

GL series



Assurance in occupational and health safety

Welding fumes and dusts from related processes are easily handled by this system. The Institute for Occupational Safety and Health (IFA) has specifically tested them in accordance with DIN ISO 15012-1 (2013) and 15012-4 (2016). It fulfils the protection level for safe extraction and filtering required by the TRGS 528 Di-

rective. High safety requirements are thus met. Smoke, vapours or dusts with particles in the micrometer range are safely filtered out of the air. Awarded W3 and the DGUV seal, the system offers triple protection for humans, environment and machinery, and is accordingly listed on the "IFA positive list".

| | | |
|-----|---------------------------------|-----|
| W 3 | ISO 15012-1 $\eta \geq 99\%$ | W 3 |
|-----|---------------------------------|-----|



Low noise and energy saving



The GL series, as "Green Line", stands for especially environmentally friendly. We have developed this series especially with environmental protection in mind, so that it consumes less electricity than conventional extraction systems.

The energy-saving and noise-reduced blowers used (approx. 55 db(A)) are hardly noticed in noise-sensitive environments such as laboratories and offices. Energy savings of up to 65 % are possible.



Modular and flexible



The compact and modular design ensures easy adaptation of the filter equipment depending on the process. Depending on the application, the GL series can

be equipped with different modules to optimize filter costs. In case of application changes, later adaptation of your filter and extraction system is also possible.



Double adsorption power



Active carbon



BAC granulate



Active carbon/BAC

The adsorption of the gaseous substances takes place with activated carbon (physical adsorption) and BAC granulate (chemical adsorption). In addition, they take up a very broad spectrum of gases and odours.

-> Neutralization through chemical bonding with the reaction substance applied to the substrate material.

Draws off every harmful particle



Pollutants do not stand a chance



- Low-contamination dust disposal
- Molecular sieve against gaseous pollutants
- Piping / Flexible hose / Extraction arm
- Air-recirculation or exhaust-air pipe

Tool-free filter changing



Simple filter removal

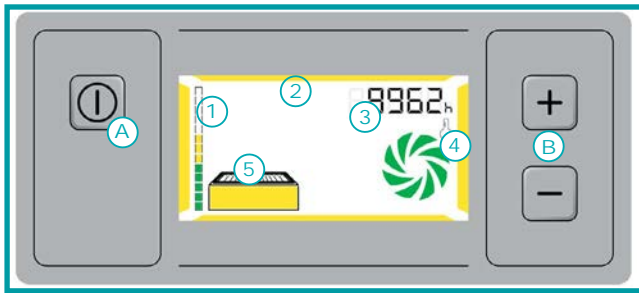


- Swift and smooth changing
- No special knowledge required
- Easy handling
- No tools required
- Time-saving

Inspiring checking



Always full control over the system



- . A - Start / Stop button
- . B - Manual power control
- . 1 - Saturated filter notification
- . 2 - System status indication
- . 3 - Power-setting indication/Hour meter
- . 4 - Temperature and turbine-status indication
- . 5 - Filter-status indication

Sub-D 25 interface



External control of the system



Illustration similar

Powerful control unit

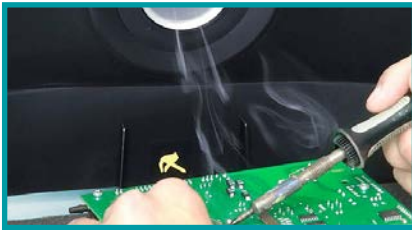
- . Start / Stop button
- . "Filter full" pre-warning stage (75%)
- . Group-error output
(speed, temperature, "filter full" 100%)
- . External power control
- . Parameterization access for activating special functions
- . Message cache
- . Digital interface (RS232)

Applications



Laser technology

Lasers are used for processing metals, woods and plastics. Due to this versatility, companies are intensively involved in laser technology. This not only increases efficiency, but also creates unwanted by-products, regardless of type and performance. TBH systems ensure safe extraction of fine dust and laser fumes.



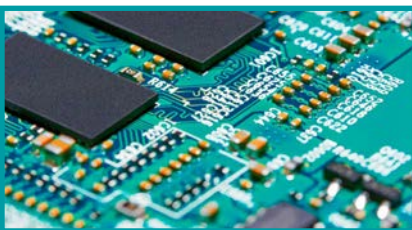
Soldering

Soldering connects two different materials by melting. Tin solder being used releases additives that have harmful effects on the respiratory organs. Depending on the soldering application (manual or automated), a suitable filter and extraction system must therefore be used.



Welding/Grinding/Cutting

Welding, grinding and cutting processes result in very fine particles from the surfaces being worked. These dangerous substances settle in the lungs and can lead to permanent inability of the respective employee to work. To prevent this from happening, welding fumes must be efficiently extracted. This is demanded by the legal authorities in TRGS528. TBH GmbH therefore offers a large number of systems with W3 / DGUV approval.



