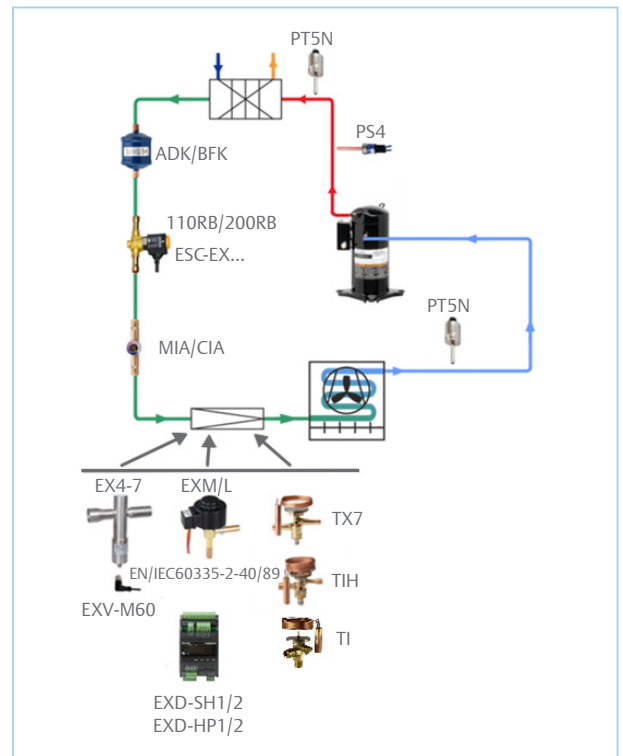


Did you know?

Emerson offers the most complete range of products to be used in A2L applications

Products qualified and released

- **Electrical Control Valves**
 - EXM/L series, VDE tested for small to medium capacities
 - EX series exclusive ceramic port & slider technology:
 - Practically unlimited lifespan
 - Accurate flow control
 - Wide application range:
 - Medium temperature -50°C...100°C
 - Capacity 10%...100%
 - Linear slope
- **Thermo-Expansion Valves**
 - Hermetic and take-a-part models
 - Large diaphragms for smoother and consistent valve control
 - Easy and precise superheat adjustment
 - Bi-flow applications
- **Solenoid Valves**
- **Electronic Controllers and Sensors**
- **Pressure Switches & Controls**
- **System Protectors and Moisture Indicators**
- **Ball Valves**



In the ground of supporting our customers to reach the best performance in their refrigeration solutions, the following A2L refrigerants* have been qualified for its flow control portfolio application: R32, R444B, R447A, R452A, R452B, R454A, R454B, R454C, R455A, R1234ze, R1234yf.

The applied products in systems with A2L refrigerants require compliance with certain standards and directives in terms of design, qualifications and manufacturing. The release of standard products with A2L refrigerants is based on the following considerations/tasks:

- ✓ Material compatibility of used elastomer in products
- ✓ The majority of A2L refrigerants are classified as fluid group 1 similar to propane, so it required the adaptation of the products in terms of qualifications, test, quality process and manufacturing to certain directives and standards. The safety aspect of components in systems with A2L refrigerants is different from traditional systems with HFC refrigerants, but not as high as systems with Hydrocarbon refrigerants.
- ✓ Operating conditions in comparison with R410A refrigerant in terms of pressure, temperature, enthalpy etc.
- ✓ Capacity of valves based on flow capacity resulted from these three refrigerant thermodynamic properties
- ✓ Software modification in electronic devices when it is required
- ✓ Behavior of Thermo™-Expansion valves and required resetting

* Check the concrete availability with your sales office