aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

Micro-filters

Compressed air, gas and vacuum filters

Parker Zander

ENGINEERING YOUR SUCCESS.

Micro-filter - compressed air, gas and vacuum filters

Compressed air filters are now recognised 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.

We are one of the leaders in the purification of compressed air, gas and vacuum filters. 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. Parker Zander emphasises, not only the filtration efficiency but, importantly, links this to energy costs in terms of pressure differential, product consistency and reliability.

Filter Housings

Micro-filters in two housing formats:

G-Housings with threaded connection from G 1/4 to G3

- High grade aluminium casting
- Alu-chromed in and outside to prevent corrosion
- Powder coated to ensure top quality finish

F-Flanged housings DN 80 to DN 300

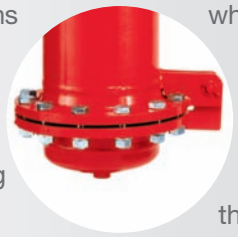
- Welded mild steel vessels
- Sand blasted, cleaned and degreased
- Polyester primed in and outside
- Acrylic paint outside

Untreated and Alu-chromed filter bowls after a salt spray test acc. to DIN 50021 SS > 250 hours

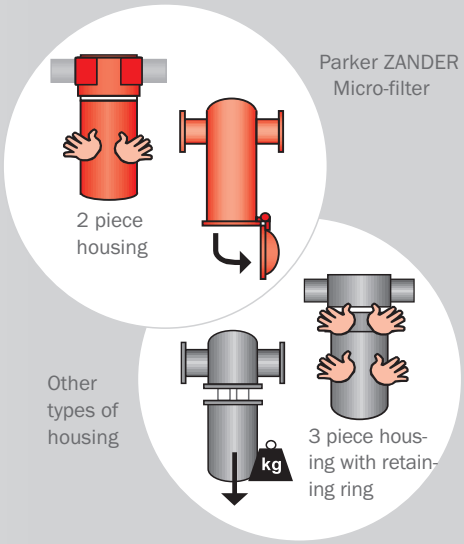
Both types of housings are built to the highest quality standards and have a double surface protection. The aluminium housings are alu-chromed and epoxy powder coated, the steel housings are intensivly cleaned, polyester primed and acrylic painted.
Thanks to the attention of quality surface treatment, Parker Zander offers a **10 year** guarantee on the filter housings. This gives confidence to the user!

Micro-filter Housing Construction

All Micro-filter housings are two piece. This means that, no matter what the size is, one person can change the filter elements. This saves having to employ a helper!

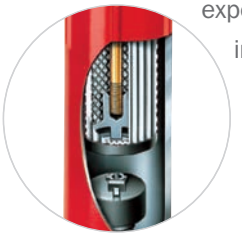


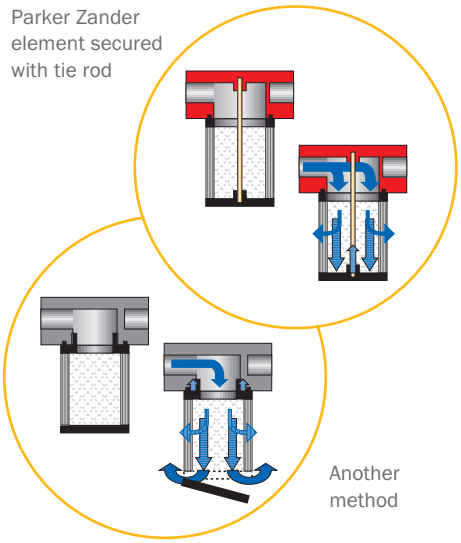
The F flanged filter housings, which can weigh up to a ton, have a hinged lower cover, which one person can open and close, when it is time to change the elements.