Electronics

Manufacturers of electronic products work with small or tiny elements. Highly-toxic materials such as arsenic or phosphorus are often used to modify the properties of semiconducting substances. Solvents are used for removing contaminants on microchips; these pollute the environment and are harmful for employees.



Work processes with vapours/gases

Gases are much more difficult to separate than solid particles. Due to their chemical structure, they can pass through most filters without any problems. Special filters are required to extract gases correctly and reliably.



Plastics processing

Almost every industry today processes plastics. TBH systems are exactly the right solution for the safe extraction and filtration of grinding dusts and vapours that occur during the processing of plastics. Be convinced by our quality.



Textile processing

Clothing can lose small lint and thread particles. These are so light that they can hover in the air of enclosures, and any motion continuously whirls them up. A high concentration of these airborne fibres is present particularly in the processing of textiles. There are also chemicals used for dyeing clothing, which are usually harmful to health and therefore need to be extracted.



Technical glass

Glass production results in great heat. The high temperatures required for melting glass cause gases containing large quantities of environmentally-hazardous substances to rise. In the course of the acid polishing, the hot or cold final layer releases tin or titanium chlorides, such as hydrofluoric acid and sulphuric acid. These substances must be drawn off, as they are harmful to one's health.



Refilling work, packaging processes, feeding and conveying processes

When materials are moved from one place to another, such as during packaging or transportation, this process can cause particles to be released. Especially since they are not visible to the human eye, the risk should not be underestimated. Particles can develop from turbulences. TBH filter and extraction systems safely remove these particles from the ambient air.

Technical data GL 230 ZA



Delivery scope:

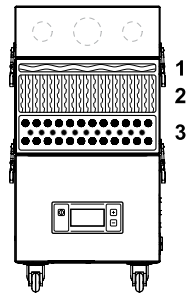
- Completely assembled (incl. the selected filter equipment)
- 4 castors for mobile use
- Power cord

Illustration similar

| TECHNICAL DATA | UNIT | STANDARD | A | Z | ZA |
|--|----------|--------------------|-------------|-------------|--------------|
| Air volume flow with free air delivery | m³/h | max. 350 | max. 350 | max. 350 | max. 350 |
| Effective air volume flow | m³/h | 100-300 | 100-300 | 100-300 | 100-300 |
| Max. static pressure | Pa | 6000 | 6000 | 6000 | 6000 |
| Voltage | V | 100-240 | 100-240 | 100-240 | 100-240 |
| Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 |
| Motor output | kW | 0.6 | 0.6 | 0.6 | 0.6 |
| Class of protection | - | 1 | 1 | 1 | 1 |
| Drive type | - | Continuous running | | | |
| Sound level | db(A) | approx. 53 | approx. 53 | approx. 53 | approx. 53 |
| Serial interface | Sub-D | 25-pin | 25-pin | 25-pin | 25-pin |
| Weight | kg | approx. 45 | approx. 45 | approx. 45 | approx. 65 |
| Dimensions(HxWxD) | mm | 700x350x440 | 700x350x440 | 785x350x440 | 1025x350x440 |
| Intake sleeve NW 50 | Quantity | 2 | 2 | 2 | 2 |
| Intake sleeve NW 80 | Quantity | 1 | 1 | 1 | 1 |
| Intake sleeve NW 100 | Quantity | 1 | 1 | 1 | 1 |
| Color | RAL | 7035 | 7035 | 7035 | 7035 |

| FILTER CONFIGURATION | | | | | |
|----------------------|--|-----------|-----------|---|-----------|
| | Pre-filter mat M5 (ISO ePM ₁₀ > 50%) | ✓ | ✓ | - | - |
| Z ⁺ | Z-Linepanel plus filter F7 (ISO ePM ₁ , 50-65%, ePM _{2.5} 65-80%, ePM ₁₀ > 85%) | - | - | ✓ | ✓ |
| | Particle filter H13 | ✓ | - | ✓ | ✓ |
| A | activated carbon/BAC filter | 10 liters | 18 liters | - | 18 liters |

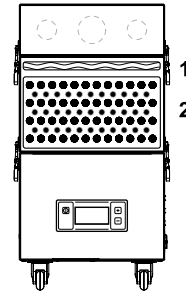
Ordering data GL 230



STANDARD

| DESIGNATION | ART. NO. |
|-----------------------------|----------|
| GL 230 100-240V 50/60 Hz | 90140 |

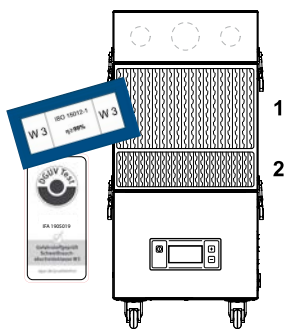
| SPARE FILTER | | |
|---------------------------------|-------|---|
| Pre-filter mat | 10040 | 1 |
| Particle filter | 10013 | 2 |
| activated carbon/ BAC filter | 10004 | 3 |



