

HANDBOOK
REFRIGERATING SYSTEM PROTECTORS

Ed. 2017

 **Castel**[®]
Italian technology

CHAPTER 12 ■ HERMETIC STRAINERS

FOR REFRIGERATION PLANTS THAT USE HCFC, HFC OR HFO REFRIGERANTS



Point (b) of Directive 2014/68/EU, with reference to EC Regulation No. 1272/2008.

The filters in series 45 can be installed on systems that use the following refrigerant fluids:

- HFC (R32)
- HFO (R1234yf)

classified as A2L in the ASHRAE 34-2013 standard, and belonging to Group 1, as defined in Article 13, Chapter 1, Point (a) of Directive 2014/68/EU, with reference to EC Regulation No. 1272/2008.

For specific applications with refrigerant fluids not listed above, please contact Castel Technical Department.

CONSTRUCTION

The filter body is completely manufactured in steel, with SAE FLARE copper-plated steel threaded connections. The product range also includes versions with copper plated solder connections, offering the possibility to solder the copper pipe inside the connections (ODS).

Inside the filters there is a screen basket, with large filter surface, made of austenitic stainless steel AISI 304. The mesh filters in series 45 are not inspectionable and therefore cannot be cleaned.

APPLICATIONS

The filters in series 45 illustrated in this chapter are designed for installation on commercial refrigeration systems and on civil and industrial air conditioning plants that use the following refrigerant fluids:

- HCFC (R22)
- HFC (R134a, R404A, R407C, R410A, or R507)
- HFO and HFO/HFC mixtures (R1234ze, R448A, R449A, R450A, and R452A)

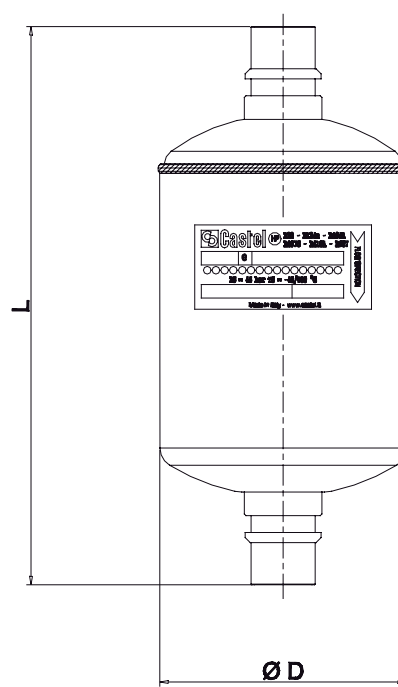
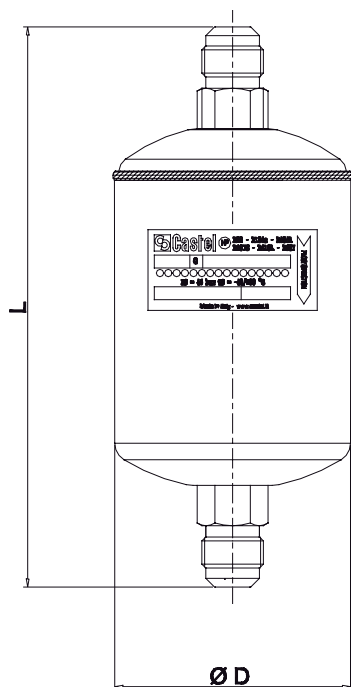
belonging to Group 2, as defined in Article 13, Chapter 1,

TABLE 54: General characteristics of strainers

Catalogue Number	Filtering Surface [cm ²]	Useful Passage Surface [%]	Mesh Opening [mm]	Connections				Kv Factor [m ³ /h]	PS [bar]	TS [°C]		TA [°C]		Risk Category according to PED Recast	
				SAE Flare	ODS		ODM			min.	max.	min.	max.		
					∅ [in.]	∅ [mm]	∅ [in.]								∅ [mm]
4510/3	58	36,6	0,166	3/8"	–	–	–	–	45	–40	+80	–20	+50	Art. 4.3	
4510/4	142			1/2"	–	–	–	–							
4520/2	58			–	1/4"	–	3/8"	–							2,4
4520/3				–	3/8"	–	1/2"	–							2,4
4520/M10				–	–	10	–	12							3,4
4520/M12				–	–	12	–	14							3,4
4520/4				–	1/2"	–	5/8"	16							3,4
4520/5				–	5/8"	16	3/4"	–							3,4
4520/M18				142	–	–	18	–							22

TABLE 55: Dimensions and weights of strainers

Catalogue Number	Dimensions [mm]		Weight [g]
	Ø D	L	
4510/3	52	110	195
4510/4	76	174	515
4520/2	52	109	195
4520/3			
4520/M10			
4520/M12			
4520/4			
4520/5	76	170	495
4520/M18	76	170	495



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