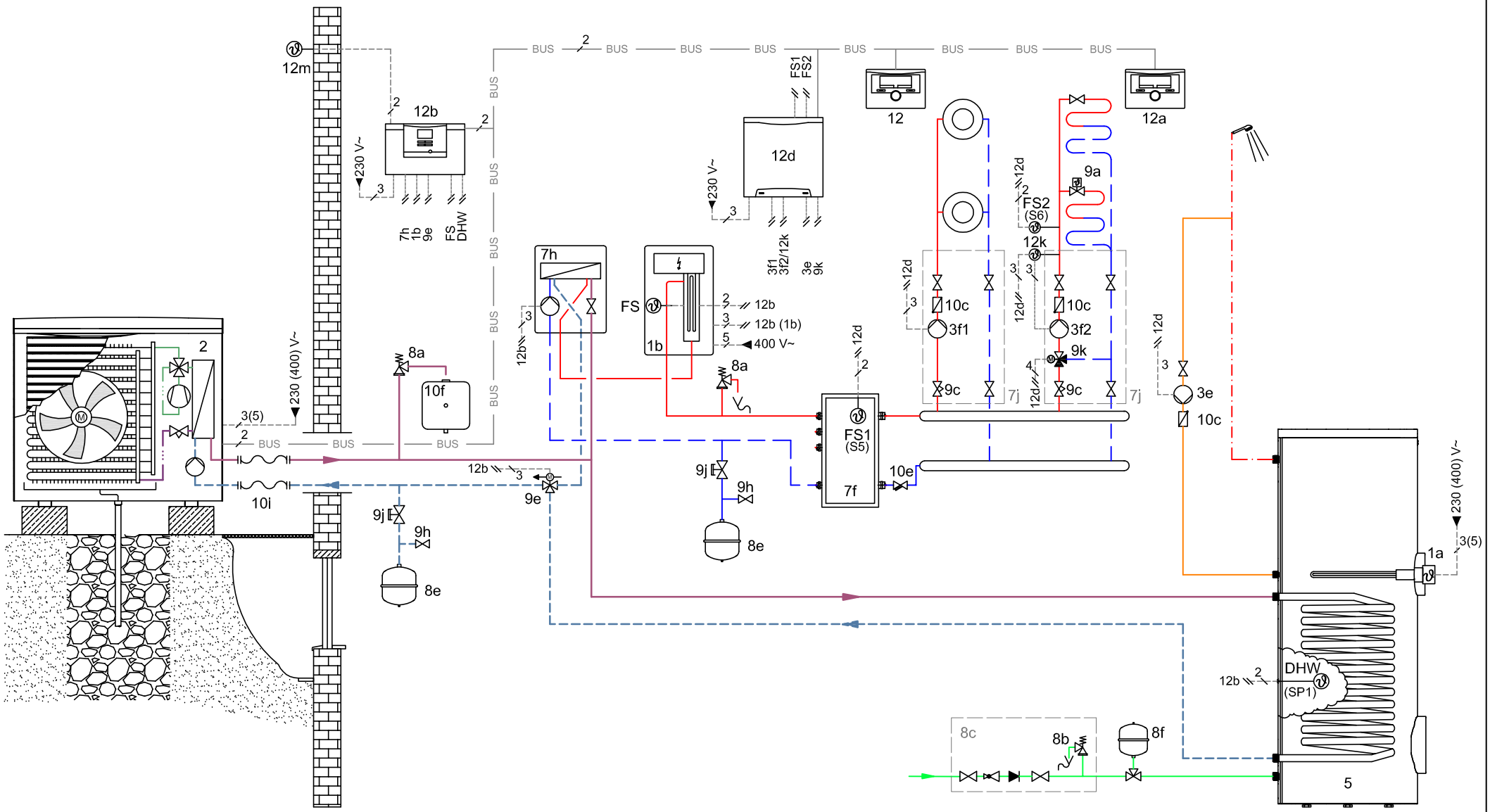
0020194202

One-family house with one mixed heating circuits and one pump heating circuit. Heat pump to use for the heating circuits and DHW. The backup heater CH supports the heating circuits. For DHW support there is another backup heater in the DHW coil tank. Planning the DHW coil tank interpreted in accordance with applicable standards and requirements.



