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 dimentioned 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: 312 - 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 system flange.
- Relief membrane is placed at inlet connection, which minimizes membrane wear.

**Lower operating costs**

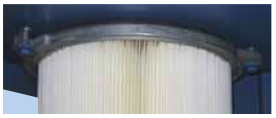
Inlet with downflow and pre-separation as well as optimized filter cleaning ensure lower differential pressure above the filter cartridge. Therefore longer operation times with less shutdowns as well as lower operating costs (filter materials, electricity and compressed-air consumption) are achieved.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

**Simple mounting, connection and operation**

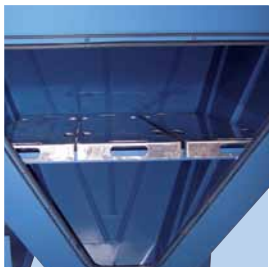
Filter unit is delivered in two modules that are assembled on the installation site by external flanges. Filter cartridges and control are delivered mounted. Compressed-air connection is easily connected on unit front. Easily accessible reading of differential pressure in digital display of filter control 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 system flange. Standard 72L 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-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
- 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 |

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 incl. mating flange:**

**Material:**
Membrane: AISI 304
Mating flange: Galvanized

**Relief pressure: +0.1bar**
Relief area is calculated for the individual unit for Kst = 300bar m/sec and Pmax = 10bar

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.



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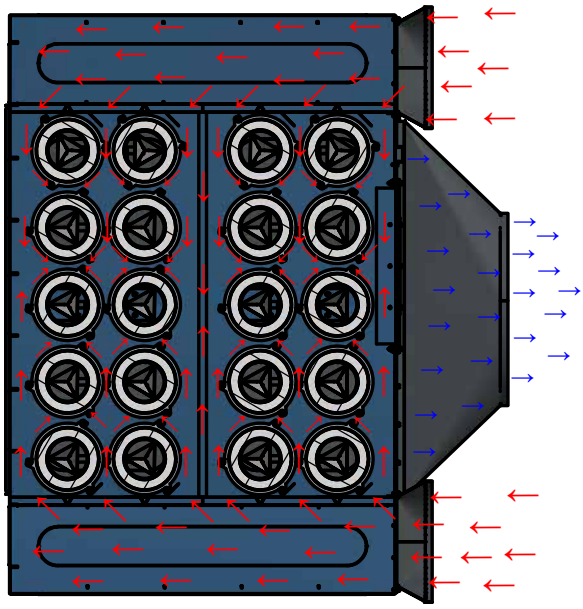
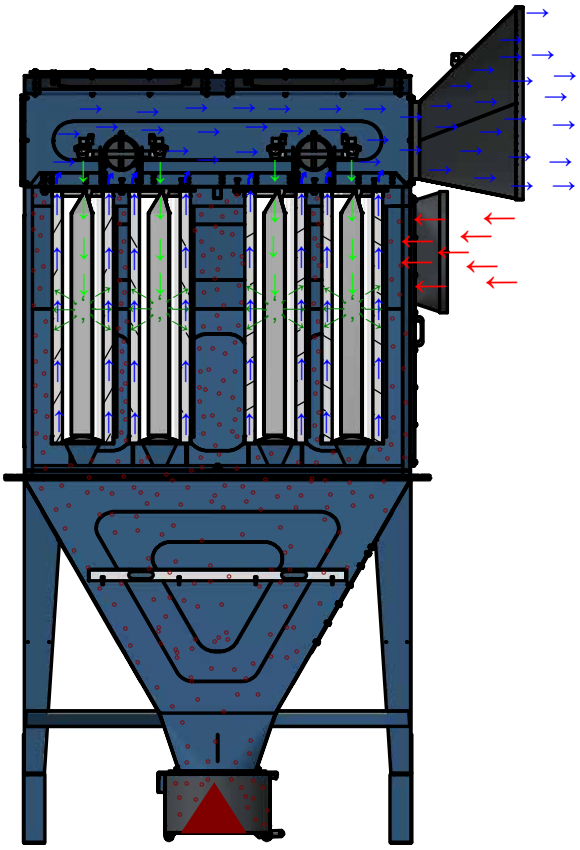
**Principle sketch for flow through jet filter type QFG:**





