EK Filter Drier

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The straight facts about EK

The EK Filter Drier is a best-in-class Emerson® product. This document is designed to accurately address questions and misconceptions about the EK Filter Drier performance.

1. Sporlan implies that the fiberglass pads on the EK Filter Drier are burnt during the manufacturing process and that this "condition" affects its performance.

When heated, the fiberglass pads turn amber to dark brown in color. This discoloration is due to additional curing of the phenolic resin used to bind the fiberglass fibers together. The curing process does not harm or shrink the fibers, but in fact, increases their strength. In no way does it adversely affect the performance of the EK.

2. It's common industry misconception that all bead-style filter driers are more susceptible to desiccant breakdown than molded-core or block-style filter driers.

The EK compacted bead-style filter drier uses a compressions spring on the inlet side that works with refrigerant flow to maintain desiccant compaction. The spring force acts in the same manner as the binding agent in molded cores. With this proven design, the attrition of desiccant is essentially reduced to zero.

The EK filter drier recommended by Emerson Climate Technologies, Inc. for use with HFC refrigerants.

Source: Emerson AE-1297-R3

3. Sporlan claims its Catch-All has "unexcelled" acid removal ability compared to the EK.

Actually, this statement is true but somewhat vague. The Catch-All desiccant blend is rich in activated alumina, which does an effective job of acid removal but also acts to strip additives from POE lubricants. The EK design has a maximum activated alumina content of 25 percent, which meets recommendations of Emerson Climate Technologies, Inc., and is designed to provide best over-all system protection performance. In fact, our in-house testing shows that Sporlan has changed their desiccant blend to more closely match that of the EK filter drier.

4. Many contractors have been led to believe that since the EK contains more fiberglass then a molded-core type filter, it has less moisture-removal capability.

Moisture removal is based on a number of design considerations, the most important of which is the total surface area of the desiccant. Comparing the molded-core "size" or "weight" to that of the EK is meaningless. In fact, the molded-core filter drier uses a binding agent that reduces the effective surface area of the desiccant. The only true comparison is the published data per ARI Standard 710, which shows the moisture removal capacity of each product. See Table 1.

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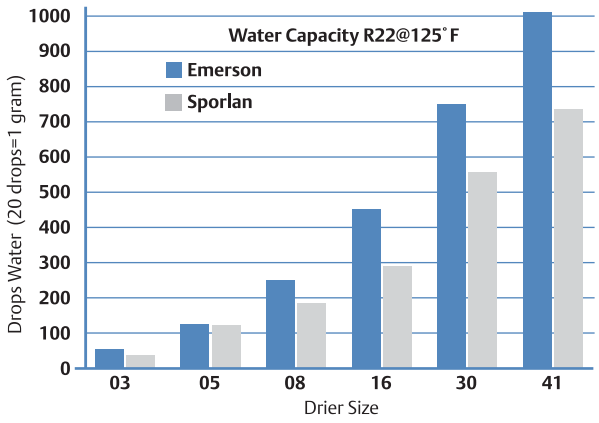
Table 1. Moisture Removal ARI Standard 710



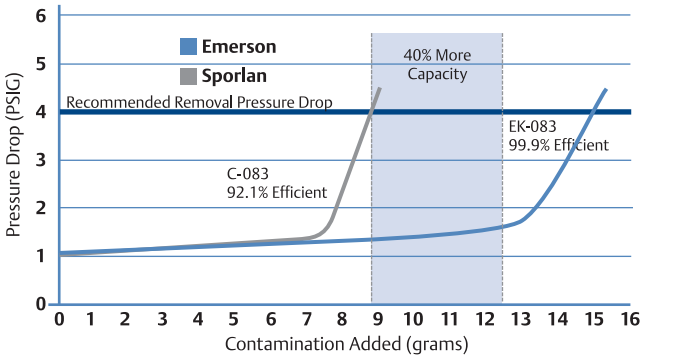
Source: Emerson Catalog 2003FC-91 R1

Sporlan Bulletin 40-10 Oct. 01

Summary

The overall design of an effective filter drier balances the moisture and acid removal with the ability to catch and hold contaminants. The patented EK delivers on both. It offers unsurpassed filtration performance with the ability to capture even the finest particles. The real advantage of the EK is its ability to hold contaminants during the system start up and cycling when pulses in the system tend to dislodge particles from molded-core filter driers causing them to become system contaminators instead of protectors.

Table 2. Filtration Performance



This chart illustrates the filtration capability of liquid line filter driers per the ASHRAE 63.2 Method of Testing.
Capacity – Emerson's EK removes 40% more solid particles than Sporlan's C before needing to be replaced.
Efficiency – Emerson's EK catches and holds the solid particles far better than Sporlan's C.

See for yourself. Visit your local Emerson Climate Technologies wholesaler for a demonstration of how the EK Filter Drier offers superior system protection. Or go to **EmersonClimateContractor.com** to get a free copy of the EK white paper and product brochure. The EK Filter Drier delivers - and it's been recommended by Emerson Climate Technologies, Inc. for the last 12 years.

	Emerson EK	Sporlan C
Desiccant Type	Compacted Bead	Molded Core/Block
Absolute Filtration	20 microns	Not Published
Filtration Capacity	15 g	9 g
Moisture Removal	250 drops H_20	196 drops H_20
MWP	680 psig	650 psig
Acid Capacity	500 mg	750 mg

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