A

| DESIGNATION | ART. NO. |
|-----------------------------|----------|
| GL 230 100-240V 50/60 Hz | 90142 |

| SPARE FILTER | | |
|---------------------------------|-------|---|
| Pre-filter mat | 10040 | 1 |
| Particle filter | - | |
| activated carbon/ BAC filter | 10007 | 2 |

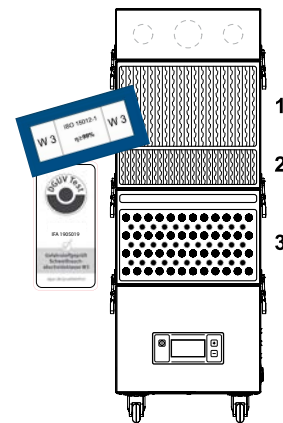


Z

| DESIGNATION | ART. NO. |
|-----------------------------|----------|
| GL 230 100-240V 50/60 Hz | 90144 |

* more on W3, see catalog page 2

| SPARE FILTER | | |
|---------------------------------|-------|---|
| Z-Linepanelplus filter | 16199 | 1 |
| Particle filter | 10013 | 2 |
| activated carbon/ BAC filter | - | |



ZA

| DESIGNATION | ART. NO. |
|-----------------------------|----------|
| GL 230 100-240V 50/60 Hz | 90146 |

* more on W3, see catalog page 2

| SPARE FILTER | | |
|---------------------------------|-------|---|
| Z-Linepanelplus filter | 16199 | 1 |
| Particle filter | 10013 | 2 |
| activated carbon/ BAC filter | 10007 | 3 |

Technical data GL 265



Delivery scope:

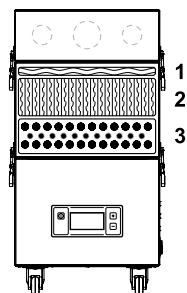
- Completely assembled (incl. the selected filter equipment)
- 4 castors for mobile use
- Power cord

Illustration similar

| TECHNICAL DATA | UNIT | STANDARD | A | Z | ZA |
|--|-------------------|--------------------|-------------|-------------|--------------|
| Air volume flow with free air delivery | m ³ /h | max. 350 | max. 350 | max. 350 | max. 350 |
| Effective air volume flow | m ³ /h | 100-300 | 100-300 | 100-300 | 100-300 |
| Max. static pressure | Pa | 6000 | 6000 | 6000 | 6000 |
| Voltage | V | 230/120 | 230/120 | 230/120 | 230/120 |
| Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 |
| Motor output | kW | 0.6 | 0.6 | 0.6 | 0.6 |
| Class of protection | - | 1 | 1 | 1 | 1 |
| Drive type | - | Continuous running | | | |
| Sound level | db(A) | approx. 55 | approx. 55 | approx. 55 | approx. 55 |
| Serial interface | Sub-D | 25-pin | 25-pin | 25-pin | 25-pin |
| Weight | kg | approx. 70 | approx. 70 | approx. 70 | approx. 90 |
| Dimensions(HxWxD) | mm | 750x350x655 | 750x350x655 | 835x350x655 | 1105x350x655 |
| Intake sleeve NW 50 | Quantity | 3 | 3 | 3 | 3 |
| Intake sleeve NW 100 | Quantity | 2 | 2 | 2 | 2 |
| Intake sleeve NW 125 | Quantity | 1 | 1 | 1 | 1 |
| Color | RAL | 7035 | 7035 | 7035 | 7035 |

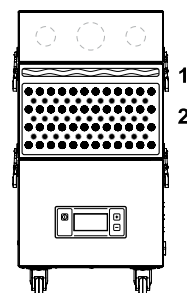
| FILTER CONFIGURATION | | | | | |
|----------------------|--|-----------|-----------|---|-----------|
| | Pre-filter mat M5 (ISO ePM ₁₀ > 50%) | ✓ | ✓ | - | - |
| Z+ | Z-Linepanel plus filter F7 (ISO (ISO ePM ₁ 50-65%, ePM _{2.5} 65-80%, ePM ₁₀ > 85%)) | - | - | ✓ | ✓ |
| | Particle filter H13 | ✓ | - | ✓ | ✓ |
| A | activated carbon/BAC filter | 26 liters | 45 liters | - | 45 liters |

