Filter GH3-GH13 PN350

High-pressure filter for compressed air up to 350 bar

Short description

GH series Parker Zander high-pressure filters are designed to be ideal for high-pressure areas of up to 350 bar. Innovative construction features of the filter housing provide a reliable assemblence, as well as simple and safe handling for replacing the filter element. One essential construction feature is the double o-ring sealing which protects the housing thread against pollution and humidity and therefore prevents the thread from corrosion. Additionally the second o-ring prevents the filter housing parts from overwinding.

By fasten the filter element via it´s base thread screwed on the tie-rod, which provides the greatest operating safety, even under the pressure pulsations in intermittent operation that are common for high-pressure applications.

Highly-effective pleated media in four different grades provide an element surface that is four times the size, compared to the conventional wrapped design. The result is a reduced flow speed and efficient separation simultaneously with low pressure drop, thus providing cost reduction during operation with reliable separation performance.

Performance overview:

Order No.*	Nominal width[1]	Nominal[2]	Element*
GH3/350_	1/2	365	1050_
GH5/350_	1/2	501	1070_
GH7/350_	1/2	776	1140_
GH9/350_	3/4	1035	2010_
GH11/350_	1	1852	2020_
GH12/350_	1 1/2	2816	2030_
GH13/350_	1 1/2	4261	2050_

** Replace underscore with the element grade V, ZP, XP, or A.*

1: Port Sizes per DIN ISO 228 (BSP-P)

2: Flow rates in m^3/h based on 1 bar_a and 20 °C, subsequently compressed to 350 bar_e.

With deviant minimum operating pressures, the actual flow rate must be multiplied by the relevant correction factor CFP (see relevant table on page 3) to determine the necessary nominal flow rate and thus the filter size required.

Scope of supply:

Ready-to-install filter, including filter element and manual drain.
Optionally avilable without a manual drain (in this case, not ready-to-install).

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Product specifications

High-pressure filter series GH up to 350 bar

Applications Filter

Flow medium	Compressed air and gaseous nitrogen	
Operating pressure, maximum	350 bar_e	
Operating Temperature	1.5 to 80 °C	using element type V, ZP, XP
	1.5 to 40 °C	using element type A

Performance data Element types

	V	ZP	XP	A
Removal	Solid particles	Solid/liquid particles	Solid/liquid particles	Oil vapor
Flow	from outside to inside	inside-to-outside	inside-to-outside	inside-to-outside
Pre-filter required	Leave blank	Separator (for wall flow)	ZP	XP
Particle grain size	3 µm	1 micron	0.01 µm	Not applicable
Residual oil content at 20 °C	Not applicable	0.5 mg/m^3	0.01 mg/m^3	0.003 mg/m^3
Differential pressure,dry	< 300 $mbar_e$	< 300 $mbar_e$	< 300 $mbar_e$	< 300 $mbar_e$
Differential pressure, wet	< 350 $mbar_e$	< 370 $mbar_e$	< 400 $mbar_e$	Not applicable
Change of element recommended	600 to 700 $mbar_e$	600 to 700 $mbar_e$	600 to 700 $mbar_e$	Quarterly, 1500 h max.

Licenses for pressure equipment

EU	Pressure-equipment directive 97/23/EC for fluid group 2
GUS	TR (formerly GOST-R)

Materials

Housing size	GH3 to GH7		GH9 to GH13	
Upper-lower section	Aluminum, anodized		Steel	
Surface treatment	Powder-coated exterior		Powder-coated exterior, interior undercoated	
Sealing materials	NBR			
Gland mountings	Galvanized steel			
Threaded rod	Stainless steel			
Needle valve	Stainless steel			
Element types	**V**	**ZP**	**XP**	**A**
Filter fleece	Microfiber, waterproofed	Borosilicate nanofibers, surface coated		Microfibers with activated carbon
Woven drainage fabric, incorporated	None	Parafil woven fabric		None
Backing fabric	None	Polypropylene		Polypropylene, Parafil
Support screens	Stainless steel			
End caps	Polyamide, glass-fiber reinforced			
Adhesive	Polyurethane adhesive, solvent-free			
Sealing materials	NBR			