Micro-filter Tie Rod

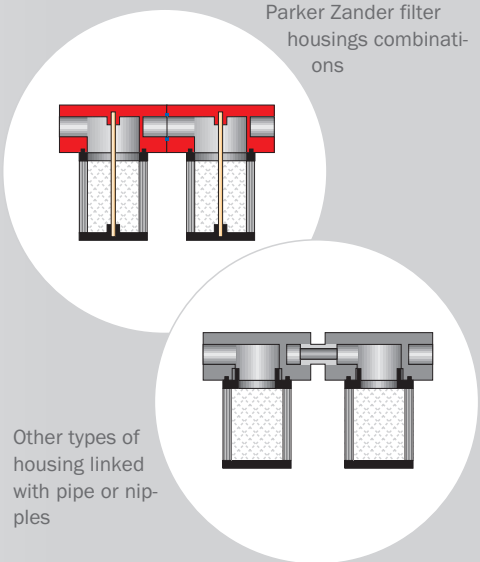
The tie rod fixing of the element to the housing ensures that the element sits in the housing without any possibility of movement and therefore leakage between the dirty and clean side.
The lower end cap of the element is firmly secured to the tie rod. This eliminates any possibility of the end cap flying off 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 when aluminium threads on the element corrode into the housing. This means an expensive new housing instead of a simple element replacement.
A small difference with large cost savings!





Micro-filter Modular Concept

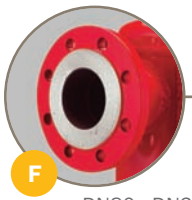
The user can install simply and economically Micro-filters in modular units up to the G13 size. Using a filter combination kit, the installer can link together up to three filters in a set. This lowers the consequential pressure drop. These filter combinations can be easily wall mounted with brackets.



Micro-filter construction and user choice chart

1 Connections

G 1/4 - G3



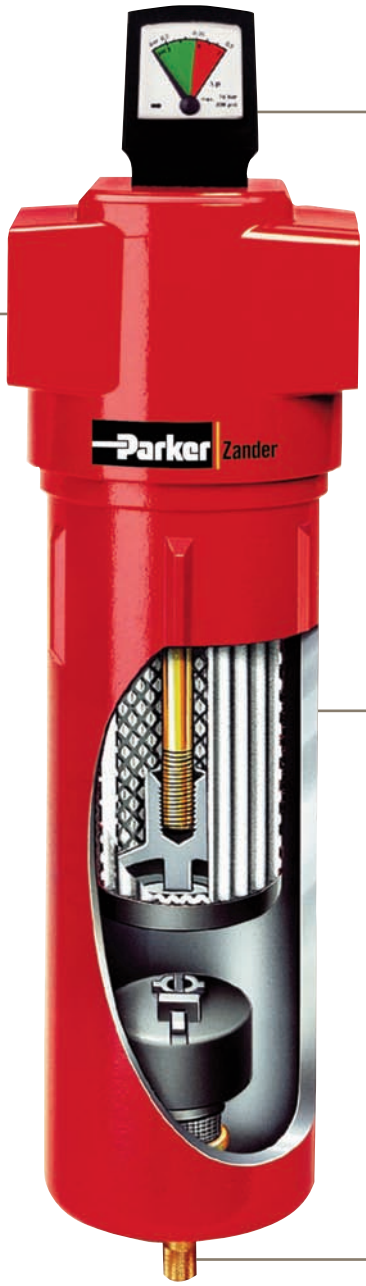
DN80 - DN300

5 Combination kits

Standard combination kits

(up to G13 size only)

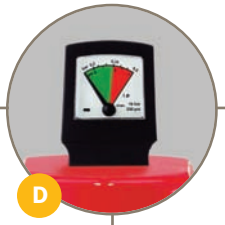
Combination kits and wall brackets G2 - G13



Filter head accessories

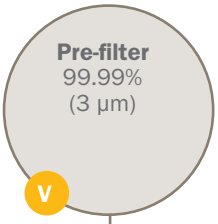
(Available from G3 size)

Screwed plugs

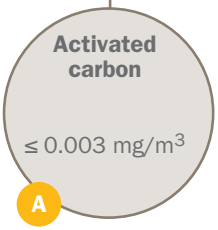


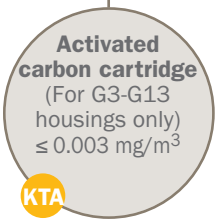
Pressure differential gauge

2 Filter element

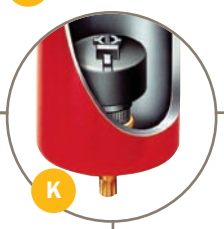


Advanced TECHNOLOGY



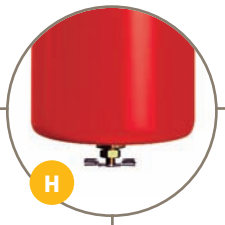


4 Condensate drains



Automatic condensate drain

Standard on V-XP4
No need to specify!