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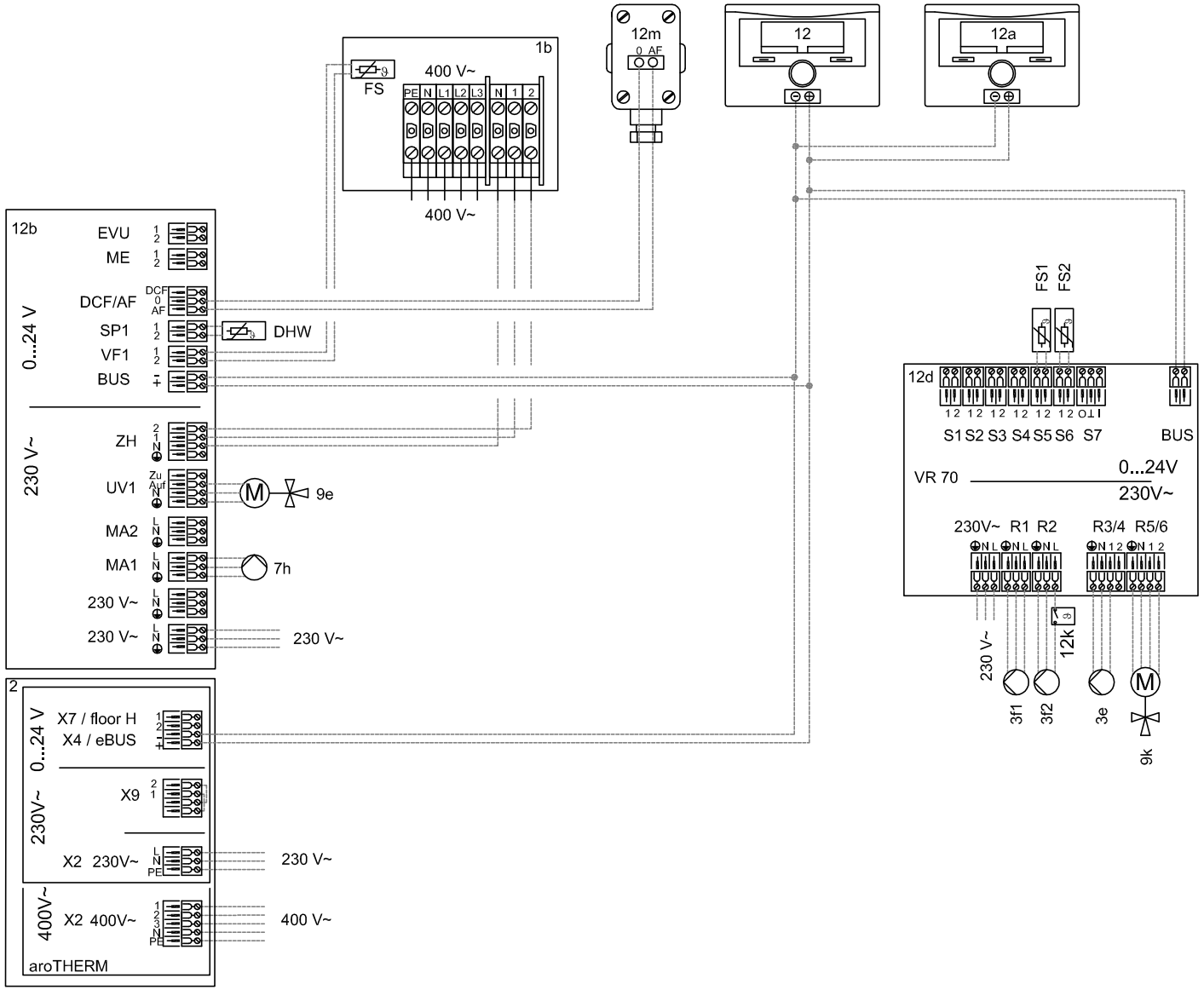

