

 **WAMAK**

BW 10



Heat pump brine - water

Heat pump brine - water

Compact heat pump with stable frame construction and flexible outputs. Double high-absorption suspension with sylomer pads and adjustable feet base plates ensure low noise and vibration levels of the hermetic SCROLL compressor.

Stainless steel plate heat exchanger (1.4401) for heating circuit. Stainless plate plate heat exchanger (1.4401) for source circuit. Electrical switchboard with integrated safety elements and equithermal controller of the heat pump is located under the upper lid. With electronic starter via built-in soft starter and electronic expansion valve control with autoadaptivity.

Frame construction with a massive base plate on adjustable legs. Covering the epoxy-coated unit. The multi-layer sound insulation and vibration-eliminating profiles are glued from the inside of the cover. Equithermal, digital control of the heat pump with integrated cooling control function (passive cooling). For controlling one heating circuit with mixing unit, for one heating circuit without a mixing unit. Using the cooling function (passive cooling) and the cooling circuit with mixing unit. Temperature regulation for DHW storage tank and control of electrical auxiliary heating. Simple extension of control up to 3 heating / cooling circuits via expansion modules or up to 16 circuits via system controllers. The standard version also includes solar control as well as the possibility of cascading up to 16 devices.

Full-text control menu with features dependent on user instructions, information texts and status output signal. Diagnostic system with record history of operation. External temperature sensor, hotgas sensor, liquid refrigerant temperature sensor, heat pump flow and return temperature sensor as well as source output sensor, source return sensor, and hot water sensor.

Build-in brine pump and condenser pump, backup heating element of 6 kW as well as 3 way switching valve for DHW preparation in packaging.

Optionally available with ModBus module as well WebControl control and monitoring via the Internet.

Technical information - heat pump

Type :	BW 10	latest data update :	2017-11-23 15:22:00
Article code :	WA001014	Language :	English

Nominal performance data according to EN 14511

Heating capacity :	10.40 kW	Input :	2.21 kW
Refrigerating capacity :	8.19 kW	COP :	4.7

* Data at conditions B0°C/W35°C

Operating temperature limitations

Source temperature minimal :	-5°C	Flow temperature minimal :	+20°C
Source temperature maximal :	+25°C	Flow temperature maximal :	+60°C

Mechanical data

Width :	650 mm	Weight inside :	125 kg
Depth :	630 mm		
Height :	1270 mm		

Noise emissions

Noise emissions inside Lp (1m) :	36 dB(A)
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Refrigerant circle parameters

Refrigerant :	R410a	Orifice inside :	EEV
Refrigerant volume :	10.0 kg		

Pipe dimensions, flow rates , pressure drops

Connecting dimensions - primary side :	1.1/4 "	Pressure drop - primary side :	max 12 kPa
Connecting dimensions - secondary side :	1 "	Pressure drop - secondary side :	max 12 kPa
Flow - primary side :	2.49 m ³ /hour	Recommended ΔT source :	3 K
Flow - secondary side :	1.80 m ³ /hour	Recommended ΔT consumer :	5 K

Electrical parameters

Main connection cable - dimension :	5x4 mm ²	Current - nominal :	4.08 A
Primary side cable - dimension :	n.a mm ²	Current - maximal :	7.40 A
Voltage :	3 x 400 V	Softstart :	MCI 12
Fuze :	20 A	Starting current :	11.02 A

