



*inspired by
technology*

Microfilter Compressed air, gas and vacuum filters

Validated performance that exceeds the standards



Microfilter – Compressed air, gas and vacuum filters

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

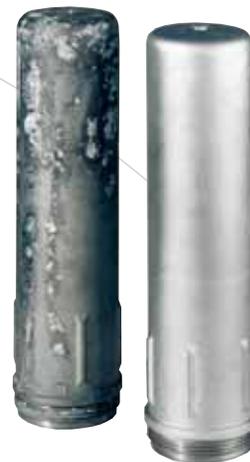
- High grade aluminum casting
- Achromed in and outside to prevent corrosion
- Powder coated to ensure top quality finish

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 a chrom 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



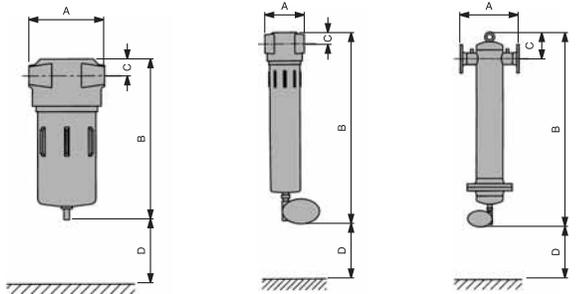
Untreated and Achromed filter bowls after a salt spray test to DIN 50021 SS > 250 hours



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

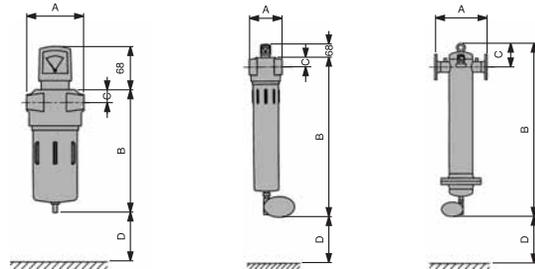


G2_ - G13_

G14_ - G19_

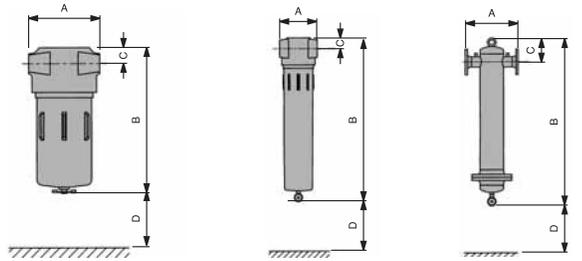
TF17_ - TF200_

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



G3_D(E) - G13_D(E) G14_D(E) - G19_D(E) TF17_D(E) - TF200_D(E)

Activated carbon filter A & KTA
Standard format with manual drain

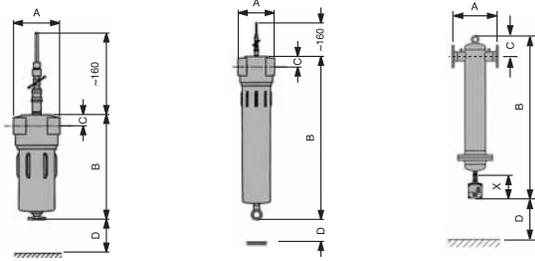


G2A, G3_ - G13_

G14A - G19A

TF17A - TF200A

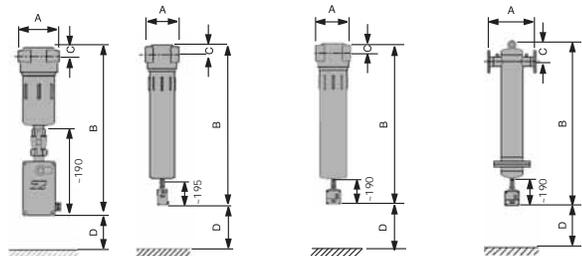
Activated carbon filter AOP & KTAOP
Complete with manual drain and oil indicator



G3_OP - G13_OP G14AOP - G19AOP TF17AOP - TF200AOP

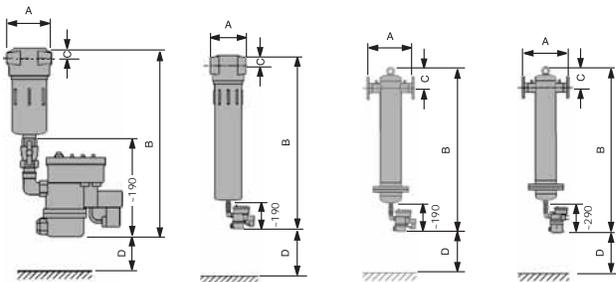
Dimensions with electronic condensate drains

