5 Technical specifications

Technical specifications	Liquid Cooling Package Plus	
Model No. SK	3301.480	
Rated voltage (V, Hz)	230/1~ 50/60	400/3~/N/PE 50/60
Rated current (A/Hz)	10.5/50 11.5/60	3.5/50 3.8/60
Pre-fuse T (A)	16.0	10.0
Duty cycle (%)	100	
Capacity (W/Hz)	2400/50 2650/60	
Useful cooling output L37W15 (kW/Hz) (at 15 °C inlet temperature and a volumetric flow of 60 l/min)	28/50 28/60	
Air throughput of fans ((m^3/h)/Hz)	max. 5000	
Coolant	Water/glycol mixture (up to 30%)	
Coolant inlet temperature (°C)	+6 to +20 (ideally +15)	
Permissible operating pressure p_{max} (bar)	5	
Ambient temperature range (°C)	+6 to +35	
Noise level (dB(A)) (Open air above reflective flooring, distance 1 m)	64	
Width (mm)	300	
Height (mm)	2000	
Depth (mm)	1200	
Weight (kg)	max. 230	
Fill quantity (l)	9	

Tab. 2: Technical specifications

14.1 Hydrological information

To avoid system damage and to ensure safe operation, Rittal GmbH & Co KG recommends the use of system water or an additive whose composition does not differ from that presented in the following summary:

pH value	7 – 8.5%
Carbon hardness	> 3 < 8 °dH
Free carbonic acid	8 – 15 mg/dm³
Accompanying carbonic acid	8 – 15 mg/dm³
Corrosive carbonic acid	0 mg/dm³
Sulphides	Free
Oxygen	<10 mg/dm³
Chloride ions	< 50 mg/dm³
Sulphate ions	< 250 mg/dm³
Nitrates and nitrites	< 10 mg/dm³
COD	< 7 mg/dm3
Ammonia	< 5 mg/dm3
Iron	< 0.2 mg/dm³
Manganese	< 0.2 mg/dm³
Conductivity	< 2200 µS/cm
Residue on evapouration	< 500 mg/dm³
Potassium permanganate consumption	< 25 mg/dm³
Suspended matter	< 3 mg/dm³
	> 3 < 15 mg/dm³ Partial current purification recommended > 15 mg/dm³ Continuous purification recommended

Tab. 17: Hydrological data

14.2 Characteristic curves

14.2.1 Cooling output

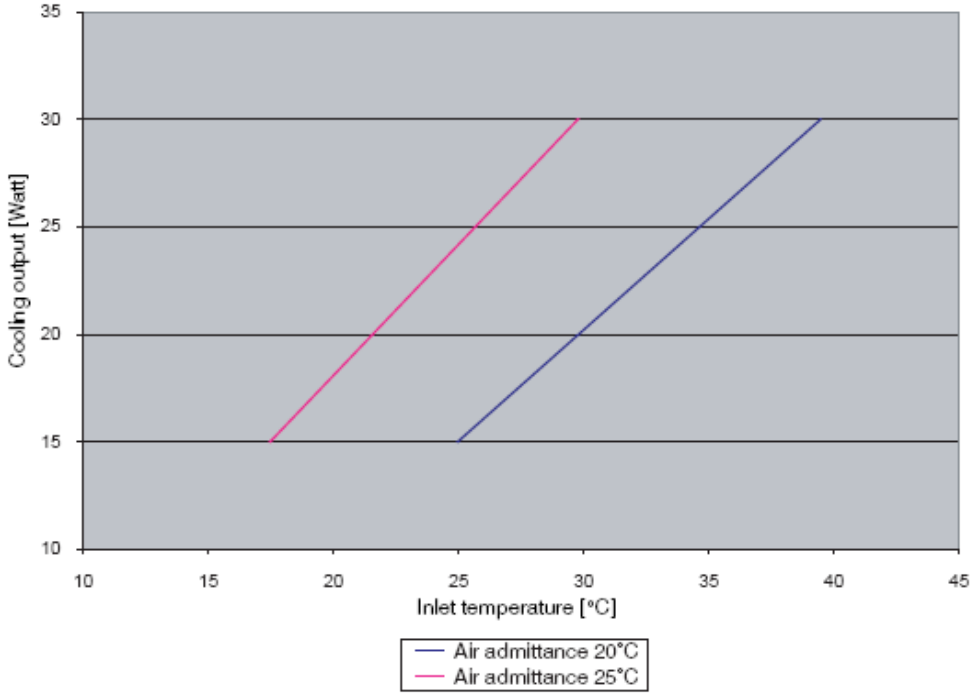


Fig. 71: Cooling output of the Liquid Cooling Package Plus, with flow temperature 10 °C

