



Energy-efficient unit for larger filtration tasks. Suitable for filtration of grinding dust, blasting media dust, cutting fumes and dusty air containing metal, rock, plastic etc. or from handling various powder mixes. Unit is constructed for application at ATEX-zones 21-22 and is standard equipped with relief membrane, designed to break at an explosion, whereby the unit is relieved and explosions controlled.

Variants	1	2
Inlet and raw air chamber:	Zone 21	Zone 21
Clean air chamber and outlet:	Zone 22	Zone 21
Surroundings:	Zone 22	Zone 21

Unit is standard dimensioned for KST 300bar m/sec. and Pmax 10bar (similar to ST2).

QFG: Air volume: Up to 45,000m³/h
 Vacuum: Up to 5,000Pa
 Filter area: 104 - 520m²

Description

- Polluted air enters filter unit by raw air chamber. Hereby downflow and pre-separation is ensured, which contributes to load reduction on the filter media itself.
- Air is filtered through vertical-placed filter cartridge with internal filter core, which optimizes cleaning effect.
- Differential pressure controlled cleaning of filter cartridges through integrated compressed-air system incl. automatic after-cleaning for optimized regeneration of filter cartridges.
- The clean air is led out through connection in unit top.
- Dust is collected in dust container in unit bottom. Quicklock-adjustable dust container system suspended in ø400mm/16-system flange.
- Relief membrane is placed at inlet connection, which minimizes membrane wear.

Lower operating costs

Inlet with downflow and pre-separation as well as optimized filter cleaning ensure lower differential pressure above the filter cartridge. Therefore longer operation times with less shutdowns as well as lower operating costs (filter materials, electricity and compressed-air consumption) are achieved. One-cone version, which minimizes unit costs in connection with waste management.

Simple mounting, connection and operation

Filter unit is delivered in two modules that are assembled on the installation site by external flanges. Filter cartridges and control are delivered mounted. Compressed-air connection is easily connected on unit front. Easily accessible reading of differential pressure in digital display of filter control placed on unit service side. Filters are replaced through front door in unit side. Quicklock-adjustable dust container on 4 turnable wheels ensures user-friendly dust container service.



Service

Unit is delivered with cejn-coupling incl. connection for easy compressed-air coupling. Control is placed on unit at service height.



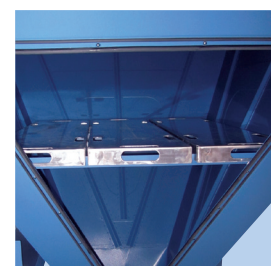
Dust container

Cone bottom is finished with ø400mm/16-system flange. Standard 70L dust container (excl. sack holder) with 4 turnable wheels.



Easy filter replacement with limited dust generation

Cartridge replacement is performed by bayonet suspension, which is loosened from clean air chamber and inserted into sack. Access by front door.



Service step grating

Dust-repellent fixtures for insertion of step grate for use at filter replacement incl. external storage fitting.

- Filters:**
- Filter cartridge ø325mm. Length: 1320mm
- Filter control:**
- Differential pressure control type ECO-A-S with automatic after-cleaning. 230V AC (constant)
 - Compressed-air: 5.5 - 6.0 bar dry compressed-air by cejn-coupling incl. ø10mm hose nipple (compressed-air quality according to ISO 8473-1 2.4.1.)
 - Differential pressure is visible in digital display, placed on unit at service height
 - 1"-jet valves connected to central compressed-air tank in clean air chamber
- Filter change:** Cartridge replacement made easily and dust-reduced by filter bayonet suspension that is loosened from clean air chamber and inserted into sack. Access by front door.

Filter material:

Standard	Material	Used for
G113	Polyester flake with PFPT-coating, antistatic	Static-loaded or hygroscopic particles

Alternative

G116A	Polyester flake with teflon membrane, antistatic	Finer static-loaded dust sorts
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The filters meet demands for extraction degree for dust class M according to DIN EN 60335-2-69 Appendix AA (extraction degree > 99.9%).

