Microfilter
Compressed air, gas and vacuum filters
Validated performance that exceeds the standards
Compressed air filters are now recognized as being an integral part of any system. Few, if any, compressed air systems can operate successfully without high efficiency filters. Production and process standards demand the finest quality air and components are now manufactured to such tight tolerances that no contamination is permitted.

ZANDER is one of the leaders in the purification of compressed air, gas and vacuum flows. Their product development is lead by strong partnerships with compressed air and gas users to ensure the best available product for increasingly demanding applications.

Dust, dirt and oil mist filtration is common enough today. ZANDER emphasizes not only the filtration efficiency but links this to energy costs in terms of pressure differential, product consistency and reliability.

ZANDER Filter Housings

ZANDER supplies Microfilters in three housing formats:

G-Housings with threaded connection from 1/4” to 3” NPT
- High grade aluminum casting
- Alochromed in and outside to prevent corrosion
- Powder coated to ensure top quality finish

TF In-line Flanged & ZF Floor-mounted Flanged housings 2” to 12” ANSI Flange
- Welded mild steel vessels
- Sand blasted, cleaned and degreased
- Polyester primed in and outside
- Acrylic paint outside

All three types of housings are built to the highest quality standards and have a double surface protection. The aluminum housings with alochrom and epoxy powder coating and the steel housings with intensive cleaning, priming and acrylic paint. Thanks to the attention to quality surface treatment, ZANDER offers a 10 year guarantee on the filter housings. This gives confidence to the user!
Dimensions

Pre-filter, General purpose filter and Superfine filter
V, ZP, XP, XP4
Standard format with automatic condensate drain

Grades VD(E), ZPD(E), XPD(E) and XP4(E)
Complete with automatic drain and differential pressure gauge
(E with volt-free contact)

Activated carbon filter A & KTA
Standard format with manual drain

Activated carbon filter AOP & KTAOP
Complete with manual drain and oil indicator

Dimensions with electronic condensate drains

LS range

LC range
### Filter Element Performance Tables

<table>
<thead>
<tr>
<th>Filter Type</th>
<th>V</th>
<th>ZP</th>
<th>XP</th>
<th>XP4</th>
<th>A, KT A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-filter element V</td>
<td>0.29 psi (dry)</td>
<td>1.02 psi (saturated)</td>
<td>99.99% (3 μ)</td>
<td>General Purpose Filter ZP</td>
<td>0.44 psi (dry)</td>
</tr>
<tr>
<td>Activated Carbon Filter A</td>
<td>≤ 0.44 psi (dry)</td>
<td>1.02 psi (saturated)</td>
<td>99.99% (3 μ)</td>
<td>≤ 0.003 ppm (14.5 psi and 68°F)</td>
<td></td>
</tr>
<tr>
<td>Activated Carbon Cartridge KTA</td>
<td>Depending on size 2.18 - 5.8 psi - ppm (Oil Removal as A grade)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Conversion factor f for other operating pressures

<table>
<thead>
<tr>
<th>Operating pressure psi</th>
<th>14.5</th>
<th>29.0</th>
<th>45.5</th>
<th>58.0</th>
<th>72.5</th>
<th>87.0</th>
<th>101.5</th>
<th>116.0</th>
<th>130.5</th>
<th>145.0</th>
<th>159.5</th>
<th>174.0</th>
<th>188.5</th>
<th>203.0</th>
<th>217.6</th>
<th>232.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>f=</td>
<td>0.25</td>
<td>0.38</td>
<td>0.50</td>
<td>0.63</td>
<td>0.75</td>
<td>0.88</td>
<td>1.00</td>
<td>1.13</td>
<td>1.25</td>
<td>1.38</td>
<td>1.50</td>
<td>1.63</td>
<td>1.75</td>
<td>1.88</td>
<td>2.00</td>
<td>2.13</td>
</tr>
</tbody>
</table>

*2 calculated for constant velocity and 68°F

Example 1: If you have a flow of 765 scfm (14.5 psi and 68°F), what is the minimum working pressure of 145 psi, what size filter do you require? Answer: Flow ÷ f = 765 scfm ÷ 1.38 = 553 scfm → G14 size

Example 2: What is the nominal flow through a G14 filter with a minimum working pressure of 145 psi? Answer: Flow: · f = 553 scfm · 1.38 = 765 scfm (14.5 psi and 68°F)
Microfilter Housing Construction

All ZANDER Microfilter housings are two piece. This means that, no matter what the size is, one person can change the filter elements. The TF flanged filter housings, which can weigh up to a ton, have a hinged lower cover, which one person can open and close, when it is time to change the elements.

