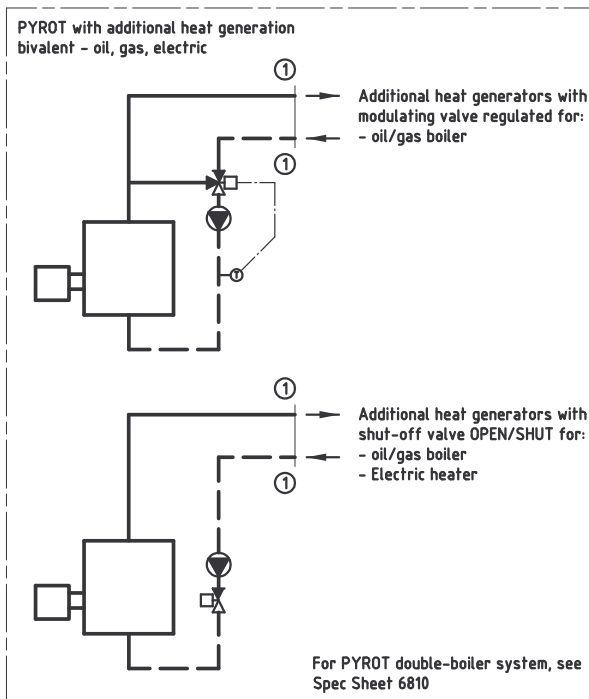
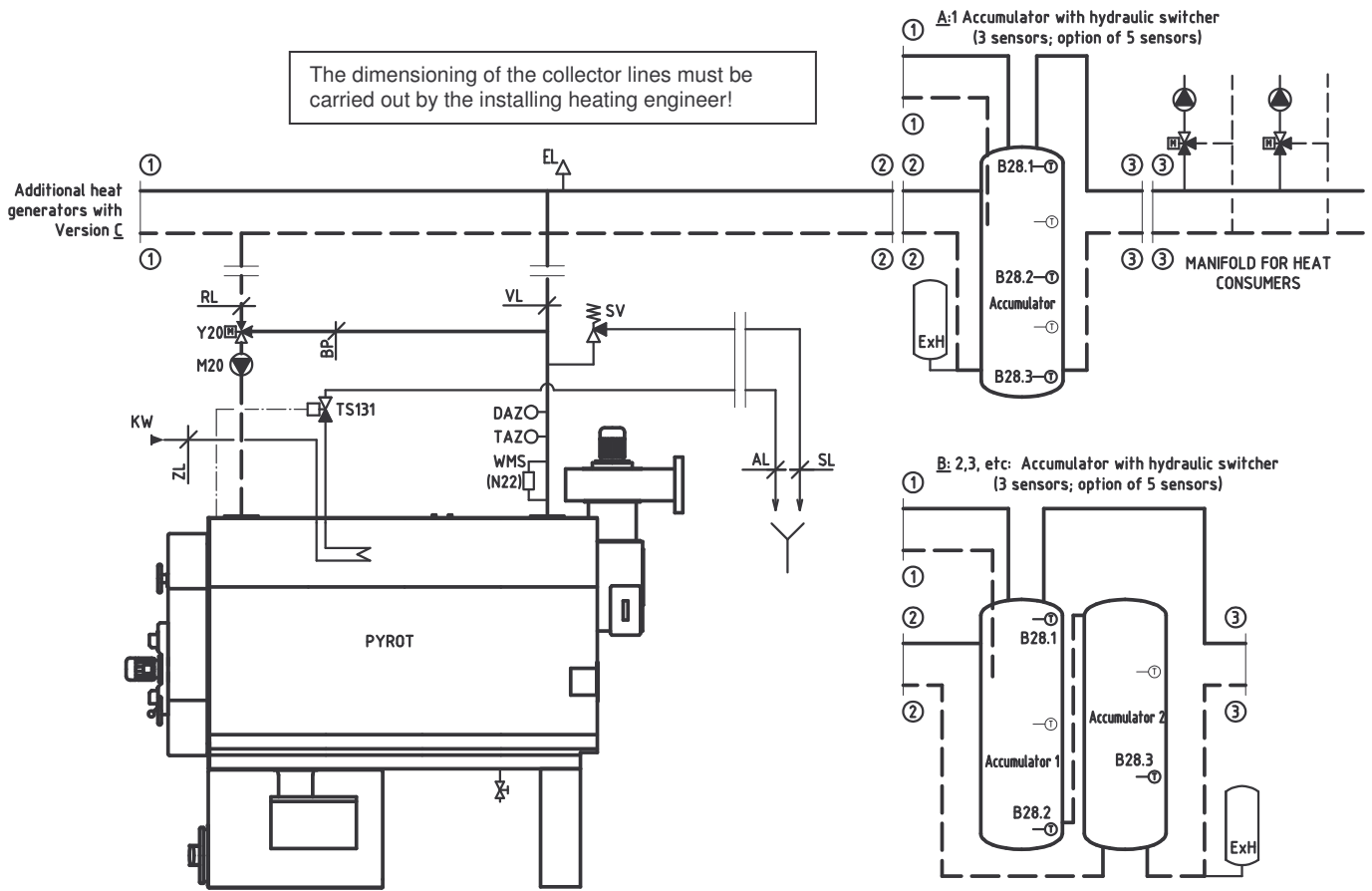
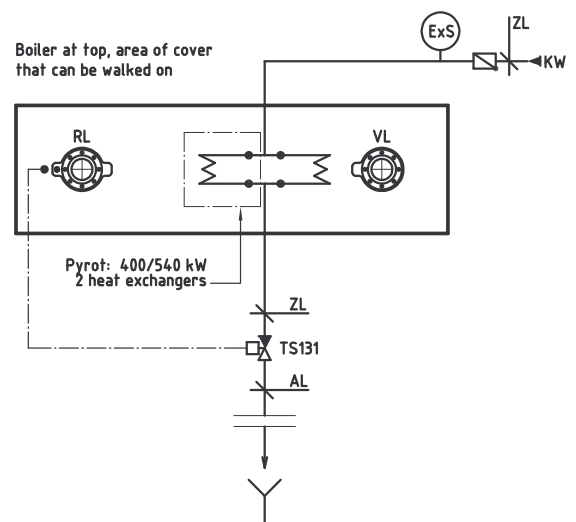
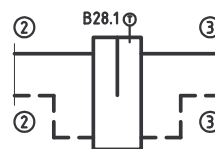


