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MEASUREMAN MA331

MEASUREMAN 3-1/8" AC Pressure Gauge Instruction Manual

Model: MA331

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1. INTRODUCTION

This manual provides instructions for the proper use, setup, operation, and maintenance of your MEASUREMAN 3-1/8" AC Pressure Gauge. This single high-side refrigeration gauge is designed for monitoring the high-pressure side of AC systems and is compatible with R410A, R22, R404A, and R134a refrigerants. It features a large, easy-to-read dial with a 0-800 PSI scale and Class 1.6 accuracy for reliable readings.

2. SAFETY INFORMATION

Always observe the following safety precautions when working with refrigeration systems and pressure gauges:

- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves, to protect against refrigerant exposure and potential frostbite.
- Ensure the AC system is depressurized or isolated before connecting or disconnecting the gauge, unless specifically performing a pressure test that requires the system to be active.
- Never exceed the maximum rated pressure of the gauge (800 PSI).
- Handle refrigerants in a well-ventilated area. Avoid inhaling refrigerant vapors.
- Consult a qualified HVAC technician if you are unsure about any procedure or encounter unexpected issues.
- Keep the gauge and hose away from open flames or high heat sources.

3. PRODUCT COMPONENTS

Your MEASUREMAN AC Pressure Gauge package includes the following items:

- One (1) 3-1/8" AC Pressure Gauge (0-800 PSI)
- One (1) 12-inch Red Service Hose with 1/4" SAE Fittings



Image 3.1: The 3-1/8" AC Pressure Gauge, showing the dial with refrigerant scales for R410A, R22, R404A, and R134a, and the 0-800 PSI range.



Image 3.2: The 12-inch red service hose, rated for 800 PSI working pressure and 4000 PSI burst pressure, equipped with 1/4" SAE fittings.

4. SETUP

Before using your pressure gauge, follow these steps for initial setup:

1. **Inspect Components:** Carefully unpackage all components and inspect them for any signs of damage. Ensure all fittings are clean and free of debris.
2. **Connect Hose to Gauge:** Thread one end of the 12-inch red service hose onto the bottom port of the pressure gauge. Hand-tighten first, then use a wrench to secure it firmly, ensuring a leak-free connection. Do not overtighten.
3. **Check External Adjustment:** The gauge features an external adjustment screw. Before first use, ensure the needle rests precisely on the '0' mark. If not, gently turn the adjustment screw with a small screwdriver until the needle aligns with '0'.

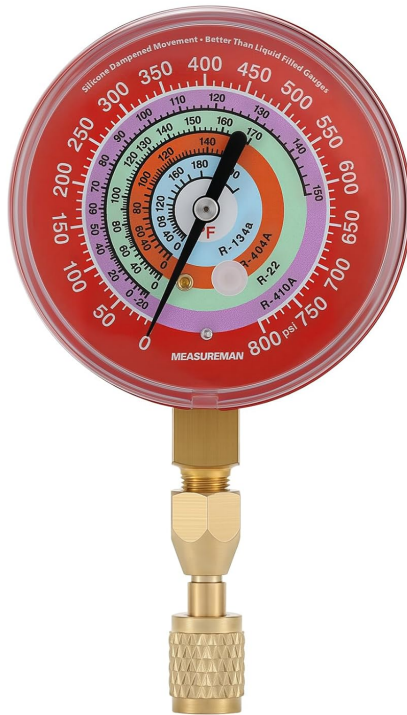


Image 4.1: The AC pressure gauge with the red service hose properly connected, ready for use.

5. OPERATING INSTRUCTIONS

This gauge is designed for measuring the high-side pressure of AC systems. Follow these steps for accurate readings:

1. **Identify High-Side Port:** Locate the high-side service port on your AC system. This port is typically smaller than the low-side port and may be marked with an 'H' or a red cap.
2. **Connect Hose to System:** Ensure the AC system is running and stable. Connect the free end of the red service hose to the high-side service port. Hand-tighten the fitting, then use a wrench to ensure a secure, leak-free connection.
3. **Read Pressure:** Once connected, the gauge needle will move to indicate the system's high-side pressure in PSI. The dial also includes temperature scales for common refrigerants (R410A, R22, R404A, R134a) to assist in diagnostics. Allow a few moments for the reading to stabilize.
4. **Disconnect Hose:** After obtaining your reading, carefully disconnect the hose from the service port. Be prepared for a small amount of refrigerant to escape during disconnection.
5. **Store Gauge:** Once disconnected, cap the hose fittings and store the gauge in a clean, dry place to protect it from damage.

6. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your MEASUREMAN AC Pressure Gauge:

- **Cleaning:** Wipe the gauge and hose with a clean, damp cloth after each use. Avoid using harsh chemicals or abrasive cleaners that could damage the lens or markings.
- **Storage:** Store the gauge in its original packaging or a protective case when not in use to prevent physical damage and exposure to dust or moisture.

- **Calibration Check:** Periodically check the gauge's zero point. If the needle does not rest on '0' when disconnected and at ambient pressure, use the external adjustment screw to re-calibrate it.
- **Hose Inspection:** Regularly inspect the service hose for cracks, cuts, or wear. Replace the hose if any damage is observed to prevent refrigerant leaks.
- **Fitting Inspection:** Check the O-rings and threads on all fittings for wear or damage. Replace worn O-rings to ensure a tight seal.

7. TROUBLESHOOTING

Refer to the following common issues and solutions:

- **Inaccurate Readings:**
 - **Issue:** Gauge needle does not return to zero when disconnected.
 - **Solution:** Use the external adjustment screw to reset the needle to the '0' mark.
 - **Issue:** Readings appear inconsistent or incorrect.
 - **Solution:** Ensure the gauge is properly connected and the system is stable. Verify the gauge is rated for the refrigerant being tested. If issues persist, the gauge may require professional calibration or replacement.
- **Refrigerant Leaks at Connections:**
 - **Issue:** Hissing sound or refrigerant smell at hose connections.
 - **Solution:** Ensure all fittings are securely tightened. Check the O-rings inside the hose fittings for damage or wear and replace if necessary. Do not overtighten, as this can damage fittings.
- **Fluttering Needle:**
 - **Issue:** The gauge needle vibrates excessively during operation.
 - **Solution:** This gauge features a flutter-free pointer designed to resist vibration. If excessive fluttering occurs, ensure the system is running smoothly and there are no external vibrations affecting the gauge.

8. SPECIFICATIONS

Feature	Specification
Brand	MEASUREMAN
Model Number	MA331
Gauge Diameter	3-1/8 inches
Pressure Range	0-800 PSI
Accuracy Class	1.6
Compatible Refrigerants	R410A, R22, R404A, R134a
Hose Length	12 inches
Hose Fittings	1/4" SAE

Feature	Specification
Hose Working Pressure	800 PSI
Hose Burst Pressure	4000 PSI
Material	Brass (fittings), Steel (case), Polycarbonate (lens)
Item Weight	10.6 ounces (approx.)
Product Dimensions	5 x 2 x 5 inches (approx.)

9. WARRANTY INFORMATION

For specific warranty details regarding your MEASUREMAN 3-1/8" AC Pressure Gauge, please refer to the product packaging or contact the manufacturer directly. Warranty terms typically cover defects in materials and workmanship under normal use.

10. CUSTOMER SUPPORT

If you require assistance, have questions about your product, or need to report an issue, please contact MEASUREMAN customer support through their official website or the retailer from whom you purchased the product. Please have your model number (MA331) and purchase information ready when contacting support.