

### 2 WAY DIGITAL MANIFOLD for AC&R SYSTEMS

This 2 Way Digital Manifold is a durable, multi-functional, practical, accurate, easy to use instrument with quick access and process of the information. The DM2- 63 has a large and easy to read LCD Liquid Cristal Display ( Backlight for darker environments and low battery indicator) that gives accurate information upon : the Refrigerant Pressure/Saturated Temperature, Actual Temperature on tubing (with the Clamp-on Thermocouple "K" Probe - optional), automatically calculated Refrigerant Superheat and Subcooling Temperatures (with the Clamp-on Thermocouple "K" Probe - optional) for 63 refrigerants.

#### Applications :

- Evacuation/Dehydration with Vacuum leak test of the AC/R systems (with the Vacuum Thermocouple Probe - Optional);
- Charging refrigerant/oil;
- Charging refrigerant. Diagnosing Pressure/Temperature on low and high side of the system;
- Measuring Superheat and Subcooling (with the Clamp-on Thermocouple "K" Probe - optional);
- Recovery and/or Recycling of refrigerants;
- Test and set single or dual Pressure Switch (N.O. Normaly Open and N.C. Normaly Close points).

#### Features :

- Case in ABS protected by a rugged rubber boot;
- Retractable swivel hanging hook;
- (3) 1/4" (7/16" 20UNF) Male SAE Flare connections (left side and front with additional valve core and plastic cap with retainer). 5/16" (1/2" 20UNF) Male SAE Flare for R-410a (Adapters available);
- (1) 1/4" (7/16" 20UNF) Male SAE Flare connection hose holder. 5/16" (1/2" 20UNF) Male SAE Flare for R-410a (Adapter available);
- Low Side (Blue) and High Side (Red) pressure valves free floating piston seal seat;
- Sight glass for refrigerant liquid flow;
- LCD Liquid Cristal Display 4 digit 3/8" (9,52 mm.);
- Sealed keypad which protects the instrument from spills and dust;
- Memory data for 63 Refrigerants already installed : R11, R12, R13, R21, R22, R23 (Arcton® 23, Genetron® 23), R32, R113, R114, R115, R116, R123, R124, R125, R134, R134a (Suva® 134a), R141b, R142b, R143, R143a, R152a, R176, R218, R290, R401a (Suva® MP39), R401b (Suva® MP66), R401c (Suva® MP52), R402a (Suva® HP80), R402b (Suva® HP81), R403a (Isceon® 69-S), R403b (DuPont™ R403b, Isceon® 69-L), R404a (Suva® HP62, Forane® FX70), R405a (G2015), R406a (GHG Autofrost-X3), R407a (Klea® 60), R407b (Klea® 61), R407c (Suva® 9000, Klea® 66), R407d, R408a (Forane® FX10), R409a (Forane® FX56), R410a (Genetron® AZ20, Puron®), R410b (Suva® 9100), R411a (Greencool® G2018A), R411b (Greencool® G2018B), R412a, R413a (Isceon® MO49), R414a (GHG-X4), R414b (Hot Shot™), R417a (Isceon® MO59), R422a (Isceon® MO79), R422d (Isceon® MO29), R427a (Forane® FX100), R501, R502, R503, R504, R507a (Genetron® AZ50), R508b (Suva® 95), R509a, R600, R600a, R601, R601a;
- POWER function to turn the Manifold ON/OFF;
- VACUUM function to read evacuation process (used also to scroll through refrigerants);
- ENTER function to Confirm Data;
- SELECT function for Units Selection (used also to scroll through refrigerants) :  
Pressure Unit: Psi, Bar, MPa, Kg/cm<sup>2</sup>;

Temperature Unit : ° F. or ° C.;

Vacuum Unit : MICRONS, mBar, KPa, Pa, mm-Hg, Torr, MTorr;

- B/LT. function for Backlight Display;
- Vacuum Thermocouple Probe Port;
- Low side and High Side Clamp-On Thermocouple Ports;
- Battery eliminator jack;

