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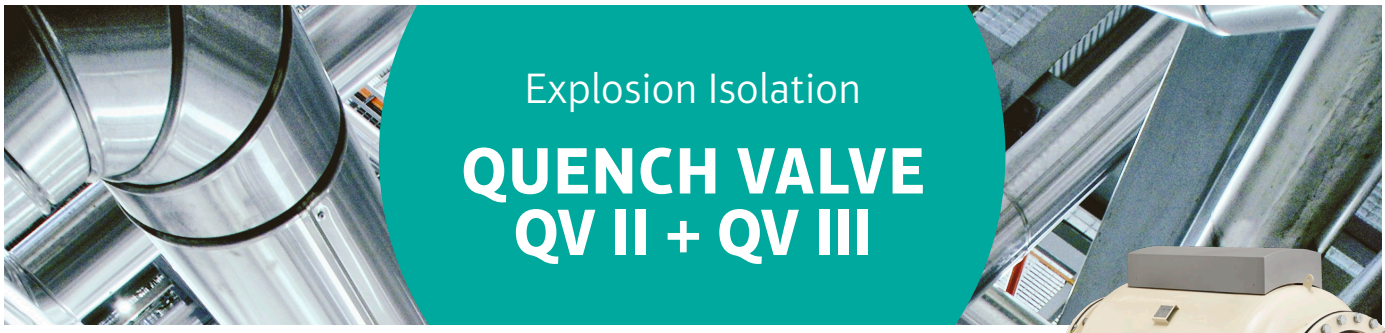
PRODUCT INFORMATION



Explosion Isolation

QUENCH VALVE QV II + QV III

QUENCH VALVES FOR SPACE-SAVING BI-DIRECTIONAL ISOLATION

Quench valves QV II and QV III are isolation devices. This protective system prevents an explosion pressure wave and flame propagating via connecting pipes into other equipment sections or plant areas. For this reason the quench valve is connected to a controller (EXKOP® Express or EXKOP® TriCon)*. In the case of an explosion, the controller receives a trigger signal (e.g. from the signalling unit of the Q-Rohr® or an explosion vent, from a pressure switch or spark detector) and activates the connected quench valves. These close within a few milliseconds and thus prevent the explosion from spreading to adjacent plant components. After being triggered, the quench valves can be put back in operation once again at the touch of a button.

Additional functions:

- Spark arrester (e.g. between a mill and the product filter)
- Overpressure limiter (e.g. between a silo vehicle and the silo)

Made in Germany

Your advantages

- **Compact design** for flexible integration into the production process.
- **High level of safety** due to very rapid closing times.
- **Returns to operation immediately** after triggering.
- **Fail Safe mechanism** automatically closes the valve if the power supply fails or the valve is manipulated.

*Detailled information concerning controllers can be found in the related product information.

ATEX
EC type examination certificate no.
FSA 04 ATEX 1537 X
FSA 15 ATEX 1659 X

Certified in accordance with EN 15089

Technical data*		QV II		QV III
Diameter nominal**		DN 80 – DN 200	DN 250	DN 300 – DN 600
Housing material		Alu, painted (RAL 1015)	St 37.2, painted (RAL 1015)	
Flanges		acc. to EN 1092-1 Type 11 (PN 10)***		
Operating limits	Medium	organic and chemical dusts		
	K_{St}	≤ 300 bar × m/s	≤ 200 bar × m/s	≤ 300 bar × m/s
	P_{max}	≤ 10 bar		
	MIE	≥ 3 mj		
	P_{red}	≤ 2.0 bar	≤ 1.0 bar	≤ 2.0 bar
	Allowable flow rate	≤ 30 m/s		
	ATEX category (indoor/outdoor)	1D/3D		
Suitable for use in food processing industry		Yes		
Ambient temperature		+ 5 to + 60 °C****		
Installation position		Any		
Power supply		24 VDC from EXKOP® II controller		
Compressed air supply		6.0 bar gauge pressure from system network		
Compressed air connection		8 mm (Festo)		
Protection type		IP 65		

*Our specialists will be pleased to assist you in finding a solution that matches your specific operating conditions.
**Other nominal diameters available on request.
***Replaces DIN 2632, PN 10
****Other ambient temperature available on request.

