

# CHARACTERISTICS OF A CIGARETTE FILTER WITH UNIQUE END-APPEARANCE


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**CPF Advanced™ key benefits:**

- The potential for a distinctive end appearance, offering market and product differentiation possibilities as well as enhancing brand identity
- Opportunities to prevent counterfeiting, both using a standard CPF Advanced™ or a CPF Advanced™ filter with a coloured inner wrap
- Higher retention than acetate filters at the same pressure drop (PD) without any significant reduction in smoking impact
- Can give an equivalent tar retention to a monoacetate but a lower pressure drop is achievable and suitable for cigarettes at any tar level
- A reduction in tip ventilation required to achieve a given yield

The Filtrona CPF Advanced™ filter is manufactured using cellulose acetate fibre, surrounded by an embossed paper inner wrap, giving the fluted appearance



Flutes to mouth (FTM)      Flutes to tobacco (FTT)

When CPF Advanced™ is used with the flutes to the mouth end; the unique appearance offers a strong brand identity and a potential anti-counterfeiting tool

At an equivalent pressure drop to a monoacetate filter, the CPF Advanced™ filter can significantly reduce tar yield without the need for additional ventilation. This can be especially useful when reducing tar levels for an established brand whilst maintaining optimum draw resistance, taste and impact.


	CPF Advanced™	Mono Acetate (ACE)
Cigarette PD (open vent)	100mmWg	100mm
Tip Length	25mm	25mm
Tip Circ.	24.5mm	24.5mm
Ventilation	25%	25%
Ventilation Position	15mm	15mm
NFDM (Tar) Yield	9.1mg	10mg
Nicotine Yield	0.88mg	0.74mg

As smoke from the burning coal flows through the filter, it naturally follows the path of least resistance i.e. along the flutes.

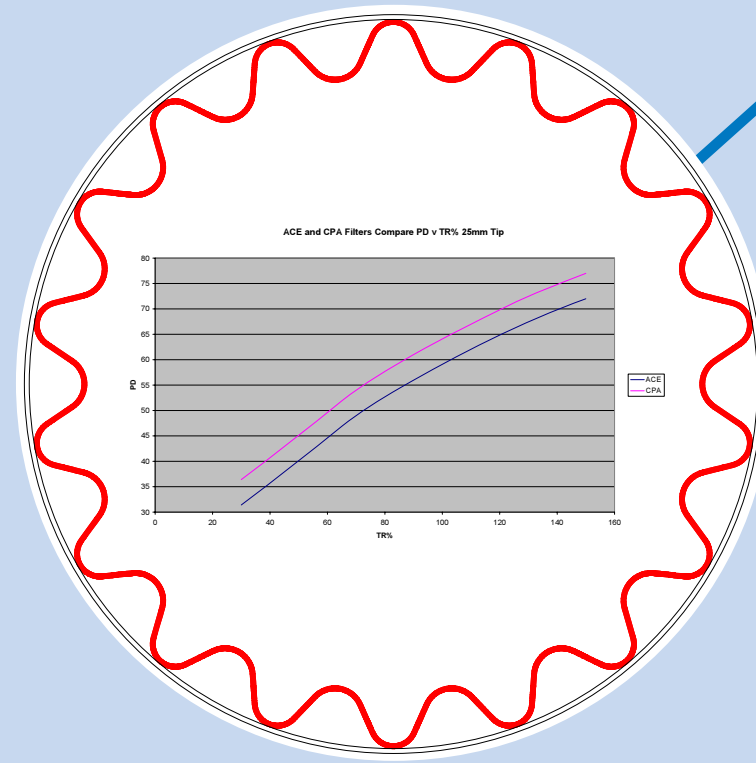
As the flutes are only formed for part of the filter length, smoke is drawn through the paper at the end of the embossed flutes.

This cross flow filtration mechanism achieves an extremely high level of tar and nicotine retention giving the CPF Advanced™ filter its increased efficiency.

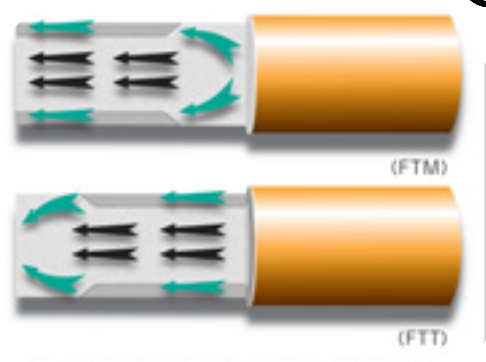
Entire brand families can use the CPF Advanced™ filter due to its suitability at all tar levels from full flavour to ultra low. Menthol variants of CPF Advanced™ are also available. Thus a powerful brand identity can be created by using CPF Advanced™ across an entire product range.



CPF Advanced™ - Flavour Thread



**- Smoke Flow Paths**

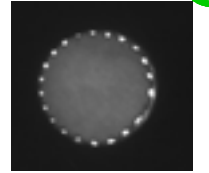


(FTM)      (FTT)


← Cross Flow Filtration Smoke Path  
← Conventional Filtration Smoke Path

**Flute Improvements**


CPF™ - Original process



CPF Advanced™ - Redeveloped process




The Filtrona CPF Advanced™ filter can be used either as a mono or combined with another filter type to produce a dual configuration which will allow, for example, the addition of activated carbon. This will facilitate even greater flexibility for both design and marketing.



CPF Advanced™ - Dual Filter

Coloured inner wrap can also be used for anti-counterfeiting and product differentiation purposes.



CPF Advanced™ - Coloured Inner Wrap

CPF Advanced™ is currently being used on the following brands:



Falling Rain & Wonder Produced by Thai Monopoly      Lanzhou produced by Lanzhou Cigarette Factory

**Infra Red Imaging System**

Developed by Filtrona to inspect the flutes of the CPF Advanced product.

Specialist hardware supports and photographs a CPF Advanced™ filter.

The system then uses the image of the filter to calculate the fluted area of the product.