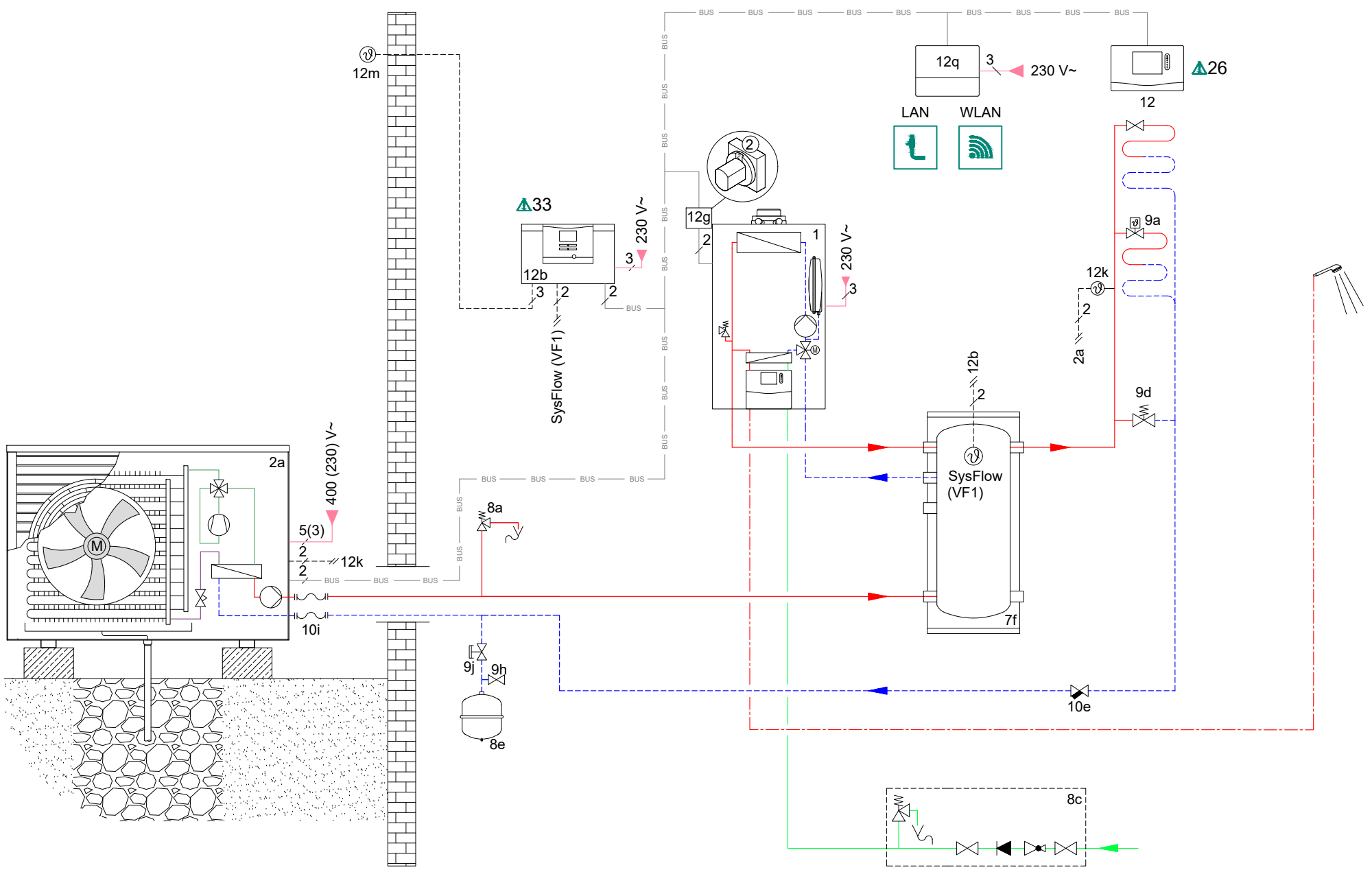
Attention, this principal scheme does not supersede a correct professional design of the system!  
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drawn: OV	date: 08.07.2021
version no. 10.00	reference to

Appliances: aroTHERM plus VWL, ecoTEC plus VCW VP RW 45/2 B
Controls: VRC720, VR921, VWZ AI (VWL x/6), VR32/3

Circuits: 1 x direct underfloor
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⚠ 22: Electrical supply voltage depending on the installation and appliance: 230 V, 400 V  
 26: Also compatible with VRC 700.  
 33: VWZ AI compatible with VWL x/6 has to be used

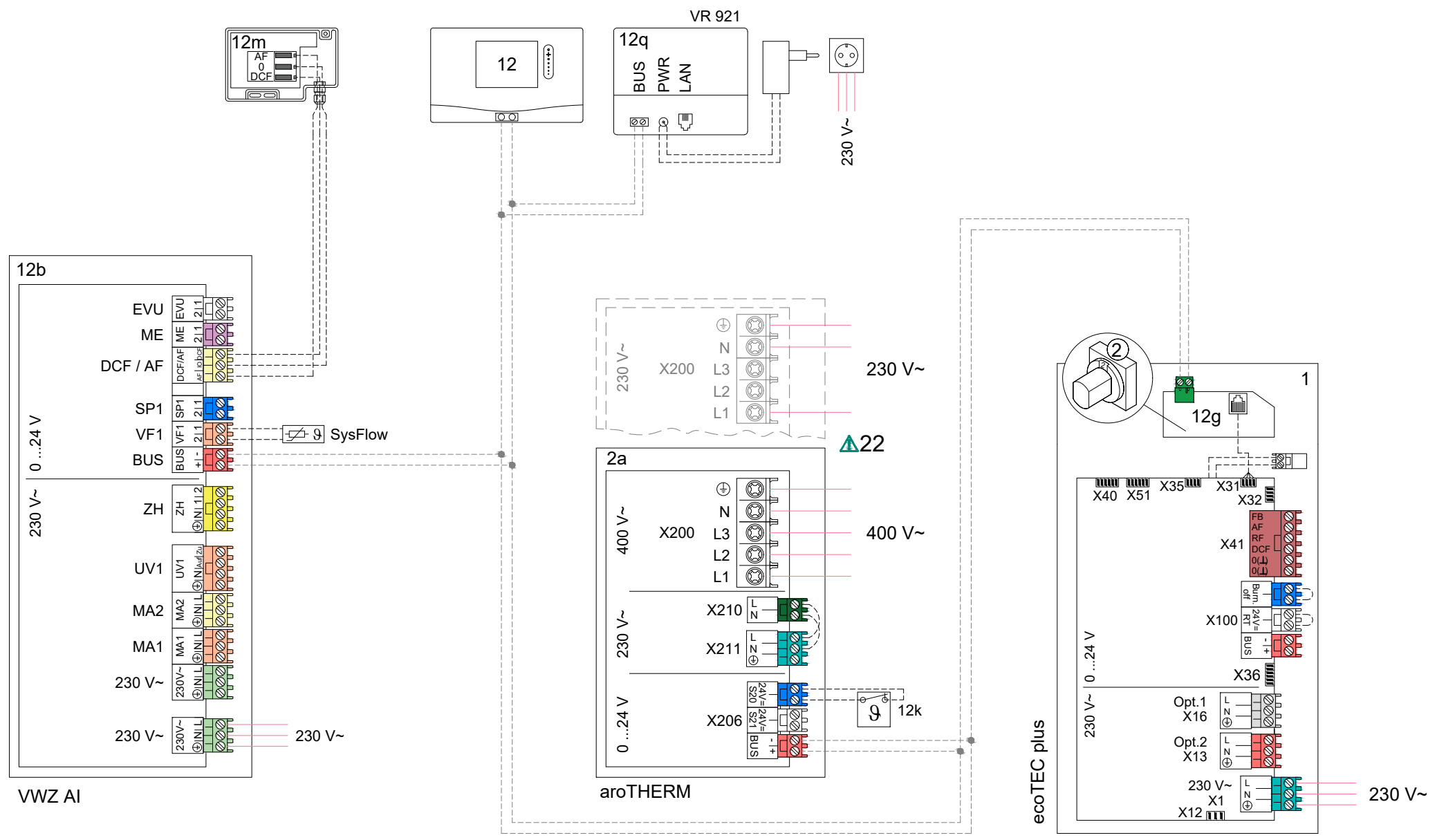


Attention, this principal scheme does not supersede a correct professional design of the system!  
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drawn:	OV	version no.	13.00
date:	21.05.2021	reference to	

Appliances:	aroTHERM plus VWL, ecoTEC plus VCW VP RW 45/2 B
Controls:	VRC720, VR921, VWZ AI (VWL x/6), VR32/3

Circuits:	1 x direct underfloor	Page 1 / 4
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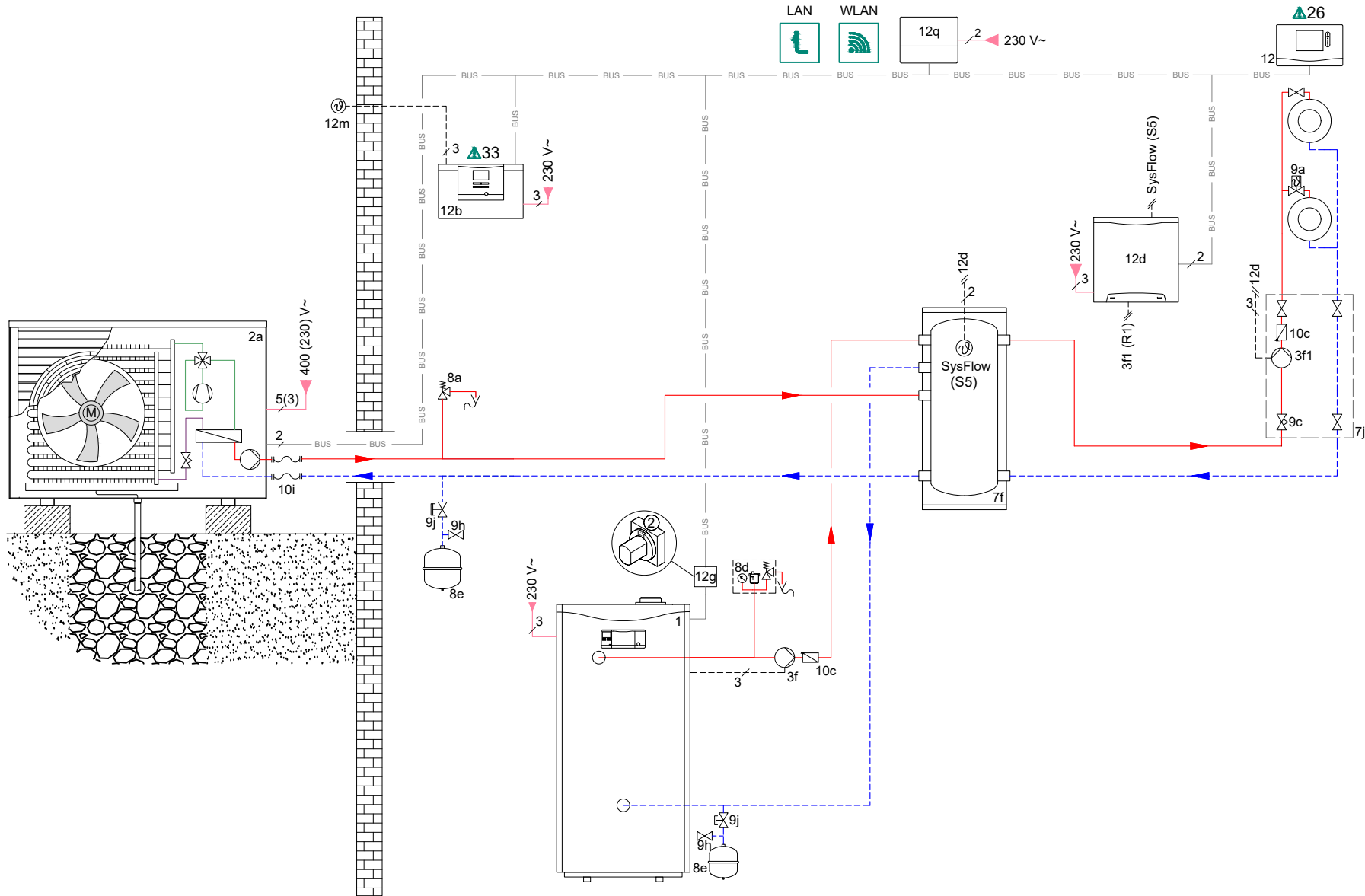


Attention, this principal scheme does not supersede a correct professional design of the system!  
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drawn:	OV	version no.	13.00
date:	21.05.2021	reference to	

Appliances:	aroTHERM plus VWL, ecoTEC plus VCW VP RW 45/2 B
Controls:	VRC720, VR921, VWZ AI (VWL x/6), VR32/3

Circuits:	1 x direct underfloor	Page 2 / 4
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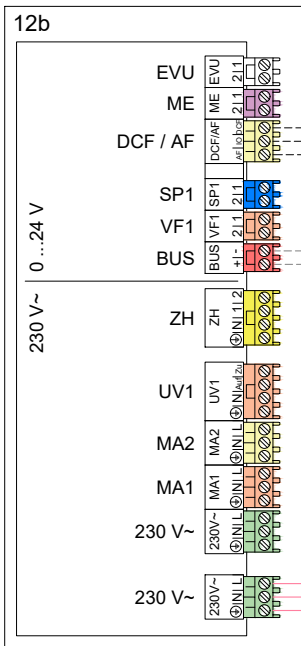
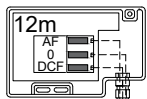


Attention, this principal scheme does not supersede a correct professional design of the system!  
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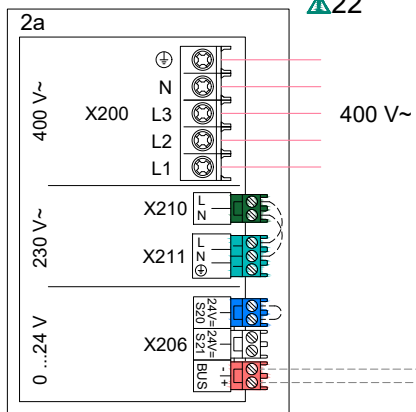
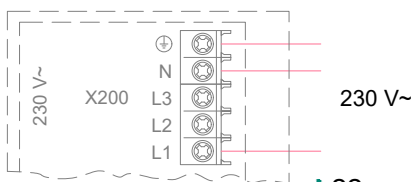
**Necessary Settings (Heat pump)**  
 - Cooling technology : **No cooling**  
**Necessary Settings (Control)**  
 - Basic system diagram config.:  
 - Basic system diagram code : **16**

- FM3 configuration : **1**  
 - Circuit1 / Circuit type: **Heating**  
 - Circuit2 / Circuit type: **Inactive**  
 - Zone1 / Zone activated: **Yes**  
 Domestic hot water:

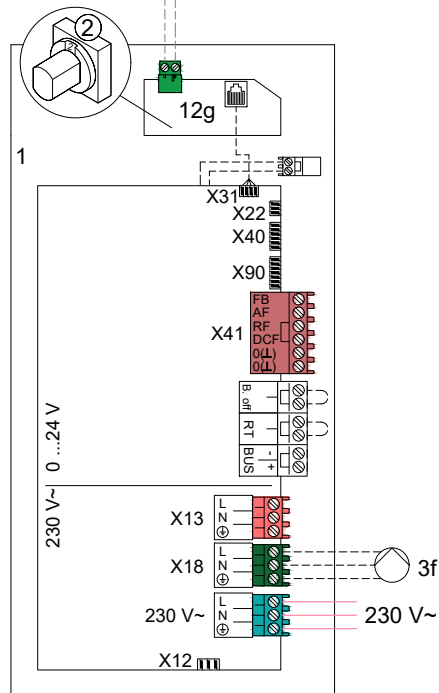
- Cylinder : **Inactive**  
**Necessary Settings (eBUS coupler (boiler))**  
 - Address : **2**



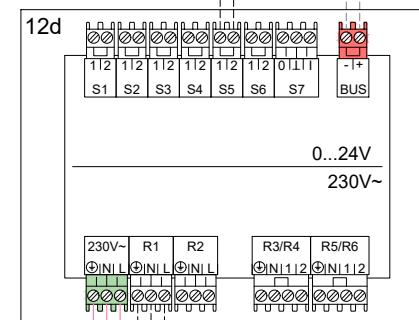
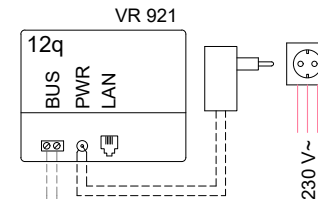
VWZ AI



aroTHERM



ecoVIT



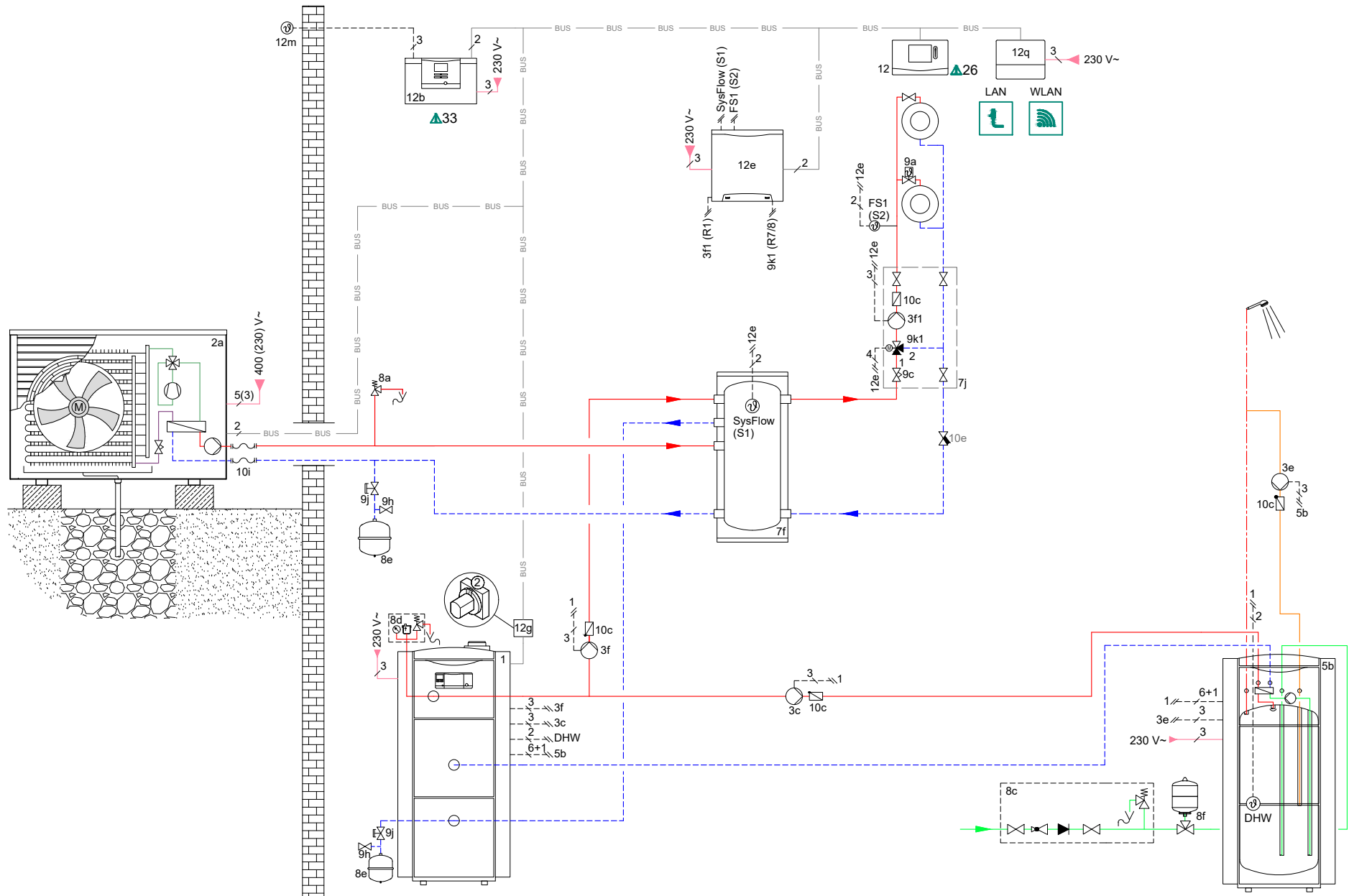
VR 70

Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

drawn: JB	date: 10.06.2020
version no. 01.00	reference to

Appliances: aroTHERM plus VWL, ecoVIT VKK  
 VP RW 45/2 B  
 Controls: VRC720, VR70, VR921, VWZ AI (VWL x/6), VR32/3

