

## REFCO 3004145

# GOBI II Universal Condensate Pump

MODEL: 3004145

Instruction Manual

## 1. Introduction

The REFCO GOBI II Universal Condensate Pump is designed for efficient and quiet removal of condensate from air conditioning, HVAC, and dehumidifier systems. Suitable for systems ranging from 6,000 BTU/h to 120,000 BTU/h, this pump features a digital water sensor, universal voltage compatibility, and individually configurable flow rates, making it a versatile solution for various applications. This manual provides essential information for safe installation, operation, maintenance, and troubleshooting of your GOBI II pump.



Figure 1.1: Assembled view of the GOBI II Universal Condensate Pump.

## 2. Safety Information

Please read all safety instructions carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Always disconnect power to the air conditioning unit and the pump before performing any installation,

maintenance, or troubleshooting.

- Installation must be performed by a qualified technician in accordance with all local and national electrical and plumbing codes.
- Ensure the pump is installed in a location where it is protected from direct water spray and extreme temperatures.
- Do not operate the pump with damaged cables or if it has been dropped or damaged.
- This pump is designed for condensate water only. Do not use it for other liquids.
- Keep children and unauthorized persons away from the installation area.

### 3. Product Overview

The GOBI II pump system consists of several key components designed for reliable condensate removal.

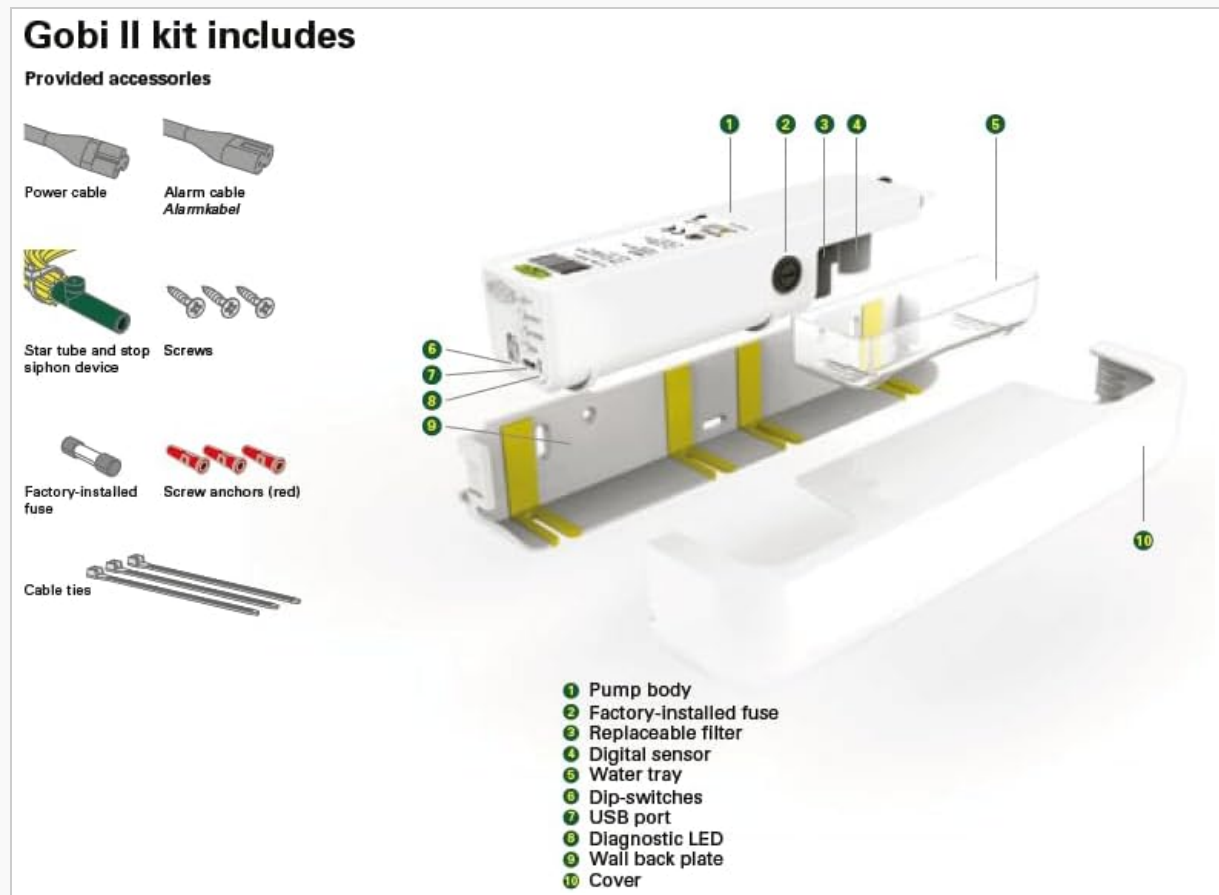


Figure 3.1: GOBI II kit components and labeled diagram.

