Optiheat All-in-One

OH 1-5es – OH 1-18es
Brine/water

Technical documentation

AC Cooling Heating

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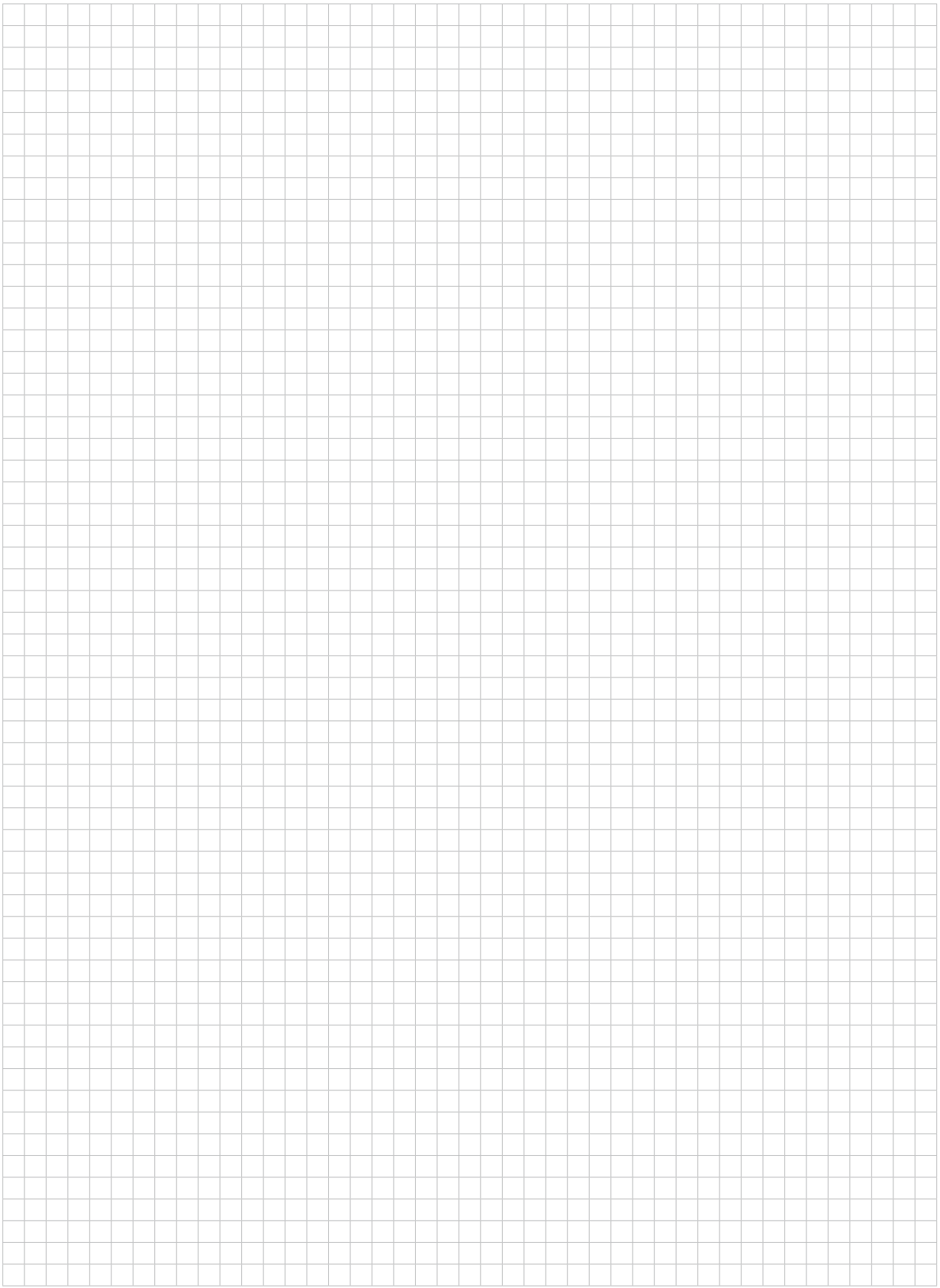


Technical data
Optiheat compact devices All-in-One

OH 1-5es to OH 1-8es, brine/water with controller Optiplus

Technical data
Optiheat compact devices All-in-One

OH 1-5es to OH 1-8es, brine/water with controller Optiplus

Technical data
Optiheat compact devices All-in-One

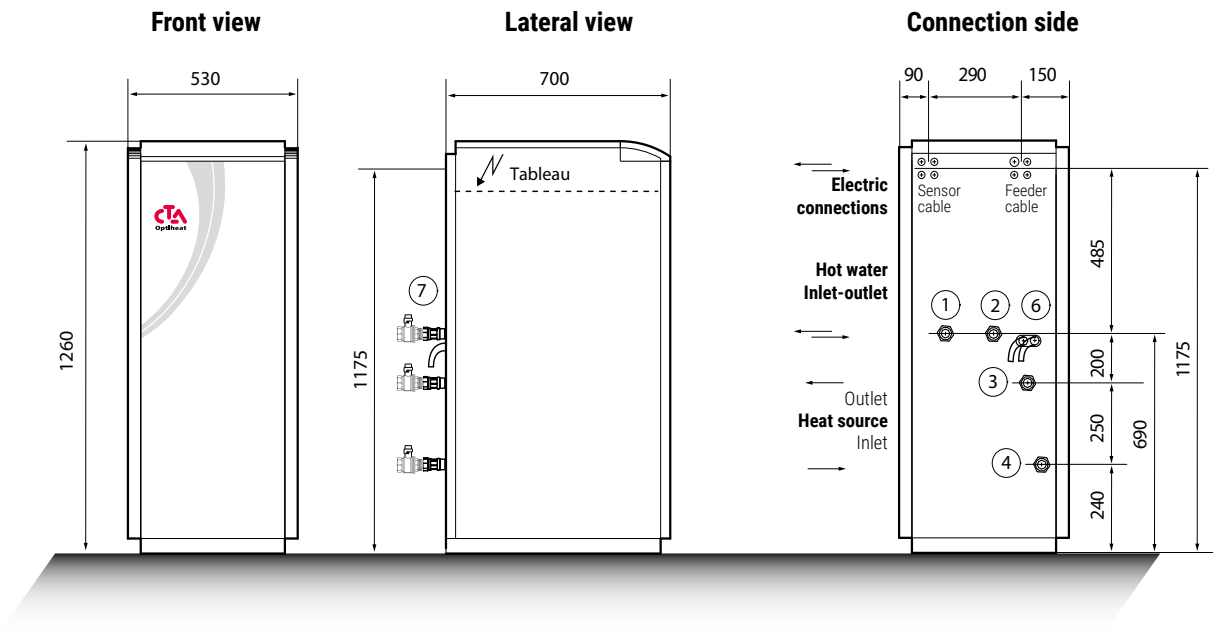
OH 1-11es to OH 1-18es, brine/water with controller Optiplus

Technical data
Optiheat compact devices All-in-One

OH 1-11es to OH 1-18es, brine/water with controller Optiplus

Dimension drawings
Optiheat compact devices All-in-One

OH 1-5es to OH 1-8es, brine/water



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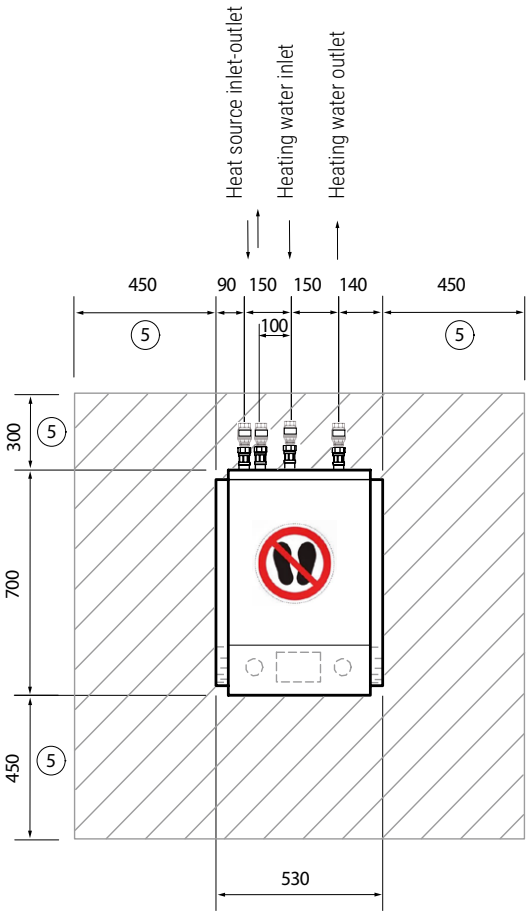


Legend
1 Heating water outlet
2 Heating water inlet
3 Heat source outlet
4 Heat source inlet
5 Minimum distances
6 Outlet of safety valve from heat source and heater
7 Ball valves

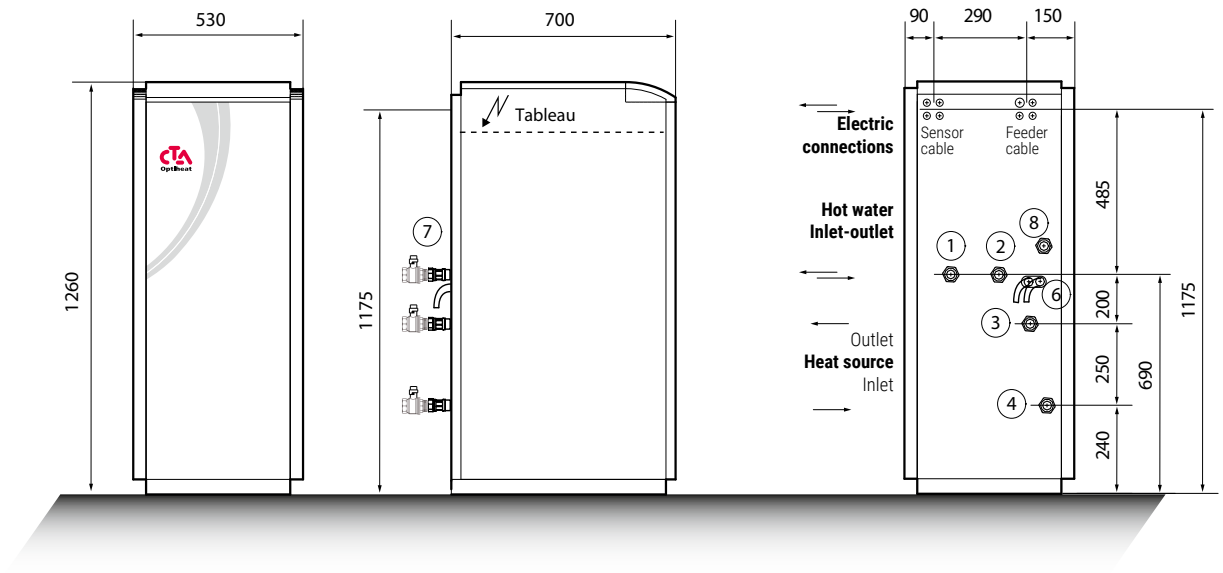
All dimensions are in mm

The external sensor (QAC 34/101) and the documents are enclosed in the electric panel.

Dimension drawings
Optiheat compact devices All-in-One

OH 1-11es to OH 1-18es, brine/water

Front view **Lateral view** **Connection side**



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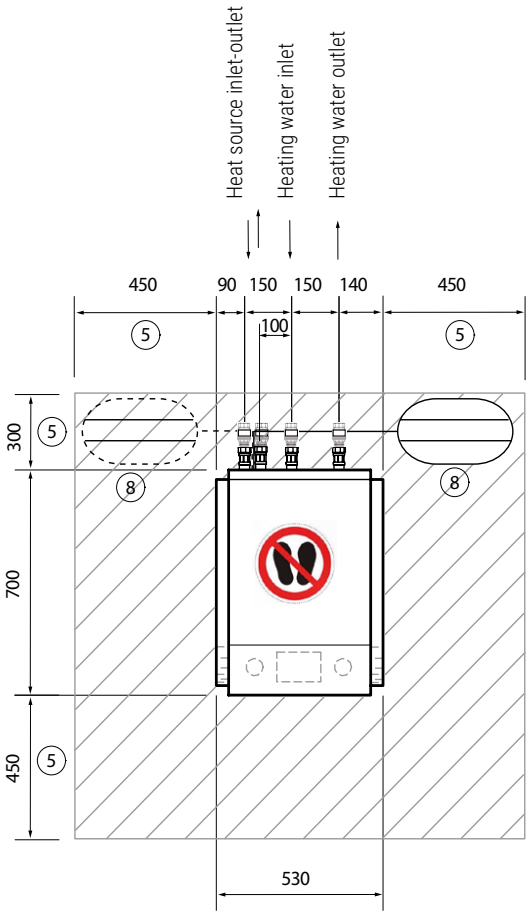


Legend
1 Heating water outlet
2 Heating water inlet
3 Heat source outlet
4 Heat source inlet
5 Minimum distances
6 Outlet of safety valve from heat source and heater
7 Ball valves
8 Connection expansion vessel heater 1500 mm hose length from the outlet

All dimensions are in mm

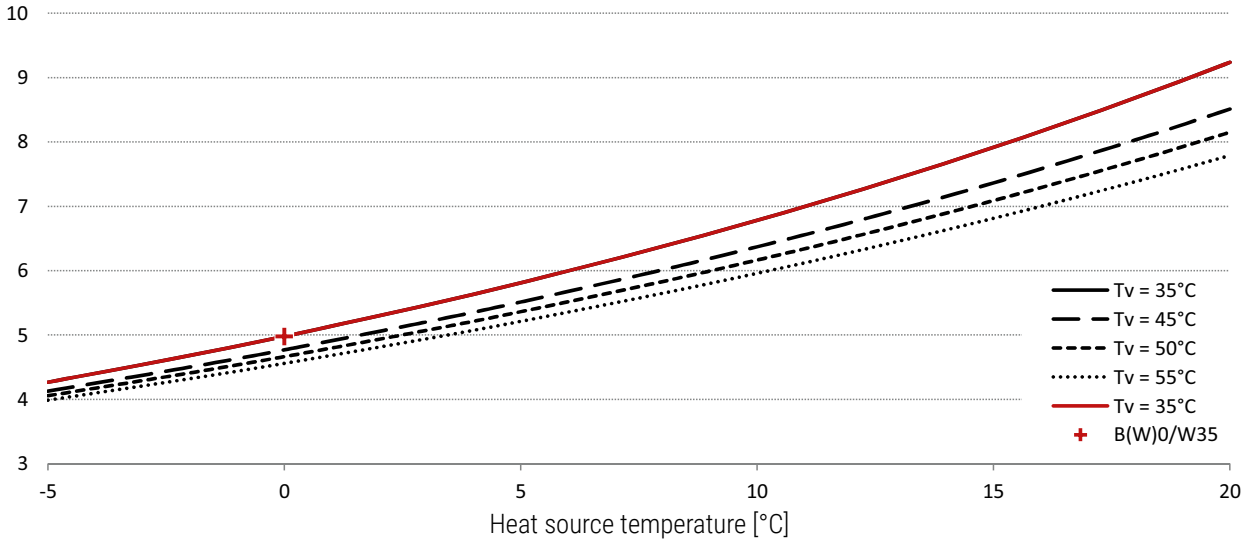
The external sensor (QAC 34/101) and the documents are enclosed in the electric panel.

Power curves
Optiheat OH 1-5es

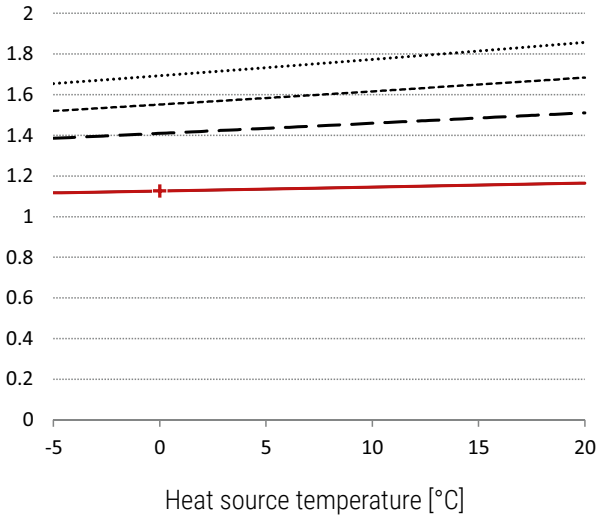
Volume flow source minimum / nominal / standard **0.88/1.01/1.17 m³/h**
Volume flow heater minimum / nominal / standard **0.43/0.61/0.86 m³/h**

Performance data as per EN 14511

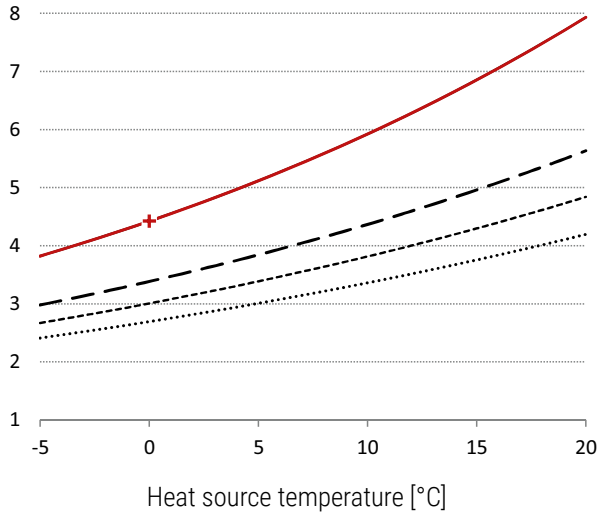
Heat output in kW



Electric output in kW



Performance data COP

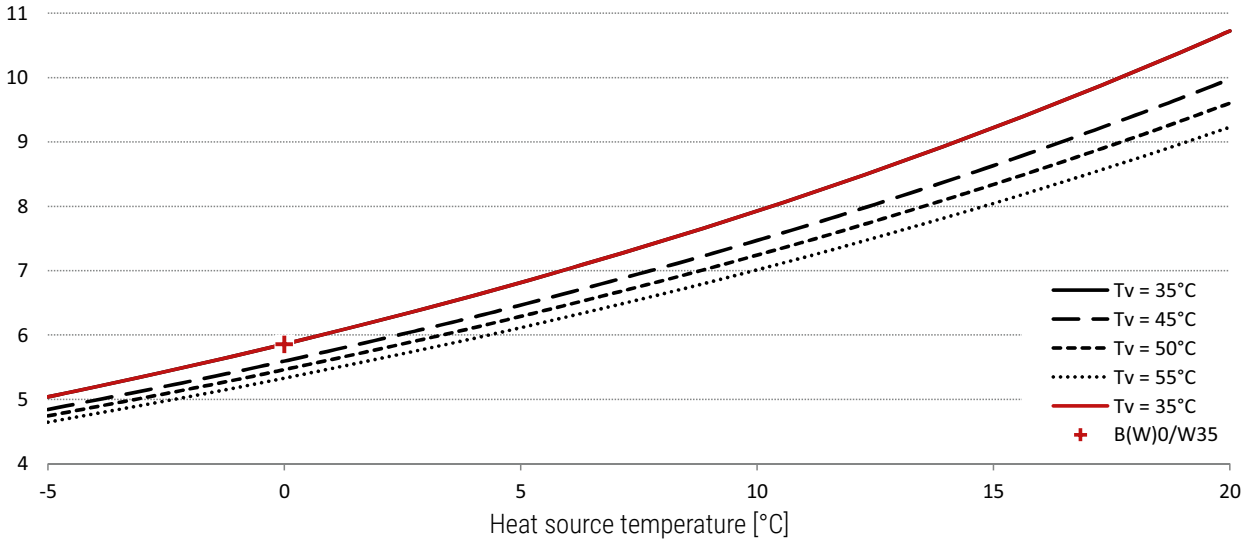


Power curves
Optiheat OH 1-6es

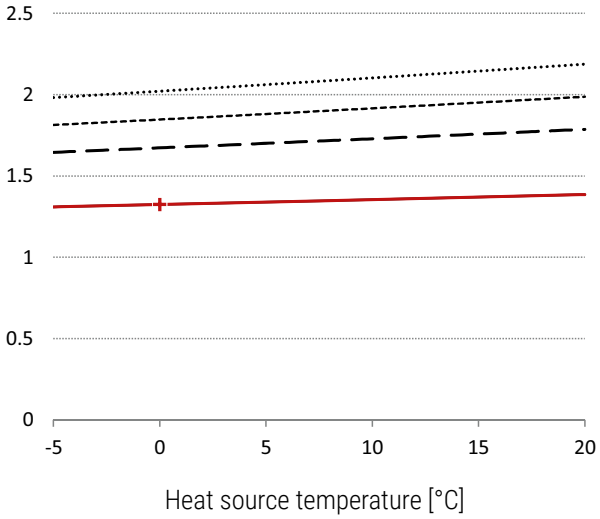
Volume flow source minimum / nominal / standard **1.04/1.19/1.39 m³/h**
Volume flow heater minimum / nominal / standard **0.51/0.72/1.01 m³/h**

Performance data as per EN 14511

Heat output in kW



Electric output in kW



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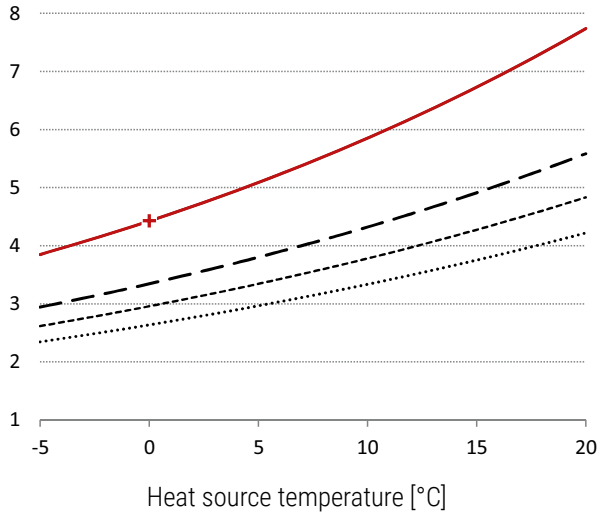
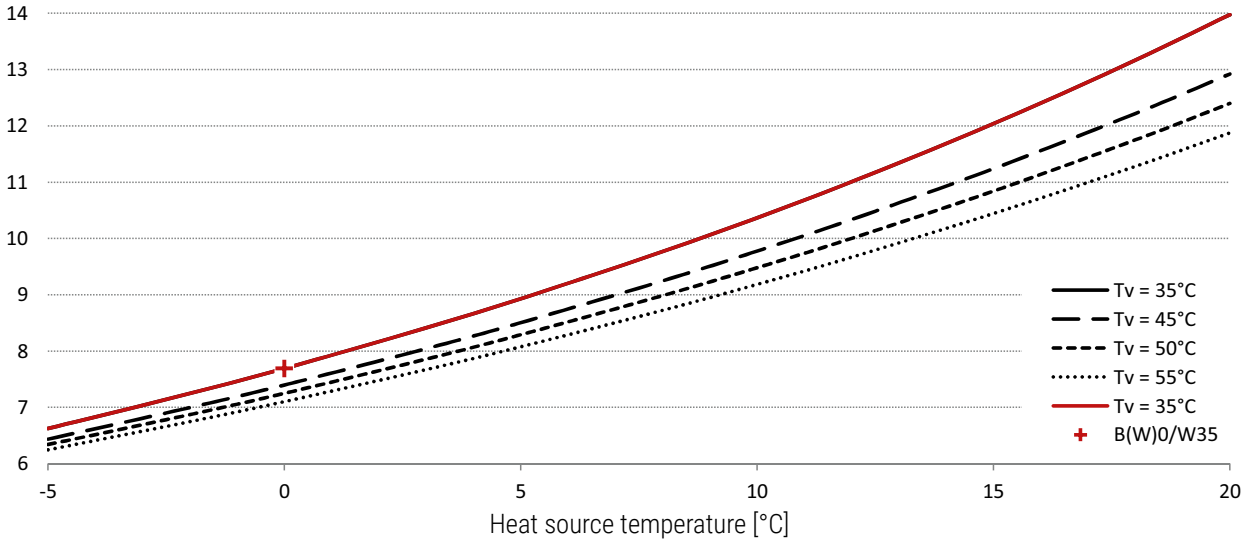