Ordering data GL 265



STANDARD

| DESIGNATION | ART. NO. |
|-----------------------------|----------|
| GL 265 100-240V 50/60 Hz | 90136 |

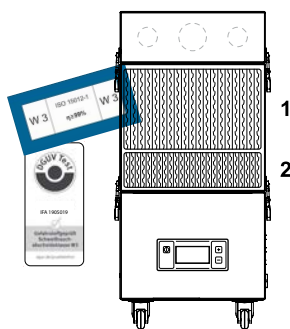


A

| DESIGNATION | ART. NO. |
|-----------------------------|----------|
| GL 265 100-240V 50/60 Hz | 90151 |

| SPARE FILTER | | |
|---------------------------------|-------|---|
| Pre-filter mat | 10001 | 1 |
| Particle filter | 10009 | 2 |
| activated carbon/ BAC filter | 10046 | 3 |

| SPARE FILTER | | |
|---------------------------------|-------|---|
| Pre-filter mat | 10001 | 1 |
| Particle filter | - | |
| activated carbon/ BAC filter | 12052 | 2 |

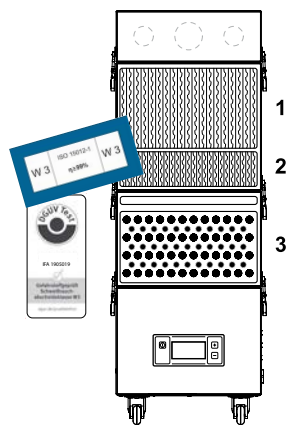


Z

| DESIGNATION | ART. NO. |
|-----------------------------|----------|
| GL 265 100-240V 50/60 Hz | 90153 |

* more on W3, see catalog page 2

| SPARE FILTER | | |
|---------------------------------|-------|---|
| Z-Linepanelplus filter | 16360 | 1 |
| Particle filter | 10009 | 2 |
| activated carbon/ BAC filter | - | |



ZA

| DESIGNATION | ART. NO. |
|-----------------------------|----------|
| GL 265 100-240V 50/60 Hz | 90155 |

* more on W3, see catalog page 2

| SPARE FILTER | | |
|---------------------------------|-------|---|
| Z-Linepanelplus filter | 16360 | 1 |
| Particle filter | 10009 | 2 |
| activated carbon/ BAC filter | 12052 | 3 |

Electronic control system



| FUNCTION | GL 230 | GL 265 |
|---|--------|--------|
| Start / Stop button | ✓ | ✓ |
| Manual output control | ✓ | ✓ |
| Saturated filter notification (complete system) | ✓ | ✓ |
| Indication of filter status | ✓ | ✓ |
| Indication of system status | ✓ | ✓ |
| Indication of power setting/hour meter | ✓ | ✓ |
| Indication of temperature and turbine error | ✓ | ✓ |

| INTERFACE FUNCTION | Sub-D | Sub-D |
|---|-------|-------|
| Interface | Sub-D | Sub-D |
| Start / Stop button | ✓ | ✓ |
| Pre-warning, filter saturated to 75% | ✓ | ✓ |
| Visual and audible indication of filter saturated | ✓ | ✓ |
| Group-error output (speed, temperature, "filter full" 100%) | ✓ | ✓ |
| External power control | ✓ | ✓ |
| Message cache | ✓ | ✓ |
| Parameterization access for activating special functions | ✓ | ✓ |

Accessories



USB CONNECTION CABLE

| USE | DESIGNATION | CABLE LENGTH | ART. NO. |
|--------------|----------------------|--------------|----------|
| GL 230 / 265 | USB connection cable | 1.5 meters | 16455 |

DELIVERY SCOPE: Connection cable (incl. software)



CABLE REMOTE CONTROL

| USE | DESIGNATION | CABLE LENGTH | ART. NO. |
|--------------|----------------------|--------------|----------|
| GL 230 / 265 | Cable remote control | 7 meters | 16477 |

FUNKTIONEN:

- Indication „Filter saturated“
- Run/Stand-by switch-over
- Speed control
- Switch-on status of the system: Stand-by operation

DELIVERY SCOPE: Remote control (incl. cable)

Harting option



HARTING MAINS CONNECTION

| USE | DESIGNATION | ART. NO. |
|-------------|---------------------------------|----------|
| GL 230/ 265 | Mains connection Harting option | *17036 |

* GL 265: except for 120V version".



