PRODUCT MANUAL

Filter drier

Model: BF-052 – BF-309S



CATEGORY
Filter Driers & Sight Glasses

MODEL
BF-052 – BF-309S

ISSUE DATE
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1. Product Overview

This is a bi-flow filter drier for heat pumps and reversible systems, where the refrigerant changes direction between heating and cooling and a conventional one-way drier would be working backwards half the time. Inside the shell, a spring-loaded adapter opens and closes with the flow direction, so the same cartridge filters the liquid line whichever way the refrigerant is travelling. That single feature removes the need for two driers with bypass check valves, which is the usual alternative on reversible equipment.

The range runs from BF-052 to BF-309S. ODF connections cover 1/4 inch to 1-1/8 inch and SAE connections 1/4 inch to 3/4 inch, which between them cover most split systems, packaged units and small chillers. Liquid line capacity is published for R410A from 5.6 kW to 67.8 kW; capacities for other refrigerants are lower and should be taken from the capacity table rather than assumed from the R410A figure. Maximum working pressure is 45 bar, which keeps the drier within range on R410A and R32 systems running high condensing temperatures.

The body is steel with an epoxy powder finish; the finish is not cosmetic, it is what stops the shell rusting through in coastal installations and in condensing plant rooms. The drying core removes moisture and acid, and the outlet screen keeps any core material from migrating downstream to the expansion device.

Selection is by refrigerant, capacity at the design condensing and evaporating temperature, and connection size. Oversizing costs very little in pressure drop but slows the moisture pick-up rate; undersizing gives a pressure drop that shows up as flash gas at the expansion valve.

The drier can be installed in any position, including vertically with downward flow, because the bi-flow adapter does not rely on gravity. Braze with the valve open and the body wrapped; replace the drier whenever the circuit has been opened for repair, since a saturated core will release moisture back into the system once it warms up.

2. Key Features

- Internal adapter opens and closes automatically with the reversing device — one part handles both refrigerant flow directions
- Prevents diaphragm impact overload when reversing
- Installation position is not restricted
- Corrosion resistant epoxy powder coating, 500 hours salt spray tested

3. Technical Specifications

Item	Specification
Model range	BF-052 – BF-309S (bi-flow filter drier)
ODF connection	1/4" – 1-1/8"
SAE connection	1/4" – 3/4"
Capacity (R410A)	5.6 – 67.8 kW
Max. working pressure	45 bar
Body dimensions A × B × D	63.5 / 100 / 110 / 181 mm × 76 mm × 18 – 40 mm

4. Commercial Terms

MINIMUM ORDER	**Negotiable**
LEAD TIME	**Negotiable**
SHIPPING PORT	**Shanghai / Ningbo, China**
PLACE OF ORIGIN	**China**
PAYMENT TERMS	**T/T, L/C**
SUPPLY ABILITY	**Negotiable**

Contact us for a free quotation

Our engineering team replies within 24 hours with selection advice and an FOB / CIF quotation.



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