



Safety is for life.™

PRODUCT INFORMATION



Flameless explosion venting
for metal dusts

Q-ROHR®

Certified in
accordance with
EN 16009



Consulting. Engineering. Products. Service.



REMBE®
offers the
innovative
solution



EXPLOSION SAFETY

Special challenges with metal dusts

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

Explosion safety for companies in the metalworking industry is therefore difficult and expensive, especially for machines 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 cost-efficient 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 3000 °C (5400 °F)) extremely efficiently. This reduces the volume of gas ejected and extinguishes the explosion. The stainless steel mesh filter also guarantees that no burned or unburned metal dusts exit the vessel. It thus ensures the best possible protection for the environment against explosions and their consequences.

Please note!

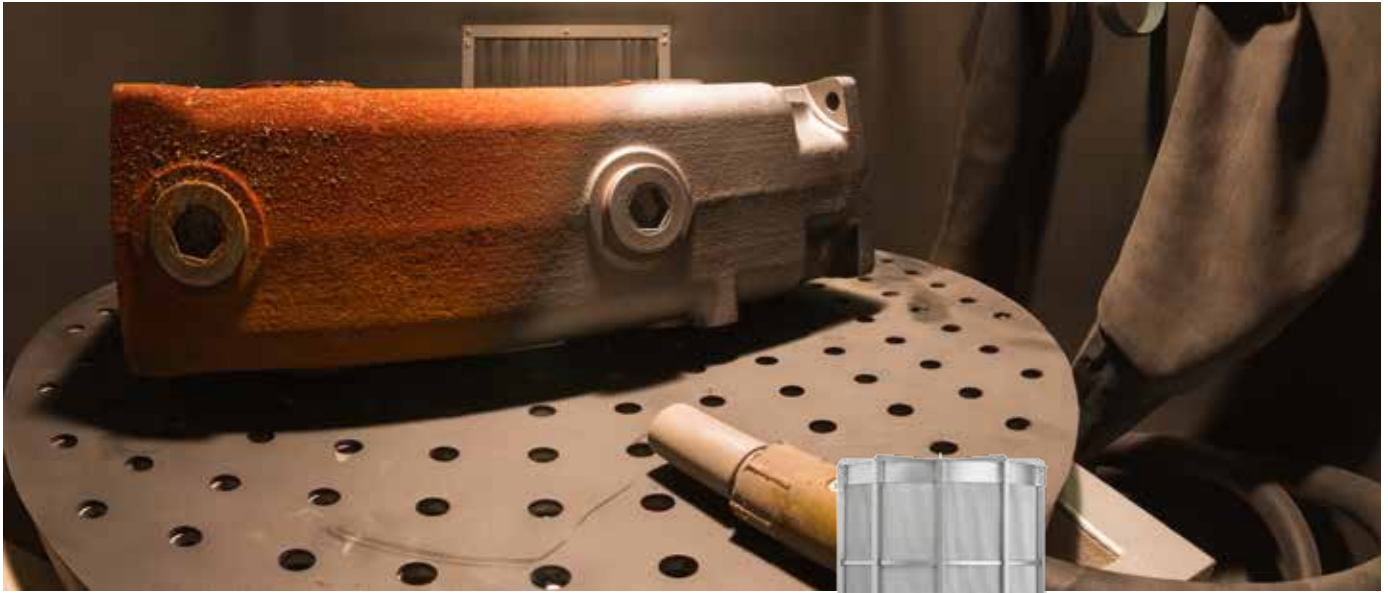
The combination of the Q-Rohr® and isolation systems prevents pressure waves and flames propagating to other parts of the plant.



Thermographic investigation of a 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.**
- **Perfect 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 halls. Proximity to an external wall is not required.
- **Integrated signalling unit** for reliable monitoring.
- **Noise level and rise of pressure typically associated with explosions** are greatly reduced to an acceptable harmless level.



