



Take note:

- Installing a hydraulic switcher at A-A close the distributor at B_B for advance and return flow separately. Without hydraulic switcher install according to B1-B1 or B2-B2.
To prevent exhaust gas condensation from causing corrosion in the boiler, the return circuit temperature may not fall below 70°C. A return circuit pump with a return circuit valve has to be built into the relevant boiler series according to their layout. The boiler circuit has to be designed to assure that the temperature difference between in and outflow is equal to or less than 15°C.
The following layout meets this requirement as long as no further blockages are built into the boiler / feed circuit. The installation of a blocking valve or a heat counter in the boiler / feed circuit requires that the heating systems technician designs a new layout of the boiler pump and return circuit.
- To connect heat consumers refer to data sheets 9700.

a) Safety equipment available through the furnace manufacturer

- TS... Thermic run-off safety valve R ¾" certified, opening temperature 95-100 °C, (safety heat exchanger built into the boiler), the Pyrot-400 and Pyrot-540 have 2 safety heat exchangers built in parallel! Only one run-off safety valve is required.
 Not required for open plants. However we recommend the use of one.
- KW... Cold water inlet DN 15 R ½" in metal permanently piped, min. 2,5 bar, max. 3,5 bar,
- TSL... Drainage has thermic run-off safety valve R ¾" (NW 20)
 Not required for open plants. However we recommend the use of one.
- WMS... Low water safety valve type certified. Required in Germany as of Pyrot-400.
- ExO... Open expansion tank located at the warmest spot of the plant, heat isolated;
- DAZ... Manometer
- TAZ... Thermometer

b) Boiler circuit with open expansion, poss. heat storage circuit set up recommendations

Pyrot Boiler	Boiler circuit pump M20 Fabr. Grundfos Type 1)	Pressure valve Y20 Fabr. Landis & Stäfa Type	Feed valve Y28 Fabr. Landis & Stäfa Type	Advance (VL) Back flow (RL) Bypass (BP)	Advance safety valve (SVL)	Back flow safety valve (SRL)
100	UP(S) 32-80 230 V	VXG 48.40/SQS35.00	VXG 48.40/SQS35.00	NW 40	NW 32	NW 25
150	UP(S) 32-80 230 V	VBF 21.50/SQK 33	VBF 21.50/SQK 33	NW 50	NW 32	NW 32
220	UPS 40-60F 400V	VBF 21.50/SQK 33	VBF 21.50/SQL 33	NW 50	NW 40	NW 32
300	UPS 50-60F 400V	VBF 21.65/SQK 33	VBF 21.65/SQL 33	NW 65	NW 40	NW 32
400	UPS 50-60F 400V	VBF 21.80/SQL 33	VBF 21.80/SQL 33	NW 80	NW 50	NW 40
540	UPS 65-60F 400V	VBF 21.80/SQL 33	VBF 21.80/SQL 33	NW 80	NW 50	NW 40

1) For 400 V a contactor / motor protection combination required in the switch box (option) or externally.

c) Description of the motors, sensors and safety switches

- Motors:**
- M1 Exhaust gas blower
 - M2 Loader module
 - M11 Advance grating
 - M12 Primary air duct
 - M13 Rotating blower
 - M13.2 Secondary air duct
 - M16 Ignition device
 - M17 Oil burner
 - M20 Boiler circuit pump
 - Y20 Pressure valve
- Electrical emitters and sensors:**
- B1G.1 Light barrier emitter 1 ember
 - B1G.2 Light barrier sensor 1 ember
 - B2G.1 Light barrier emitter 2 ember
 - B2G.2 Light barrier sensor 2 ember
 - B1 Exhaust gas sensor PT-100
 - B02 Temperature sensor loader module PT-100
 - B2.1 Emitter light barrier loader module
 - B2.2 Sensor light barrier loader module
 - B13 Temperature sensor rotation blower QAZ 21.5220
 - B20 Boiler sensor KTY 10/6
 - B20.1 Return circuit sensor QAZ 21.5220
 - B26 Lambda-sensor
 - U26 Measuring transducer Lambda-sensor
- Safety switches:**
- N21 Temperature limiter
 - N22 Low water safety valve
 - S2 Ultimate final switch
 Maint. cover loader module
 - S17 Ultimate final switch
 Switch box
- Storage with storage management:**
- Y28 Storage valve
 - B28.1 Storage sensor below
 - B28.2 Storage sensor middle
 - B28.3 Storage sensor above

Requesting additional heat generators
 N37 Control thermostat of hydraulic switcher