

## Mini Kleenpak™ Capsules with Fluorodyne® EX Grade EDT Membrane



### Unrivalled Mycoplasma Control with Superior Value

#### Fluorodyne EX Grade EDT Membrane Filtration Technology

Mini Kleenpak capsules with Fluorodyne EX Grade EDT membrane are high capacity, 0.1 micron rated sterilizing grade filters, suitable for filter-sizing studies or the processing of small volumes (up to 30L) of pharmaceutical GMP process streams.

#### Applications / Use

- ▶ Qualifying filter membrane performance on the bench before commitment to a full-scale manufacturing process
- ▶ Filtration of cell culture media
- ▶ Enhanced sterile filtration of biological fluids

#### Benefit from using Mini Kleenpak capsules with Fluorodyne EX EDT membrane in your process

- ▶ **Superior value** – An asymmetric, high capacity MachV polyethersulfone (PES) membrane combined with twin polyvinylidene fluoride (PVDF) membrane layers downstream ensures excellent throughput performance.
- ▶ **Economical scale-up** – For large production volumes, scale up from Mini Kleenpak capsules to high-area AB-style filter cartridges and Kleenpak Nova filter capsules. These high area formats feature a unique, Pall-patented laid over pleat membrane pleating construction coupled with a narrow core design for maximum throughput capacity and rapid fluid processing when effective time and cost control is paramount.
- ▶ **Safety** – Validated for the removal of *Brevundimonas diminuta* (ATCC® 19146) and *Acholeplasma laidlawii* (ATCC® 23206) (see removal ratings on reverse). They assure maximum safety in critical sterilizing filtration applications where there is also a need for mycoplasma control.

## Specifications

### Materials of Construction

Filter Membrane	Prefilter layer: Single layer hydrophilic asymmetric PES
Support/Drainage	Final filter layers: Dual layer hydrophilic PVDF
Capsule Shell	Polypropylene
Core and Endcaps	Polypropylene
Filling Bell	Polycarbonate
Sealing Technology	Thermal bonding without adhesives

### Operating Parameters<sup>1</sup>

Maximum Operating Temperature	40 °C
Maximum Operating Pressure	4.1 bar (60 psi) at 38 °C

<sup>1</sup> In compatible fluids which do not soften, swell or adversely affect the filter or its materials of construction

### Sterilization Conditions<sup>2</sup>

Autoclavable 'G' option	3 x 30 minutes up to 135 °C
Gamma-irradiatable 'G' option	Maximum of 50 kGy

<sup>2</sup> • Pre-sterilized 'S' option Mini Kleenpak capsules must not be re-sterilized.  
• Mini Kleenpak capsules must not be sterilized *in-situ* by passing steam under pressure

### Typical Extractables in Water at 20 °C

< 5 mg NVR

### Nominal Dimensions

Maximum Diameter Including valves	68 mm (2.7 in.)
Length – Code 2	105 mm (4.1 in.)
Length – Code 8	73 mm (2.9 in.)

### Ordering Information<sup>4</sup>

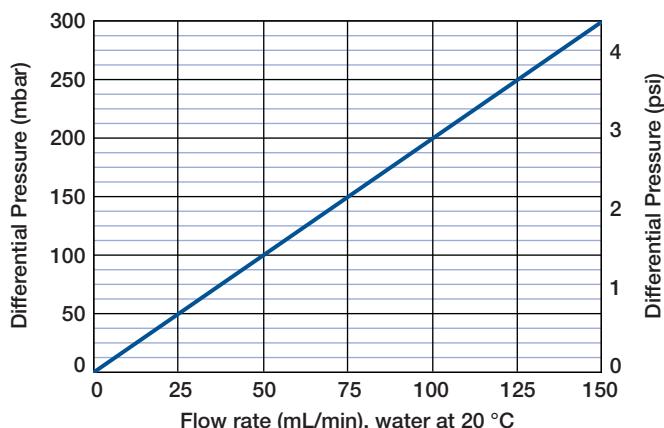
Pall Part Number: KA02EDTP

<input type="checkbox"/>	<input type="checkbox"/>	<b>Code</b>	<b>Connection Options</b>	<b>Code</b>	<b>Shipping Format</b>
		2	1/4 – 1/2 in. (6 – 13 mm) hosebarb	G	Non-sterile gamma irradiatable/ autoclavable
		8	1/2 – 3/4 in. (13 – 19 mm) sanitary flange	S <sup>5</sup>	Pre-sterilized using gamma irradiation

<sup>4</sup> 3 filters per box

<sup>5</sup> 'S' option with Code 2 connection is provided with filling bell on outlet. It is removable for in-line use

### Typical Liquid Flow vs. Differential Pressure



For liquids other than water, multiply differential pressure by fluid viscosity (cP).

### Nominal Effective Filter Area (EFA)

200 cm<sup>2</sup> (0.22 ft<sup>2</sup>)

### Removal Rating<sup>3</sup>

0.1 µm sterilizing grade

Sterile effluent when challenged with 10<sup>7</sup>/cm<sup>2</sup> *Brevundimonas diminuta*. Zero recovery for *Acholeplasma laidlawii* when challenged with 2 x 10<sup>9</sup> organisms per capsule (10<sup>7</sup>/cm<sup>2</sup>) consistent with the titer reduction claim for this organism of > 10<sup>10</sup> for the AB style and Kleenpak Nova configurations. Please contact Pall for integrity test values.



Life Sciences

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