**Relief membrane:****Material:**

Membrane: AISI 304
Mating flange: Galvanized

**Relief pressure: +0.1bar**

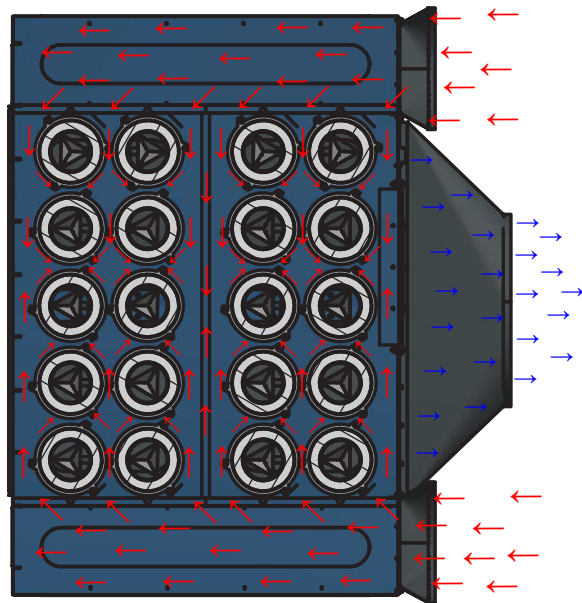
Relief area is calculated for the individual unit for $K_{st} = 300 \text{ bar m/sec}$ and $P_{max} = 10 \text{ bar}$

Relief membrane is designed as a single unit, which provides a light construction and thus fast opening. The membrane is especially developed for dust explosion relief and gives a reliable ensurance, since it relieves at an early stage, already in the start of an explosion.

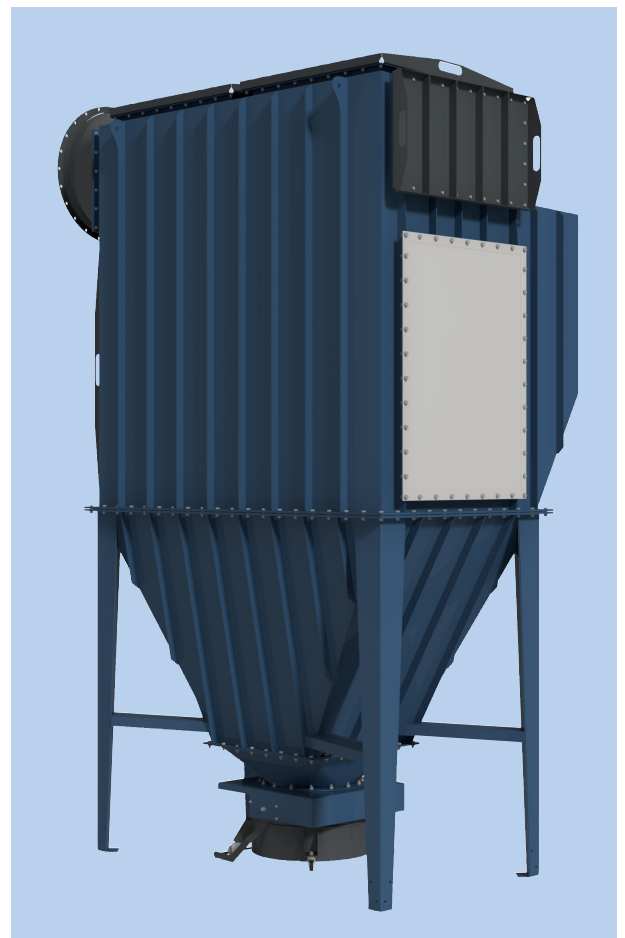
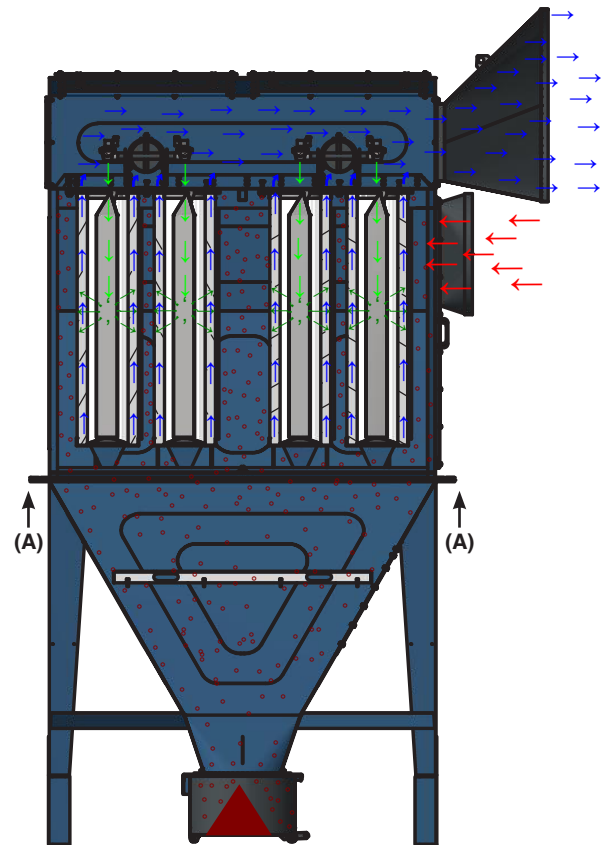
NOTE