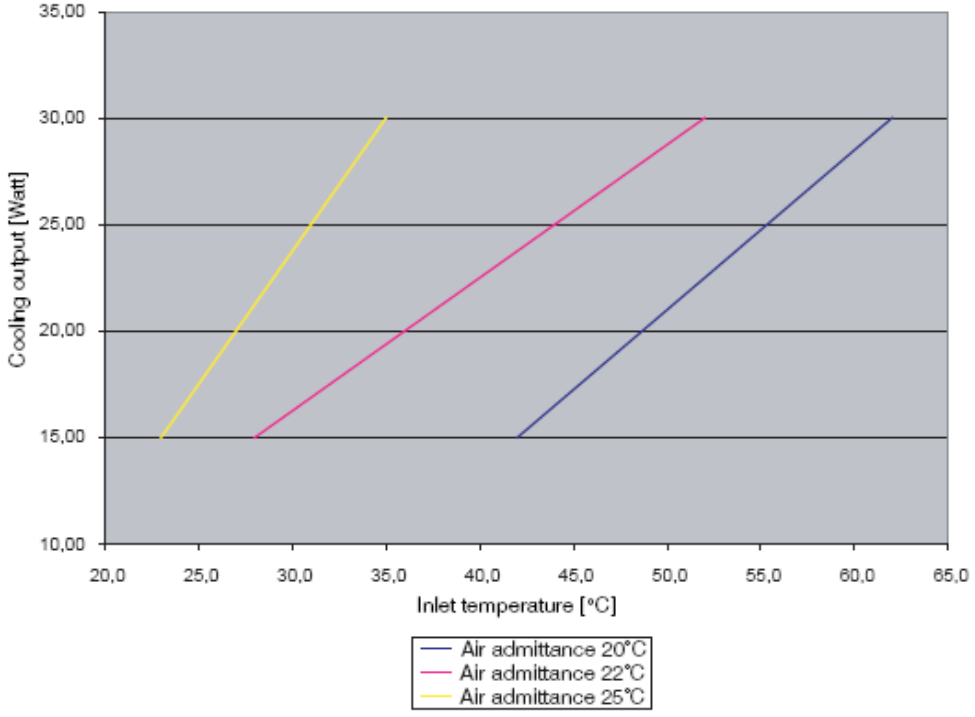


Fig. 72: Cooling output of the Liquid Cooling Package Plus, with flow temperature 15 °C