INTERFACE HARTING

| USE | DESIGNATION | ART. NO. |
|-------------|--------------------------|----------|
| GL 230/ 265 | Interface Harting option | 15719 |



USB CONNECTION HARTING

| USE | DESIGNATION | CABLE LENGTH | ART. NO. |
|--------------|------------------------------|--------------|----------|
| GL 230 / 265 | USB connection cable Harting | 1.5 meters | 16466 |

DELIVERY SCOPE: Connection cable (incl. software)



ELECTRIC FOOT SWITCH

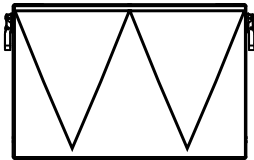
| USE | DESIGNATION | CABLE LENGTH | ART. NO. |
|--------------|----------------------|--------------|----------|
| GL 230 / 265 | Electric foot switch | 2 meters | 16369 |

FUNKTIONS:

- . Start / Stop button
- . Switch-on status of the system: Stand-by operation

DELIVERY SCOPE: Foot switch (incl. cable)

Accessories



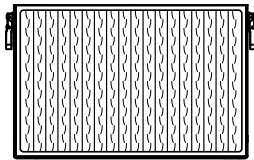
Pocket filter M5/M6

FILTER-HOUSING MODULE*^T AS UPGRADE KIT- pocket filter

To expand the filter surface / service life of the system for coarse dusts.

| USE | FILTER CLASS | UPGRADE KIT | SPARE FILTER |
|--------|---------------------|-------------|--------------|
| GL 230 | Pocket filter M5/M6 | 12938* | 12738 |
| GL 265 | Pocket filter M5/M6 | 12739** | 12740 |

* additional height 300 mm ** additional height 300 mm



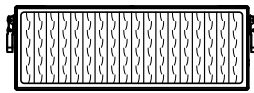
Z-LinepanelPlus-Filter F7

FILTER-HOUSING MODULE⁺ AS UPGRADE KIT - Z-Linepanel/plus filter

To expand the filter surface / service life of the system for medium/fine dusts.

| USE | FILTER CLASS | UPGRADE KIT | SPARE FILTER |
|--------|---------------------------|-------------|--------------|
| GL 230 | Z-LinepanelPlus-Filter F7 | 16367* | 16199 |
| GL 265 | Z-LinepanelPlus-Filter F7 | 16368** | 16360 |

* Raises the system by approx. 225 mm ** Raises the system by approx. 265 mm

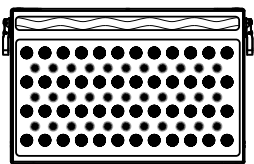


Particle filter H13

FILTER-HOUSING MODULE* AS UPGRADE KIT - Particle filter

| USE | FILTER CLASS | UPGRADE KIT | SPARE FILTER |
|--------|---------------------|-------------|--------------|
| GL 230 | Particle filter H13 | 14728* | 10013 |
| GL 265 | Particle filter H13 | 14729* | 10009 |

* additional height 85 mm

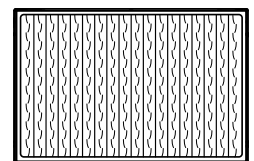


Pre-filter mat M5
activated carbon/BAC filter

FILTER-HOUSING MODULE AS UPGRADE KIT - Activated carbon/BAC filter

| USE | FILTER CLASS | UPGRADE KIT | SPARE FILTER |
|--------|--------------|-------------|--------------|
| GL 230 | 18 liters | 12114* | 10007 |
| GL 265 | 45 liters | 12112** | 12052 |

* additional height 235 mm ** additional height 265 mm



Police filter H14

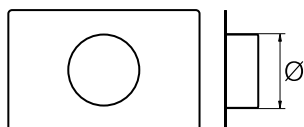
FILTER-HOUSING MODULE - Police filter

- Police-filter function e.g. in case of filter rupture or in environments with high safety requirements
- Is strapped to the outlet of the system*

| USE | FILTER CLASS | UPGRADE KIT | SPARE FILTER |
|-----------------|-------------------|-------------|--------------|
| GL 230 / GL 265 | Police filter H14 | 15634 | 14179 |

* no filter monitoring available, reduces the air flow rate of the system by approx. 10%.

Accessories

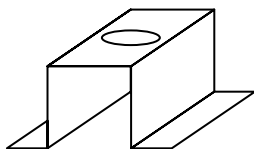


AIR OUTLET PLATE

| USE | NW (mm) | ART. NO. |
|-----------------|---------|----------|
| GL 230 / GL 265 | 100 | 12839 |
| GL 230 / GL 265 | 125 | 12232 |
| GL 230 / GL 265 | 160 | 13325 |

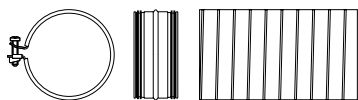
* Connection plate with socket for specific air discharge via hose

BRACKET for extraction arm



| USE | NW (mm) | ART. NO. |
|--------|---------|----------|
| GL 230 | 63 | 14128 |
| | 75 | 13192 |
| GL 265 | 63 | 14129 |
| | 75 | 13195 |
| | 100 | 13196 |