At installation of units with relief membrane you must be aware of the heavy pressure wave and the flame spread that will occur in areas outside of the relief membrane and mount the unit so that the explosion is led away from people and building components.

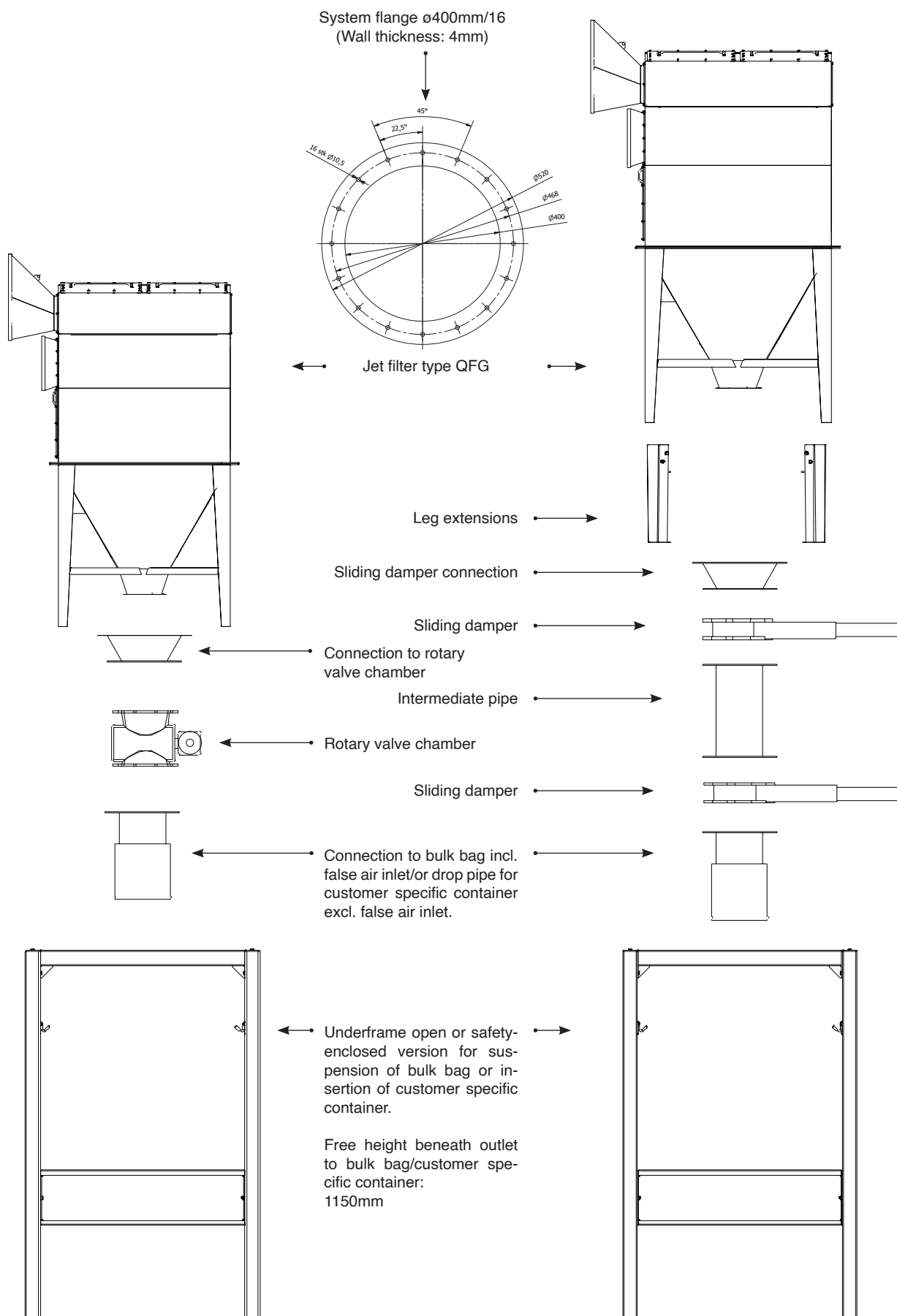
Principle sketch for flow through jet filter type QFG:



Note: Seen from below and up (see arrow A)



Principle sketch for equipment for jet filter type QFG:



We refer to the Gram price list for the complete program!

