Product Specification

GL Filter Series

Element Type VL

Date: November 12th, 2010 – Author: Marion Peters

Brief Description

Parker Zander, High-performance GL-series filters, containing VL grade filter elements are designed as depth-filters for the reliable remove of 3 µm solid particulate and exhibit a filtration performance of 99,95% in compressed air or compressed nitrogen gas.

Innovative filter housing and filter element design leads to optimum flow characteristics at minimum pressure drops: This results in cost savings throughout the operating lifetime of the filter element at reliable levels of filtration performance.

Highly-efficient, borosilicate nano-fibre media with a voids volume of 96% ensures high dirt-holding capacity at constantly low differential pressure. This efficiency is additionally supported by deep-pleating technology enabling 4.5 times more effective filtration surface area when compared with conventional filter elements.

The light-weight, compact construction, ensures a requirement for minimum clearance below the filter bowl for element removal. The simple method of installing the filter element into the filter bowl, in conjunction with a secure, air-tight housing closure avoids installation errors and prevents by-pass between the contaminated and clean enclosures. The inlet-port is clearly marked by an aluminium feature above and below the opening signifying the correct direction of flow through the filter element.

Performance overview:

Model	Port Size[1]	Nominal[2]	Element
GL2VL	1/4	36	CP1008VL
GL3VL	3/8	55	CP2010VL
GL5VL	1/2	72	CP2010VL
GL7VL	3/4	108	CP2020VL
GL9VL	1	216	CP3025VL
GL11VL	1 1/2	396	CP3040VL
GL12VL	1 1/2	576	CP4040VL
GL13VL	2	792	CP4050VL
GL14VL	2 1/2	1188	CP4065VL
GL17VL	2 1/2	1548	CP5065VL
GL19VL	3	2232	CP5080VL

1: Port size as per DIN ISO 228 (BSP-P) or ANSI B 1.20.1 (NPT-F)

2: Flow rates in m^3/h related to 1 bara and 20 °C, compressed to 7 bar_e.

Where the minimum operating pressure deviates, the actual flow rate must be multiplied with the respective correction factor f (see the respective table) to determine the required nominal flow rate and the appropriately required filter model.

Scope of supply:

Ready-to-install filter, complete with filter element and float drain ZK15NO/KN; with optional differential pressure gauge ZD90GL and/or manual drain HV15.Optionally available without a drain (in this case, not ready-to-install).

Contact:

Parker Hannifin Corporation
ZANDER Aufbereitungstechnik GmbH
Im Teelbruch 118
45219 Essen

Phone +49 (0) 20 54 – 934 0
Fax +49 (0) 20 54 – 934 164
info@zander.de
www.parker.com

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Materials	**Housing**	
Upper/lower housing	Aluminium alloy with alochrome coating, outside powder coating	
Sealing materials	NBR	
Materials	**Element**	
Filter fleece	Borosilicate nanofibre, surface coated	
Supporting net	Polypropylene	
Outer sleeve	Polyester fibre, surface coated	
Support screens	Stainless steel	
End caps	Glass fibre reinforced polyamide	
Adhesive	Epoxy resin	
Sealing materials	NBR	
Area of application	**Filter**	
Max. operat. pressure	16 bar_e	with float drain, with or without differential pressure gauge
	20 bar_e	with manual drain or without drain
Operating temperature	1.5 to 80 °C	with float drain, with or without differential pressure gauge
	1.5 to 100 °C	with manual drain or without drain
Performance data	**Element**	
Flow medium	Compressed air and gaseous nitrogen	
Filtration	Solid particulate	
Flow direction	from inside to outside	
Upstream filter required	no data	
Particle size	3 µm	
Filtration performance	99.95 %	
Differential press., dry	< 70 $mbar_e$	
Differential press., saturated	no data	
Quality assurance and warranty		
R&D, Manufacturing	DIN EN ISO 9001, DIN EN ISO 14001	
Validation	ISO 8573-1:2010 [3:–: –]	
Element	12 months guaranteed filtration performance in line with filter element service-life	
Housing	Corrosion warranty limited to the maximum housing lifetime of 10 years	

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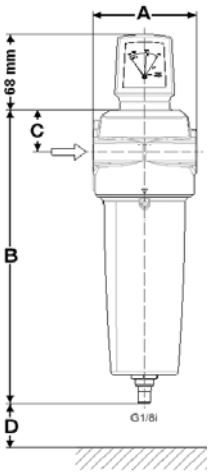
Dimensions [mm] and weights [kg]

Size	A	B	C	D	Weight
GL2VL	67	208	23	40	0.55
GL3VL	89	270	38	50	1.3
GL5VL	89	270	38	50	1.3
GL7VL	89	270	38	50	1.3
GL9VL	130	309	46	70	3.0
GL11VL	130	399	46	70	3.2
GL12VL	164	471	57	100	6.9
GL13VL	164	563	57	100	7.3
GL14VL	164	563	57	100	7.1
GL17VL	192	685	72	120	10.3
GL19VL	192	875	72	120	15.3