Heating / cooling 1 x direct radiator circuits:



Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

drawn:	JB	date:	15.10.2020
version no.	01.00	reference to	

Appliances:	aroTHERM plus VWL, ecoVIT VKK VP RW 45/2 B, actoSTOR VIH K 300
Controls:	VRC720, VR71, VR921, VWZ AI (VWL x/6), VR32/3

Heating / cooling	1 x mixed radiator
circuits:	

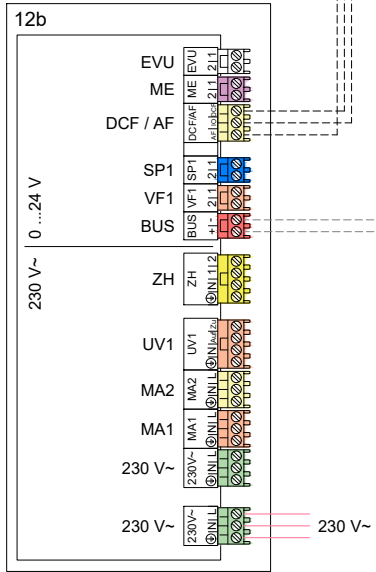
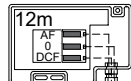
0020314920

**Necessary Settings**  
 Heat pump:  
 - Cooling technology : **No cooling**

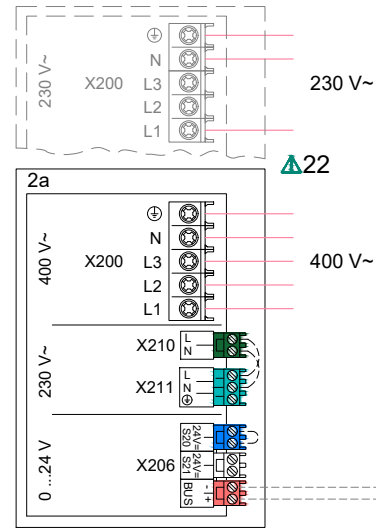
**Control | Basic system diagram config.:**  
 - Basic system diagram code : **9**  
 - FM5 configuration : **3**  
 - Circuit 1/ Circuit type: **Heating**  
 - Circuit 2..3/ Circuit type: **Inactive**

- Circuit 1/ Room temp. mod.:  
**Active, Expanded**  
 - Circuit 1/ Cooling possible: **No**  
 - Zone 1/ Zone activated: **Yes**  
 - Zone 1/ Zone assignment: **Control**

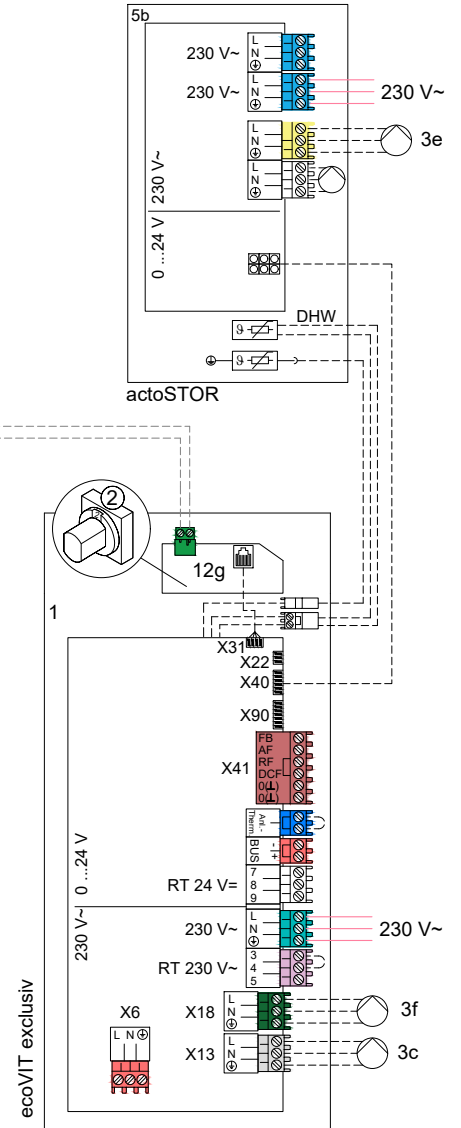
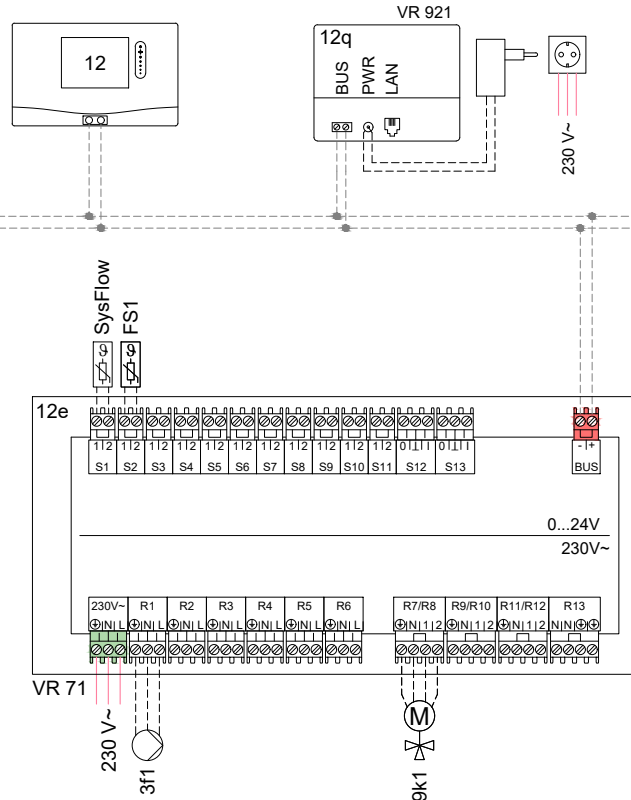
**eBUS coupler (boiler):**  
 - Address : **2**



VWZ AI



aroTHERM



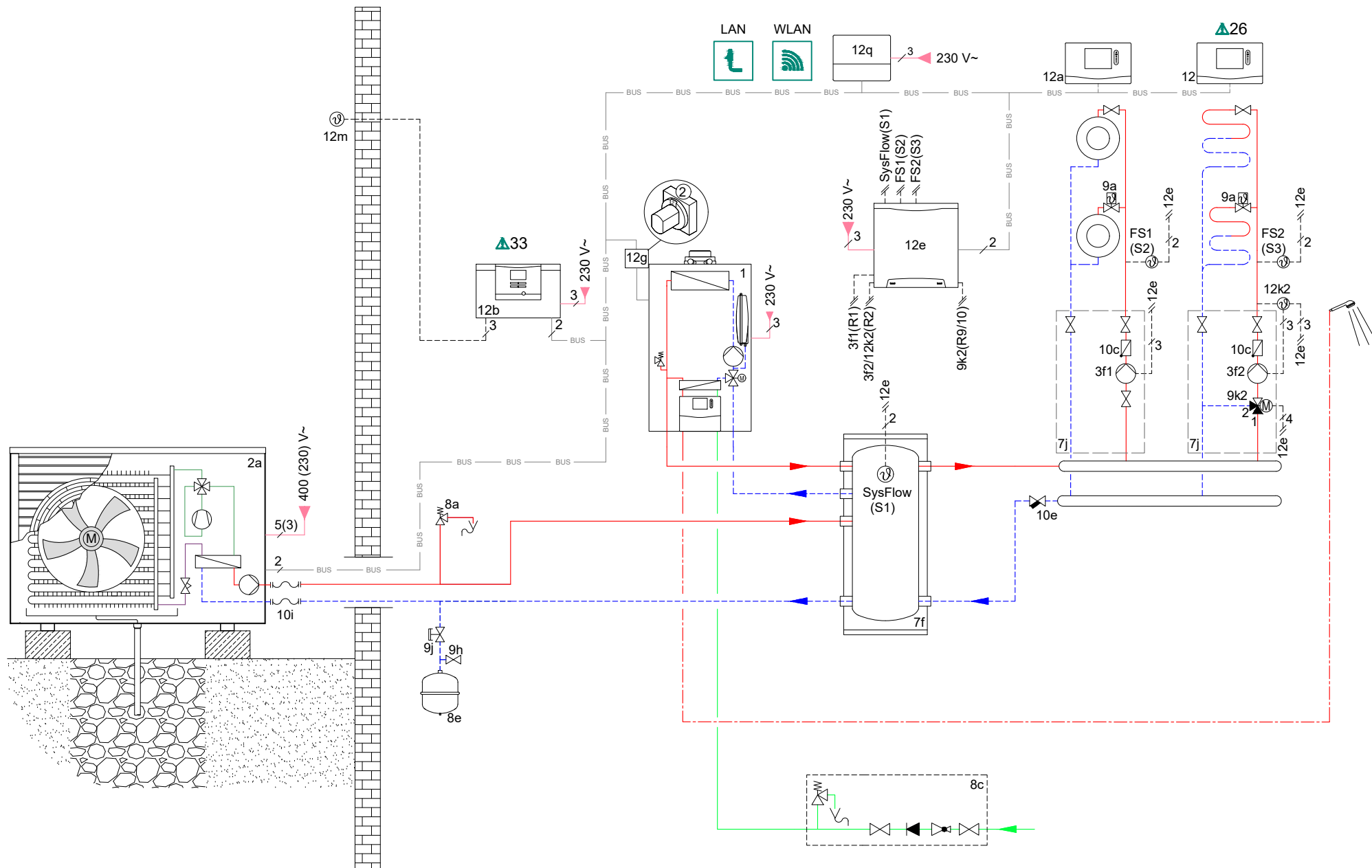
Attention, this principal scheme does not supersede a correct professional design of the system!  
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drawn:	JB	date:	15.10.2020
version no.	01.00	reference to	

Appliances:	aroTHERM plus VWL, ecoVIT VKK VP RW 45/2 B, actoSTOR VIH K 300
Controls:	VRC720, VR71, VR921, VWZ AI (VWL x6), VR32/3

Heating / cooling	1 x mixed radiator circuits:	Page 2 / 4
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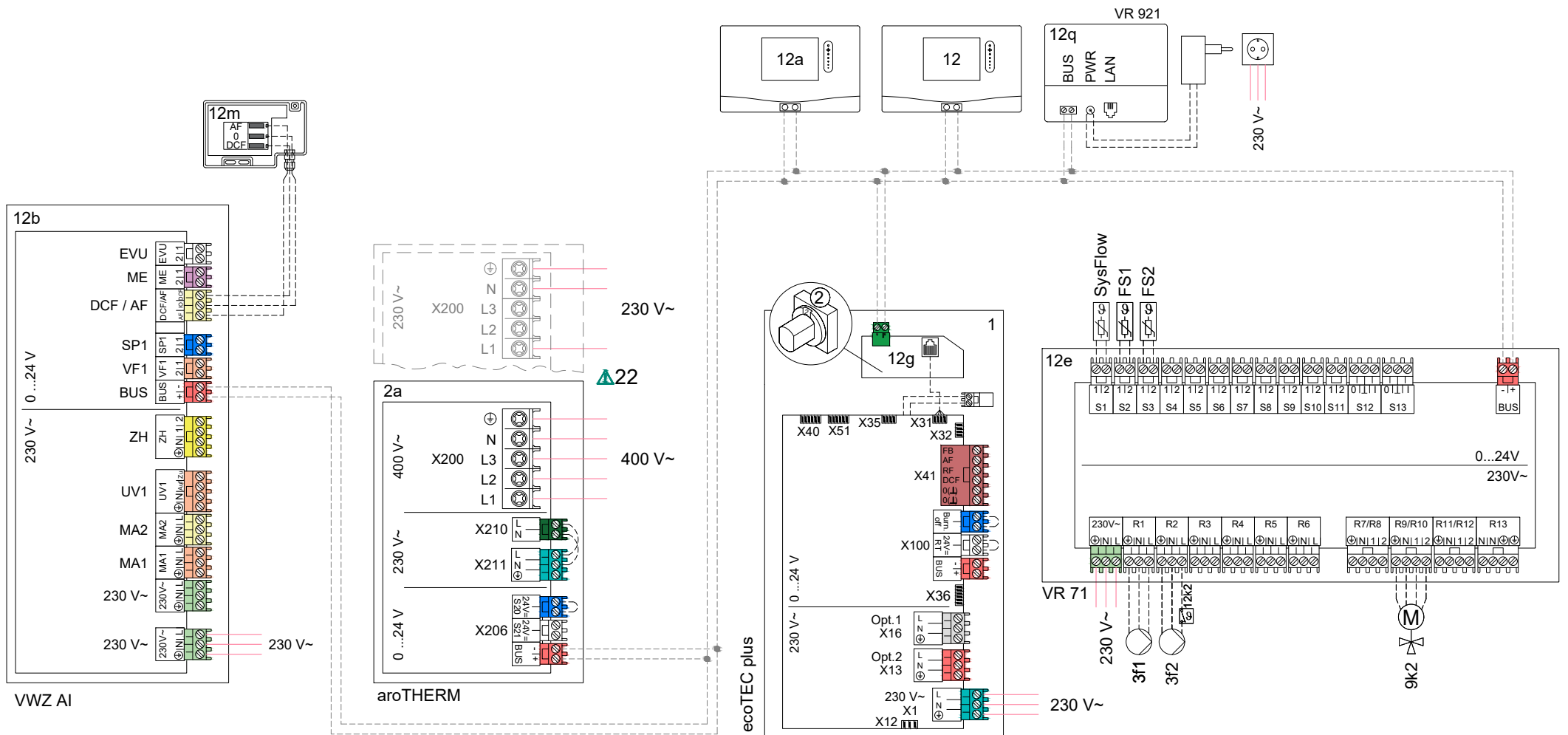
Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

**Necessary Settings**  
 Control | Basic system diagram config.:  
 - Basic system diagram code : **9**  
 - FM5 configuration : **3**  
 - Circuit 1..2/ Circuit type: **Heating**

- Circuit 1..2/ Room temp. mod.:  
**Active, Expanded**  
 - Circuit 3/ Circuit type: **Inactive**  
 - Zone 1..2/ Zone activated: **Yes**  
 - Zone 1/ Zone assignment: **Rem. Contr. 1**

- Zone 2/ Zone assignment: **Control**

eBUS coupler (boiler):  
 - Address : **2**

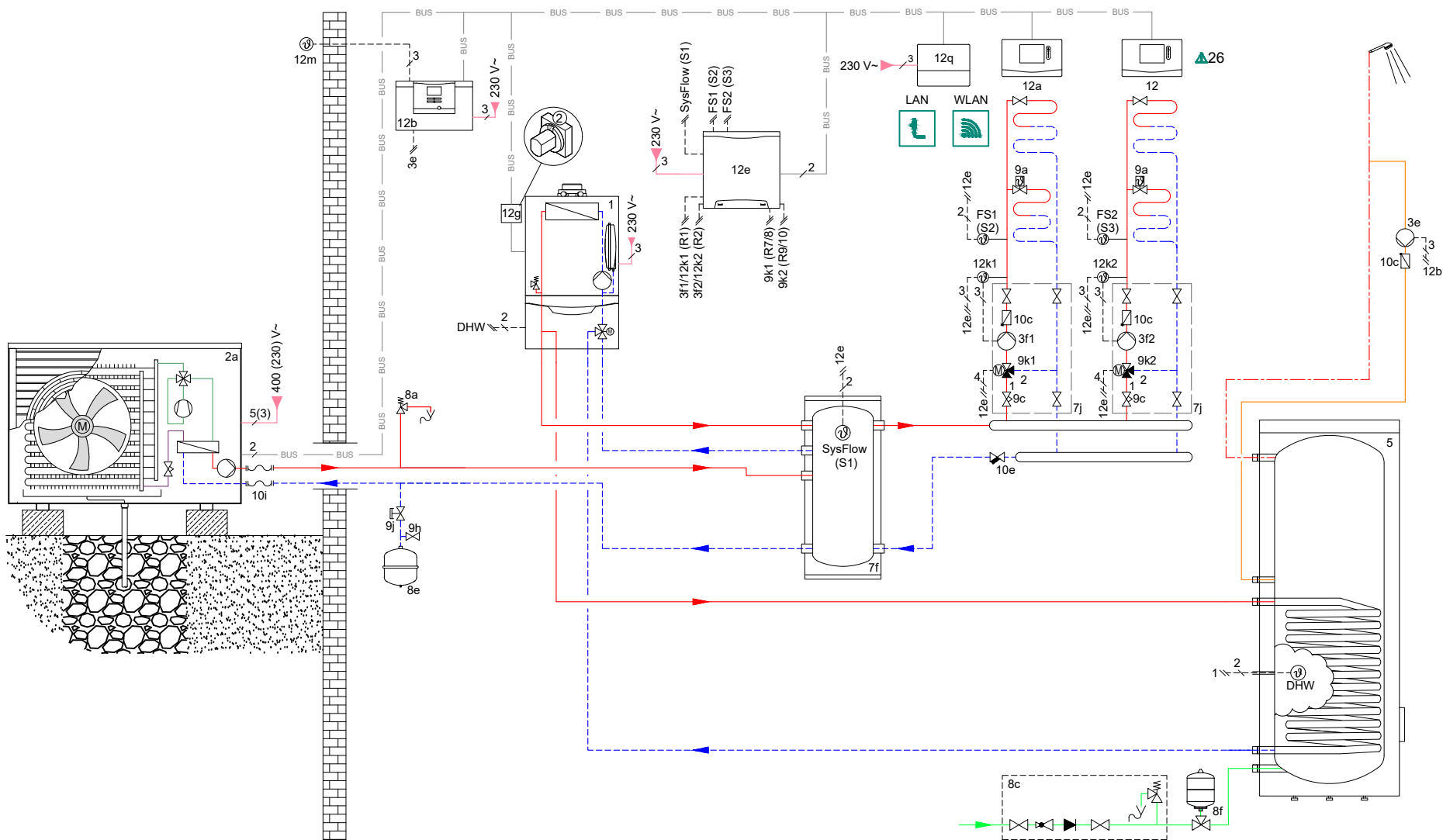


Attention, this principal scheme does not supersede a correct professional design of the system!  
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drawn: SJ  
 version no. 10.00  
 date: 31.05.2021  
 reference to