LS range



G2 - G13 LS5 BFLS03
G14 - G17/TF17 LS5 BFLS02
G18 - G19/TF19 LS11 BFLS02
TF20 LS11 BFLS04

LC range



G2 - G13 ED2010 BFED01
G14 - G19/TF19 ED2010 BFED02
TF20 - TF40 ED2010 BFED08
TF60 - TF200 ED2020 BFED03

Technical Data

ZANDER Type	Capacity*1	Connection	Max. pressure	Dimensions				Weight	Filter element
	nominal			(inches)	(inches)	(inches)	(inches)		
	scfm	NPT/Flg	psi	A	B	C	D	lbs	Qty/Type
G 2	18	1/4" NPT	232	2.36	6.57	0.06	2.36	1.76	1/1030
G 3	29	1/4" NPT	232	3.43	8.23	0.83	2.95	3.30	1/1050
G 5	41	3/8" NPT	232	3.43	8.23	0.83	3.54	3.30	1/1070
G 6	50	1/2" NPT	232	3.43	8.23	0.83	3.54	3.30	1/1070
G 7	59	1/2" NPT	232	3.43	10.98	0.83	6.30	3.74	1/1140
G 9	106	3/4" NPT	232	5.12	12.40	1.69	5.31	9.46	1/2010
G 10	135	1" NPT	232	5.12	12.40	1.69	5.31	9.46	1/2010
G 11	177	1" NPT	232	5.12	16.34	1.69	9.25	11.00	1/2020
G 12	277	1 1/2" NPT	232	5.12	20.28	1.69	13.19	12.10	1/2030
G 13	412	1 1/2" NPT	232	5.12	28.15	1.69	20.67	15.18	1/2050
G 14	553	2" NPT	232	6.46	32.40	1.89	20.47	21.12	1/3050
G 17	853	2" NPT	232	6.46	42.24	1.89	30.31	39.38	1/3075
G 18	1142	2 1/2" NPT	232	9.84	41.42	2.91	24.02	44.00	1/5060
G 183	1325	3" NPT	232	9.84	41.42	2.91	24.02	44.00	1/5060
G 19	1412	3" NPT	232	9.84	47.32	2.91	29.92	60.50	1/5075
TF 17	853	2" Flg	260	16.0	48.0	8.0	30.0	115.0	1/3075
TF 19	1410	3" Flg	260	17.9	54.0	12.0	30.0	140.0	1/5075
TF 20	1700	4" Flg	260	21.1	55.9	13.0	30.0	330.0	2/3075
TF 30	2560	4" Flg	260	21.1	55.9	13.0	30.0	330.0	3/3075
TF 40	3413	6" Flg	260	23.8	56.6	14.4	30.0	360.0	4/3075
TF 50	4265	6" Flg	260	27.5	59.9	18.0	30.0	400.0	5/3075
TF 60	5120	6" Flg	260	27.5	59.9	18.0	30.0	450.0	6/3075
TF 80	6827	8" Flg	260	28.8	66.0	19.0	30.0	600.0	8/3075
TF 100	8533	8" Flg	260	33.0	65.0	15.0	30.0	500.0	10/3075
TF 120	10240	10" Flg	260	37.0	72.0	18.0	30.0	625.0	12/3075
TF 160	13650	10" Flg	260	37.0	72.0	18.0	30.0	640.0	16/3075
TF 200	17065	12" Flg	260	37.0	72.0	18.0	30.0	875.0	20/3075

*1 Calculated at 14.5 psi and 68°F at 100 psig working pressure

Filter Element Performance Tables

Pre-filter element V – 0.29 psi (dry) – 1.02 psi (saturated) – 99.99% (3μ)
 General Purpose Filter ZP – 0.44 psi (dry) – 1.45 psi (saturated) – 99.9999% (1μ) – ≤ 0.5 ppm (14.5 psi and 68°F)
 Oil Removal Filter XP – 0.87 psi (dry) – 2.18 psi (saturated) – 99.99999% (0.01μ) – ≤ 0.01 ppm (14.5 psi and 68°F)
 Super Fine Filter XP4 – 1.74 psi (dry) – 4.06 psi (saturated) – ≥ 99.99999% (0.01μ) – ≤ 0.001 ppm (14.5 psi and 68°F)

Activated Carbon Filter A – 0.44 psi - ≤ 0.003 ppm (14.5 psi and 68°F) with an inlet concentration of ≤ 0.01 ppm
 Activated Carbon Cartridge KTA – Depending on size 2.18 - 5.8 psi – psi (Oil Removal as A grade)

