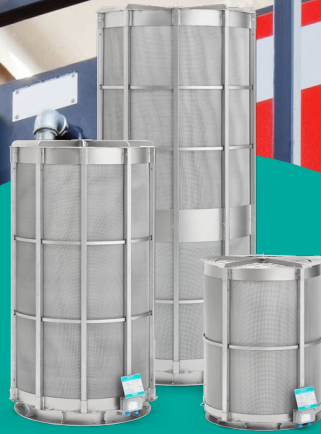




Safety is for life.™

PRODUCT INFORMATION



Flameless explosion venting  
for metal dusts

**Q-ROHR®**

Certified in  
accordance  
with EN 16009,  
Compliant with  
NFPA



Consulting. Engineering. Products. Service.



REMBE® offers the innovative solution



## EXPLOSION SAFETY

Unique challenges with metal dusts

The combustion temperatures and thermal combustion energies of metal dusts far exceed those for other types of dust. In the event of an explosion, the temperature can reach approximately 5400°F (3000°C) and can cause devastating damage when combined with the sudden pressure wave.

Explosion safety for companies in the metalworking industry is difficult and expensive, especially for equipment used indoors. Until recently, most companies in this sector have used wet separators in order to prevent explosions. However, the resulting sludge is not only difficult to handle, but also expensive to dispose of correctly.

## Q-ROHR® – FLAMELESS EXPLOSION VENTING FOR METAL DUSTS

Q-Rohr® is the world's first protective system for flameless explosion venting to be certified for metal dusts in accordance with EN 16009! It is THE solution for indoor explosion safety in the metalworking industry.

Expensive and complicated safety systems are no longer required. Q-Rohr® allows companies to focus once again on finding the optimum plant layout for their specific production processes. Q-Rohr® requires only a quick, visual inspection and no regular maintenance – thus offering on-going cost savings.

### Mechanism

The special stainless steel mesh filter inlet developed by REMBE® cools the hot flame gases (up to 5400°F (3000°C)) extremely efficiently. This reduces the volume of steam ejected and extinguishes the explosion. The stainless steel mesh filter also guarantees that no metal dust exits the vessel. It thus ensures the best possible protection for the environment against explosions and their consequences.

### Important!

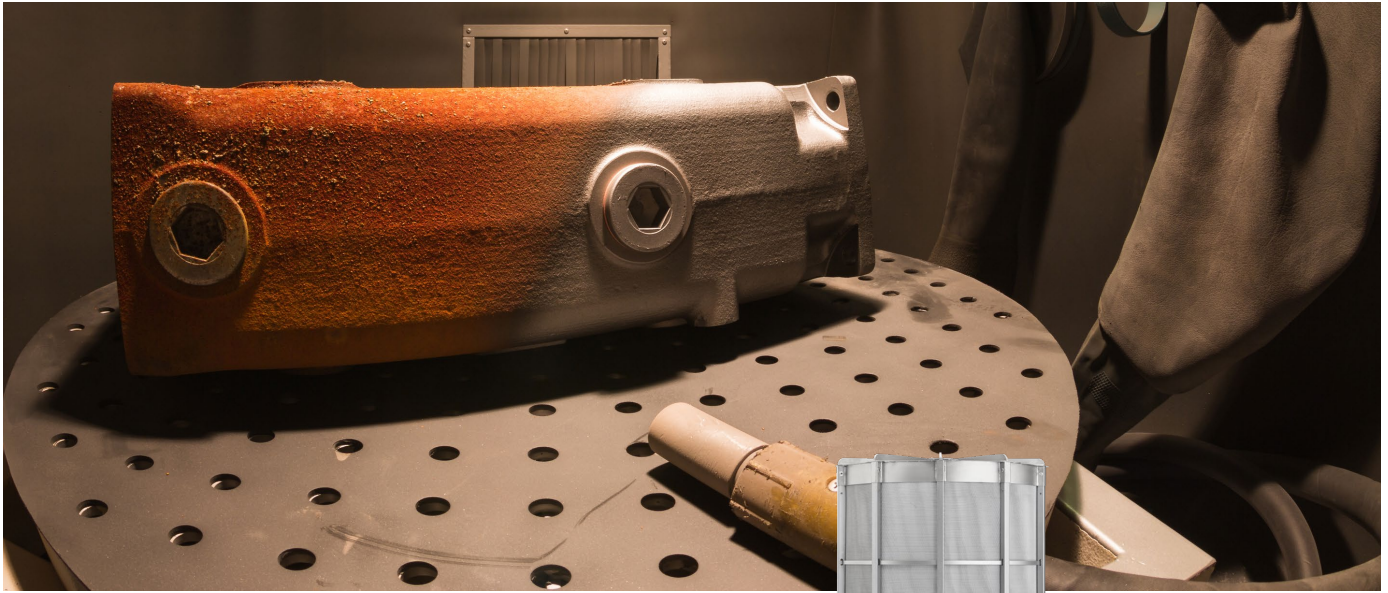
The combination of the Q-Rohr® and isolation systems prevents pressure waves and flames from propagating to other parts of the plant.



