

# purgas TGA

Filter series TGA PN16/PN25/PN50



## Brief description

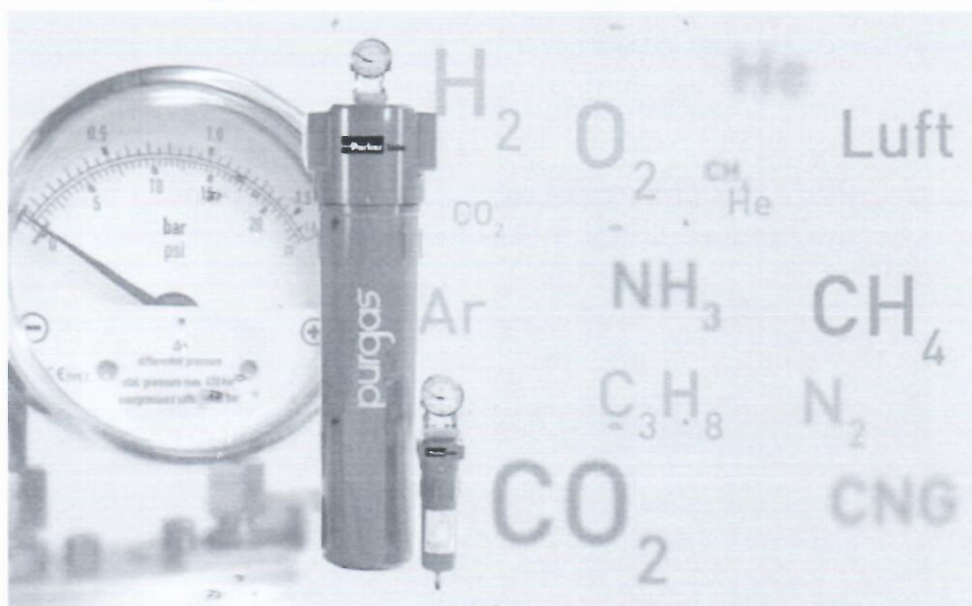
Purgas filters from Parker Zander offer you a wide selection of separation techniques for solid and liquid particles as well as vapours from critical industrial gases and natural gasses, as standard.

The TGA filter series is available for pressure levels PN16, PN25 and PN50. They are characterised by the employment of high-quality materials, thorough cleaning and production methods, as well as the traceability of the products.

The housings consist of aluminium casting, internally and externally chromated, and they also have an additional epoxy coating on their exterior. All TGA filters are equipped with a stainless steel needle valve on the outlet, as standard.

A variety of different elements are available for the separation: separator/demister inserts, surface filter elements for coarse separation, micro filter elements for depth filtration, as well as cartridge inserts for the adsorption of oil vapours and moisture.

Optionally, filters from the TGA series can be supplied in a dissipative design with classification based on Ex II 2G.



### Applications

- Critical industrial gases and natural gases classified in fluid group 1 as per PED (DGRL) 97/23/EC
- Zone 1 and zone 2 as per ATEX 94/9/EC

### Design and purchased parts package

- Ready-for-operation filter with nominal pressure 16 bar (up to 120°C / 248°F), 25 bar (up to 80°C/176°F) or 50 bar (up to 80°C/176°F); maximum operating temp. depends on element/seal selected
- Includes filter element/insert/cartridge
- Includes needle valve as outlet
- Internal thread connection as per DIN ISO 228 (BSP-P) or as per ANSI B 1.20.1 (NPT-F)
- FEPM seal as standard, optional FKM, EPDM, NBR, CR, etc.
- Connection bores prepared for differential pressure gauges (sealed)
- Wetted surfaces, cleaned to be oil and grease-free
- Filter with ATEX option in a dissipative design, individually tested, earthing points prepared