14.2.2 Pressure loss

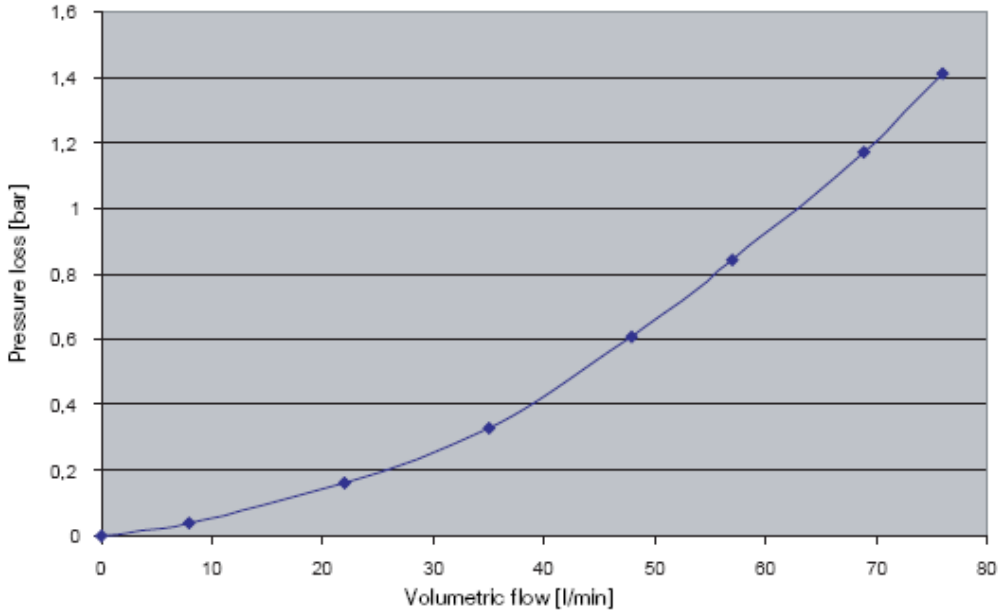


Fig. 73: Pressure loss in the Liquid Cooling Package Plus

14.3 Overview diagram

View without side panel right front/back

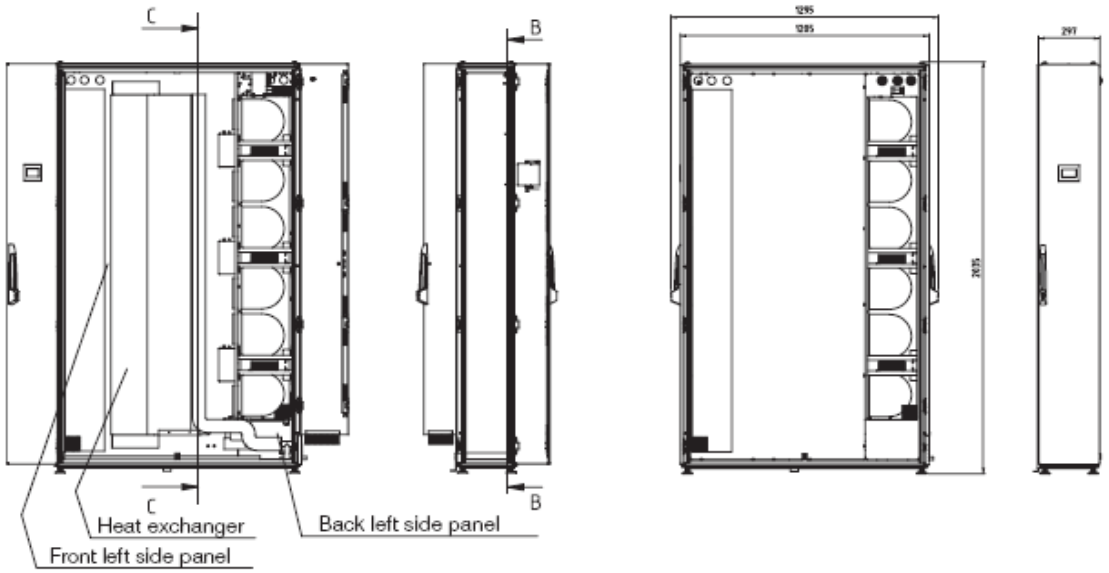


Fig. 74: Overview diagram – Liquid Cooling Package Plus (front, side and rear views)

