Operating Instructions
DV-22N
Digital Micron Gauge

- Reads Vacuum In 7 International Units: Microns, PSIA, InHg, mBars, Pascals, Torr, mTorr
- 25 to 12,000 Microns Vacuum Range
- Uses 9V Alkaline Battery (not included)

OPERATION

1. Push square button to turn gauge on. If unit does not display any characters, check to be sure batteries are correctly installed. The start-up display will show the letters " J:B " followed by either the micron value or the overrange indicator " 1".
2. Push the lower square button to select the desired display units. The gauge will save the selected unit and use that unit every time the gauge is turned on.
3. The micron gauge power saver feature automatically turns the gauge off after 10 minutes. To continue, repress the start button; J:B will be displayed followed by the current reading.

LOW BATTERY INDICATOR

If 3 blinking decimal points are displayed, the battery is low. Replace with 9 volt battery.

CLEANING VACUUM SENSOR

Fill vacuum hose connection fitting half full with alcohol. Replace cap. Gently shake the gauge to allow the alcohol to rinse the inside of the sensor. Remove cap and pour out the alcohol. Turn gauge upside down and allow the vacuum sensor to dry for 20-30 minutes before using gauge or replacing cap.

WARRANTY

DV-22N is warrantied for 12 months after manufacture date. The warranty covers a 6 month over-the-counter return with the balance covering repair only. Misuse or damage from impact, etc. are not covered. For repair, return the complete unit to your local wholesaler. In warranty items must have a copy of the invoice included.

TESTING VACUUM PUMP

It is a good idea to attach the micron gauge to the vacuum pump before evacuation to make sure the pump pulls down to at least 50 microns. If it doesn't, your pump is contaminated and the oil should be changed. Do not shut-off the blank-off valve on the pump and expect the gauge to hold a vacuum as the gauge will fall back to atmosphere. The reason for this is that the sensor is too close to the pump and the gauge's sensor doesn't have time to equalize.

DV-29 HOOK-UP

The most leak-proof setup is by using the DV-29 (see page 2) which works with all micron gauges. This unit creates a closed system eliminating any leakage under deep vacuum.

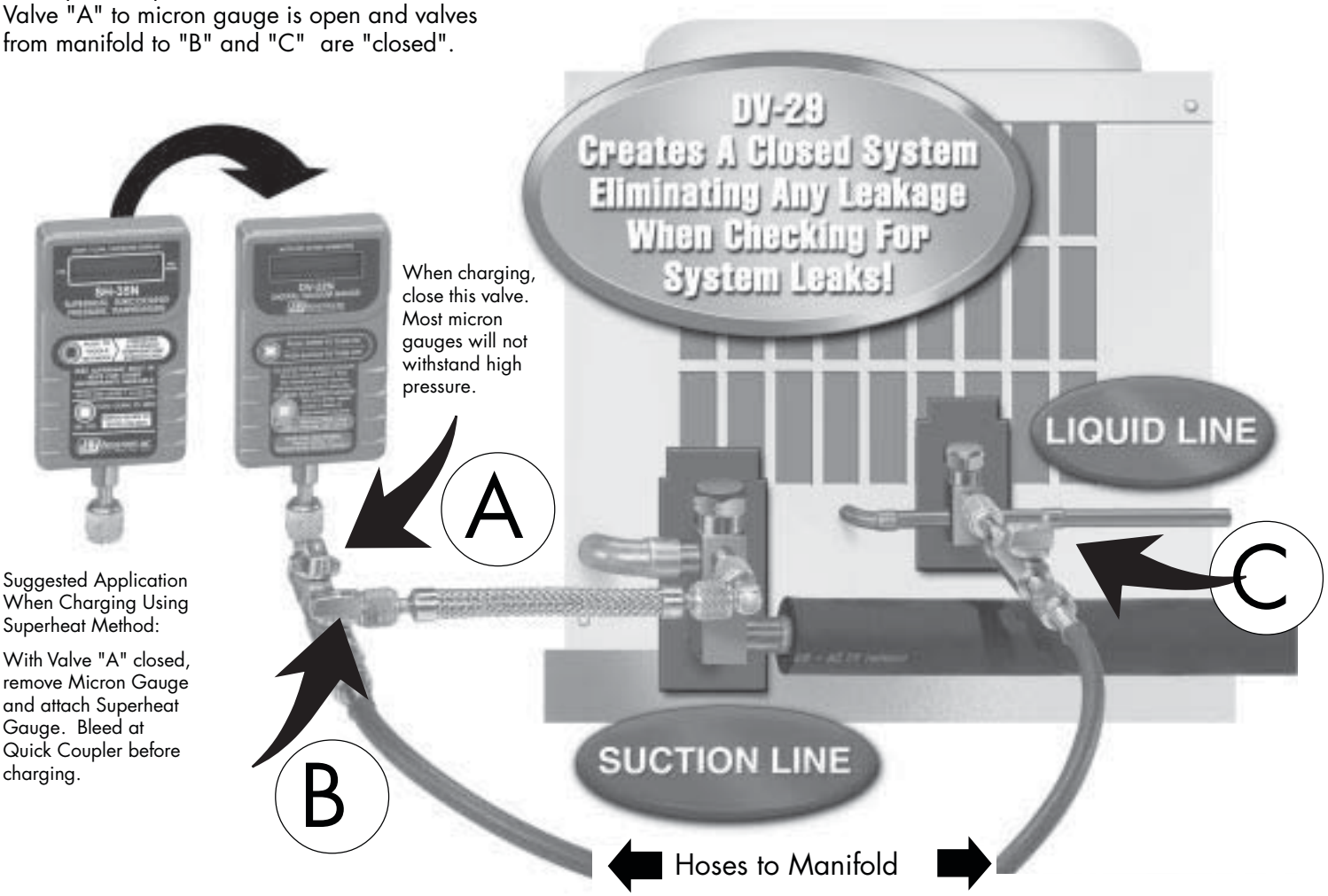
The DV-29 test unit eliminates other problems when attaching the micron gauge into the system. If the micron gauge is attached directly to the vacuum pump or with 3' dedicated hose, we will get a lower reading as the gauge is sensing what the pump is doing and not what the pump is doing to the system.