*Data is subject to alterations*

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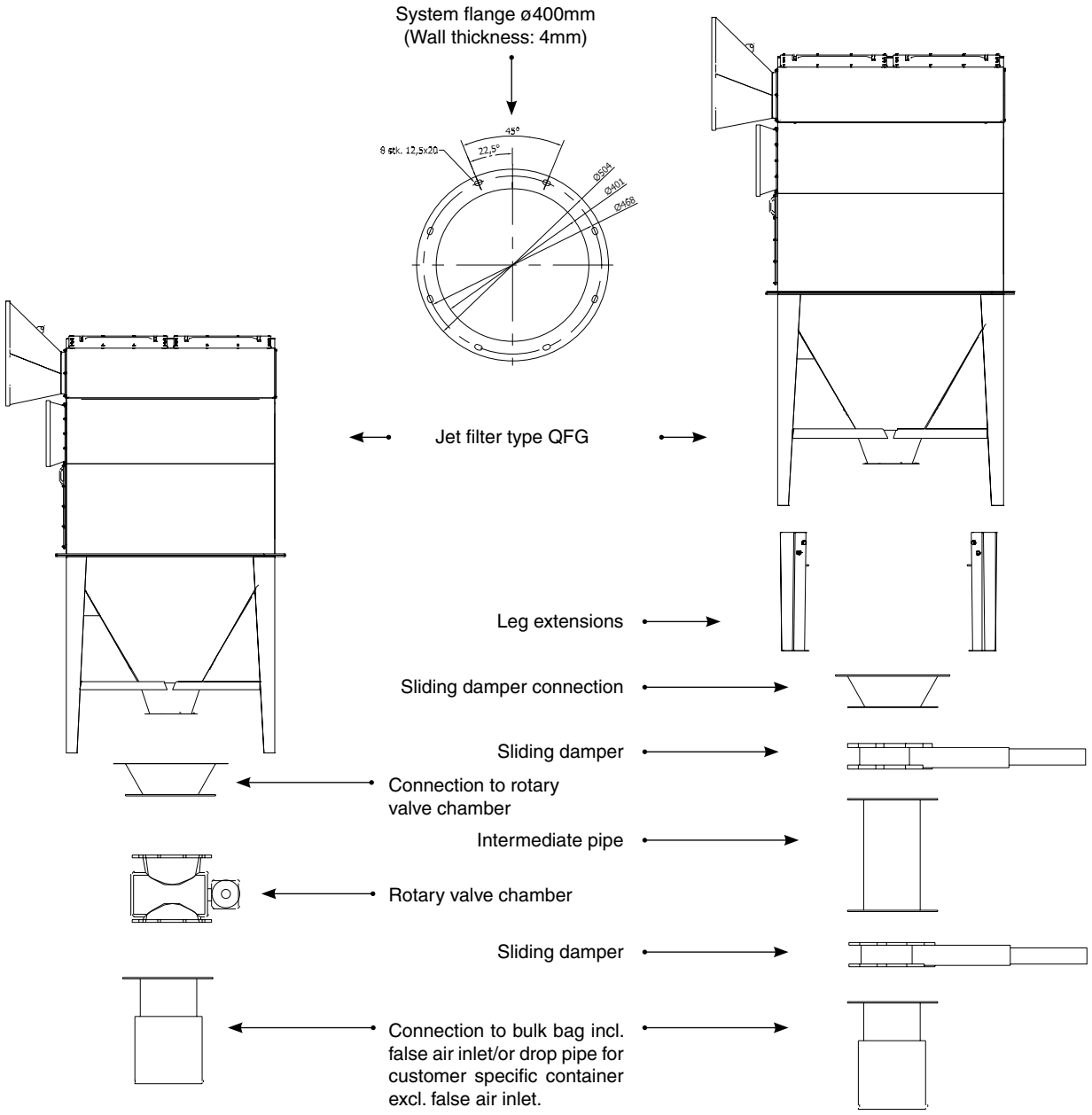
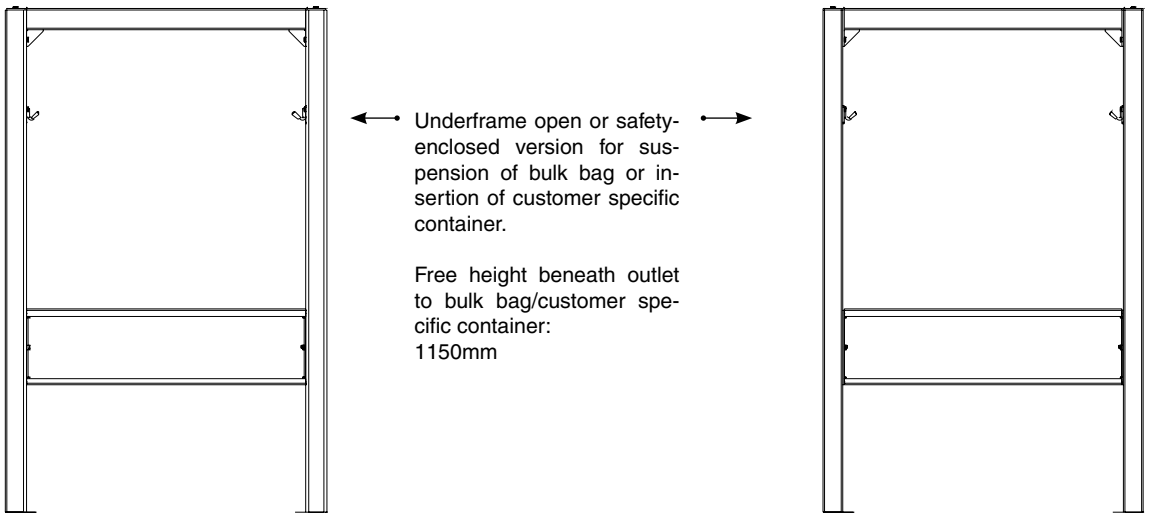
**Principle sketch for equipment for jet filter type QFG:**