Power curves
Optiheat OH 1-8es

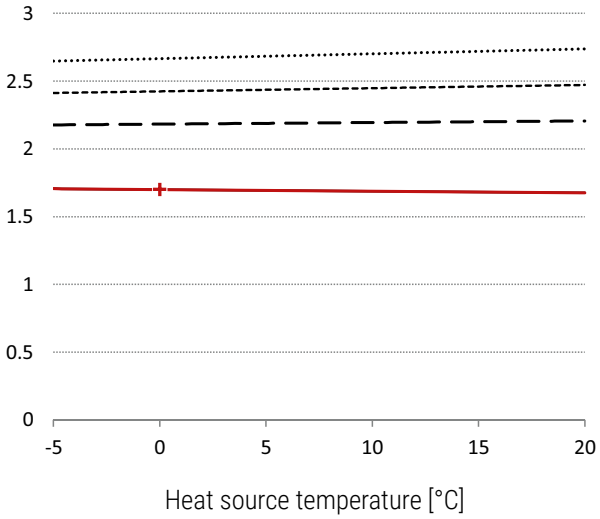
Volume flow source minimum / nominal / standard **1.36/1.55/1.81 m³/h**
Volume flow heater minimum / nominal / standard **0.66/0.95/1.33 m³/h**

Performance data as per EN 14511

Heat output in kW



Electric output in kW



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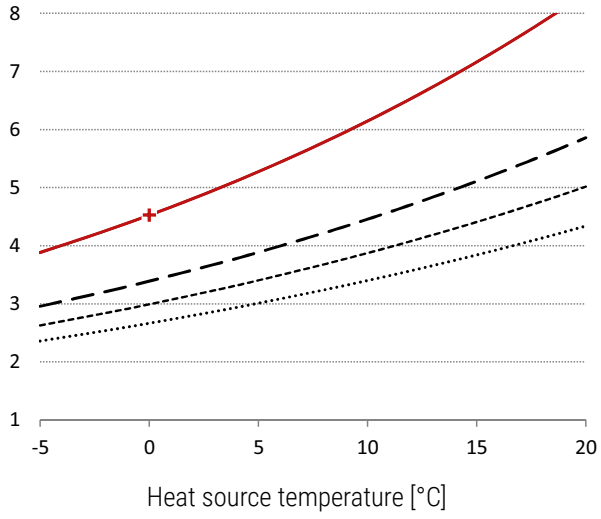
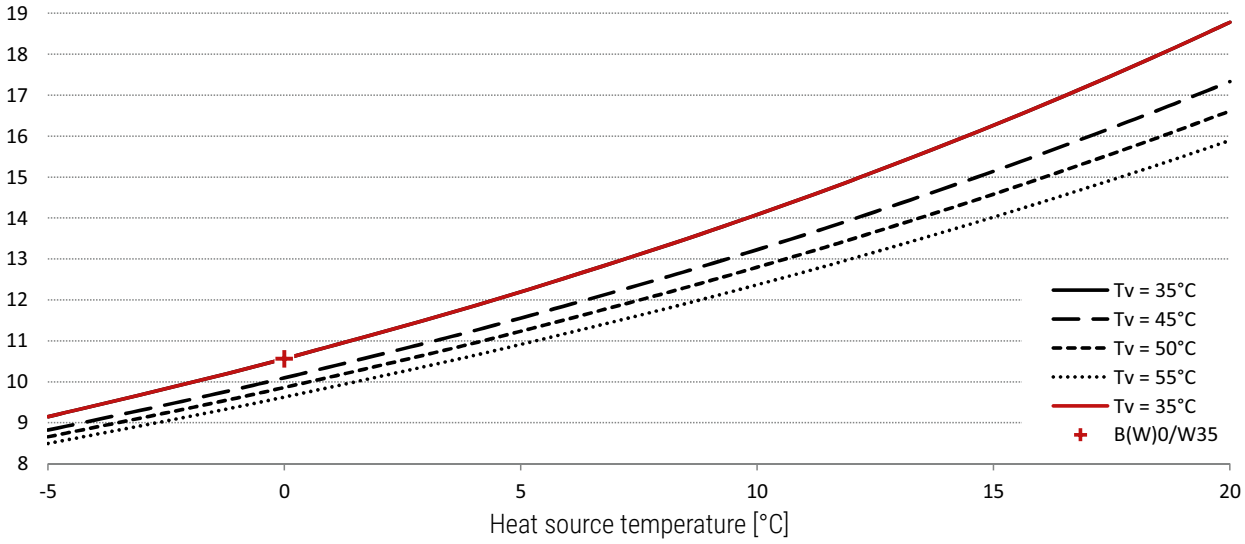


Power curves
Optiheat OH 1-11es

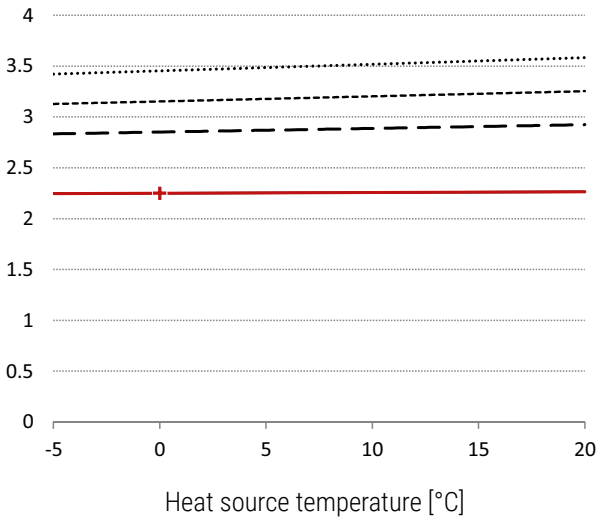
Volume flow source minimum / nominal / standard **1.98/2.15/2.51 m³/h**
Volume flow heater minimum / nominal / standard **0.91/1.30/1.91 m³/h**

Performance data as per EN 14511

Heat output in kW



Electric output in kW



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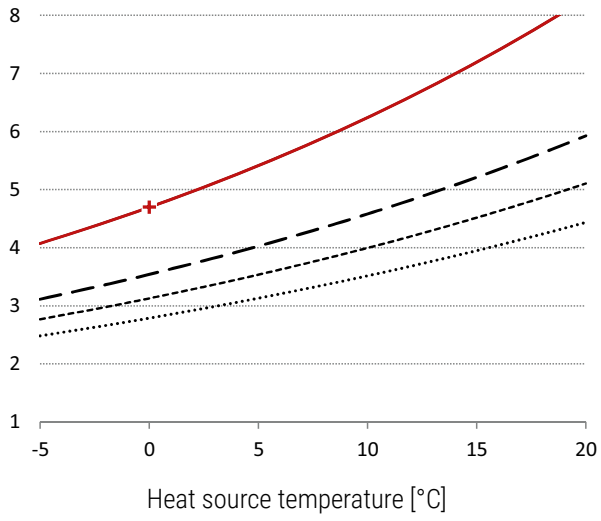
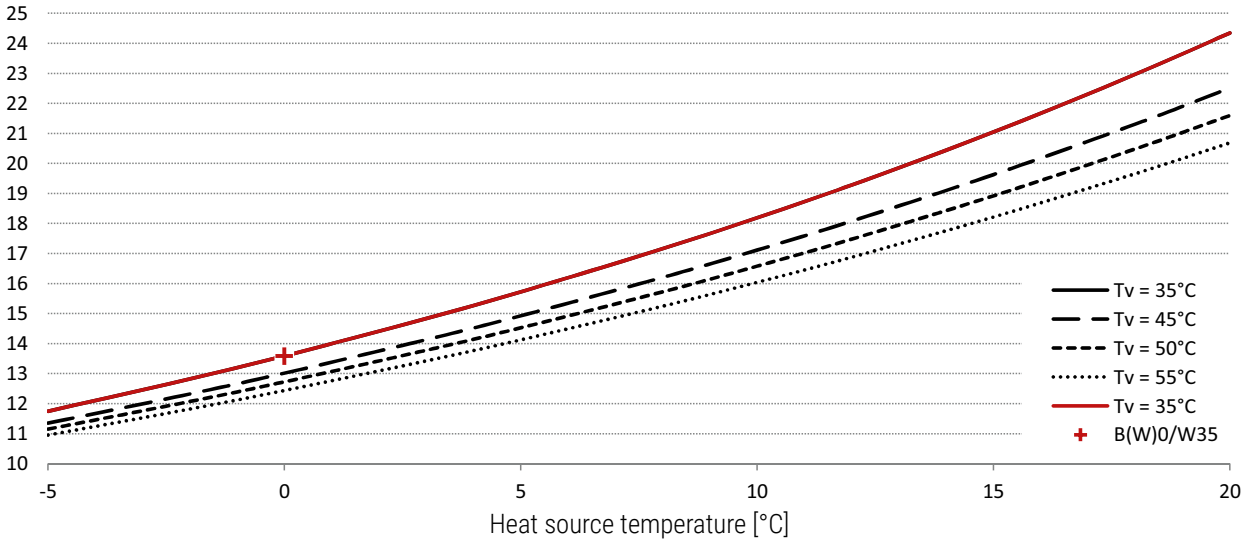


Power curves
Optiheat OH 1-14es

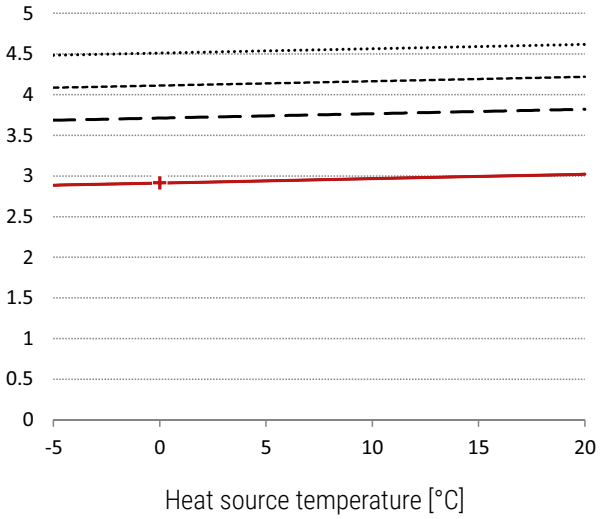
Volume flow source minimum / nominal / standard **2.45/2.80/3.27 m³/h**
Volume flow heater minimum / nominal / standard **1.19/1.69/2.36 m³/h**

Performance data as per EN 14511

Heat output in kW



Electric output in kW



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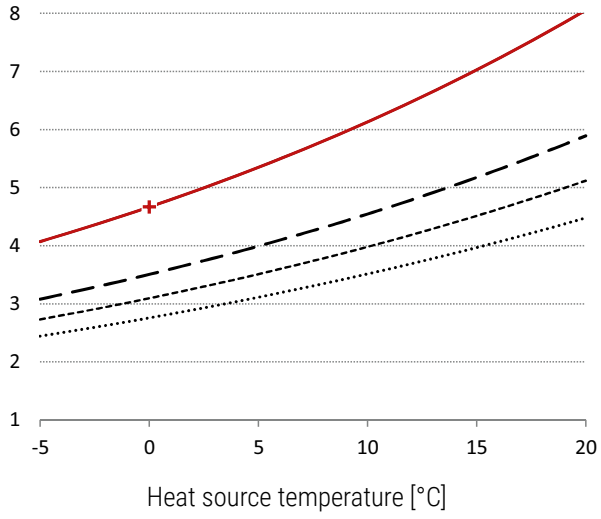
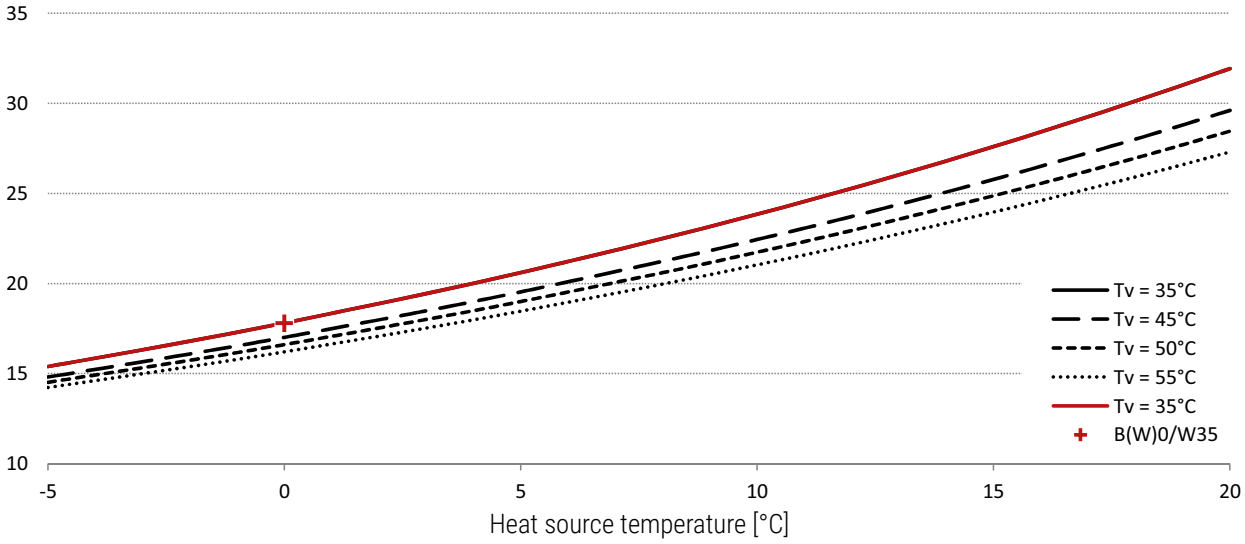


Power curves
Optiheat OH 1-18es

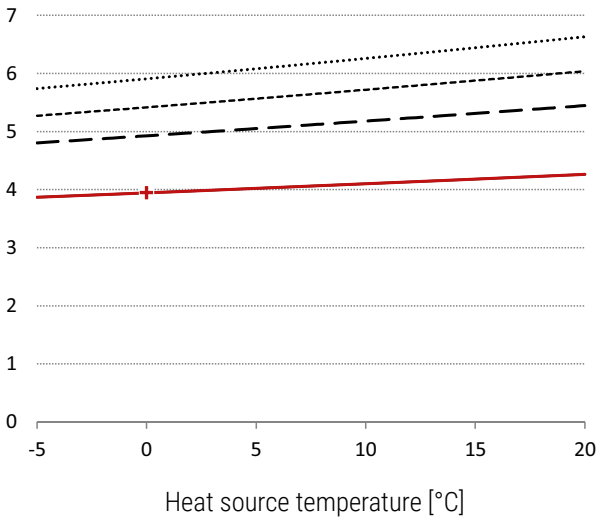
Volume flow source minimum / nominal / standard **3.13/3.58/4.18 m³/h**
Volume flow heater minimum / nominal / standard **1.53/2.18/3.06 m³/h**

Performance data as per EN 14511

Heat output in kW



Electric output in kW



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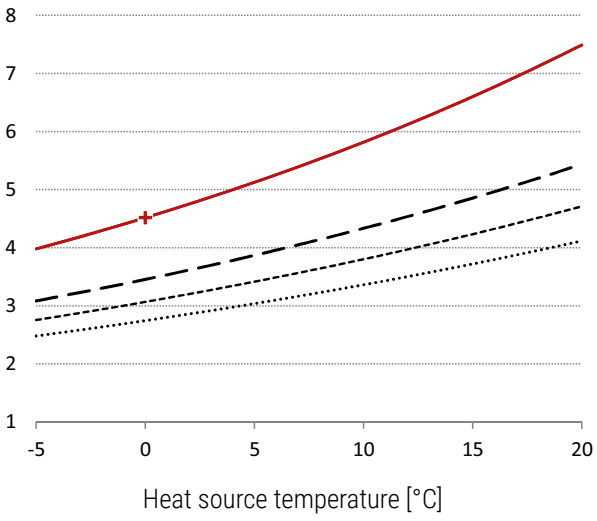


Function description

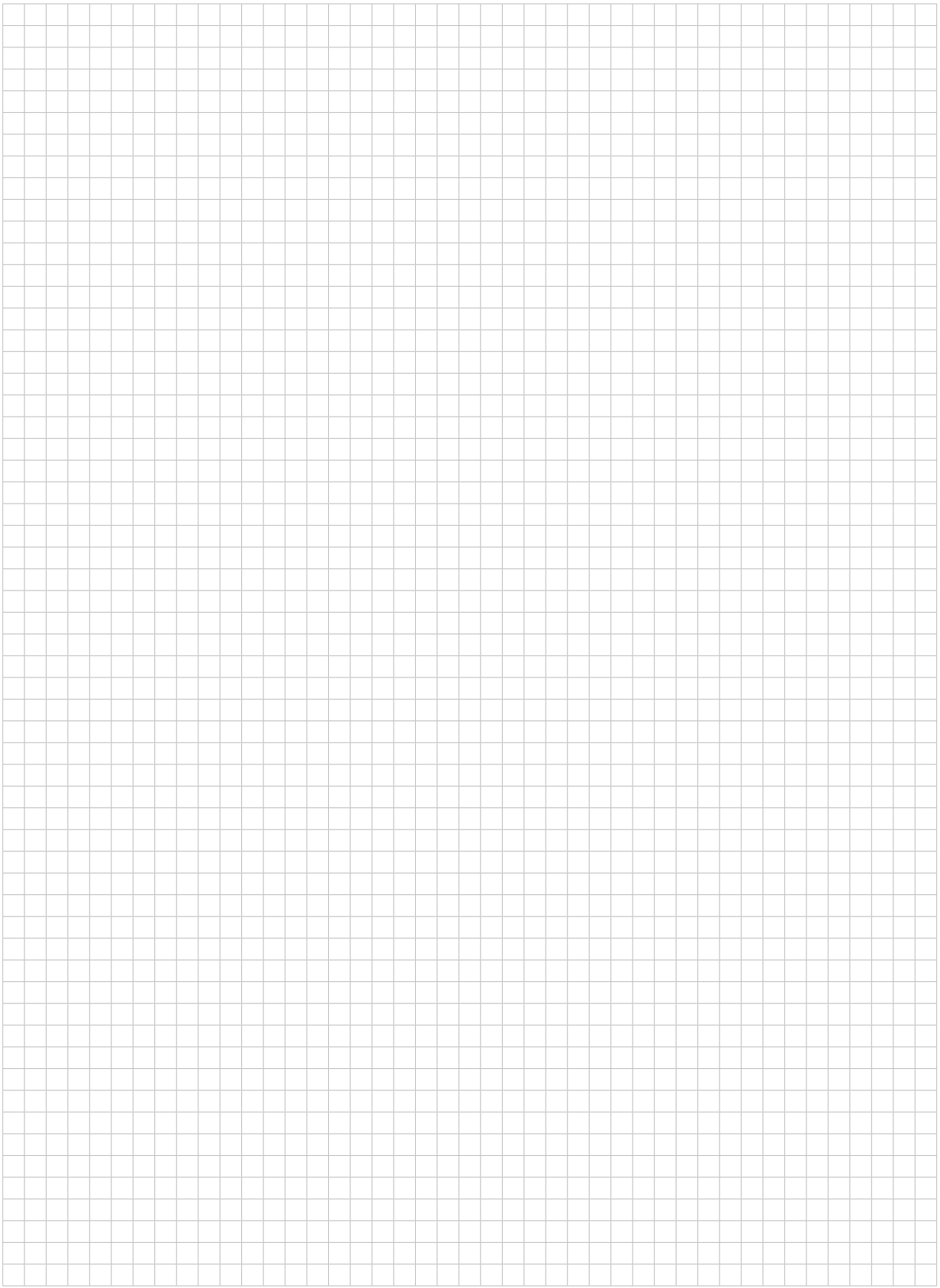
Heat pump
Start the heat pump via the external temperature sensor B9. Depending on the hydraulic integration, this works directly on the buffer storage or directly in the heating circulation. Depending on the heat demand, the heat pump is switched on and off via the temperature sensors B4/B41 or B71.
The heat pump has a restart delay in order to prevent wobbling. In case of direct heat operation (e. g. underfloor heating), the condenser pump Q9 is in operation during the entire heating period.