Construction/surface:

Jet filter filter type QFG is constructed according to:

- Machine Directive 2006/42/EU
- ATEX directive 2014/34/EU
- EMC Directive 2014/30/EU
- Directive 2014/68/EU about pressure equipment
- Low Voltage Directive 2014/35/EU
- Harmonized standards: EN 13854, EN 4414, EN 12100, EN 60204-1, EN ISO 13857
- Further standards: ISO 3746

Filter cabinet is made in 2mm black steel plate

Surface powder enamelled RAL 5007/7011 structure

Further is available:

- Version in hot-galvanized, enamelled steel plates for outdoor mounting
- Backdraft damper type KTR for piping placement
- 148L dust container with sack holder*
- Underframe and connections for bulk bag and drop pipe for customer specific containers
- ½"-pressure regulator with manometer and pressure reducing valve
- Temperature sensor type RT101 as well as alarm devices
- Precoat unit type PCA
- Precoat 11.5kg in sack

* Note: Unit height is increased by 330mm

Jet filter filter type QFG-A is available in the sizes as stated in the form below.

Please, contact us for assistance in selecting the optimal unit taking into consideration air volume, dust type and volume, operation times etc.

Jet filter type QFG-A (max. 5,000Pa):

ATEX zone: 21/22 / 21/21

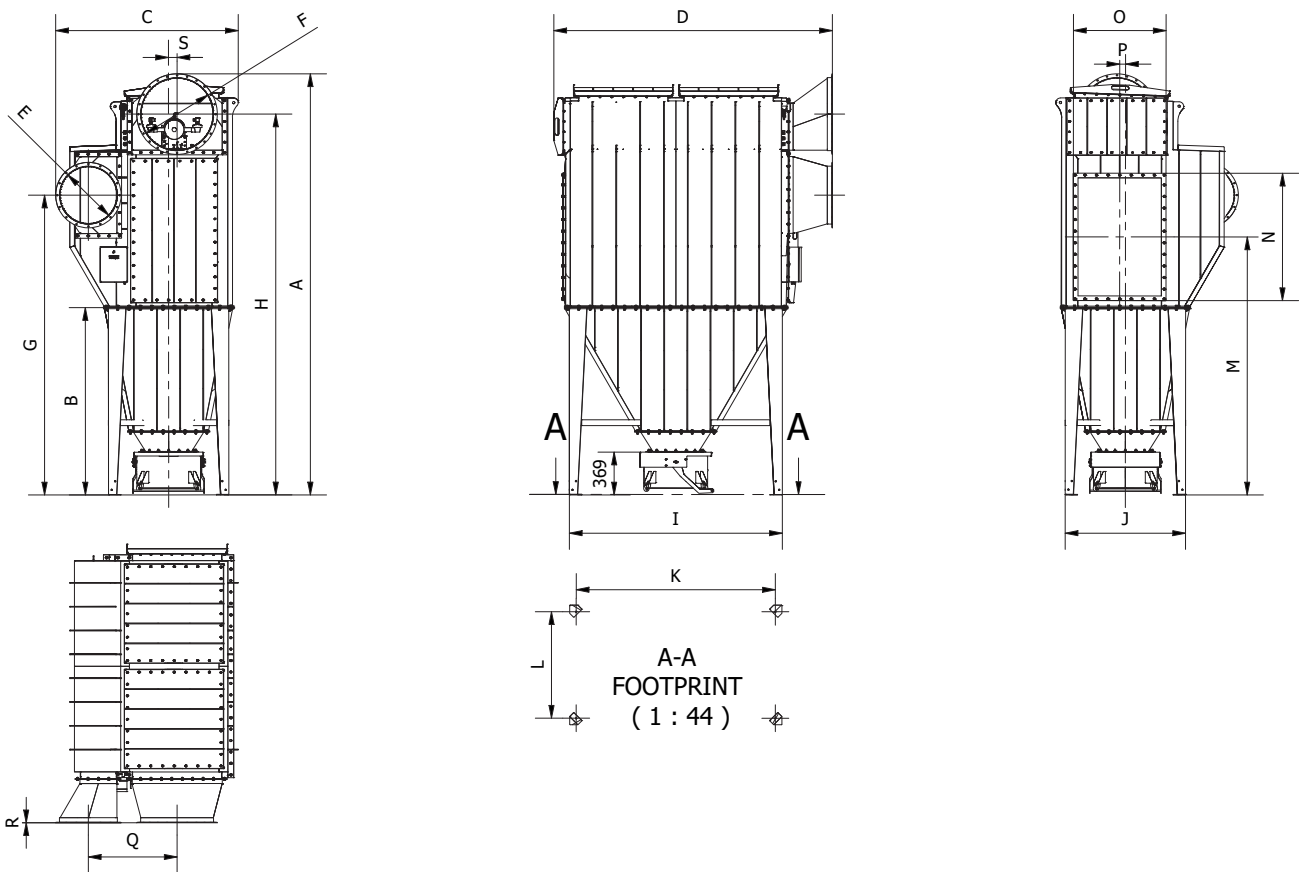
Type	ATEX zone 21/22 Item no.	ATEX zone 21/21 Item no.	ΔP start/stop ²⁾ [Pa]	Filter element ¹⁾ [pc.]	Valve [pc.]	G113 filter area [m ²]	Compressed-air [L/min.]	Container (stand.) [L]	Container (option ³⁾) [L]	[kg]
QFG-A 104	10 408 000	10 408 500	200/2000	4	4	104	30	1x70	1x148	566
QFG-A 156	10 408 250	10 408 750	200/2000	6	6	156	30	1x70	1x148	727
QFG-A 208	10 409 000	10 409 500	200/2000	8	8	208	30	1x70	1x148	952
QFG-A 312	10 410 000	10 410 500	200/2000	12	12	312	30	1x70	1x148	1411
QFG-A 416	10 411 000	10 411 500	200/2000	16	16	416	30	1x70	1x148	1690
QFG-A 520	10 412 000	10 412 500	200/2000	20	20	520	30	1x70	1x148	1859