AIR INLET - flexible connection hoses



| DESIGNATION | NW (mm) | LENGTH (m) | ART. NO. |
|--------------------------------------|---------|------------|----------|
| Hose set with nipple and hose clamps | 80 | 2.5 | 13179* |
| | | 2.5 | 13729** |
| | | 5.0 | 13180* |
| | | 5.0 | 14600** |
| | 100 | 2.5 | 13181 |
| | | 5.0 | 13182 |
| | | 10.0 | 13198 |
| | 125 | 2.5 | 13183 |
| | | 5.0 | 13184 |
| 10.0 | | 13199 | |

* for GL 230

** for GL 265 (with reduction from NW 100 to NW 80)

Accessories



SPARK EXTINGUISHER (Use in piping)

| USE | AIR VOLUME | Ø d (mm) | ART. NO. |
|--------------|--------------|----------|----------|
| GL 230 / 265 | 150-300 m³/h | 63 | 16649 |

ATEX approval according to EN1834

Installation: Depending on the application and size, the spark extinguishers can be installed on the wall or on a worktable using a special holder (incl. magnets, included in delivery scope) or with pipe clamps (please order separately).



Illustration similar

SPARK EXTINGUISHER (mounted on system cover)

| USE | AIR VOLUME | Ø d (mm) | ART. NO. |
|--------|--------------|----------|----------|
| GL 230 | 150-300 m³/h | 63 | 16647 |
| GL 265 | 150-300 m³/h | 63 | 16648 |



Illustration similar

SPARK EXTINGUISHER (mounted on system cover - extraction arm)

| USE | AIR VOLUME | EXTRACTION ARM | ART. NO. |
|--------|--------------|----------------|----------|
| GL 230 | 150-300 m³/h | System 50 | 16699* |
| GL 265 | 150-300 m³/h | System 50 | 16715* |
| GL 265 | 150-300 m³/h | System 75 | 16704* |

*Extraction arm and base tube not included in delivery, please order separately. (See accessories catalog)

ATEX approval according to EN1834

Installation: Spark extinguisher incl. base box for Alsident extraction arm is supplied mounted on system lid.

The base tube of the separately ordered extraction arm can be screwed on directly.

Accessories



FILTER-RUPTURE MONITORING DEVICE

| USE | Ø d (mm) | ART. NO. |
|-----------------|----------|----------|
| GL 230 / GL 265 | 100 | 16651 |



SIGNAL MODULE

| USE | ART. NO. |
|-----------------|----------|
| GL 230 / GL 265 | 16621 |



MACHINE BASE

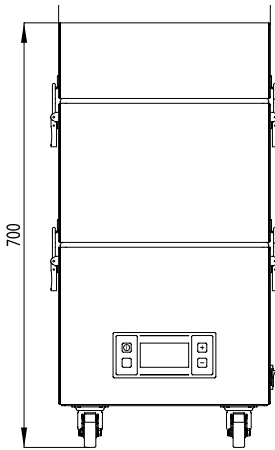
| USE | DIMENSIONS (HxWxD) mm | ART. NO. |
|-----------------|-----------------------|----------|
| GL 230 / GL 265 | 30x550x550 | 16353 |
| GL 230 / GL 265 | 30x550x700 | 16721 |



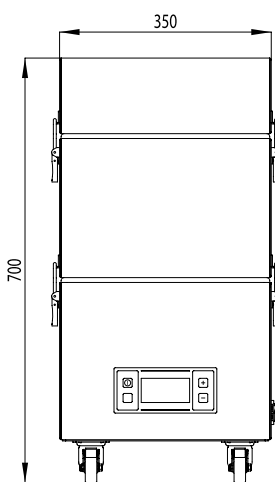
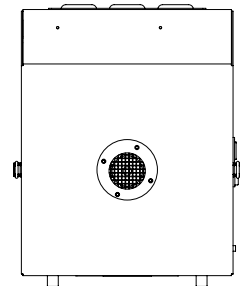
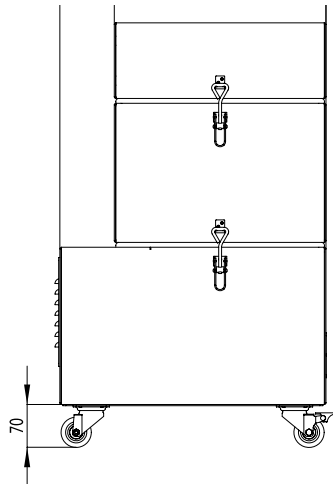
FLOW-RATE MONITORING DEVICE

| USE | Ø d (mm) | ART. NO. |
|-----------------|----------|----------|
| GL 230 / GL 265 | 80 | 16642 |
| GL 230 / GL 265 | 100 | 16643 |