#### 3.1. Included Components:

- Power cable
- Alarm cable
- Star tube and anti-siphon device
- Screws (for mounting)
- Screw anchors
- Factory-installed alarm fuse
- Cable ties

#### 3.2. Key Features:

- Universal application for various AC systems.

- High pumping capacity: 11 GPH (gallons per hour).
- High discharge head: up to 65.6 ft.
- Extremely quiet operation: less than 19 dB noise level.
- Reliable digital water sensor, eliminating traditional float problems.
- Demand-oriented control for optimized pumping capacity.

## 4. Setup and Installation

The GOBI II pump is designed for direct mounting under the air conditioner unit. Follow these steps for proper installation:

1. **Mounting:** Secure the pump's wall back plate (component 9 in Figure 3.1) to a stable surface directly beneath the air conditioning unit using the provided screws and screw anchors. Ensure it is level.
2. **Pump Body Installation:** Slide the pump body (component 1 in Figure 3.1) onto the mounted back plate until it clicks securely into place.
3. **Condensate Inlet Connection:** Connect the condensate drain line from the air conditioning unit to the pump's inlet. Ensure a tight, leak-free connection.
4. **Discharge Line Connection:** Connect the 1/4" discharge tube from the pump's outlet to your desired drain point. Install the provided anti-siphon device in the discharge line to prevent backflow and ensure proper pump operation. Ensure the discharge line rises vertically for at least 6 inches before running horizontally or downwards.
5. **Electrical Connection:** Connect the power cable to the pump and then to a suitable power supply (100-240 VAC, 50/60 Hz). Ensure all electrical connections are secure and comply with local electrical codes.
6. **Alarm Cable Connection (Optional but Recommended):** Connect the alarm cable to the pump's alarm relay terminals and integrate it with your HVAC system's alarm circuit if desired. The alarm relay is interchangeable (NO or NC) and rated for 250VAC, 6.3A or 28VDC, 6.3A.
7. **Testing:** Once all connections are made, restore power to the system. Pour a small amount of water into the air conditioner's drain pan to verify the pump activates and discharges water correctly. Check for any leaks.

## 5. Operating Instructions

The GOBI II condensate pump operates automatically based on the water level detected by its digital sensor. It will activate when condensate accumulates and shut off once the water is cleared.

### 5.1. Digital Sensor and Flow Control:

The integrated digital sensor (component 4 in Figure 3.1) precisely monitors the water level, ensuring the pump activates only when necessary. The pump's demand-oriented control adjusts the pumping capacity as needed, optimizing efficiency and minimizing noise.

### 5.2. Diagnostic LEDs:

The pump features a diagnostic LED (component 8 in Figure 3.1) to indicate its operational status.

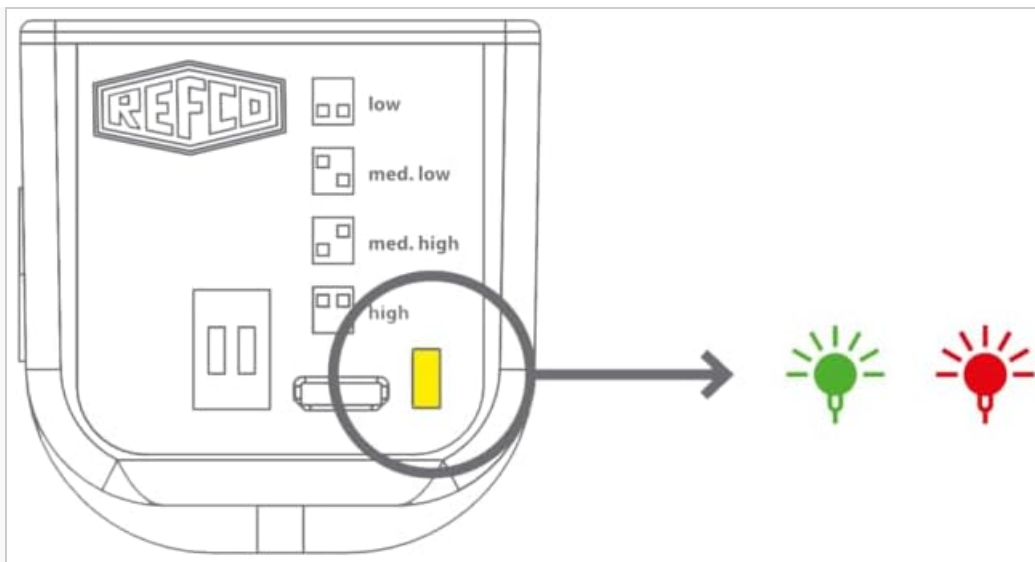


Figure 5.1: Diagnostic LED indicators.