# Product specification

Filter series TGA PN16/PN25/PN50

## Particle filtration

Element	Scope of application	Efficiency grade in % <sup>1)</sup>	Fineness in µm	Operating temp. in °C	Material
<b>S</b>	Separation of fluids (wall flow) over wide pressure/flow areas, wear-free, ideal for employment on intermediate- or aftercoolers of compressors.	98.5	–	1.5 - 120	PPS <sup>2)</sup>
<b>P <sup>3)</sup></b>	Coarse separation of solid particles from dry gas flows.	99.99	3	1.5 - 60	Impregnated cellulose
<b>PL12</b>	Coarse separation of solid particles. Element reusable after ultrasound cleaning.	99.99	12	1.5 - 120	Stainless steel mesh
<b>PL25</b>		99.99	25		
<b>PL12NX</b>	Coarse separation of solid and liquid particles, also for high-temperature usage.	99.99	12	1.5 - 120	Stainless steel mesh, aramid coat
<b>PL25NX</b>		99.99	25		
<b>C <sup>3)</sup></b>	Micro filtration of solid and liquid particles.	99.9999	1	1.5 - 80	Borosilicate microfibre
<b>CF <sup>3)</sup></b>		99.99999	0.01		
<b>CSF <sup>3)</sup></b>		99.99999	0.01		
<b>CHTCR</b>	Micro filtration of liquid particles, with increased loads, also for high-temperature usage.	99.9999	1	1.5 - 120	Borosilicate microfibre, aramid coat
<b>CFHTCR</b>		99.99999	0.01		
<b>CSFHTCR</b>		99.99999	0.01		

<sup>1)</sup> As per nominal capacity. <sup>2)</sup> Polyphenylene sulphide.

<sup>3)</sup> Additional code letter E for an ATEX-suitable element with stainless steel end caps, if deviating from its standard.

## Oil adsorption

Element / cartridge	Area of application	Residual oil content in mg/m <sup>3</sup> <sup>1) 2)</sup>	Operating temp. in °C	Material
<b>A <sup>3)</sup></b>	Adsorption of oil vapour, volatile organic components (VOCs) and odorous matter. With light loads.	0.003	1.5 - 40	Activated carbon mesh
<b>KA</b> (Model <sup>4)</sup> TK_A)	Adsorption of oil vapour, volatile organic components (VOCs) and odorous matter. With increased loads.	0.003	1.5 - 40	Activate carbon granules
<b>KDG</b> (Model <sup>4)</sup> TK_DG)	Adsorption of oil vapour at higher temperatures.	0.003	40 - 80	Silica gel granules

<sup>1)</sup> m<sup>3</sup> referring to 1 bar (a), 20°C. <sup>2)</sup> Predrying required.

<sup>3)</sup> Additional code letter E for an ATEX-suitable element with stainless steel end caps, if deviating from its standard.

<sup>4)</sup> Models for cartridges are required for the ordering of single cartridges as spare parts.

## Water vapour adsorption

Cartridge	Area of application	Residual vapour in mg/m <sup>3</sup> <sup>1) 2)</sup>	Operating temp. in °C	Material
<b>KMD</b> (Model <sup>3)</sup> TK_DG)	Adsorption of water vapour at higher temperatures.	150	1.5 - 55	3Å molecular sieve granule
<b>KMS</b> (Model <sup>3)</sup> TK_DG)		150	1.5 - 55	4Å molecular sieve granule
<b>KMZ</b>		150	1.5 - 55	10Å molecular sieve granule

<sup>1)</sup> m<sup>3</sup> referring to 1 bar (a), 20°C. <sup>2)</sup> Prefiltration required.

<sup>3)</sup> Models for cartridges are required for the ordering of single cartridges as spare parts.

# Product specification

Filter series TGA PN16/PN25/PN50

## Available filter fittings

Housing																																				
Size (TGA)	102			104			106			108			110			112			114			116			118			120			122			124		
Nominal pressure (PS)	16	25	50	16	25	50	16	25	50	16	25	50	16	25	50	16	25	50	16	25	50	16	25	50	16	25	50	16	-	-	9	-	-	8	-	-
Nominal temperature (TS)	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80
Connection sizes (G)	¼			¼			3/8			1/2			3/4			1			1 ½			1 ½			2			2			2 ½			3		
Outlet - needle valve	EV05/64DTG																								EV07/64DTG											
Element series	Without ATEX																																			
S																																				
P/C/CF/CSF/A																																				
CHTCR/CFHTCR/ CSFHTCR																																				
PL12/PL25																																				
PL12NX/PL25NX																																				
KA																																				
KDG																																				
KMD																																				
KMS																																				
KMZ																																				
Element series	With ATEX																																			
PE/CE/CFE/ CSFE/AE																																				
CHTCR/CFHTCR/ CSFHTCR																																				
PL12/PL25																																				
PL12NX/PL25NX																																				
KA																																				
KDG																																				
KMD																																				
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● = Available