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	date.: 07.09.2015	reference to			

Legend

Hydraulic

1	heat generator
1a	additional boiler DHW
1b	additional boiler heating
1c	additional boiler heating/DHW
1d	solid fuel boiler
2	heat pump
2a	DHW heat pump
2b	air brine heat exchanger unit
2c	outdoor unit refrigerant split
2d	indoor unit refrigerant split
2e	ground water module
2f	passive cooling module
3	circulation pump heat generator
3a	circulation pump swimming pool
3b	circulation pump cooling circuit
3c	cylinder charging pump
3d	suction well pump
3e	circulation pump DHW
3f	heating pump
3g	circulation pump heat source
3h	legionella protection pump
4	buffer cylinder
5	monovalent DHW cylinder
5a	bivalent DHW cylinder
5b	shift-load DHW cylinder
5c	combined cylinder (tank-in-tank)
5d	multi-functional buffer cylinder
5e	hydraulic tower
6	solar collector (thermal)
7a	brine filling station
7b	solar unit
7c	DHW unit
7d	heating satelite
7e	hydraulic block
7f	decoupler module
7g	heat decoupling module
7h	heat exchanger module
7i	2-zone module
7j	pump group
8a	expansion relief valve
8b	expansion relief valve drinking water
8c	safety assembly drinking water connection
8d	safety assembly heat generator
8e	expansion vessel heating
8f	expansion vessel drinking water
8g	expansion vessel solar/brine
8h	solar protection vessel
8i	thermal safety device
9a	single room temperature control valve (thermostatic/motorized)
9b	zone valve
9c	balancing valve
9d	bypass valve
9e	diverter valve DHW
9f	diverter valve cooling
9g	switching valve
9h	filling and draining cock
9i	purging valve
9j	valve cap
9k	3-way mixer
9l	3-way mixer cooling
9m	3-way mixer increase in return
9n	thermostat mixing valve
9o	flow meter (Taco-Setter)
9p	cascade valve
10a	thermometer
10b	pressure gauge
10c	non-return valve
10d	air separator
10e	dirt and magnetite separator
10f	collecting vessel solar/brine
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 extension module
12c	multi-functional module 2 to 7
12d	extension module/ mixer module
12e	main extension module
12f	control center
12g	bus coupler eBUS
12h	solar control
12i	external control
12j	isolating relay
12k	overheat protection thermostat
12l	cylinder temperature limiter
12m	outdoor temperature sensor
12n	flow switch
12o	eBUS generator
12p	radio receiver unit

Wiring

BufTop	temperature sensor buffer cylinder top
BufBt	temperature sensor buffer cylinder bottom
BufTopDHW	temperature sensor DHW of buffer top
BufBtDHW	temperature sensor DHW of buffer bottom
BufTopCH	temperature sensor heating of buffer top
BufBtCH	temperature sensor heating of buffer bottom
C1/C2	release of cylinder charge/ buffer charge
COL	collector temperature sensor
DEM	external heating demand for heating circuit
DHW	temperature sensor for DHW cylinder
DHWBT	temperature sensor for DHW cylinder bottom
EVU	switching contact energy supply company
FS	flow temperature sensor/ temperature sensor pool
MA	multi-function relay output
ME	multi-function relay input
PWM	PWM signal for pump
PV	interface to PV inverter
RT	room thermostat
SCA	signal cooling
SG	interface to power grid operator
Solar yield	solar yield sensor
SysFlow	system flow temperature sensor
TD	temperature sensor for ΔT control
TEL	switch contact remote control
TR	isolating circuit with switching heat generator

Multiple use components (x) are serially numbered (x1, x2,..., xn)

drinking water		flow brine	
domestic hot water		return brine	
circulation		flow cooling	
wiring		return cooling	
flow heating		flow refrigerant	
return heating		return refrigerant	
flow solar			
return solar			

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The actual applicable national and international standards and regulations have to be attended.

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Design and planning advice:

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 to!

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.

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