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## Mastercool 69100

# Mastercool 69100 Complete A/C Recovery System User Manual

Model: 69100

## 1. INTRODUCTION AND OVERVIEW

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The Mastercool 69100 Complete A/C Recovery System is a professional-grade unit designed for efficient and reliable refrigerant recovery from HVAC and automotive systems. This compact and lightweight system features a 1/2 HP oil-less compressor and is compatible with a wide range of refrigerants, including CFCs, HCFCs, and HFCs like R134a, R22, and R410A. Its robust design and integrated safety features ensure safe and effective operation for technicians on the go or in the shop.



**DURABLE** reinforced  
hard plastic case



**PORTABLE**  
for easy transportation

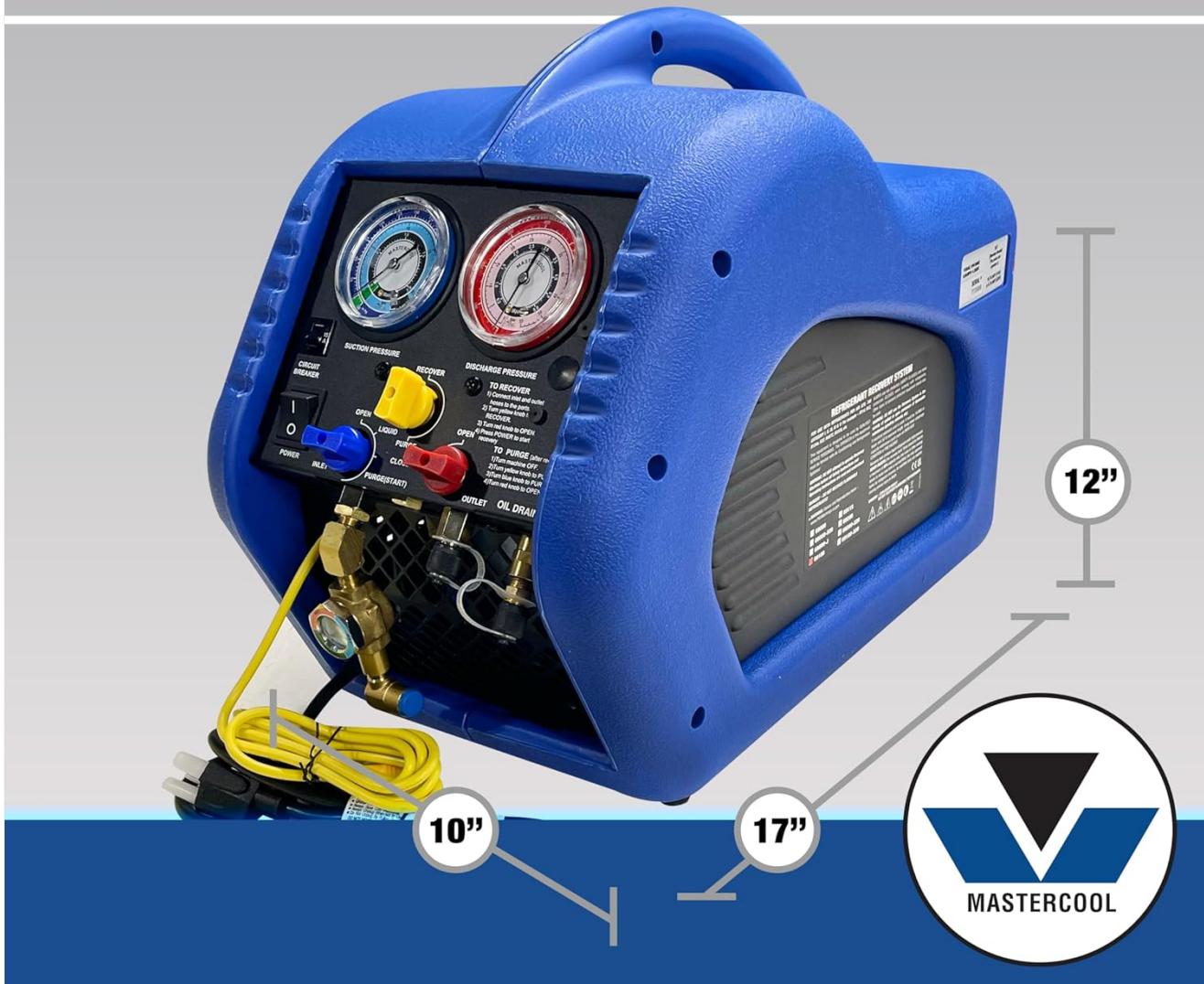


Figure 1.1: The Mastercool 69100 unit highlighting its compact and portable design with dimensions of 17 inches L x 10 inches W x 12 inches H.

## 2. KEY FEATURES

- **Complete System with Recovery Tank:** Includes a 30 lb DOT-certified recovery tank, filter dryer, and sight glass for immediate use.
- **Powerful 1/2 HP Oil-Less Compressor:** High-efficiency compressor with an internal cooling fan for fast, reliable recovery speeds and prevention of overheating.
- **Automatic Low-Pressure Cut-Off Switch:** Built-in safety feature that automatically stops recovery when complete, protecting the compressor.
- **Wide Refrigerant Compatibility:** Supports CFC, HCFC, and HFC refrigerants, including R134a, R22, and R410A.
- **Compact & Lightweight:** Weighs only 38 lbs with dimensions of 17" L x 10" W x 12" H for easy portability.
- **High-Pressure Safety Shut-Off:** Automatically stops operation if pressure levels exceed safe limits, ensuring user and equipment safety.