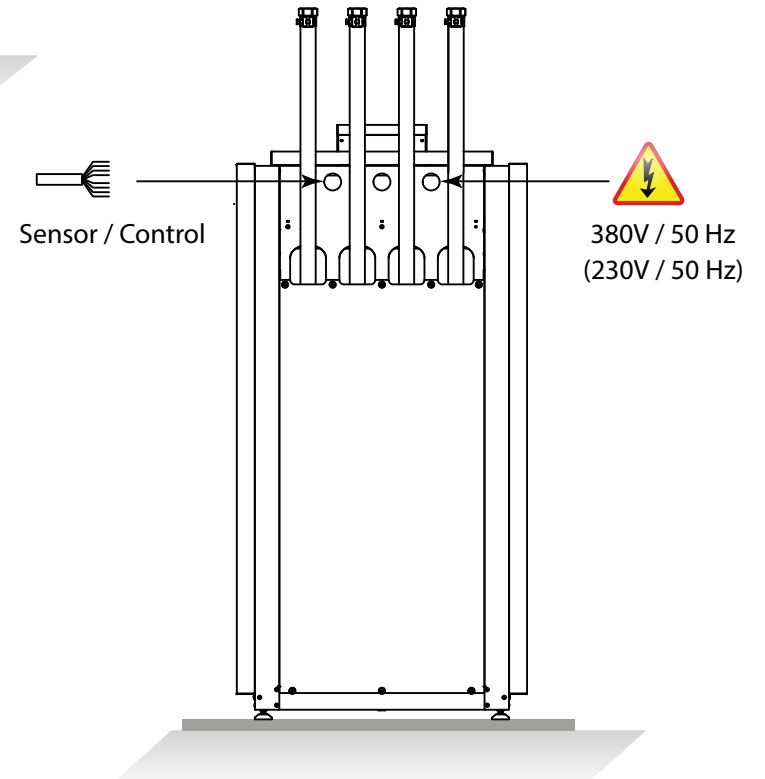
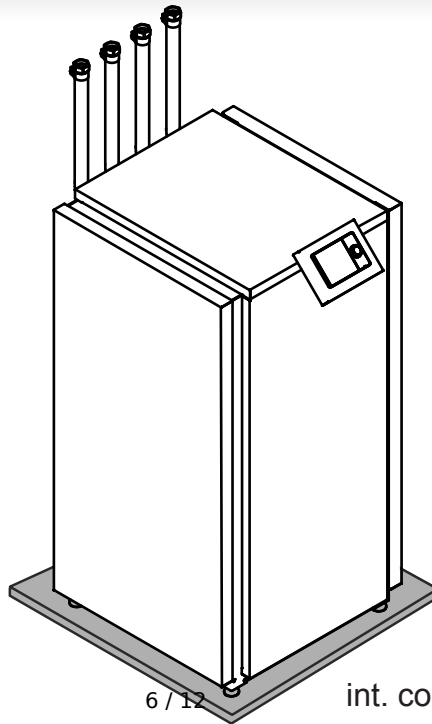
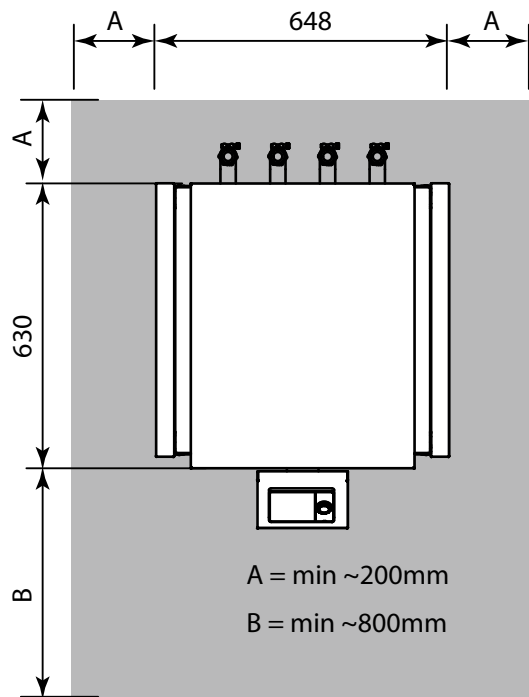