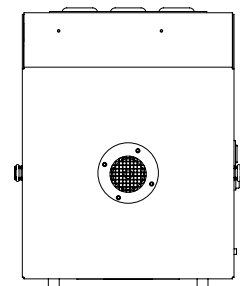
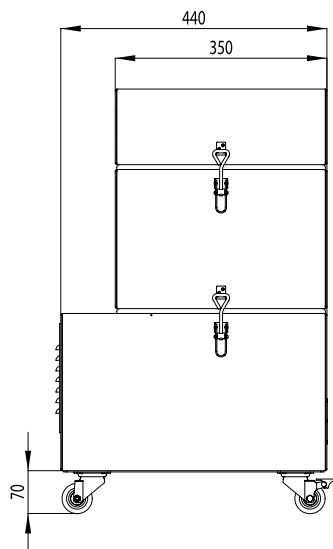
Technical drawings



GL 230 STANDARD

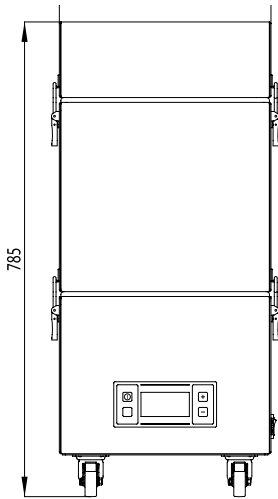


GL 230 A

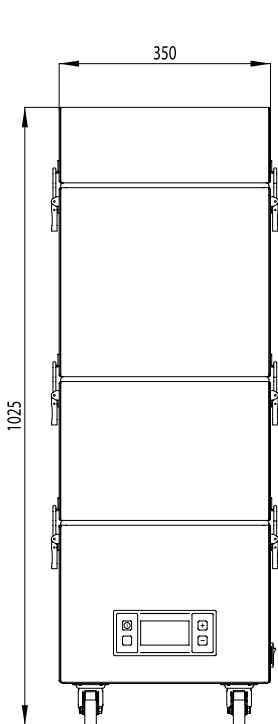
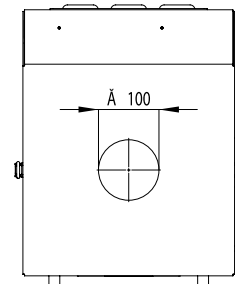
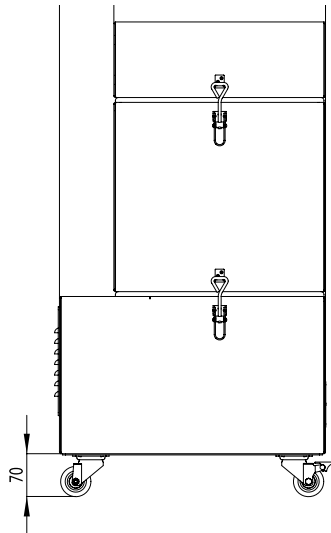


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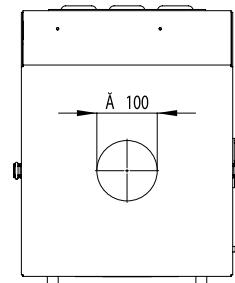
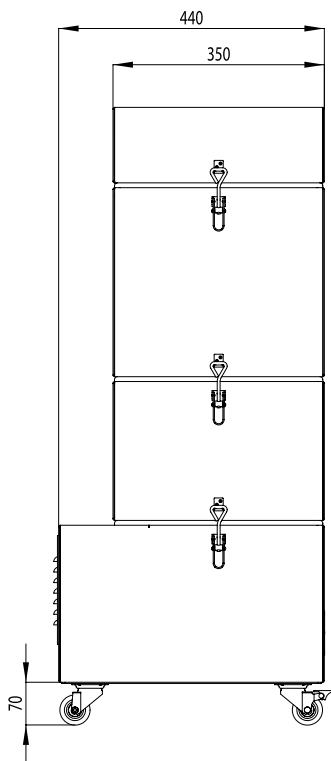
Technical drawings



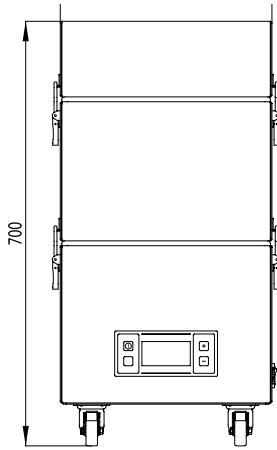
GL 230 Z



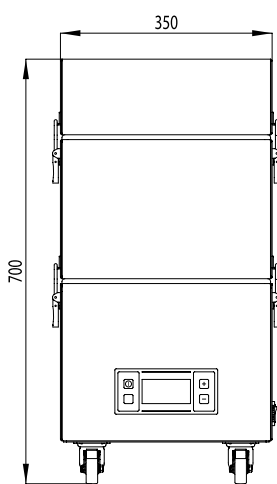
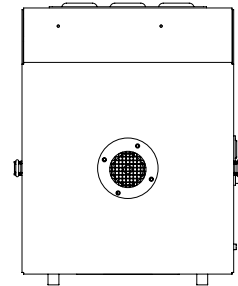
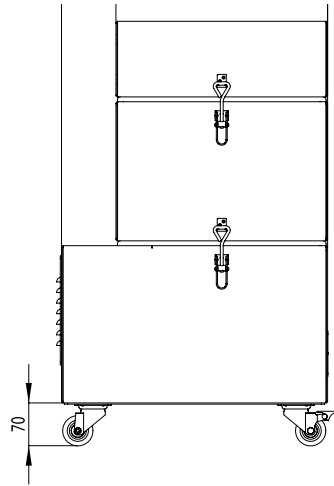
GL 230 ZA