GENERAL MICRON GAUGE HOOK-UP

When designing your hook-up system, choose from the following hoses, valve and coupler designed for leak-proof service in a deep vacuum environment.

1. D10436 or D10427 1/4" Metal Hose and D10636 or D10660 3/8" Metal Hose with o-ring couplers. Your hook-up through manifold, pump and if desired, to the micron gauge.
2. A34000 Quick Coupler Tee w/o-ring seal. Since the most accurate reading is obtained at the compressor's high or low side, use to tee-off the gauge.
3. D10162 ball valve with O-ring quick coupler to valve off gauge before charging. Depending on the gauge, it should be remembered that the electronic gauge's sensors will not take pressure beyond 1 to 100 pounds. Depending on hook-up, use with metal hose or A34000 coupler.

Valve position pictured for Pressure Rise Test. Valve "A" to micron gauge is open and valves from manifold to "B" and "C" are "closed".



Suggested Application When Charging Using Superheat Method:

With Valve "A" closed, remove Micron Gauge and attach Superheat Gauge. Bleed at Quick Coupler before charging.

Before making connection as pictured, close all Ball Valves before hookup. NOTE: If micron gauge has 1/4" male flare, use D10244 O-ring Swivel Coupler included.

Leak-Proof Test Unit

Deep vacuum has it own unique properties which requires leak-proof design in all the components including couplers and hoses. DV-29 unit with flexible metal hose and O-ring seal couplers is absolutely vacuum tight.

Pulling a Vacuum

Open all valves and pull a vacuum. When the sensor reads between 300 and 400 microns and only if compressor is in the vacuum, close valves to the high and low side of the system, leaving the valve closest to the micron gauge open. You now have the micron gauge within the system to check for pressure rise.

Pressure Rise Test

When the sensor reads between 300 and 400 microns,

DV-29 Method. Blank-off the high and low side ball valves attached to the system.

General Hookup Method. This includes using copper tubing or metal hose to the high and low side. Close blank-off valve on the pump. This will isolate the gauge from the pump.

Wait for at least 5 to a maximum of 20 minutes to allow system pressure to equalize. The reading you see at the end of this test will be very close to what you actually have in the system. A rapid rise during this test to atmospheric pressure indicates a leak, while a slower rise to around 1500 microns indicates moisture is present.

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