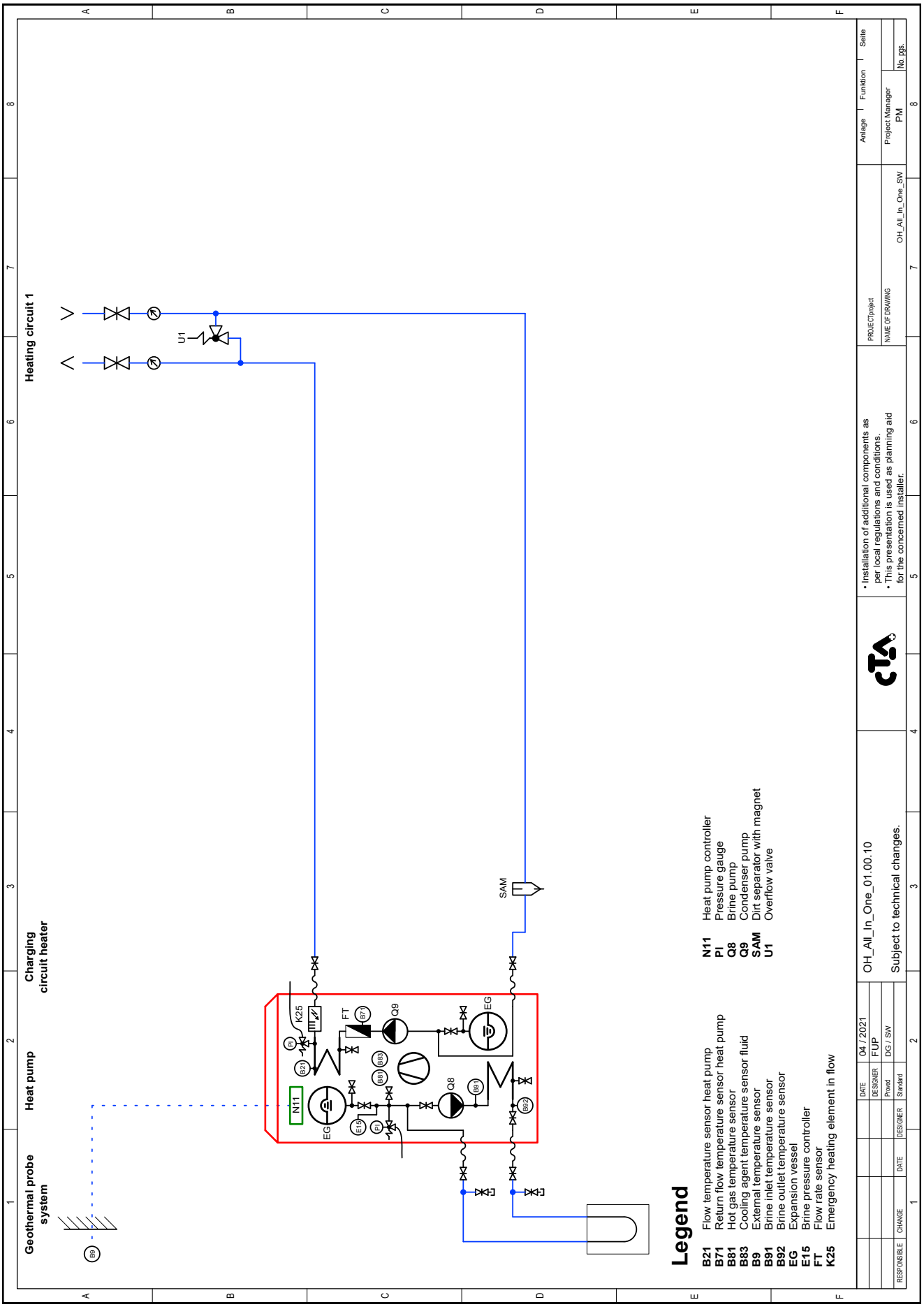
DHW charging
DHW is charged according to the time program to the respective setpoint value. Charge is released via the temperature sensor B3, and the deflector valve Q3 is switched. The electrical heating element K6 in the DHW storage is released by the heat pump controller (further release necessary).
An external heat exchanger is used for DHW storage without internal register. Two additional temperature sensors B31 and B36 must be installed for controlling the intermediate circuit pump Q33.

Buffer storage
If a buffer storage is used in the hydraulic system, the heat generator side and consumer side are decoupled. The storage is used to bridge heat generator locks. The setpoint value of the storage is calculated by the maximum demand of the consumer groups.

Discharge control
The setpoint value for the heating flow is calculated with the current outside temperature and the set heating curve. The discharge control adjusts the flow temperature B1 with the mixing valve Y1 to this setpoint value. The discharge pump Q2 is in operation during the entire heating period.

Free Cooling
For passive cooling, cooling is done without operating a cooling generator. Heat is returned to the connected source (soil sensor or ground water).
For cooling requirement, the source circuit is controlled by means of the deflector valves Y28 and Y21 (in case of mixed discharge group) via the plate heat exchanger (PWT).
The heat pump controller runs a cooling curve via the external temperature B9, this is controlled with the mixer Y1 and the flow temperature B1. For available room thermostat valves, these must be adaptable for the cooling as well as the heating operation.




Geothermal probe system
Heat pump
Charging circuit heater
Heating circuit 1
U1
SAM
N11
K25
FT
Q9
Q8
EG
B9
B21
B71
B81
B83
B91
B92
E15
Legend
B21 Flow temperature sensor heat pump
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
EG Expansion vessel
E15 Brine pressure controller
FT Flow rate sensor
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
Q8 Brine pump
Q9 Condenser pump
SAM Dirt separator with magnet
U1 Overflow valve
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• Installation of additional components as per local regulations and conditions.
• This presentation is used as planning aid for the concerned installer.
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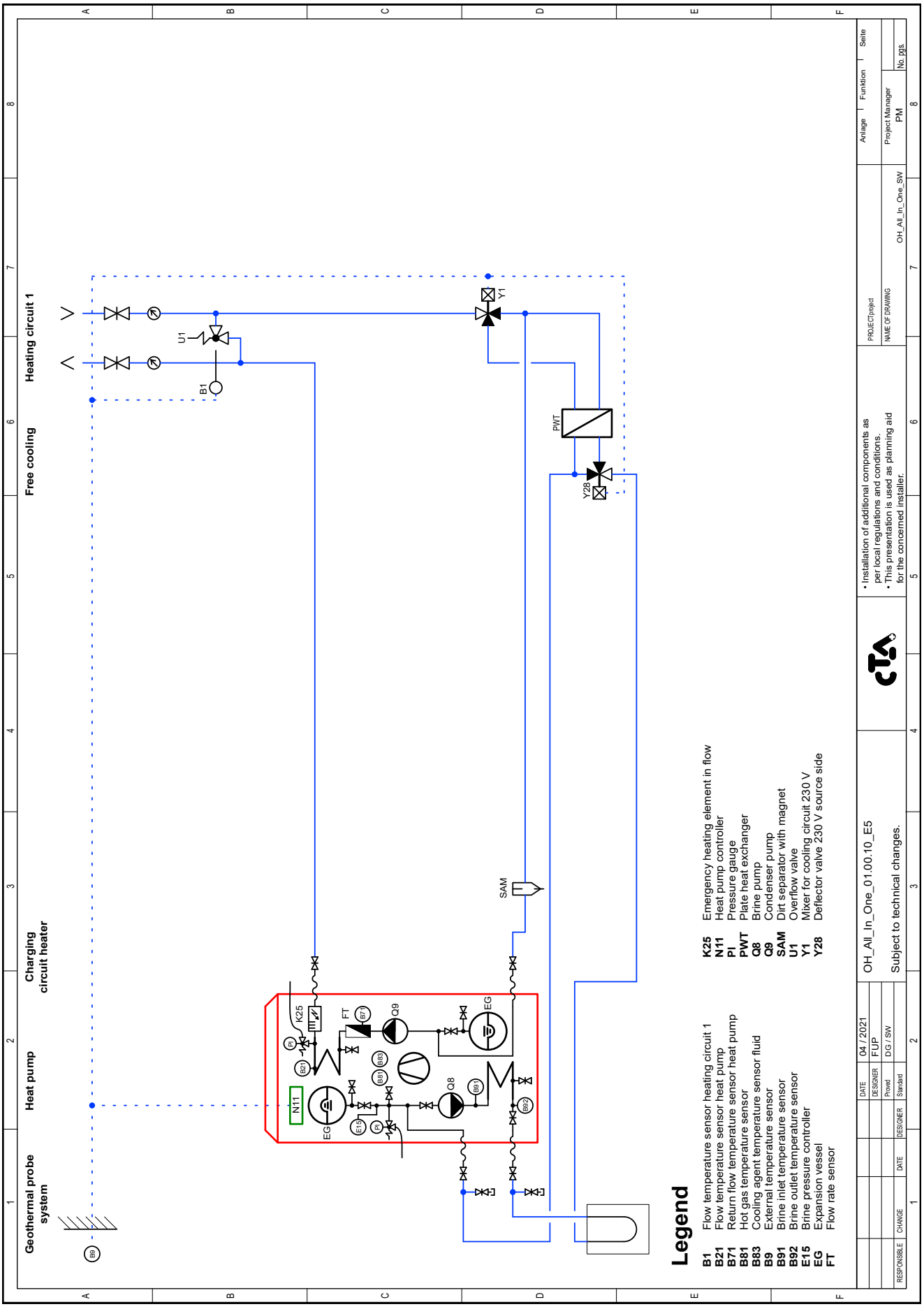
Geothermal probe system
Heat pump
Charging circuit heater
Free cooling
Heating circuit 1
B1
U1
Y1
PWT
Y28
SAM
K25
FT
Q9
EG
Q8
N11
Legend
B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
E15 Brine pressure controller
EG Expansion vessel
FT Flow rate sensor
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
PWT Plate heat exchanger
Q8 Brine pump
Q9 Condenser pump
SAM Dirt separator with magnet
U1 Overflow valve
Y1 Mixer for cooling circuit 230 V
Y28 Deflector valve 230 V source side
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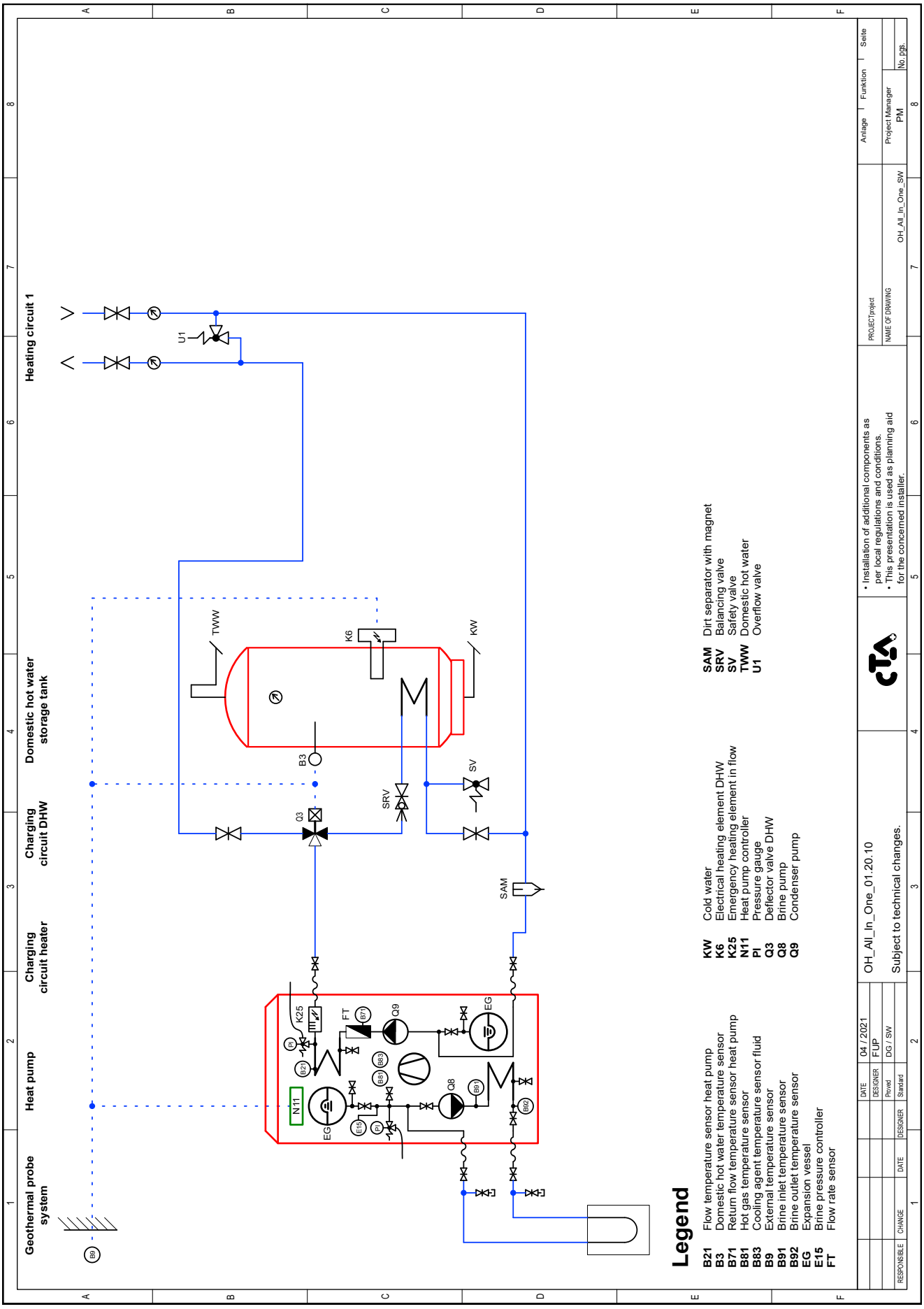
Geothermal probe system
Heat pump
Charging circuit heater
Charging circuit DHW
Domestic hot water storage tank
Heating circuit 1
Legend
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
EG Expansion vessel
E15 Brine pressure controller
FT Flow rate sensor
KW Cold water
K6 Electrical heating element DHW
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
Q3 Deflector valve DHW
Q8 Brine pump
Q9 Condenser pump
SAM Dirt separator with magnet
SRV Balancing valve
SV Safety valve
TWW Domestic hot water
U1 Overflow valve
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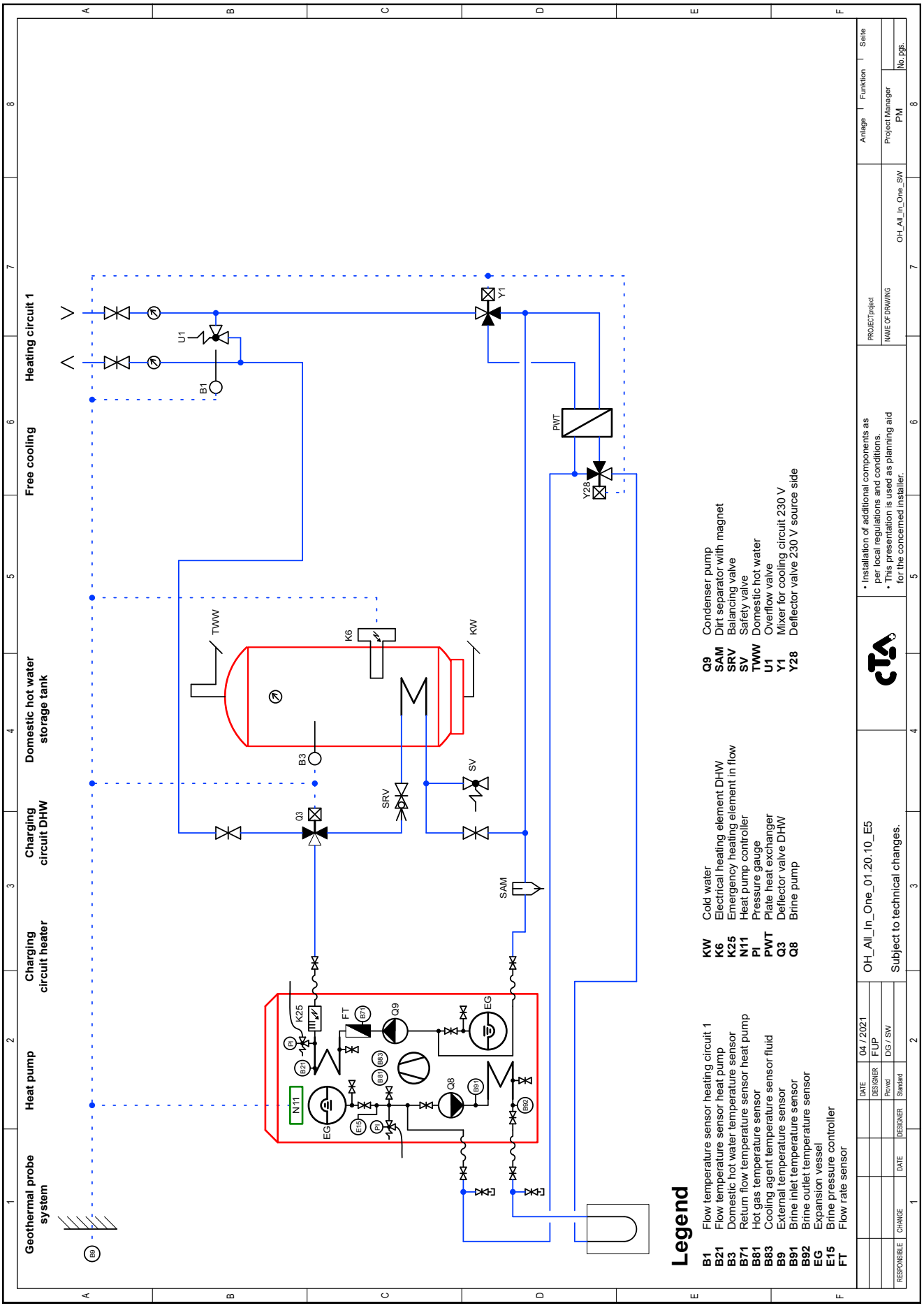
Geothermal probe system
Heat pump
Charging circuit heater
Charging circuit DHW
Domestic hot water storage tank
Free cooling
Heating circuit 1
Legend
B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
EG Expansion vessel
E15 Brine pressure controller
FT Flow rate sensor
KW Cold water
K6 Electrical heating element DHW
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
PWT Plate heat exchanger
Q3 Deflector valve DHW
Q8 Brine pump
Q9 Condenser pump
SAM Dirt separator with magnet
SRV Balancing valve
SV Safety valve
TWW Domestic hot water
U1 Overflow valve
Y1 Mixer for cooling circuit 230 V
Y28 Deflector valve 230 V source side
• Installation of additional components as per local regulations and conditions.
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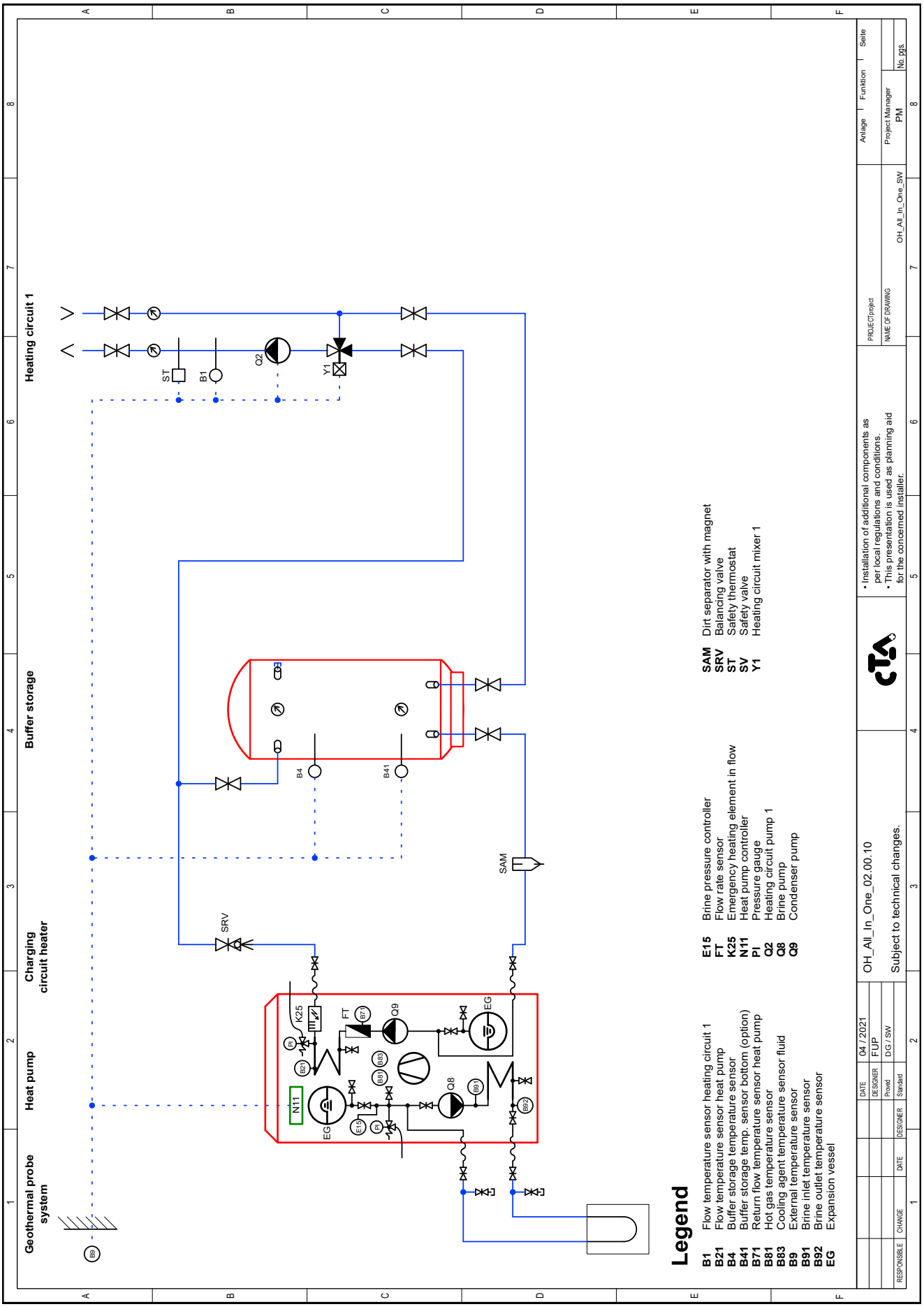
Geothermal probe system
Heat pump
Charging circuit heater
Buffer storage
Heating circuit 1
Legend
B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B4 Buffer storage temperature sensor
B41 Buffer storage temp. sensor bottom (option)
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
EG Expansion vessel
E15 Brine pressure controller
FT Flow rate sensor
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
Q2 Heating circuit pump 1
Q8 Brine pump
Q9 Condenser pump
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve
Y1 Heating circuit mixer 1
• Installation of additional components as per local regulations and conditions.
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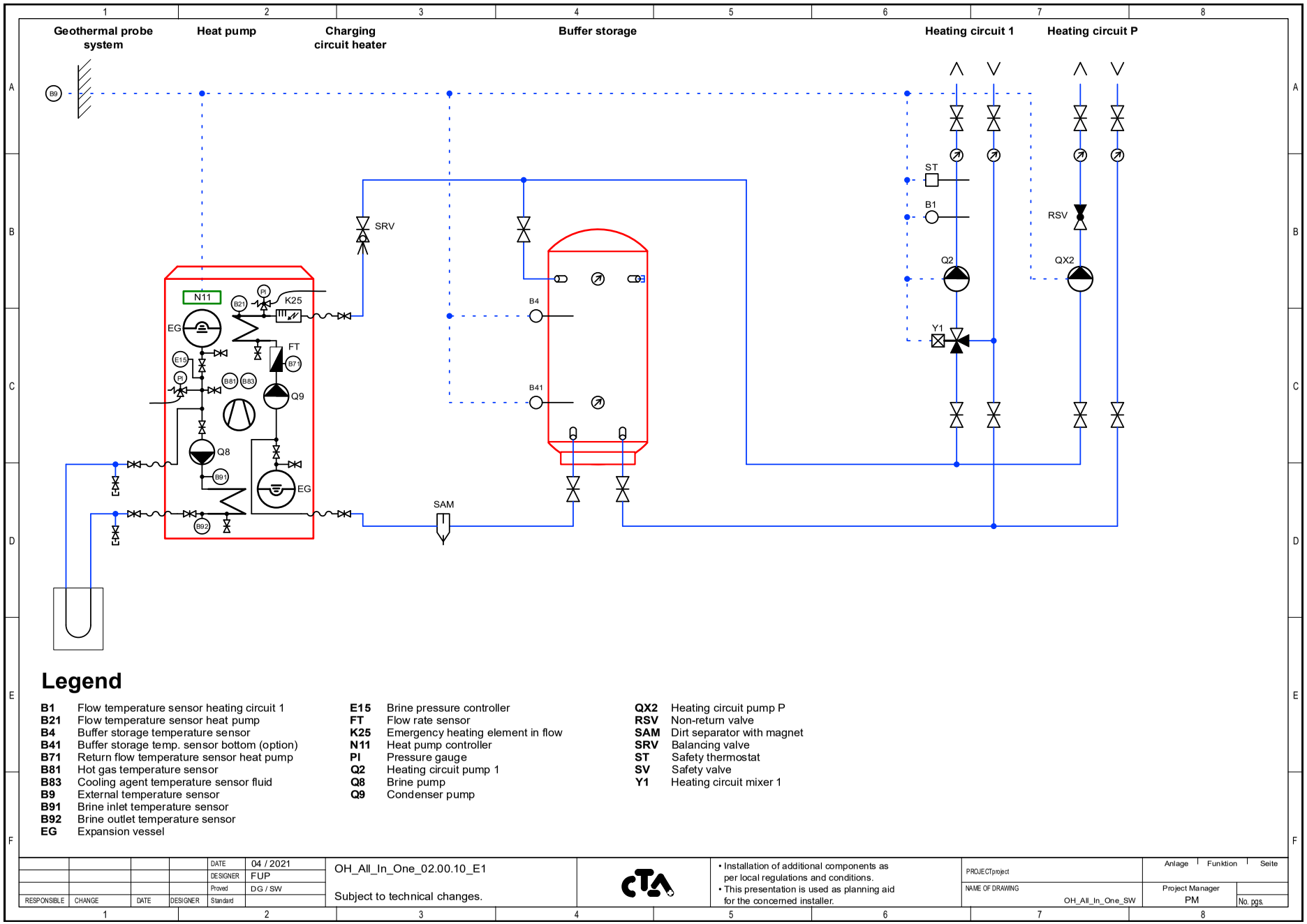