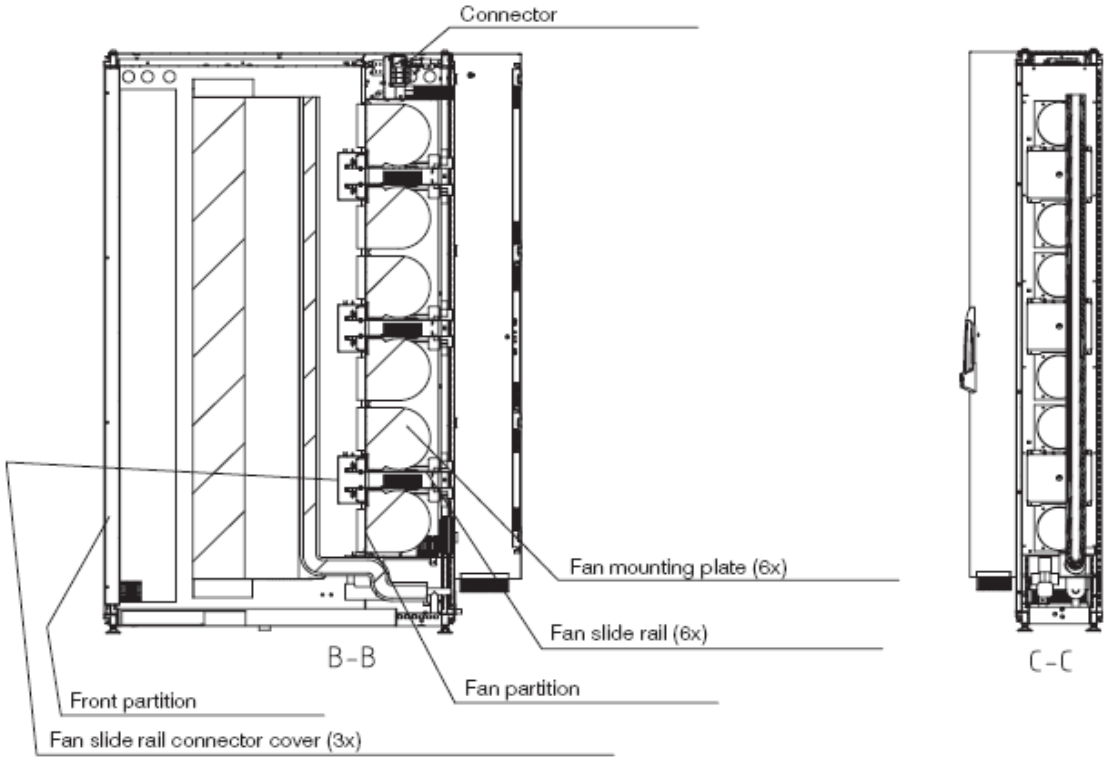


Fig. 75: Overview diagram – Liquid Cooling Package Plus (detail B and C)

