



Safety is for life.™

## PRODUCT INFORMATION



Flameless  
Explosion Venting  
**Q-BOX**

Also suitable  
for outdoor  
applications!

### COST-EFFECTIVE INDOOR EXPLOSION VENTING FOR DUST EXPLOSIONS

The Q-Box guarantees safe explosion venting in production facilities. The flames are instantly extinguished inside the Q-Box by efficient cooling from the metal mesh.

The Q-Box is designed for safe explosion venting of indoor or outdoor plant equipment, such as filters, elevators or silos, used in processes that entail a risk of combustible dust explosions.

### Your Advantages

- Flexible use of the Q-Box permits **process-efficient plant design.**
- **Perfect protection of the surrounding area:** Neither heat, dusts nor a dangerous pressure wave emerge from the vessel – everything stays in the Q-Box.
- **Reduced downtime:** Access to the protected plant does not require a safety interlock (LOTO).
- **Cost-effective alternative to vent ducts:** No running costs for vent ducts and external maintenance, a visual inspection is sufficient.
- **Integrated signaling unit** for reliable monitoring.
- **Flexible solution for indoor and outdoor use.**
- **Simple retrofitting to existing explosion panel installations.**
- **Reduces noise levels.**

**Please note:**

The combination of the Q-Box and isolation systems prevents pressure waves and flames propagating to other parts of the plant.



NFPA Compliant



ATEX  
EC type examination  
certificate no.  
BVS 16 ATEX H 021 X

SIL equivalent SIL 2



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### Technical data\*

|   |  |
|---|--|
| $K_{St}$ -Value                         | ≤ 200 bar × m/s  |
| $P_{max}$                               | ≤ 9 bar  |
| Minimum ignition energy                 | ≥ 3 mJ   |
| Minimum ignition temperature            | ≥ 716 °F (380 °C)  |
| Static response pressure ( $P_{stat}$ ) | 0.1 bar (other pressures available)  |
| Max. red. explosion pressure $P_{red}$  | ≤ 2.0 bar (305 × 610 mm)   |
|   | ≤ 0.7 bar (586 × 920 mm)   |
| Ambient temperature                     | -104 to +140 °F (-40 to +60 °C)  |
| Process temperature                     | -22 to 356 °F (-30 to +180 °C)<br>(higher temperatures available on request) |

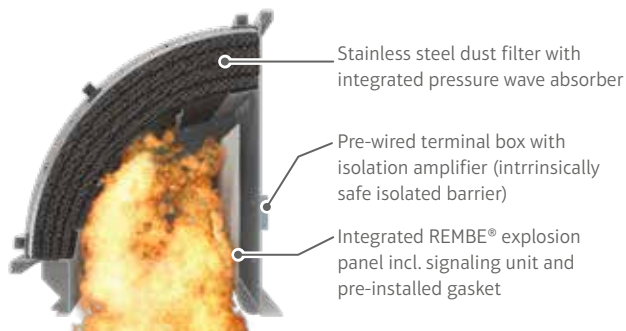
\*Our specialists will be pleased to assist you in finding a solution that matches your specific operating conditions.

### Dimensions and weight

| Q-Box Nominal width<br>[mm] | Height |      | Weight        |              |
|-----------------------------|--------|------|---------------|--------------|
|                             | [mm]   | [in] | [lbs approx.] | [kg approx.] |
| <b>305 × 610</b>            | 500    | 19.7 | 62            | 28           |
| <b>586 × 920</b>            | 780    | 30.7 | 170           | 77           |

## Competitive advantages

- Process-optimized plant layout.
- No external maintenance costs.



Q-Box components.



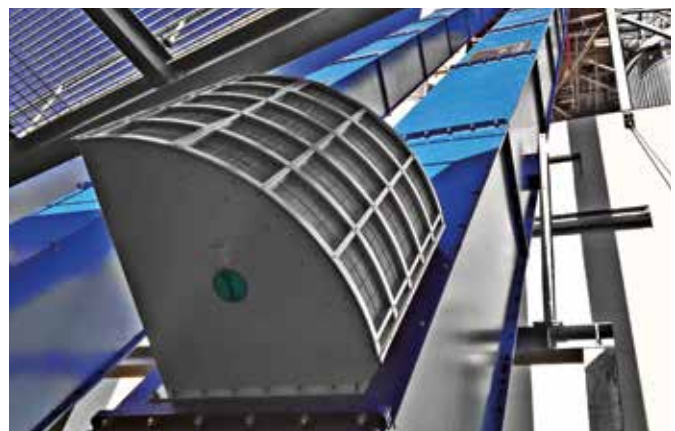
The sanitary cover protects the Q-Box against dust from outside sources.



Explosion venting of a chip bunker using the Q-Box to protect the surrounding infrastructure.



Flameless explosion venting on a grinder machine.



Explosion Safety of a trough chain conveyor using the Q-Box in a biomass power plant.

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