- **Liquid-Compatible Recovery:** Designed to handle both vapor and liquid refrigerant recovery efficiently.



Figure 2.1: Detailed view of key features such as the high volume cooling fan, ergonomic handle, and automatic low pressure cut-off switch.

### 3. WHAT'S IN THE Box

Your Mastercool 69100 Complete A/C Recovery System package includes the following components:

- Recovery Unit: 1/3 HP oil-less compressor
- Recovery Tank: 30 lb DOT-certified recovery tank
- Filter Dryer: Included for moisture removal
- Sight Glass: For monitoring refrigerant flow
- Service Hoses: Standard set for connection



## COMPLETE KIT

for refrigerant recovery



**PRECISION**  
and craftsmanship for  
reliable performance



30 LB DOT-APPROVED TANK



SIGHTGLASS



OIL PURGE BOTTLE  
R134A LOW SIDE COUPLER



Figure 3.1: All components included in the Mastercool 69100 complete kit for refrigerant recovery.

## 4. SETUP INSTRUCTIONS

- Unpacking:** Carefully remove all components from the packaging. Inspect for any shipping damage.
- Placement:** Place the recovery unit on a stable, level surface in a well-ventilated area. Ensure adequate clearance around the unit for airflow.
- Tank Connection:** Connect the service hose from the recovery unit's outlet to the vapor port of the 30 lb DOT-certified recovery tank. Ensure connections are tight.
- Filter Dryer & Sight Glass:** Ensure the inline filter dryer and sight glass are properly installed between the recovery unit and the system being serviced, as indicated by the flow direction arrows.
- Power Connection:** Connect the power cord to a grounded 100V AC outlet.
- System Connection:** Connect the appropriate service hoses from the system to be recovered (e.g., vehicle A/C or HVAC unit) to the inlet ports of the recovery unit.