Appliances: aroTHERM plus VWL, ecoTEC plus VCW  
 VP RW 45/2 B  
 Controls: VRC720, VR71, VR92, VR921, VWZ AI (VWL x6), VR32/3

Heating / cooling circuits: 1 x direct radiator  
 1 x mixed underfloor



Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

drawn:	OV	version no.	10.00
date:	01.09.2021	reference to	

Appliances:	aroTHERM VWL, ecoTEC VC VP RW 45/2 B, uniSTOR VIH R
Controls:	VRC720, VR71, VR92, VR921, VWZ AI, VR32/3

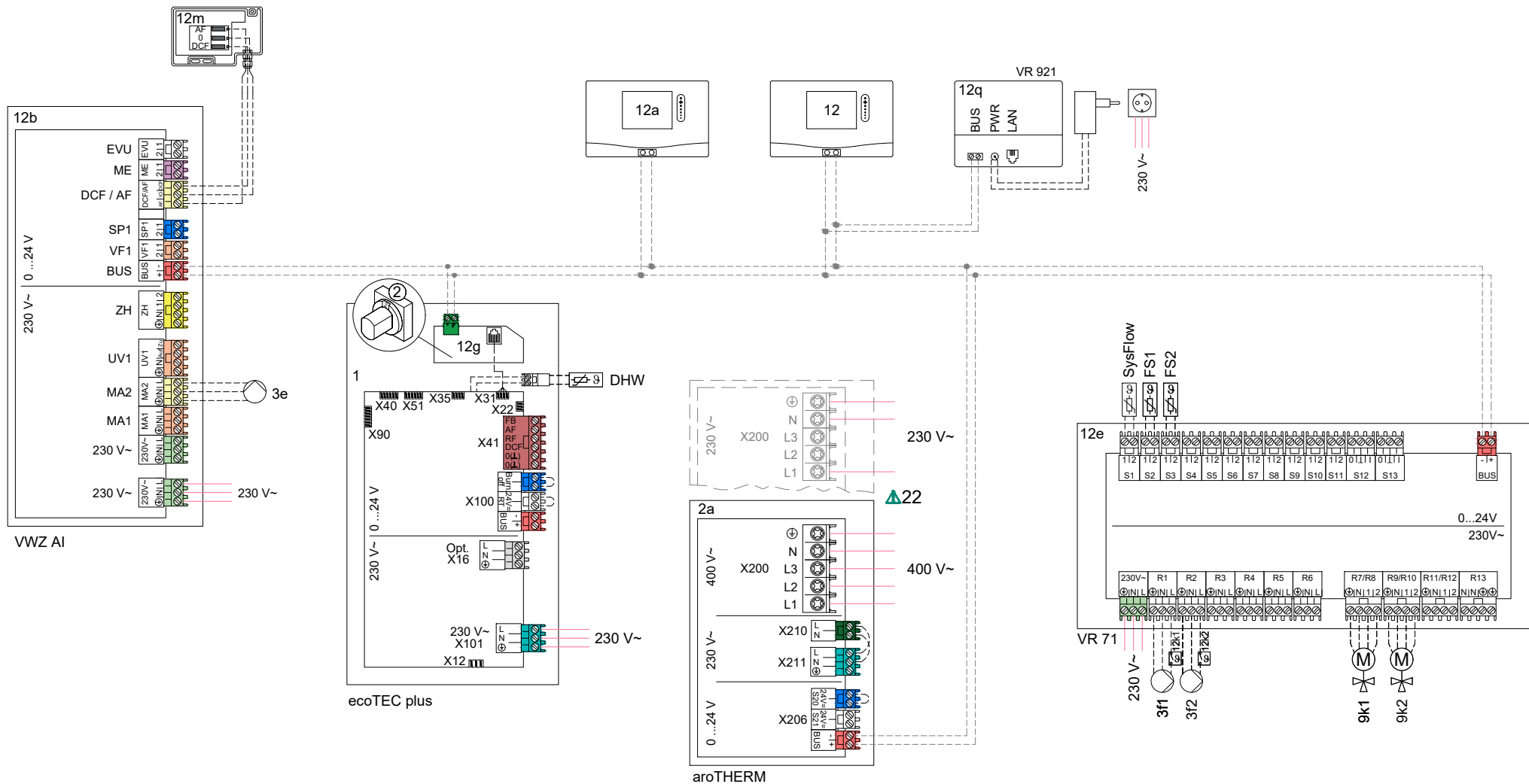
Heating / cooling 2 x mixed underfloor circuits:

**Necessary Settings**  
 Control | Basic system diagram config.:  
 - Basic system diagram code : 9  
 - FM5 configuration : 3  
 - Circuit 1..2/ Circuit type: Heating

- Circuit 1..2/ Room temp. mod.:  
**Active, Expanded**  
 - Circuit 3/ Circuit type: **Inactive**  
 - Zone 1..2/ Zone activated: **Yes**  
 - Zone 1/ Zone assignment: **Rem. Contr. 1**

- Zone 2/ Zone assignment: **Control**  
 Control | HP control module configuration:  
 - MO 2 : **Circulation pump**

eBUS coupler (boiler):  
 - Address : 2



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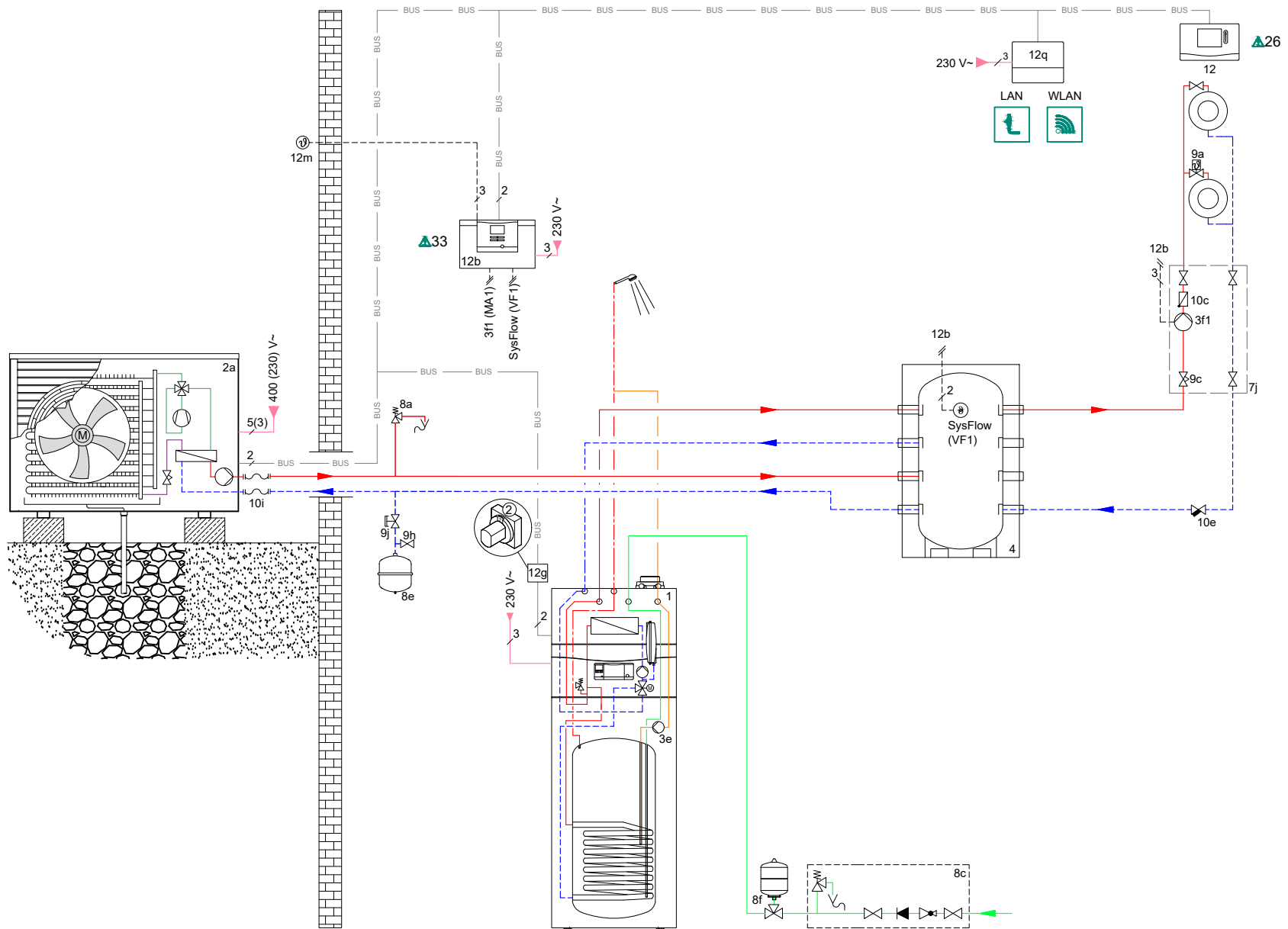
drawn: OV  
 date: 01.09.2021  
 version no. 10.00  
 reference to

Appliances: aroTHERM VWL, ecoTEC VC  
 VP RW 45/2 B, uniSTOR VIH R  
 Controls: VRC720, VR71, VR92, VR921, VWZ AI, VR32/3

Heating / cooling 2 x mixed underfloor circuits:



22: Electrical supply voltage depending on the installation and appliance: 230 V, 400 V  
 26: Also compatible with VRC 700.  
 33: VWZ AI compatible with VWL x/6 has to be used



Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

drawn: OV date: 28.07.2021  
 version no. 10.00 reference to

Appliances: aroTHERM plus VWL, ecoCOMPACT VCC  
 uniSTOR VPS R  
 Controls: VRC720, VR921, VWZ AI (VWL x/6), VR32/3

Circuits: 1 x direct radiator

**Necessary Settings**

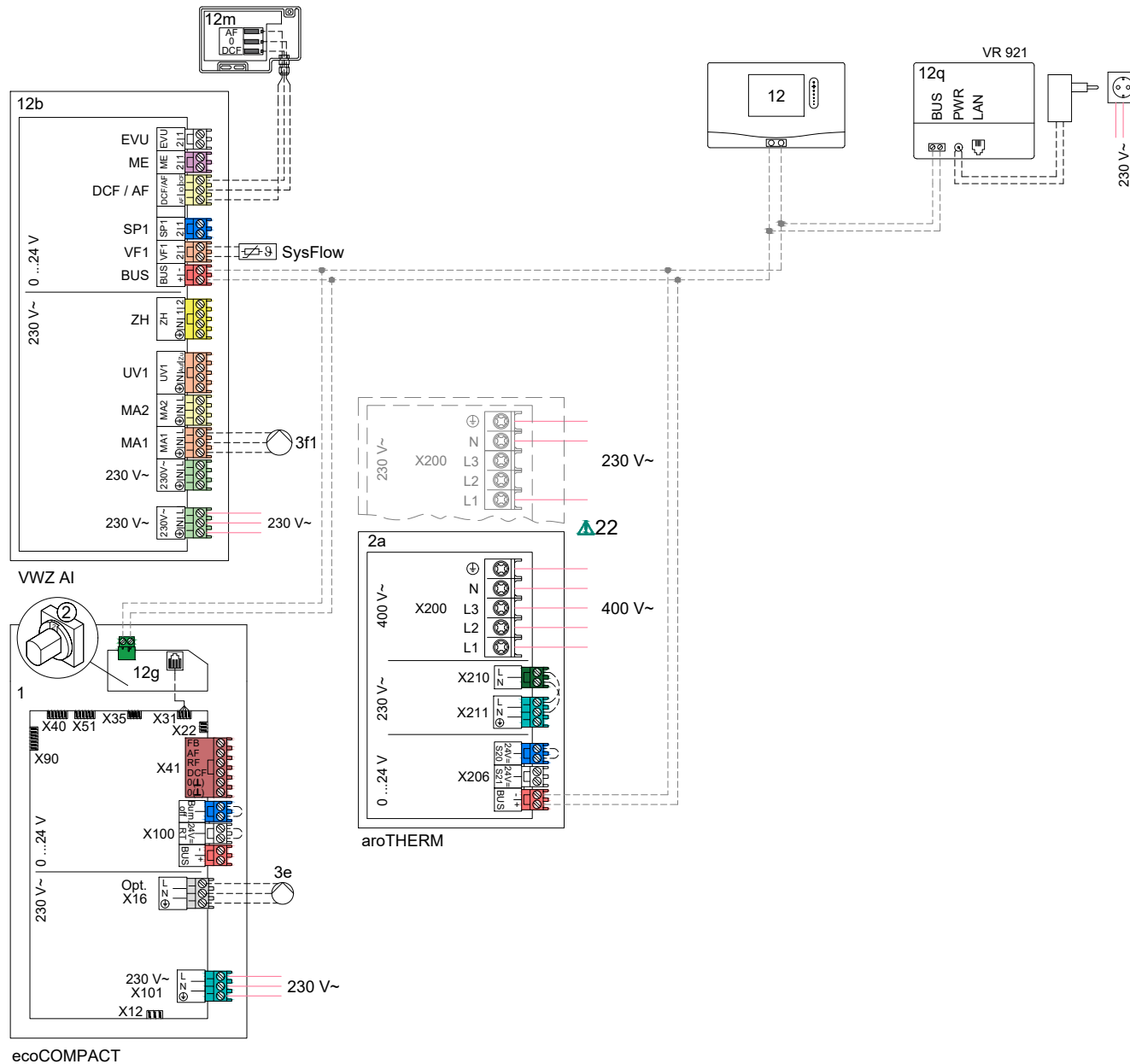
Heat pump:  
- Cooling technology : **No cooling**

Control | Basic system diagram config.:

- Basic system diagram code : **10**

Boiler:

- Auxiliary relay (D.026) : **Circulation pump**



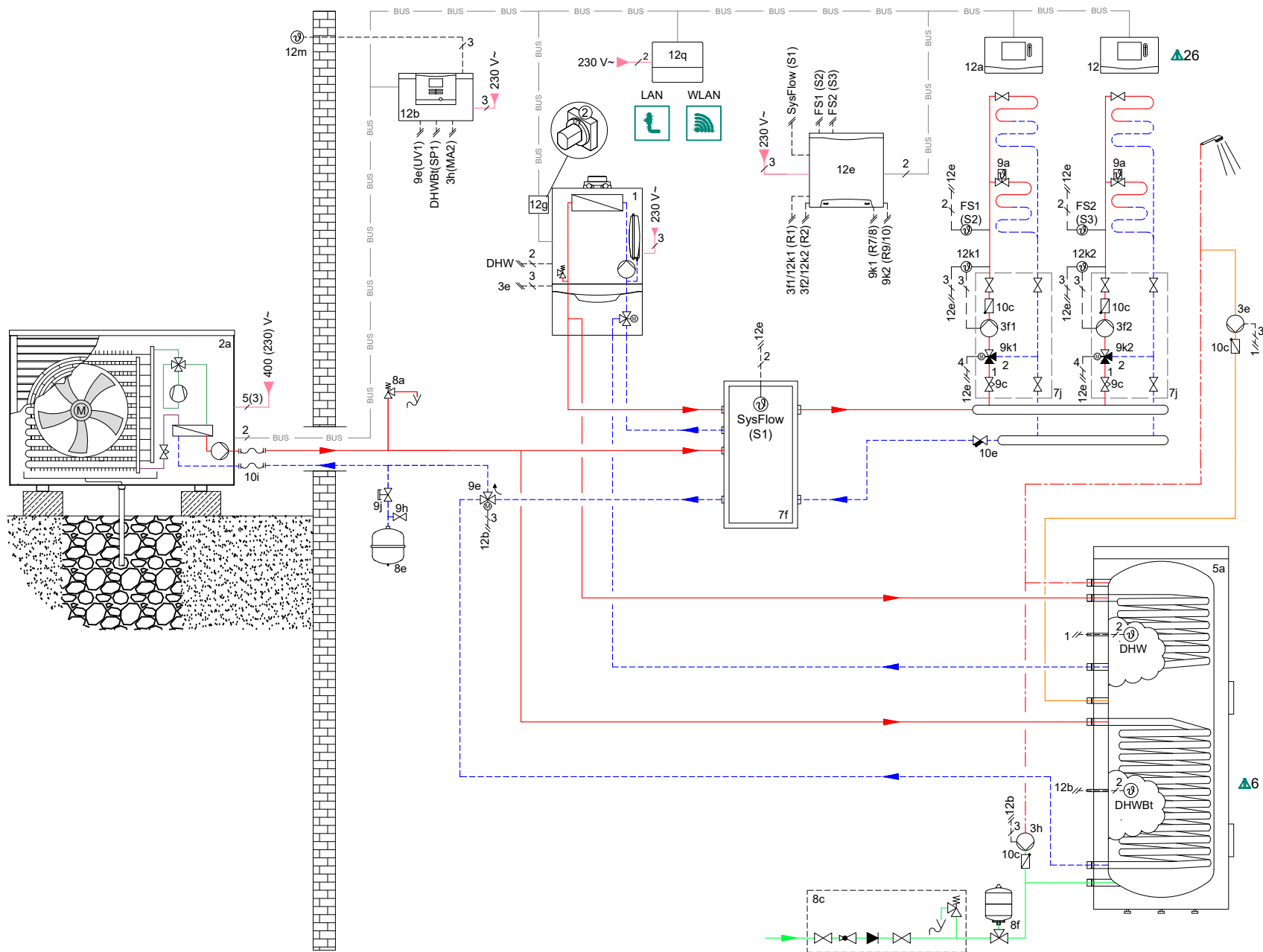
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drawn: OV	date: 28.07.2021
version no. 10.00	reference to

Appliances: aroTHERM plus VWL, ecoCOMPACT VCC uniSTOR VPS R
Controls: VRC720, VR921, VWZ AI (VWL x/6), VR32/3

Circuits: 1 x direct radiator
-------------------------------

**⚠** 6: The coil size of the DHW tank has to be aligned to the heating output of the heat pump.  
 22: Electrical supply voltage depending on the installation and appliance: 230 V, 400 V  
 26: Also compatible with VRC 700.



Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

drawn:	OV	date:	29.05.2019
version no.	10.00	reference to:	

Appliances: aroTHERM VWL, ecoTEC VC  
 VWZ MPS 40, auroSTOR VIH S  
 Controls: VRC720, VR71, VR92, VR921, VWZ AI

Heating / cooling: 2 x mixed underfloor circuits:

**Necessary Settings (Control)**

Basic system diagram code:

- System diagram : 12
- VR71 Configuration : 3
- Circuit 1..2 / Type of circuit: **Heating**

- Circuit1..2 / Room temp. mod.: **Active, Expanded**
- Circuit 3 / Type of circuit: **Inactive**
- Zone1..2 / Zone activated: **Yes**
- Zone1 / Zone assignment: **Rem. Contr. 1**

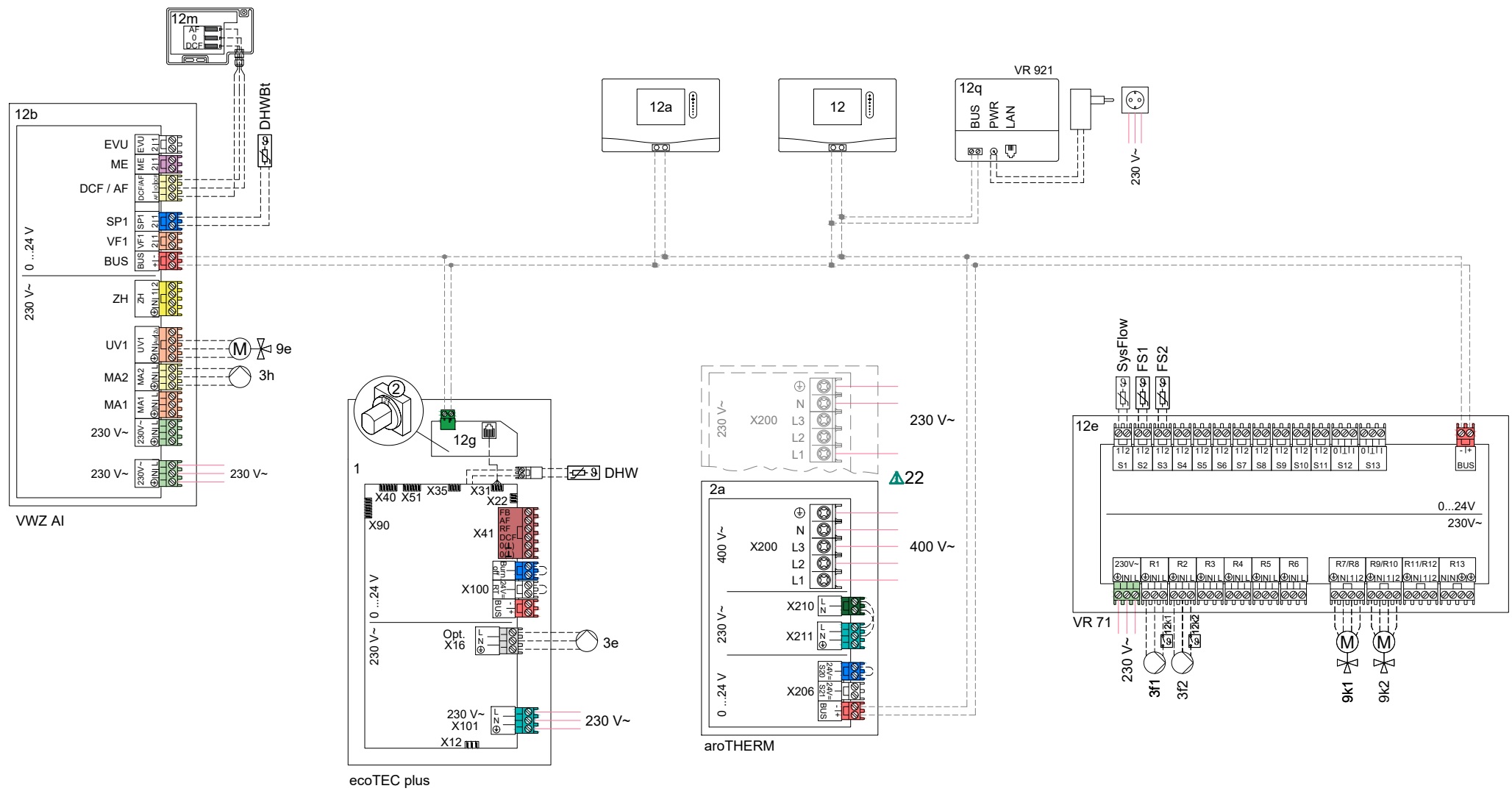
- Zone2 / Zone assignment: **Control**

HP control module configuration:

- MO2 : **Anti-legio funct.**

**Necessary Settings (Boiler)**

- Auxiliary relay : **Circulation pump**
- Necessary Settings (eBUS coupler (boiler))**
- Address : 2



Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

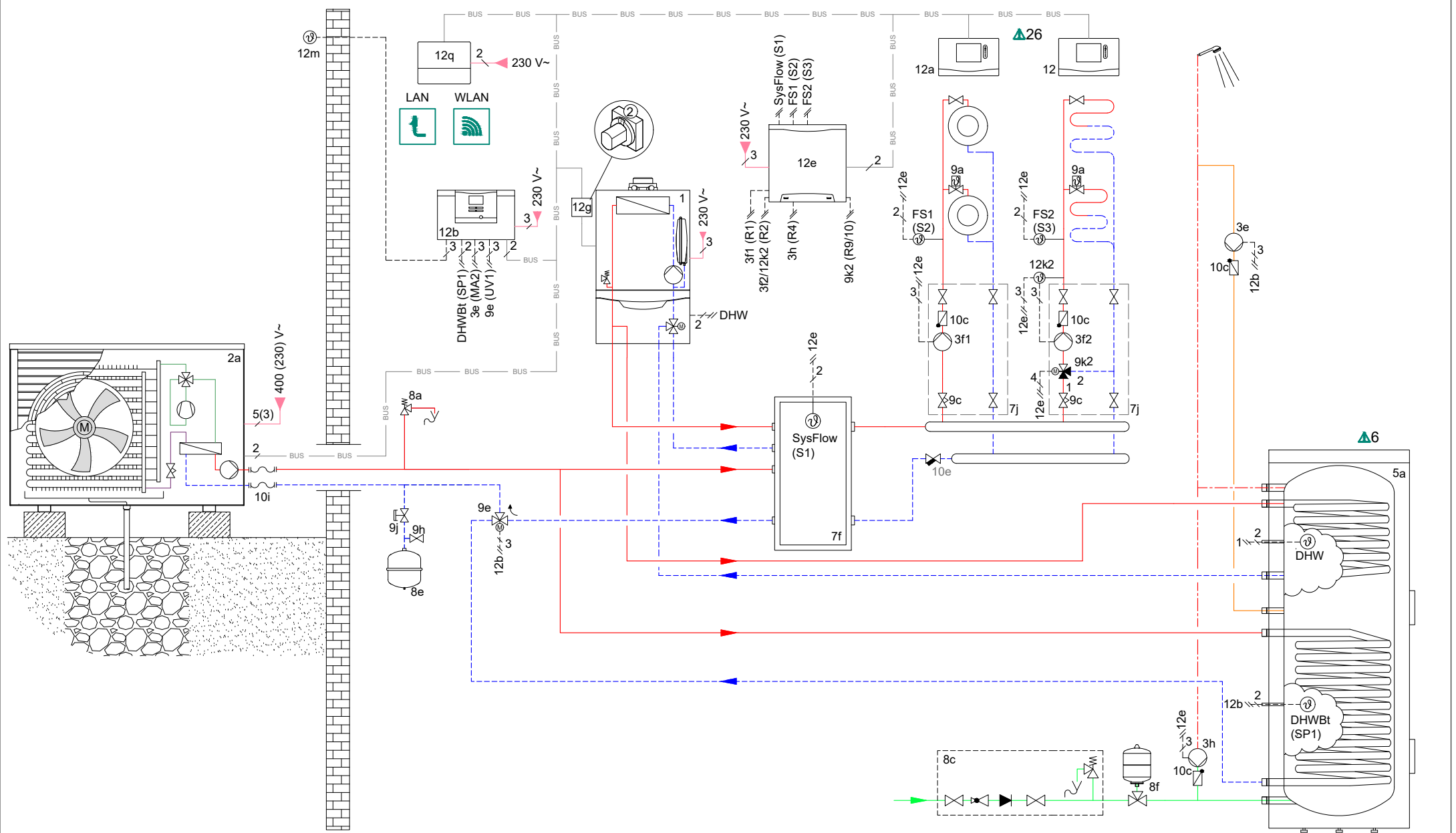
drawn: OV	date: 29.05.2019
version no. 10.00	reference to

Appliances: aroTHERM VWL, ecoTEC VC  
 VWZ MPS 40, auroSTOR VIH S  
 Controls: VRC720, VR71, VR92, VR921, VWZ AI

Heating / cooling 2 x mixed underfloor circuits:



⚠ 6: The coil size of the DHW tank has to be aligned to the heating output of the heat pump.  
 22: Electrical supply voltage depending on the installation and appliance: 230 V, 400 V  
 26: Also compatible with VRC 700.



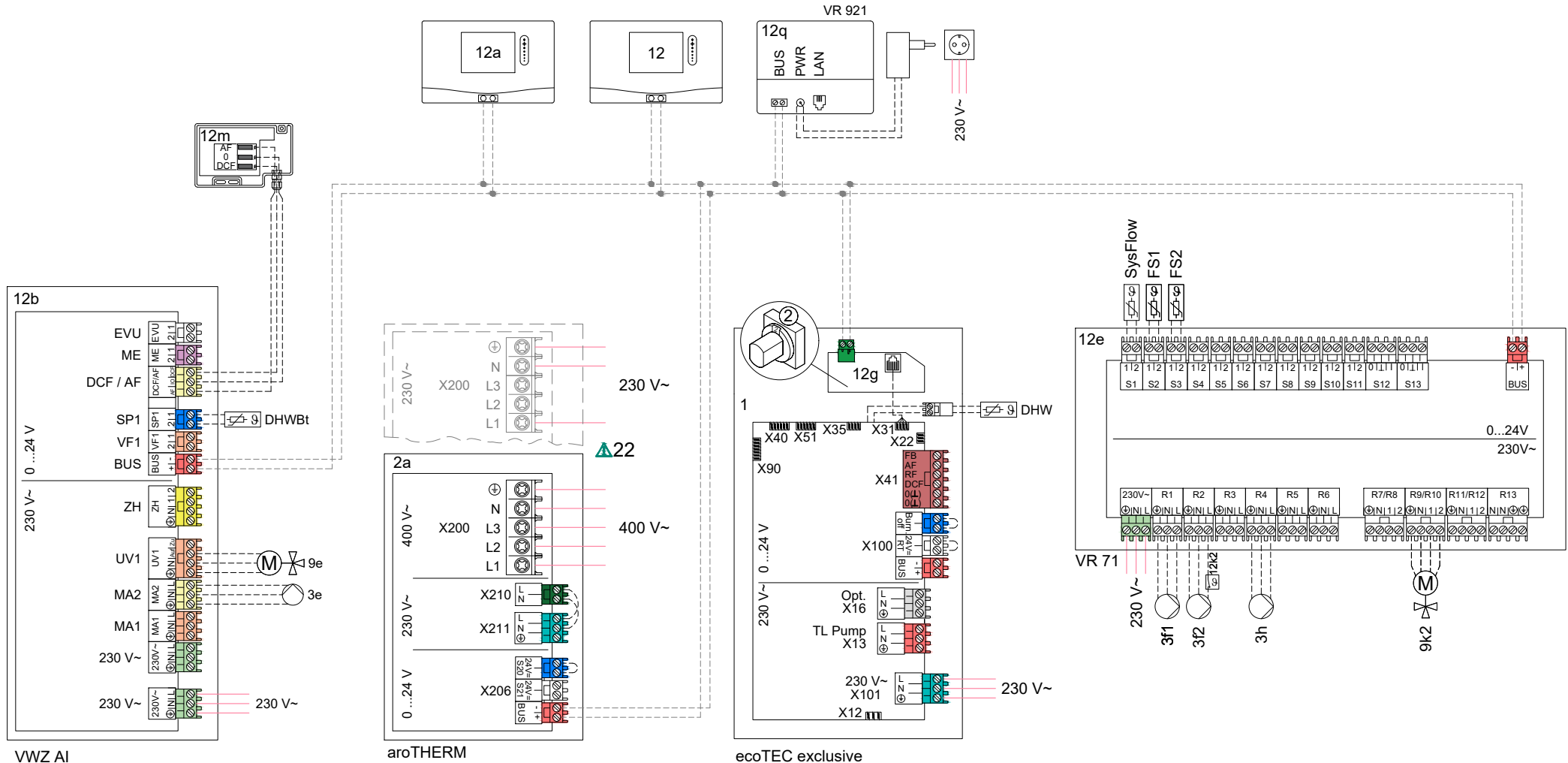
Attention, this principal scheme does not supersede a correct professional design of the system!  
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drawn:	CP	date:	12.08.2019	Appliances:	aroTHERM VWL, ecoTEC VC VWZ MPS 40, auroSTOR VIH S
version no.:	10.00	reference to:		Controls:	VRC720, VR71, VR92, VR921, VWZ AI, VR32/3

**Necessary Settings (Control)**  
 Basic system diagram code:  
 - System diagram : 12  
 - FM5 configuration : 3  
 - FM5 MO : Anti-legio, pump

- Circuit1..2 / Circuit type: **Heating**  
 - Circuit3 / Circuit type: **Inactive**  
 - Circuit1..2 / Room temp. mod.:  
**Active, Expanded**  
 - Zone1..2 / Zone activated: **Yes**

- Zone1 / Zone assignment: **Rem. Contr. 1**  
 - Zone2 / Zone assignment: **Control**  
**Necessary Settings (eBUS coupler (boiler))**  
 - Address : 2



Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

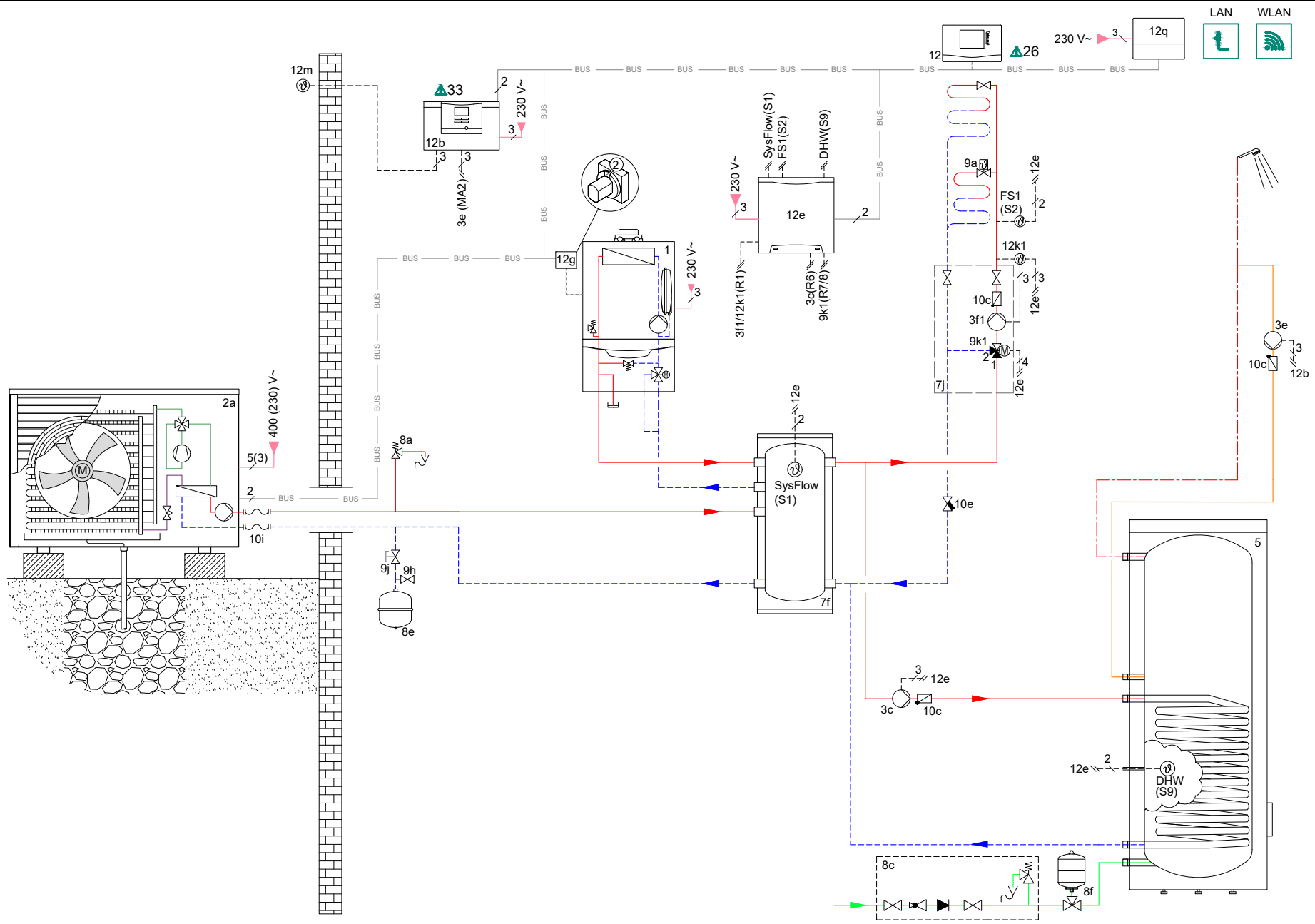
drawn:	CP	date:	12.08.2019
version no.	10.00	reference to	

Appliances:	aroTHERM VWL, ecoTEC VC VWZ MPS 40, auroSTOR VIH S
Controls:	VRC720, VR71, VR92, VR921, VWZ AI, VR32/3

Heating / cooling circuits:	1 x direct radiator 1 x mixed underfloor
-----------------------------	---



22: Electrical supply voltage depending on the installation and appliance: 230 V, 400 V  
 26: Also compatible with VRC 700.  
 33: VWZ AI compatible with VWL x/6 has to be used



Attention, this principal scheme does not supersede a correct professional design of the system!  
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drawn:	CM	date:	08.12.2021
version no. 01		reference to	

Appliances:	aroTHERM plus VWL, ecoTEC plus VC VP RW 45/2 B, uniSTOR VIH R
Controls:	VRC720, VR921, VWZ AI (VWL x/6), VR32/3

Circuits:	1x mixed underfloor
-----------	---------------------

**Necessary Settings**

Heat pump:  
- Cooling technology : **No cooling**

Control | Basic system diagram config.:

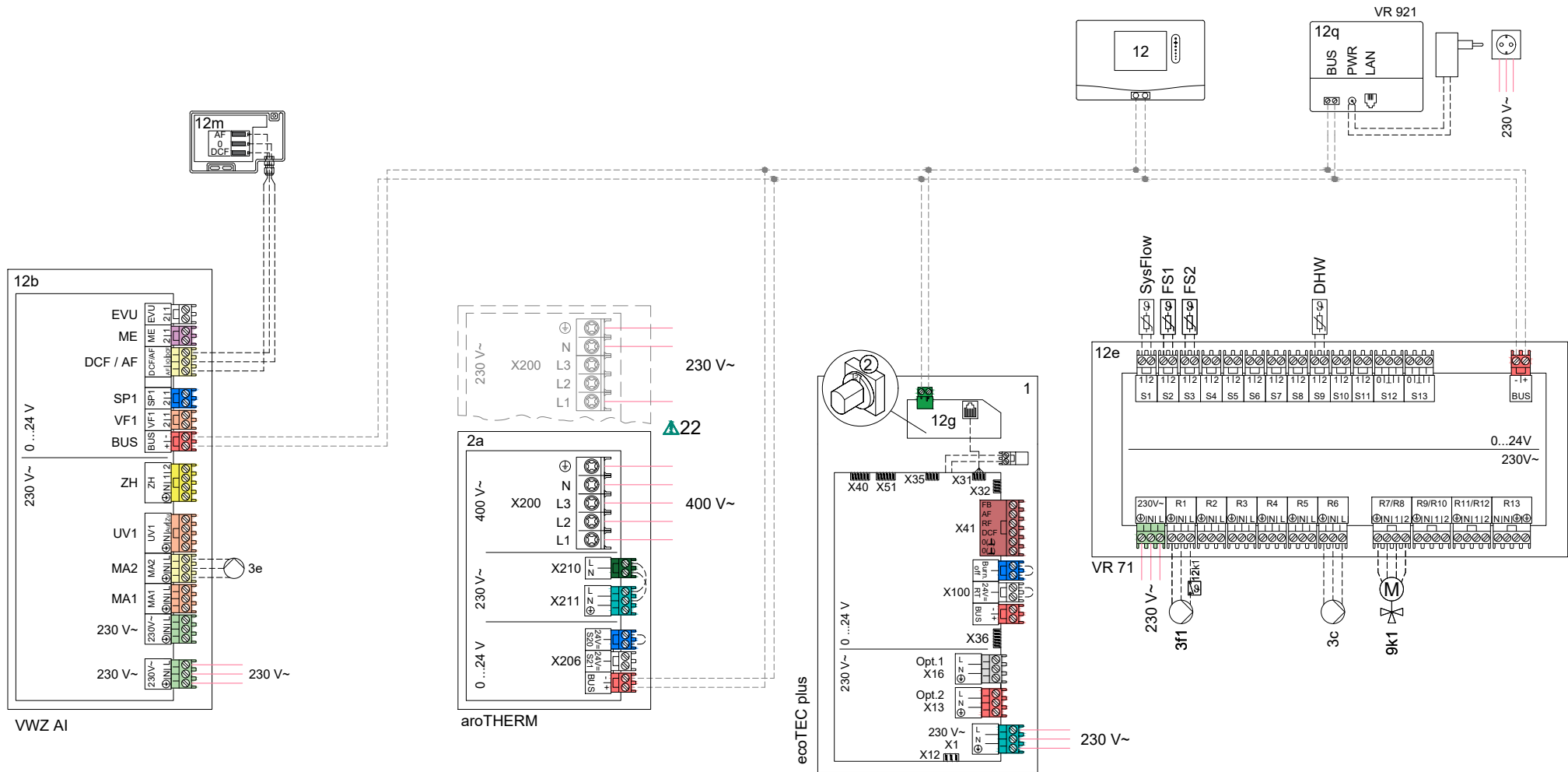
- Basic system diagram code : **16**
- FM5 configuration : **3**
- Circuit 1/ Circuit type: **Heating**
- Circuit 2..3/ Circuit type: **Inactive**

Control | HP control module configuration:

- MO 2 : **Circulation pump**

eBUS coupler (boiler):

- Address : **2**



Attention, this principal scheme does not supersede a correct professional design of the system!  
This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

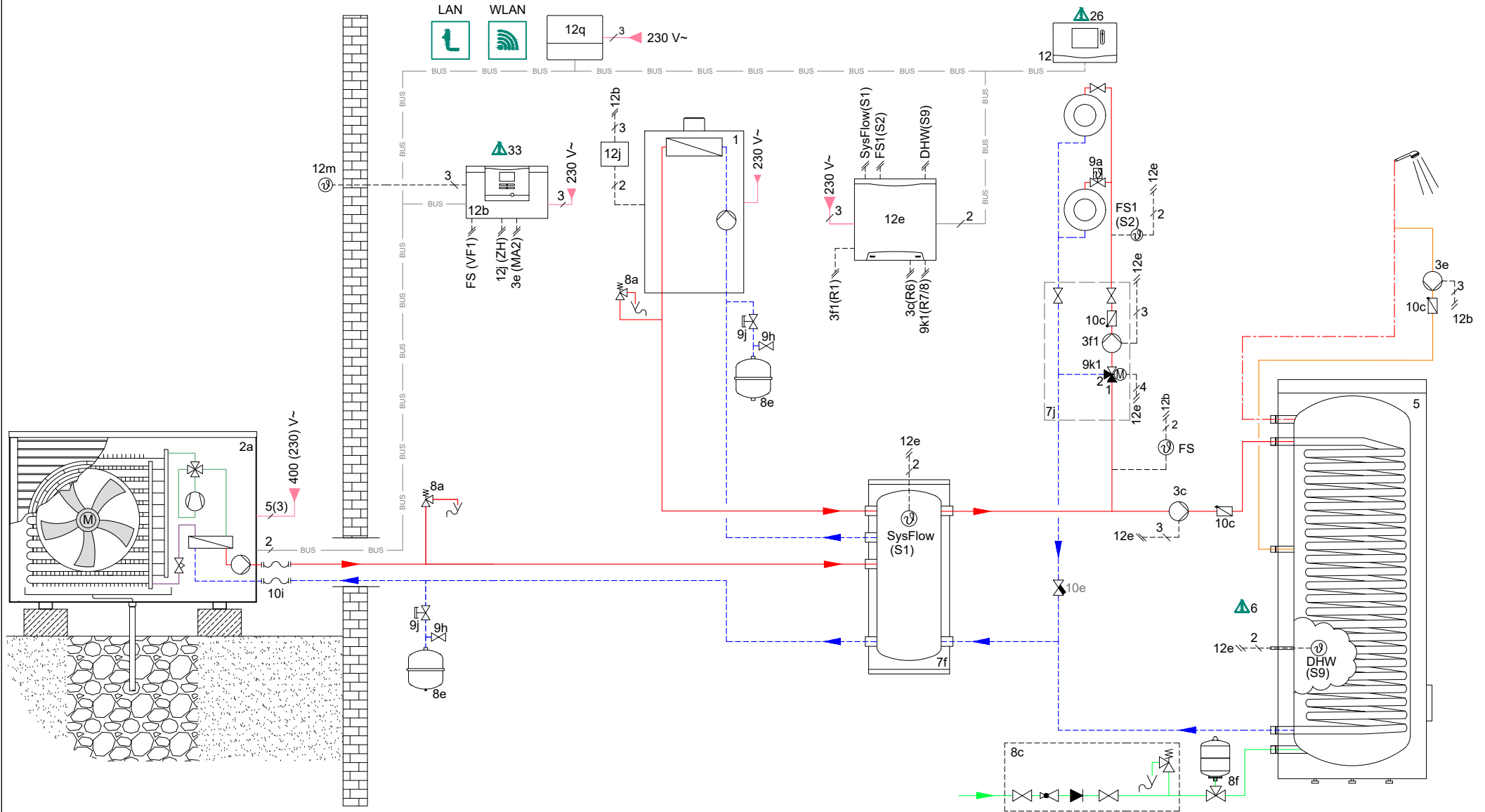
drawn:	CM	date:	08.12.2021
version no. 01		reference to	

Appliances:	aroTHERM plus VWL, ecoTEC plus VC VP RW 45/2 B, uniSTOR VIH R
Controls:	VR720, VR921, VWZ AI (VWL x/6), VR32/3

Circuits:	1x mixed underfloor
-----------	---------------------



6: The coil size of the DHW tank has to be aligned to the heating output of the heat pump.  
 22: Electrical supply voltage depending on the installation and appliance: 230 V, 400 V  
 26: Also compatible with VRC 700.  
 33: VWZ AI compatible with VWL x/6 has to be used



Attention, this principal scheme does not supersede a correct professional design of the system!  
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drawn:	OV	date:	07.07.2021
version no.	10.00	reference to	

Appliances: aroTHERM plus VWL, external WHB  
 VP RW 45/2 B, uniSTOR VIH RW  
 Controls: VRC720, VR71, VR921, VWZ AI (VWL x/6)

Circuits: 1 x mixed radiator

**Necessary Settings**

- Heat pump:  
 - Cooling technology : **No cooling**  
 - Aux. heater output : **Stage 1**

Control | Basic system diagram config.:

- Basic system diagram code : **16**  
 - FM5 configuration : **3**  
 - Circuit 1/ Circuit type : **Heating**

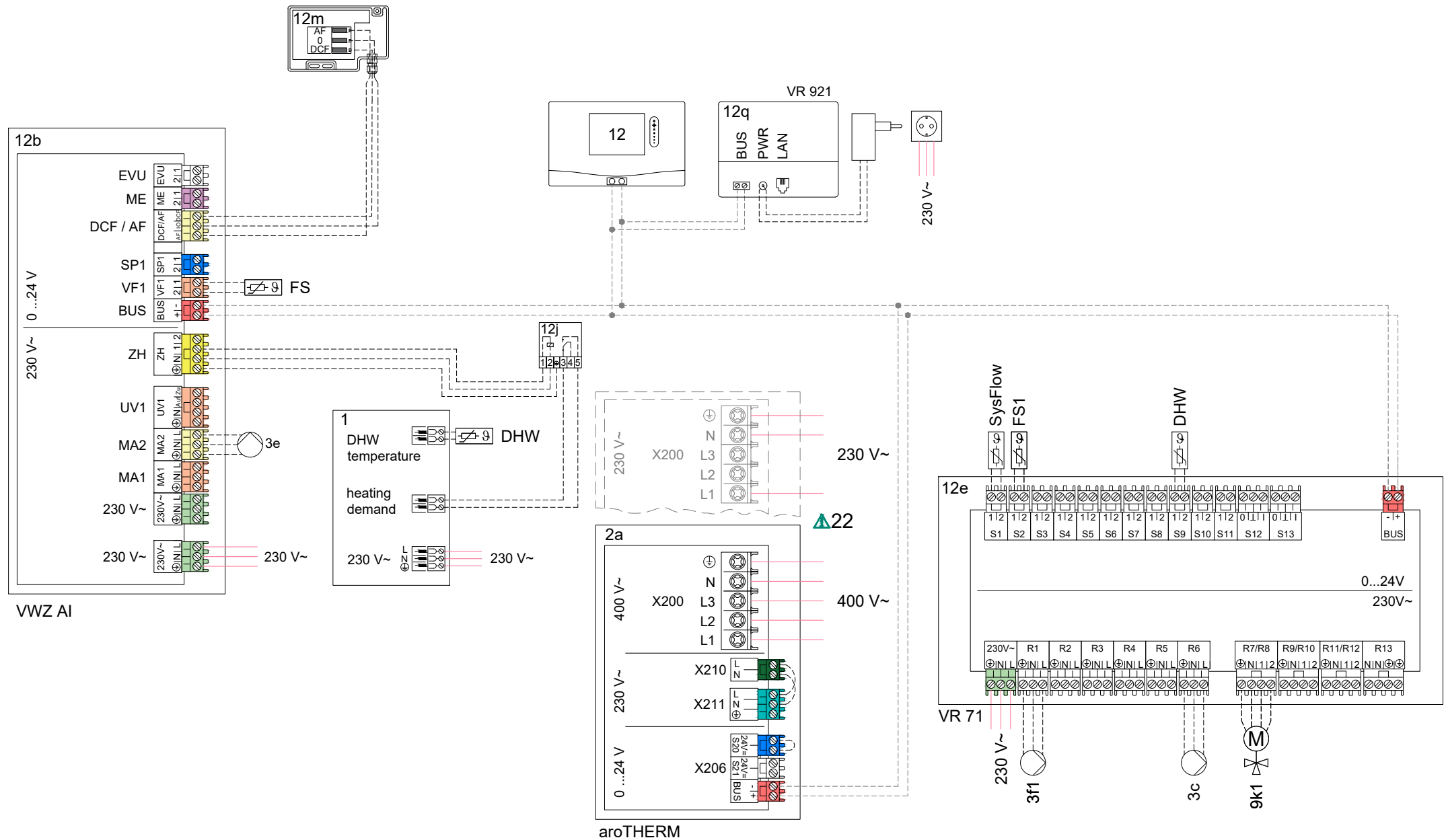
- Circuit 1/ Room temp. mod.:

- Active, Expanded**  
 - Circuit 1/ Cooling possible: **No**  
 - Circuit 2../3/ Circuit type: **Inactive**  
 - Zone 1/ Zone activated: **Yes**

- Zone 1/ Zone assignment: **Control**

Control | HP control module configuration:

- MO 2 : **Circulation pump**



Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

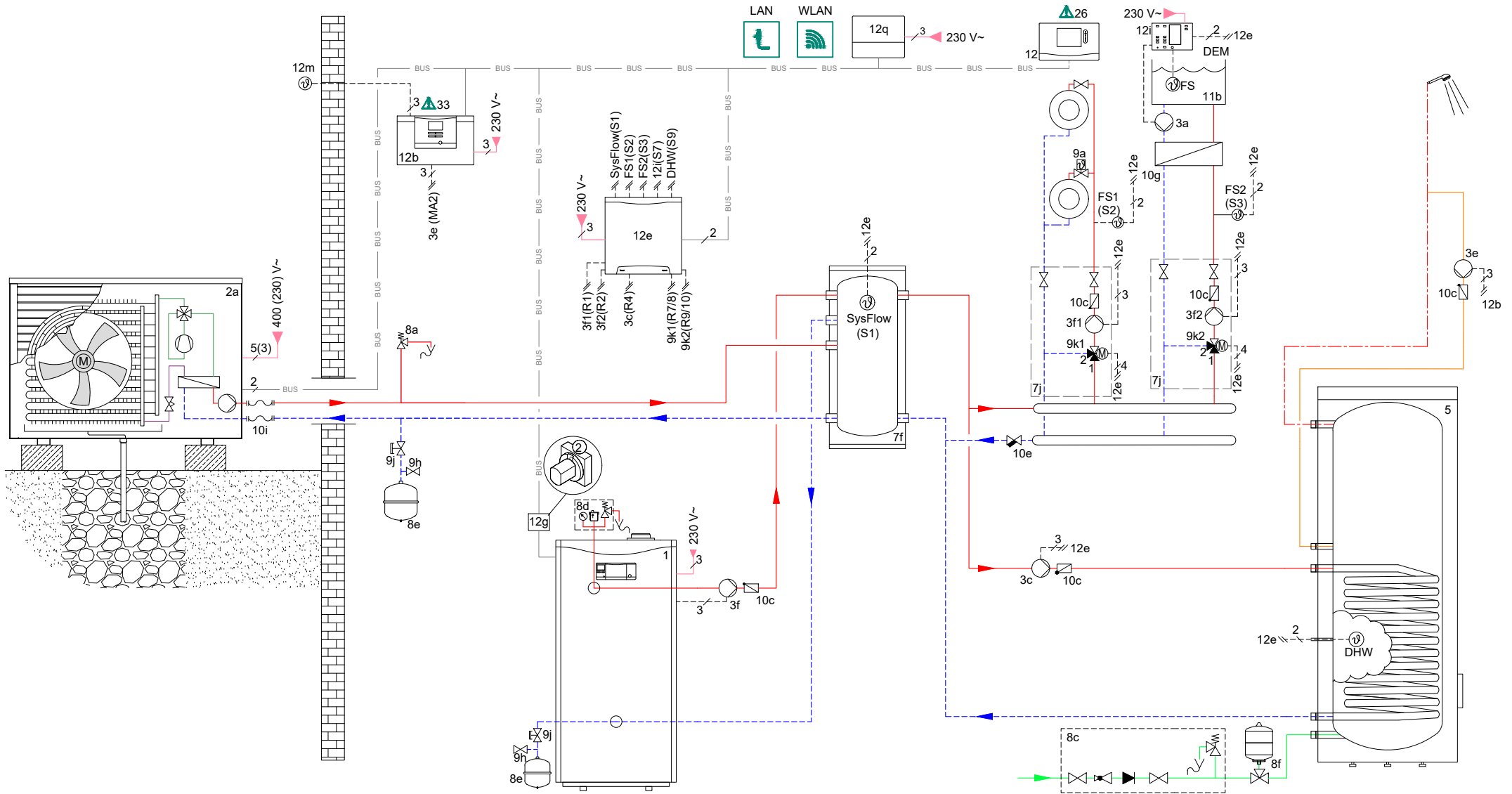
drawn: OV	date: 07.07.2021
version no. 10.00	reference to

Appliances: aroTHERM plus VVWL, external WHB VP RW 45/2 B, uniSTOR VIH RW
Controls: VRC720, VR71, VR921, VVZ AI (VVWL x/6)

Circuits: 1 x mixed radiator
------------------------------



22: Electrical supply voltage depending on the installation and appliance: 230 V, 400 V  
 26: Also compatible with VRC 700.  
 33: VVZ AI compatible with VWL x/6 has to be used



Attention, this principal scheme does not supersede a correct professional design of the system!  
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drawn:	MM	date:	09.02.2021
version no.	10.00	reference to	

Appliances:	aroTHERM plus VWL, ecoVIT VKK VP RW 45/2 B, uniSTOR VIH R
Controls:	VRC720, VR71, VR921, VVZ AI (VWL x/6), VR32/3

Circuits:	1 x mixed radiator swimming pool
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**Necessary Settings**  
 Heat pump:  
 - Cooling technology : **No cooling**

