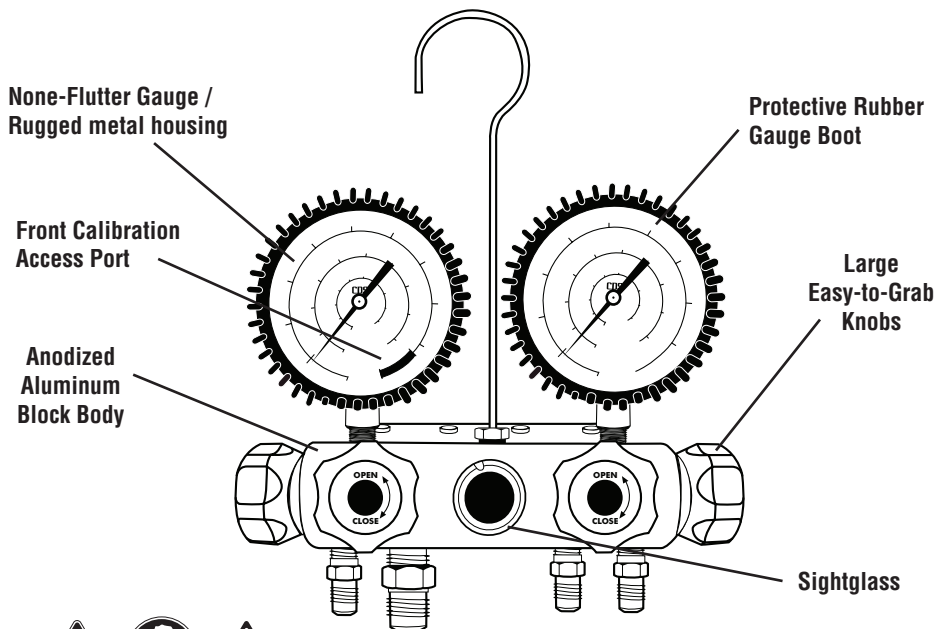


CPS®

VORTECH™ 4 VALVE MANIFOLD



GENERAL SAFETY INSTRUCTIONS

ONLY QUALIFIED SERVICE PERSONNEL SHOULD OPERATE THIS UNIT. MOST STATES, COUNTRIES, ETC MAY REQUIRE THE USER TO BE LICENSED. PLEASE CHECK WITH YOUR LOCAL GOVERNMENT AGENCY.

Danger- Avoid breathing refrigerant vapors and lubricant vapor or mist. Breathing high concentration levels may cause heart arrhythmia, loss of consciousness, or even cause suffocation. Exposure may irritate eyes, nose, throat, and skin. Please read the manufacturers Material Safety Data Sheet for further safety information on refrigerants and lubricants.

Danger- EXPLOSION RISK. Use extreme caution when working with flammable refrigerants. Never use this manifold with Oxygen.

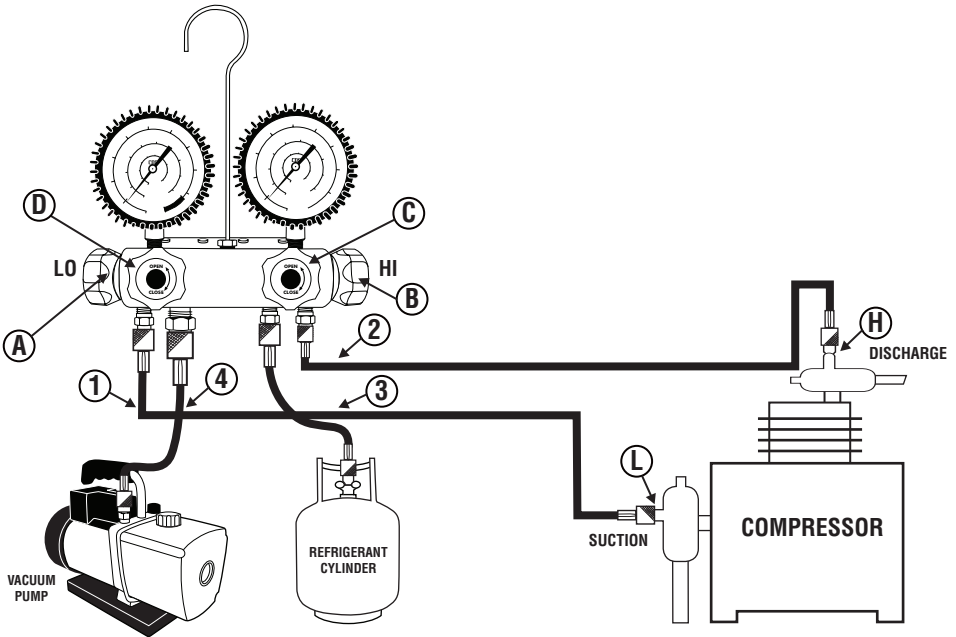
Danger- EXPLOSION/RUPTURE RISK. DO NOT use this manifold with unregulated nitrogen, carbon dioxide or other very high pressure gasses. Unregulated gasses can cause components in a refrigeration system to rupture. Severe Injury or Death can occur.

Caution- all hoses may contain liquid refrigerant under pressure. Contact with refrigerant may cause frost-bite or other related injuries. Wear proper personal protective equipment such as safety goggles and gloves. When disconnecting any hose, please use extreme caution.

