

ESBE VTA 321

ESBE VTA 321 Automatic Mixing Valve User Manual

Model: VTA 321

1. INTRODUCTION

The ESBE VTA 321 is an automatic mixing valve designed for precise temperature control in water systems. Its primary function is to provide anti-scald protection, making it ideal for draw-off points where scalding must be prevented. Additionally, this valve is suitable for controlling the temperature in underfloor heating systems. All components that come into contact with water are constructed from corrosion-resistant materials to ensure durability and longevity.

2. SAFETY INFORMATION

Please read all instructions carefully before installation and operation. Failure to follow these instructions may result in property damage, personal injury, or death. Keep this manual for future reference.

- Installation should only be performed by a qualified professional in accordance with local plumbing and building codes.
- Ensure the main water supply is turned off before beginning any installation or maintenance work.
- Verify that the operating temperature and pressure of your system are within the valve's specifications.
- Do not tamper with the valve's internal components.
- Protect the valve from freezing temperatures.

3. PRODUCT OVERVIEW

The ESBE VTA 321 is a compact and robust thermostatic mixing valve. It features an asymmetric flow design and integrated anti-scald protection, ensuring a consistent and safe mixed water temperature. The valve is constructed from durable brass, designed for long-term performance in various water heating applications.



Figure 1: ESBE VTA 321 Automatic Mixing Valve, side view with threaded connections. This image shows the overall design of the valve, highlighting its brass body and black control knob.



Figure 2: ESBE VTA 321 Automatic Mixing Valve, front view. This image displays the ESBE brand logo and a clear flow direction indicator on the valve's casing.



Figure 3: ESBE VTA 321 Automatic Mixing Valve, side view. This image provides a close-up of the product label, indicating the model number VTA321-31100700, the temperature range of 20-43°C, and "MADE IN SWEDEN".

4. INSTALLATION/SETUP

Proper installation is crucial for the safe and efficient operation of the ESBE VTA 321 mixing valve. It is strongly recommended that installation be carried out by a certified plumber.

4.1 Pre-Installation Checks

- Inspect the valve for any signs of damage.

- Ensure all necessary tools and fittings (e.g., 3/4" internal thread connectors) are available.
- Flush the water lines to remove any debris before connecting the valve.

4.2 Installation Steps

1. Turn off the main water supply to the system.
2. Identify the hot and cold water inlets and the mixed water outlet on the valve. The valve typically has markings or an instruction diagram for this.
3. Connect the hot water supply to the designated hot inlet, the cold water supply to the cold inlet, and the mixed water line to the outlet. Use appropriate sealing materials (e.g., PTFE tape) on threaded connections.
4. Ensure all connections are tight and leak-free.
5. Slowly restore the main water supply and check for leaks.

5. OPERATION

The ESBE VTA 321 valve automatically maintains the set mixed water temperature within its specified range (20-43°C). The temperature is typically adjusted by rotating the black knob on the top of the valve. Refer to any markings on the knob or valve body for specific temperature settings.

- **Temperature Adjustment:** Rotate the control knob to increase or decrease the desired mixed water temperature.
- **Anti-Scald Function:** In the event of a cold water supply failure, the valve will automatically shut off the hot water flow to prevent scalding.

6. MAINTENANCE

The ESBE VTA 321 is designed for minimal maintenance. However, periodic checks can help ensure its continued optimal performance.

- **Annual Inspection:** Annually inspect the valve and connections for any signs of leaks or corrosion.
- **Temperature Verification:** Periodically check the mixed water temperature with a thermometer to ensure it is within the desired range and the anti-scald function is operating correctly.
- **Cleaning:** If water quality is poor, sediment may accumulate. In such cases, a qualified professional may need to clean the internal components.

7. TROUBLESHOOTING

If you experience issues with your ESBE VTA 321 mixing valve, consult the following table. For problems not listed or if solutions do not resolve the issue, contact a qualified plumber.

Problem	Possible Cause	Solution
Mixed water temperature is too hot or too cold.	Incorrect temperature setting; sediment buildup; unbalanced hot/cold pressure.	Adjust the temperature knob; have a professional clean the valve; check system pressures.
Reduced water flow.	Sediment or debris in the valve or pipes; partially closed isolation valves.	Check and clean strainers (if present); ensure all isolation valves are fully open.
Valve leaking.	Loose connections; damaged seals.	Tighten connections; contact a professional for seal replacement.

8. SPECIFICATIONS

Model Number	VTA 321 (Manufacturer Reference: 31100700)
Manufacturer	ESBE
Material	Brass
Connection Type	3/4" Internal Thread (IG)
Operating Temperature Range	20 - 43°C
Maximum Operating Pressure	10 bar
Maximum Operating Temperature	95°C
Dimensions (L x W x H)	8.6 x 2.5 x 8.6 cm (Product); 110 x 75 x 80 mm (from description)
Weight	1 Kilogram
Certifications	CE, EN 1074-1, EN 1074-2, DIN 28011, DIN 28012, DVGW G 280, DVGW G 281

9. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided at the time of purchase or contact your retailer. For technical support or inquiries regarding spare parts, please contact ESBE directly or consult their official website. Information regarding spare parts availability is not provided in this manual.