Castel
Italian technology

GO GREEN
R744 • NATURAL REFRIGERANT

HERMETIC FILTER DRIERS

FOR REFRIGERATION PLANTS
THAT USE THE R744 REFRIGERANT

EN

HERMETIC FILTER DRIERS

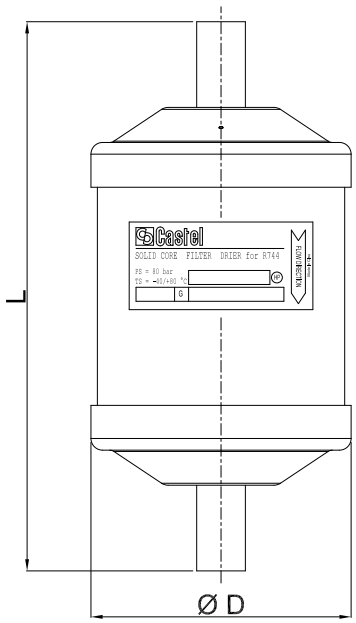
Applications

Castel has developed filters DF303E , DF305E , DF308E , DF316E , DF330E and DF341E illustrated in this brochure, for all the applications that use R744 refrigeration fluid belonging to Group 2, defined in Article 13, Chapter 1, Point (b) of Directive 2014/68/EU, with reference to EC Regulation No. 1272/2008.

Construction

The filter body is made completely from steel with copper connections, EN 12735-1 – Cu-DHP, offering the possibility to solder the copper pipe inside the connections (ODS).

The cartridges are made from moulding a dehydrating filler made completely from 3 Å molecular sieves, with a suitable binder. The choice of using only 3 Å molecular sieves as the dehydrating material grants the cartridge extraordinary moisture adsorption capacity while maintaining reasonable deacidifying characteristics.



Solder connection

General characteristics of hermetic filter driers for R744

Catalogue Number 100% molecular sieves	International Reference	Block Filtering Surface [cm²]	Nominal Volume [cm³]	Connections ODS Ø [in.]	Connections ODS Ø [mm]	PS [bar]	TS [°C] min.	TS [°C] max.	TA [°C] min.	TA [°C] max.	Risk Category according to PED Recast
DF303E/2S	032S	58	50	1/4"	–	80	– 40	+ 80	– 20	+ 50	Art. 4.3
DF303E/3S	033S			3/8"	–						
DF305E/2S	052S	104	80	1/4"	–						
DF305E/3S	053S			3/8"	–						
DF305E/M10S	–			–	10						
DF308E/2S	082S	141	130	1/4"	–						
DF308E/3S	083S			3/8"	–						
DF308E/M10S	–			–	10						
DF308E/M12S	–			–	12						
DF308E/4S	084S			1/2"	–						
DF316E/3S	163S	183	250	3/8"	–						
DF316E/M10S	–			–	10						
DF316E/M12S	–			–	12						
DF316E/4S	164S			1/2"	–						
DF316E/5S	165S			5/8"	16						
DF330E/3S	303S	345	500	3/8"	–						
DF330E/4S	304S			1/2"	–						
DF330E/5S	305S			5/8"	16						
DF341E/4S	414S	384	670	1/2"	–						
DF341E/5S	415S			5/8"	16						

Dimensions and weights of hermetic filters for R744

Catalogue Number	Connections ODS Ø [in.]	Connections ODS Ø [mm]	Dimensions [mm] Ø D	Dimensions [mm] L	Weight [g]
DF303E/2S	1/4"	–	42	101	152
DF303E/3S	3/8"	–		105	186
DF305E/2S	1/4"	–	64	112	406
DF305E/3S	3/8"	–		116	414
DF305E/M10S	–	10		120	414
DF308E/2S	1/4"	–	64	133	502
DF308E/3S	3/8"	–		137	514
DF308E/M10S	–	10		141	520
DF308E/M12S	–	12		141	520
DF308E/4S	1/2"	–		137	514
DF316E/3S	3/8"	–	64	157	616
DF316E/M10S	–	10		161	616
DF316E/M12S	–	12		161	616
DF316E/4S	1/2"	–		157	626
DF316E/5S	5/8"	16		163	628
DF330E/3S	3/8"	–	76	230	1450
DF330E/4S	1/2"	–		230	1450
DF330E/5S	5/8"	16		236	1500
DF341E/4S	1/2"	–	89	235	1775
DF341E/5S	5/8"	16		241	1886

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Refrigerant flow capacity of hermetic filter driers for R744

Catalogue Number	Pressure drop 0,07 bar (1) [kW]	Pressure drop 0,14 bar (1) [kW]
DF303E/2S	5,8	7,0
DF303E/3S	10,8	12,9
DF305E/2S	7,3	9,5
DF305E/3S	11,4	14,9
DF305E/M10S	11,4	14,9
DF308E/2S	7,0	9,2
DF308E/3S	12,5	16,3
DF308E/M10S	12,5	16,3
DF308E/M12S	15,7	20,4
DF308E/4S	15,7	20,4
DF316E/3S	13,5	18,2
DF316E/M10S	13,5	18,2
DF316E/M12S	18,7	25,2
DF316E/4S	18,7	25,2
DF316E/5S	22,2	30,0
DF330E/3S	14,0	18,9
DF330E/4S	23,4	31,5
DF330E/5S	27,4	37,0
DF341E/4S	23,9	35,9
DF341E/5S	30,9	46,3

(1) : Maximum values of the refrigerant flow capacity at which the drier can be used when fluid dehydration is not the a major problem, provided that the original moisture is limited before the installation of the drier.
The maximum refrigerant flow capacities are referred to a total pressure drop of 0,07 bar / 0,14 bar , inlet and outlet connections included, (according to ARI STANDARD 710-2009 - with liquid temperature at -5°C and evaporating temperature at - 40°C).

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ISO 14001

Castel has always been aware of environmental sustainability issues and gives its contribution to a cleaner environment, supplying the refrigeration and air conditioning industry with state-of-the-art and environment-friendly technology. With its commitment and steady research in its laboratories, Castel has developed a whole range of products using natural refrigerants, which reduce emissions to the minimum. The large range of products belonging to the Castel "GoGreen" line has been developed to be used in CO2 (R744)- and HC hydrocarbon-filled systems.

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