APV
AN SPX BRAND

APV Compakva VXB50+

District heating unit with 50 litres storage tank

SPX®

Product description

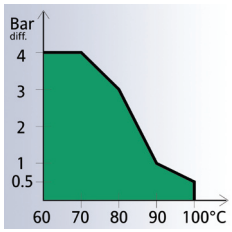
The APV Compakva VXB-50+ is a complete district heating unit offering optimum safety and comfort. A plate heat exchanger heats central heating water as well as domestic water when combined with the storage tank. The simple and extremely compact design makes the APV Compakva VXB-50+ the smallest unit of its type on the market.

- Smallest on the market
- Low operating costs
- Low power consumption
- Excellent cooling

Application

The APV Compakva VXB-50+ can be connected directly to the district heating network at a maximum flow temperature of 130°C. Operating conditions depend upon the differential pressure and the temperature of the district heating water.

The graph illustrates operating conditions without the need for a differential pressure controller. The use of a differential pressure controller set at a maximum of 40 kPa is recommended for levels outside the green area.



The APV Compakva VXB-50+ is especially suitable for remote areas of the district heating network with reduced capacity. Power consumption at maximum output is 10 kW.
The APV Compakva VXB-50+ is designed for single-family installations with no bath tub.

Components and function

The APV Compakva VXB-50+ consists of the following main components: An APV multifunctional block, an APV plate heat exchanger in two sections, two thermostatic valves, a differential pressure controller (for heating), two circulation pumps, an expansion tank, and a storage tank.

APV multifunctional block

The d multifunctional block functions as a pipe arrangement, cover, back panel and sensor pocket. The special channel design combined with the position of the sensor in the multifunctional block accelerates the closing function of the valve. This contributes to the low energy consumption at idle and reduces operating costs.

APV plate heat exchanger

The newly developed plate coupling (two sections in one plate heat exchanger) means that the same plate heat exchanger can be used for both domestic water and central heating, thereby reducing the pipe arrangement and space requirements.

Differential pressure controller

The differential pressure controller ensures optimum operating conditions for the thermostatic valve, which controls the central heating temperature.

Circulation pump

The pump on the central heating circuit circulates the water through the central heating circuit and the plate heat exchanger. The extremely energy-efficient pump features a built-in frequency converter that reduces power consumption by as much as 40% compared to traditional pumps, and eliminates noise.

Temperature control

The APV Compakva VXB-50+ features temperature control for both domestic water and central heating. The domestic water thermostatic valve ensures a consistent tap water temperature. When the district heating unit is not in use, the thermostatic valve ensures a suitable idle temperature.
The central heating thermostatic valve ensures a consistent central heating water temperature.

Storage tank

The stainless steel storage tank is pre-heated. The water is heated by a storage tank pump and heat exchanger. The advantages of using a storage tank instead of a traditional hot water tank are the absence of a heating coil and much smaller installation dimensions. The stainless steel storage tank requires no corrosion protection.

Storage tank pump

The storage tank pump maintains domestic water temperature in the storage tank by checking the temperature in the tank at regular intervals during start-up. The operation temperature is factory set at 40°C, and can be adjusted in the pump display.

Balancing valve

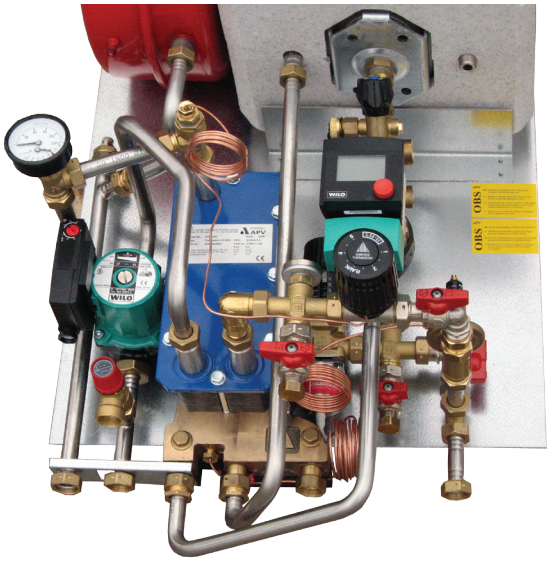
The balancing valve determines the tank emptying time.