Sequence of a metal dust explosion: conventional explosion venting with an explosion vent.



Identical explosion with the Q-Rohr®: no heat generated outside the vessel with only a slight pressure rise and minimal noise volume.



## Your advantages

- **REMBE® is the first manufacturer in the world to be certified for metal dusts.**
- **Maximum protection of the surrounding area.** Guaranteed flame arresting and particulate retention – no hazardous pressure wave effects.
- **The complete production process remains in the building.**
- **No running costs** for the disposal of sludges (wet separator) and fillings or for external maintenance. A visual inspection is sufficient.
- The Q-Rohr® is a **flexible solution** – it can even be used in the middle of your production. Proximity to an external wall is not required.
- **Integrated signaling unit** for reliable monitoring.
- **Reduces the noise level and pressure rise typically associated** with explosions to acceptable levels.



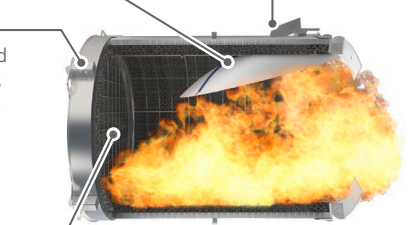
Q-Rohr® is available in sizes DN 200 to DN 800.

Integrated REMBE® explosion vent incl. signaling unit and pre-installed gasket

Pre-wired junction box with isolation amplifier (intrinsically safe isolated barrier)

Explosion-proof housing structure with riveted retention rails, which remains stable even during extremely dynamic explosions

Stainless steel dust filter with integrated pressure wave absorber



Q-Rohr® components.

## Your competitive advantages

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

## Certification



Meets the requirements of NFPA 68



Certified in accordance with EN 16009 EN 14797

Inspection certificate EN 10204-3.1



ATEX EC type examination certificate no. IBExU 13 ATEX 2085 X IBExU 13 ATEX 2086 X IBExU 14 ATEX 2027 X

## Technical data\*

|  | For silicon, iron and steel dusts (Q-Rohr®-3-6T) | For aluminium dusts (Q-Rohr®-3-6T-AL) |
|--|--|---------------------------------------|
| Burst pressure $P_{stat}$              | 0.1 bar at 71°F (22°C)                           | 0.1 bar at 71°F (22°C)                |
| Max. red. explosion pressure $P_{red}$ | ≤ 0.5 bar  | ≤ 0.8 bar                             |
| Max. $K_{St}$ value                    | ≤ 200 bar × m/s                                  | ≤ 300 bar × m/s                       |
| Operating temperature                  | 14 to 446°F (-10 to +230°C)                      | 14 to 446°F (-10 to +230°C)           |