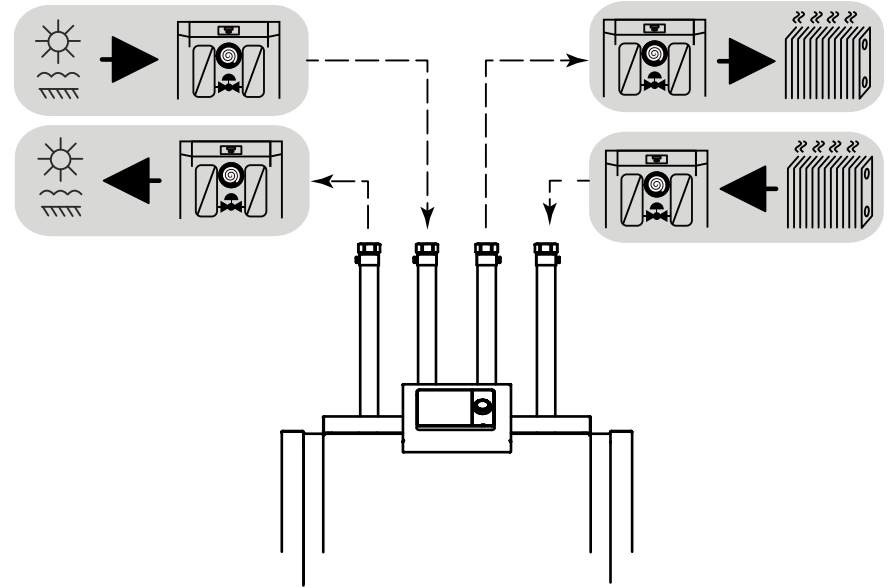
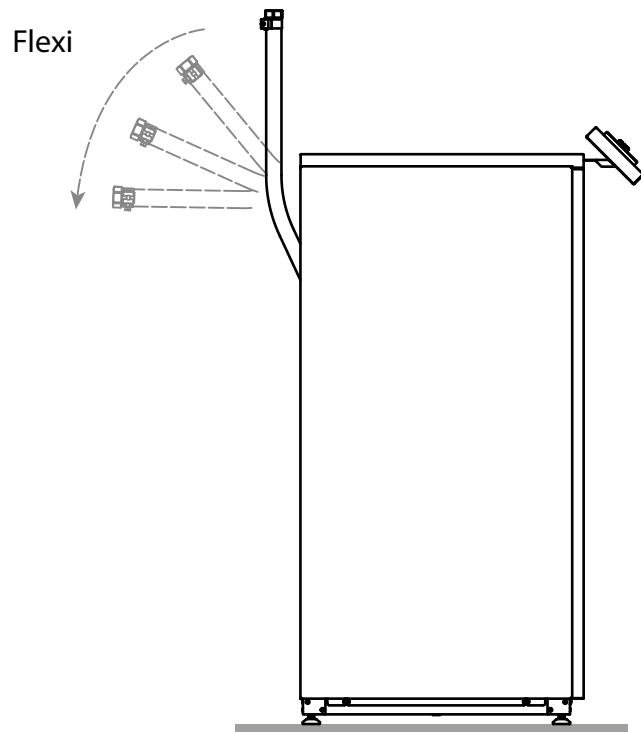
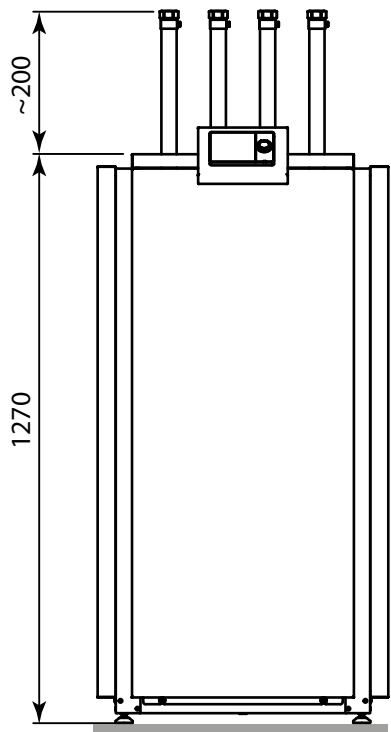
Features