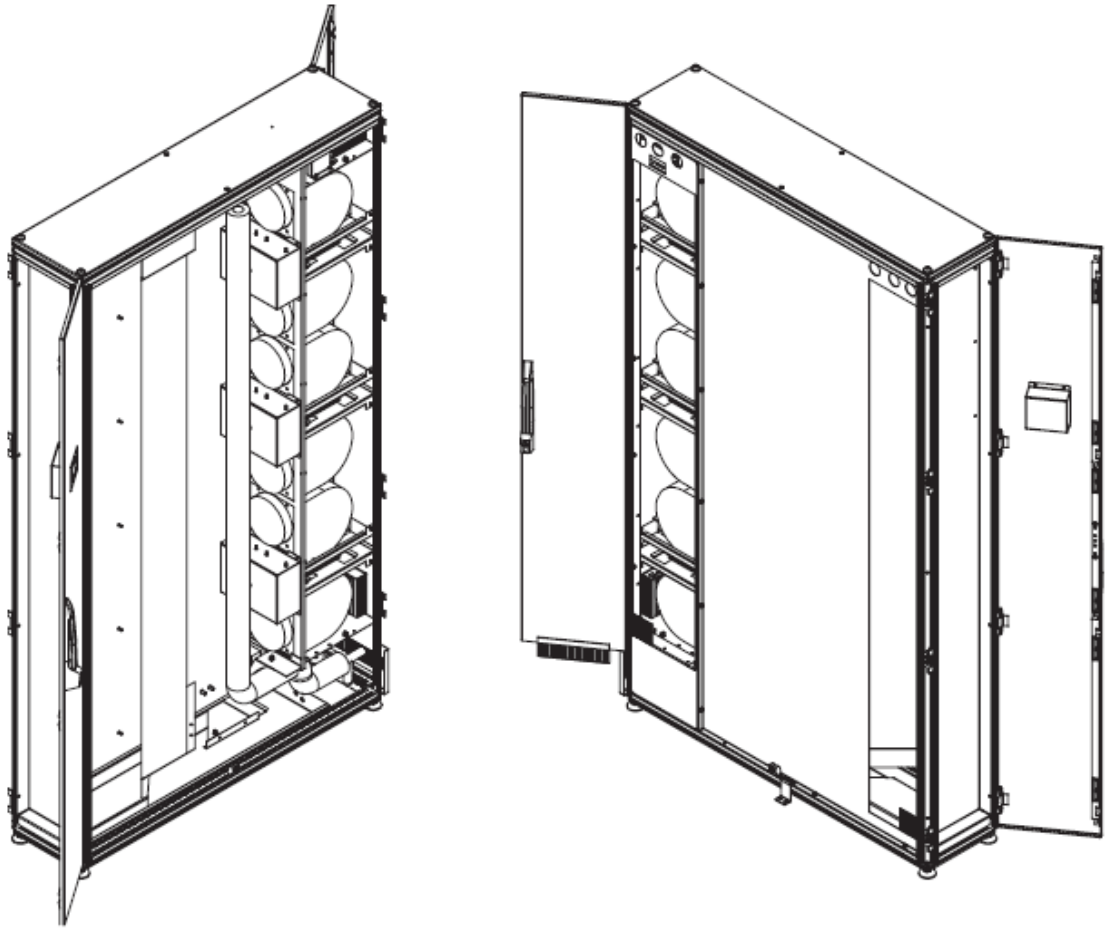


Fig. 76: Overview diagram – Liquid Cooling Package Plus (isometry)