Domestic water circulation

The APV Compakva VXB-50+ is ready-fitted for domestic water circulation installations, ensuring hot water as soon as the tap is turned on, no matter how far the tap is from the water heater. Circulation pipes can be connected to the built-in ½" end caps – or outside the unit.

Central heating system safety equipment

The central heating unit is fitted with a safety valve and an expansion tank.



Domestic water system safety equipment
The domestic water system is fitted with a safety valve.

Mounting
The APV Compakva VXB-50+ is designed for wall-mounting. Fitting is simple and the positioning of all pipe connections at pipe bracket distance from the wall facilitates a neat pipe arrangement.

Packaging
The APV Compakva VXB-50+ comes in shock-resistant packaging.

Technical data and specifications

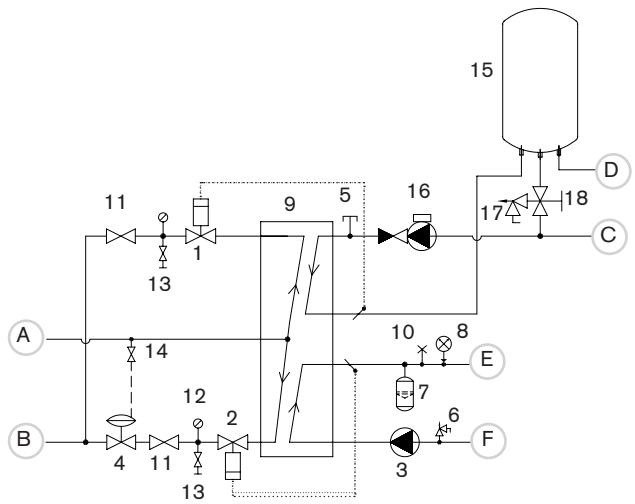
Domestic water system				
APV Type	Domestic heating temperature	60°C / 25°C		
	Domestic water temperature	10°C / 45°C		
	Total pressure loss (DH) kPa	Capacity kW	Domestic water l/h	No. of houses
Compakva VXB-50+	25	10	246	1

Central heating circuit				
APV Type	Domestic heating temperature	70°C / 40°C		
	Domestic water temperature	60°C / 35°C		
	Total pressure loss (DH) kPa	Capacity kW	Domestic water l/h	No. of houses
Compakva VXB-50+	25	13	453	1

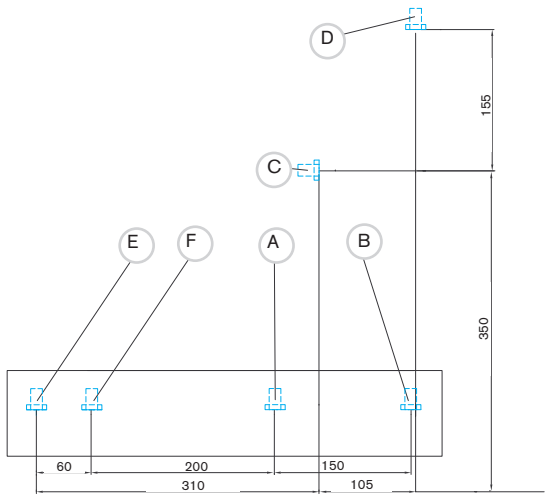
Measurements (without cabinet)				
APV Type	Width mm	Height mm	Depth mm	Weight kg
Compakva VXB50+	550	1350	360	40

Pressure level	PN10 (special model PN16)
Max temp.	130°C
Connections	3/4"
Materials	Red brass/stainless steel AISI 316

Flow diagram



Connections seen from above



The measurements on the drawing are stated in mm. The distance from the center of the connections to the wall is 44 mm

1. Thermostatic valve, domestic water
2. Thermostatic valve, heat
3. Pump
4. Differential pressure controller
5. ½" end cap for possible circulation pipe
6. Safety valve, heating
7. Expansion tank
8. Mano thermometer
9. APV plate heat exchanger
10. Air vent
11. Shutt-off valve
12. Thermometer
13. Drain
14. Mini ball valve
15. Storage tank (50 liter)
16. Storage tank pump with non-return valve
17. Safety valve, domestic water
18. Pipe regulating valve

A District heating, flow forward
B District heating, flow return
C Cold domestic water, inlet
D Hot domestic water, outlet
E Radiator, forward
F Radiator, return

WHERE IDEAS MEET INDUSTRY

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For more information about our worldwide locations, approvals, certifications, and local representatives, please visit www.apv.com.

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