Conversion factor f for other operating pressures*2

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

*2 calculated for constant velocity and 68°F

Example 1: If you have a flow of 765 scfm (14.5 psi and 68°F) –) at a 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)

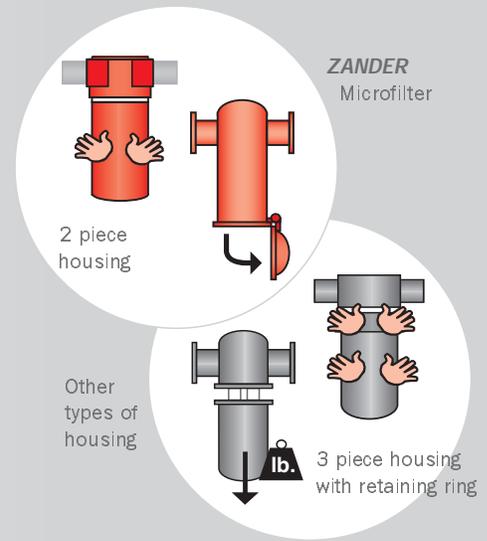
Microfilter Housing Construction

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



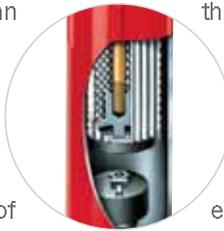
housings, which can weigh up to a ton, have a hinged lower cover, which one person can open and close, when it is time to change the elements.



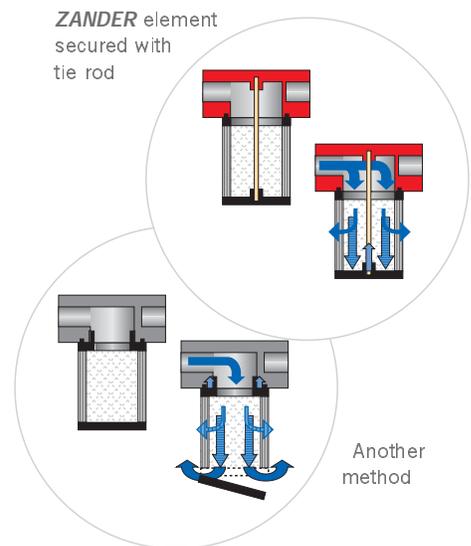
Microfilter Tie Rod

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!

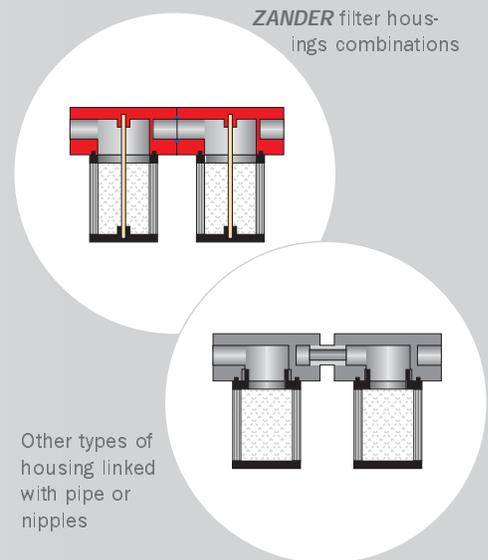


Microfilter Modular Concept

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

5 Combination kits



Standard combination kits

(up to G13 size only)



W

Combination kits and wall brackets G2 - G13

3 Filter head accessories

(Available from G3 size)



Standard

Screwed plugs



D

Pressure differential gauge

2 Filter element



Pre-filter
99.99%
(3 µm)

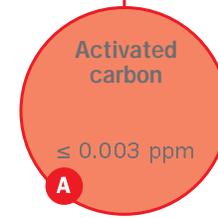
V



General purpose filter
99.9999%
(1 µm)
≤ 0.5 ppm

ZP

Advanced TECHNOLOGY



Activated carbon

≤ 0.003 ppm

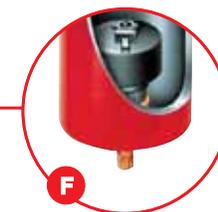
A



Activated carbon cartridge
(For G3-G13 housings only)
≤ 0.003 ppm

KTA

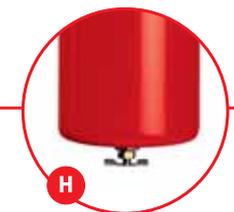
4 Condensate drains



F

Automatic condensate drain

Standard on V-XP4
No need to specify!