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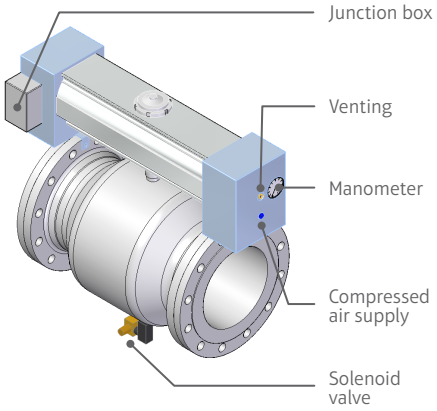

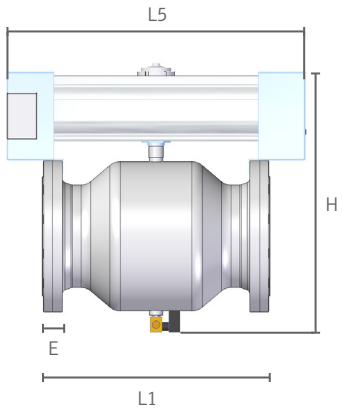

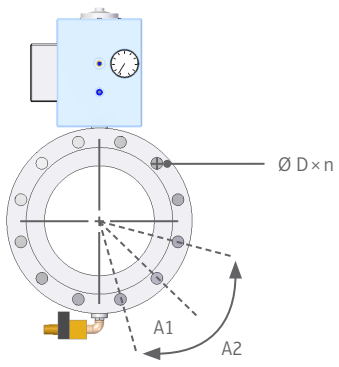

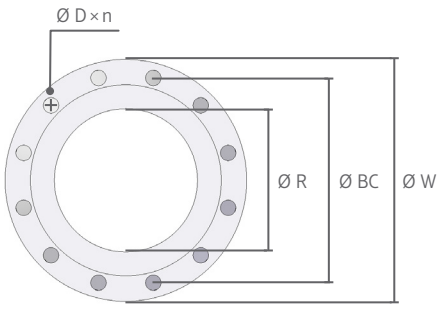

Flange diameter

Dimensions QV II

		EXKOP® QV II - 3	EXKOP® QV II - 4	EXKOP® QV II - 5	EXKOP® QV II - 6	EXKOP® QV II - 8	EXKOP® QV II - 10
Diameter nominal	**DN**	80	100	125	150	200	250
Length L1	**[mm]**	228	282	350	420	555	610
Length L5	**[mm]**	400	400	400	400	650	800
Height H	**[mm]**	520	554	600	652	742	856
E	**[mm]**	29	35	39	43	60	49
Ø D × n	**[mm]**	18 × 8	18 × 8	18 × 8	22 × 8	22 × 8	22 × 12
A1		22.5°	22.5°	22.5°	22.5°	22.5°	15°
A2		45° × 8	45° × 8	45° × 8	45° × 8	45° × 8	30° × 12
Ø R	**[mm]**	80	100	120	145	190	240
Ø BC	**[mm]**	160	180	210	240	295	350
Ø W	**[mm]**	200	220	250	285	340	395
Weight	**[kg]**	13	18	26	35	56	130

Other dimensions available on request.

Mounting distances for QV II with St1

Diameter nominal	DN 80 – DN 200	DN 250
Min. mounting distance	6	7
Max. mounting distance	20	8

Mounting distances for QV II with St2

Diameter nominal	DN 80 – DN 200	DN 250
Min. mounting distance	8	on request
Max. mounting distance	20	on request

