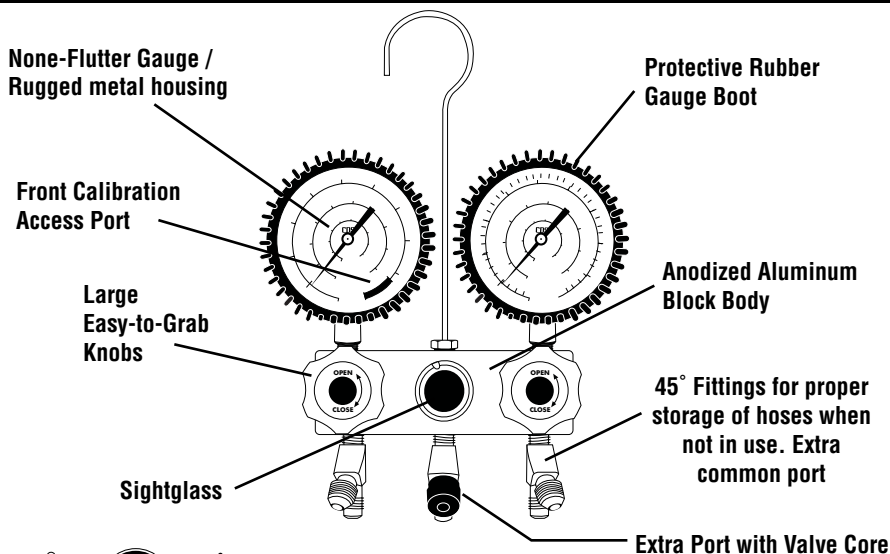


# CPS®

## VORTECH™ 2 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 frostbite or other related injuries. Wear proper personal protective equipment such as safety goggles and gloves. When disconnecting any hose, please use extreme caution.

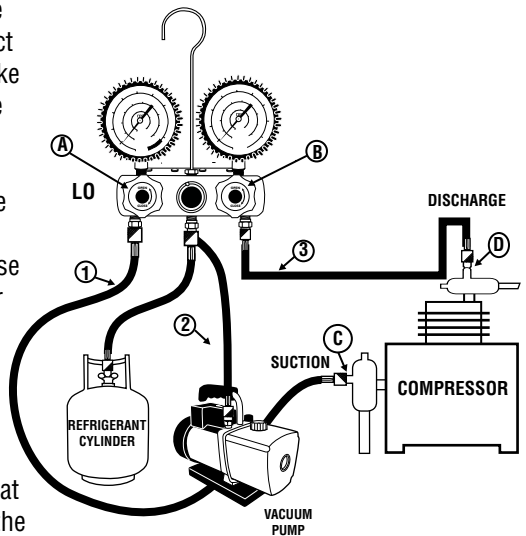
### 2 WAY MANIFOLD FUNCTION

1. The right side hand knob (red) will control the flow to the right side port.
2. The left side hand knob (blue) will control the flow to the left side port.
3. The center port is used from common connection to vacuum pump, recovering unit or refrigerant supply tank. The center port is also equipped with a tee fitting with valve core. This allows for dual hook up between vacuum pump and refrigerant supply tank.
4. Low Pressure gauge measures pressure on the left side port with the left side valve closed.
5. High Pressure gauge measures pressure on the right side port with the right side valve closed.

## EVACUATING PROCEDURE

1. Remove all refrigerant from the system. NOTE: It is unlawful to discharge or exhaust refrigerants into the atmosphere. CPS strongly recommends the practice of recovery or recycling.
  2. Connect a vacuum pump to the center yellow charging hose.
  3. Connect the high side service valve of the system to the right side red charging hose.
  4. Connect the low side service valve of the system to the left side blue hose.
  5. Fully open the high and low side hand knobs.
  6. Start the vacuum pump.
  7. Evacuate the system according to the manufacturer's specifications; close the high and low side hand knobs.
  8. Turn off the vacuum pump.
  9. Disconnect the yellow charging hose at the vacuum pump end and connect it to the refrigerant supply tank. (Make sure to turn shut off valve, off before disconnecting).
  10. Slightly open the valve on the refrigerant supply tank and purge the air from the yellow hose at the manifold by loosening the yellow hose fitting, the close fitting and container valve.
2. When the proper charge has been achieved, open the low side service valve on the system.
  3. Run the compressor as per the manufacturer's specifications and observe the pressure gauge reading and compare to the manufacturer's specifications to determine that the system is operating correctly. If no adjustments need to be made, then read step 4. If not, follow proper procedures to repair or adjust the system.
  4. Close the high and low side service valve of the system before removing the charging hoses from the system. Follow all safety practice procedures.

