



# Hermetic filters for refrigerating systems



## Applications

The filters, shown in this leaflet, are designed for installation on commercial refrigerating systems and on civil and industrial conditioning plants.

Filters series DF2 and series DF3 have been developed for specific installations on refrigerating systems using HFC refrigerant fluids, particularly R134a , R404A , R407C , R410A and R507 mixed with POE lubricants. In spite of this, the new block may be successfully used also in refrigerating systems using the old CFC or HCFC refrigerant fluids, mixed with mineral lubricants

## Construction

The filter is completely manufactured in steel, either with chrome-plated Flare threaded connections. The product range also includes types with copper solder connections, offering the possibility to solder the copper pipe inside the connections (ODS).

The blocks in the filters series DF2 are molded from a blend of dehydrating charge, 80% of 3 Å molecular sieves and 20 % of activated alumina, and a special binding agent in appropriate proportions. The choice

of blend, molecular sieves – activated alumina, gives to the block a very high capacity of acid adsorption also maintaining very good dehydrating characteristics.

The blocks in the filters series DF3 are molded from a blend of dehydrating charge, totally made of 3 Å molecular sieves, and a special binding agent in appropriate proportions. The choice of the 3 Å molecular sieves, as sole dehydrating material, gives to the block a superlative capacity of water adsorption also maintaining quite good de-acidifying characteristics.

The manufacturing process gives a considerable compactness and stoutness to both the products so that they are resistant to shocks and abrasions.

The shape of the block is designed in order to offer the maximum possible surface area to the incoming fluid. The internal cavity is also positioned in such a way as to have a uniform wall thickness. As a result, the fluid encounters a constant strength at all points, flows linearly through the block, and ensures efficient dehydration and minimum charge loss.

The block is chemically inert, not deliquescent, does not react with refrigerating fluids, and is capable of blocking oil by-products dragged into the circuit.

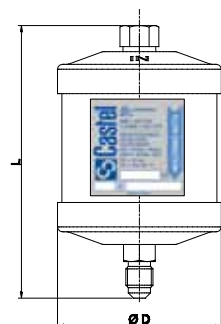


**SOLID CORE FILTER DRIERS - SAE FLARE CONNECTIONS  
APPROVED BY UNDERWRITERS LABORATORIES INC.**

| Part number          |                                   | International code | SAE Flare Connections | Nominal volume [cm³] | Dimensions [mm] |     | PS [bar] | TS [°C] |     | Package pcs |
|----------------------|-----------------------------------|--------------------|-----------------------|----------------------|-----------------|-----|----------|---------|-----|-------------|
| 100% molecular sieve | 80% molecular sieve + 20% alumina |                    |                       |                      | Ø D             | L   |          | Min     | Max |             |
| DF303/2              | DF203/2                           | 032                | 1/4"                  | 50                   | 42              | 110 | 45 (1)   | -40     | +80 | 25          |
| DF303/3              | DF203/3                           | 033                | 3/8"                  | 50                   | 42              | 119 |          |         |     | 25          |
| DF305/2              | DF205/2                           | 052                | 1/4"                  | 80                   | 64              | 123 |          |         |     | 25          |
| DF305/3              | DF205/3                           | 053                | 3/8"                  | 80                   | 64              | 130 |          |         |     | 25          |
| DF308/2              | DF208/2                           | 082                | 1/4"                  | 130                  | 64              | 141 |          |         |     | 25          |
| DF308/3              | DF208/3                           | 083                | 3/8"                  | 130                  | 64              | 151 |          |         |     | 25          |
| DF308/4              | DF208/4                           | 084                | 1/2"                  | 130                  | 64              | 156 |          |         |     | 25          |
| DF316/2              | DF216/2                           | 162                | 1/4"                  | 250                  | 64              | 161 |          |         |     | 15          |
| DF316/3              | DF216/3                           | 163                | 3/8"                  | 250                  | 64              | 171 |          |         |     | 15          |
| DF316/4              | DF216/4                           | 164                | 1/2"                  | 250                  | 64              | 176 |          |         |     | 15          |
| DF316/5              | DF216/5                           | 165                | 5/8"                  | 250                  | 64              | 186 |          |         |     | 15          |
| DF330/3              | DF230/3                           | 303                | 3/8"                  | 500                  | 76              | 244 |          |         |     | 10          |
| DF330/4              | DF230/4                           | 304                | 1/2"                  | 500                  | 76              | 249 |          |         |     | 10          |
| DF330/5              | DF230/5                           | 305                | 5/8"                  | 500                  | 76              | 259 |          |         |     | 10          |
| DF341/4              | -                                 | 414                | 1/2"                  | 670                  | 89              | 254 |          |         |     | 6           |
| DF341/5              | DF241/5                           | 415                | 5/8"                  | 670                  | 89              | 264 |          |         |     | 6           |
| DF341/6              | DF241/6                           | 416                | 3/4"                  | 670                  | 89              | 274 |          |         |     | 6           |
| DF303/2F (2)         | -                                 | -                  | 1/4"                  | 50                   | 42              | 110 |          |         |     | 25          |
| DF305/2F (2)         | -                                 |                    | 1/4"                  | 80                   | 64              | 123 |          |         |     | 25          |
| DF308/2F (2)         | -                                 |                    | 1/4"                  | 130                  | 64              | 141 |          |         |     | 25          |
| DF308/3F (2)         | -                                 |                    | 3/8"                  | 130                  | 64              | 151 |          |         |     | 25          |
| DF316/3F (2)         | -                                 |                    | 3/8"                  | 250                  | 64              | 171 |          |         |     | 15          |
| DF316/3F (2)         | -                                 |                    | 3/8"                  | 250                  | 64              | 171 |          |         |     | 15          |