Underframe open or safety-enclosed version for suspension of bulk bag or insertion of customer specific container.

Free height beneath outlet to bulk bag/customer specific container:
1150mm

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





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**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 349, 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
- 150L dust container with sack holder*
- Underframe and connections for bulk bag and drop pipe for customer specific containers
- ½"-water separator 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. | △ P start/stop [2] [Pa] | Filter element[1] [pc.] | Valve [pc.] | G113 filter area [m²] | Com-pressed-air [L/min.] | Container (stand.) [L] | Container (option [3]) [L] | [kg] |
|---|---|---|---|---|---|---|---|---|---|---|
| QFG-A 312 | 10 410 000 | 10 410 500 | 200/2000 | 12 | 12 | 312 | 30 | 1x72 | 1x150 | 1411 |
| QFG-A 416 | 10 411 000 | 10 411 500 | 200/2000 | 16 | 16 | 416 | 30 | 1x72 | 1x150 | 1690 |
| QFG-A 520 | 10 412 000 | 10 412 500 | 200/2000 | 20 | 20 | 520 | 30 | 1x72 | 1x150 | 1859 |

*[1] Filter cartridge ø325 x 1320mm/ø13.5mm, 26m², G113 (08 129 400)*
*[2] Pressure drop above filter cartridge.*
*[3] Please note that unit heights is increased by 330mm.*