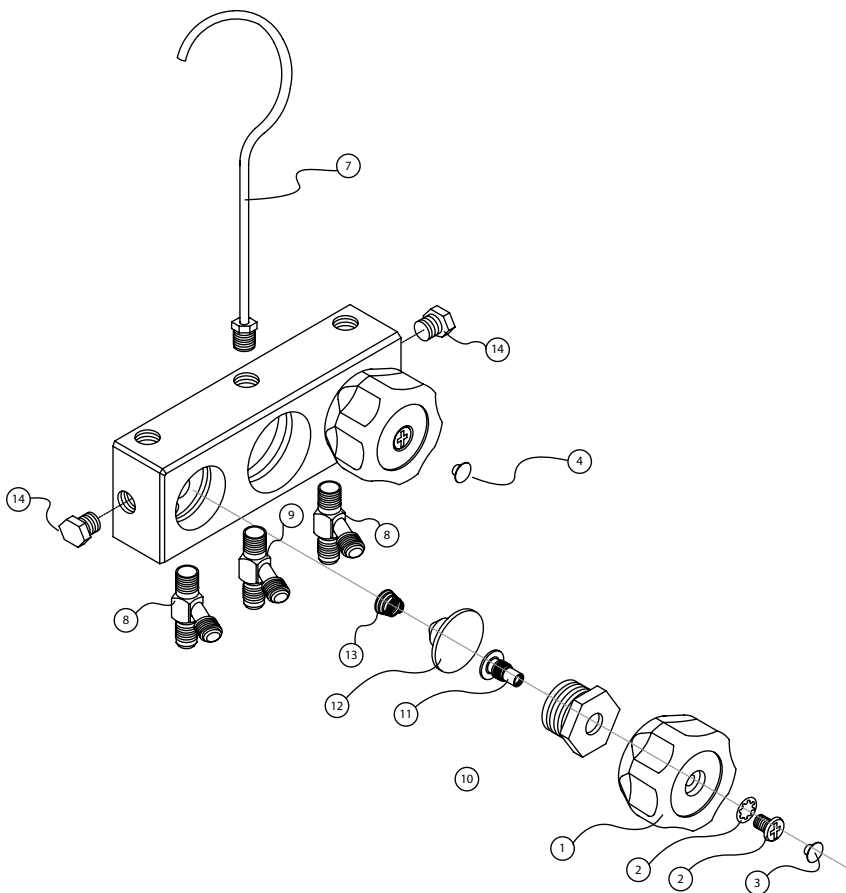
**WARNING:** Remove all hoses with care as they may contain refrigerant.



## CHARGING PROCEDURE

1. Follow the manufacturer's recommended specification for the amount of refrigerant to charge in that system. Should it specify to charge the system on that high side, close the low side service valve. Open the refrigerant supply container valve, then open the high side (red label) hand knob of the manifold. After the proper amount of refrigerant has been transferred, close the high red label hand knob of the manifold; also close the refrigerant supply container valve.

**SERVICE PARTS LIST: 2V VVS MANIFOLDS**



CPS P/N	Items (qty.)	Description	2V Models
MVXK	1,2,3,4,5,6	Black Knob w/covers w/screw	MV2,MV3,MV7, MV8, MV11
MVXTD	12,13	VVS Valve Repair Kit	MV2,MV3,MV7, MV8, MV11
MV2XRK	12(2), 13(2)	2V VVS Valve Repair Kit	MV2,MV3,MV7, MV8, MV11
MXMH	7	Hook Hanger	MV2,MV3,MV7, MV8, MV11
42-691	10	VVS Packing Nut	MV2,MV3,MV7, MV8, MV11
42-694	11	VVS Stem	MV2,MV3,MV7, MV8, MV11
40-147	8	1/4 SAE STR Fitting	MV8
42-109	8	1/2 ACME STR Fitting	MV7
40-396	9	1/4 SAE TEE with Core	MV2,MV3,MV8
40-397	8	1/4 SAE Tee with Dummy	MV2, MV3
40-398	9	1/2-20 Tee with Core	MV11
40-399	8	1/2-20 Tee with Dummy	MV11
40-388	9	1/2 ACME Tee with Core	MV7
42-120	14	Low Side R 134a fitting	MV7, MV8
42-121	14	High Side R134a fitting	MV7, MV8
41-003	14	Plugs	MV2, MV3, MV11



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