Legend

B1	Flow temperature sensor heating circuit 1
B21	Flow temperature sensor heat pump
B4	Buffer storage temperature sensor
B41	Buffer storage temp. sensor bottom (option)
B71	Return flow temperature sensor heat pump
B81	Hot gas temperature sensor
B83	Cooling agent temperature sensor fluid
B9	External temperature sensor
B91	Brine inlet temperature sensor
B92	Brine outlet temperature sensor
EG	Expansion vessel
E15	Brine pressure controller
FT	Flow rate sensor
K25	Emergency heating element in flow
N11	Heat pump controller
PI	Pressure gauge
Q2	Heating circuit pump 1
Q8	Brine pump
Q9	Condenser pump
QX2	Heating circuit pump P
RSV	Non-return valve
SAM	Dirt separator with magnet
SRV	Balancing valve
ST	Safety thermostat
SV	Safety valve
Y1	Heating circuit mixer 1

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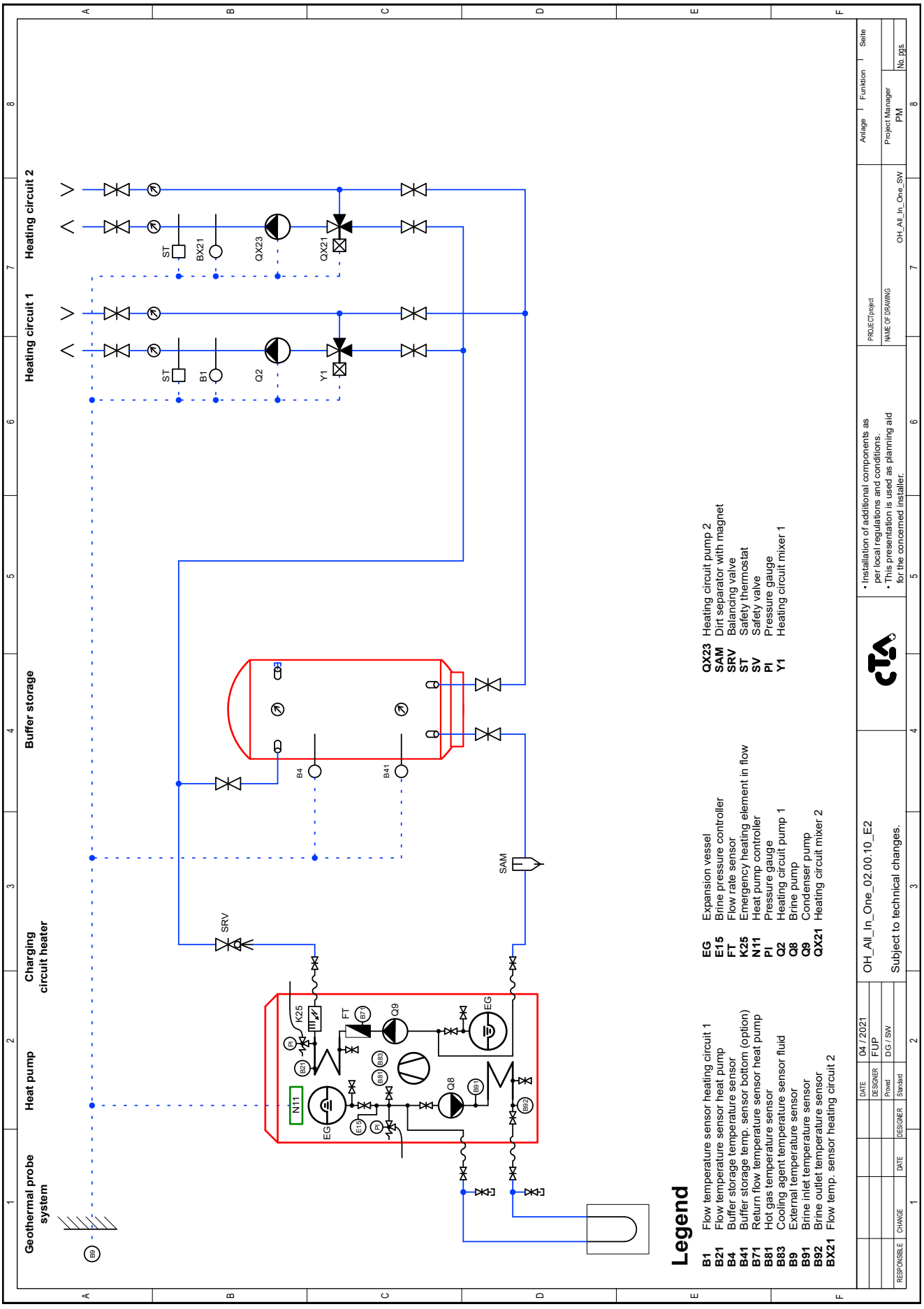
Geothermal probe system
Heat pump
Charging circuit heater
Buffer storage
Heating circuit 1
Heating circuit 2
Legend
B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B4 Buffer storage temperature sensor
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BX21 Flow temp. sensor heating circuit 2
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FT Flow rate sensor
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
Q2 Heating circuit pump 1
Q8 Brine pump
Q9 Condenser pump
QX21 Heating circuit mixer 2
QX23 Heating circuit pump 2
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve
PI Pressure gauge
Y1 Heating circuit mixer 1
• Installation of additional components as per local regulations and conditions.
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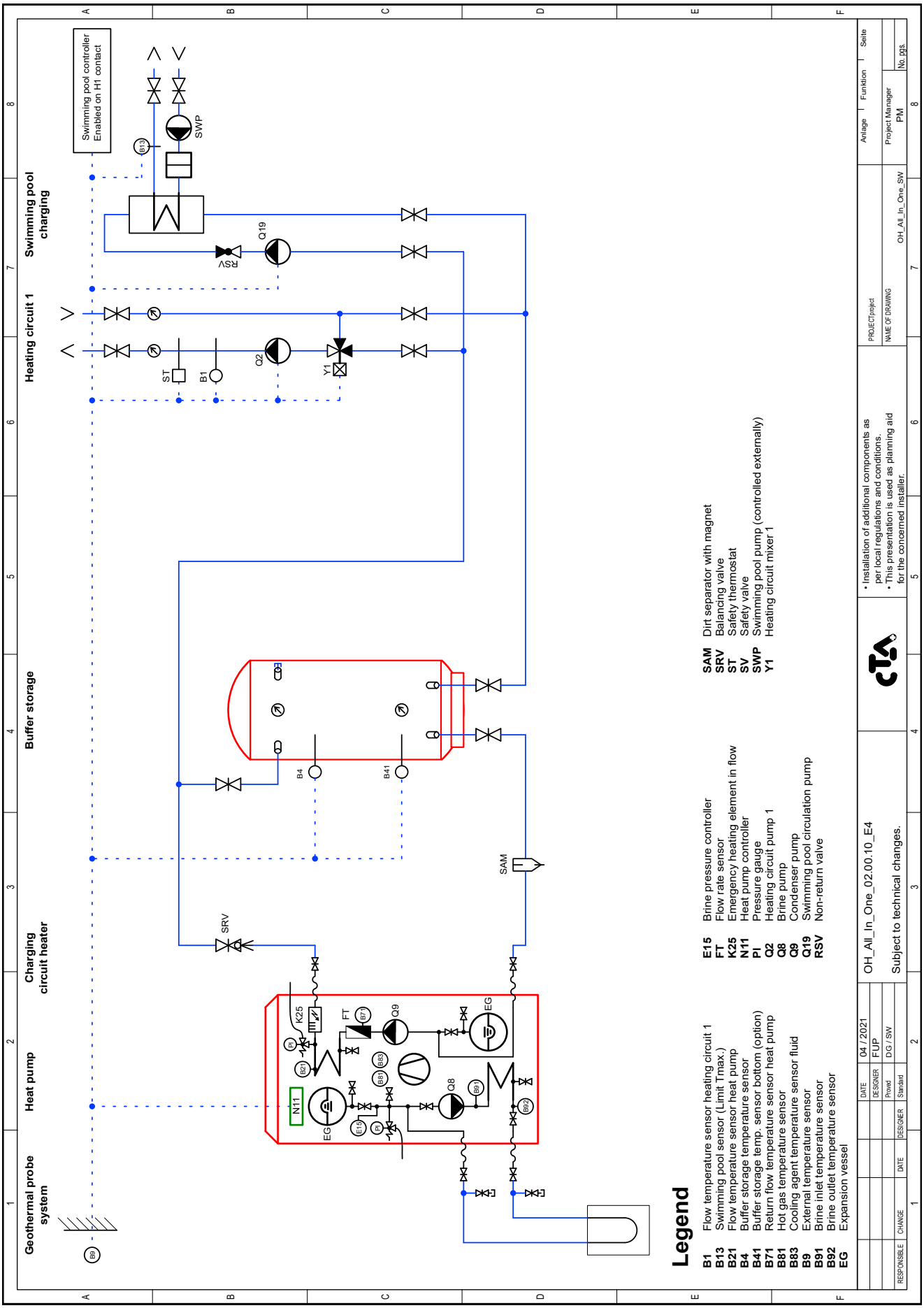
Geothermal probe system
Heat pump
Charging circuit heater
Buffer storage
Heating circuit 1
Swimming pool charging
Swimming pool controller Enabled on H1 contact
SWP
RSV
Q19
Q2
Y1
ST
B1
B4
B41
SAM
SRV
K25
FT
Q9
Q8
EG
N11
Legend
B1 Flow temperature sensor heating circuit 1
B13 Swimming pool sensor (Limit Tmax.)
B21 Flow temperature sensor heat pump
B4 Buffer storage temperature sensor
B41 Buffer storage temp. sensor bottom (option)
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
EG Expansion vessel
E15 Brine pressure controller
FT Flow rate sensor
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
Q2 Heating circuit pump 1
Q8 Brine pump
Q9 Condenser pump
Q19 Swimming pool circulation pump
RSV Non-return valve
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve
SWP Swimming pool pump (controlled externally)
Y1 Heating circuit mixer 1
• Installation of additional components as per local regulations and conditions.
• This presentation is used as planning aid for the concerned installer.
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PROJECT/project
NAME OF DRAWING
OH_All_In_One_SW
Project Manager PM
Anlage | Funktion | Seite
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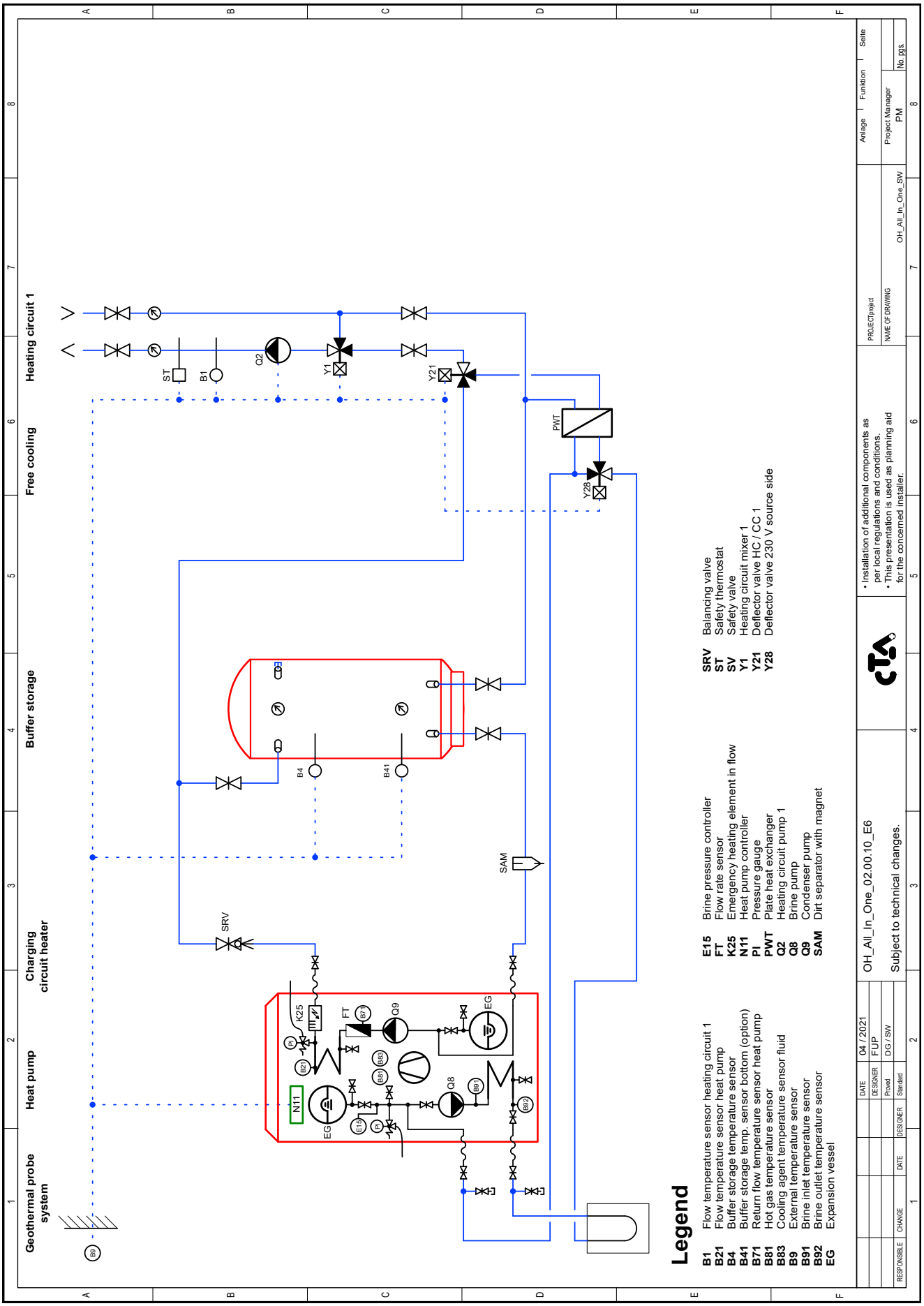
DATE 04 / 2021
DESIGNER FUP
Proved D.G. / SW
Standard
RESPONSIBLE CHANGE DATE DESIGNER


Geothermal probe system
Heat pump
Charging circuit heater
Buffer storage
Free cooling
Heating circuit 1
Legend
B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B4 Buffer storage temperature sensor
B41 Buffer storage temp. sensor bottom (option)
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
EG Expansion vessel
E15 Brine pressure controller
FT Flow rate sensor
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
PWT Plate heat exchanger
Q2 Heating circuit pump 1
Q8 Brine pump
Q9 Condenser pump
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve
Y1 Heating circuit mixer 1
Y21 Deflector valve HC / CC 1
Y28 Deflector valve 230 V source side
• Installation of additional components as per local regulations and conditions.
• This presentation is used as planning aid for the concerned installer.
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OH_All_In_One_02.00.10_E6
04 / 2021
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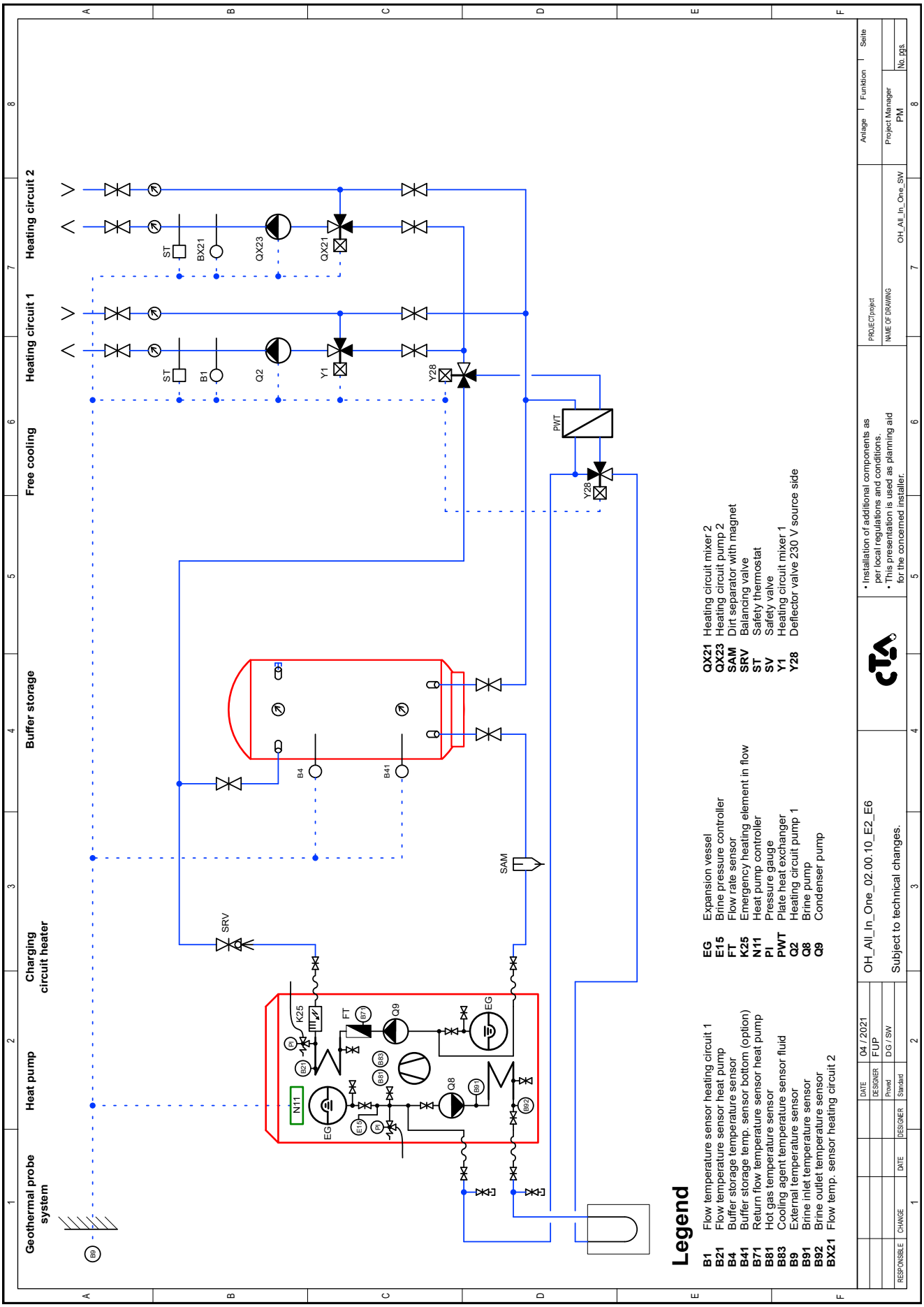
D/G / SW
Standard
OH_All_In_One_SW
Project Manager PM