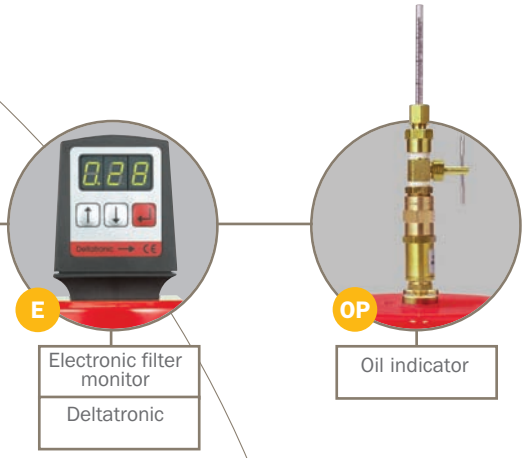


manual drain

Standard on A-KTA
No need to specify!

Connection	Filter size	Element	Head accessory	Drain	Comb. Kit	Examples
1		2	3	4	5	**Examples**
G	7	ZP				Filter with G1/2 thread connection, plug in head and automatic condensate drain (Standard on V–XP4)
G	11	XP	D	K3		Filter with G1 thread connection, oil removal element, differential pressure gauge and electronic "no-loss" condensate drain ED3000 range.
G	14	A			W	G2 connection with activated carbon filter, plug in head, manual drain (Standard for A & KTA filter). Wall brackets

Pleated filter elements



Electronic filter monitor
Deltatronic

Oil indicator

Oil removal filter
99.99999%
(0.01 µm)
≤ 0.01 mg/m³
XP

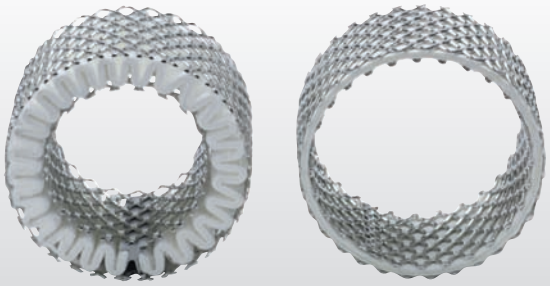
Advanced TECHNOLOGY

Super fine filter
≥ 99.99999%
(0.01 µm)
≤ 0.001 mg/m³
XP4

HIGH Advanced TECHNOLOGY

Electronic level sensing drain Series ED 3000
up to F 200

Electronic level sensing drain ED 2000 range

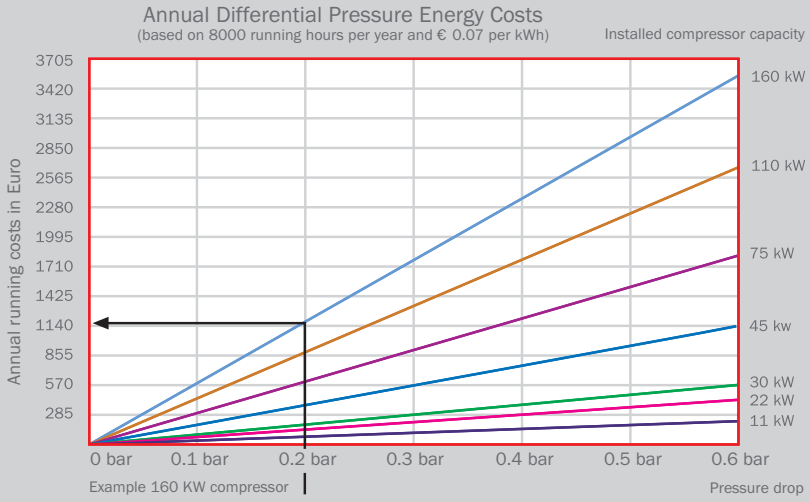


Parker Zander filters use machine pleated elements, which form the heart of the filter. These pictures well illustrate the benefits of a pleated filter. They have 3 to 4.5 times the filter surface area of a wrapped filter and have a consistent and reproducible quality.

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 160 KW compressor. Parker Zander pleated filters can save Euro 1140 per annum compared to a conventional wrapped element!



