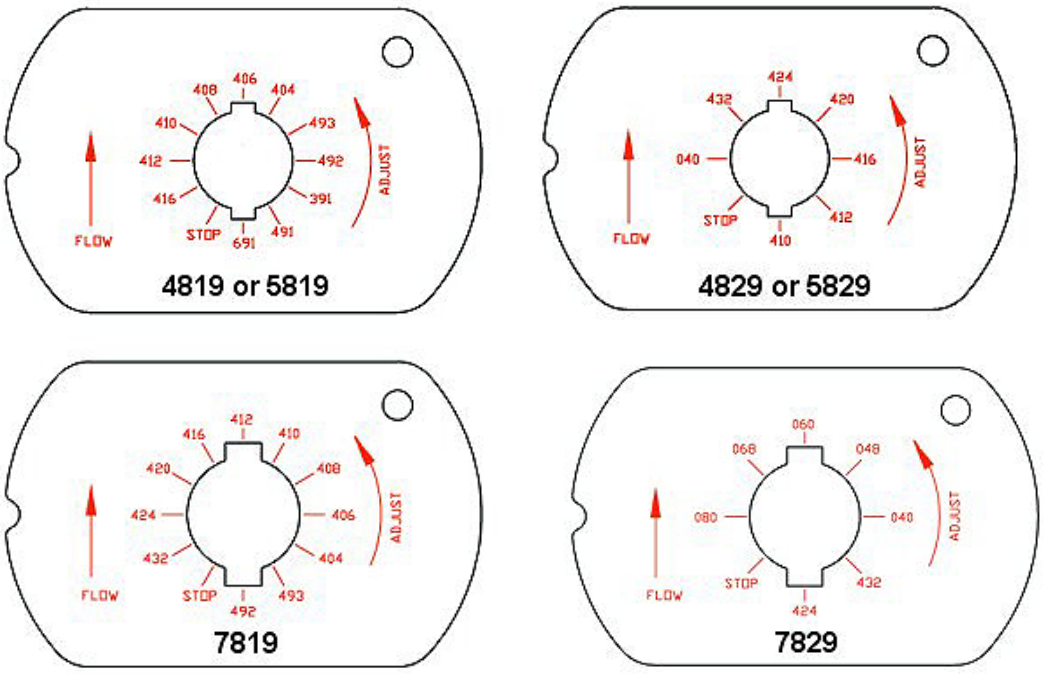
90° A.R.M.E.D.® Installation Instructions

Adjustable Refrigerant Metering Evaporator Device

The A.R.M.E.D.® is used to regulate flow through pressure drop and may be installed between the XDX® valve and the expansion valve or prior to the distributor, in some applications. The A.R.M.E.D.® is designed with multiple nozzle settings for fine-tuning your system as listed below:

- Adjustment allows for fluctuations in ambient temperature that might affect liquid feed both conventionally and with XDX®.
- Adjustment allows for load changes in a system both conventionally and with XDX®.
- Adjustment allows for refrigerant changes where it would require opening up the system and replacing the nozzle in a conventional system.
- Adjustment creates the ability to have a good liquid vapor mixture at the entrance to the evaporator coil.
- Use of the ARMED technology, used with the Mysticool® and XSTREAM® valves, allows for simpler sizing of the thermostatic expansion valve. It simply needs to be at least 1-1/2 times the capacity of the conventionally used TXV.

The A.R.M.E.D.® comes in connection sizes ½, 5/8, 7/8, 1-1/8, and 1-3/8 OD copper with multiple respective nozzle openings. Make all necessary adjustments in a counter-clockwise direction and allow top access for adjustments. Confirm that you have the appropriate nozzle and that it is set to the correct position, as referenced by the following diagram:



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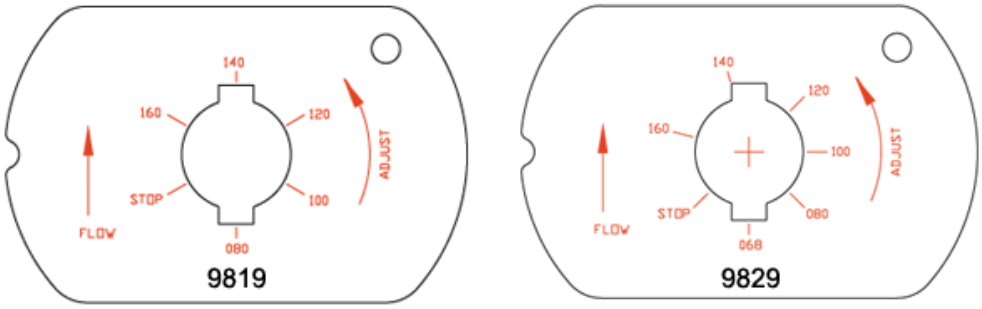

Remove or drill out completely any distributor nozzle or orifice that may be installed in the existing distributor. From the outlet of the thermostatic expansion valve, within 4 inches, install the A.R.M.E.D.® component with the directional arrow on the side of each device and the "inlet" sticker confirming that it is installed in the proper direction. Tightening of the A.R.M.E.D.® cap is necessary to eliminate refrigerant leakage. The "stop" position is not intended for use as a permanent system shut-off valve. Evacuation of the system is most efficient when the A.R.M.E.D.® adjustment indicator is set perpendicular to the inlet pipe.

After setting the evaporator superheat to the lowest possible setting, A.R.M.E.D.® can be used for fine-tuning the evaporator performance at the evaporator inlet. Monitor the evaporator coil refrigerant temperature inlet, the evaporator coil refrigerant temperature outlet, and the evaporator coil refrigerant pressure at the outlet. Determine the total evaporator coil pressure drop. (Usually about 2 PSI) While monitoring the evaporator coil pressure-temperature inlet match, A.R.M.E.D.® can be adjusted to achieve the lowest possible evaporator coil temperature difference from inlet to outlet. This adjustment can be used to confirm good refrigerant feed at the inlet to the evaporator coil. Adjustments should only require minor changes from the XDX® recommended setting. Superheat at the outlet of the evaporator will need to be reconfirmed and possibly readjusted after these changes are made.

Reference other XDX® Installation Instructions or Installation Manuals for specific installation requirements and recommendations.

Manufactured under one or more of the following patents:

U.S. Patents		
6,185,958 B1	6,401,470 B1	6,401,471 B1
6,397,629 B2	6,389,825 B1	6,393,851 B1
6,314,747 B1		

Other U.S. and foreign patents pending.

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