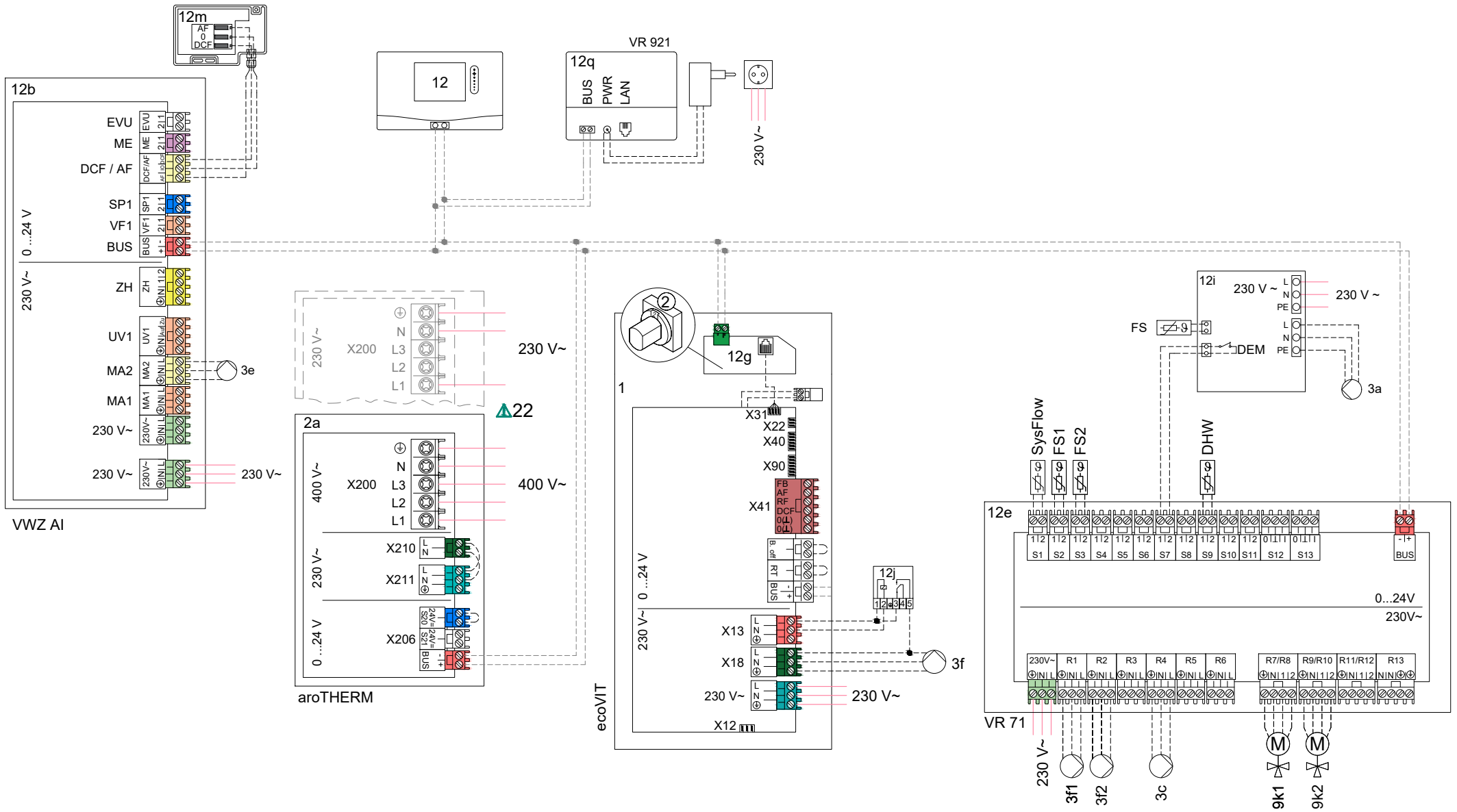
**Control | Basic system diagram config.:**  
 - Basic system diagram code : **16**  
 - FM5 configuration : **3**  
 - FM5 MO : **Cyl. Charg. Pump**  
 - Circuit 1/ Circuit type: **Heating**

- Circuit 2/ Circuit type: **Fixed val.**  
 - Circuit 3/ Circuit type: **Inactive**  
 - Circuit 1/ Room temp. mod.:  
**Active, Expanded**  
 - Circuit 1/ Cooling possible: **No**

- Circuit 2/ TARGET FLOW TEMP., SET-BACK: **0°C**  
 - Circuit 2/ OT SWITCH-OFF THRESHOLD:  
**15..25°C**  
 - Circuit 2/ Target flow temp. °C: **40..50°C**  
 - Zone 1/ Zone activated: **Yes**

- Zone 1/ Zone assignment: **Control**  
**Control | HP control module configuration:**  
 - MO 2 : **Circulation pump**

eBUS coupler (boiler):  
 - Address : **2**



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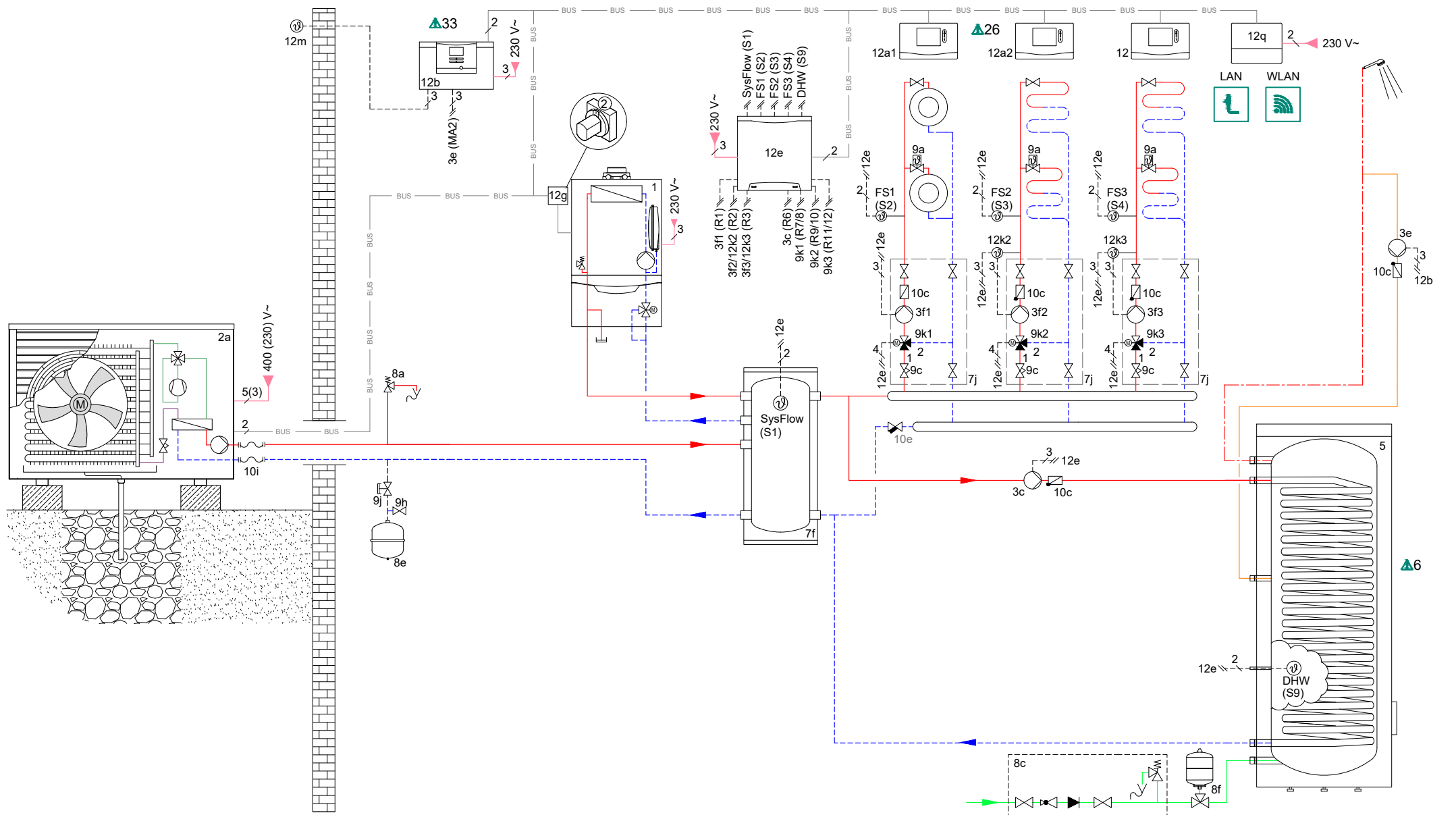
drawn: MM	date: 09.02.2021
version no. 10.00	reference to

Appliances: aroTHERM plus VWL, ecoVIT VKK VP RW 45/2 B, uniSTOR VIH R
Controls: VRC720, VR71, VR921, VWZ AI (VWL x/6), VR32/3

Circuits: 1 x mixed radiator swimming pool
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- ▲ 6: The coil size of the DHW tank has to be aligned to the heating output of the heat pump.
- ▲ 22: Electrical supply voltage depending on the installation and appliance: 230 V, 400 V
- ▲ 26: Also compatible with VRC 700.
- ▲ 33: VWZ AI compatible with VWL x/6 has to be used



Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

drawn:	MH	version no.	10.00
date:	21.10.2020	reference to	

Appliances: aroTHERM plus VWL, ecoTEC VC  
 VP RW 45/2 B, uniSTOR VIH RW  
 Controls: VRC720, VR92, VR921, VWZ AI, VR32/3

Heating / cooling 1 x mixed radiator  
 circuits: 2 x mixed underfloor

**Necessary Settings**  
 Heat pump:  
 - Cooling technology : **No cooling**

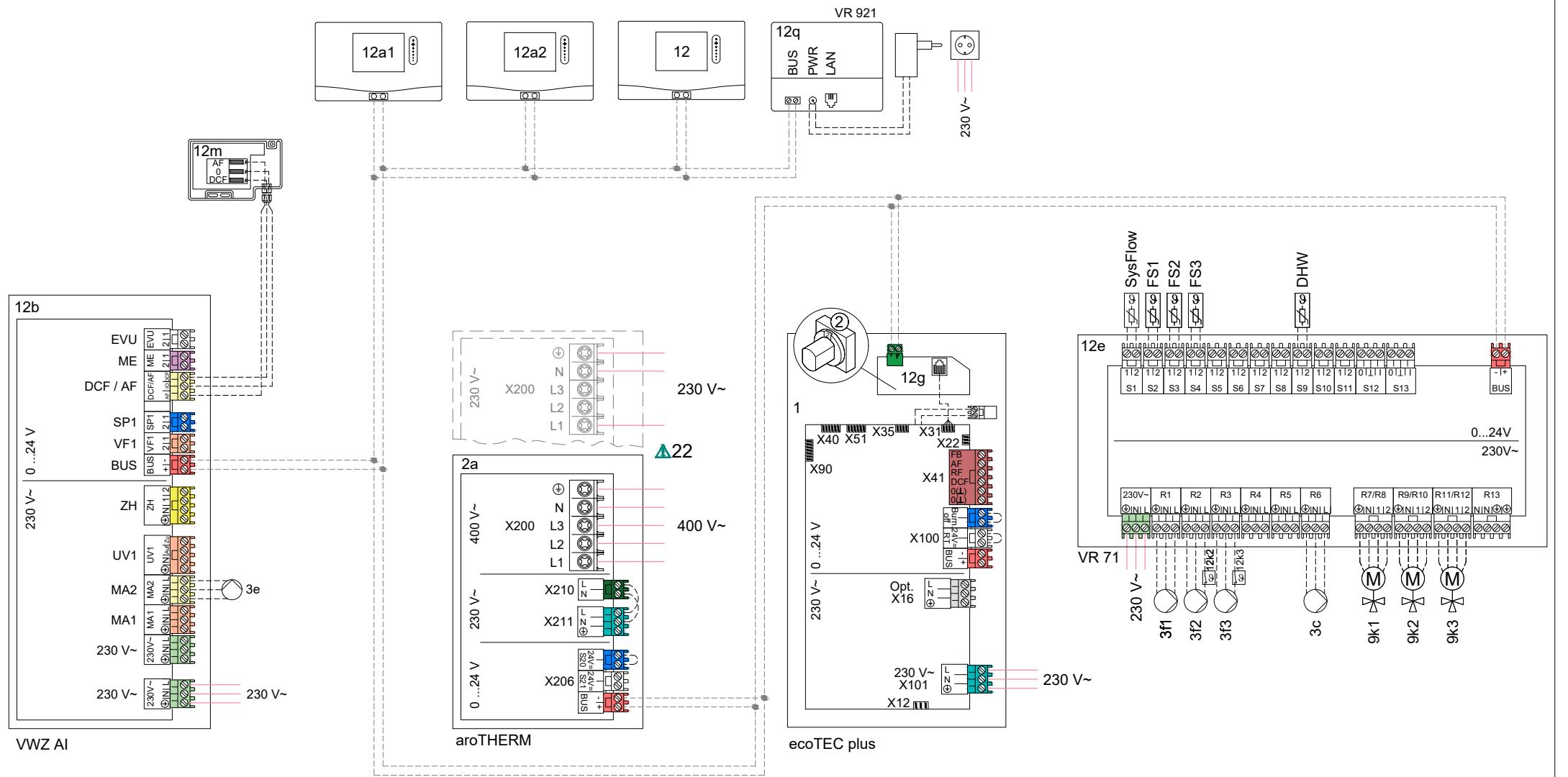
**Control | Basic system diagram config.:**  
 - Basic system diagram code : **16**  
 - FM5 configuration : **3**  
 - Circuit 1..3/ Circuit type : **Heating**

- Circuit 1..3/ Room temp. mod.:  
**Active, Expanded**  
 - Circuit 1..3/ Cooling possible: **No**  
 - Zone 1..3/ Zone activated: **Yes**

- Zone 1..2/ Zone assignment:  
**Rem. contr. 1..2**  
 - Zone 3/ Zone assignment: **Control**

**Control | HP control module configuration:**  
 - MO 2 : **Circulation pump**

**eBUS coupler (boiler):**  
 - Address : **2**

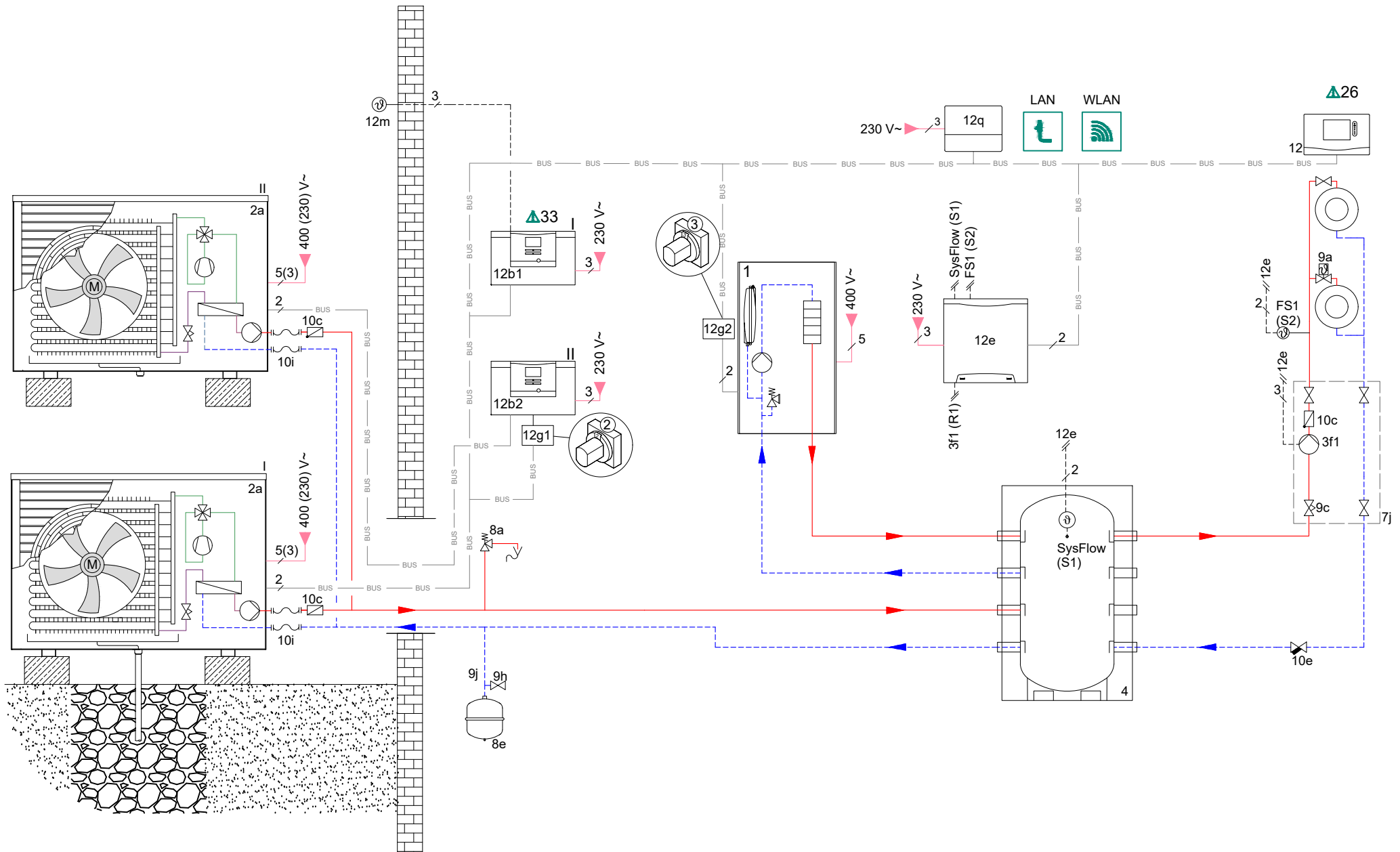


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drawn:	MH	version no.	10.00
date:	21.10.2020	reference to	

Appliances:	aroTHERM plus VWL, ecoTEC VC VP RW 45/2 B, uniSTOR VIH RW
Controls:	VRC720, VR92, VR921, VWZ AI, VR32/3

Heating / cooling 1 x mixed radiator circuits:  
 2 x mixed underfloor



Attention, this principal scheme does not supersede a correct professional design of the system!  
 This scheme does not include all necessary shut-off and safety devices for a right installation. The applicable national and international laws, regulations, standards and directives must be adhered to! Due to special object-related circumstances or potential differences in the installation environment (e.g. climatic conditions) it is recommended to involve a specialized planning agency.

drawn:	MH	date:	21.10.2020
version no.	10.00	reference to	

Appliances:	aroTHERM plus VWL, eloBLOCK VE uniSTOR VPS R
Controls:	VRC720, VR71, VR921, VWZ AI (VWL x/6), VR32B

Heating / cooling	1 x direct radiator circuits:
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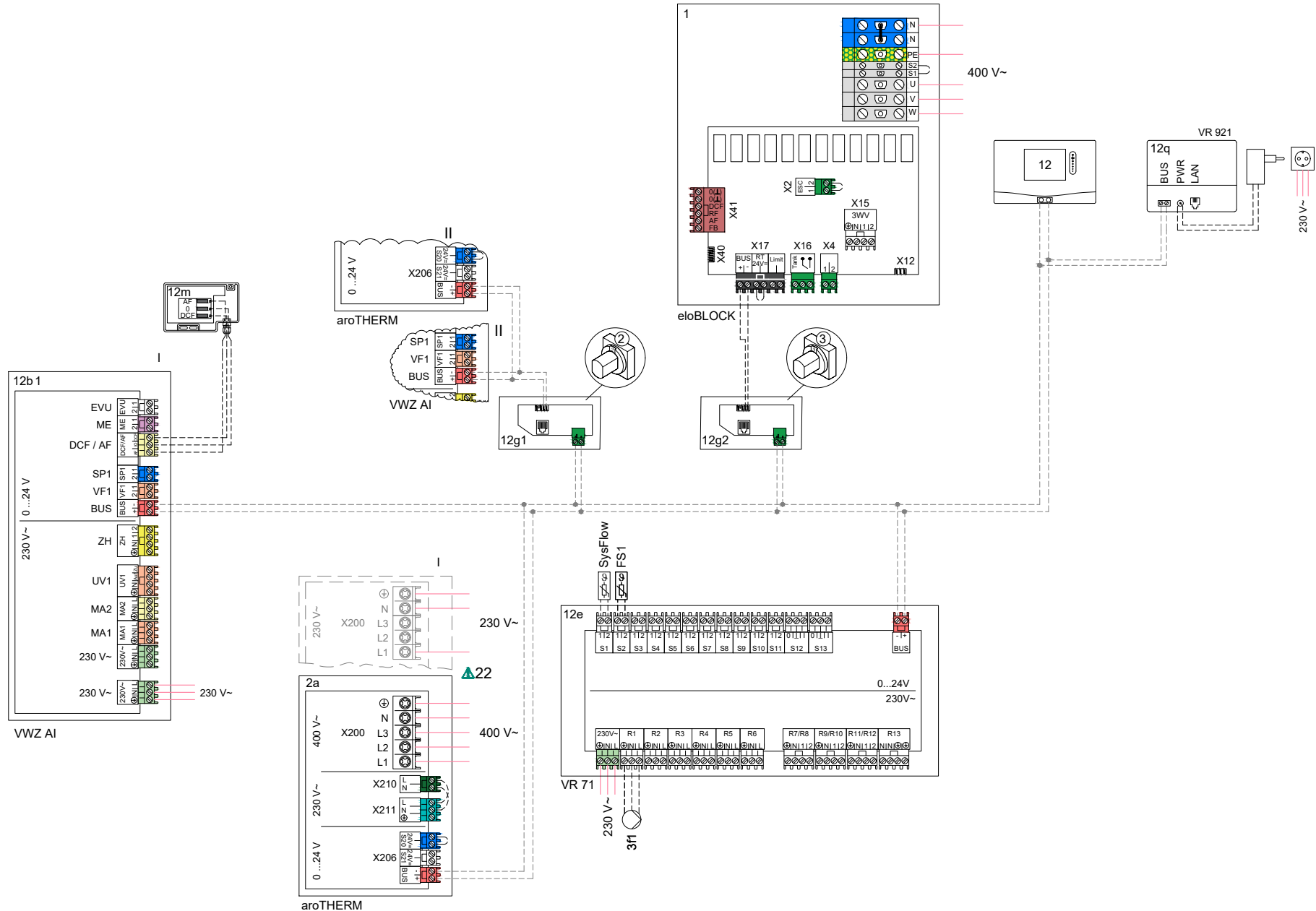
**Necessary Settings**  
 Heat pump:  
 - Cooling technology : **No cooling**

