Sustainable flameless venting of dust explosions

Like its two previous models, the new Q-Box® R3leaf™ guarantees safe explosion venting in manned areas. The flames are instantly quenched inside the Q-Box® R3leaf™ by the high-efficient cooling effect. The Q-Box® R3leaf™ is designed for dust explosion-prone applications of low design strength and the need for large vent areas such as required for filters, dryers, sifters, elevators or silos. The Q-Box® R3leaf™ complements the product line of REMBE® flameless explosion venting devices as is it optimised in terms of performance and sustainability. Based on systematic development the venting efficiency the maximum protected volume as well as the K_{St} value could be improved significantly. Hence, less flameless explosion venting devices are required, especially for larger vessels.

The main focus during the development of the Q-Box® R3leaf™ was on sustainability and the following core question: How can we truly challenge the status "Q(uo)"? Responsibility and respect for our natural resources drove us to develop the Q-Box® R3leaf™ entirely in stainless steel and dispensed with stains, paint, coatings or welded seams. This enables simplified recycling and significantly reduces the logistical effort. In other words, the semi-finished parts are supplied compact, space-saving and individually, and allow to be assembled at all REMBE® satellites worldwide. In total, the same amount of Q-Box® require less storage space, less mileage and cause less CO_2 emissions.

Advantages

- ✓ Proven reliability and safety in a new, more efficient and sustainable design
- ✓ Maximum process efficiency for the protected plant due to the flexible use
- ✓ Perfect protection for people, the environment and the plant
- ✓ Economical alternative to vent ducts
- ✓ Maximum reduction in TCO (total cost of ownership) thanks to low maintenance requirements
- ✓ Long service life due to increased corrosion resistance
- ✓ Sustainability through product design, logistics and maximum venting efficiency
- ✓ Easier recycling compared to painted steel
- ✓ No false activations

Technical data

Static response pressure P_{stat}	0,1 bar g
Process temperature	-30 °C to +180 °C
Ambient temperature	-40 °C to +60 °C
Dimensions*	305x610, 586x920
Dimensions (w x d x h)	305x610: 592x689x533 586x920: 1044x998x948
Housing material	stainless steel
K_{St} value	up to 300 bar × m/s
Dust explosion class	St 1, St 2
Weight	305x610: ca. 45 kg 586x920: ca. 118 kg
ATEX category	II D

* Other dimensions in preparation.

Certification

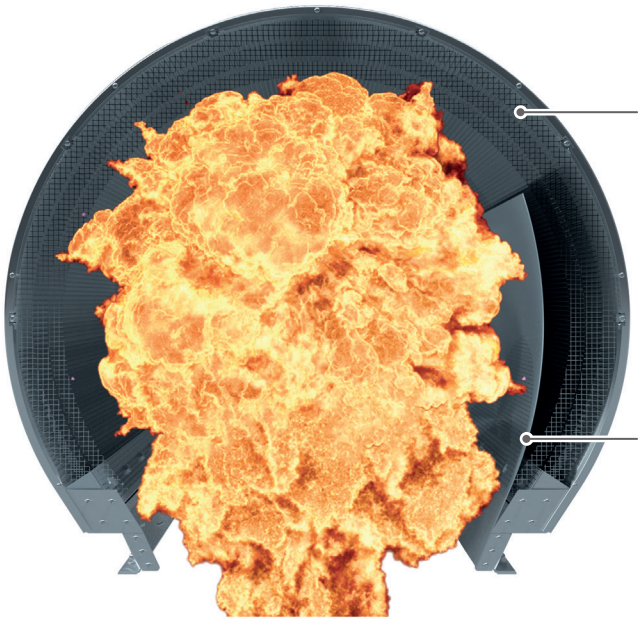
NFPA®
Meets the requirements of **NFPA 68**

ATEX
EU-type examination certificate no.
BVS 23 ATEX H 033 X

Certified in accordance with
EN 16009
EN 14797

360° sustainability

90% reduction of chemicals
90% reduction of transport + logistics
up to **90%** venting efficiency
up to **90%** reduction of carbon footprint



Stainless steel flame quenching element with integrated pressure wave absorber

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

Q-Box® R3leaf™ cross section

Visit rembe.de for detailed information and your personal contact.

REMBE® GmbH Safety+Control
Gallbergweg 21 | 59929 Brilon, Germany | T +49 2961 7405-0
hello@**rembe.de**

REMBE® Sustainability:
Not only do we provide professional safety for your plant and machinery and protect human life, but our products also avoid harmful emissions sustainably eliminate leaks and/or reduce noise pollution. You can find more information on sustainability at rembe-green.de.

Releaf line