

TGE ATEX Approved Stainless Steel Filters for Technical and Industrial Gases Clamp Connection



Biomethane is biogas which has been 'upgraded' to Natural Gas quality for injection into a gas-grid or for use as a vehicle fuel. There are several biogas upgrading technologies on the market such as Water Scrubbers, Chemical Scrubbers, PSAs and Membranes which essentially remove CO₂ from the raw biogas to achieve the highest possible methane content.

Depending on the upgrade process, varying degrees of filtration are necessary. Membranes and PSAs for example, often use oil-lubricated compressors to increase the gas pressure and thus need coalescing filters to protect the upgrading media from oil carryover. There can also be residues in the gas after the upgrade process which can be removed with particulate filters.

Parker can offer a range of high performance coalescing and particulate filters specifically designed for operation with both raw biogas and biomethane with full compliance to ATEX and PED regulations.



Applications

Biogas and biomethane classified in fluid group 1 as per PED 2014/68/EU Zone 1 and Zone 2 as per 2014/34/EU

Specification

Ready-for-operation filter with nominal pressure 16/20 bar**

TGE-Series – Biomethane/ Biogas Filtration

- *Housing:* High-grade stainless steel 1.4404 AISI316L
- *Connection Types:* T.Clamp Asme Bpe



ENGINEERING YOUR SUCCESS.

Biomethane/ Biogas Filters

TGE

Threaded or flanged filters stainless steel PN16/PN20**

Model	Flow* (m ³ /h)	Element	Number	Connection T. Clamp Asme Bpe	PN
TGE308/16_-C/A	220	TE09_	1	Clamp Asme BPE 1"	16/20*
TGE314/16_-C/A	500	TE13_	1	Clamp Asme BPE 1-1/2"	16/20*
TGE316/16_-C/A	780	TE14_	1	Clamp Asme BPE 2"	16/20*
TGE318/16_-C/A	1150	TE18_	1	Clamp Asme BPE 2"	16/20*

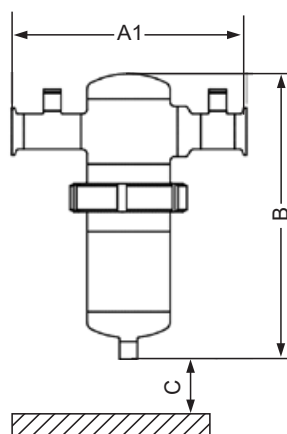
* calculated at 1 bar (abs.) and 20 °C at 7 bar_g working pressure.

** PS+0/+16bar TS +0/+80 °C

** PS+0/+20bar TS +0/+55 °C

Dimensions

Model	A1	B	C
TGE308/16_-C/A	240	255	85
TGE314/16_-C/A	250	307	140
TGE316/16_-C/A	233	480	280
TGE318/16_-C/A	233	775	530



Conversion factors

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

Specification of elements for TGE filter series

Filter element	Filtration efficiency	Residual oil contents	Description
CF	99,99999 % (0,01 µm)	≤ 0,01 mg/m ³	Coalescing high efficiency filter
C	99,9999 % (1 µm)	≤ 0,5 mg/m ³	Coalescing pre-filter

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