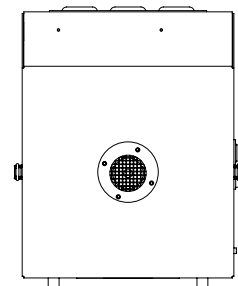
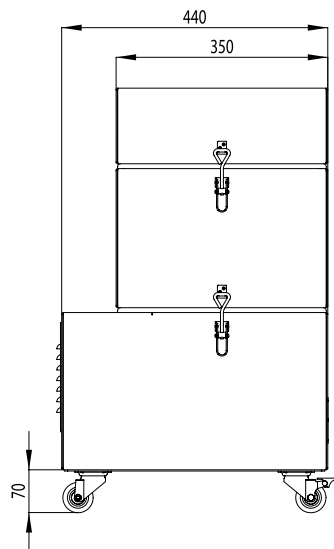
Technical drawings



GL 265 STANDARD

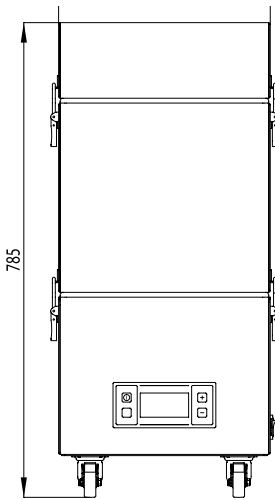


GL 265 A

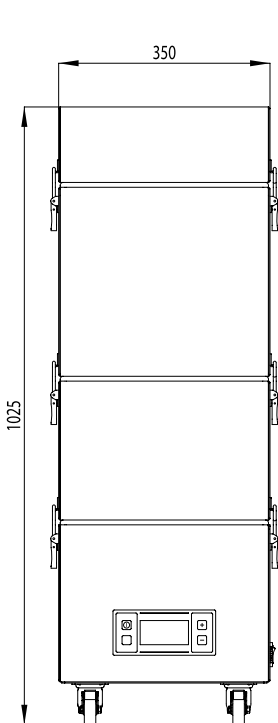
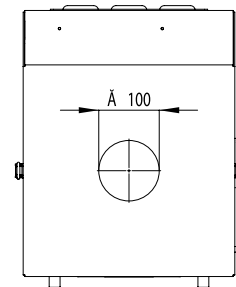
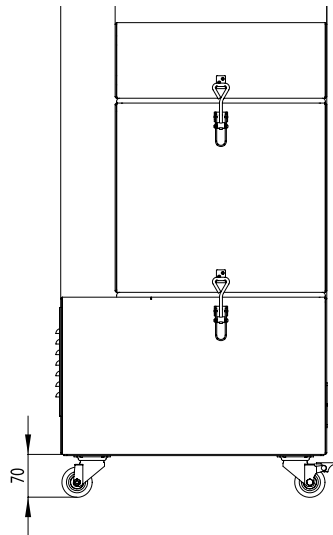


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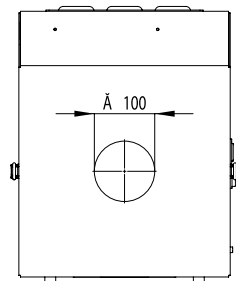
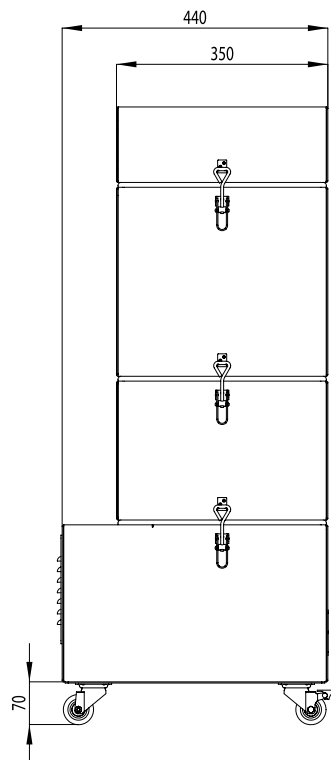
Technical drawings



GL 265 Z



GL 265 ZA



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Further information on the series