The dimensioning of the collector lines must be carried out by the installing heating engineer!



C: hydraulic switcher is possible with a large volume of water in the network.



a) Note:

- To reliably prevent boiler corrosion caused by condensation of exhaust gases, the boiler return flow temperature must not under any circumstances be below 65°C. A boiler circuit pump with a boiler mixer should be provided according to the diagram for this purpose. The boiler circuit should be designed such that the temperature difference between the forward flow and the return flow is equal to or less than 15°C.
- For integrating heat consumers, see Spec Sheet 4000.
- The expansion tank has to be connected to the boiler above the boiler forward flow and without any shut-offs.

b) Safety-relevant equipment included in the scope of performance provided by the installing heating engineer

M 20	Boiler pump
Y 20	Boiler mixer
SV	Safety valve, pressure set to max. 3.0 bar, homologated component as per DIN 3440
	Nominal width of the valve, of the connection line and of the exhaust pipe as per DIN 4751 Part 2
TS131	Thermal run-off safety valve R ¾", homologated component; special-purpose design for opening temperature 100°C, (safety heat exchanger built into boiler). With the Pyrot-400 and Pyrot-540, two safety heat exchangers in parallel are required but only one thermal run-off safety valve.
KW	Cold water inlet, min. 2.5 bar, max. 3.5 bar
WMS...	Water level control device, homologated component; required in Germany starting from systems over 350 KW, Installation recommendation: WMS with magnetic transmission of the float movement to a switch unit
EL	Air separator (recommendation: absorption-type degasser)
ExH...	Expansion tank closed, with design certification; for heating system (Recommendation: connect on cool return flow, connected to the boiler via the forward flow without any blockage units)
ExS...	Expansion tank closed; with design certification; for safety heat exchanger, max. 4.0 litres, 10 bar
DAZ	Pressure indication device (pressure gauge)
TAZ	Temperature indication device (thermometer)

c) Design recommendation

Model KPT-	Boiler circuit (VL, RL, BP)	Thermal run-off safety valve TS-131 (quantity)	Water through-put required at 2.5 bar	Accumulator volume ³⁾	Supply line ZL	Drain pipe AL ²⁾	Safety valve model SV 68M ¹⁾	Safety line SL ²⁾
100	NW 40	1	620 l/h	1500l	R ¾"	R 1"	R 1"	NW 32
150	NW 50	1	915 l/h	1500 l	R ¾"	R 1"	R 1"	NW 40
220	NW 50	1	1230 l/h	2200 l	R ¾"	R 1"	R 1"	NW 40
300	NW 65	1	1500 l/h	2500 l	R ¾"	R 1"	R 1 ¼"	NW 50
400	NW 80	1	1880 l/h	3200 l	R ¾"	R 1"	R 1 ¼"	NW 50
540	NW 80	1	2266 l/h	4300 l	R ¾"	R 1"	R 1 ½"	NW 65

¹⁾ Threaded connection for supply line

²⁾ Length of the exhaust pipe up to 4.0 m (for longer lines, see DIN 4751 Part 2)

³⁾ On request, we will be glad to provide a project-based offer on the accumulator(s).

d) Equipment recommendation from KÖB's delivery programme

Note: The equipment below will only be supplied via the installing heating engineer.

Model KPT-	Designation:	Description:	Item no:	See Spec Sheet:
	TS 131	Thermal run-off safety valve, 100°C	K-TS-131	4500
100	M 20	Grundfos pump UP 32-80, 400V ¹⁾	ZPS-328-4	4600
150	M 20	Grundfos pump UP 32-80, 400V ¹⁾	ZPS-328-4	4600
220	M 20	Grundfos pump UPS 40-60 4F, 400V ¹⁾	ZPS-406-4	4600
300	M 20	Grundfos pump UPS 50-60 4F, 400V ¹⁾	ZPS-506-4	4600
400	M 20	Grundfos pump UPS 50-60 4F, 400V ¹⁾	ZPS-506-4	4600
540	M 20	Grundfos pump UPS 65-60 4F, 400V ¹⁾	ZPS-656-4	4600
100	Y 20	Motor-three way valve, VXG 48.80/SQS 35.00	ZV-3-40	4600
150	Y 20	Motor-three way tap, VBF 21.50/SQK 33	ZH-3-50	4600
220	Y 20	Motor-three way tap, VBF 21.50/SQK 33	ZH-3-50	4600
300	Y 20	Motor-three way tap, VBF 21.65/SQK 33	ZH-3-65	4600
400	Y 20	Motor-three way tap, VBF 21.80/SQK 33	ZH-3-80	4600
540	Y 20	Motor-three way tap, VBF 21.80/SQK 33	ZH-3-80	4600

¹⁾ For Δt 15K, as per illustration

Any additional resistors (heat meters, slide valve) require redesigning of the boiler pump!