## Application: Natural gases

Medium	ATEX	Natural gases											
Products		10	16	25	50	100	250	350	CNG	Propane	Methane	Biomethane	Raw biogas
Composition												Gas distribution system quality	
TGA		●	●	●	●				●	●	●	●	

● = Available

## Application: Industrial gases

Medium	ATEX	Industrial gases													
Products		Pressure levels (bar)							Critical gases				Inert gases		
Relative humidity[%]		10	16	25	50	100	250	350	O <sub>2</sub>	CO <sub>2</sub>	NH <sub>3</sub>	H <sub>2</sub>	N <sub>2</sub>	He	
TGA		●	●	●	●				●	●	○	○	●	●	●

● = Available ○ = Available upon request

## Approval

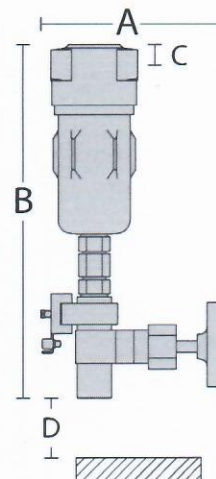
With CE marking as per Directive 97/23/EC (PED) for fluid group 1; where applicable, no marking is permitted as per art. 3, para. 3. Optionally with CE marking as per Directive 94/9/EC (ATEX) in line with Ex II 2G (for zones 1 and 2).

# Product specification

Filter series TGA PN16/PN25/PN50

## Dimensions and weight

Type	Performance (m³/h)	Connection (BSP-P)	Dimensions (mm)				Weight (kg)			Element <sup>1)</sup>	Cartridge <sup>1)</sup>
			A	B	C	D	PN 16	PN 25	PN 50		
TGA 102	Depends on medium, upon request	G ¼	120	249	14	60	0.75	0.75	0.75	TA30_	TKA08_
TGA 104		G ¼	134	309	21	75	1.1	1.1	1.1	TA 50_	TKA12_
TGA 106		G	134	309	21	90	1.1	1.1	1.1	TA 70_	TKA12_
TGA 108		G ½	134	379	21	160	1.4	1.4	1.4	TA 90_	TKA18_
TGA 110		G ¾	155	416	43	135	4.1	4.1	4.1	TB 10_	TKB16_
TGA 112		G 1	155	516	43	235	4.1	4.1	4.1	TB 20_	TKB23_
TGA 114		G 1 ½	155	616	43	335	5.3	5.3	5.3	TB 30_	TKB33_
TGA 116		G 1 ½	155	816	43	525	6.5	6.5	6.5	TB 50_	TKB53_
TGA 118		G 2	172	797	48	520	8.9	8.9	8.9	TC 50_	
TGA 120		G 2	172	1047	48	770	12			TC 75_	
TGA 122		G 2 ½	250	1024	74	600	24.2			TC 60_	
TGA 124		G 3	250	1174	74	750	26.6			TC 75_	



**Product key** Example for a filter with the nominal pressure PN16 (PN9/PN8)

Filter	Size	/	Nominal pressure	Element series	Accessories	-	Connection	/	Options
TGA	102	/	16	S		-	B BSP		
TGA	104	/	16	P		-	N NPT	/	C CR seals
TGA	...	/	16	C		-	B	/	D EPDM seals
TGA	120	/	16	H		-	B	/	O <sub>2</sub> Oxygen design
TGA	122	/	9	...		-	B	/	P NBR seals
TGA	124	/	8	KMS		-	B	/	V FKM seals

## Available accessories ATEX-suitable

Locking screw on the outlet	V	VTG08/100/MV (TGA102-116), VTG/5/356/MV (TGA118-124)
Autodrain	KF	11LD/28TG
Differential pressure gauge	D	HZD80/50RTGG (not for TGA102)
Differential pressure gauge with potential-free contact	DE	HZDE80/50RTGG (not for TGA102)

### Example of an order ...

... for a filter up to 9 bar, 2 1/2" NPT connection, ATEX-suitable to zone 1, housing and element seals in EPDM, including TC60CSFHTCR element, including 11LD/28TG autodrain instead of EV07/640TG mounted on the outlet:

Filter	Size	/	Nominal pressure	Element series	Accessories	-	Connection	/	Options
TGA	122	/	9	CSFHTCR	KF	-	N	/	AD



# Technical information



## Note:


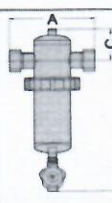
The temperature class as per ATEX depends on the temperature of the infed gas. The TG filters are generally suited for any temperature class because they do not feature a thermal source.