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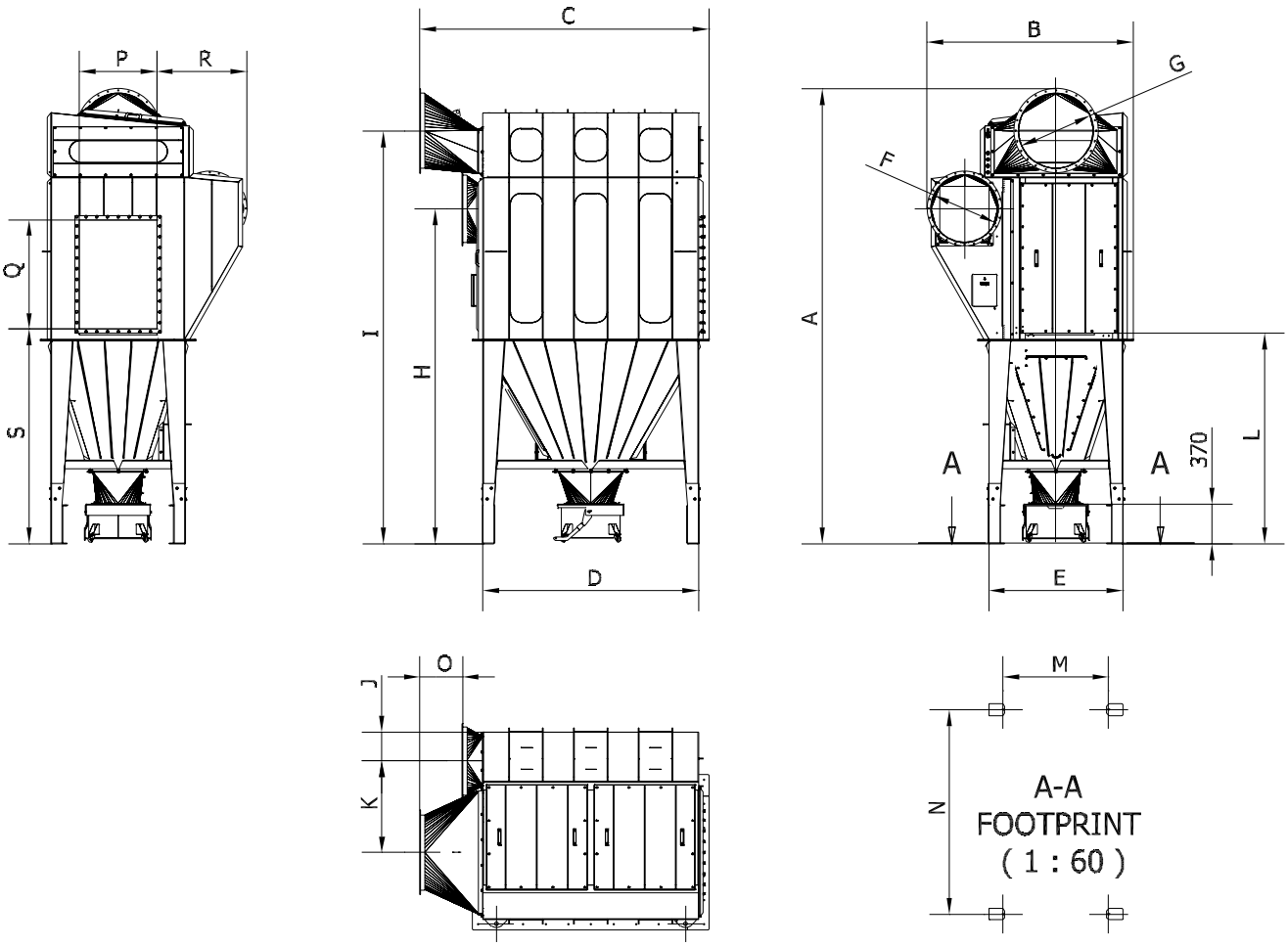
**Jet filter type QFG-A 312 - 520:**