Male connections

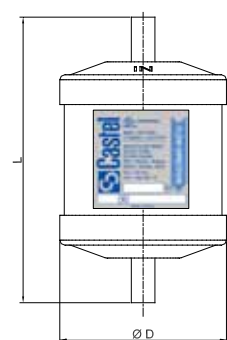


Male - Female connections

Note: (1): MWP = 650 psi according to UL approval (2) : male/female connections (inlet female)

**SOLID CORE FILTER DRIERS - SOLDER CONNECTIONS  
APPROVED BY UNDERWRITERS LABORATORIES INC.**

| Part number          |                                   | International code | Connections |        |         |        | Nominal volume [cm³] | Dimensions [mm] |     | PS [bar] | TS [°C] |     | Package pcs |
|----------------------|-----------------------------------|--------------------|-------------|--------|---------|--------|----------------------|-----------------|-----|----------|---------|-----|-------------|
| 100% molecular sieve | 80% molecular sieve + 20% alumina |                    | ODS         |        | ODM     |        |                      | Ø D             | L   |          | Min     | Max |             |
|                      |                                   |                    | Ø [in.]     | Ø [mm] | Ø [in.] | Ø [mm] |                      |                 |     |          |         |     |             |
| DF303/2S             | DF203/2S                          | 032S               | 1/4"        | -      | 3/8"    | -      | 50                   | 42              | 101 | 45 (1)   | -40     | +80 | 25          |
| DF303/3S             | DF203/3S                          | 033S               | 3/8"        | -      | 1/2"    | -      | 50                   | 42              | 103 |          |         |     | 25          |
| DF305/2S             | DF205/2S                          | 052S               | 1/4"        | -      | 3/8"    | -      | 80                   | 64              | 112 |          |         |     | 25          |
| DF305/3S             | DF205/3S                          | 053S               | 3/8"        | -      | 1/2"    | -      | 80                   | 64              | 116 |          |         |     | 25          |
| DF305/M10S           | DF205/M10S                        | -                  | -           | 10     | -       | 12     | 80                   | 64              | 120 |          |         |     | 25          |
| DF308/2S             | DF208/2S                          | 082S               | 1/4"        | -      | 3/8"    | -      | 130                  | 64              | 133 |          |         |     | 25          |
| DF308/3S             | DF208/3S                          | 083S               | 3/8"        | -      | 1/2"    | -      | 130                  | 64              | 137 |          |         |     | 25          |
| DF308/M10S           | DF208/M10S                        | -                  | -           | 10     | -       | 12     | 130                  | 64              | 141 |          |         |     | 25          |
| DF308/M12S           | DF208/M12S                        | -                  | -           | 12     | -       | 14     | 130                  | 64              | 141 |          |         |     | 25          |
| DF308/4S             | DF208/4S                          | 084S               | 1/2"        | -      | 5/8"    | 16     | 130                  | 64              | 137 |          |         |     | 25          |
| DF316/3S             | DF216/3S                          | 163S               | 3/8"        | -      | 1/2"    | -      | 250                  | 64              | 157 |          |         |     | 15          |
| DF316/M10S           | DF216/M10S                        | -                  | -           | 10     | -       | 12     | 250                  | 64              | 161 |          |         |     | 15          |
| DF316/M12S           | DF216/M12S                        | -                  | -           | 12     | -       | 14     | 250                  | 64              | 161 |          |         |     | 15          |
