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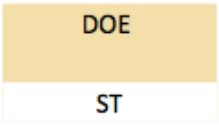
FILTERING CARTRIDGES

TECHNICAL INFORMATION 1

FILTER END CONFIGURATIONS

Double Open End (DOE)



Double open-end filtering cartridges (DOE) as the name suggests, are open on both sides and guarantee sealing thanks to the direct compression carried out by the filter container itself.

The sealing system generally uses a scoring mechanism on both ends of the cartridge, one with a blind side and the other with a hole leading to the side of the filtrate. The edges of the engraver are pressed against the end of the cartridge using different types of compression device, commonly spring or screw.

The disadvantage of the DOE system is that the scoring seal mechanisms are relatively rough and susceptible to damage or installation errors by the operator leading to a potential bypass of the filter cartridge and thus a reduction in the efficiency of the filtration system.

This type of cartridge is not recommended if you require 5 µm absolute and lower filtration efficiencies, when operation is expected at high temperatures or where sanitation is required.

Double Open End (DOE) cartridges are ideal for non-critical filtration and pre-filtration applications and for general purposes, where operating economy is of primary importance.

Generally, there are the two configurations in extruded polypropylene with direct incision on the filtering material or pleated with a rigid structure and flat gaskets on both sides.

Single Open End (SOE)

Single open end (SOE) cartridges are those that have one end of the cartridge already "locked" with a closure terminal and the other end open but with a terminal equipped with integrated O-rings, offering a much more efficient and reliable seal compared to the DOE configuration.

In addition to an improved sealing method, SOE cartridges offer a simpler and more reliable installation method in the filter housing and have fewer loose filter components, making cleaning and maintenance easier and more effective.

There are several types of O-rings and end caps available on the market, generally for specific applications or to suit particular filter designs.

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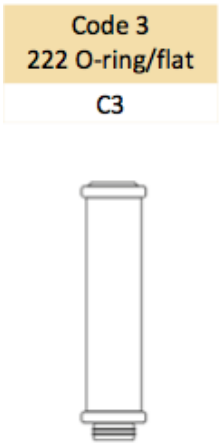
Here are 4 of the most common configurations: Code 3 and 8 and Code 2 and 7.

Code 3

Code 3 uses 2 "222" O-rings at the open end and a flat sealing plug at the closed end. This is one of the most common types used in industrial and pure water applications.

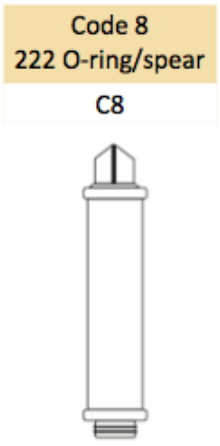
(222 O-rings and flat end)



Code 8

Code 8 uses the same 2 "222" O-rings as the Code 3 configuration, but with a tip at the closed end. The tip's function is to help center the cartridge when installing longer cartridges.

(222 O-rings and fin end)



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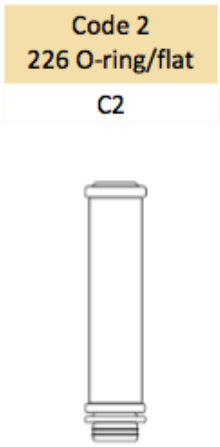
Code 2

Code 2 uses the same configuration with 2 “226” O-rings combined with a double bayonet fitting at the open end of Code 7 and a flat blanking plug at the closed end.

The function of the bayonet coupling is to allow the correct positioning of the cartridge, allow the operator to confirm the correct installation, prevent the movement of the cartridge during sterile filtration, protect against the possibility of seal breakage due to backwashing.

(226 O-rings, bayonet and flat end)



Code 7

Code 7 uses 2 “226” O-rings combined with a double bayonet fitting on the open end and a ferrule on the closed end. This cartridge configuration is the standard for many critical processes in the pharmaceutical and beverage industry. It has the same advantages as the Code 2 style.

(226 O-rings, bayonet and fin end)

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TYPES OF SEALS ON STANDARD CARTRIDGES

Attacchi	DOE	Code 3 222 O-ring/flat	Code 8 222 O-ring/spear	Code 2 226 O-ring/flat	Code 7 226 O-ring/spear
CODICE	ST	C3	C8	C2	C7