Geothermal probe system
Heat pump
Charging circuit heater
Buffer storage
Free cooling
Heating circuit 1
Heating circuit 2
Legend
B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B4 Buffer storage temperature sensor
B41 Buffer storage temp. sensor bottom (option)
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
BX21 Flow temp. sensor heating circuit 2
EG Expansion vessel
E15 Brine pressure controller
FT Flow rate sensor
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
PWT Plate heat exchanger
Q2 Heating circuit pump 1
Q8 Brine pump
Q9 Condenser pump
QX21 Heating circuit mixer 2
QX23 Heating circuit pump 2
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve
Y1 Heating circuit mixer 1
Y28 Deflector valve 230 V source side
• Installation of additional components as per local regulations and conditions.
• This presentation is used as planning aid for the concerned installer.
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PROJECT/project
NAME OF DRAWING
OH_All_In_One_SW
Project Manager PM
Anlage
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DATE 04 / 2021
DESIGNER FUP
Proved D.G. / SW
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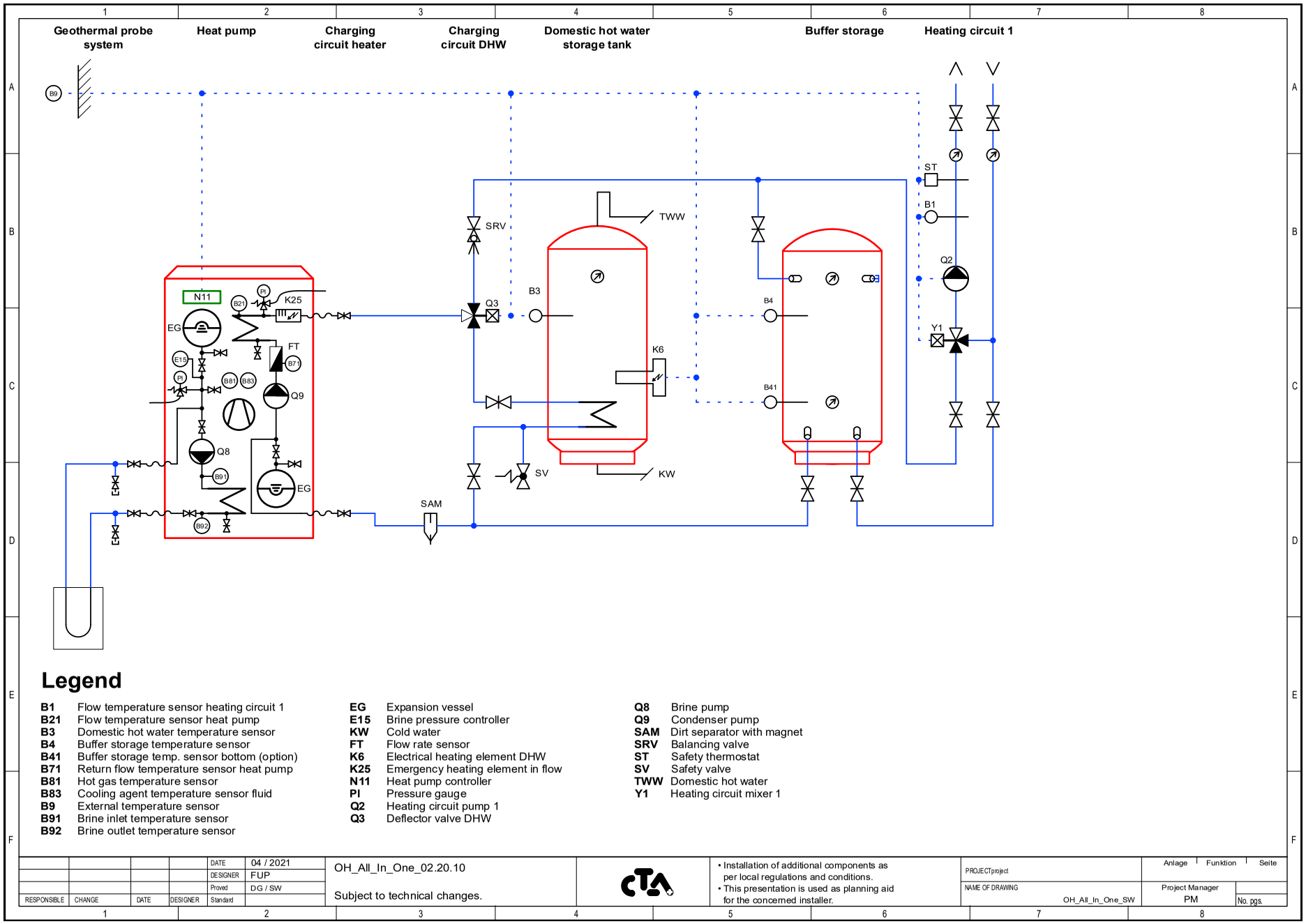

Legend

B1	Flow temperature sensor heating circuit 1
B21	Flow temperature sensor heat pump
B3	Domestic hot water temperature sensor
B4	Buffer storage temperature sensor
B41	Buffer storage temp. sensor bottom (option)
B71	Return flow temperature sensor heat pump
B81	Hot gas temperature sensor
B83	Cooling agent temperature sensor fluid
B9	External temperature sensor
B91	Brine inlet temperature sensor
B92	Brine outlet temperature sensor
EG	Expansion vessel
E15	Brine pressure controller
KW	Cold water
FT	Flow rate sensor
K6	Electrical heating element DHW
K25	Emergency heating element in flow
N11	Heat pump controller
PI	Pressure gauge
Q2	Heating circuit pump 1
Q3	Deflector valve DHW
Q8	Brine pump
Q9	Condenser pump
SAM	Dirt separator with magnet
SRV	Balancing valve
ST	Safety thermostat
SV	Safety valve
TWW	Domestic hot water
Y1	Heating circuit mixer 1

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- This presentation is used as planning aid for the concerned installer.

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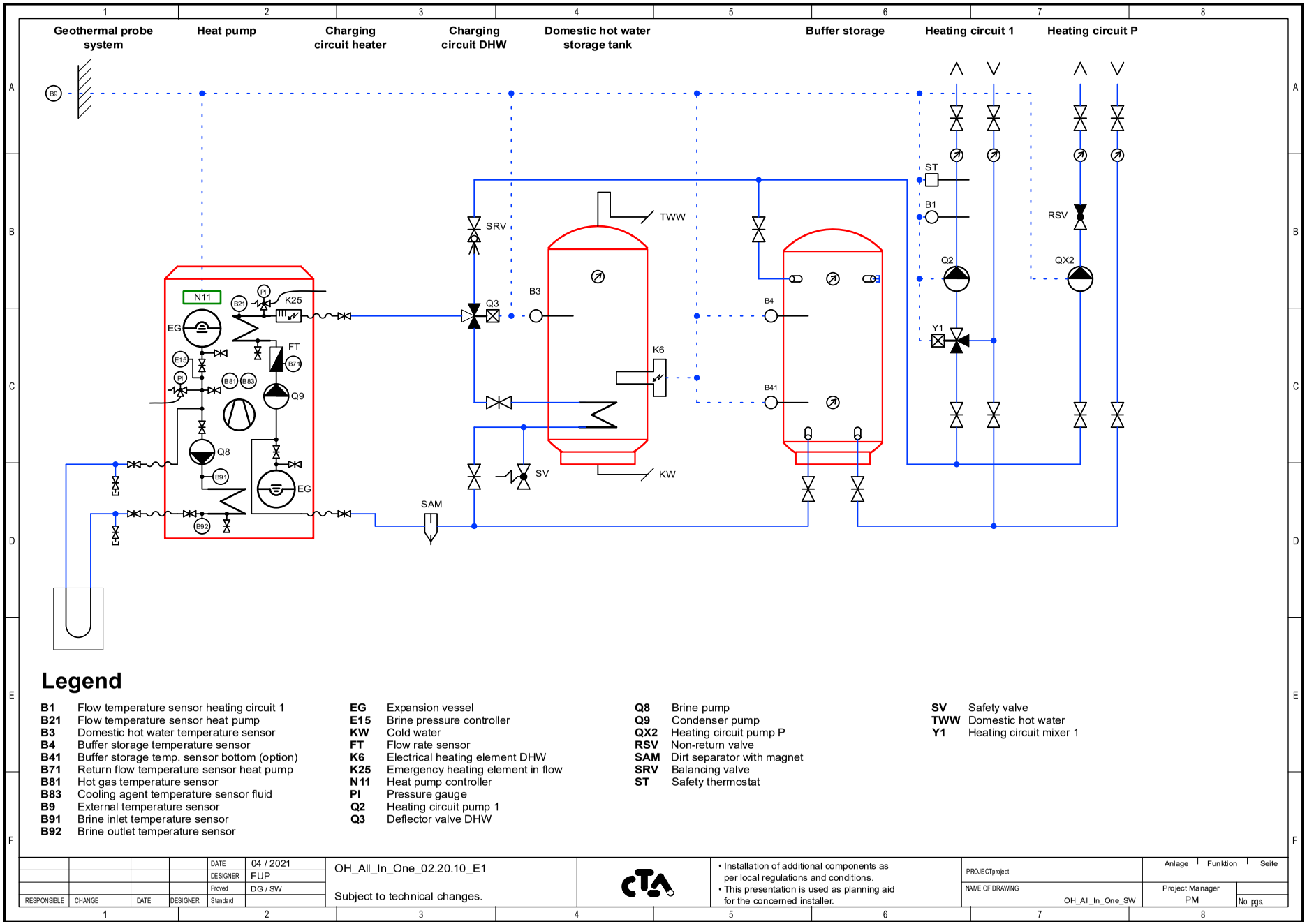

Legend

B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B4 Buffer storage temperature sensor
B41 Buffer storage temp. sensor bottom (option)
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor

EG Expansion vessel
E15 Brine pressure controller
KW Cold water
FT Flow rate sensor
K6 Electrical heating element DHW
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
Q2 Heating circuit pump 1
Q3 Deflector valve DHW

Q8 Brine pump
Q9 Condenser pump
QX2 Heating circuit pump P
RSV Non-return valve
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat

SV Safety valve
TWW Domestic hot water
Y1 Heating circuit mixer 1

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OH_All_In_One_02.20.10_E1

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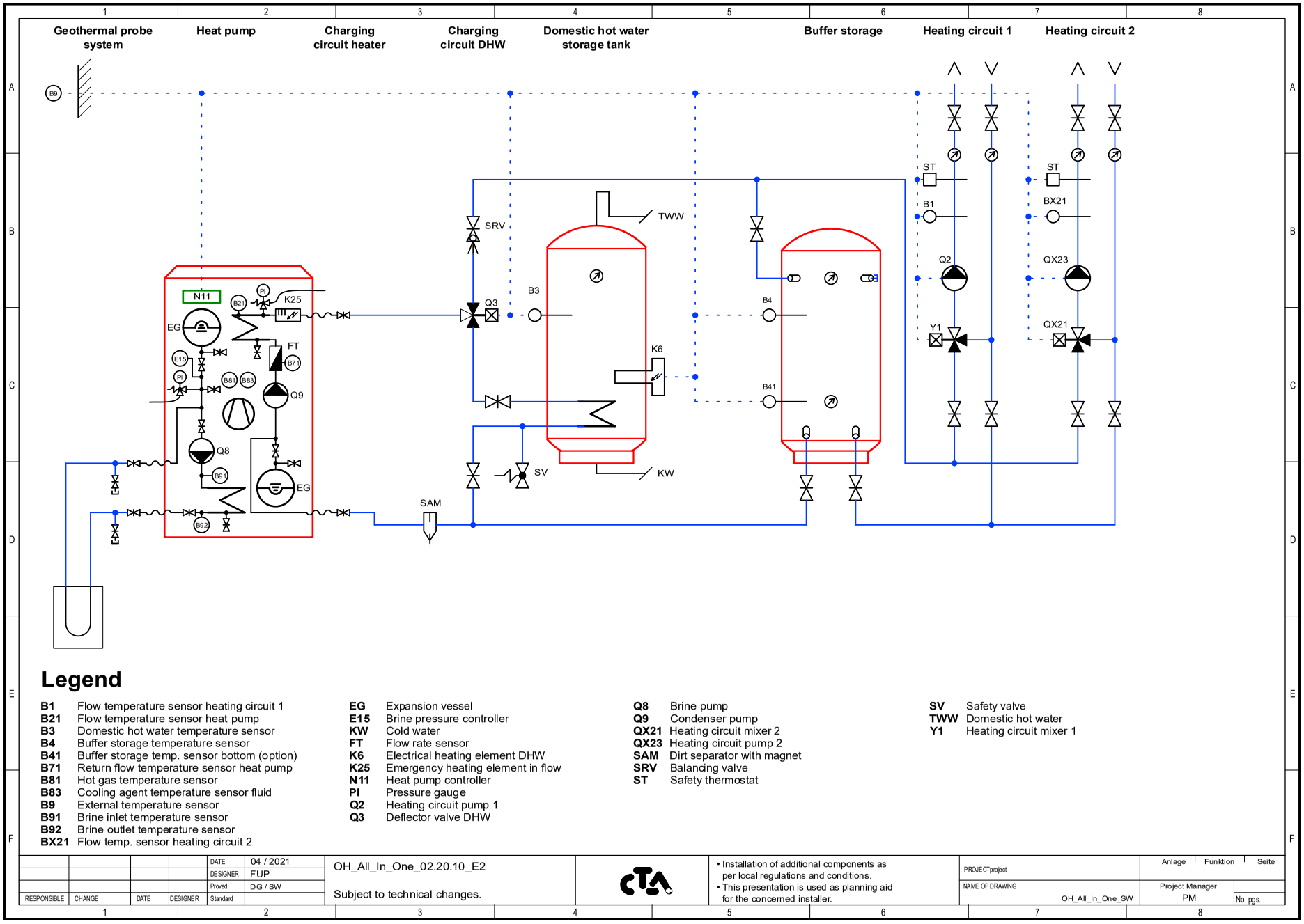

Legend

B1	Flow temperature sensor heating circuit 1
B21	Flow temperature sensor heat pump
B3	Domestic hot water temperature sensor
B4	Buffer storage temperature sensor
B41	Buffer storage temp. sensor bottom (option)
B71	Return flow temperature sensor heat pump
B81	Hot gas temperature sensor
B83	Cooling agent temperature sensor fluid
B9	External temperature sensor
B91	Brine inlet temperature sensor
B92	Brine outlet temperature sensor
BX21	Flow temp. sensor heating circuit 2
EG	Expansion vessel
E15	Brine pressure controller
KW	Cold water
FT	Flow rate sensor
K6	Electrical heating element DHW
K25	Emergency heating element in flow
N11	Heat pump controller
PI	Pressure gauge
Q2	Heating circuit pump 1
Q3	Deflector valve DHW
Q8	Brine pump
Q9	Condenser pump
QX21	Heating circuit mixer 2
QX23	Heating circuit pump 2
SAM	Dirt separator with magnet
SRV	Balancing valve
ST	Safety thermostat
SV	Safety valve
TWW	Domestic hot water
Y1	Heating circuit mixer 1

				DATE	04 / 2021
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OH_All_In_One_02.20.10_E2

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- Installation of additional components as per local regulations and conditions.
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NAME OF DRAWING OH_All_In_One_SW

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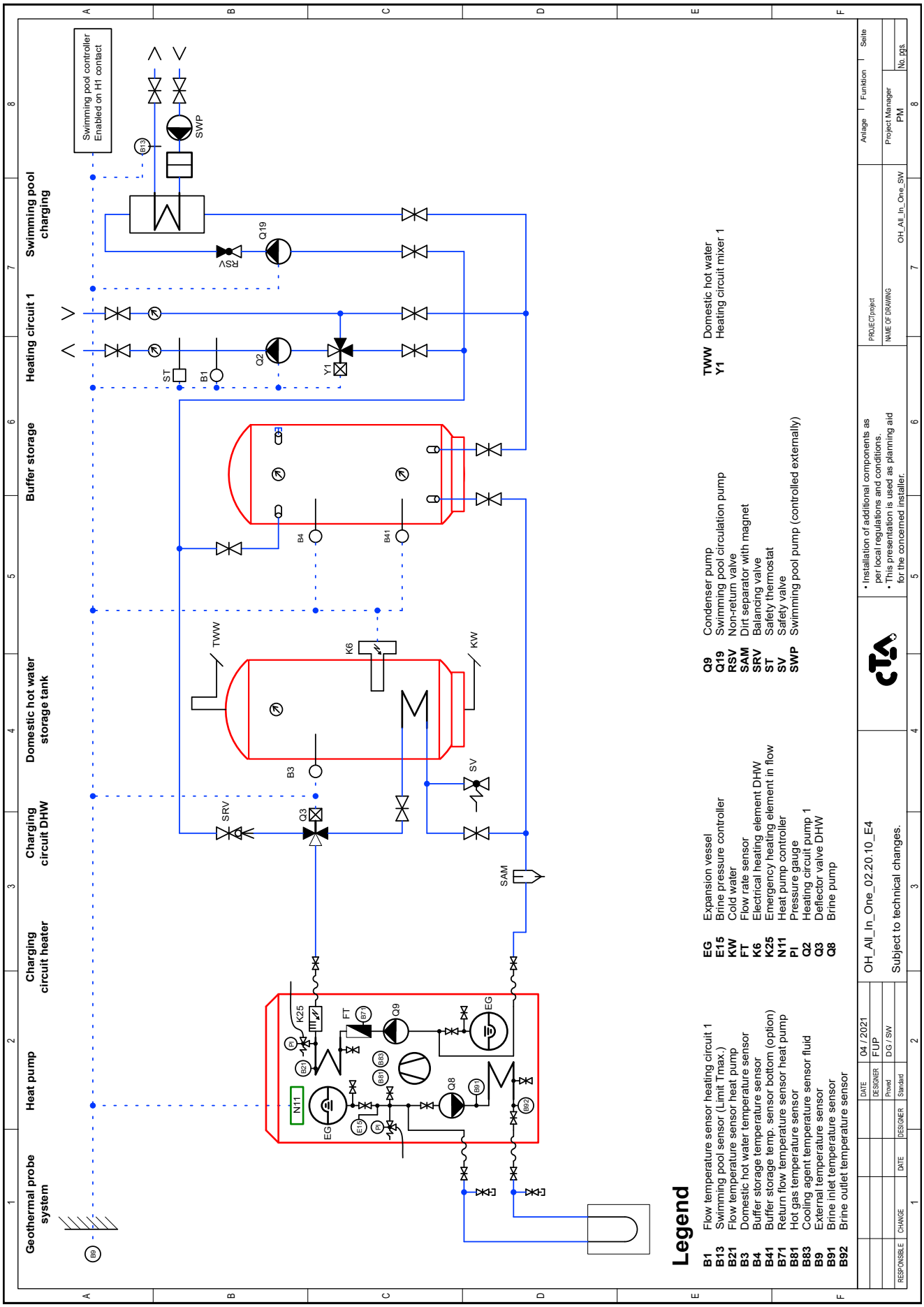
Geothermal probe system
Heat pump
Charging circuit heater
Charging circuit DHW
Domestic hot water storage tank
Buffer storage
Heating circuit 1
Swimming pool charging
Swimming pool controller Enabled on H1 contact
Legend
B1 Flow temperature sensor heating circuit 1
B13 Swimming pool sensor (Limit Tmax.)
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B4 Buffer storage temperature sensor
B41 Buffer storage temp. sensor bottom (option)
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
EG Expansion vessel
E15 Brine pressure controller
KW Cold water
FT Flow rate sensor
K6 Electrical heating element DHW
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
Q2 Heating circuit pump 1
Q3 Deflector valve DHW
Q8 Brine pump
Q9 Condenser pump
Q19 Swimming pool circulation pump
RSV Non-return valve
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve
SWP Swimming pool pump (controlled externally)
TWW Domestic hot water
Y1 Heating circuit mixer 1
• Installation of additional components as per local regulations and conditions.
• This presentation is used as planning aid for the concerned installer.
OH_All_In_One_02.20.10_E4
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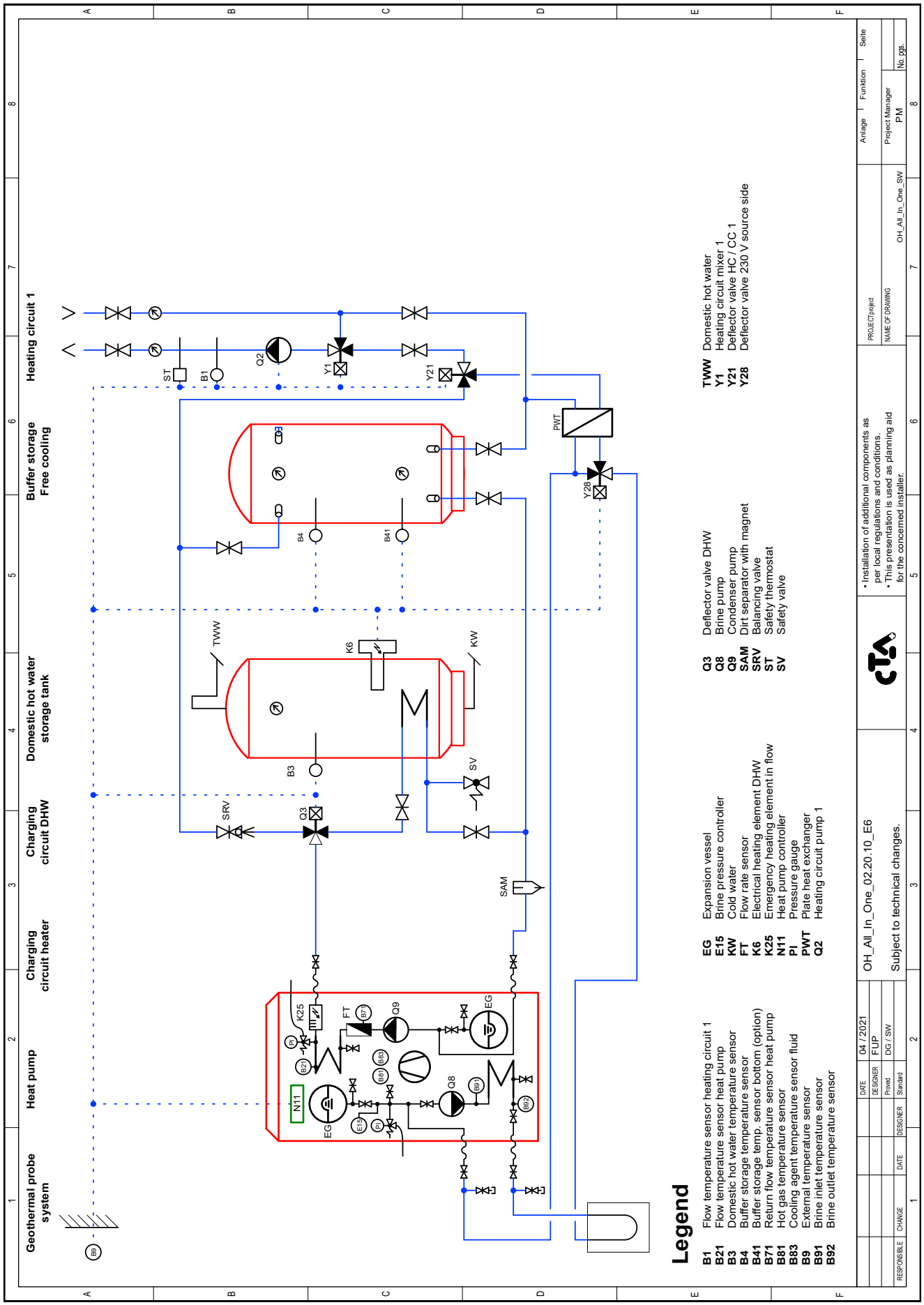
OH_All_In_One_SW
Project Manager PM