## Filter types

TGA 102–118, 16–50 bar											
Type	Capacity (m³/h)	Connection (G/DN)	Dimensions (mm)				Weight (kg)			Element	
			A	B	C	D	PN 16	PN 25	PN 50		
TGA 104	depending on the medium, upon request	G 1/4	87	201	21	75	1,0	0,8	0,8	TA 50_	
TGA 106		G 3/8	87	201	21	90	1,0	1,2	1,2	TA 70_	
TGA 108		G 1/2	87	271	21	160	1,2	1,2	1,2	TA 90_	
TGA 110		G 3/4	130	306	43	135	3,8	1,4	1,4	TB 10_	
TGA 112		G 1	130	406	43	235	4,5	4,1	4,1	TB 20_	
TGA 114		G 1 1/2	130	506	43	335	5,0	4,9	4,9	TB 30_	
TGA 116		G 1 1/2	130	706	43	525	6,4	5,0	5,0	TB 50_	
TGA 118		G 2	164	751	48	520	9,6	6,6	6,6	TC 50_	
TGH 104–118, 100–350 bar*											
Type	Capacity (m³/h)	Connection (G/DN)	Dimensions (mm)				Weight (kg)			Element	
			A	B	C	D	PN 100	PN 250	PN 350		
TGH 104	depending on the medium, upon request	G 1/4	85	330	25	100	3,3	3,3	3,3	TA 50_	
TGH 106		G 3/8	85	330	25	115	3,4	3,4	3,4	TA 70_	
TGH 108		G 1/2	85	395	25	185	3,9	3,9	3,9	TA 90_	
TGH 110		G 3/4	116	445	25	170	11,0	14,0	19,0	TB 10_	
TGH 112		G 1	116	530	25	270	12,4	17,4	21,6	TB 20_	
TGH 114		G 1 1/2	125	640	33	335	16,5	21,5	28,0	TB 30_	
TGH 116		G 1 1/2	125	900	33	560	21,0	30,0	40,0	TB 50_	
TGH 118		G 2	155	925	45	565	31,0	47,0	62,0	TC 50_	

\* Technical data for filters 450 bar on request



TGS 214–232, 16–100 bar									
Type	Capacity (m <sup>3</sup> /h)	Connection (G/DN)	Dimensions (mm)				Weight** (kg)	Quantity/ element	
			A	B	C	D			
TGS 214	depending on the medium, upon request	DN 50	380	931	167	315	31,0	1/TC 50_	
TGS 216		DN 65	380	1180	175	530	38,0	1/TC 75_	
TGS 218		DN 80	420	1180	175	530	42,0	1/TD 60_	
TGS 220		DN 80	440	1320	205	530	44,0	1/TD 75_	
TGS 222		DN 100	500	1440	230	550	101,0	2/TC 75_	
TGS 224		DN 100	500	1440	230	550	102,0	3/TC 75_	
TGS 226		DN 150	640	1590	280	550	136,0	4/TC 75_	
TGS 228		DN 150	790	1650	300	550	220,0	6/TC 75_	
TGS 230		DN 200	790	1730	340	550	252,0	8/TC 75_	
TGS 232		DN 200	840	1730	360	550	353,0	10/TC 75_	
TGE 308–326, 16–100 bar									
Type	Capacity (m <sup>3</sup> /h)	Connection (G/DN)	Dimensions (mm)				Weight** (kg)	Element	
			A	B	C	D			
TGE 308	depending on the medium, upon request	G 3/4	151	300	55	85	3,0	TE 09_	
TGE 314		G 1 1/2	198	400	75	140	4,2	TE 13_	
TGE 316		G 2	233	570	80	280	7,1	TE 14_	
TGE 320		G 2 1/2	275	875	110	530	12,5	TE 18_	
TGE 322		G3	289	1135	110	790	13,9	TE 19_	
TGE 324		DN 80	350	739	145	410	32,6	TEL 19_	
TGE 326		DN 100	430	742	138	490	45,0	TEL 20_	