**Control | Basic system diagram config.:**  
 - Basic system diagram code : **9**  
 - FM5 configuration : **3**  
 - Circuit 1/ Circuit type: **Heating**  
 - Circuit 2../ Circuit type: **Inactive**

- Circuit 1/ Room temp. mod.:  
**Active, Expanded**  
 - Circuit 1/ Cooling possible: **No**  
 - Zone 1/ Zone activated: **Yes**  
 - Zone 1/ Zone assignment: **Control**

**Control | Domestic hot water:**  
 - Cylinder : **Inactive**  
 eBUS coupler (heat pump):  
 - Address : **2**

eBUS coupler (boiler):  
 - Address : **3**



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drawn:	MH	date:	21.10.2020
version no.	10.00	reference to	

Appliances:	aroTHERM plus VWL, eloBLOCK VE uniSTOR VPS R
Controls:	VR C720, VR71, VR921, VWZ AI (VWL x/6), VR32B

## Hydraulica

1	Warmteopwekker
1a	Extra CV-toestel warm water
1b	Extra CV-toestel verwarming
1c	Extra CV-toestel verwarming/warm water
1d	Handmatig aangevoerde ketel op vaste brandstof
2	Warmtepomp
2a	Warmwater warmtepomp
2b	Lucht-brijnwarmtewisselaar
2c	Buitenunit split-warmtepomp
2d	Binnenunit split-warmtepomp
2e	Grondwatermodule
2f	Module voor passieve koeling
3	Circulatiepomp warmteopwekker
3a	Circulatiepomp zwembad
3b	Koelcircuitpomp
3c	Boilerlaadpomp
3d	Bronpomp
3e	Circulatiepomp
3f	CV-pomp
3g	Circulatiepomp warmtebron
3h	Legionellabeveiligingspomp
3i	Pomp warmtewisselaar
4	Buffervat
5	Warmwaterboiler monovalent
5a	Warmwaterboiler bivalent
5b	Gelaagde boiler
5c	Combiboiler (tank in tank)
5d	Multifunctionele boiler
5e	Hydraulische toren
6	Zonnecollector (thermisch)
7a	Warmtepomp-brijnvulstation
7b	Zonnestation
7c	Drinkwaterstation
7d	Woningstation
7e	Hydraulisch blok
7f	Hydraulische module
7g	Warmteloskoppelingsmodule
7h	Warmtewisselaarmodule
7i	2-zone-module
7j	Pompgroep
8a	Veiligheidsklep
8b	Veiligheidsklep drinkwater
8c	Veiligheidsgroep drinkwateraansluiting
8d	Ketelveiligheidsgroep
8e	Membraanexpansievat CV
8f	Membraanexpansievat drinkwater
8g	Membraanexpansievat solair/brijn
8h	Zonnevoorschakelvat
8i	Thermische afvoerbeveiliging
9a	Klep afzonderlijke ruimteregeling (thermostatisch/motorisch)
9b	Zoneventiel
9c	Leidingregelklep
9d	Overstroomklep
9e	Driewegklep warmwaterbereiding
9f	Driewegklep Koelen
9g	Omschakelklep
9h	Vulen aftapkraan
9i	Ontluchtingsklep
9j	Ventielkap
9k	Driewegmengklep
9l	3 weg mengklep Koelen
9m	3 weg mengklep retourverhoging
9n	Thermostatische mengkraan
9o	Hoeveelheidsmeter
9p	Cascadeklep
10a	Thermometer
10b	Manometer
10c	Terugslagklep

10d	Luchtafscheider
10e	Vuilvervang mag magnetietafscheider
10f	Solair-/brijnopvangvat
10g	Warmtewisselaar
10h	Open verdeler
10i	Flexibele aansluitingen
11a	Ventilatorconvector
11b	Zwembad
12	Systeemregelaar
12a	Afstandsbediening
12b	Warmtepompuitbreidingsmodule
12c	Multifunctionele module 2 van 7 (VR 40)
12d	Uitbreidings-/mengmodule VR 70
12e	Hoofduitbreidingsmodule VR 71
12f	Bedradingsboxe
12g	Buskoppeling eBUS (VR 32)
12h	Zonneregelaar
12i	Externe thermostaat
12j	Scheidingsrelais
12k	Maximaalthermostaat
12l	Boilertemperatuurbegrenzer
12m	Buitentemperatuurvoeler
12n	Stromingsschakelaar
12o	eBUS netadapter
12p	Draadloze ontvangerenheid
12q	Internetmodule VR 900
13	Ventilatieeenheid
14a	Geluiddemper
14b	Brandwerende klep
14c	Luchtinlaat
14d	Remmingsklep
14e	Lucht omstelling
14f	Afvoerlucht apparaat
14g	Lucht collector
14h	Luchtfilter
14i	Lucht omstelling met inspectie opening
14j	Radiale ventilator
14k	Bypass klep

## Bedrading

BufTop	Temperatuurvoeler buffer boven
BufBt	Temperatuurvoeler buffer beneden
BufTopDHW	Temperatuurvoeler WW-deel buffer boven
BufBtDHW	Temperatuurvoeler WW-deel buffer beneden
BufTopCH	Temperatuurvoeler CV-deel buffer boven
BufBtCH	Temperatuurvoeler CV-deel buffer beneden
C1/C2	Vrijgave boilerlading/bufferlading
COL	Collectortemperatuurvoeler
DEM	Externe verwarmingsvraag voor CV-circuit
DHW	Boilertemperatuurvoeler
DHWBT	Boilertemperatuurvoeler beneden (warmwater-boiler)
EVU	Schakelcontact energiebedrijf
FS	Aanvoertemperatuurvoeler/zwembadvoeler
MA	Multifunctionele uitgang
ME	Multifunctionele ingang
PWM	Pulsbreedte modulatie signaal voor pomp
PV	Interface naar fotovoltatische ondulator
RT	Kamerthermostaat
SCA	Signaal koeling
SG	Interface naar transportnetexploitant
Solar yield	Zonneopbrengstvoeler
SysFlow	Systeemtemperatuurvoeler
TD	Temperatuurvoeler voor een ΔT regeling
TEL	Schakelingang voor afstandsbediening
TR	Scheidingsschakeling met schakelende CV-ketel

**Meervoudig gebruikte componenten (x) worden doorlopend genummerd (x1, x2, ..., xn).**

Drinkbaar water	—	Vertrek zonnensysteem	—	Glycol vertrek (van bron)	—	Koudemiddel lage druk	—
Sanitair warm water	- - -	Terugloop zonnensysteem	- - -	Glycol terugkeer (naar de bron)	- - -	Afvoerlucht	- - -
Circulatie warm water	—	Extra-lage spanning	—	Koeling vertrek	—	Buitenlucht	—
Verwarmingsaanvoer	—	Voeding 230 / 400V	—	Koeling terugloop	—	Recirculatielucht	- - -
Verwarmingsterugloop	- - -	eBus kabel	-BUS-	Koelmiddel hoge druk	—	Luchttoevoer	—

## Let op! Schematische voorstelling !

1. Niet-bindende aanbeveling! De onderstaande informatie vervangt nooit het correcte professionele ontwerp van het systeem. Deze schematische voorstelling toont niet alle uitschakel- en veiligheidsvoorzieningen die nodig zijn voor de professionele installatie. De toepasselijke nationale en internationale wetten en reglementen, normen en richtlijnen moeten worden nageleefd!
2. Onder voorbehoud van wijzigingen in de schematische voorstelling! Voor de volledige en/of gedeeltelijke reproductie van dit schema is de voorafgaande schriftelijke toestemming nodig van Vaillant GmbH.
3. Tijdens de planning en het ontwerp, de installatie en het latere gebruik van het systeem moeten alle instructies voor de installatie en het gebruik die op het toestel, de accessoires en/of alle andere systeemcomponenten van toepassing zijn, worden nageleefd.
4. Vaillant GmbH wijst uitdrukkelijk elke aansprakelijkheid af voor schadeclaims op eender welke wettelijke grond, met name voor het schenden van verplichtingen of voor strafbare feiten, d.w.z. vorderingen wegens onrechtmatige daad. Deze uitsluiting van aansprakelijkheid geldt niet in geval van statutaire aansprakelijkheid, opzet of grove nalatigheid, en evenmin bij levensgevaarlijke, lichamelijke verwondingen of gezondheidsschade of bij het schenden van wezenlijke contractuele verplichtingen (fundamentele verplichtingen) mits een contract wordt gesloten met de gebruiker van de schematische voorstelling hieronder. Fundamentele verplichtingen zijn wezenlijke verplichtingen die moeten worden gewaarborgd door het contract in overeenstemming met het onderwerp of doel ervan; wezenlijke contractuele verplichtingen zijn in de eerste plaats onontbeerlijk voor de correcte uitvoering van dit contract; de klant vertrouwt doorlopend op en heeft het recht om op het nakomen van deze verplichtingen te vertrouwen. De aansprakelijkheid voor schadeclaims als gevolg van het schenden van deze wezenlijke contractuele verplichtingen is echter beperkt tot voorspelbare schade in het kader van het betreffende contract, tenzij deze schending een geval is van opzet of grove nalatigheid of bij aansprakelijkheid als gevolg van levensgevaarlijke, lichamelijke verwondingen of gezondheidsschade. De voornoemde bepalingen veranderen niets aan de bewijslast ten nadele van de gebruiker van de schematische voorstelling hieronder.

### Bescherming tegen legionella:

- ▲1 Het systeem voldoet niet aan de hygiënische vereisten volgens DIN 1988-200: 2012-5 (bescherming tegen legionella).
- ▲2 De functie voor bescherming tegen legionella moet worden ingesteld via de systeemregeling op de ketels.
- ▲3 Het systeem voldoet alleen aan de hygiënische vereisten volgens DIN 1988-200: 2012-5 (bescherming tegen legionella) als een elektrische piekverwarmer is ingebouwd of als de systeemtemperatuur  $\leq 60^{\circ}\text{C}$ .

### Zonne energie:

- ▲4 De aansluiting van een externe zonne-opbrengstsensor is niet mogelijk.
- ▲5 De aansluiting van een geregelde zonne-energie-eenheid is niet mogelijk.
- ▲6 Monteer de sensor van de veiligheidsthermostaat op een geschikte plaats om temperaturen boven  $100^{\circ}\text{C}$  in het reservoir te vermijden.
- ▲7 Veiligheidsthermostaat 10k moet worden geïnstalleerd volgens DIN EN 60335-1.

### Warmtepomp:

- ▲8 Het verwarmingsvermogen van de warmtepomp moet worden afgestemd op de grootte van de spoel van het SWW-reservoir.
- ▲9 Gebruik van VIH RW 300 tot maximaal verwarmingsvermogen van de warmtepomp van 11 kW.
- ▲10 Gebruik van VIH RW 400 B tot maximaal verwarmingsvermogen van de warmtepomp van 7 kW.
- ▲11 Gebruik van VIH RW 400 B tot maximaal verwarmingsvermogen van de warmtepomp van 11 kW.
- ▲12 Bijkomende technische vereisten voor gebruik van open verdeler:
  - 1) Instelling verwarmingscurve: zo vlak mogelijk.
  - 2) Instelpunt kamertemperatuur in elk vertrek: min.  $17^{\circ}\text{C}$  (volgens DIN EN12831)
  - 3) Type van open verdeler moet worden afgestemd op warmtepomp.
- ▲13 Warmtebronopties 0020178458; nummer 1,2,3,4
- ▲14 Warmtebronopties 0020199566; nummer 1,2,3
- ▲15 Min. 35 % van het nominale debiet door de referentieruimte zonder temperatuurregelklep in individuele vertrekken.

- ▲16 Een bijkomende warmteopwrekker moet worden geïnstalleerd om de vereiste temperaturen voor sanitair warm water te halen volgens de bestaande normen en richtlijnen.

- ▲17 Pomp met IF-module is noodzakelijk.
- ▲18 Referentie UV1 002003674

### Ketel:

- ▲19 De aansluiting van een buitensensor is mogelijk voor SDBG WHB.
- ▲20 Voor ketels zonder bijkomend ingebouwd relais moet de SWW-circulatiepomp worden aangesloten op verlengmodule 2 tot 7.
- ▲21 Voor configuraties met SWW-circulatiepomp moet een bijkomende verlengmodule worden gebruikt.
- ▲22 Voor ketels zonder ingebouwd expansievat moet een bijkomend expansievat worden aangebracht in het SWW-laadcircuit van de ketel.
- ▲23 Het SWW-reservoir kan niet worden geladen terwijl de verwarming werkt.

### Ander:

- ▲24 Débit d'entrée pour le chargement du ballon (ECS et chauffage)  $< 1800 \text{ m}^3/\text{h}$ .

### Divers:

- ▲25 Het debiet van de aangesloten warmteopwekkers moet worden afgestemd op de ontkoppelmodule.
- ▲26 De noodverwarmer voor SWW moet worden beschermd door een autonome thermostaat tegen oververhitting.
- ▲27 De noodverwarmer voor de CV moet worden beschermd door een autonome thermostaat tegen oververhitting.
- ▲28 Max. 8 adressen voor afstandsbediening, zonnelaadeenheden en SWW-productie-eenheden.
- ▲29 De SWW-circulatiepomp moet apart worden geïnstalleerd.
- ▲30 Optionele component.
- ▲31 De cascadeschakeling kan worden geconfigureerd met 1 tot 7 warmteopwekkers.
- ▲32 De cascadeschakeling kan worden geconfigureerd met 1 tot 4 SWW-stations.
- ▲33 De cascadeschakeling kan worden geconfigureerd met 1 tot 4 zonne-energiestations.
- ▲34 Gebruik dezelfde waarde voor de verwarmingscurve voor VERWARMING 1 en VERWARMING 2.
- ▲35 Het systeem kan worden geconfigureerd voor maximaal 9 gemengde circuits.

## Legenda

1	Générateur de chaleur
1a	Système de chauffage d'appoint pour eau chaude sanitaire
1b	Système de chauffage d'appoint pour chauffage
1c	Système de chauffage d'appoint pour chauffage/ECS
1d	Chaudière à combustible solide à alimentation manuelle
2	Pompe à chaleur
2a	Pompe à chaleur avec production d'eau chaude sanitaire
2b	Échangeur thermique air/eau glycolée
2c	Unité extérieure de la pompe à chaleur à système split
2d	Unité intérieure de la pompe à chaleur à système split
2e	Module pour nappe phréatique
2f	Module pour rafraîchissement passif
3	Pompe de recirculation pour générateur de chaleur
3a	Pompe de circulation pour piscine
3b	Pompe du circuit de rafraîchissement
3c	Pompe de charge
3d	Pompe de puits
3e	Pompe de circulation
3f	Pompe chauffage
3g	Pompe de circulation de la source de chaleur
3h	Pompe de protection anti-légionelles
3i	Echangeur de chaleur de la pompe
4	Ballon d'accumulation
5	Ballon d'eau chaude sanitaire monovalent
5a	Ballon d'eau chaude sanitaire bivalent
5b	Ballon à stratification
5c	Ballon combiné (ballon dans un ballon)
5d	Ballon multifonctions
5e	Tour hydraulique
6	Capteur solaire (thermique)
7a	Station de remplissage de glycol pour pompe à chaleur
7b	Station solaire
7c	Station d'eau potable
7d	Station domestique
7e	Bloc hydraulique
7f	Module hydraulique
7g	Module de découplage thermique
7h	Module d'échangeur thermique
7i	Module 2 zones
7j	Groupe de pompage
8a	Soupape de sécurité
8b	Soupape de sécurité sanitaire
8c	Groupe de sécurité pour le raccordement sanitaire
8d	Groupe de sécurité chauffage
8e	Vase d'expansion chauffage
8f	Vase d'expansion sanitaire
8g	Vase d'expansion solaire/eau glycolée
8h	Vase tampon solaire
8i	Soupape de sûreté thermique
9a	Vanne de régulation pièce par pièce (thermostatique/motorisée)
9b	Vanne de zone
9c	Vanne d'équilibrage
9d	By-pass
9e	Vanne 3 voies de production d'eau chaude sanitaire
9f	Vanne 3 voies de rafraîchissement
9g	Soupape d'inversion
9h	Robinet de remplissage/vidange
9i	Soupape de purge
9j	Soupape à ouverture manuelle
9k	Vanne mélangeuse à 3 voies
9l	Vanne mélangeuse à 3 voies pour rafraîchissement
9m	Vanne mélangeuse à 3 voies d'augmentation de la temp. de retour
9n	Mélangeur thermostatique
9o	Débitmètre
9p	Vanne de cascade
10a	Thermomètre
10b	Manomètre
10c	Clapet anti-retour

10d	Purgeur d'air
10e	Collecteur d'impuretés avec séparateur magnétique
10f	Collecteur solaire/eau glycolée
10g	Échangeur thermique
10h	Compensateur hydraulique
10i	Raccords souples
11a	Convecteur soufflant
11b	Piscine
12	Régulateur de l'installation
12a	Thermostat d'ambiance
12b	Module d'extension pour pompe à chaleur
12c	Module multifonctions 2 en 7 (VR 40)
12d	Module d'extension/de mélange VR 70
12e	Module d'extension/de mélange VR 71
12f	Boîtier de câblage
12g	Coupleur de bus eBUS (VR 32)
12h	Régulateur solaire
12i	Régulateur externe
12j	Relais de coupure
12k	Thermostat de sécurité
12l	Sécurité de surchauffe du ballon
12m	Sonde extérieure
12n	Contacteur de débit
12o	Module d'alimentation eBUS
12p	Récepteur radio
12q	Passerelle internet VR 900
13	Unité de ventilation
14a	Silencieux
14b	Clapet coupe-feu
14c	Entrée d'air
14d	Clapet d'étranglement
14e	Déviateur d'air
14f	Extracteur d'air
14g	Collecteur d'air
14h	Filtre à air
14i	Déflexeur d'air avec ouverture d'inspection
14j	Ventilateur radial
14k	Clapet bypass

## Câblage

BufTop	Capteur de température en haut du ballon tampon
BufBt	Capteur de température en bas du ballon tampon
BufTopDHW	Capteur de temp. ECS en haut du ballon tampon
BufBtDHW	Capteur de temp. ECS en bas du ballon tampon
BufTopCH	Capteur de temp. chauffage en haut du ballon tampon
BufBtCH	Capteur de temp. chauffage en bas du ballon tampon
C1/C2	Autorisation de charge du ballon/charge tampon
COL	Sonde de température du capteur solaire
DEM	Demande de chauffage externe pour circuit chauffage
DHW	Sonde de température du ballon
DHWBT	Sonde de température de stockage en bas de ballon (ballon d'eau chaude sanitaire)
EVU	Contact de délestage du fournisseur d'énergie
FS	Sonde de température de départ/sonde de piscine
MA	Sortie multifonctions
ME	Entrée multifonction
PWM	Signal PWM de la pompe
PV	Interface de l'onduleur photovoltaïque
RT	Thermostat d'ambiance
SCA	Signal de rafraîchissement
SG	Interface avec le gestionnaire de réseau de distribution
Solar yield	Sonde de retour solaire
SysFlow	Capteur de température système
TD	Capteur de température pour régulation ΔT
TEL	Entrée de commutation pour commande à distance
TR	Coupe-circuit avec commutation de chaudière au sol

Les composants utilisés à plusieurs reprises (x) sont numérotés dans l'ordre (x1, x2, ..., xn).