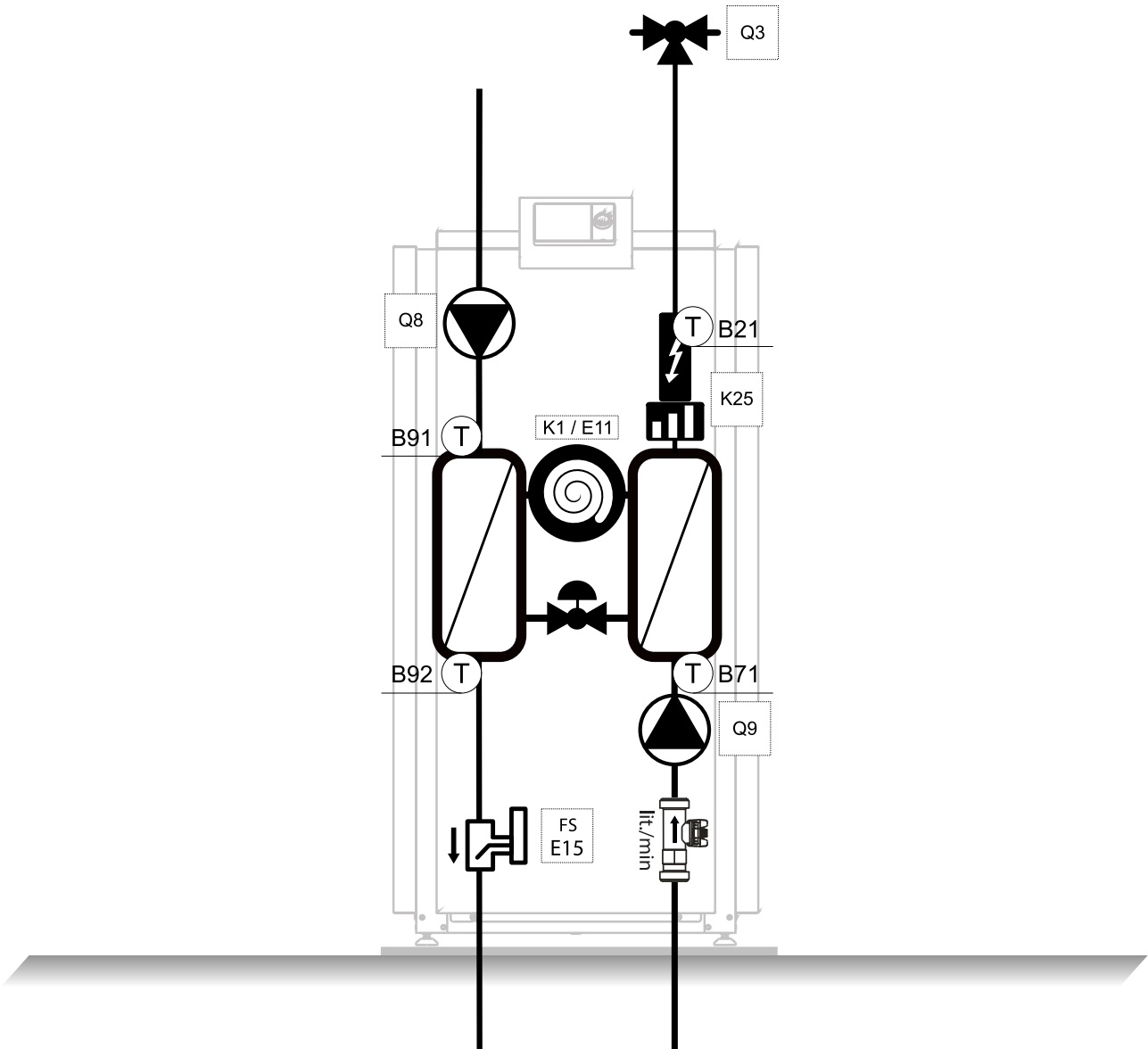
Condenser circulator installed :	Yes	Installed HP controller :	SIEMENS RVS 21
Source circulator installed :	Yes	Control of mixed heating circuit :	Yes
Bivalent heater installed :	6 kW	Control of direct pump heating circuit :	Yes
Three way switching valve in delivery :	Yes	Active cooling :	optional