#### Specifications :

**Working Pressure** : 0 ÷ 750 Psi (0 ÷ 52,0 Bar / 0 ÷ 5,00 MPa / 0 ÷ 52,0 Kg/cm<sup>2</sup>);

**Pressure Resolution** : 1 Psi (0,1 Bar / 0,01 MPa / 0,1 Kg/cm<sup>2</sup>);

**Pressure Accuracy** : ±1 Psi or ±1% of reading / Class 1.0

**Max Pressure** : 1.000 Psi (70,0 Bar / 7,00 MPa / 70,0 Kg/cm<sup>2</sup>);

**Refrigerant Temperature Range** : -40° ÷ 200° F.; (-4° ÷ 93° C.);

**Temperature Resolution** : 1° F. (1° C.);

**Temperature Accuracy** : ± 1° F. between 32° ÷ 160° F.; (±0,5° C. between 0 ÷ 71° C.);

**Vacuum Range** : ATM ÷ 25000 μ microns ÷ 1 μ microns;

**Ambient Temperature** : 32° ÷ 122° F (0° ÷ 50° C.);

**Storage Temperature** : 10° ÷ 120° F (-12° ÷ 49° C.);

**Auto Shut-Off** : after 15 minutes of Non-use (can be disabled);

**Power** : (1) 9V Alkaline battery w/optional AC/DC adapter;

**Battery life** : 30 ÷ 36 hours Pressure/Temperature mode (continuous use);  
25 ÷ 30 hours Vacuum/Backlight mode (continuous use);

**Dimensions** : 7,9" x 8,2" x 3" / 200 x 210 x 75 mm.;

**Weight** : 2,54 Lbs. / 1.150 gr.



Model	Description
DM2- 63	2 Way Digital Manifold - Piston type valves. 1/4" (7/16" 20UNF) Male SAE ports with (1) 9V Alkaline battery.
Accessories - See page 52a	

### 4 WAY DIGITAL MANIFOLD for AC&R SYSTEMS

This 4 Way Ball Valve Digital Manifold with Data Logger Application is a durable, multi-functional, practical, accurate, easy to use instrument with quick access and process of the information. The DM4- 63 has a large and easy to read LCD Liquid Cristal Display (Backlight for darker environments and low battery indicator) that gives accurate information upon : the Refrigerant Pressure/ Saturated Temperature, Actual Temperature on tubing (with the Clamp-on Thermocouple "K" Probe - optional), automatically calculated Refrigerant Superheat/Subcooling Temperatures (with the Clamp-on Thermocouple "K" Probe - optional) for 63 refrigerants, Records and Stores Data (with Data Logger Software Application - included).

#### Applications :

- Evacuation/Dehydration with Vacuum leak test of the AC/R systems (with the Vacuum Thermocouple Probe - Optional);
- Charging refrigerant/oil;
- Charging refrigerant. Diagnosing Pressure/Temperature on low and high side of the system;
- Measuring Superheat and Subcooling (with the Clamp-on Thermocouple "K" Probe - optional);
- Recovery and/or Recycling of refrigerants;
- Test and set single or dual Pressure Switch (N.O. Normally Open and N.C. Normally Close points).