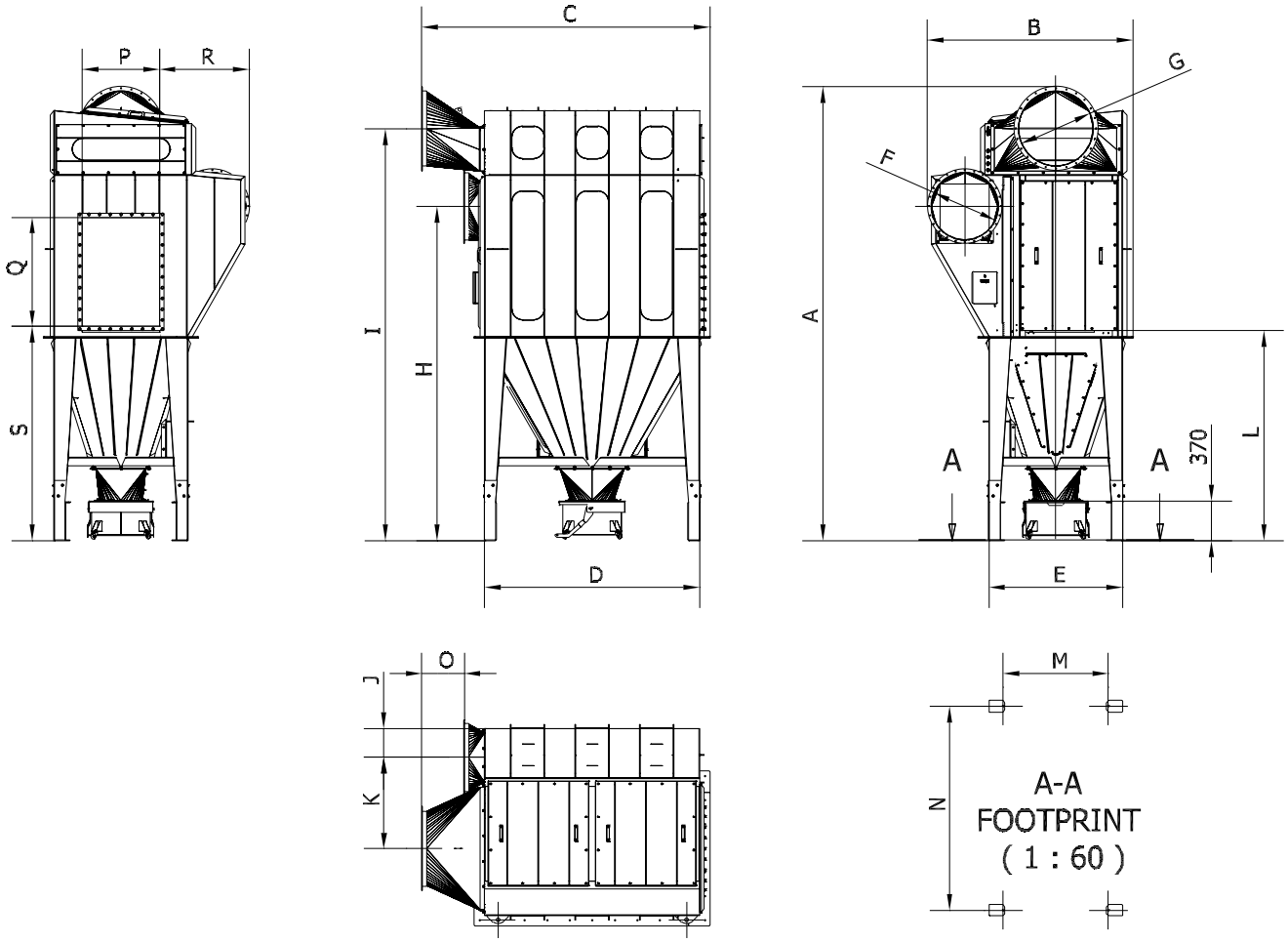



**Jet filter type QFG-A (max. 5,000Pa):**
**ATEX zone: 21/22**

| Type | Item no. | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QFG-A 312 | 10 410 000 | 4235 | 1920 | 2691 | 2010 | 1250 | ø630 | ø700 | 3118 | 3842 | 272 | 850 | 1957 | 981 | 1903 |
| QFG-A 416 | 10 411 000 | 4089 | 2684 | 2687 | 2015 | 1616 | ø500 | ø800 | 3068 | 3649 | 272 | 1055 | 1957 | 1340 | 1903 |
| QFG-A 520 | 10 412 000 | 4380 | 3170 | 2688 | 2016 | 2015 | ø630 | ø1000 | 3118 | 3840 | 272 | 1255 | 1957 | 1740 | 1904 |

| Type | Item no. | O | P | Q | R | S |
|---|---|---|---|---|---|---|
| QFG-A 312 | 10 410 000 | 393 | 720 | 1020 | 838 | 1997 |
| QFG-A 416 | 10 411 000 | 393 | 1020 | 1020 | 832 | 1997 |
| QFG-A 520 | 10 412 000 | 393 | 1020 | 1020 | 1075 | 1997 |

**Jet filter type QFG-A 312 - 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 312 | 10 410 500 | 4235 | 1920 | 2691 | 2010 | 1250 | ø630 | ø700 | 3118 | 3842 | 272 | 850 | 1957 | 981 | 1903 |
| QFG-A 416 | 10 411 500 | 4089 | 2684 | 2687 | 2015 | 1616 | ø500 | ø800 | 3068 | 3649 | 272 | 1055 | 1957 | 1340 | 1903 |
| QFG-A 520 | 10 412 500 | 4380 | 3170 | 2688 | 2016 | 2015 | ø630 | ø1000 | 3118 | 3840 | 272 | 1255 | 1957 | 1740 | 1904 |

| Type | Item no. | O | P | Q | R | S |
|---|---|---|---|---|---|---|
| QFG-A 312 | 10 410 500 | 393 | 720 | 1020 | 838 | 1997 |
| QFG-A 416 | 10 411 500 | 393 | 1020 | 1020 | 832 | 1997 |
| QFG-A 520 | 10 412 500 | 393 | 1020 | 1020 | 1075 | 1997 |



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