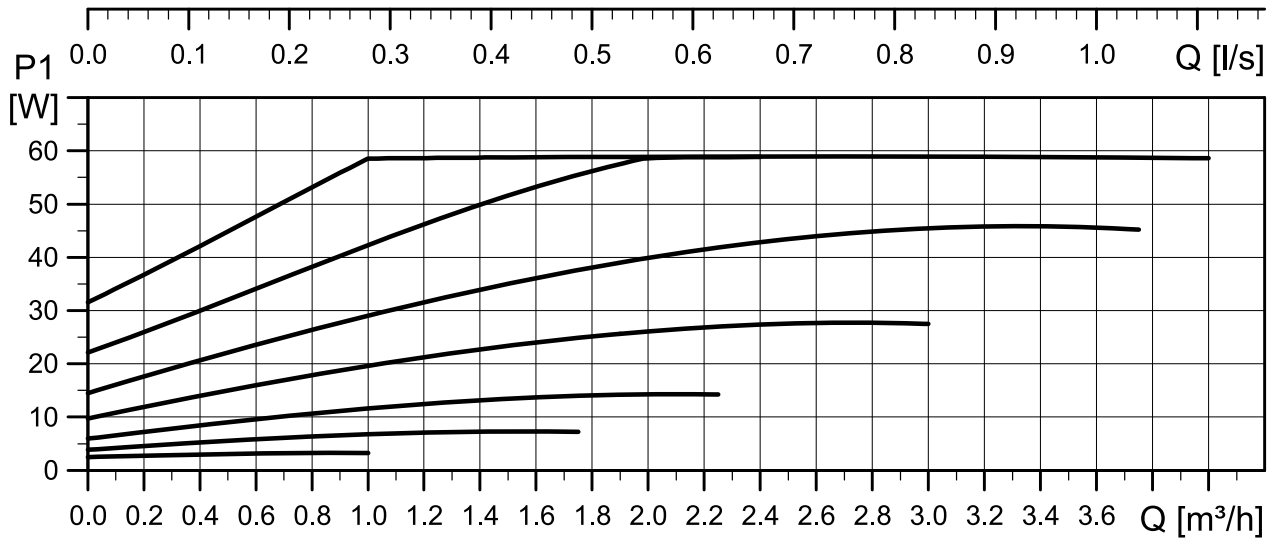
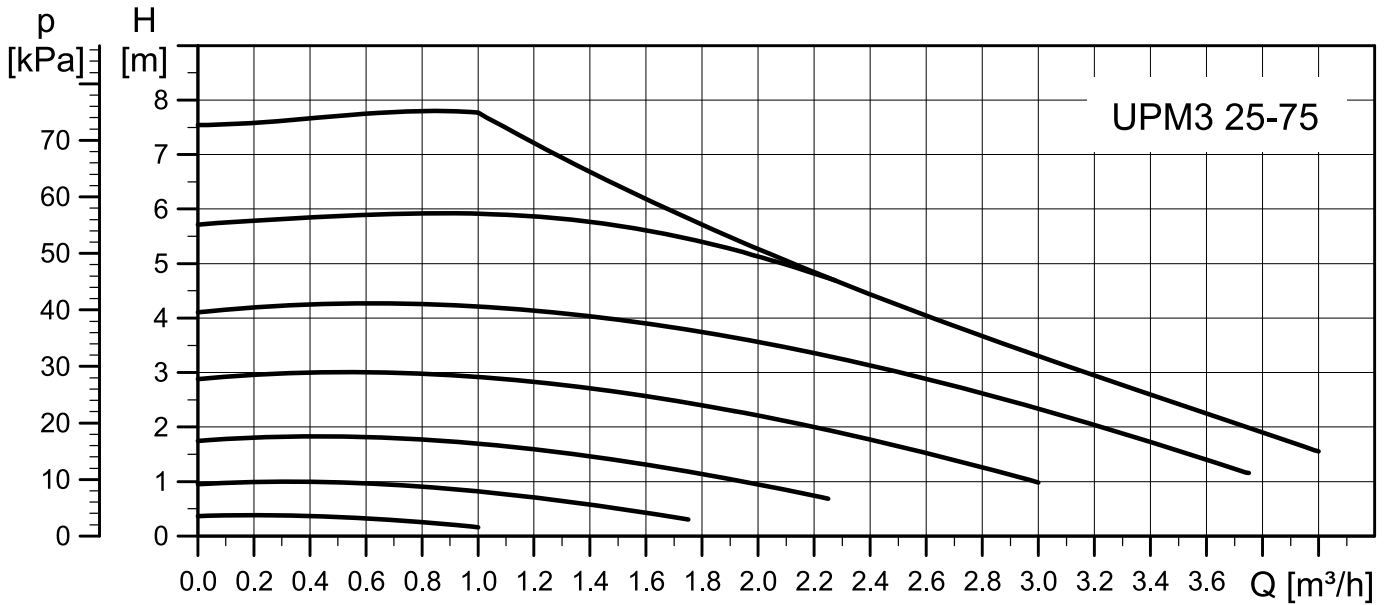
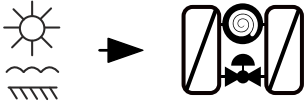
ModBus :	with extension module	Solar system control :	Yes
WebControl :	with WebServer-Module		

