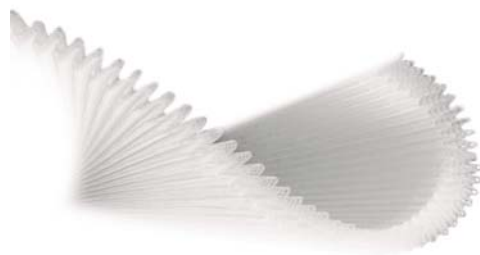


ZANDER high-capacity ZP,XP,XP4 filters are designed as coalescing depth filters and therefore reliably separate liquid and solid particles up to a size of 0.01µm with a filtration efficiency of greater than 99.99999% from compressed air and gas streams.

The core of the filters is the pleated and up to 4-layer filter fabric consisting of a coated borosilicate microfibre-fabric with a void volume of more than 96%, surrounded by another filter and support fabric made from polypropylene. The drainage layer, comprising an innovative, ageing-resistant filter material with an improved performance, is already incorporated in the pleated filter fabric. As a result, any external foam sock is superfluous. The filter fabric is machine-produced and therefore of a consistently high quality. The machine pleating ensures that up to four times the filter surface is available compared to a wrapped element of the same size. The enlargement of the filter surface achieved by pleating results in a reduction of velocity through the filter fabric, and therefore in a reduction of differential pressure with simultaneous improvement of dirt holding capacity and separation behaviour.



The filter element cylinders consists of high-quality stainless-steel mesh with large perforations as well as plastic or optional aluminium or stainless-steel endcaps.

#### Basic technical data:

	ZP	XP	XP4
<b>Filtration efficiency</b>	99.9999% <sup>*1</sup>	99.99999% <sup>*2</sup>	≥ 99.99999% <sup>*2</sup>
<b>MPPS filtration level</b>	99.99% <sup>*3</sup>	99.9999% <sup>*3</sup>	≥ 99.9999% <sup>*3</sup>
<b>Residual oil content</b> <sup>*4</sup>	≤ 0.5 mg/m <sup>3</sup>	≤ 0.01 mg/m <sup>3</sup>	≤ 0.001 mg/m <sup>3</sup>
<b>Differential pressure</b> <sup>*5</sup>	30 mbar	60 mbar	120 mbar

\*1: in relation to particle size 1µ

\*2: in relation to particle size 0.01µ

\*3: in relation to MPPS particle size 0.1-0.5 µm (most penetrating particle size)

\*4: in relation to 1 bar absolute, 20°C with an inlet concentration of 20 mg/m<sup>3</sup>

\*5: differential pressure in new state, dry, at nominal capacity.

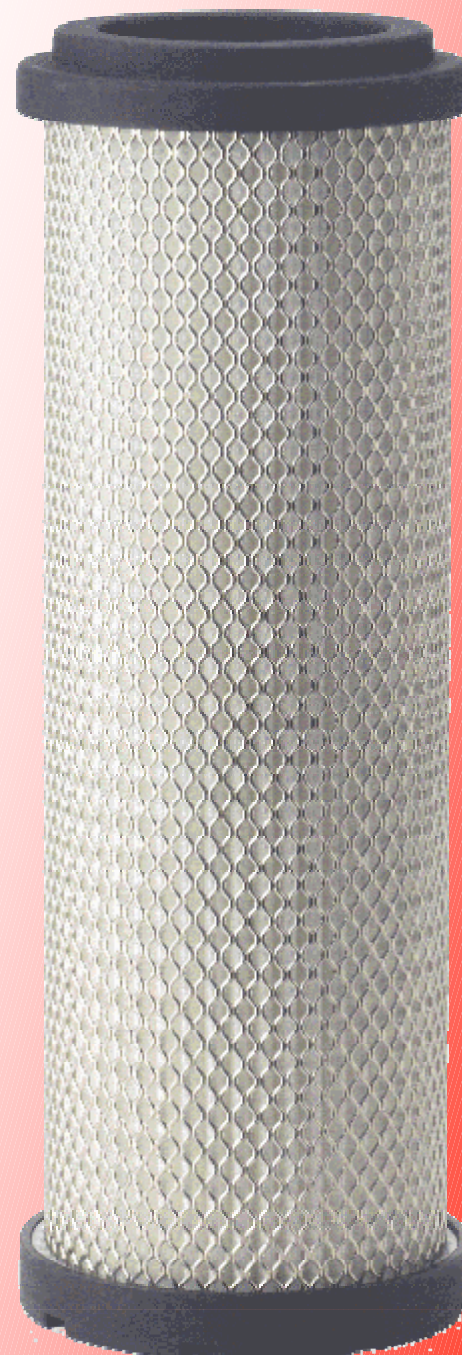
#### Capacity<sup>\*6</sup>:

Model	Nominal
<b>1030</b>	30 m <sup>3</sup> /h
<b>1050</b>	50 m <sup>3</sup> /h
<b>1070</b>	70 m <sup>3</sup> /h
<b>1140</b>	100 m <sup>3</sup> /h
<b>2010</b>	180 m <sup>3</sup> /h
<b>2020</b>	300 m <sup>3</sup> /h
<b>2030</b>	470 m <sup>3</sup> /h
<b>2050</b>	700 m <sup>3</sup> /h
<b>3050</b>	940 m <sup>3</sup> /h
<b>3075</b>	1450 m <sup>3</sup> /h
<b>5060</b>	1940 m <sup>3</sup> /h
<b>5075</b>	2400 m <sup>3</sup> /h

\*6: capacity calculated at 1 bar absolute and 20°C at 7 bar working pressure



## Filter elements ZP,XP,XP4-series



#### Materials used

Filter fabric	Borosilicate microfibre fabric coated with polypropylene homopolymer support-fabric
Drainage layer	Parafil-fibre fabric incorporated in the filter fabric
Rib mesh	Stainless steel VA 1.4306
Endcaps	Plastic endcaps polyamide modified, glass-fibre-reinforced (up to size 3075), optional aluminium (size 5060, 5075 standard) or stainless steel VA 1.4305
Sealing materials	NBR (Perbunan), optional FPM (Viton)
Bonding materials	Polyurethane adhesive, solvent-free

#### Temperature range

Nominal	+1°C to +80°C
Maximum (short-term)	+1°C to +100°C

Differential pressures at nominal capacity	ZP	XP	XP4
Differential pressure in new state dry <sup>1</sup>	0.03 bar	0.06 bar	0.12 bar
Differential pressure saturated <sup>2</sup>	0.10 bar	0.15 bar	0.28 bar
Bursting pressure filter element	approx. 5 bar	approx. 5 bar	approx. 5 bar

\*1: measured at 7 bar working pressure with model 1050 as example

\*2: impact of test aerosols after 60 minutes with an inlet concentration of >20 mg/m<sup>3</sup>, measured at 7 bar working pressure, model 1050

Filtration efficiency	ZP	XP	XP4
Filtration efficiency at nominal capacity	99.9999% (1µm)	99.99999% (0.01µm)	≥ 99.99999% (0.01µ)
MPPS <sup>3</sup> filtration efficiency at nominal capacity	99.99% (0.1-0.5µm)	99.9999% (0.1-0.5µm)	≥ 99.9999% (0.1-0.5µm)
Residual oil content at nominal capacity at an inlet concentration of 20 mg/m <sup>3</sup>	≤ 0.5 mg/m <sup>3</sup> (1 bar a, 20°C)	≤ 0.01 mg/m <sup>3</sup> (1 bar a, 20°C)	≤ 0.001 mg/m <sup>3</sup> (1 bar a, 20°C)
Actually achieved average residual oil content during validation at nominal capacity and an inlet concentra- tion of 20 mg/m <sup>3</sup>	-----	0.0021 mg/m <sup>3</sup> (1 bar a, 20°C)	0.0006 mg/m <sup>3</sup> (1 bar a, 20°C)

\*3: most penetrating particle size –the particle size that is most difficult to separate

#### Direction of flow

Filtration of solid particles/liquid particles	From inside to outside
Filtration of pure solid particles	From inside to outside (standard) or from outside to inside

#### Capacity calculated at 1 bar absolute and 20°C at 7 bar working pressure

Model	Nominal
1030	30 m <sup>3</sup> /h
1050	50 m <sup>3</sup> /h
1070	70 m <sup>3</sup> /h
1140	100 m <sup>3</sup> /h
2010	180 m <sup>3</sup> /h
2020	300 m <sup>3</sup> /h
2030	470 m <sup>3</sup> /h
2050	700 m <sup>3</sup> /h
3050	940 m <sup>3</sup> /h
3075	1450 m <sup>3</sup> /h
5060	1940 m <sup>3</sup> /h
5075	2400 m <sup>3</sup> /h

#### Production / quality assurance

Development, manufacture and quality assurance in accordance with DIN EN ISO9001, supplemented by ZANDER's own TQM (Total Quality Management)

#### Validation

performed by BIM – Biotechnologie-Gesellschaft Mittelhessen mbH