Geothermal probe system
Heat pump
Charging circuit heater
Charging circuit DHW
Domestic hot water storage tank
Buffer storage Free cooling
Heating circuit 1
Legend
B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B4 Buffer storage temperature sensor
B41 Buffer storage temp. sensor bottom (option)
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
EG Expansion vessel
E15 Brine pressure controller
KW Cold water
FT Flow rate sensor
K6 Electrical heating element DHW
K25 Emergency heating element in flow
N11 Heat pump controller
PI Pressure gauge
PWT Plate heat exchanger
Q2 Heating circuit pump 1
Q3 Deflector valve DHW
Q8 Brine pump
Q9 Condenser pump
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve
TWW Domestic hot water
Y1 Heating circuit mixer 1
Y21 Deflector valve HC / CC 1
Y28 Deflector valve 230 V source side
• Installation of additional components as per local regulations and conditions.
• This presentation is used as planning aid for the concerned installer.
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Subject to technical changes.
PROJECTproject
NAME OF DRAWING
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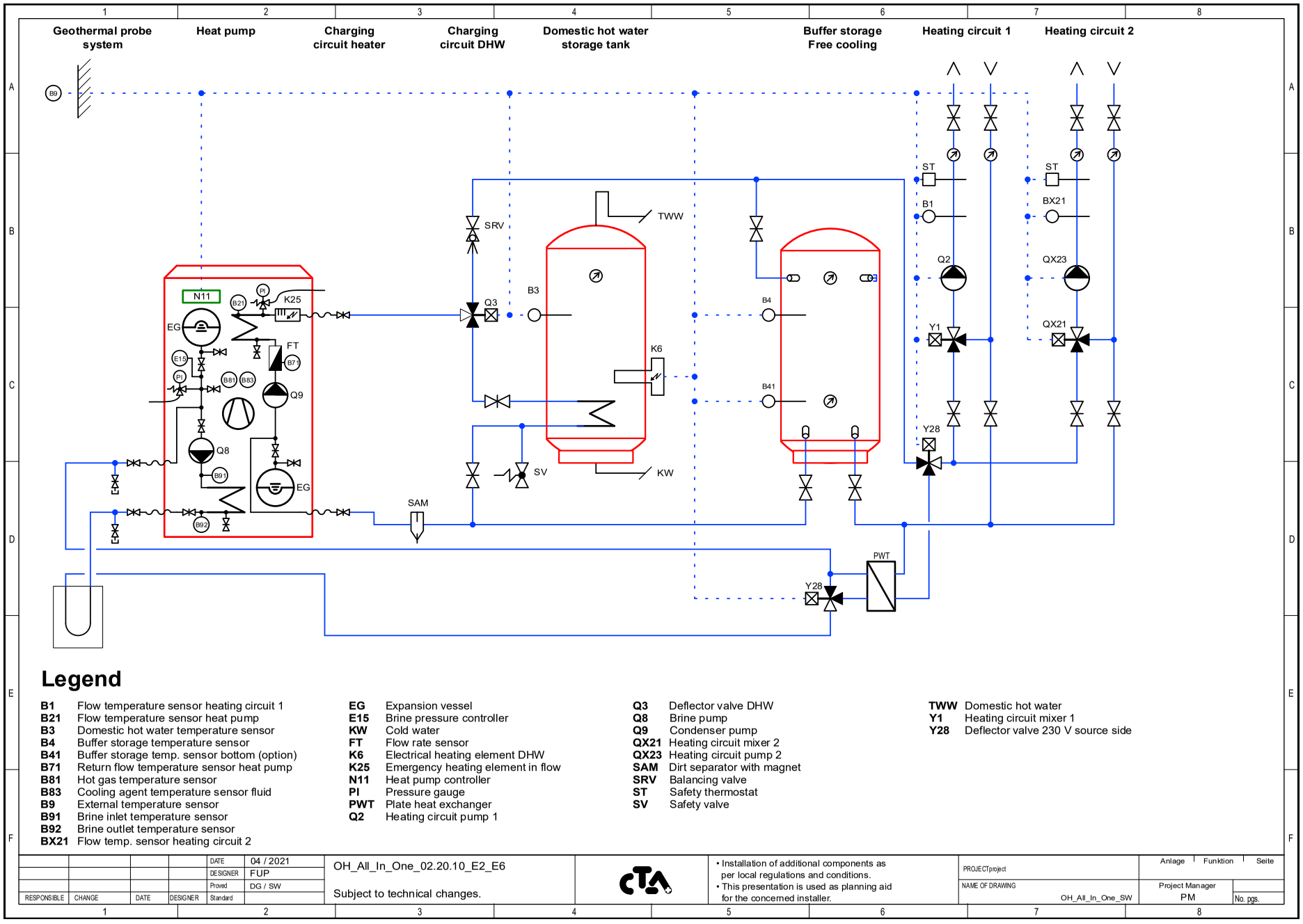

Legend

B1	Flow temperature sensor heating circuit 1
B21	Flow temperature sensor heat pump
B3	Domestic hot water temperature sensor
B4	Buffer storage temperature sensor
B41	Buffer storage temp. sensor bottom (option)
B71	Return flow temperature sensor heat pump
B81	Hot gas temperature sensor
B83	Cooling agent temperature sensor fluid
B9	External temperature sensor
B91	Brine inlet temperature sensor
B92	Brine outlet temperature sensor
BX21	Flow temp. sensor heating circuit 2
EG	Expansion vessel
E15	Brine pressure controller
KW	Cold water
FT	Flow rate sensor
K6	Electrical heating element DHW
K25	Emergency heating element in flow
N11	Heat pump controller
PI	Pressure gauge
PWT	Plate heat exchanger
Q2	Heating circuit pump 1
Q3	Deflector valve DHW
Q8	Brine pump
Q9	Condenser pump
QX21	Heating circuit mixer 2
QX23	Heating circuit pump 2
SAM	Dirt separator with magnet
SRV	Balancing valve
ST	Safety thermostat
SV	Safety valve
TWW	Domestic hot water
Y1	Heating circuit mixer 1
Y28	Deflector valve 230 V source side

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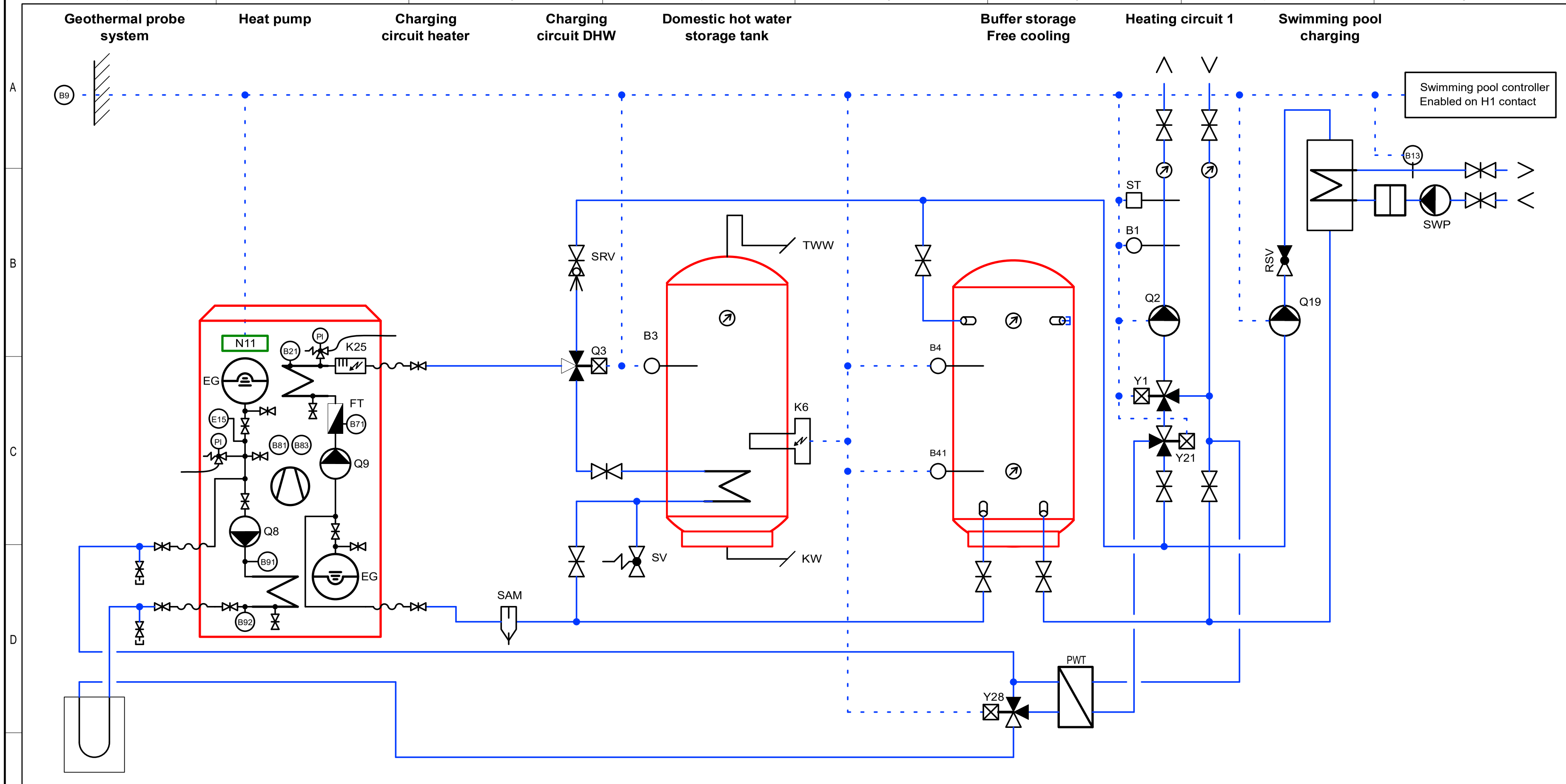

Legend

B1	Flow temperature sensor heating circuit 1
B13	Swimming pool sensor (Limit Tmax.)
B21	Flow temperature sensor heat pump
B3	Domestic hot water temperature sensor
B4	Buffer storage temperature sensor
B41	Buffer storage temp. sensor bottom (option)
B71	Return flow temperature sensor heat pump
B81	Hot gas temperature sensor
B83	Cooling agent temperature sensor fluid
B9	External temperature sensor
B91	Brine inlet temperature sensor
B92	Brine outlet temperature sensor
EG	Expansion vessel
E15	Brine pressure controller
KW	Cold water
FT	Flow rate sensor
K6	Electrical heating element DHW
K25	Emergency heating element in flow
N11	Heat pump controller
PI	Pressure gauge
PWT	Plate heat exchanger
Q2	Heating circuit pump 1
Q3	Deflector valve DHW
Q8	Brine pump
Q9	Condenser pump
Q19	Swimming pool circulation pump
RSV	Non-return valve
SAM	Dirt separator with magnet
SRV	Balancing valve
ST	Safety thermostat
SV	Safety valve
SWP	Swimming pool pump (controlled externally)
TWW	Domestic hot water
Y1	Heating circuit mixer 1
Y21	Deflector valve HC / CC 1
Y28	Deflector valve 230 V source side

RESPONSIBLE	CHANGE	DATE	DESIGNER		
				DATE	04 / 2021
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Project Manager PM

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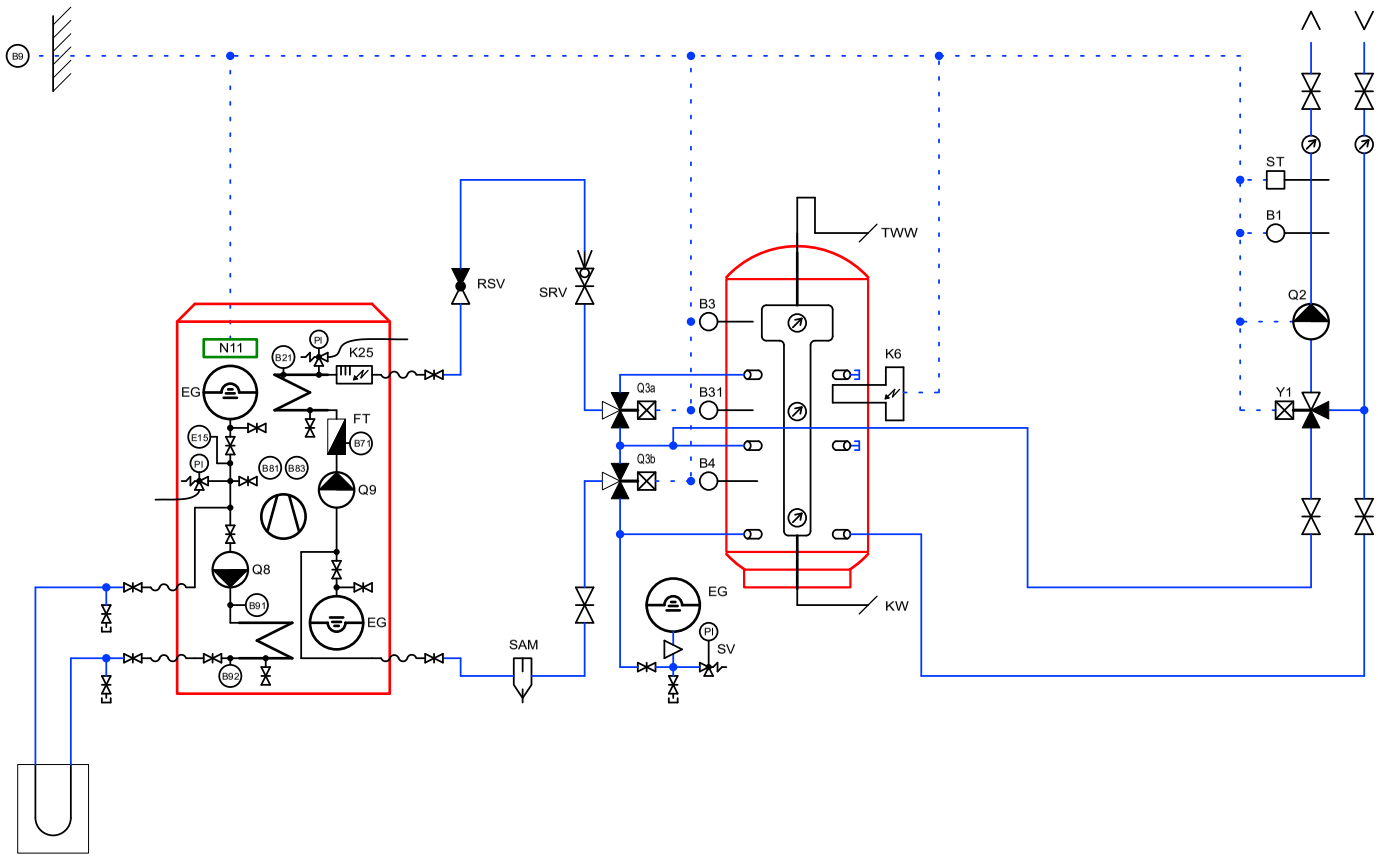

Legend

B1	Flow temperature sensor heating circuit 1
B21	Flow temperature sensor heat pump
B3	Domestic hot water temperature sensor
B31	DHW temperature sensor bottom (option)
B4	Buffer storage temperature sensor
B71	Return flow temperature sensor heat pump
B81	Hot gas temperature sensor
B83	Cooling agent temperature sensor fluid
B9	External temperature sensor
B91	Brine inlet temperature sensor
B92	Brine outlet temperature sensor
EG	Expansion vessel
E15	Brine pressure controller
FT	Flow rate sensor
K6	Electrical heating element DHW
K25	Emergency heating element in flow
KW	Cold water
N11	Heat pump controller
PI	Pressure gauge
Q2	Heating circuit pump 1
Q3	Deflector valve DHW
Q8	Brine pump
Q9	Condenser pump
RSV	Non-return valve
SAM	Dirt separator with magnet
SRV	Balancing valve
ST	Safety thermostat
SV	Safety valve
TWW	Domestic hot water
Y1	Heating circuit mixer 1

				DATE	04 / 2021	OH_All_In_One_02.30.10		• Installation of additional components as per local regulations and conditions. • This presentation is used as planning aid for the concerned installer.	PROJECTproject	Anlage	Funktion	Seite
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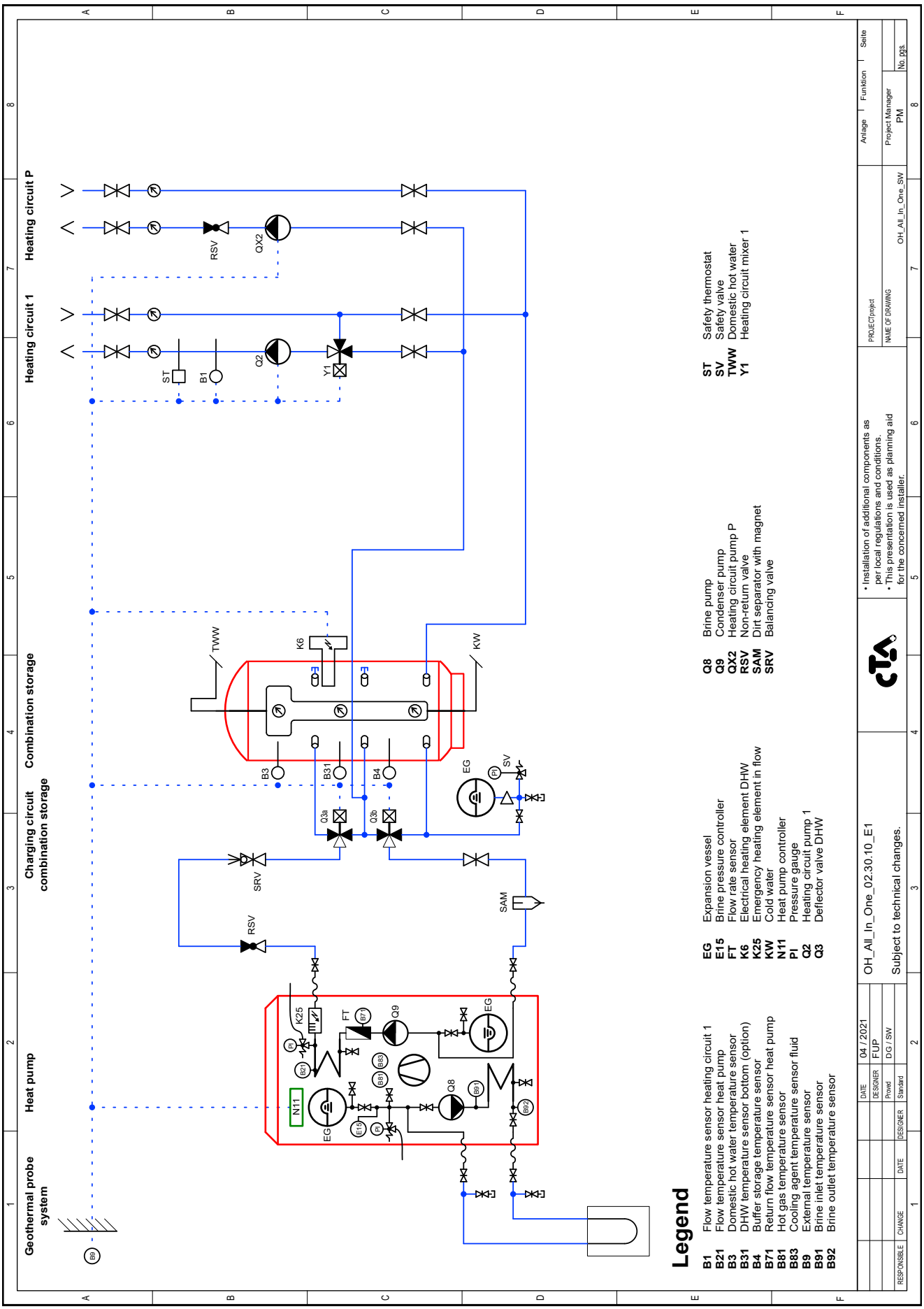
Geothermal probe system
Heat pump
Charging circuit combination storage
Combination storage
Heating circuit 1
Heating circuit P
Legend
B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B31 DHW temperature sensor bottom (option)
B4 Buffer storage temperature sensor
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor
EG Expansion vessel
E15 Brine pressure controller
FT Flow rate sensor
K6 Electrical heating element DHW
K25 Emergency heating element in flow
KW Cold water
N11 Heat pump controller
PI Pressure gauge
Q2 Heating circuit pump 1
Q3 Deflector valve DHW
Q8 Brine pump
Q9 Condenser pump
QX2 Heating circuit pump P
RSV Non-return valve
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve
TWW Domestic hot water
Y1 Heating circuit mixer 1
• Installation of additional components as per local regulations and conditions.
• This presentation is used as planning aid for the concerned installer.
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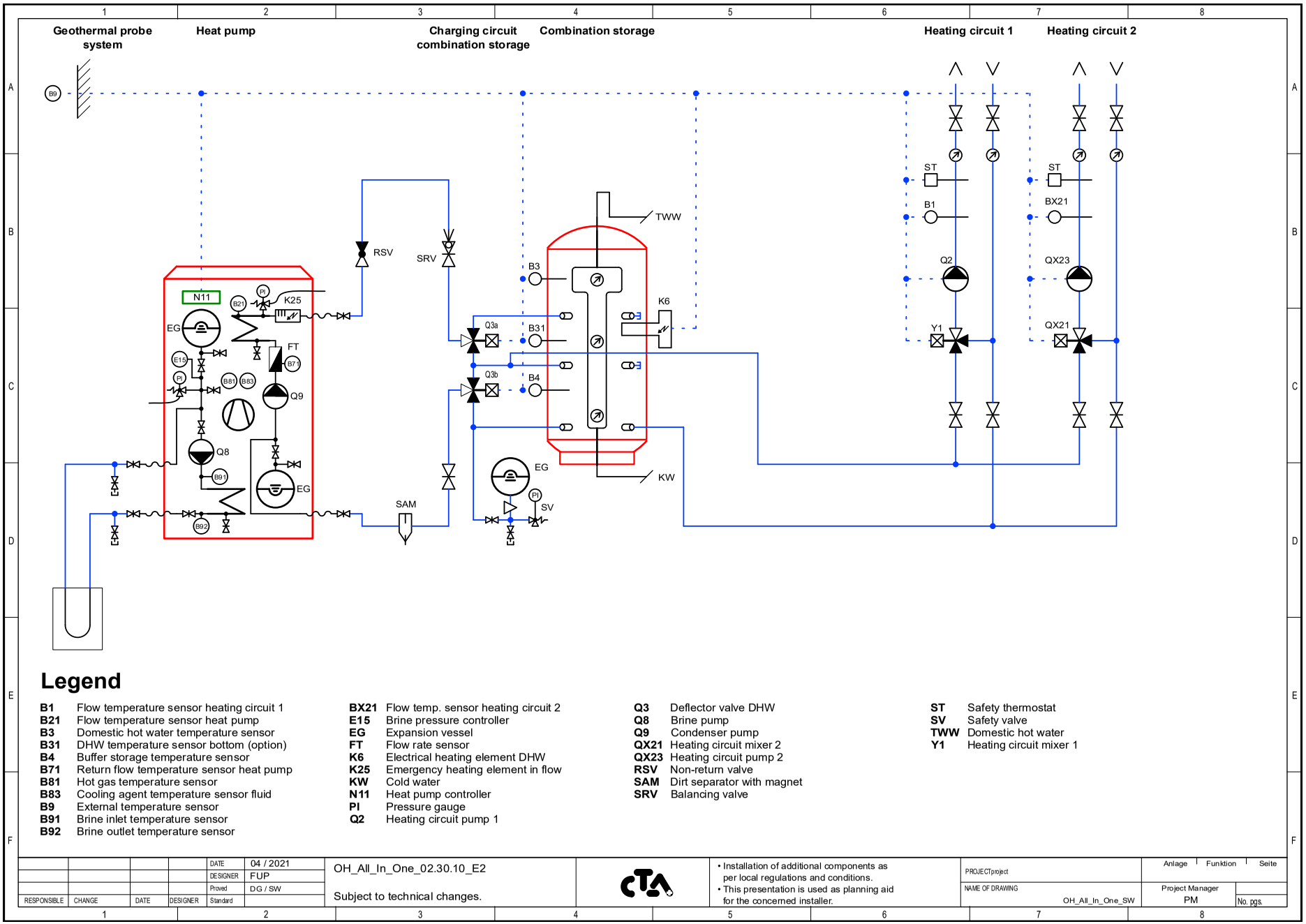
OH_All_In_One_SW
Project Manager PM



Legend

B1	Flow temperature sensor heating circuit 1
B21	Flow temperature sensor heat pump
B3	Domestic hot water temperature sensor
B31	DHW temperature sensor bottom (option)
B4	Buffer storage temperature sensor
B71	Return flow temperature sensor heat pump
B81	Hot gas temperature sensor
B83	Cooling agent temperature sensor fluid
B9	External temperature sensor
B91	Brine inlet temperature sensor
B92	Brine outlet temperature sensor
BX21	Flow temp. sensor heating circuit 2
E15	Brine pressure controller
EG	Expansion vessel
FT	Flow rate sensor
K6	Electrical heating element DHW
K25	Emergency heating element in flow
KW	Cold water
N11	Heat pump controller
PI	Pressure gauge
Q2	Heating circuit pump 1
Q3	Deflector valve DHW
Q8	Brine pump
Q9	Condenser pump
QX21	Heating circuit mixer 2
QX23	Heating circuit pump 2
RSV	Non-return valve
SAM	Dirt separator with magnet
SRV	Balancing valve
ST	Safety thermostat
SV	Safety valve
TWW	Domestic hot water
Y1	Heating circuit mixer 1

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OH_All_In_One_02.30.10_E2

Subject to technical changes.