#### Features :

- Case in ABS protected by a rugged rubber boot;
- Retractable swivel hanging hook;
- (4) 1/4" Male SAE (7/16" 20UNF) LOW side, VAC, REF, HIGH side connections. Front side 3/8" Male SAE (5/8" 18UNF) VAC connection with plastic cap and retainer; 1/4" Female SAE (7/16" 20UNF) x 5/16" Male SAE (1/2" 20UNF) adapters for R-410a (Accessories);
- Ball valves with free floating piston seal seat;
- Sight glass for refrigerant liquid flow;
- LCD Liquid Cristal Display 4 digit. 3/8" (9,52 mm.) high;
- Sealed keypad protected from spills and dust;
- Memory data for 63 Refrigerants already installed : R11, R12, R13, R21, R22, R23 (Arcton<sup>®</sup> 23, Genetron<sup>®</sup> 23), R32, R113, R114, R115, R116, R123, R124, R125, R134, R134a (Suva<sup>®</sup> 134a), R141b, R142b, R143, R143a, R152a, R176, R218, R290, R401a (Suva<sup>®</sup> MP39), R401b (Suva<sup>®</sup> MP66), R401c (Suva<sup>®</sup> MP52), R402a (Suva<sup>®</sup> HP80), R402b (Suva<sup>®</sup> HP81), R403a (Isceon<sup>®</sup> 69-S), R403b (DuPont<sup>™</sup> R403b, Isceon<sup>®</sup> 69-L), R404a (Suva<sup>®</sup> HP62, Forane<sup>®</sup> FX70), R405a (G2015), R406a (GHG Autofrost-X3), R407a (Klea<sup>®</sup> 60), R407b (Klea<sup>®</sup> 61), R407c (Suva<sup>®</sup> 9000, Klea<sup>®</sup> 66), R407d, R408a (Forane<sup>®</sup> FX10), R409a (Forane<sup>®</sup> FX56), R410a (Genetron<sup>®</sup> AZ20, Puron<sup>®</sup>), R410b (Suva<sup>®</sup> 9100), R411a (Greencool<sup>®</sup> G2018A), R411b (Greencool<sup>®</sup> G2018B), R412a, R413a (Isceon<sup>®</sup> MO49), R414a (GHG-X4), R414b (Hot Shot<sup>™</sup>), R417a (Isceon<sup>®</sup> MO59), R422a (Isceon<sup>®</sup> MO79), R422d (Isceon<sup>®</sup> MO29), R427a (Forane<sup>®</sup> FX100), R501, R502, R503, R504, R507a (Genetron<sup>®</sup> AZ50), R508b (Suva<sup>®</sup> 95), R509a, R600, R600a, R601, R601a;
- Recording and data storing function, uses Data Logger Application, displaying data in real time by using an USB cable connection (included), one computer (not furnished) and the software (included) directly into the manifold's memory. Stores 24 hours of data before downloading. Downloads data at 115 kb per second. Compatible with Windows 2000, XP, Windows Vista and Window 7;

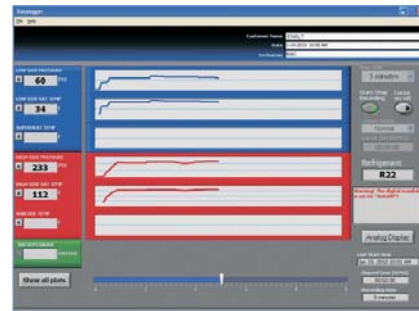
#### Recorder / Cursor function features :

- Recorder TIME function records intervals of : 5, 15 minutes, 1, 4, 8, 24 hours;
- Recorder ON/OFF function;
- ZOOM / NORMAL 5x or 10x to view specific data;
- TIME-LINE function measures the selected recording time, also displaying specific plot points.

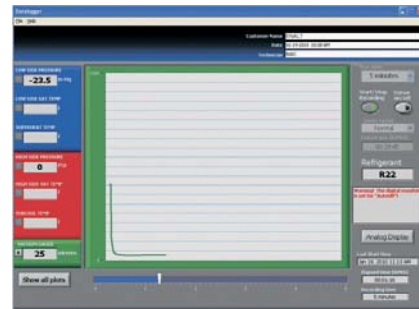
#### Display function features :

- ALL function : the parameters of the Manifold are displayed simultaneously also the real time data will be shown;

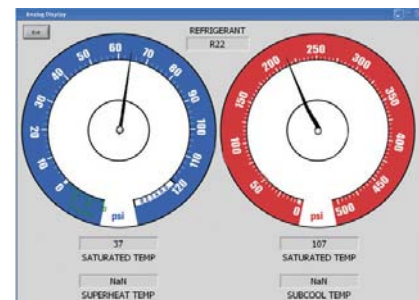
MONITOR function : The Data Logger continues to record functions in the background, regardless of the functions displayed;



DEEP VACUUM ONLY function : deep vacuum readings displayed on the screen;



ANALOG GAUGES function : simulate the Manifold's data on the basics of HIGH and LOW pressure analog gauges;