1 Connection	2 Filter size	3 Element	4 Head accessory	5 Drain	6 Comb. Kit	Examples
G	9	KTA	OP			Filter with G 3/4 connection, activated carbon cartridge, oil indicator and manual drain (standard).
G	5	XP4KTA	DOP	K3		Filter with G 3/8 connection, - with super fine filter element XP 4, differential pressure gauge and ED3000 drain - combined with KTA cartridge filter with oil indicator and manual drain (standard)
F	200	XP	E	K2		Flanged filter with 300 mm connection, oil removal filter XP, electronic differential pressure gauge and ecodrain ED2000 condensate drain.

Micro-filter

Technical Data

Parker Zander Type	Capacity*1 nominal m³/h	Connection G/DN	Max. pressure bar	Dimensions mm A	mm B	mm C	mm D	Weight kg	Filter element Anzahl/ Type
G 2	30	G 1/4	16	60	165	14	60	0,6	**1/1030**
G 3	50	G 1/4	16	87	215	21	75	1,0	**1/1050**
G 5	70	G 3/8	16	87	215	21	90	1,0	**1/1070**
G 7	100	G 1/2	16	87	285	21	160	1,2	**1/1140**
G 9	180	G 3/4	16	130	325	43	135	3,8	**1/2010**
G 11	300	G 1	16	130	425	43	235	4,5	**1/2020**
G 12	470	G 1 1/2	16	130	525	43	335	5,0	**1/2030**
G 13	700	G 1 1/2	16	130	725	43	525	6,4	**1/2050**
G 14	940	G 2	16	164	825	48	520	9,6	**1/3050**
G 17	1450	G 2	16	164	1075	48	770	12,3	**1/3075**
G 18	1940	G 2 1/2	16	250	1050	74	600	24,6	**1/5060**
G 19	2400	G 3	16	250	1200	74	750	27,0	**1/5075**
F 17	1850	DN 80	16	380	1280	175	530	52,0	**1/3075**
F 19	2920	DN 80	16	440	1320	205	530	79,0	**1/5075**
F 20	3700	DN 100	16	500	1440	230	550	106,0	**2/3075**
F 30	5550	DN 100	16	500	1440	230	550	106,5	**3/3075**
F 40	7400	DN 150	16	640	1590	280	550	148,0	**4/3075**
F 60	11100	DN 150	16	790	1650	300	550	208,0	**6/3075**
F 80	14800	DN 200	16	790	1730	340	550	230,0	**8/3075**
F 100	18500	DN 200	16	840	1780	360	550	368,0	**10/3075**
F 120	22200	DN 250	16	940	1940	420	600	450,0	**12/3075**
F 160	29600	DN 250	16	940	1940	420	600	460,0	**16/3075**
F 200	37000	DN 300	16	940	1970	450	600	520,0	**20/3075**

*1 Calculated at 1 bar a and 20˚C at 7 barg working pressure

Filter Element Performance Tables

Pre-filter element V	– 0.02 bar (dry) – 0.07 bar (saturated) –	99.99% (3µ)	
General Purpose Filter ZP	– 0.03 bar (dry) – 0.10 bar (saturated) –	99.9999% (1µ)	– ≤ 0.5 mg/m³ (1 bar a and 20˚C)
Oil Removal Filter XP	– 0.06 bar (dry) – 0.15 bar (saturated) –	99.99999% (0.01µ)	– ≤ 0.01 mg/m³ (1 bar a and 20˚C)
Super Fine Filter XP4	– 0.12 bar (dry) – 0.28 bar (saturated) –	≥ 99.99999% (0.01µ)	– ≤ 0.001 mg/m³ (1 bar a and 20˚C)

Activated Carbon Filter A – 0.03 bar - ≤ 0.003 mg/m³ (1 bar a and 20˚C) with an inlet concentration of ≤ 0.01 mg/m³
Activated Carbon Cartridge KTA – Depending on size 0.15-0.4 bar – bar (Oil Removal as A grade)

Conversion factor f for other operating pressures*2

Operating pressure bar e	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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

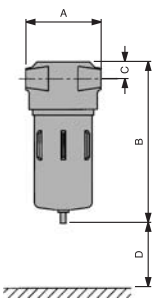
*2 calculated for constant velocity and 20°C