- Installation of additional components as per local regulations and conditions.
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PROJECTproject

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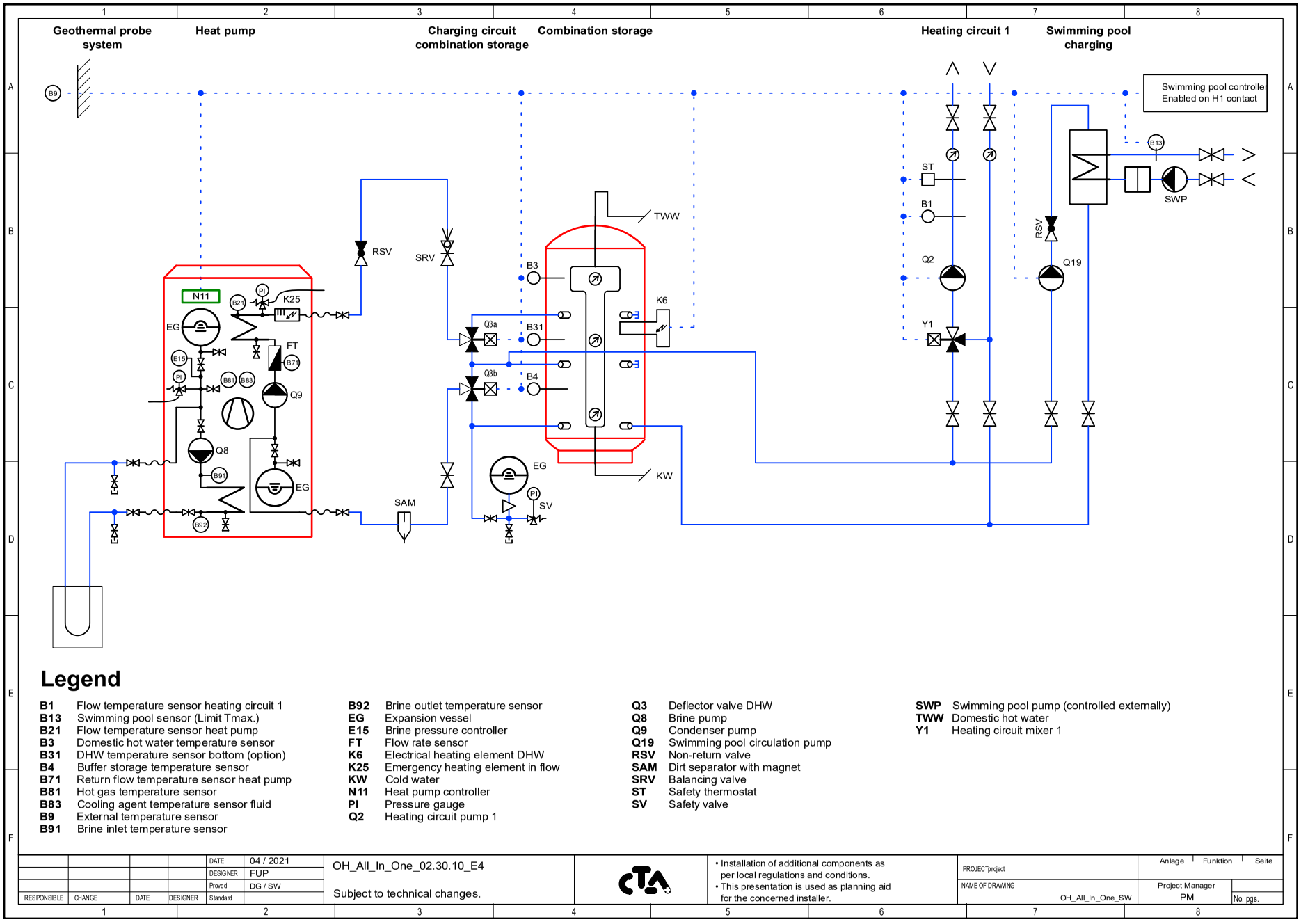
Project Manager PM		No. pgs.



Legend

B1	Flow temperature sensor heating circuit 1
B13	Swimming pool sensor (Limit Tmax.)
B21	Flow temperature sensor heat pump
B3	Domestic hot water temperature sensor
B31	DHW temperature sensor bottom (option)
B4	Buffer storage temperature sensor
B71	Return flow temperature sensor heat pump
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B9	External temperature sensor
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EG	Expansion vessel
E15	Brine pressure controller
FT	Flow rate sensor
K6	Electrical heating element DHW
K25	Emergency heating element in flow
KW	Cold water
N11	Heat pump controller
PI	Pressure gauge
Q2	Heating circuit pump 1
Q3	Deflector valve DHW
Q8	Brine pump
Q9	Condenser pump
Q19	Swimming pool circulation pump
RSV	Non-return valve
SAM	Dirt separator with magnet
SRV	Balancing valve
ST	Safety thermostat
SV	Safety valve
SWP	Swimming pool pump (controlled externally)
TWW	Domestic hot water
Y1	Heating circuit mixer 1

				DATE	04 / 2021
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RESPONSIBLE	CHANGE	DATE	DESIGNER	Standard	

OH_All_In_One_02.30.10_E4

Subject to technical changes.

- Installation of additional components as per local regulations and conditions.
- This presentation is used as planning aid for the concerned installer.

PROJECT project

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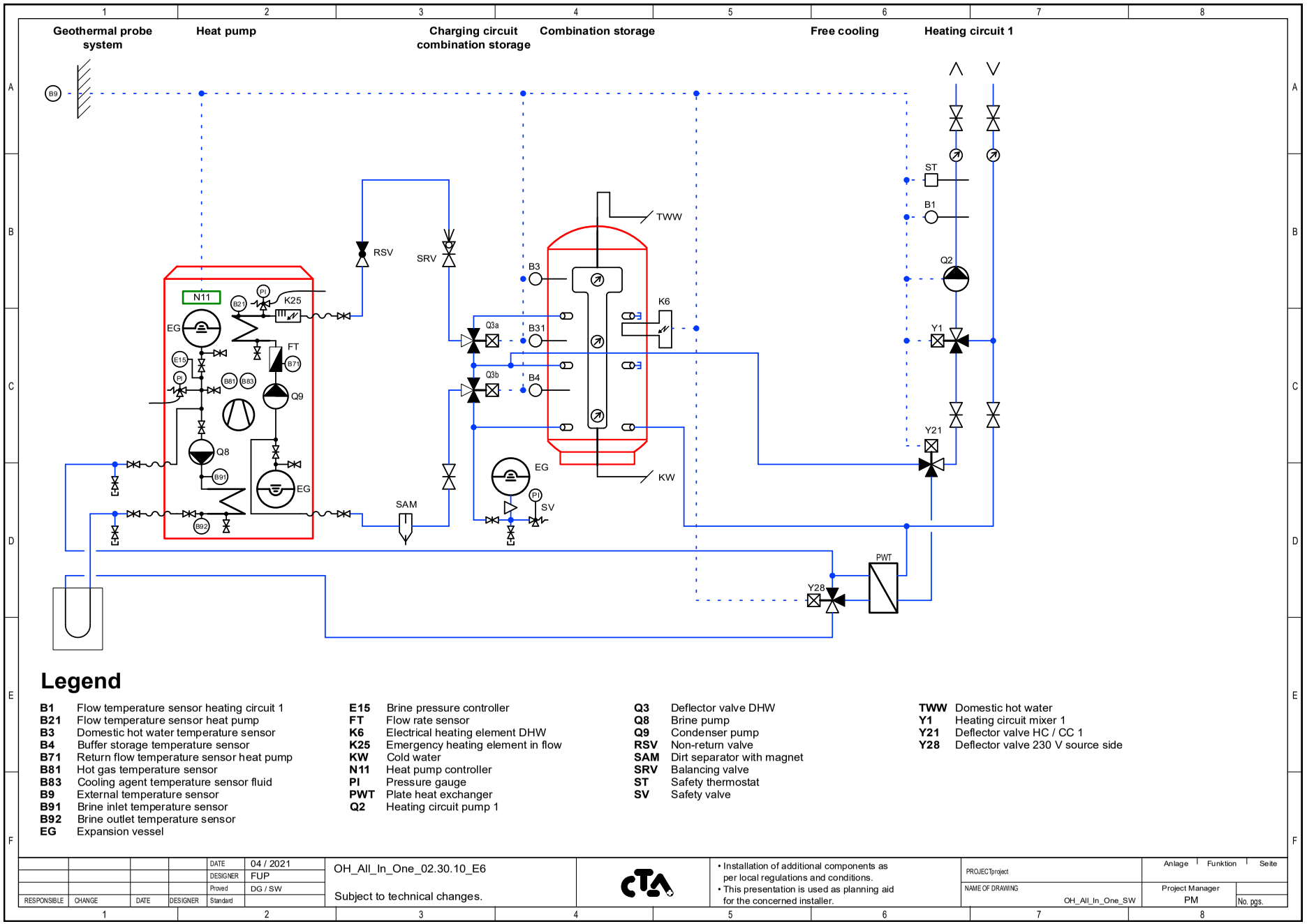

Legend

B1	Flow temperature sensor heating circuit 1
B21	Flow temperature sensor heat pump
B3	Domestic hot water temperature sensor
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B71	Return flow temperature sensor heat pump
B81	Hot gas temperature sensor
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FT	Flow rate sensor
K6	Electrical heating element DHW
K25	Emergency heating element in flow
KW	Cold water
N11	Heat pump controller
PI	Pressure gauge
PWT	Plate heat exchanger
Q2	Heating circuit pump 1
Q3	Deflector valve DHW
Q8	Brine pump
Q9	Condenser pump
RSV	Non-return valve
SAM	Dirt separator with magnet
SRV	Balancing valve
ST	Safety thermostat
SV	Safety valve
TWW	Domestic hot water
Y1	Heating circuit mixer 1
Y21	Deflector valve HC / CC 1
Y28	Deflector valve 230 V source side

				DATE	04 / 2021
				DESIGNER	FUP
				Proved	DG / SW
RESPONSIBLE	CHANGE	DATE	DESIGNER	Standard	

OH_All_In_One_02.30.10_E6

Subject to technical changes.

- Installation of additional components as per local regulations and conditions.
- This presentation is used as planning aid for the concerned installer.

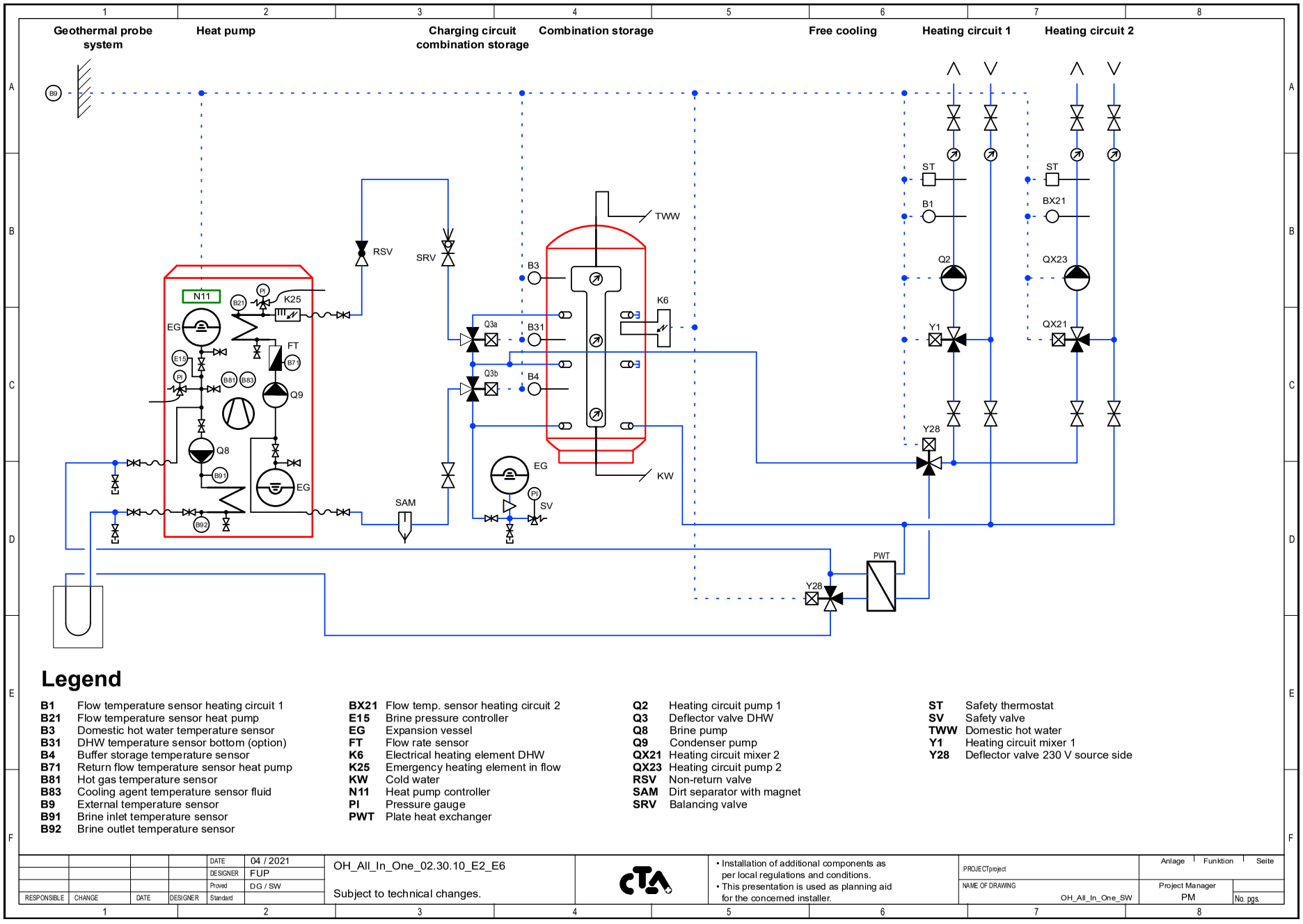
PROJECT project

NAME OF DRAWING OH_All_In_One_SW

Anlage | Funktion | Seite

Project Manager PM

No. pgs.



Legend

B1	Flow temperature sensor heating circuit 1
B21	Flow temperature sensor heat pump
B3	Domestic hot water temperature sensor
B31	DHW temperature sensor bottom (option)
B4	Buffer storage temperature sensor
B71	Return flow temperature sensor heat pump
B81	Hot gas temperature sensor
B83	Cooling agent temperature sensor fluid
B9	External temperature sensor
B91	Brine inlet temperature sensor
B92	Brine outlet temperature sensor
BX21	Flow temp. sensor heating circuit 2
E15	Brine pressure controller
EG	Expansion vessel
FT	Flow rate sensor
K6	Electrical heating element DHW
K25	Emergency heating element in flow
KW	Cold water
N11	Heat pump controller
PI	Pressure gauge
PWT	Plate heat exchanger
Q2	Heating circuit pump 1
Q3	Deflector valve DHW
Q8	Brine pump
Q9	Condenser pump
QX21	Heating circuit mixer 2
QX23	Heating circuit pump 2
RSV	Non-return valve
SAM	Dirt separator with magnet
SRV	Balancing valve
ST	Safety thermostat
SV	Safety valve
TWW	Domestic hot water
Y1	Heating circuit mixer 1
Y28	Deflector valve 230 V source side

				DATE	04 / 2021
				DESIGNER	FUP
				Proved	DG / SW
RESPONSIBLE	CHANGE	DATE	DESIGNER	Standard	

OH_All_In_One_02.30.10_E2_E6

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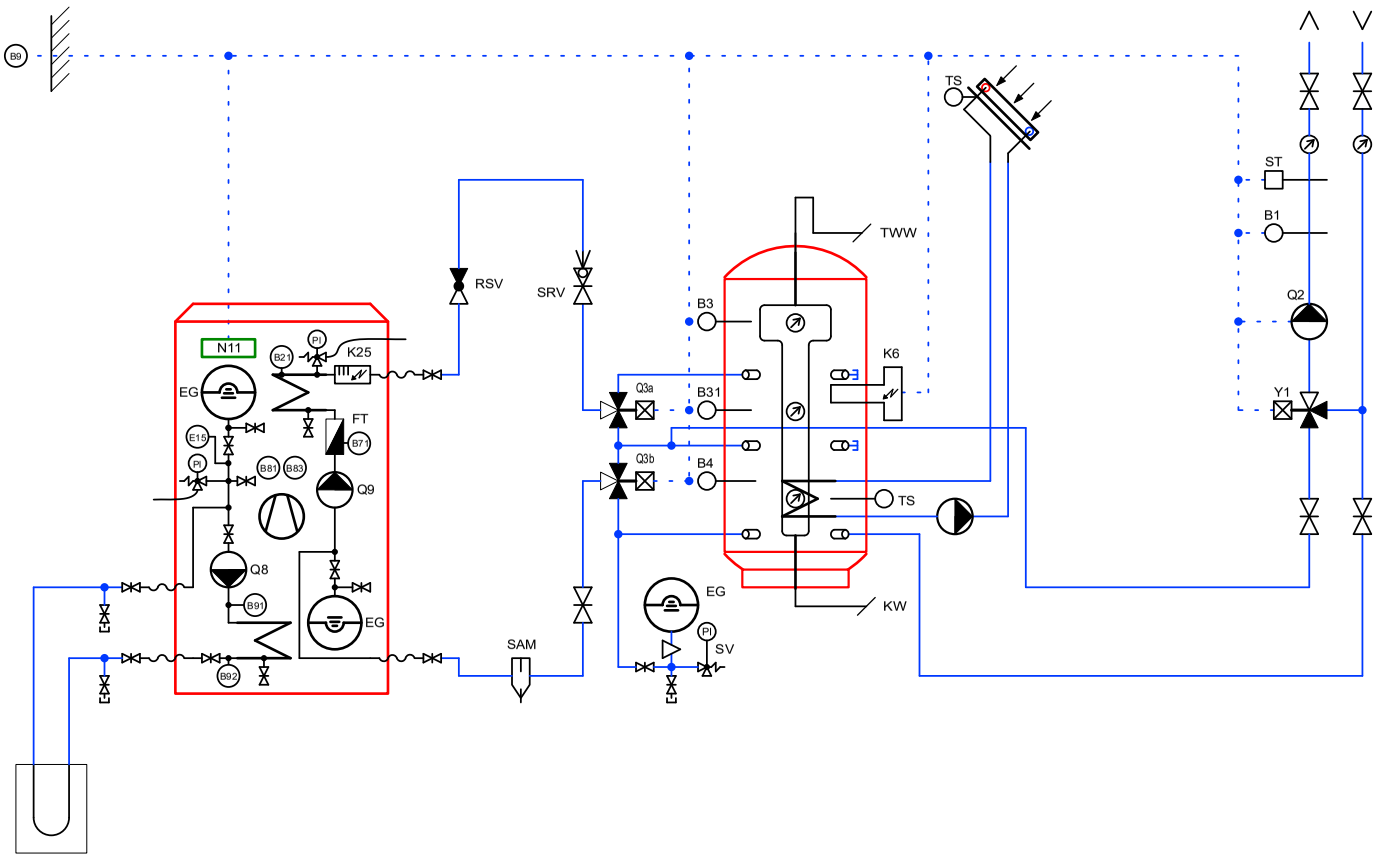
PROJECTproject

NAME OF DRAWING OH_All_In_One_SW

Anlage	Funktion	Seite
Project Manager PM		No. pgs.

Geothermal probe system | Heat pump | Charging circuit combination storage | Combination storage | Solar system | Heating circuit 1



Legend

B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B31 DHW temperature sensor bottom (option)
B4 Buffer storage temperature sensor
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor

EG Expansion vessel
E15 Brine pressure controller
FT Flow rate sensor
K6 Electrical heating element DHW
K25 Emergency heating element in flow
KW Cold water
N11 Heat pump controller
PI Pressure gauge
Q2 Heating circuit pump 1
Q3 Deflector valve DHW

Q8 Brine pump
Q9 Condenser pump
RSV Non-return valve
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve

TS Solar sensor
TWW Domestic hot water
Y1 Heating circuit mixer 1

Solar system on-site, independent of control by the heat pump.