- POWER function to turn the Digital Manifold ON/OFF;
- VACUUM function to read evacuation process (used also to scroll through refrigerants);
- ENTER function to Confirm Data;
- SELECT function for Units Selection (used also to scroll through refrigerants) :  
Pressure Unit : Psi, Bar, MPa, Kg/cm<sup>2</sup>;  
Temperature Unit : ° F. or ° C. ;  
Vacuum Unit : MICRONS, mBar, KPa, Pa, Torr, mTorr; mm-Hg,
- B/LT/REC. function for Backlight Display and to Start and Stop the Record Data Mode;

- Vacuum Thermocouple Probe Port;
- Low side and High Side Clamp-On Thermocouple Ports;
- USB port;
- Battery eliminator jack.

### Specifications :

**Working Pressure** : 0 ÷ 750 Psi (0 ÷ 52,0 Bar / 0 ÷ 5,00 MPa / 0 ÷ 52,0 Kg/cm<sup>2</sup>);

**Pressure Resolution** : 1 Psi (0,1 Bar / 0,01 MPa / 0,1 Kg/cm<sup>2</sup>);

**Pressure Accuracy** : ±1 Psi or ±1% of reading / Class 1.0  
**Max Pressure** : 1.000 Psi (70,0 Bar / 7,00 MPa / 70,0 Kg/cm<sup>2</sup>);

**Refrigerant Temperature Range** : -40° ÷ 200° F.;  
 (-4° ÷ 93° C.);

**Temperature Resolution** : 1° F. (1° C.);

**Temperature Accuracy** : ± 1° F. between 32° ÷ 160° F.;  
 (±0,5° C. between 0° ÷ 71° C.);

**Vacuum Range** : ATM ÷ 25000 μ microns ÷ 1 μ microns;

**Ambient Temperature** : 32° ÷ 122° F (0° ÷ 50° C.);

**Storage Temperature** : 10° ÷ 120° F (-12° ÷ 49° C.);

**Auto Shut-Off** : after 15 minutes of Non-use (can be disabled);

**Power** : (1) 9V Alkaline battery w/optional AC/DC adapter;

**Battery life** : 30 ÷ 36 hours Pressure/Temperature mode (continuous use);  
 25 ÷ 30 hours Vacuum/Backlight mode (continuous use);

**Dimensions** : 7" x 10" x 3" / 179 x 254 x 75 mm.;

**Weight** : 4,4 Lbs. / 2.000 gr.



DM4- 63

UR3- 4 5

Model	Description
DM4- 63	4 Way Ball Valve Digital Manifold. (4) 1/4" + (1) 3/8" Male SAE Flare ports w/9V Alkaline battery & Software.
<b>Accessories</b>	
DMX01	Clamp-On Thermocouple "K" Probe for tube Ø 1/4" ÷ 1-3/8" OD (6 ÷ 35 mm. OD). Uncoiled cord lenght 36" (914 mm.).
DMX02	Vacuum Thermocouple Probe with uncoiled cord lenght 60" (1,5 m.).
DMX03	110V-1ph-50/60Hz AC/DC Adapter.
DMX04	220V-1ph-50/60Hz AC/DC Adapter (Schuko plug).
UR3- 4 5	Adapter 1/4" (7/16" 20UNF) <b>Female SAE</b> Flare with Long Tan Copper Gasket x 5/16" (1/2" 20UNF) <b>Male SAE</b> Flare for <b>R410a</b> . (4 pcs. required for DM2- 63 and DM4- 63).
AD45	Adapter 1/4" (7/16" 20UNF) <b>Female SAE</b> with Neoprene Gasket and Depressor x 5/16" (1/2" 20UNF) <b>Male SAE</b> with Valve Core for <b>R410a</b> . (2 pcs. required for DM2- 63).
QC-65	Quick Coupler 3/8" (5/8" 18UNF) <b>Female SAE</b> with Neoprene Gasket x 5/16" (1/2" 20UNF) <b>Male SAE</b> with Valve Core for <b>R410a</b> . (1 pc. required for DM4- 63).