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

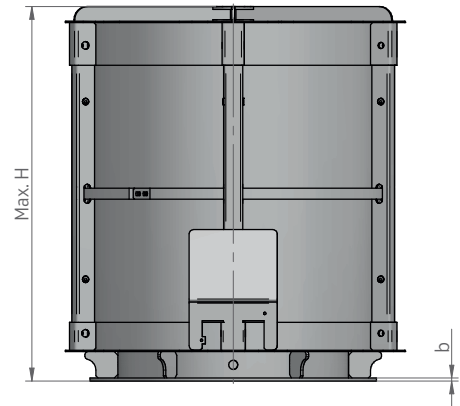
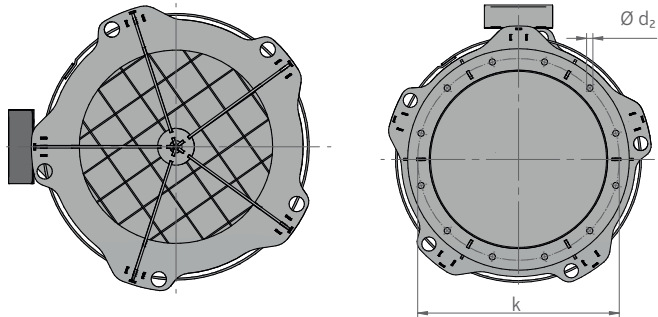
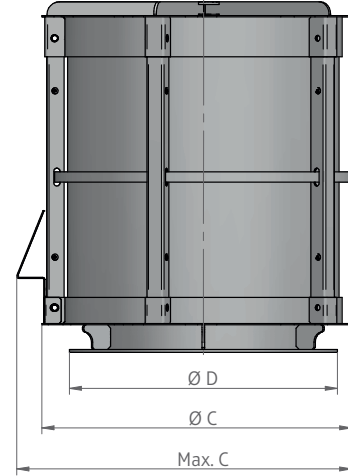
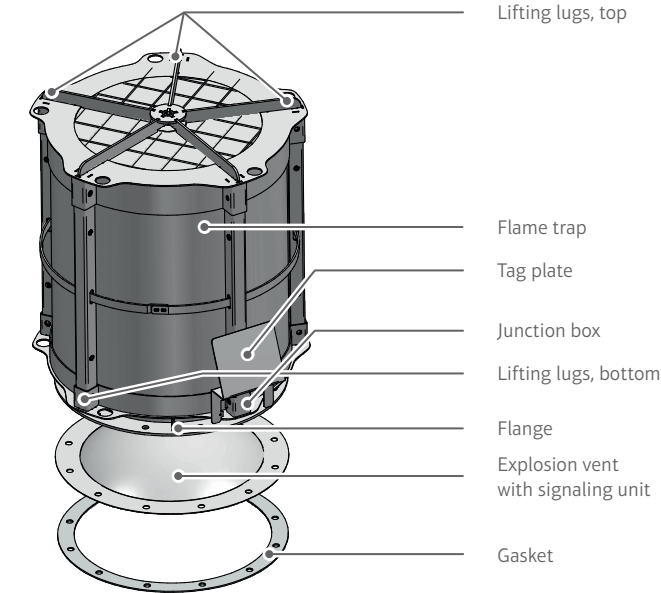
You can find detailed information and contact details for enquiries relating to Q-Rohr® at [www.rembe.us](http://www.rembe.us). Or just give us a call at: T +1 704 716 7022, [info@rembe.us](mailto:info@rembe.us).





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## PRODUCT INFORMATION



### Technical data

| DN | Max. H |       | Max. C |       | Ø C  |       | Ø D  |       | k    |       | Ø d <sub>2</sub> |      | b    |       | No. of bolts | Recommended bolts | Weight |      |     |
|----|--------|-------|--------|-------|------|-------|------|-------|------|-------|------------------|------|------|-------|--------------|-------------------|--------|------|-----|
|    | [in]   | [mm]  | [in]   | [mm]  | [in] | [mm]  | [in] | [mm]  | [in] | [mm]  | [in]             | [mm] | [in] | [mm]  |              |                   | [lbs]  | [kg] |     |
| 8  | 200    | 23.62 | 600    | 16.14 | 410  | 13.78 | 350  | 10.55 | 268  | 9.57  | 243              | 0.33 | 8.5  | 0.157 | 4            | 8                 | M8     | 62   | 28  |
| 12 | 300    | 23.62 | 600    | 19.69 | 500  | 17.72 | 450  | 15.35 | 390  | 13.98 | 355              | 0.43 | 11   | 0.197 | 5            | 12                | M8     | 77   | 35  |
| 16 | 400    | 35.43 | 900    | 23.62 | 600  | 21.65 | 550  | 19.69 | 500  | 17.44 | 443              | 0.51 | 13   | 0.197 | 5            | 16                | M10    | 119  | 54  |
| 20 | 500    | 35.43 | 900    | 27.56 | 700  | 25.59 | 650  | 23.62 | 600  | 21.42 | 544              | 0.51 | 13   | 0.197 | 5            | 20                | M10    | 165  | 75  |
| 24 | 600    | 55.12 | 1400   | 31.89 | 810  | 29.92 | 760  | 27.56 | 700  | 25.43 | 646              | 0.51 | 13   | 0.197 | 5            | 20                | M10    | 331  | 150 |
| 28 | 700    | 74.80 | 1900   | 35.83 | 910  | 33.86 | 860  | 31.50 | 800  | 29.61 | 752              | 0.51 | 13   | 0.197 | 5            | 28                | M10    | 529  | 240 |
| 32 | 800    | 86.61 | 2200   | 39.76 | 1010 | 37.80 | 960  | 35.43 | 900  | 33.62 | 854              | 0.51 | 13   | 0.197 | 5            | 28                | M10    | 672  | 305 |

Other dimensions available on request.

Consulting. Engineering. Products. Service.

REMBE<sup>®</sup> Inc.

9567 Yarborough Road | Fort Mill, SC 29707, USA | T +1 704 716 7022 | F +1 704 716 7025  
info@rembe.us | www.rembe.us