

# FILTER-DRIERS

The function of a filter-drier is to remove system contaminants, acid and moisture.

## Applications

Henry Technologies filter-driers are intended for liquid line applications. The product range is approved for use with HCFC refrigerants as listed in the table.

## Main features

- Proven system protector
- High filtering capability
- High moisture absorption and acid removal
- Interchangeable cores
- Copper connections
- Flange cover plate includes ¼ NPT pressure tapping

## Technical Specification

Allowable operating pressure = 0 to 34.5 barg

Allowable operating temperature = -10°C to +135°C

## Materials of Construction

The main shell and fixed end cap are made from carbon steel. The cover plate is made from aluminum alloy. The ODS connections are made from copper.

## Filter-drier core

Each DRI-COR filter-drier core is made from a moulded composite of desiccant material(s) bonded to provide very high mechanical strength, micronic filtration, high moisture absorption and acid removal. Two types are available – Standard or High Capacity. Both types are interchangeable and have the same flow capacity. The High Capacity core has extra drying capacity. Each core is fully activated and placed in a hermetically sealed container.



## Filter core

Each FIL-COR filter core provides micronic filtration when drying is not required. The FIL-COR elements are interchangeable with the DRI-COR elements.

## Strainer core

The strainer core is a 100-mesh stainless steel screen, reinforced with a perforated tubular steel shell. The strainer cores are interchangeable with the filter-drier cores.

**Note: Cores not included with drier shells - to be ordered separately.**

Part No	Conn Size (inch)	DRI-COR		Cores		Core Data		Dimensions (mm)						Weight (kg)	Kv (m³/hr)	CE Cat
		Recommended Capacity (kW)*	Flow Capacity @ 0.138 Bar pressure drop, in kW	Qty.	Cat.No.	Volume (cm³)	Surface area (cm²)	A	B	C	D	E	F**			
V8048-5/8-CE	5/8 ODS	53	81	1	848-C or 848-CM	787	413	152	89	13	229	121	172	5.4	3.42	Cat I
V8048-7/8-CE	7/8 ODS	70	172	1		787	413	156	95	19	232	121	172	5.4	6.83	Cat I
V8048-1 1/8-CE	1 1/8 ODS	70	264	1		787	413	159	99	24	235	121	172	5.4	10.26	Cat I
V8048-1 3/8-CE	1 3/8 ODS	70	356	1		787	413	162	102	25	238	121	172	5.4	14.53	Cat I
V8048-1 5/8-CE	1 5/8 ODS	70	440	1		787	413	165	102	29	241	121	172	5.4	17.95	Cat I
V8096-7/8-CE	7/8 ODS	106	183	2		1574	826	295	95	19	364	121	312	6.8	6.84	Cat I
V8096-1 1/8-CE	1 1/8 ODS	106	271	2		1574	826	298	99	24	378	121	312	6.8	11.11	Cat I
V8096-1 3/8-CE	1 3/8 ODS	141	363	2		1574	826	302	102	25	381	121	312	6.8	14.53	Cat I
V8096-1 5/8-CE	1 5/8 ODS	141	458	2		1574	826	305	102	29	381	121	312	6.8	17.95	Cat I
V8096-2 1/8-CE	2 1/8 ODS	141	634	2		1574	826	308	105	35	384	121	312	6.8	25.64	Cat I
V8144-1 1/8-CE	1 1/8 ODS	176	282	3		2361	1238	441	99	24	518	121	451	8.2	11.11	Cat I
V8144-1 3/8-CE	1 3/8 ODS	211	380	3		2361	1238	445	102	25	521	121	451	8.2	15.38	Cat I
V8144-1 5/8-CE	1 5/8 ODS	211	475	3		2361	1238	448	102	29	524	121	451	8.2	18.80	Cat I
V8192-1 5/8-CE	1 5/8 ODS	317	496	4		3148	1651	588	102	29	673	121	591	9.5	5.13	Cat II
V8192-2 1/8-CE	2 1/8 ODS	317	676	4		3148	1651	591	105	35	676	121	591	9.5	26.50	Cat II
V8300-2 1/8-CE	2 1/8 ODS	440	693	3	810-CM	4917	1896	613	137	35	730	152	169	20.4	27.35	Cat II
V8400-2 5/8-CE	2 5/8 ODS	581	887	4		6555	2528	792	149	38	908	152	169	23.6	35.04	Cat II
* Recommended kW rating based on both drying and flow capacity. ** 'F' is the minimum space required to remove the filter drier cores from the shell																

\* Recommended kW rating based on both drying and flow capacity.

\*\* 'F' is the minimum space required to remove the filter drier cores from the shell

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## Selection Guidelines

The user should select a model based on refrigerant type, refrigeration capacity, and preferred degree of filtration /drying. The preferred connection size can then be used to decide which model is best. Alternatively, the user may select first on connection size then check that the application is within the refrigeration capacity and filtration/drying limits of the selected model.

## Example

Refrigerant = R22

Refrigeration capacity = 80 kW

Degree of filtration /drying required = Standard

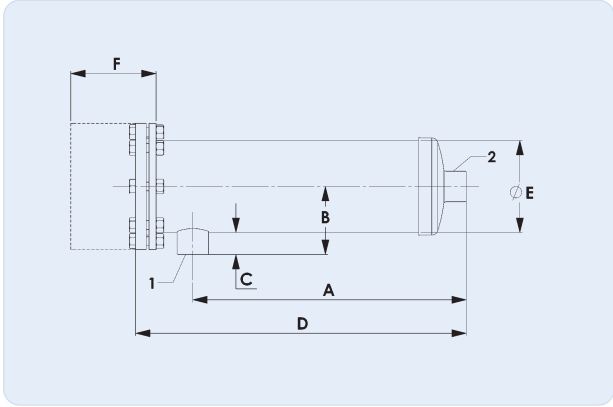
Selected models: V8096-7/8-CE or V8096-1 1/8-CE, using 848-C cores.

Final selection based on preferred connection size.

Note: A user may decide to oversize the filter-drier based on experience or if the system contamination level is likely to be higher than normal.

## Installation – Main Issues

1. Install the filter-drier upstream of liquid line controls to give maximum protection. Locate upstream of moisture indicator so that drying effectiveness can be measured.
2. Ensure dimension "F" is complied with in order to remove cores.
3. It is recommended to install the unit horizontally for easier core replacement.



- 1 Inlet
- 2 Outlet

The water holding capacities and filter areas are presented in the table, for the range of cores.

Core Part No.	Function	Description	Drier Shell Dia. (mm)	Volume (cm³)	A.R.I. Cap. Ratings Drops of water		Core Length (mm)	Weight (kg)
					R22 (60ppm)			
					Liquid Line Temperature °C			
					24°C	52°C		
848-C	Filter-drier	Standard DRI-COR	121	787	460	288	140	0.91
824-CM*	Filter-drier	High Capacity DRI-COR	76	393	288	183	148	0.64
848-CM			121	787	576	365	140	1.13
810-CM			152	1640	1200	760	165	2.40
848-F	Filter	Fil-Cor	121	413 cm <sup>2</sup> Filter Area		Use When Not Drying	140	0.23
810-F			152	632 cm <sup>2</sup> Filter Area			165	0.32
848-ST	Strainer	Strainer	121	419 cm <sup>2</sup> Filter Area				140
* Replacement core for obsoleted V8024 series filter-driers								

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