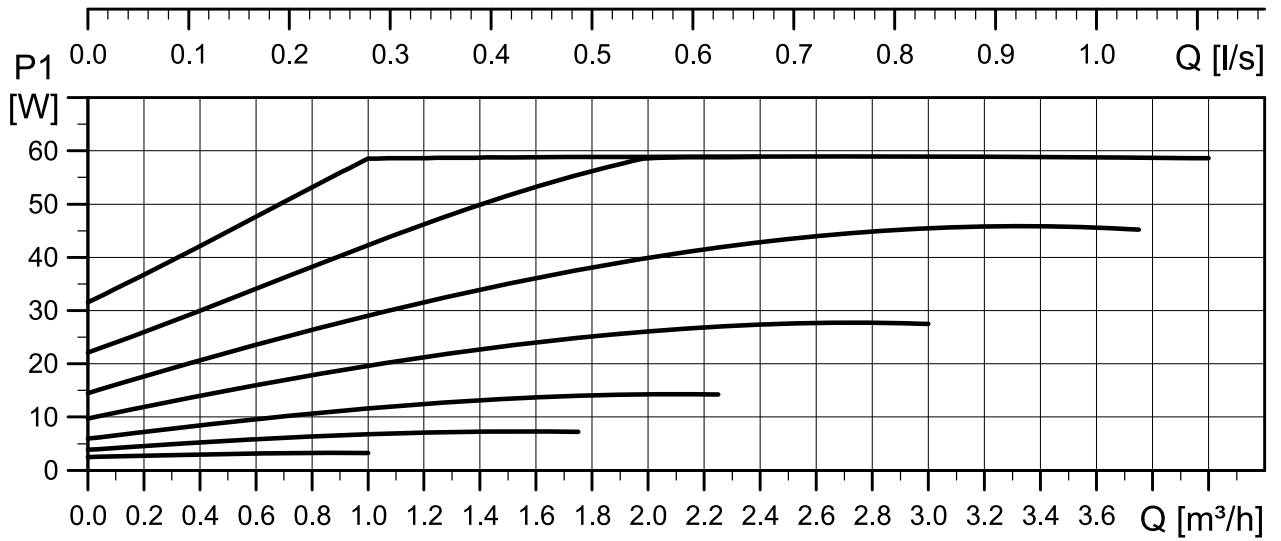
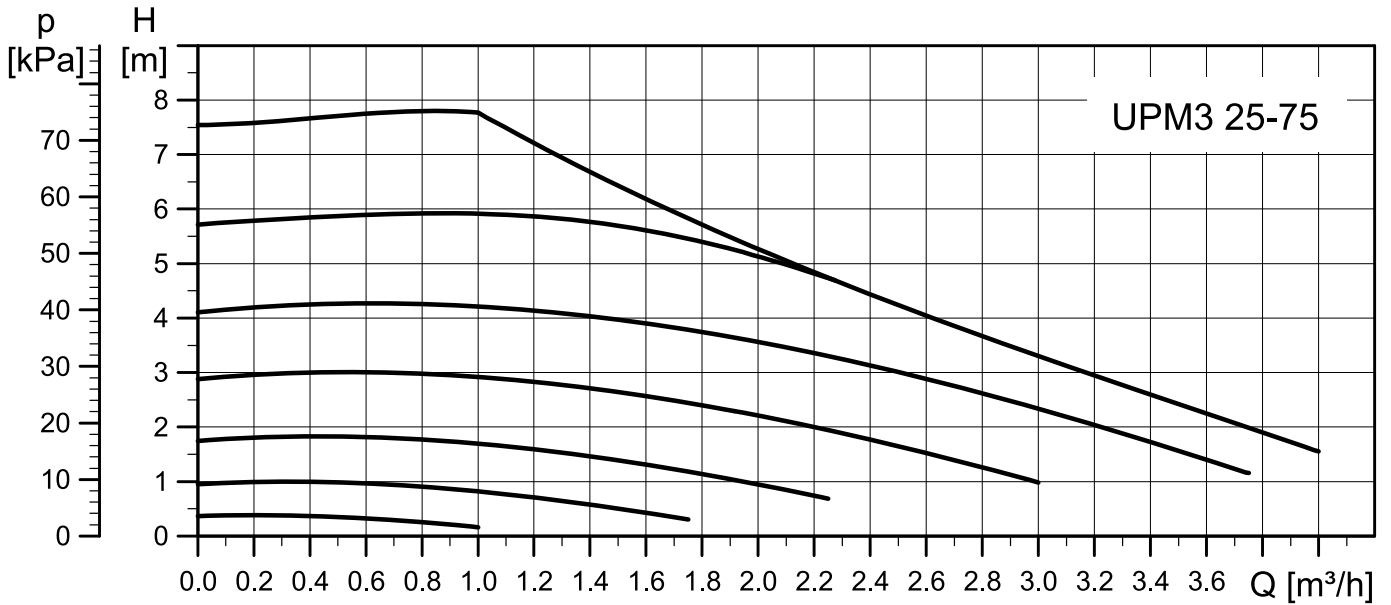
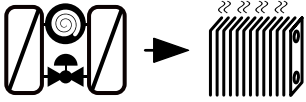
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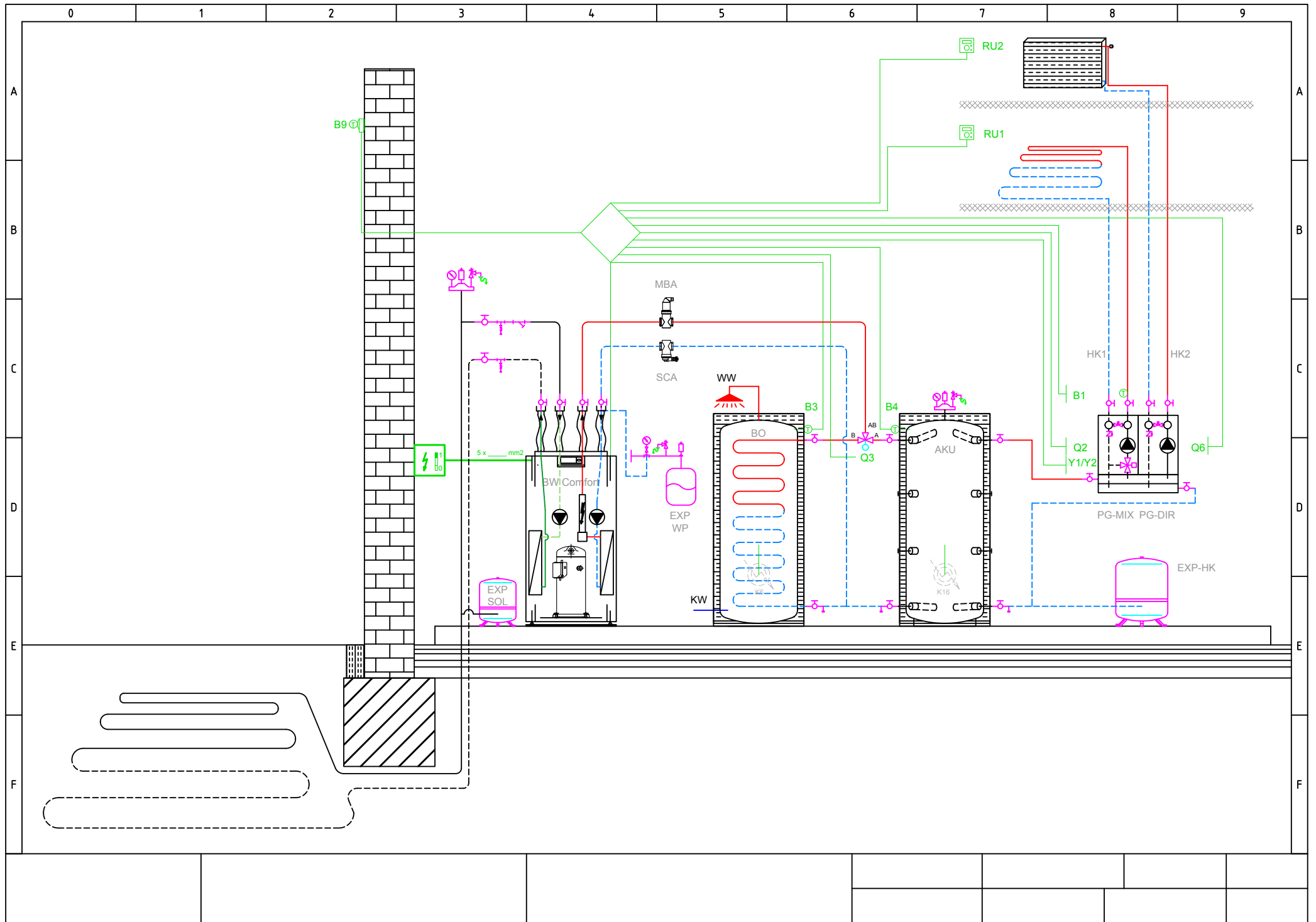
Source	Heating capacity / flow temperature (kW)			Power input / flow temperature (kW)			COP / flow temperature (-)		
	35	45	55	35	45	55	35	45	55
10	13,60	12,72	12,24	2,37	2,78	3,52	5,73	4,57	3,47
9	13,13	12,29	11,84	2,33	2,74	3,48	5,63	4,48	3,40
8	12,66	11,87	11,43	2,29	2,70	3,43	5,53	4,40	3,33
7	12,31	11,57	11,16	2,27	2,68	3,42	5,42	4,31	3,26
6	12,02	11,29	10,89	2,26	2,67	3,42	5,32	4,22	3,19
5	11,73	11,01	10,62	2,25	2,66	3,41	5,22	4,13	3,12
4	11,46	10,85	10,54	2,24	2,68	3,47	5,12	4,05	3,04
3	11,20	10,60	10,25	2,23	2,68	3,45	5,01	3,96	2,97
2	10,93	10,35	10,09	2,23	2,67	3,48	4,91	3,87	2,90
1	10,67	10,09	9,99	2,22	2,67	3,54	4,80	3,79	2,82
0	10,40	9,84	9,74	2,21	2,66	3,54	4,70	3,70	2,75
-1	10,26	9,79	9,69	2,23	2,71	3,57	4,59	3,61	2,71
-2	10,11	9,74	9,64	2,26	2,76	3,61	4,48	3,53	2,67
-3	9,97	9,69	9,48	2,28	2,82	3,61	4,37	3,44	2,62
-4	9,82	9,64	9,35	2,31	2,88	3,63	4,26	3,35	2,58
-5	9,68	9,59	9,19	2,33	2,94	3,63	4,15	3,26	2,53