- **Green LED:** Indicates normal operation. The pump is powered and functioning correctly.
- **Red LED:** Indicates an error or alarm condition. Refer to the Troubleshooting section for possible causes.

## 6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your GOBI II pump.

- **Monthly Check:** Visually inspect the pump, inlet, and discharge lines for any blockages, kinks, or leaks. Ensure the pump housing is clean.
- **Annual Cleaning:** Disconnect power to the pump and the AC unit. Carefully remove the pump body from the wall back plate. Clean the water tray (component 5 in Figure 3.1) and the digital sensor (component 4) to remove any sludge, mold, or debris. A soft brush and mild detergent can be used. Rinse thoroughly with clean water.
- **Filter Replacement:** The pump includes a replaceable filter (component 3 in Figure 3.1). Check its condition during annual cleaning and replace if it appears clogged or damaged.
- **Reassembly:** After cleaning, reassemble all components, ensuring they are securely in place. Restore power and test the pump's operation.

## 7. Troubleshooting

If you encounter issues with your GOBI II pump, refer to the following table for common problems and solutions. Always disconnect power before attempting any inspection or repair.

Problem	Possible Cause	Solution
Pump does not run	No power; Clogged inlet/outlet; Faulty sensor; Motor issue	Check power supply; Clear blockages; Clean digital sensor; Contact support if issue persists.
Pump runs continuously	Anti-siphon device missing/incorrectly installed; Leak in discharge line; Sensor issue	Install/check anti-siphon device; Inspect discharge line for leaks; Clean sensor.
Water overflow	Pump not running; Clogged lines; Pump capacity exceeded; Alarm not connected	See "Pump does not run"; Clear blockages; Ensure system BTU/h is within pump's range; Connect alarm.

Problem	Possible Cause	Solution
Red diagnostic LED is on	Error condition (e.g., high water alarm, pump fault)	Check for blockages, ensure proper installation, and verify power. If the issue persists after checking, contact technical support.

## 8. Specifications

Detailed technical specifications for the GOBI II Universal Condensate Pump.

Parameter	Value
Max. Flow Rate	11 GPH (0.18 Gallons Per Minute)
Max. Discharge Head	65.6 ft
Max. Suction Lift	10 ft
Noise Level	<19 dB(A)
Pump Type	Diaphragm type
Tube Diameter	1/4 "
Voltage	100 - 240 VAC
Frequency	50 / 60 Hz
Energy Consumption	8 W
Protection Class	I
Alarm Relay	Interchangeable NO or NC, rated 250VAC, 6.3A or 28VDC, 6.3A
Ingress Protection	IP44
Cable Length	5 ft
Operating Temperature Range	41 - 104 °F (5 - 40 °C)
Water Temperature Range	41 - 104 °F (5 - 40 °C)
Storage Temperature Range	-4 - 122 °F (-20 - 50 °C)
Item Weight	2.59 pounds
Package Dimensions	13.66 x 12.8 x 2.6 inches

### 8.1. Capacity Curve:

The following graph illustrates the pump's capacity (flow rate) versus vertical lift/head pressure.