14.4 Circuit diagram

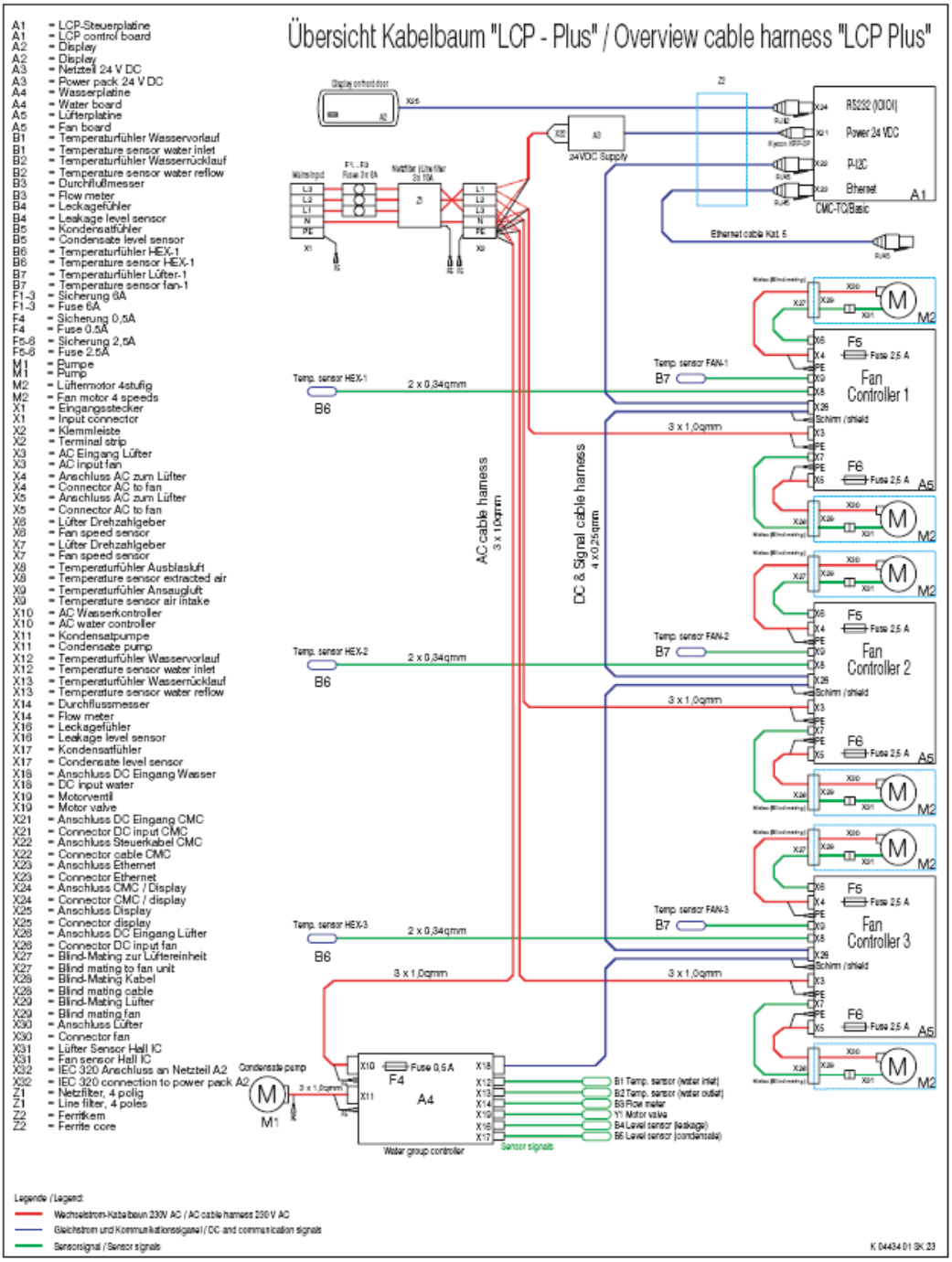


Fig. 77: Circuit diagram

14.5 Water circulation diagram

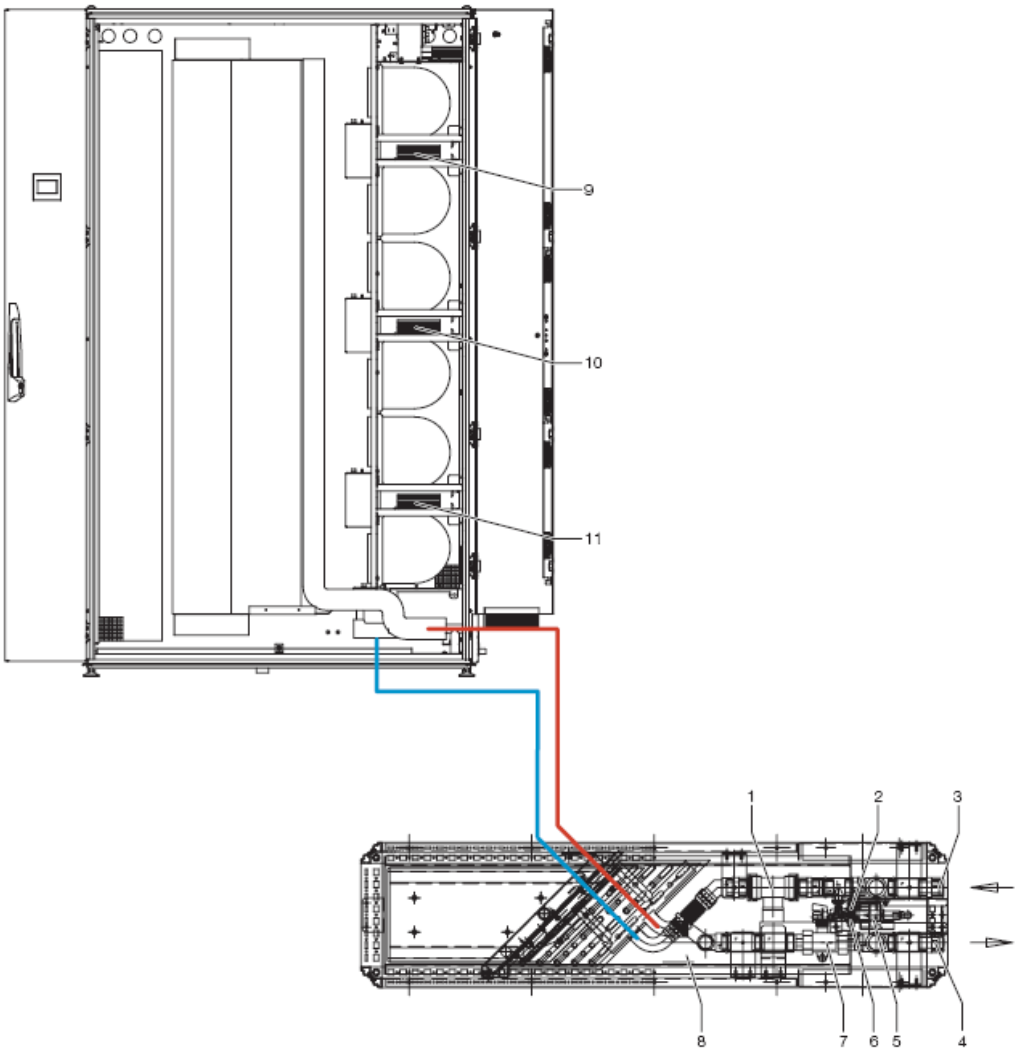


Fig. 78: Water circulation diagram

1 Two-way control valve
2 Leakage sensor
3 Cooling water flow
4 Cooling water return
5 Condensate pump
6 Condensate sensor (float-actuated switch)
7 Flow meter
8 Condensate collecting tray
9 Fan module 1 (top)
10 Fan module 2 (middle)
11 Fan module 3 (bottom)