H

Manual drain

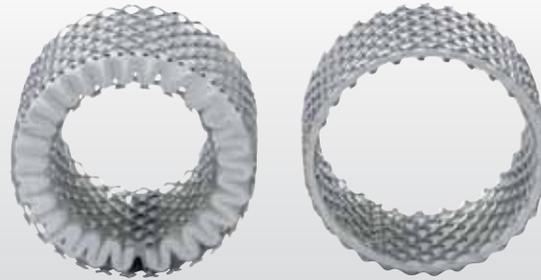
Standard on A-KTA
No need to specify!



Connection
Filter size
Element
Head accessory
Drain
Comb. Kit

1	2	3	4	5	Examples
G	7	ZP			Filter with 1/2" NPT thread connection, plug in head and automatic condensate drain (Standard on V-XP4)
G	11	XP	D	LS	Filter with 1" NPT thread connection, oil removal element, differential pressure gauge and electronic "zero air loss" condensate drain LS range.
G	14	A		W	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.

- higher dirt holding capacity
- longer service life
- lower operating costs

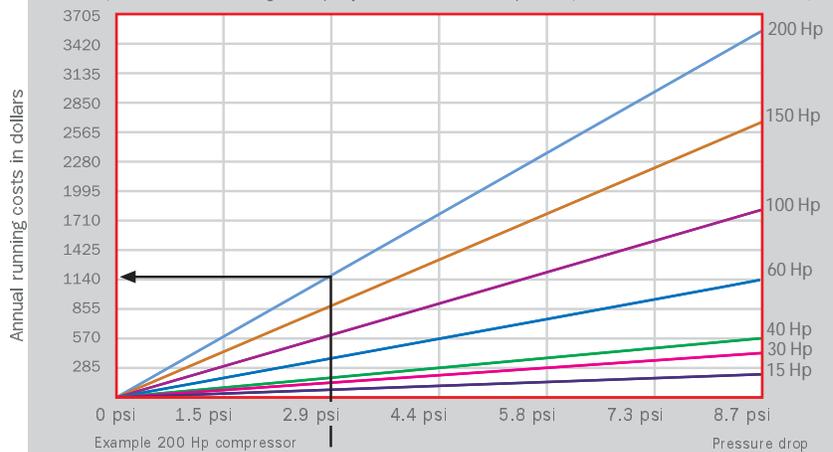
The advantages quickly pay for themselves. No matter what the installed capacity of the system, the pleated filter elements save considerable electrical costs. The graph gives an example of 200 Hp compressor. ZANDER pleated filters can save \$1200 per year compared to a conventional wrapped element!

Pleating means the following benefits:

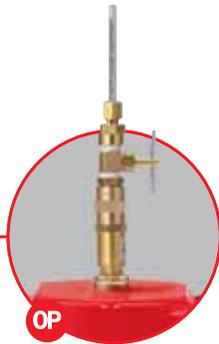
- lower velocity
- lower differential pressure
- better separation

Annual Differential Pressure Energy Costs

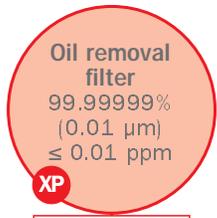
(based on 8000 running hours per year and 0.075 dollars per kWh) Installed compressor capacity



DE
Pressure differential gauge
with potentialfree contact

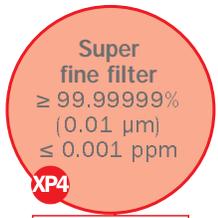


OP
Oil indicator



XP
Oil removal filter
99.99999%
(0.01 µm)
≤ 0.01 ppm

Advanced TECHNOLOGY



XP4
Super fine filter
≥ 99.99999%
(0.01 µm)
≤ 0.001 ppm

HIGH Advanced TECHNOLOGY



LS
Electronic level sensing capacitance drain
(LS range) up to TF20



LC
Electronic level sensing drain ED range

- Connection
- Filter size
- Element
- Head accessory
- Drain
- Comb. Kit

	1	2	3	4	5	Examples
Connection	G					Filter with 3/4" NPT connection, activated carbon cartridge, oil indicator and manual drain (standard).
Filter size	9					Filter with 3/8" NPT connection,
Element	KTA					- with super fine filter element XP 4, differential pressure gauge and LS drain
Head accessory	OP					- combined with KTA cartridge filter with oil indicator and manual drain (standard)
Drain				LS		
Comb. Kit						
Connection	TF					Flanged filter with 12" Flg connection, oil removal filter XP, electronic differential pressure gauge and ecodrain ED condensate drain.
Filter size	200					
Element	XP					
Head accessory	DE					
Drain				LC		
Comb. Kit						

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