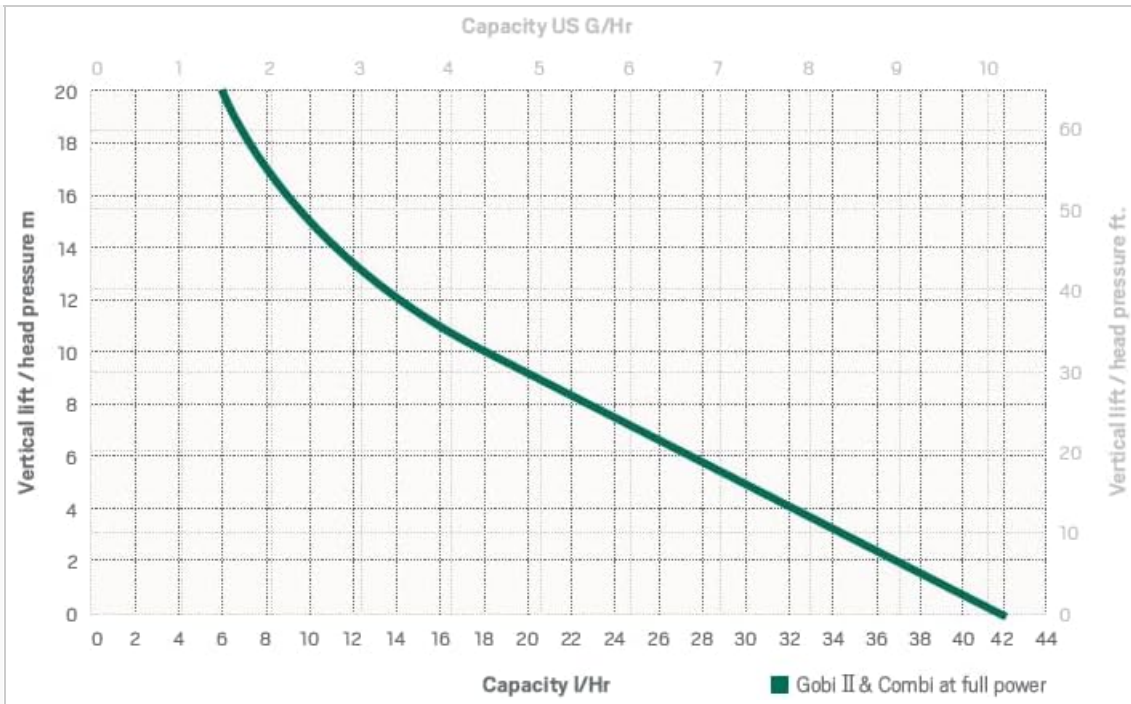


Figure 8.1: GOBI II Capacity Curve.

## 9. Warranty


The manufacturer warranty for the GOBI II Universal Condensate Pump begins with the commissioning of the unit. Please refer to the warranty documentation included with your purchase for specific terms and conditions.

## 10. Support

For technical assistance, spare parts, or further inquiries, please contact your REFCO product supplier or visit the official REFCO website for support contact information.

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## Related Documents - 3004145

	<p><a href="#">Gobi II Condensate Pump Installation and Operation Manual</a></p> <p>Comprehensive guide for the REFCO Gobi II condensate pump, covering installation, operation, maintenance, and troubleshooting for HVAC/R systems.</p>
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 <p>GOBI II 3004145</p> <p>Quick Guide</p> <p>Original language: EN</p>	<p><a href="#">REFCO GOBI II Condensate Pump: Quick Installation Guide</a></p> <p>Official quick guide for the REFCO GOBI II condensate pump (model 3004145). Provides essential information on installation, operation, safety, and maintenance for efficient condensate removal in HVAC systems.</p>
 <p>Condensate Pump Gobi II 3004145</p>	<p><a href="#">REFCO Gobi II Condensate Pump Installation and Operation Manual</a></p> <p>A comprehensive guide to the REFCO Gobi II condensate pump, detailing installation, operation, safety precautions, technical specifications, and troubleshooting. Features include configurable quiet mode, diagnostic LED, USB connectivity, and broad application range.</p>
 <p>Universal Condensate Pump Combi 3004146</p>	<p><a href="#">REFCO Combi Universal Condensate Pump 3004146 Installation and Technical Manual</a></p> <p>This document provides comprehensive installation, technical specifications, safety guidelines, and troubleshooting information for the REFCO Combi Universal Condensate Pump (Model 3004146).</p>
 <p>VAMP-F 3004225</p> <p>Quick Guide</p> <p>Original language: EN</p>	<p><a href="#">REFCO VAMP-F Condensate Pump Quick Guide</a></p> <p>A concise guide to the installation, operation, and maintenance of the REFCO VAMP-F condensate pump, designed for efficient removal of condensate from HVAC systems. Includes technical specifications and safety instructions.</p>
 <p>VAMP-X 3004229</p> <p>INSTRUCTION MANUAL Condensate Pump</p> <p>DE BEDIENUNGSANLEITUNG Kondensatpumpe</p> <p>FR MODE D'EMPLOI Pompe à condensat</p> <p>IT ISTRUZIONE PER L'USO Pompa di condensato</p> <p>ES MANUAL DE INSTRUCCIONES Bomba de condensación</p>	<p><a href="#">REFCO VAMP-X Condensate Pump Instruction Manual</a></p> <p>This instruction manual provides detailed information on the REFCO VAMP-X condensate pump, covering its specifications, installation, operation, maintenance, safety guidelines, and troubleshooting. Available in English, German, French, Italian, and Spanish.</p>