Eau potable	-----	Départ solaire	-----	Départ eau glycolée (de la source)	-----	Fluide frigorigène basse pression	-----
Eau chaude sanitaire	- . - .	Retour solaire	- - - -	Retour eau glycolée (à la source)	-----	Air extrait	-----
Circulation ECS	-----	Très basse tension	- - - -	Départ refroidissement	-----	Air extérieur	-----
Débit chauffage	-----	Alimentation 230 / 400V	-----	Retour refroidissement	-----	Air de recirculation	-----
Retour chauffage	-----			Fluide frigorigène haute pression	-----	Alimentation en air	-----

Attention, ce schéma ne se substitue pas à la conception du système professionnel approprié.  
Ce schéma n'inclut pas tous les dispositifs d'arrêt et de sécurité nécessaires pour une installation correcte.  
Les lois, règlements, normes et directives nationales et internationales applicables doivent être respectés!

Confidentiel: La mise à disposition à des tiers, sous quelque forme est interdite sans le consentement écrit de Vaillant.

## Attention ! Représentation schématique !

1. Recommandation non contraignante ! Les informations ci-après ne peuvent en aucun cas remplacer la conception professionnelle correcte du système. Cette représentation n'inclut pas tous les dispositifs d'arrêt et de sécurité nécessaires dans un montage professionnel. Les lois, réglementations, normes et directives nationales et internationales applicables doivent être respectées !
2. Sous réserve de modifications de la représentation schématique ! Toute reproduction complète ou partielle de ce schéma requiert l'autorisation écrite préalable de Vaillant GmbH.
3. Lors de la planification et de la conception, lors de l'installation et lors de l'utilisation ultérieure du système, il est obligatoire de respecter l'ensemble des instructions d'installation et d'utilisation existantes qui s'appliquent aux appareils, aux accessoires et/ou à tout autre composant du système.
4. Vaillant GmbH décline expressément toute responsabilité dans toute action en dommages-intérêts, quelle qu'en soit la base légale, en particulier un manquement à une obligation ou une obligation délictuelle, c'est-à-dire une action pour cause d'infraction. L'exclusion de responsabilité qui précède ne s'applique pas en cas de responsabilité légale, d'intention délibérée ou de négligence grave, en cas d'atteinte à la vie, à l'intégrité corporelle ou à la santé, ou en cas de violation d'une obligation contractuelle importante (obligation essentielle) dans la mesure où un contrat a été conclu avec l'utilisateur de la représentation schématique en cause. Une obligation essentielle désigne une obligation importante ou un devoir fondamental qui doit être garanti par le contrat conformément à son objet ou à sa finalité, les obligations contractuelles importantes désignant en outre les obligations indispensables à la bonne exécution du contrat en cause, étant entendu que le client compte systématiquement et à bon droit sur le respect de ces obligations. La responsabilité dans une action en dommages-intérêts fondée sur un manquement à une telle obligation contractuelle importante est toutefois limitée aux dommages prévisibles ordinaires pour le contrat en cause, excepté si le manquement relève d'une intention délibérée ou d'une négligence grave ou si la responsabilité résulte d'une atteinte à la vie, à l'intégrité physique ou à la santé. Les dispositions qui précèdent n'entraînent aucune modification de la charge de la preuve au détriment de l'utilisateur de la représentation schématique en cause.

### Protection anti-légionelles ::

- ▲1 Le système n'est pas conforme aux exigences de la norme DIN 1988-200: 2012-5 (protection anti-légionelles).
- ▲2 La fonction de protection anti-légionelles doit être assurée au moyen de la régulation du système sur les chaudières.
- ▲3 Le système n'est conforme aux exigences de la norme DIN 1988-200: 2012-5 (protection anti-légionelles) qu'avec un chauffage électrique de pointe intégré ou avec une température du système  $\leq 60$  °C.

### Solaire:

- ▲4 Il n'est pas possible de connecter un capteur de rendement solaire externe.
- ▲5 Il n'est pas possible de connecter une unité solaire à régulation.
- ▲6 Le capteur du thermostat de sécurité contre la surchauffe doit être monté à un endroit approprié pour éviter une température du réservoir supérieure à 100 °C.
- ▲7 Un thermostat de sécurité 10k doit être installé conformément à la norme DIN EN 60335-1.

### Pompe à chaleur:

- ▲8 La puissance de chauffage de la pompe à chaleur doit correspondre à la taille de bobine du réservoir d'ECS.
- ▲9 Utilisez le VIH RW 300 jusqu'à la puissance de chauffage maximale de la pompe à chaleur de 11 kW.
- ▲10 Utilisez le VIH RW 400 B jusqu'à la puissance de chauffage maximale de la pompe à chaleur de 7 kW.
- ▲11 Utilisez le VIH RW 400 B jusqu'à la puissance de chauffage maximale de la pompe à chaleur de 11 kW.
- ▲12 Exigences techniques supplémentaires pour l'utilisation du compensateur hydraulique:
  - 1) Réglage de la courbe de chauffage : courbe la plus plate possible.
  - 2) Réglage de la température ambiante dans chaque pièce : min. 17 °C (selon DIN EN 12831)
  - 3) Le type de compensateur hydraulique doit correspondre à la pompe à chaleur.
- ▲13 Possibilités de source de chaleur 0020178458 : 1, 2, 3 et 4
- ▲14 Possibilités de source de chaleur 0020199566 : 1, 2 et 3
- ▲15 Min. 35 % du débit nominal à travers la pièce de référence sans régulateur de température dans les pièces individuelles.
- ▲16 Un générateur de chaleur supplémentaire doit être installé pour atteindre les températures d'eau chaude sanitaire requises conformément aux normes et directives applicables.
- ▲17 Une pompe avec module IF est indispensable.
- ▲18 Référence UV1 002003674

### Chaudière:

- ▲19 Il est possible de connecter un capteur extérieur pour la chaudière à chaleur perdue SDBG.
- ▲20 Pour les chaudières sans relais supplémentaire intégré, la pompe de circulation d'ECS doit être connectée à l'un des modules d'extension 2 à 7.
- ▲21 Pour les installations comprenant une pompe de circulation d'ECS, il faut utiliser un module d'extension supplémentaire.
- ▲22 Pour les chaudières sans vase d'expansion intégré, un vase d'expansion additionnel doit être prévu dans le circuit de chargement d'ECS de la chaudière.
- ▲23 Le réservoir d'ECS ne peut être chargé simultanément au fonctionnement en mode de chauffage.

### Ballon:

- ▲24 Débit d'entrée pour le chargement du ballon (ECS et chauffage) < 1800 m³/h.

### Divers:

- ▲25 Le débit des générateurs de chaleur connectés doit être aligné sur le module de découplage.
- ▲26 Le système de chauffage de secours de l'ECS doit être protégé par un thermostat anti-surchauffe autonome.
- ▲27 Le système de chauffage de secours du chauffage central doit être protégé par un thermostat anti-surchauffe autonome.
- ▲28 Max. 8 adresses pour les commandes à distance, les unités de chargement solaires et les unités de génération d'ECS.
- ▲29 Une pompe de circulation d'ECS doit être installée séparément.
- ▲30 Le module d'extension VWZ AI est intégré dans la tour hydraulique.
- ▲31 Le montage en cascade peut être configuré pour 1 à 7 générateurs de chaleur.
- ▲32 Le montage en cascade peut être configuré pour 1 à 4 stations d'ECS.
- ▲33 Le montage en cascade peut être configuré pour 1 à 4 stations solaires.
- ▲34 Utilisez la même valeur de courbe de chauffage pour CHAUFFAGE 1 et CHAUFFAGE 2.
- ▲35 Le système peut être configuré avec un maximum de 9 circuits mixtes.



# Legend



## Hydraulic





















1	Heat generator
1a	Back-up heater for domestic hot water
1b	Back-up heater for heating
1c	Back-up heater for domestic hot water/heating
1d	Solid fuel boiler with manual feed
2	Heat pump
2a	Air-to-water heat pump
2b	Air-to-brine heat exchanger
2c	Refrigerant-split heat pump outdoor unit
2d	Refrigerant-split heat pump indoor unit
2e	Ground water module
2f	Passive cooling module
3	Heat generator circulation pump
3a	Swimming pool circulation pump
3b	Cooling circuit pump
3c	Cylinder charging pump
3d	Well pump
3e	Circulation pump
3f	Heating pump
3g	Heat source circulation pump
3h	Anti-legionella pump
3i	Pump heat exchanger
4	Buffer cylinder
5	Monovalent domestic hot water cylinder
5a	Bivalent domestic hot water cylinder
5b	Shift-load cylinder
5c	Combi cylinder
5d	Multi-functional buffer cylinder
5e	Hydraulic tower
6	Solar collector (thermal)
7a	Heat pump brine filling unit
7b	Solar pump station
7c	Domestic hot water station
7d	Heat interface unit
7e	Hydraulic block
7f	Decoupler module
7g	Heat recovery module
7h	Heat exchanger module
7i	2-zone module
7j	Pump group
8a	Expansion relief valve
8b	Potable water expansion relief valve
8c	Safety assembly for the potable water connection
8d	Safety assembly for the heat generator
8e	Expansion vessel for heating
8f	Expansion vessel for potable water
8g	Expansion vessel for brine/solar
8h	Solar protection vessel
8i	Thermal safety assembly
9a	Single-room temperature control valve (thermostatic/motorised)
9b	Zone valve
9c	Flow regulator valve
9d	Bypass valve
9e	Diverter valve for potable water
9f	Diverter valve for cooling
9g	Diverter valve
9h	Filling/draining cock
9i	Purging valve
9j	Tamper-proof capped valve
9k	3-port mixing valve
9l	3-port mixing valve - for cooling
9m	Increase in return flow for 3-port mixing valve
9n	Thermostatic mixing valve
9o	Flow meter (Taco setter)
9p	Cascade valve
10a	Thermometer
10b	Manometer/pressure gauge

10c	Non-return valve
10d	Air separator
10e	Line strainer with magnetite separator
10f	Solar/brine collecting vessel
10g	Heat exchanger
10h	Low loss header
10i	Flexible connections
11a	Fan coil
11b	Swimming pool
12	System control
12a	Remote control
12b	Heat pump expansion module
12c	2 in 7 multi-functional module
12d	Extension module/wiring centre
12e	Main extension module
12f	Wiring centre
12g	eBus coupler
12h	Solar control
12i	External control
12j	Cut-off relay
12k	Limit thermostat
12l	Cylinder temperature cut-out
12m	Outdoor temperature sensor
12n	Flow switch
12o	eBus power supply unit
12p	Radio receiver unit
12q	Internet gateway
12r	PV control
13	Ventilation unit
14a	Supply air outlet
14b	Extract air inlet
14c	Air filter
14d	Supply air heater
14e	Frost protection element
14f	Silencer
14g	Restrictor flap
14h	Weather protection mesh
14i	Extract air box
14j	Air humidifier
14k	Air dehumidifier
14l	Air manifold
14m	Air collector
15	Cylinder ventilation unit

## Wiring

BufBt	Bottom temperature sensor of buffer cylinder
BufTopDHW	Top temperature sensor for DHW section of buffer cylinder
BufBtDHW	Bottom temperature sensor for DHW section of buffer cylinder
BufTopCH	Top temperature sensor for heating section of buffer cylinder
BufBtCH	Bottom temperature sensor for heating section of buffer cylinder
C1/C2	Enable cylinder charging/buffer charging
COL	Collector temperature sensor
DEM	External heating demand for the heating circuit
DHW	Cylinder temperature sensor
DHWBt	Bottom cylinder temperature sensor (domestic hot water cylinder)
EVU	Energy supply company switching contact
FS	Heating circuit flow temperature sensor/swimming pool sensor
MA	Multi-function output
ME	Multi-function input
PWM	PWM signal for pump
PV	Photovoltaic inverter interface
RT	Room thermostat
SCA	Cooling signal
SG	Interface to power grid operator
Solar yield	Solar yield sensor
SysFlow	System temperature sensor
TD	Temperature sensor for a DT control system
TEL	Switch contact for remote control
TR	Isolating circuit with switching floor-standing boiler

**Components that are used multiple times (x) are numbered consecutively (x1, x2, ..., xn)**

 Potable water	 Domestic hot water	 Domestic hot water circulation
 Heating flow	 Heating return	 Solar flow
 Solar return	 Electrical wiring	 230/400 V power supply
 eBUS connection	 Brine flow (from source)	 Brine return (to source)
 Cooling flow	 Cooling return	 Refrigerant – vapour
 Refrigerant – liquid	 Extract air	 Outdoor air
 Exhaust air	 Supply air	

## Caution! Schematic diagram!

- 1 Non-binding recommendation! The information below shall never supersede the correct professional design of the system. This system schematic does not include all the shut-off and safety devices necessary for professional assembly. The applicable national and international laws and regulations, standards and directives must be adhered too!
- 2 Subject to alterations in the schematic diagram! Full and/or partial reproduction of this schematic is subject to prior written approval by Vaillant GmbH.
- 3 During planning and design, installation and later use of the system, all operating instructions for installation and use created and applicable to the appliance, the accessories and/or all other system components must be adhered to.
- 4 Vaillant GmbH herewith strictly rules out any liability for claims for damages on whatever legal ground, especially for breach of obligations or delictual obligation, i.e. claims in tort. The aforesaid shall neither apply in cases of statutory liability, wilful intent or gross negligence, nor in case of injury to life, body or health nor in the case of violation of material contractual obligations (cardinal obligations) provided that a contract is concluded with the user of the schematic diagram hereunder. Cardinal obligations are material obligations or duties to be warranted by the contract in accordance with its subject or purpose; furthermore material contractual obligations are such obligations indispensable for the correct performance of such contract in the first place; the customer constantly trusts in and is entitled to trust in the adherence to such obligations. However, liability for claims for damages due to breach of such material contractual obligations shall be limited to the foreseeable damages typical with the respective contract unless such breach is a case of wilful intent or gross negligence or in case of liability due to injury to life, body or health. The aforesaid stipulations shall not entail any change in the burden of proof to the disadvantage of the user of the schematic diagram hereunder.

**The following list contains a set of possible remarks and restrictions. For a scheme, only the remarks and restrictions explicitly stated in the header on page 1 applies/apply**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>▲ 1 The system doesn't fulfill the hygienic requirements acc. to EN 806-2:2005 (legionella protection).</li> <li>▲ 2 Legionella protection function to be arranged by boilers with system control.</li> <li>▲ 3 The system fulfills the hygienic requirements acc. to EN 806-2:2005 (legionella protection) only with integrated electric peak heater or with system temperature <math>\geq 60^{\circ}\text{C}</math>.</li> <li>▲ 4 The connection of a controlled solar unit is not possible.</li> <li>▲ 5 Mount the sensor of the overheat safety thermostat at an adequate position to avoid tank temperatures above <math>100^{\circ}\text{C}</math>.</li> <li>▲ 6 The coil size of the DHW tank has to be aligned to the heating output of the heat pump.</li> <li>▲ 7 Heat source options 0020178458: number 1, 2, 3, 4, 5</li> <li>▲ 8 Min. 35 % of the nominal flow rate through the reference room without single room temperature control valve.</li> <li>▲ 9 Pump with IF-module is necessary.</li> <li>▲ 10 An additional heat generator has to be installed to reach the required domestic hot water temperatures acc. the actual standards and directives.</li> <li>▲ 11 DHW tank loading simultaneously with heating operation is not possible.</li> <li>▲ 12 Inlet flow rate for cylinder loading (DHW and heating) <math>&lt; 1800</math> l/h.</li> <li>▲ 13 The flow rate of the connected heat generators has to be aligned with the decoupler module.</li> <li>▲ 14 Backup heater CH/DHW must be protected by a self acting overheat thermostat.</li> <li>▲ 15 Max. 4 remote controls can be used.</li> </ul> | <ul style="list-style-type: none"> <li>▲ 16 DHW circulation pump has to be installed separately.</li> <li>▲ 17 Optional component</li> <li>▲ 18 The cascade can be configured with 2 to 7 heat generators.</li> <li>▲ 19 The cascade can be configured with 2 to 4 DHW stations.</li> <li>▲ 20 The cascade can be configured with 2 to 4 solar stations.</li> <li>▲ 21 The system can be configured with up to 9 mixed circuits with max. 3 functional modules.</li> <li>▲ 22 Electrical supply voltage depending on the installation and appliance: 230 V, 400 V</li> <li>▲ 23 Heat demand has a higher priority than automatic cooling. Use time programmes to avoid parallel demands</li> <li>▲ 24 Safety equipment for solid fuel boilers has to be planned to avoid tank temperatures above <math>80^{\circ}\text{C}</math>.</li> <li>▲ 25 RCD - necessary, when demanded by local regulations.</li> <li>▲ 26 Also compatible with VRC 700.</li> <li>▲ 27 Consider the local hygienic requirements for legionella protection.</li> <li>▲ 28 Consider the polarity of the eBUS connection.</li> <li>▲ 29 Use a shielded eBUS cable if the distance is longer than 10m.</li> <li>▲ 30 In the case of external safety components, the bridge must be removed.</li> <li>▲ 31 Consider the max. inlet temperature of the connected boiler.</li> <li>▲ 32 Consider devices for protection against transient overvoltages.</li> </ul> |
|--|---|