*Always refer to local regulations and safety guidelines for proper refrigerant handling and recovery procedures.*

## 5. OPERATING INSTRUCTIONS

The Mastercool 69100 is designed for straightforward operation. Follow these steps for effective refrigerant recovery:

- 1. Pre-Operation Check:** Verify all hose connections are secure and the recovery tank is not overfilled. Ensure the system being recovered is depressurized as much as possible before starting.
- 2. Power On:** Flip the main power switch to the 'ON' position.
- 3. Mode Selection:** Select the desired recovery mode (Vapor or Liquid) using the appropriate valve on the unit. For faster recovery, start with liquid recovery if applicable, then switch to vapor.
- 4. Initiate Recovery:** Open the valves on the manifold and the recovery tank to begin the recovery process. The unit's 1/2 HP oil-less compressor will start drawing refrigerant.
- 5. Monitor Progress:** Observe the pressure gauges and the sight glass to monitor the recovery process. The sight glass allows you to see the flow of refrigerant.
- 6. Automatic Shut-Off:** The unit features an automatic low-pressure cut-off switch. Once the system being recovered reaches a vacuum, the unit will automatically shut off, preventing compressor damage and indicating the completion of recovery.
- 7. Purging (if necessary):** After recovery, if purging is required to clear residual refrigerant from the unit's internal components, follow the specific instructions on the unit's control panel for the purge procedure.
- 8. Disconnect:** Close all valves, turn off the unit, and carefully disconnect the hoses.



Figure 5.1: The control panel of the Mastercool 69100, showing the gauges and valve controls for operation.



# WORKS WITH ALL REFRIGERANTS

including CFCs, HFCs, HCFCs, and blends

**Suitable for  
HVAC & Automotive  
Applications**



Figure 5.2: The Mastercool 69100 is compatible with a wide range of refrigerants, including R134a and R410A, making it versatile for various applications.

## 6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Mastercool 69100 recovery system.

- Filter Dryer Replacement:** The inline filter dryer removes moisture and contaminants. Replace it regularly, especially after recovering from contaminated systems or when the sight glass indicates moisture (e.g., bubbles or discoloration).
- Cleaning:** Keep the exterior of the unit clean. Use a damp cloth to wipe down surfaces. Ensure the cooling fan vents are free from obstructions to maintain efficient cooling.
- Oil-Less Compressor:** The 1/2 HP compressor is oil-less, meaning it does not require oil changes or lubrication, simplifying maintenance.
- Hose Inspection:** Periodically inspect all service hoses for cracks, leaks, or damage. Replace any damaged hoses immediately to prevent refrigerant loss and ensure safety.

## 7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your Mastercool 69100 system.

Problem	Possible Cause	Solution
Unit does not power on.	No power, tripped circuit breaker, faulty power switch.	Check power outlet and cord. Reset the circuit breaker on the unit. If the switch is loose or damaged, contact customer support.
Slow recovery or no recovery.	Clogged filter dryer, closed valves, kinked hoses, low refrigerant in system, recovery tank full.	Replace filter dryer. Ensure all valves are open. Check hoses for kinks. Verify there is refrigerant to recover. Check recovery tank weight.
Unit shuts off prematurely.	High-pressure safety shut-off activated, low-pressure cut-off activated (system empty).	Check for blockages in the discharge line or overfilled tank. If the system is empty, this is normal operation. Allow unit to cool if overheated.
Unit is smoking or unusual odors.	Internal component failure, motor issue.	<b>Immediately turn off the unit and disconnect power. Do not attempt to operate. Contact qualified service personnel or Mastercool customer support.</b>

## 8. SPECIFICATIONS

Specification	Value
Brand	Mastercool
Model Name	69100
Motor Horsepower	0.5 HP
Voltage	100 Volts
Noise Level	55 dB
Item Weight	70 Pounds (shipping weight, unit is 38 lbs)
Product Dimensions (L x W x H)	17.5" x 21" x 17.5"
Material	Stainless Steel (internal components), ABS plastic (exterior)
Special Features	Automatic Shut-Off
Compatible Refrigerants	CFC, HCFC, HFC (R134a, R22, R410A)

## 9. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation included with your product or visit the official Mastercool website. Warranty terms and conditions may vary.

For technical support, service, or replacement parts, please contact Mastercool customer service directly. Contact information can typically be found on the manufacturer's website or in the product packaging.

