

Filter GH3-GH13 PN100

High-pressure filter for compressed air up to 100 bar



Short description

GH series Parker domnick hunter high-pressure filters are designed to be ideal for high-pressure areas of up to 100 bar. Innovative construction features of the filter housing provide a reliable assemblance, 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.*	Port Size ¹	Nominal ²	Element*
GH3/100_	1/2	188	1050_
GH5/100_	1/2	268	1070_
GH7/100_	1/2	469	1140_
GH9/100_	3/4	681	2010_
GH11/100_	1	1203	2020_
GH12/100_	1 1/2	1857	2030_
GH13/100_	1 1/2	2787	2050_

1: Port Sizes per DIN ISO 228 (BSP-P)
2: Flow rates in m³/h based on 1 bar_a and 20 °C, subsequently compressed to 100 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.

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

Scope of supply:

Ready-to-install filter, including filter element and manual drain.

Optionally available without a manual drain (in this case, not ready to install).

Product specifications

High-pressure filter series GH up to 100 bar

Applications Filter

Flow medium	Compressed air and gaseous nitrogen	
Operating pressure, maximum	100 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		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, FPM			

Quality assurance and guarantee

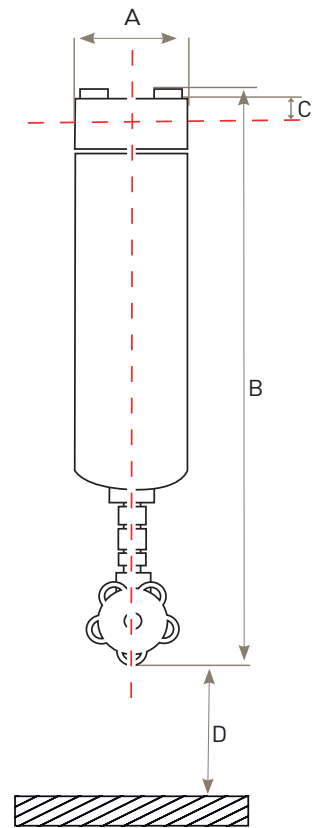
Development & Manufacture	DIN EN ISO 9001, DIN EN ISO 14001
Housings	Guarantee against corrosion over the 10-year life of the housing.

Product specifications

High-pressure filter series GH up to 100 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	100	188
GH5	1/2	100	268
GH7	1/2	100	469
GH9	3/4	100	681
GH11	1	100	1203
GH12	1 1/2	100	1857
GH13	1 1/2	100	2787

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 100 bar(e).

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

Minimum operating pressure in bar _e	50	60	70	80	90	100
Correction factor CFP	1.5	1.4	1.33	1.24	1.14	1

Example of a maximum flow rate of 350 m³/h at a minimum working pressure of 70 bar_e:
350 m³/h x 1.33 = 465.5 m³/h – select the size GH7/100 for this (see Dimensioning table).

Product codes

Product series	Size	/pressure stage	Element type	Options	
GH	3 to 13	/100	V, ZP, XP, A	OA	
Examples					
GH	7	/100	XP		Standard design with manual drain
GH	11	/100	ZP	OA	Design without diverter (drain open)

Product specifications

High-pressure filter series GH up to 100 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-GH13 (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
HZDE80/420RG	Calibrated analog differential pressure gauge PN420, medium: 1-100 °C, with Reed contact 250 VAC/DC, IP54	GH3 to GH13

Assembly kit for drain

Order No.*	Function	Suitable for filter
MK/630-G08-G08	Assembly kit G1/4a, PN630, for G1/4i diverter	GH3 to GH13

Mounted drain

Order No.	Function	Suitable for filter
EV05/640	Manual drain (needle valve) G 1/4i	GH3 to GH13

Loose drain

Order No.*	Function	Suitable for filter
TRAP2/100-G230/P	Time-controlled solenoid valve G1/4i, PN100, 2-55 °C, 230 VAC, IP65	GH3 to GH13
TRAP2/100-G115/P	Time-controlled solenoid valve G1/4i, PN100, 2-55 °C, 115 VAC, IP65	GH3 to GH13
TRAP2/100-G24D/P	Time-controlled solenoid valve G1/4i, PN100, 2-55 °C, 24 VDC, IP65	GH3 to GH13

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BULGH100-02-EN



EMEA Product Information Centre

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