

**2001  
STANDARD for**

**FLOW-  
CAPACITY  
RATING AND  
APPLICATION  
OF SUCTION-  
LINE FILTERS  
AND FILTER-  
DRIERS**



**AIR-CONDITIONING &  
REFRIGERATION  
INSTITUTE**

**Standard 730**

**IMPORTANT**

***SAFETY RECOMMENDATIONS***

It is strongly recommended that the product be designed, constructed, assembled and installed in accordance with nationally recognized safety requirements appropriate for products covered by this standard.

ARI, as a manufacturers' trade association, uses its best efforts to develop standards, employing state-of-the-art and accepted industry practices. However, ARI does not certify or guarantee safety of any products, components or systems designed, tested, rated, installed or operated in accordance with these standards or that any tests conducted under its standards will be non-hazardous or free from risk.

Note:

This standard supersedes ARI Standard 730-86

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# FLOW-CAPACITY RATING AND APPLICATION OF SUCTION-LINE FILTERS AND FILTER-DRIERS

## Section 1. Purpose

**1.1 Purpose.** The purpose of this standard is to establish, for refrigerant Suction-Line Filters and Filter-Driers (which may be referred to herein as "filters"); definitions; test requirements; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.

**1.1.1 Intent.** This standard is intended for the guidance of the industry, including manufacturers, engineers, installers, contractors and users.

**1.1.2 Review and Amendment.** This standard is subject to review and amendment as technology advances.

## Section 2. Scope

**2.1 Scope.** This standard applies to Suction-Line Filters and Suction-Line Filter-Driers, as defined in Section 3.

**2.2 Refrigerant.** This standard applies to systems employing the halocarbon refrigerants listed below.

ASHRAE Standard 34 Refrigerant Number	Chemical Name	Chemical Formula
R-12	dichlorodifluoromethane	CCl <sub>2</sub> F <sub>2</sub>
R-22	monochlorodifluoromethane	CHClF <sub>2</sub>
R-502	Refrigerants 22/115 48.8/ 51.2 wt %	CHClF <sub>2</sub> / CClF <sub>2</sub> CF <sub>3</sub>
R-134a	tetrafluoroethane	CF <sub>3</sub> CH <sub>2</sub> F

## Section 3. Definitions

All terms in this document shall follow the standard industry definitions in the current edition of *ASHRAE Terminology of Heating, Ventilation, Air Conditioning and Refrigeration* unless otherwise defined in this section.

**3.1 Permanent Installation.** An installation intended to remain in the system for an indefinite period.

**3.2 Published Rating.** A statement of the assigned values of those flow-capacity characteristics, under stated Rating Conditions, by which a filter may be chosen to fit its

application. These values apply to all filters of like nominal size and type produced by the same manufacturer. As used herein, the term Published Rating includes the rating of all performance characteristics shown on the filter or published in specifications, advertising or other literature controlled by the manufacturer, at stated Rating Conditions.

**3.2.1 Application Rating.** A rating based on tests performed at Application Rating Conditions (other than Standard Rating Conditions).

**3.2.2 Standard Rating.** A rating based on tests performed at Standard Rating Conditions.

**3.3 Rating Conditions.** Any set of operating conditions under which a single level of performance results and which causes only that level of performance to occur.

**3.3.1 Standard Rating Conditions.** Rating conditions used as the basis of comparison for performance characteristics.

**3.4 Refrigerant Flow Capacity.** The flow of refrigerant liquid, expressed as Tons of Refrigeration or mass flow rate, for a given refrigerant under specified conditions, which the filter will pass and not exceed the specified Pressure Drop.

**3.4.1 Pressure Drop.** The pressure difference at the inlet and outlet of a filter or filter-drier, including its connections, expressed in psi [kPa]

**3.4.2 Ton of Refrigeration.** A useful refrigerating effect equal to 12,000 Btu/h [3.5 kW].

**3.5 "Shall" or "Should".** "Shall" or "should" shall be interpreted as follows:

**3.5.1 Shall.** Where "shall" or "shall not" is used for a provision specified, that provision is mandatory if compliance with the standard is claimed.

**3.5.2 Should.** "Should" is used to indicate provisions which are not mandatory, but which are desirable as good practice.

**3.6 Suction-Line Filter.** A manufactured device for use in the suction line of a system, for the purpose of removing and holding solid contaminants from the refrigerant.