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

Made in Germany

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

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

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-optimised plant layout**
- **No external maintenance costs**

Certification



Meets the requirements of NFPA 68



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 22 °C (71 °F)	0.1 bar at 22 °C (71 °F)
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	- 10 to + 230 °C (14 to 446 °F)	- 10 to + 230 °C (14 to 446 °F)

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

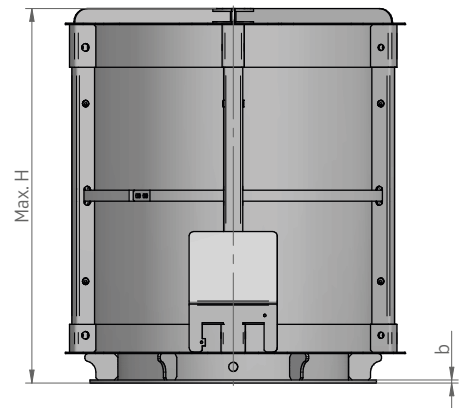
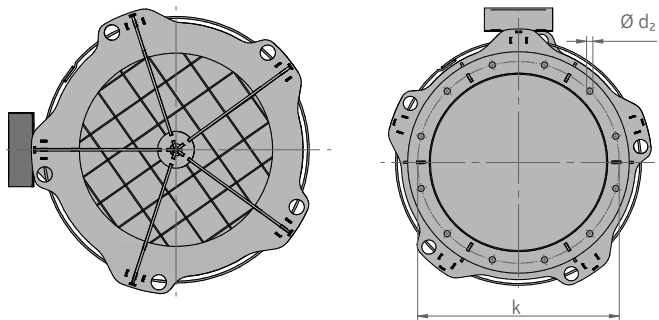
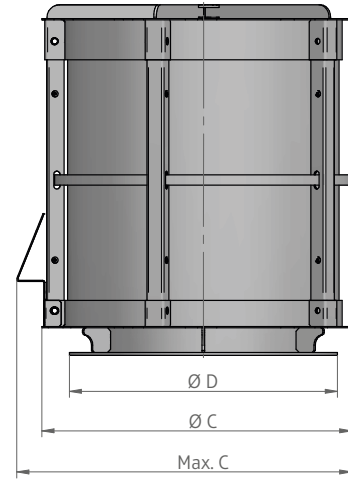
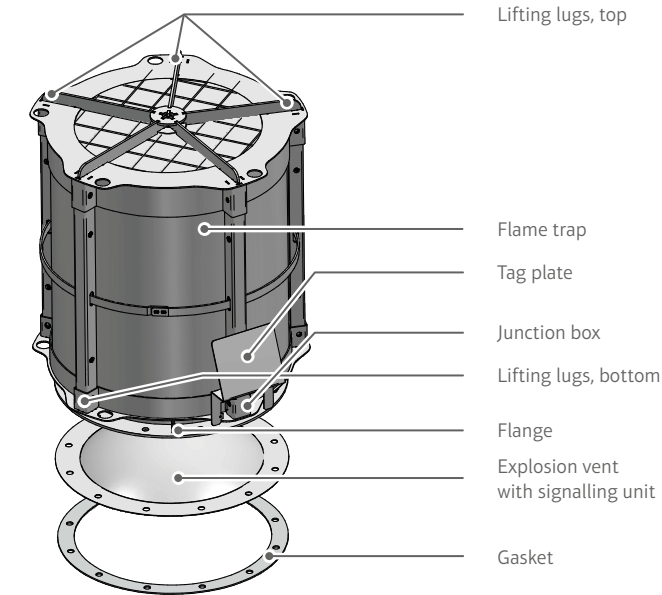
You can find detailed information and contact details for enquiries relating to Q-Rohr® at www.rembe.de. Give us a call on: T: +49 2961 7405-0 or contact us via email: info@rembe.de.





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Technical data

DN [mm]	Max. H [mm]	Max. C [mm]	Ø C [mm]	Ø D [mm]	k [mm]	Ø d ₂ [mm]	b [mm]	No. of bolts	Recommended bolts	Weight [kg]
200	600	410	350	268	243	8.5	4	8	M8	28
300	600	500	450	390	355	11	5	12	M8	35
400	900	600	550	500	443	13	5	16	M10	54
500	900	700	650	600	544	13	5	20	M10	75
600	1400	810	760	700	646	13	5	20	M10	150
700	1900	910	860	800	752	13	5	28	M10	240
800	2200	1010	960	900	854	13	5	28	M10	305

Other dimensions available on request.

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REMBE® GmbH Safety+Control

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