¹⁾ Filter cartridge $\varnothing 325 \times 1320\text{mm}/\varnothing 13.5\text{mm}$, 26m², G113 (08 129 400)

²⁾ Pressure drop above filter cartridge.

³⁾ Please note that unit heights is increased by 330mm.

Jet filter type QFG-A 104 - 312:



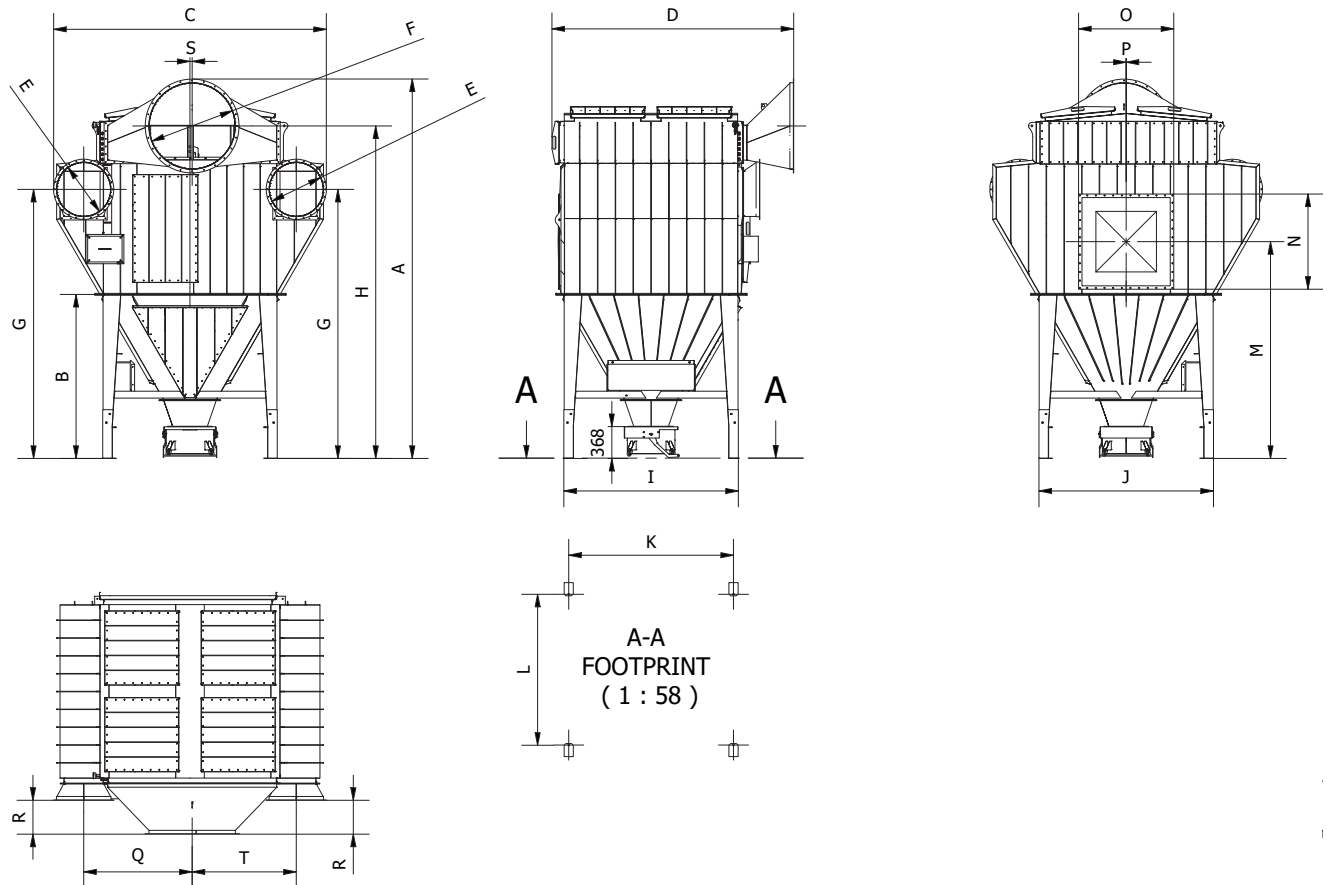
Jet filter type QFG-A (max. 5,000Pa):
ATEX zone: 21/22

Type	Item no.	A	B	C	D	E	F	G	H	I	J	K	L	M	N
QFG-A 104	10 408 000	2898	922	1470	1606	ø400	ø500	1966	2615	1039	1039	920	920	1716	733
QFG-A 156	10 408 250	3245	1270	1470	2006	ø400	ø500	2313	2963	1439	1039	1320	920	2064	733
QFG-A 208	10 409 000	3636	1618	1577	2406	ø500	ø630	2590	3289	1839	1039	1720	920	2228	1100
QFG-A 312	10 410 000	4235	1895	1906	2794	ø630	ø700	3110	3842	2016	1256	1904	981	2505	0

Type	Item no.	O	P	Q	R	S
QFG-A 104	10 408 000	733	50	683	185	74
QFG-A 156	10 408 250	733	50	683	185	44
QFG-A 208	10 409 000	800	50	766	0	74
QFG-A 312	10 410 000	800	5	851	391	23

Rev. 12.22
Data is subject to alterations

Jet filter type QFG-A 416 - 520:



