



**Mastercool**® Inc.  
"World Class Quality"

English



**OPERATING INSTRUCTIONS**

**Mini-fold COMPACT 2-WAY ALUMINUM MANIFOLD**

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## SPECIFICATIONS

- Pressure Range:
  - Low Pressure Range: -14.5 – 500 psi (-0.1 – 3.4 MPa)
  - High Pressure Range: -14.5 – 800 psi (-0.1 – 5.5 MPa)
- Resolution: 0.5 psi
- Accuracy: +/-0.5% FS
- Measurement Units: MPA, kPa, bar, psi, kg/cm2, inHg
- Temperature Unit: °C/°F
- Over Range Alarm: Display -OL-
- Operating Temperature: -10°C to 60°C
- Battery: CR2450
- Battery Life: Approximately 6 months
- Sampling Rate: 1 second
- Low Battery Indication: icon on LCD
- Display: 30 mm x 17 mm LCD
- Blue Backlight: Auto-off after 6 seconds

## INCLUDED REFRIGERANTS

R11, R113, R114, R115, R116, R12, R123, R1234yf, R1234ze, R124, R125, R13, R134a, R14, R141B, R142B, R413A, R152A, R161, R170, R21, R218, R22, R23, R290, R32, R401A, R401B, R401C, R402A, R402B, R403A, R403B, R404A, R406A, R407A, R407B, R407C, R407D, R407E, R407F, R408A, R409A, R409B, R41, R410A, R410B, R412A, R413A, R414A, R414B, R415B, R416A, R417A, R419A, R420A, R421A, R421B, R422A, R422B, R422C, R422D, R423A, R427A, R437A, R441A, R442A, R443A, R444A, R448A, R449A, R449B, R450A, R452A, R455A, R50, R500, R502, R503, R504, R507A, R508A, R508B, R509A, R513A, R600, R600a, R601, R601a, R740, R744



## WARNING!!


- **Wear Safety Glasses / Wear Gloves**
- **If eyes come in contact with refrigerant, immediately flush with plenty of water. Seek medical attention immediately.**
- **Keep the manifold in a dry place. Do not allow moisture to enter the unit.**
- **NOTE (R744): CO2 systems work under extremely high pressures. Only professional technicians are recommended to service these systems. Please use proper safety equipment while servicing.**

## DIGITAL GAUGE OPERATION



### ON/OFF

- ON: Press  button and it will display current pressure
- OFF: Press and hold  button until the screen is off


### BACKLIGHT

- When the gauge is ON, press  button to use backlight. The backlight will automatically turn off after 6 seconds of inactivity.



### MAX AND MIN MEMORY AND CLEAR

- Press  button to display MAX value and MAX symbol, then press the same button again for 3 seconds to clear the current MAX value.
- Press  button to display MIN value and MIN symbol, then press the same button again for 3 seconds to clear the current MIN value.










### ZERO






- Press and hold  for 3 seconds until 8.8.8.8 shows on the screen, then release it to clear the current value to 0.  
*NOTE: Please zero the gauge before connecting it to the system.*

### AUTO OFF

- Enable Auto Off: Press and hold  and  until ON shows. If pressure keeps unchanged for 15 minutes, the gauge will turn off automatically.
- Disable Auto Off: Press and hold these two buttons until OFF shows.

### REFRIGERANT SELECTION, TEMPERATURE/PRESSURE UNITS SWITCH

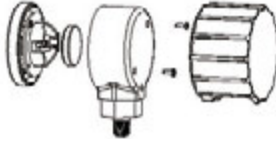
- Refrigerant Selection: Press and hold  button for 3 seconds until "R" shows and flashes, then press  or  button to switch between refrigerants. Press  button to confirm.
- Switch Temperature Unit: Press and hold  button for 3 seconds until "R" shows and flashes, then press  button to highlight the temperature units. Press  or  to select. Press  to confirm.

- Switch Pressure Unit: Press and hold  button for 3 seconds until “R” shows and flashes, then press  button twice to switch temperature units. Press  or  to select. Press  to confirm.

*NOTE: The gauge will exit setting status after 15 seconds of inactivity.*

## BATTERY REPLACEMENT

1. Please take off the rubber boot, loosen the two screws and remove the rear case.



2. Use a flat screwdriver to take out the battery in the same direction as shown below:



3. Place a new battery into the compartment with the flat side facing out. Replace the rear cover, screws (please note the screws must be tightened) and rubber boot.

## PRE-SERVICE INSTRUCTIONS

1. Before connecting to the system, zero the gauge if necessary.
2. Close both valves on the manifold gauge set by turning the high and low knobs clockwise.
3. Connect the (red) hose to the high side port and the (blue) hose to the low side port on the manifold gauge.

## TESTING AND CHARGING


To properly diagnose the problem in the R/AC system, first check the system's overall performance. This includes monitoring the system's pressure as well as leak testing. Your manifold gauge set will give accurate readings of your system's pressure.

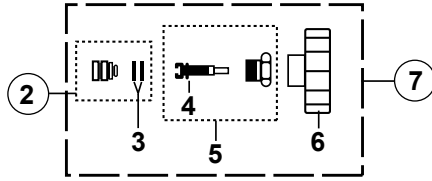
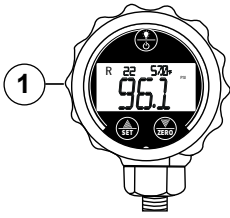
***NOTE: Be sure that the knobs on the manifold gauge set are in the closed position. Always wear gloves and safety goggles when working with refrigerant.***

1. Remove the protective caps from the system ports. Check for leaks at the ports.
2. Connect the low side service hose (blue) to the suction side of the compressor. Connect the high side service hose (red) to the discharge side of the compressor.
3. If using adapters, make sure that they are fully tightened and piercing the access valve. Failure to properly access the valve core will prohibit refrigerant flow.

## IMPORTANT NOTES

- A system that has been opened or one that is found to be excessively low on refrigerant pressure as a result of a leak, must be fully evacuated by means of recovery machine and deep vacuum pump.
- A system that has been evacuated must be repaired, leak tested and evacuated to a required level of vacuum.
- If charging on the liquid or high side, use only the high side valve on the manifold gauge set. Make sure the low side valve is closed.
- After charging, test the system by turning on the engine or system and running the A/C with both valves closed on the manifold.
- After testing, disconnect the hoses from the system and make sure to use a recovery/recycling machine to evacuate any refrigerant remaining in the hoses or manifold.

 **WARNING:** This product can expose you to chemicals including Di (2-ethylhexyl) phthalate, lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



<b>PARTS (English)</b>		
<b>Fig.</b>	<b>Description</b>	<b>Part#</b>
1.	High Side Gauge (Red) Low Side Gauge (Blue)	<b>DG-800</b> <b>DG-500</b>
2.	Piston Seal Assembly without rings (2 pcs.)	<b>85216</b>
3.	Piston Seal O-ring (4 pcs.)	<b>85215</b>
4.	Stem O-ring (2 pcs)	<b>85217</b>
5.	Stem, Nut and Stem O-ring	<b>85218</b>
6.	High Side Knob (red) Low Side Knob (blue)	<b>85212-R</b> <b>85211-R</b>
7.	Stem Assembly w/Knob (2 pcs.)	<b>93210</b>



Test Equipment Depot - 800.517.8431 - [TestEquipmentDepot.com](http://TestEquipmentDepot.com)