4 WAY MANIFOLD FUNCTION

1. The right end knob (red) will control the flow through the right end port.
2. The left end knob (blue) will control the flow through the left end port.
3. The front right hand knob (yellow) will control the flow through the right middle port.
4. The front left side hand knob (green) will control the flow through the left middle port.
5. Low Pressure gauge measures pressure on the left end port with the left side valve closed.
6. High Pressure gauge measures pressure on the right end port with the right side valve closed.

OPERATING INSTRUCTIONS



I. TO PURGE HOSES WITH REFRIGERANT GAS.

1. Connect hoses as shown with all valves closed on MANIFOLD.
2. Loosely connect ① & ② hoses to COMPRESSOR & service ports respectively.
3. Open ① & ② valves on MANIFOLD.
4. Open valve on REFRIGERANT Tank.
5. Slowly open ③ valve on MANIFOLD until gas escapes from ④ & ⑤ service valve connections.
6. Tighten ④ & ⑤ hose nuts on ④ & ⑤ service valve connections.

II. TO MONITOR SYSTEM PRESSURES

A. CONNECTIONS

- Connect hoses as shown with all valves closed on MANIFOLD.
- Open ⑥ & ⑦ service valves on COMPRESSOR.

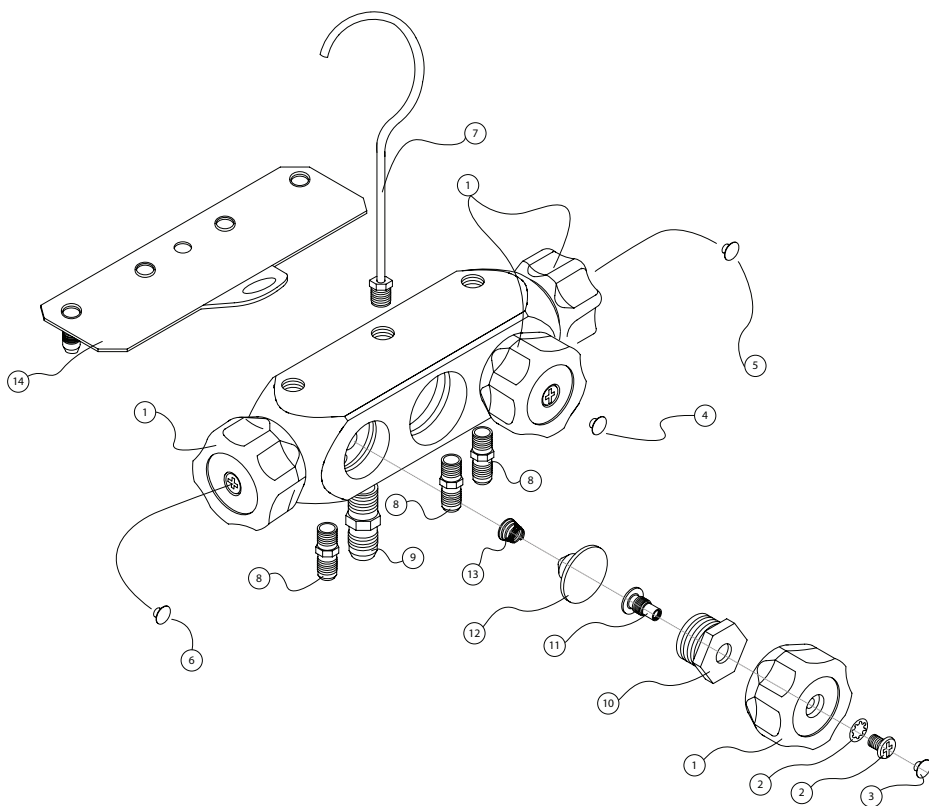
III. TO CHARGE SYSTEM WITH VAPOR ON SUCTION SIDE

1. Connect hoses as shown with all valves closed on MANIFOLD.
2. Purge hoses as in step I.
3. Open REFRIGERANT tank valve.
4. Open ③ valve on MANIFOLD.
5. Open ① valve on MANIFOLD.
6. Open ⑥ valve on MANIFOLD.

IV. TO EVACUATE SYSTEM

1. Connect hoses as shown with all valves closed on MANIFOLD.
2. Start VACUUM pump.
3. Open ④ valve on MANIFOLD.
4. Open ① & ② valve on MANIFOLD.
5. Open ⑥ & ⑦ service valves on COMPRESSOR.

SERVICE PARTS LIST: 4V VVS MANIFOLDS



CPS P/N	Items (qty.)	Description	4V Models
MVXK	1,2,3,4,5,6	Black Knob w/covers w/screw	MV4,MV9,MV12, MV13,
MVXTD	12,13	VVS Valve Repair Kit	MV4,MV9,MV12, MV13,
MV4XRK	12(4), 13(4)	4V VVS Valve Repair Kit	MV4,MV9,MV12, MV13,
MV4XHA	14	1/4 SAE, 3/8 SAE Hanger	MV4,MV13,
MV9XHA	14	3/8 SAE Hanger	MV9
MV12XHA	14	1/2-20,3/8 SAE Hanger	MV12
MXMH	7	Hook Hanger	MV4,MV9,MV12, MV13,
42-691	10	VVS Packing Nut	MV4,MV9,MV12, MV13,
40-694	11	VVS Stem	MV4,MV9,MV12, MV13,
40-147	8	1/4 SAE STR Fitting	MV4,MV13,
40-137	8	1/2-20 UNC STR Fitting	MV12
40-384	8	3/8 SAE STR Fitting	MV9
40-625	9	3/8 SAE STR Fitting	MV4,MV9,MV12, MV13,



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