Microfilter Tie Rod

The tie rod support of the element to the housing ensures that the element sits in the housing without any possibility of movement and therefore leakage between the dirty and clean side. The lower end cap of the element is firmly secured to the tie rod. This eliminates any possibility of the end cap separating under severe shock conditions.

Equally, the tie rod makes the element easier to change. There is no risk of the element end cap corroding. This does occur in competitive filters with aluminum threads on the element corroding into the housing. This means an expensive new replacement housing instead of a simple element replacement. A small difference with large cost savings!

Microfilter Modular Concept

The user can install simply and economically ZANDER Microfilters in modular units up to the G13 size. Using a filter combination kit, the installer can link together up to three filters in a set. This lowers the consequential pressure drop. These filter combinations can be easily wall mounted with brackets.
Microfilter Construction and user selection chart

1 Connections
- G: 1/4" - 3" NPT
- TF: 2" - 12" Flg

2 Filter element
- Pre-filter 99.99% (3 μm)
- General purpose filter 99.9999% (1 μm) ≤ 0.5 ppm
- Activated carbon ≤ 0.003 ppm
- Activated carbon cartridge (For G3-G13 housings only) ≤ 0.003 ppm

3 Filter head accessories
(Available from G3 size)
- Standard
- Screwed plug's
- Pressure differential gauge

4 Condensate drains
- Automatic condensate drain
  Standard on V-XP4
  No need to specify!
- Manual drain
  Standard on A & KTA
  No need to specify!

5 Combination kits
- Standard combination kits (up to G13 size only)
- Combination kits and wall brackets G2 - G13

**Examples**

<table>
<thead>
<tr>
<th>Connection</th>
<th>Filter size</th>
<th>Element</th>
<th>Head accessory</th>
<th>Drain</th>
<th>Comb. Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>7</td>
<td>ZP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>11</td>
<td>XP</td>
<td>D</td>
<td>LS</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>14</td>
<td>A</td>
<td>W</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Filter with 1/2" NPT thread connection, plug in head and automatic condensate drain (Standard on V-XP4)
Filter with 1" NPT thread connection, oil removal element, differential pressure gauge and electronic "zero air loss" condensate drain LS range.
2" NPT connection with activated carbon filter, plug in head, manual drain (Standard for A & KTA filter). Wall brackets
ZANDER pleated filter elements

ZANDER filters use machine pleated elements, which form the heart of the filter. These pictures well illustrate the benefits of a pleated filter. They have 3 to 4.5 times the filter surface area of a wrapped filter and have a consistent and reproducible quality.

Pleating means the following benefits:
- lower velocity
- lower differential pressure
- better separation
- higher dirt holding capacity
- longer service life
- lower operating costs

The advantages quickly pay for themselves. No matter what the installed capacity of the system, the pleated filter elements save considerable electrical costs. The graph gives an example of 200 Hp compressor. ZANDER pleated filters can save $1200 per year compared to a conventional wrapped element!

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### Examples

<table>
<thead>
<tr>
<th>Connection</th>
<th>Filter size</th>
<th>Head accessory</th>
<th>Drain</th>
<th>Comb. Vol.</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>9</td>
<td>KTA</td>
<td>OP</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>5</td>
<td>XP4KTA</td>
<td>DOP LS</td>
<td></td>
</tr>
<tr>
<td>TF</td>
<td>200</td>
<td>XP</td>
<td>DE</td>
<td>LC</td>
</tr>
</tbody>
</table>

- Filter with 3/4” NPT connection, activated carbon cartridge, oil indicator and manual drain (standard).
- Filter with 3/8” NPT connection,
- with super fine filter element XP4, differential pressure gauge and LS drain
- combined with KTA cartridge filter with oil indicator and manual drain (standard)
- Flanged filter with 12” Flg connection, oil removal filter XP, electronic differential pressure gauge and ecodrain ED condensate drain.
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