| DF316/4S             | DF216/4S                          | 164S               | 1/2"        | -      | 5/8"    | 16     | 250                  | 64              | 157 |          |         |     | 15          |
| DF316/5S             | DF216/5S                          | 165S               | 5/8"        | 16     | 3/4"    | -      | 250                  | 64              | 163 |          |         |     | 15          |
| DF316/7S             | DF216/7S                          | 167S               | 7/8"        | -      | 1.1/8"  | -      | 250                  | 64              | 177 |          |         |     | 15          |
| DF330/3S             | DF230/3S                          | 303S               | 3/8"        | -      | 1/2"    | -      | 500                  | 76              | 230 |          |         |     | 10          |
| DF330/4S             | DF230/4S                          | 304S               | 1/2"        | -      | 5/8"    | 16     | 500                  | 76              | 230 |          |         |     | 10          |
| DF330/5S             | DF230/5S                          | 305S               | 5/8"        | 16     | 3/4"    | -      | 500                  | 76              | 236 |          |         |     | 10          |
| DF330/7S             | DF230/7S                          | 307S               | 7/8"        | -      | 1.1/8"  | -      | 500                  | 76              | 250 |          |         |     | 10          |
| DF330/9S             | DF230/9S                          | 309S               | 1.1/8"      | -      | 1.3/8"  | 35     | 500                  | 76              | 258 |          |         |     | 10          |
| DF341/4S             | -                                 | 414S               | 1/2"        | -      | 5/8"    | 16     | 670                  | 89              | 235 |          |         |     | 6           |
| DF341/5S             | DF241/5S                          | 415S               | 5/8"        | 16     | 3/4"    | -      | 670                  | 89              | 241 |          |         |     | 6           |
| DF341/6S             | DF241/6S                          | 416S               | 3/4"        | -      | 7/8"    | -      | 670                  | 89              | 247 |          |         |     | 6           |
| DF341/7S             | DF241/7S                          | 417S               | 7/8"        | -      | 1.1/8"  | -      | 670                  | 89              | 255 |          |         |     | 6           |
| DF375/4S             | DF275/4S                          | 754S               | 1/2"        | -      | 5/8"    | 16     | 1340                 | 89              | 373 |          |         |     | 1           |
| DF375/5S             | DF275/5S                          | 755S               | 5/8"        | 16     | 3/4"    | -      | 1340                 | 89              | 379 |          |         |     | 1           |
| DF375/6S             | DF275/6S                          | 756S               | 3/4"        | -      | 7/8"    | -      | 1340                 | 89              | 385 |          |         |     | 1           |
| DF375/7S             | DF275/7S                          | 757S               | 7/8"        | -      | 1.1/8"  | -      | 1340                 | 89              | 393 |          |         |     | 1           |
| DF375/9S             | DF275/9S                          | 759S               | 1.1/8"      | -      | 1.3/8"  | 35     | 1340                 | 89              | 401 |          |         |     | 1           |



Solder connections

Note: (1): MWP = 650 psi according to UL approval



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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.



**ISO 14001**

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