Quality assurance and guarantee

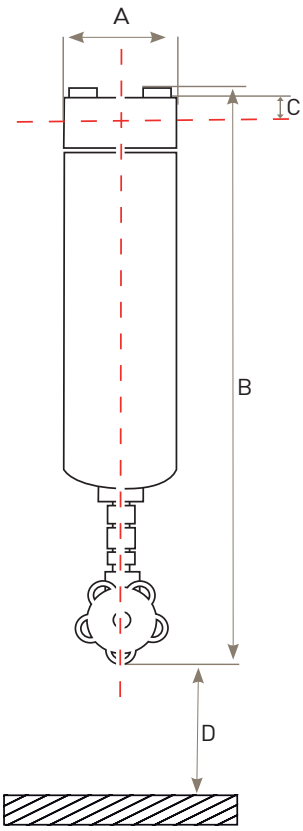
Development / manufacture	DIN EN ISO 9001, DIN EN ISO 14001
Housings	Guarantee against corrosion over the 10-year life of the housing.

Technical features

High-pressure filter series GH up to 350 bar

Dimensions (mm) and weight (kg)

Filter size	A	B	C	D	Weight
GH3	80	355	25	100	2.8
GH5	80	355	25	115	2.8
GH7	80	420	25	185	3.4
GH9	116	455	25	170	18.2
GH11	116	540	25	270	21.9
GH12	125	655	33	365	28.3
GH13	125	910	33	560	39.2



Dimensioning

Filter size	Nominal connection width[1]	max. Pressure[2]	Volume flow rate[3]
GH3	1/2	350	365
GH5	1/2	350	501
GH7	1/2	350	776
GH9	3/4	350	1035
GH11	1	350	1852
GH12	1 1/2	350	2816
GH13	1 1/2	350	4261

[1] in accordance with DIN ISO 228 (BSP-P); [2] in bar(e); [3] in m³/h based on 1 bar(a) and 20 °C, subsequently compressed to 350 bar(e).

Correction factor CFP in accordance with actual minimum operating pressure in bar_e

Minimum operating pressure in bar_e	125	150	175	200	225	250	275	300	325	350
Correction factor CFP	1,5	1,48	1,45	1,43	1,37	1,3	1,24	1,15	1,07	1

Example of a maximum flow rate of 580 m³/h at a minimum working pressure of 250 bar_e:
580 m³/h x 1.3 = 754 m³/h – select the size GH7/350 for this (see Dimensioning table).

Product codes

Product series	Size	/pressure stage	Element type	Options	
GH	3 to 13	/350	V, ZP, XP, A	OA	
Examples					
GH	7	/350	XP		Standard design with manual drain
GH	11	/350	ZP	OA	Design without diverter (drain open)

Product specifications

High-pressure filter series GH up to 350 bar

Wearing parts

Order No.*	Scope of supply
1050_	Filter element for filter size GH3
1070_	Filter element for filter size GH5
1140_	Filter element for filter size GH7
2010_	Filter element for filter size GH9
2020_	Filter element for filter size GH11
2030_	Filter element for filter size GH12
2050_	Filter element for filter size GH13
RKGH3-GH7	8 x O-rings for filter housing GH3-GH7 (2 items required per housing)
RKGH9-GH13	8 x O-rings for filter housing GH9-GH3 (2 items required per housing)

* Replace underscore with the type of element V, ZP, XP, or A.

Accessories

Loose differential pressure gauge, with extension set

Order No.	Function	Suitable for filter
HZD80/420RG	Calibrated analog differential pressure gauge PN420, medium: 1-100 °C	GH3 to GH13
HZD80/420RG	Calibrated analog differential pressure gauge PN420, medium: 1-100 °C, with Reed contact 250 VAC/DC, IP54	GH3 to GH13

Assembly kit for diverter

Function	Function	Suitable for filter
Assembly kit G1/4a, PN630, for G1/4i diverter	GH3 to GH13	GH3 to GH13

Fitted diverter

Function	Function	Suitable for filter
EV05/640	Manual drain (needle valve) G 1/4i	GH3 to GH13

Loose diverter

Function	Function	Suitable for filter
TRAP2/350-G230/J	Time-controlled solenoid valve G1/4i, PN,350, 2-55 °C, 230 VAC, IP65	GH3 to GH13
TRAP2/350-G115/J	Time-controlled solenoid valve G1/4i, PN350, 2-55 °C, 115 VAC, IP65	GH3 to GH13
TRAP2/350-G24D/J	Time-controlled solenoid valve G1/4i, PN350, 2-55 °C, 24 VDC, IP65	GH3 to GH13

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Parker Zander

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