Product key

Series	Size	Element type	Options[1]	Port[2]	[1] deviating from the standard only [2] for NPT-F only
GL	**2 up to 19**	**VL**	**D H OA**	**–N**	
Examples					
GL	7	VL			Standard design G3/4i (BSP-P) port with float drain
GL	3	VL	DH		G3/8i (BSP-P) port with differential pressure gauge and manual drain fitted
GL	17	VL	OA	–N	2 1/2“ NPT-F port, no drain (open port)

Replacement filter element

Type	Scope of delivery
CP1008VL up to CP5080VL	**Contains respective spare element and suitable O-ring of the housing.**

Correction factors f according to actual minimum operating pressure in bar_e

Minimum operating pressure in bar_e	**1**	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**	**6**	**6.5**	**7**	**7.5**	**8**	**8.5**	**9**
Correction factor f	2.65	2.16	1.87	1.67	1.53	1.41	1.32	1.25	1.18	1.13	1.08	1.04	1.00	0.97	0.94	0.91	0.88
Minimum operating pressure in bar_e	**9.5**	**10**	**10.5**	**11**	**11.5**	**12**	**12.5**	**13**	**13.5**	**14**	**14.5**	**15**	**16**	**17**	**18**	**19**	**20**
Correction factor f	0.86	0.84	0.82	0.80	0.78	0.76	0.75	0.73	0.72	0.71	0.69	0.68	0.66	0.64	0.62	0.61	0.59

Example for a maximal flow rate of 285 m^3/h for a minimum operating pressure of 4.3 bar_e:
285 m^3/h x 1.32 = 376.2 m^3/h – select size GL11 (see Table *Performance overview*).

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Accessories

Differential pressure gauge fitted			
Model	**Function**	**suitable for**	**Product key**
ZD90GL	Mechanical differential pressure gauge	GL3 up to GL19	D

Other differential pressure gauges available as loose accessories.

Drain fitted			
Model	**Function**	**suitable for**	**Product key**
ZK15NO/KN	Internal float drain (standard)	GL2 up to GL19	–
HV15	Manual drain	GL2 up to GL19	H
Open	Without drain	GL2 up to GL19	OA

Other drains available as loose accessories.

Mounting kits for drains				
Model	**Filter port**	**Drain port**	**Suitable for filter**	**Suitable for drain**
MK-G15-G10	G1/2a	G3/8a	GL2 up to GL19	Trap22
MK-G15-G10I	G1/2a	G3/8i	GL2 up to GL19	ED3002
MK-G15-G15	G1/2a	G1/2a	GL2 up to GL19	ED2010, ED3004 up to ED3100
MKG15-G20	G1/2a	G3/4a	GL2 up to GL19	ED2020 and ED2060

No mounting kit required for float drain ZB1D since G1/2a fitting is integrated.

Wall mounting (incl. combination accessories where applicable)	
Model	**suitable for**
BF/GL2	GL2, single stage
BF/GL2/2	GL2, two-stage filter combination
BF/GL2/3	GL2, three-stage filter combination
BF/GL3-GL7	GL3 up to GL7, single stage
BF/GL3-GL7/2	GL3 up to GL7, two-stage filter combination
BF/GL3-GL7/3	GL3 up to GL7, three-stage filter combination
BF/GL9-GL11	GL9 up to GL11, single stage
BF/GL9-GL11/2	GL9 up to GL11, two-stage filter combination
BF/GL9-GL11/3	GL9 up to GL11, three-stage filter combination
BF/GL12-GL14	GL12 up to GL14, single stage
BF/GL12-GL14/2	GL12 up to GL14, two-stage filter combination
BF/GL12-GL14/3	GL12 up to GL14, three-stage filter combination
BF/GL17-GL19	GL17 up to GL19, single stage
BF/GL17-GL19/2	GL17 up to GL19, two-stage filter combination
BF/GL17-GL19/3	GL17 up to GL19, three-stage filter combination

Fixing-kits	
Model	**suitable for**
BFS/GL2/2	GL2, two-stage filter combination
BFS/GL2/3	GL2, three-stage filter combination
BFS/GL3-GL7/2	GL3 up to GL7, two-stage filter combination
BFS/GL3-GL7/3	GL3 up to GL7, three-stage filter combination
BFS/GL9-GL11/2	GL9 up to GL11, two-stage filter combination
BFS/GL9-GL11/3	GL9 up to GL11, three-stage filter combination
BFS/GL12-GL14/2	GL12 up to GL14, two-stage filter combination
BFS/GL12-GL14/3	GL12 up to GL14, three-stage filter combination
BFS/GL17-GL19/2	GL17 up to GL19, two-stage filter combination
BFS/GL17-GL19/3	GL17 up to GL19, three-stage filter combination

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