				DATE	04 / 2021
				DESIGNER	FUP
				Proved	DG / SW
RESPONSIBLE	CHANGE	DATE	DESIGNER	Standard	

OH_All_In_One_02.40.10

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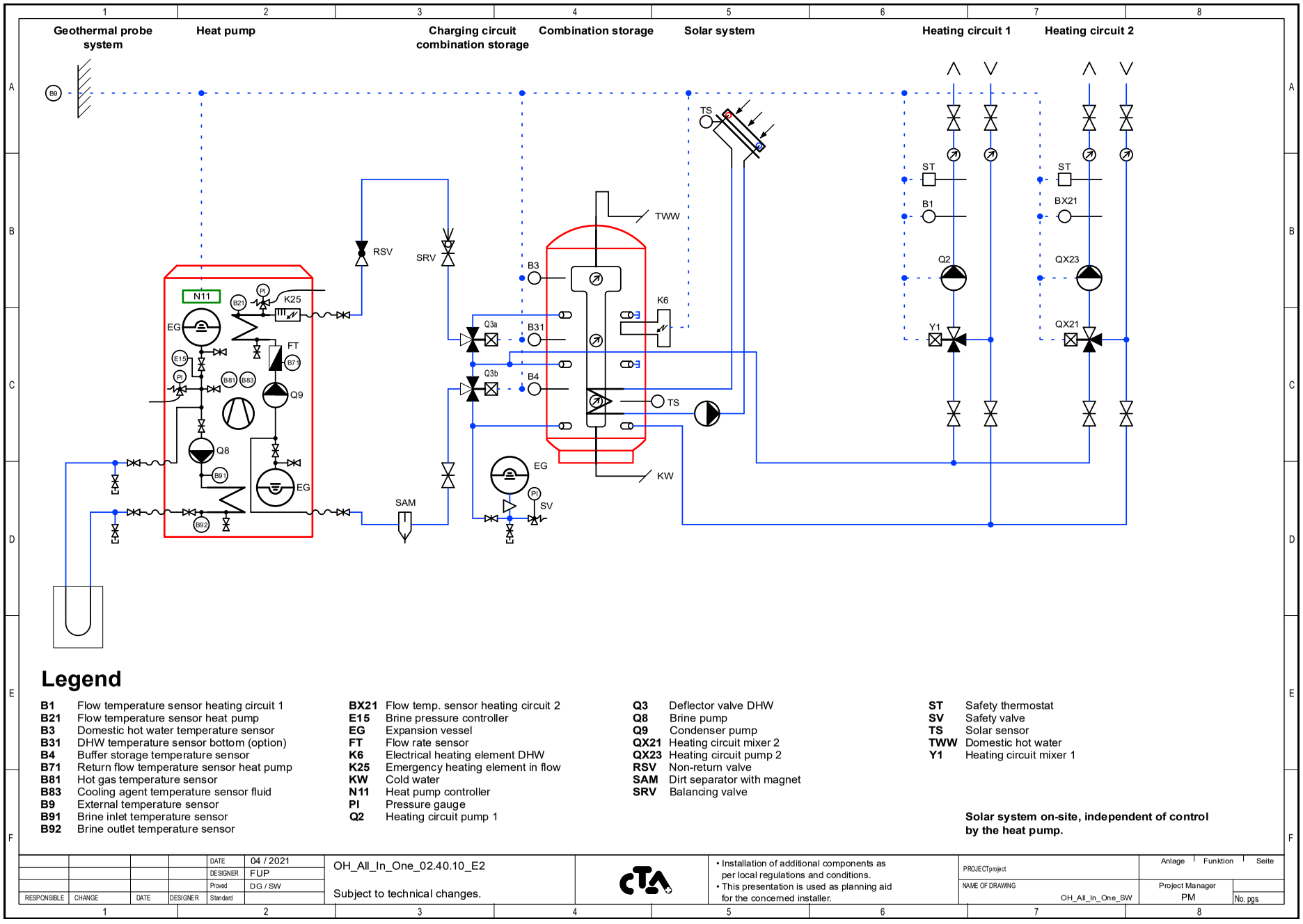
PROJECT project

NAME OF DRAWING OH_All_In_One_SW

Anlage	Funktion	Seite
Project Manager PM		No. pgs.



Legend

B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B31 DHW temperature sensor bottom (option)
B4 Buffer storage temperature sensor
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor

BX21 Flow temp. sensor heating circuit 2
E15 Brine pressure controller
EG Expansion vessel
FT Flow rate sensor
K6 Electrical heating element DHW
K25 Emergency heating element in flow
KW Cold water
N11 Heat pump controller
PI Pressure gauge
Q2 Heating circuit pump 1

Q3 Deflector valve DHW
Q8 Brine pump
Q9 Condenser pump
QX21 Heating circuit mixer 2
QX23 Heating circuit pump 2
RSV Non-return valve
SAM Dirt separator with magnet
SRV Balancing valve

ST Safety thermostat
SV Safety valve
TS Solar sensor
TWW Domestic hot water
Y1 Heating circuit mixer 1

Solar system on-site, independent of control by the heat pump.

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RESPONSIBLE	CHANGE	DATE	DESIGNER	Standard	

OH_All_In_One_02.40.10_E2

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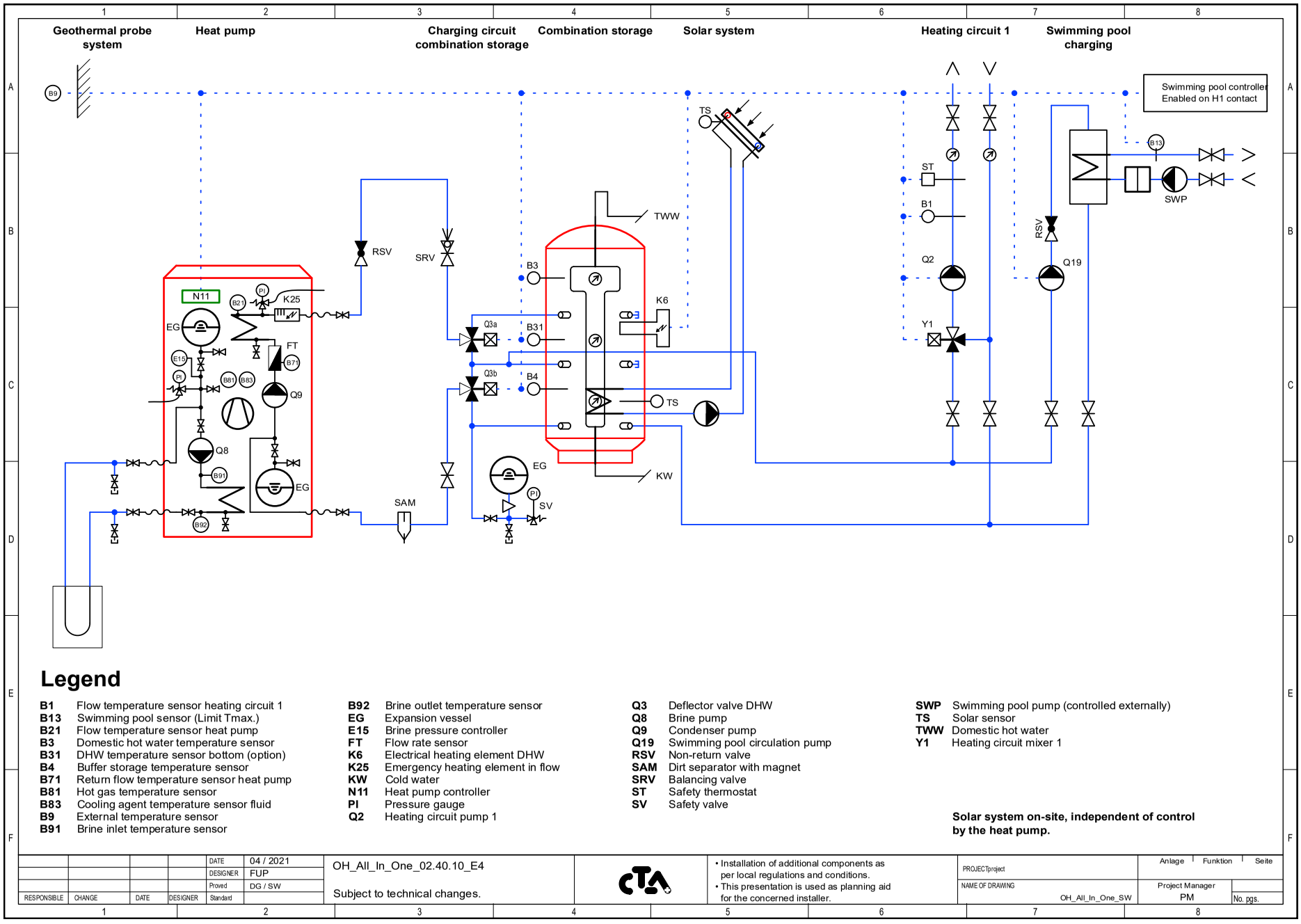
NAME OF DRAWING OH_All_In_One_SW

Anlage	Funktion	Seite
Project Manager PM		No. pgs.



Legend

B1 Flow temperature sensor heating circuit 1
B13 Swimming pool sensor (Limit Tmax.)
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B31 DHW temperature sensor bottom (option)
B4 Buffer storage temperature sensor
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor

B92 Brine outlet temperature sensor
EG Expansion vessel
E15 Brine pressure controller
FT Flow rate sensor
K6 Electrical heating element DHW
K25 Emergency heating element in flow
KW Cold water
N11 Heat pump controller
PI Pressure gauge
Q2 Heating circuit pump 1

Q3 Deflector valve DHW
Q8 Brine pump
Q9 Condenser pump
Q19 Swimming pool circulation pump
RSV Non-return valve
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve

SWP Swimming pool pump (controlled externally)
TS Solar sensor
TWW Domestic hot water
Y1 Heating circuit mixer 1

Solar system on-site, independent of control by the heat pump.

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RESPONSIBLE	CHANGE	DATE	DESIGNER	Standard	

OH_All_In_One_02.40.10_E4

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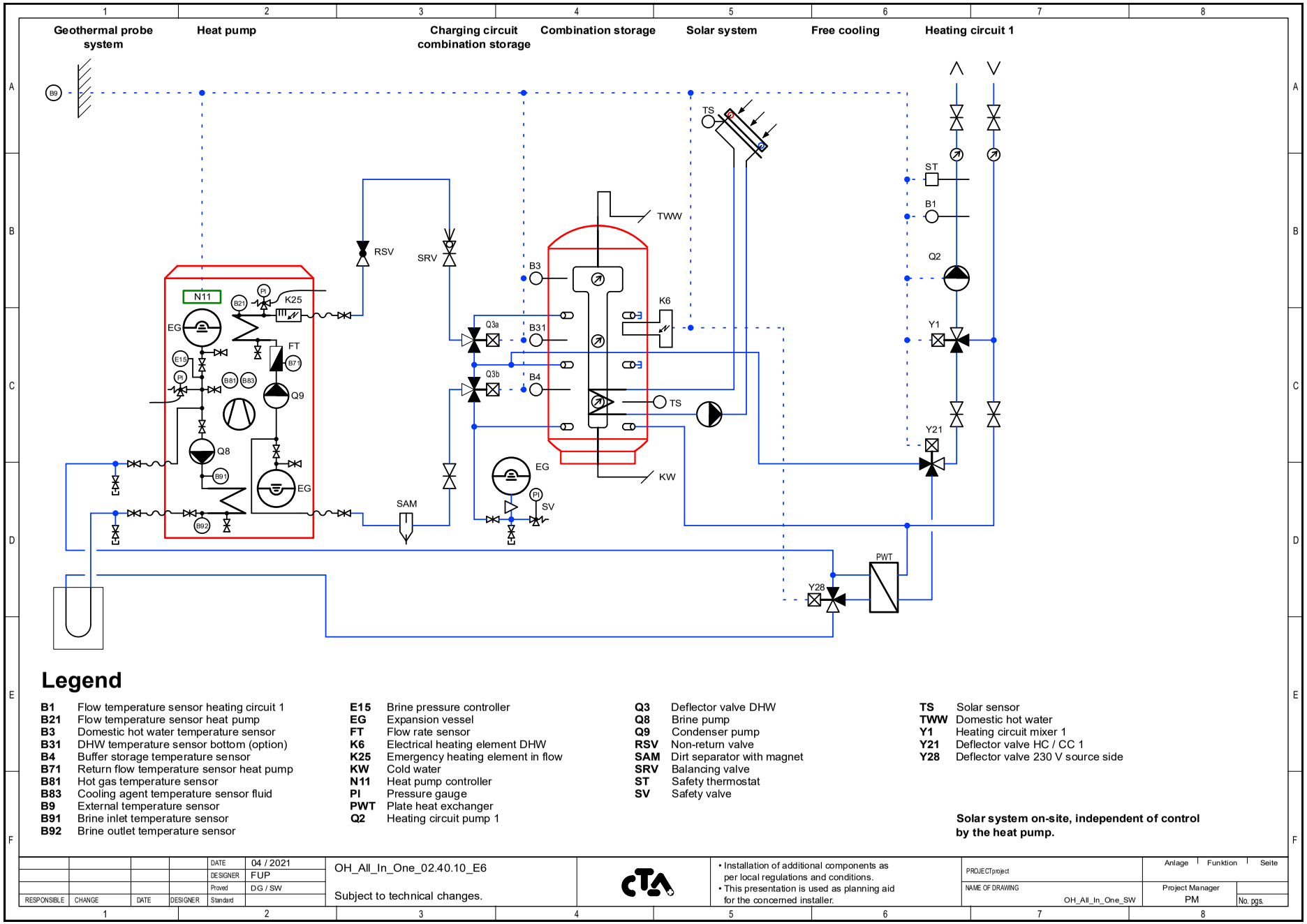
NAME OF DRAWING OH_All_In_One_SW

Anlage	Funktion	Seite
Project Manager PM		No. pgs.



Legend

B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B31 DHW temperature sensor bottom (option)
B4 Buffer storage temperature sensor
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor

E15 Brine pressure controller
EG Expansion vessel
FT Flow rate sensor
K6 Electrical heating element DHW
K25 Emergency heating element in flow
KW Cold water
N11 Heat pump controller
PI Pressure gauge
PWT Plate heat exchanger
Q2 Heating circuit pump 1

Q3 Deflector valve DHW
Q8 Brine pump
Q9 Condenser pump
RSV Non-return valve
SAM Dirt separator with magnet
SRV Balancing valve
ST Safety thermostat
SV Safety valve

TS Solar sensor
TWW Domestic hot water
Y1 Heating circuit mixer 1
Y21 Deflector valve HC / CC 1
Y28 Deflector valve 230 V source side

Solar system on-site, independent of control by the heat pump.

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OH_All_In_One_02.40.10_E6

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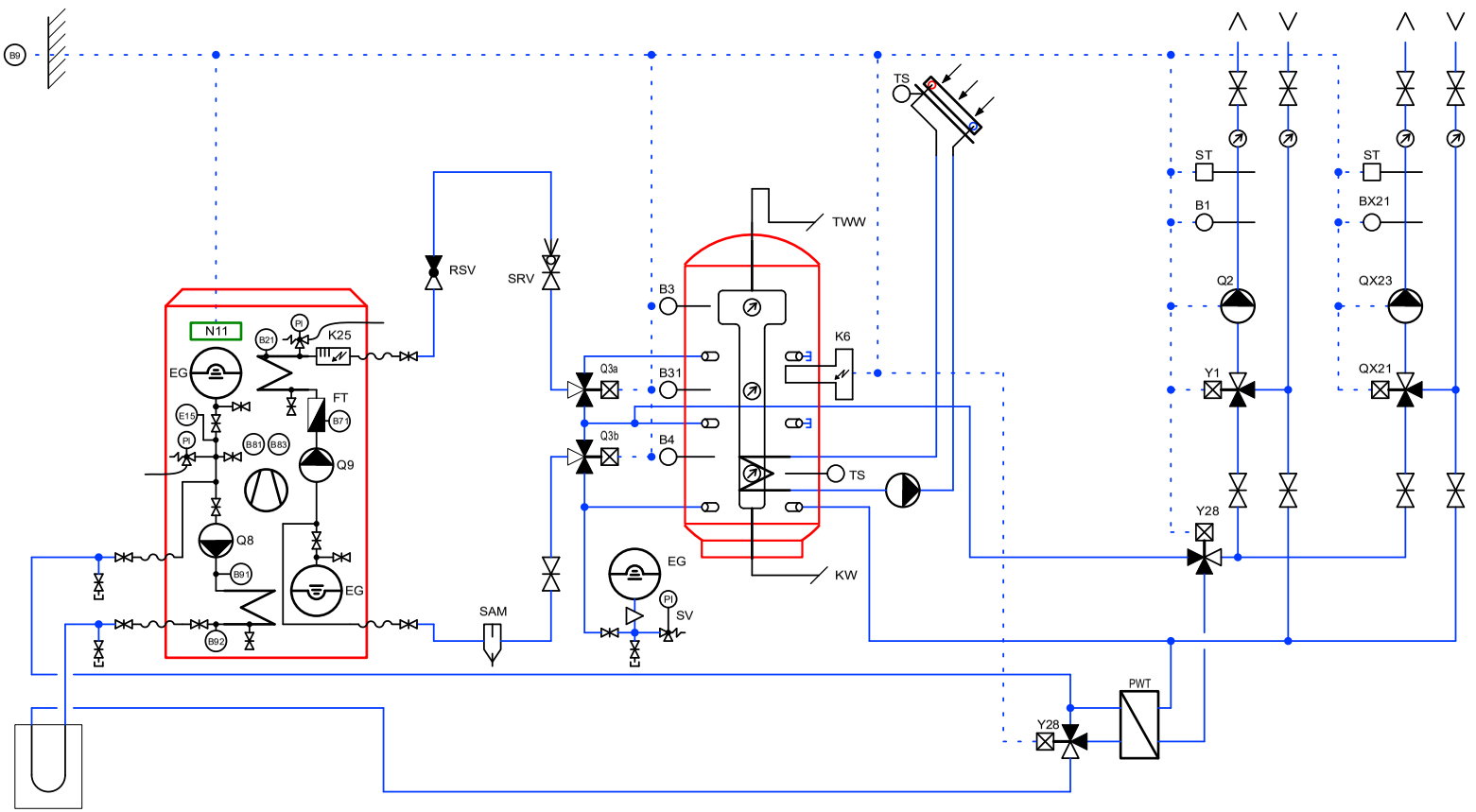
NAME OF DRAWING OH_All_In_One_SW

Anlage	Funktion	Seite
Project Manager PM		No. pgs.

Geothermal probe system | Heat pump | Charging circuit combination storage | Combination storage | Solar system | Free cooling | Heating circuit 1 | Heating circuit 2



Legend

B1 Flow temperature sensor heating circuit 1
B21 Flow temperature sensor heat pump
B3 Domestic hot water temperature sensor
B31 DHW temperature sensor bottom (option)
B4 Buffer storage temperature sensor
B71 Return flow temperature sensor heat pump
B81 Hot gas temperature sensor
B83 Cooling agent temperature sensor fluid
B9 External temperature sensor
B91 Brine inlet temperature sensor
B92 Brine outlet temperature sensor

BX21 Flow temp. sensor heating circuit 2
E15 Brine pressure controller
EG Expansion vessel
FT Flow rate sensor
K6 Electrical heating element DHW
K25 Emergency heating element in flow
KW Cold water
N11 Heat pump controller
PI Pressure gauge
PWT Plate heat exchanger

Q2 Heating circuit pump 1
Q3 Deflector valve DHW
Q8 Brine pump
Q9 Condenser pump
QX21 Heating circuit mixer 2
QX23 Heating circuit pump 2
RSV Non-return valve
SAM Dirt separator with magnet
SRV Balancing valve

ST Safety thermostat
SV Safety valve
TS Solar sensor
TWW Domestic hot water
Y1 Heating circuit mixer 1
Y28 Deflector valve 230 V source side

Solar system on-site, independent of control by the heat pump.

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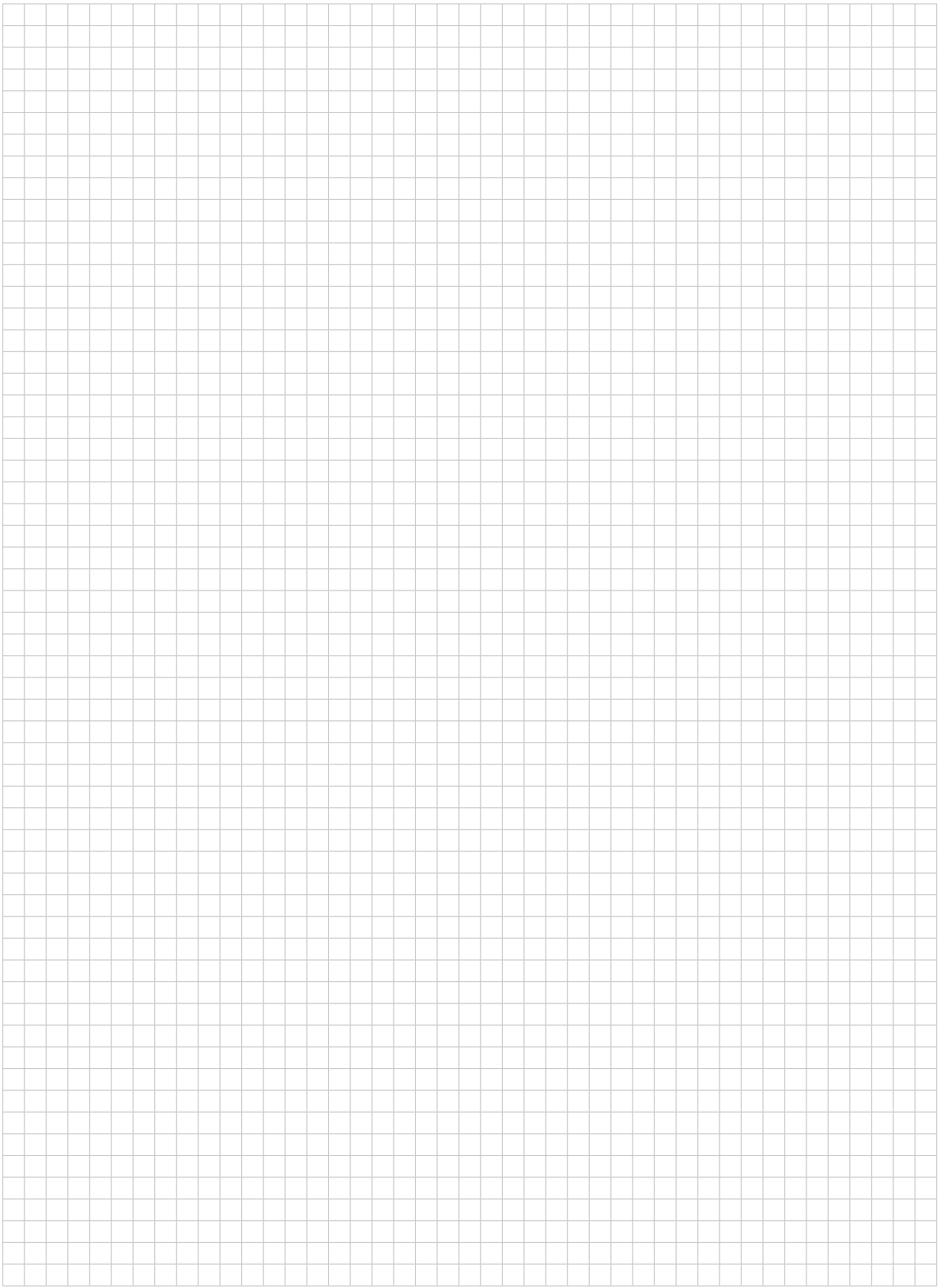
NAME OF DRAWING OH_All_In_One_SW

Anlage	Funktion	Seite

Project Manager PM

No. pgs.



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