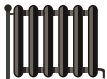
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BW 10





55 °C

A++

35 °C

A++






44 dB

■ 10
■ **10**
■ 10

kW

■ 10
■ **10**
■ 10

kW



2015
811/2013

BW 10

ErP Data

	55 °C	35 °C
Energy class	A++	A++
η [%]	140	186
P_{rated} [kW]	10	10
Q_{HE} [kWh/y]	5998	4476
SCOP [-]	3.49	4.64
$T_{bivalent}$ [°C]	-10	-

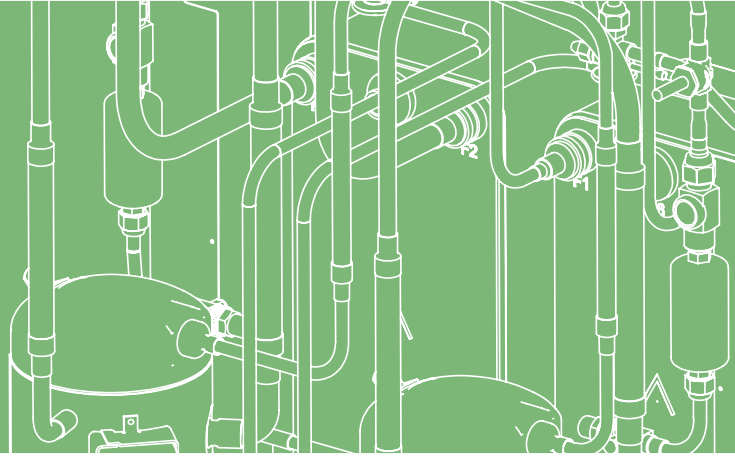
	A+	A++
Energy class	A+	A++
η [%]	122	188
P_{rated} [kW]	10	10
Q_{HE} [kWh/y]	8318	5397
SCOP [-]	3.06	4.70
$T_{bivalent}$ [°C]	-10	-

	A++	A++
Energy class	A++	A++
η [%]	181	182
P_{rated} [kW]	10	10
Q_{HE} [kWh/y]	2900	2894
SCOP [-]	4.53	4.54
$T_{bivalent}$ [°C]	-	-

CONTROLLER



+ QAA55/75	class VII	3.5% ↓
- QAA55/75	class III	1.5% ↓



SERVICE