Walfront HAD20B

Walfront HAD20B Automatic Condensate Drain Valve Instruction Manual

Model: HAD20B

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the Walfront HAD20B Automatic Condensate Drain Valve. This mechanical automatic drainer is designed for compressed air systems to efficiently remove condensed liquid without electricity or significant air loss.
The HAD20B features a casting aluminum alloy shell with a plastic powder coating for corrosion resistance. Its internal ball drainage system ensures reliable and continuous condensate removal.

Product Specifications

Model	HAD20B
Port Size	Inlet=Outlet=1/2BSP
Maximum Pressure	20 bar (290 PSI)
Maximum Temperature	100°C (212°F)
Maximum Capacity	400 L/H
Material	Casting Aluminum Alloy (Shell), Plastic Powder Coating (Surface)
Dimensions (W x H)	2.36"W x 2.36"H (approx. 6cm x 6cm)
Weight	602g (approx.)

Package Contents

The package includes the following items:

- 1 x HAD20B Automatic Condensate Drain Valve

- 1 x Pipe Fitting (1/2" BSP)

Installation Instructions

1. **Preparation:** Before installing the drainer, ensure the piping system is clean. Use compressed air to remove any impurities from the pipes to prevent blockages.
2. **Placement:** Install the automatic drainer directly beneath the drainage device of your equipment. Incorrect placement, such as installing it above the drainage point, will cause condensate to accumulate and affect the drainer's function.
3. **Connection:** Connect the 1/2" BSP inlet and outlet ports to your compressed air system. Ensure all connections are secure and properly sealed to prevent air leaks.



Figure 1: HAD20B Automatic Condensate Drain Valve with indicated dimensions (12.5cm/4.92in height, 10cm/3.93in width). Shows the 1/2" BSP IN and OUT ports, and the HAD20B model number with Pmax=20bar and Tmax=100°C.



Figure 2: Close-up view of the HAD20B drain valve, highlighting its casting aluminum alloy shell with plastic powder coating for corrosion resistance. Water droplets are visible around the unit, suggesting its function in a moist environment.



Figure 3: The HAD20B drain valve, emphasizing its stable performance and low failure rate. The image shows the unit from a slightly different angle, with clear labeling of inlet and outlet ports.



Figure 4: Top-down view of the HAD20B drain valve, clearly showing the 1/2" BSP IN port and the HAD20B model information. This perspective helps in understanding the orientation for installation.



Figure 5: Side view of the HAD20B drain valve, showing its spherical body and the connection points. This view helps visualize the compact design of the unit.



Figure 6: Rear view of the HAD20B drain valve, showing the four screws securing the casing. This perspective provides a complete view of the unit's exterior.



Figure 7: A composite image showing detailed views of the HAD20B drain valve's components. This includes a close-up of the manual drain valve, the internal mechanism, the threaded inlet/outlet, and the included pipe fitting.



Figure 8: Close-up image of the 1/2" BSP pipe fitting, which is included with the HAD20B automatic condensate drain valve for installation.

Operation

The Walfront HAD20B is a mechanical automatic drainer that operates without external power. Its function relies on a float ball system:

- When the amount of condensed liquid is low, the buoyancy acting on the float ball is insufficient to overcome its weight and the compressed air pressure, keeping the drainer outlet closed.
- As condensate accumulates, the buoyancy increases. Once it exceeds the combined weight of the float ball and the air pressure, the float ball rises, opening the drainer outlet.
- The condensed liquid is then discharged. As the liquid level drops, the float ball descends, closing the outlet and preventing compressed air loss.

This continuous cycle ensures efficient and automatic removal of condensate from your compressed air system.

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Video 1: Demonstration of the HAD20B Automatic Condensate Drain Valve in operation, showing condensate being discharged into a blue container. This video illustrates the continuous drainage process of the unit.

Maintenance

Regular maintenance is crucial for the optimal performance and longevity of your HAD20B Automatic Condensate Drain Valve.

1. **Weekly Inspection:**
    - Inspect the drainer once a week.
    - To perform the inspection, open the manual drainer valve to allow water to drain until compressed air in the equipment enters the drainer.
    - After a few seconds, close the manual valve.
    - If the amount of drained water is more than 0.5 liters, it indicates a potential blockage, and the drainer needs to be cleaned thoroughly.
2. **Annual Cleaning:**
    - Internal parts of the drainer should be removed and cleaned annually.
    - When cleaning, use soap water or dish-washing liquid.
    - **DO NOT** use solvents, as they can damage the rubber fittings and seals within the unit.

Troubleshooting

This section addresses common issues you might encounter with your automatic condensate drainer.

Problem	Possible Cause	Solution
No drainage or insufficient drainage	• Drainer installed incorrectly (e.g., above drainage point). • Internal blockage due to impurities. • Float ball mechanism stuck.	• Verify correct installation beneath the drainage device. • Perform weekly inspection and cleaning procedure. If blockage persists, perform annual cleaning. • Disassemble and clean internal parts as per annual maintenance.
Air leaks from the unit	• Improperly sealed pipe connections. • Damaged rubber fittings or seals. • Cracked housing.	• Ensure all pipe connections are tight and use appropriate thread sealant (e.g., Teflon tape). • Inspect rubber fittings during annual cleaning; replace if damaged. • If housing is cracked, the unit may need replacement.

Warranty and Support

Specific warranty information for the Walfront HAD20B Automatic Condensate Drain Valve is not provided in this manual. For details regarding warranty coverage, technical support, or replacement parts, please contact Walfront customer service or refer to the product's original purchase documentation.
You may also visit the official Walfront store on Amazon for additional product information and support resources:Walfront Store

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