## Specification of elements

Degree of filtration	Element type	Filtration efficiency <sup>a)</sup>	Temperature (°C)
Strainer filter	S	95 % (≥1 μm)	1–120
Coarse filter	P	99.99 % (3 μm)	1–60
	PL12	>99 % (12/25 μm)	1–120
	PL25		
	PL12-HTCR	>99 % (12/25 μm)	1–120
	PL25-HTCR		
	EPL01	>99 % (1 μm)	1–120
Fine filter	C	99.9999 % (1 μm) ≤ 0,5 mg/m <sup>3</sup>	1–80
Ultra-fine filter	CF	99.99999 % (0,01 μm) ≤ 0,01 mg/m <sup>3</sup>	1–80
Super-ultra-fine filter	CSF	≥ 99.99999 % (0,01 μm) ≤ 0,001 mg/m <sup>3</sup>	1–80
High temperature range HTNX <sup>b)</sup>	C/CF/CSF		1–120
High temperature range HTCR <sup>b)</sup>	C/CF/CSF		1–120

\*\* for 16 bar. Weights for other pressures on request.



# Certificate of Approval

This is to certify that the Management System of:

## Atlas Copco Airpower NV Business Area Compressor Technique

Boomsesteenweg 957, 2610 Wilrijk, Belgium

has been approved by LRQA to the following standards:

ISO 14001:2015 | ISO 9001:2015 | OHSAS 18001:2007



P.G. Cornelissen - Area Manager North Europe

Issued by: Lloyd's Register EMEA

for and on behalf of: Lloyd's Register Quality Assurance Limited

This certificate is valid only in association with the certificate schedule bearing the same number on which the locations applicable to this approval are listed.

Current issue date: 31 December 2019  
Expiry date: 11 March 2021  
Certificate identity number: 10168932

Original approval(s):  
ISO 14001 – 1 January 2005  
ISO 9001 – 9 December 2002  
OHSAS 18001 – 11 September 2007

Approval number(s): ISO 14001 – 0019527 / ISO 9001 – 0019526 / OHSAS 18001 – 0019525

The scope of this approval is applicable to:

Marketing, sales, design, manufacturing, distribution, assembling, installation and service of air/gas compressors, blowers, expanders, turbo machinery, vacuum pumps, air/gas treatment equipment, generator sets, assemblies and related products and services, under Atlas Copco brand as well as other Brands from the Brand portfolio.



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# Certificate Schedule

Certificate identity number: 10168932

Location	Activities
<p>PRA - CC - Sociedade Atlas Copco de Portugal Unipessoal Lda</p> <p>CT Division</p> <p>Lagoas Parque Edifício 15 piso 0, 2740-265 Porto Salvo, Portugal</p>	<p>ISO 14001:2015   ISO 9001:2015   OHSAS 18001:2007</p> <p>Import, trade, rent, installation and servicing of compressed air equipment, generators and accessories and compressed air assemblies.</p>
<p>ROF - CC - Atlas Copco Romania Srl</p> <p>Sos,Bucuresti-Ploiesti Km 13,2, 075100 Bucharest (Otopeni Ilofov), Romania</p>	<p>ISO 14001:2015   ISO 9001:2015   OHSAS 18001:2007</p> <p>Marketing, sales, design and service of air/gas compressors, generator sets and related products and services.</p>
<p>RSB - CC - Atlas Copco AD</p> <p>Milutina Milankovica 24, 11070 Novi Beograd, Serbia</p>	<p>ISO 14001:2015   ISO 9001:2015   OHSAS 18001:2007</p> <p>Marketing, sales, distribution, installation and service of air/gas compressors, blowers, expanders, turbo machinery, vacuum pumps and air/gas treatment equipment.</p>
<p>RUA - CC - JSC Atlas Copco</p> <p>St. Petersburg Regional Office</p> <p>bldg. 3 lit. A, 70, Prospekt Obuhovskoy oboroni, St. Petersburg, 192029, Russian Federation</p>	<p>ISO 14001:2015   ISO 9001:2015   OHSAS 18001:2007</p> <p>Sales and service of Atlas Copco compressors and related equipment in the Russian Federation.</p>
<p>RUA - CC - JSC Atlas Copco</p> <p>CT Division</p> <p>Head Office</p> <p>15 Vashutinskoe Road, Khimki, Moscow, 141402, Russian Federation</p>	<p>ISO 14001:2015   ISO 9001:2015   OHSAS 18001:2007</p> <p>Sales and service of Atlas Copco compressors and related equipment in the Russian Federation.</p>



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