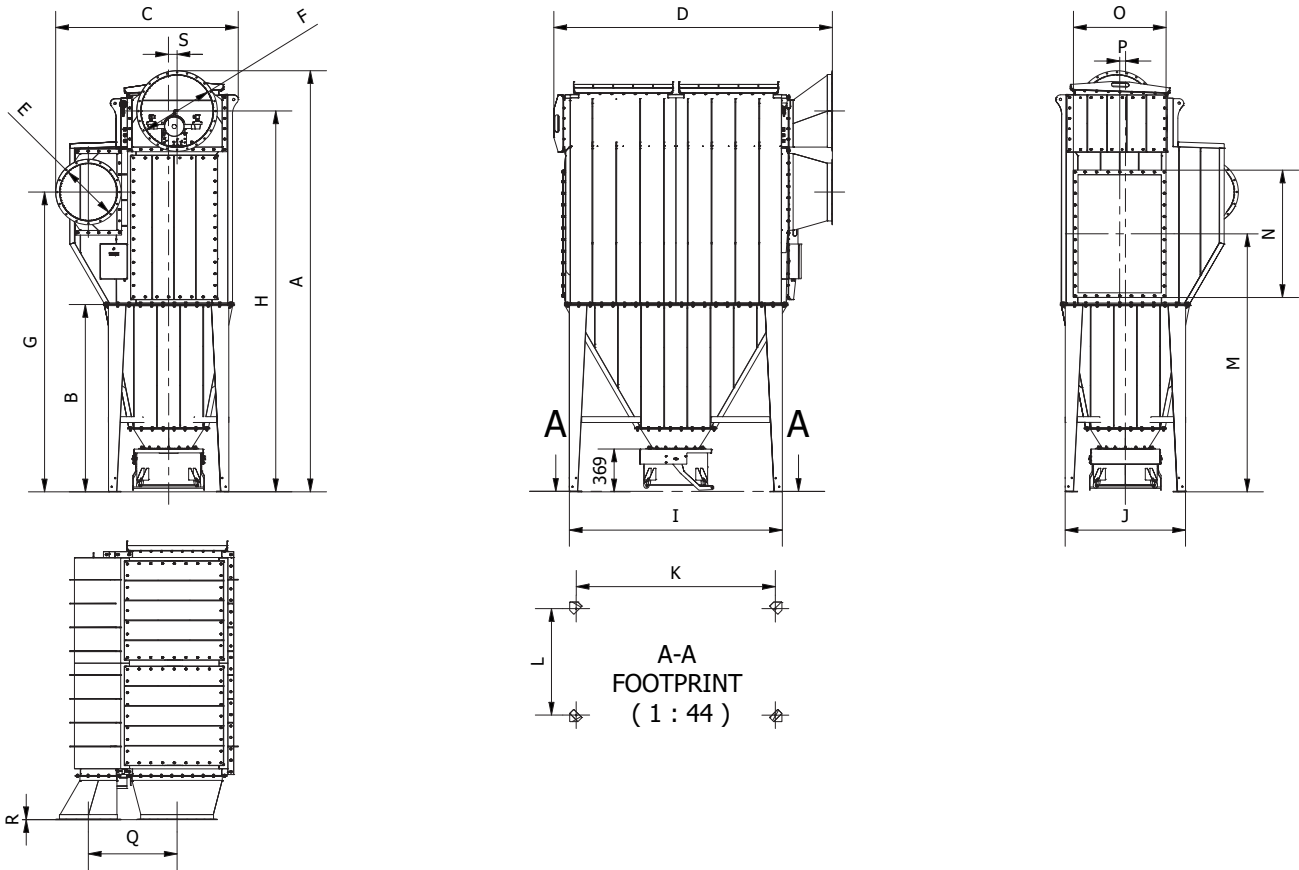
Jet filter type QFG-A (max. 5,000Pa):
ATEX zone: 21/22

Type	Item no.	A	B	C	D	E	F	G	H	I	J	K	L	M	N
QFG-A 416	10 411 000	4285	1895	2684	2794	2 x $\phi 500$	$\phi 800$	3060	3842	2016	1616	1904	1341	2505	1100
QFG-A 520	10 412 000	4385	1895	3152	2794	2 x $\phi 630$	$\phi 1000$	3110	3842	2017	2017	1905	1745	2005	1100

Type	Item no.	O	P	Q	R	S
QFG-A 416	10 411 000	1100	0	1053	391	25
QFG-A 520	10 412 000	1100	0	1253	391	25



Jet filter type QFG-A 104 - 312:



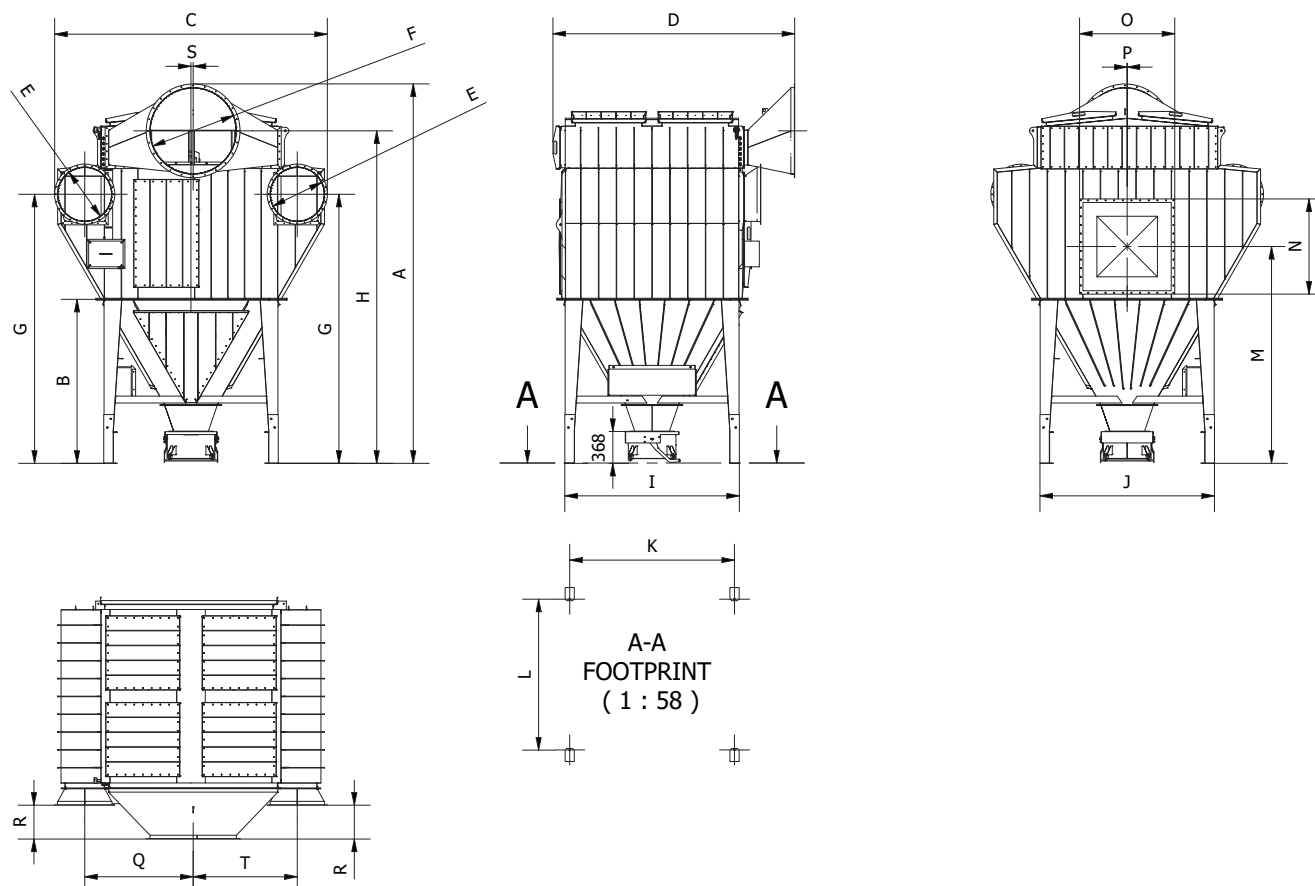
Jet filter type QFG-A (max. 5,000Pa):
ATEX zone: 21/21

Type	Item no.	A	B	C	D	E	F	G	H	I	J	K	L	M	N
QFG-A 104	10 408 500	2898	922	1470	1606	ø400	ø500	1966	2615	1039	1039	920	920	1716	733
QFG-A 156	10 408 750	3245	1270	1470	2006	ø400	ø500	2313	2963	1439	1039	1320	920	2064	733
QFG-A 208	10 409 500	3636	1618	1577	2406	ø500	ø630	2590	3289	1839	1039	1720	920	2228	1100
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QFG-A 208	10 409 500	800	50	766	0	74
QFG-A 312	10 410 500	800	5	851	391	23

Rev. 12.22
Data is subject to alterations

Jet filter type QFG-A 416 - 520:


Jet filter type QFG-A (max. 5,000Pa):
ATEX zone: 21/21

Type	Item no.	A	B	C	D	E	F	G	H	I	J	K	L	M	N
QFG-A 416	10 411 500	4285	1895	2684	2794	2 x ø500	ø800	3060	3842	2016	1616	1904	1341	2505	1100
QFG-A 520	10 412 500	4385	1895	3152	2794	2 x ø630	ø1000	3110	3842	2017	2017	1905	1745	2005	1100

Type	Item no.	O	P	Q	R	S
QFG-A 416	10 411 500	1100	0	1053	391	25
QFG-A 520	10 412 500	1100	0	1253	391	25