Example 1: If you have a flow of 1300 m³/h (1 bar a and 20˚C) –) at a minimum working pressure of 10 bar e, what size filter do you require? Answer: Flow ÷ f = 1300 m³/h ÷ 1.38 = 940 m³/h => **G14 size**

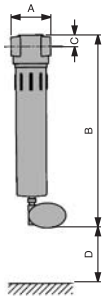
Example 2: What is the nominal flow through a G14 filter with a minimum working pressure of 10 bar e? Answer: Flow: · f = 940 m³/h · 1.38 = 1300 m³/h (1 bar a and 20˚C)

Dimensions

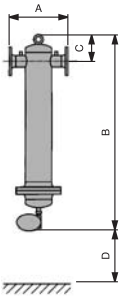
Pre-filter, General purpose filter and Superfine filter
V, ZP, ZX, XP4
Standard format with automatic condensate drain



G2_ - G13_

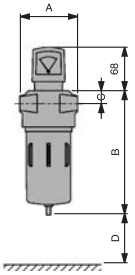


G14_ - G19_

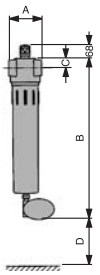


F17_ - F200_

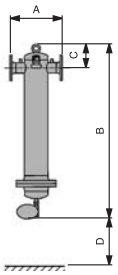
Grades VD (E), ZPD(E), XPD(E) and XP4(E)
Complete with automatic drain and differential pressure gauge (E with volt-free contact)



G3_D(E) - G13_D(E)

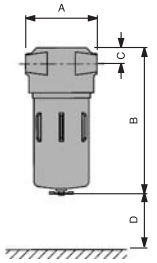


G14_D(E) - G19_D(E)

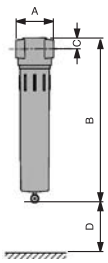


F17_D(E) - F200_D(E)

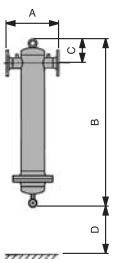
Activated carbon filter A & KTA
Standard format with manual drain



G2A, G3_ - G13_

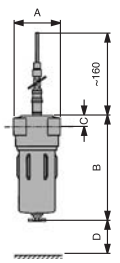


G14A - G19A

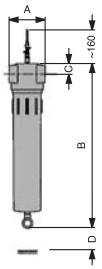


F17A - F200A

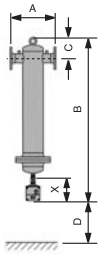
Activated carbon filter AOP & KTAOP
Complete with manual drain and oil indicator



G3_OP - G13_OP



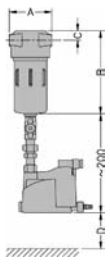
G14AOP - G19AOP



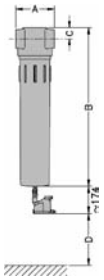
F17AOP - F200AOP

Dimensions with electronic condensate drains

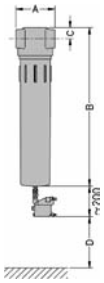
LS range



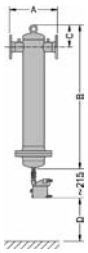
G2 - G13
ED 3002
MK
M14 - G38



G14 - G17/F17
ED 3004
MK
G12 - G12



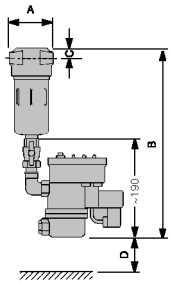
G18 - F20
ED 3007
MK
G12 - G12
G10 - G12



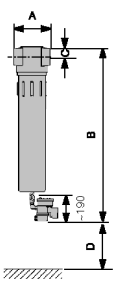
F40 - F120
ED 3030
MK
G10 - G12

F160 - F200
ED 3100
MK
G10 - G12

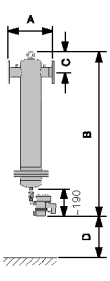
LC range



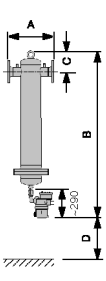
G2 - G13
ED2010
MK
M14 - G12



G14 - G19/F19
ED2010
MK
G12 - G12



F20 - F40
ED2010
MK
G10 - G12



F60 - F200
ED2020
MK
G10 - G34

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