ATEX
EC type examination certificate no.
FSA 04 ATEX 1537 X

Certified in accordance with EN 15089

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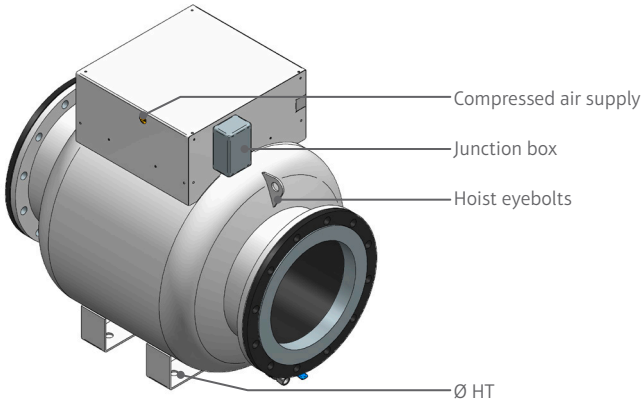

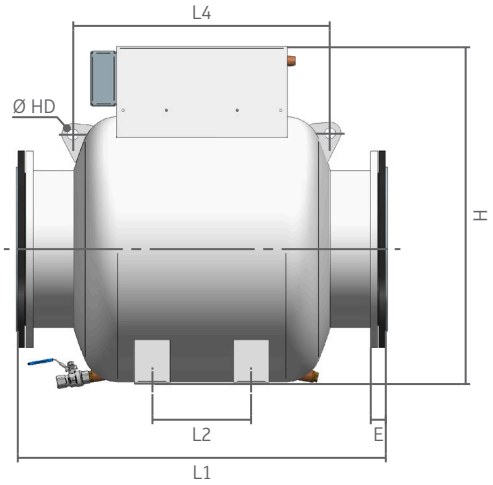

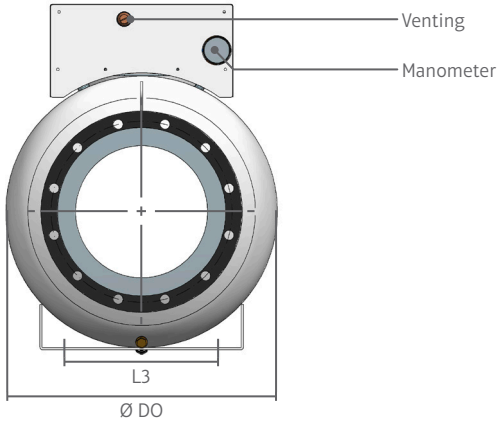

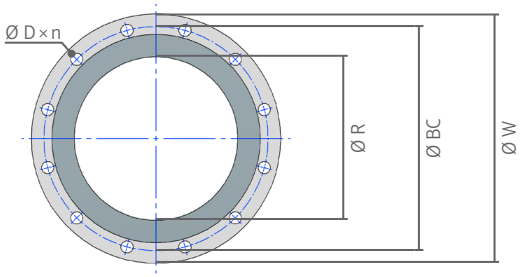

Flange diameter

Dimensions QV III

		EXKOP® QV III - 12	EXKOP® QV III - 16	EXKOP® QV III - 20	EXKOP® QV III - 24
Diameter nominal	**DN**	300	400	500	600
Ø HT	**[mm]**	22	22	22	22
Ø HD	**[mm]**	25	25	25	25
Length L1	**[mm]**	825	1125	1370	1730
Length L2	**[mm]**	224	500	679	971
Length L3	**[mm]**	340	400	450	450
Length L4	**[mm]**	580	640	1035	1333
Height H	**[mm]**	780	930	1080	1180
E	**[mm]**	45	45	45	45
Ø DO	**[mm]**	600	750	900	1000
Ø D × n	**[mm]**	22 × 12	26 × 16	26 × 20	30 × 20
Ø R	**[mm]**	292	392	492	592
Ø BC	**[mm]**	400	515	620	725
Ø W	**[mm]**	445	565	670	780
Weight	**[kg]**	194	391	605	798

Other dimensions available on request.

Mounting distances for QV III with St1

Diameter nominal	DN 300	DN 400 – DN 600
Min. mounting distance	7	8
Max. mounting distance	20	20

Mounting distances for QV III with St2

Diameter nominal	DN 300	DN 400 – DN 600
Min. mounting distance	7	8
Max. mounting distance	20	12

ATEX
EC type examination certificate no.
FSA 15 ATEX 1659 X

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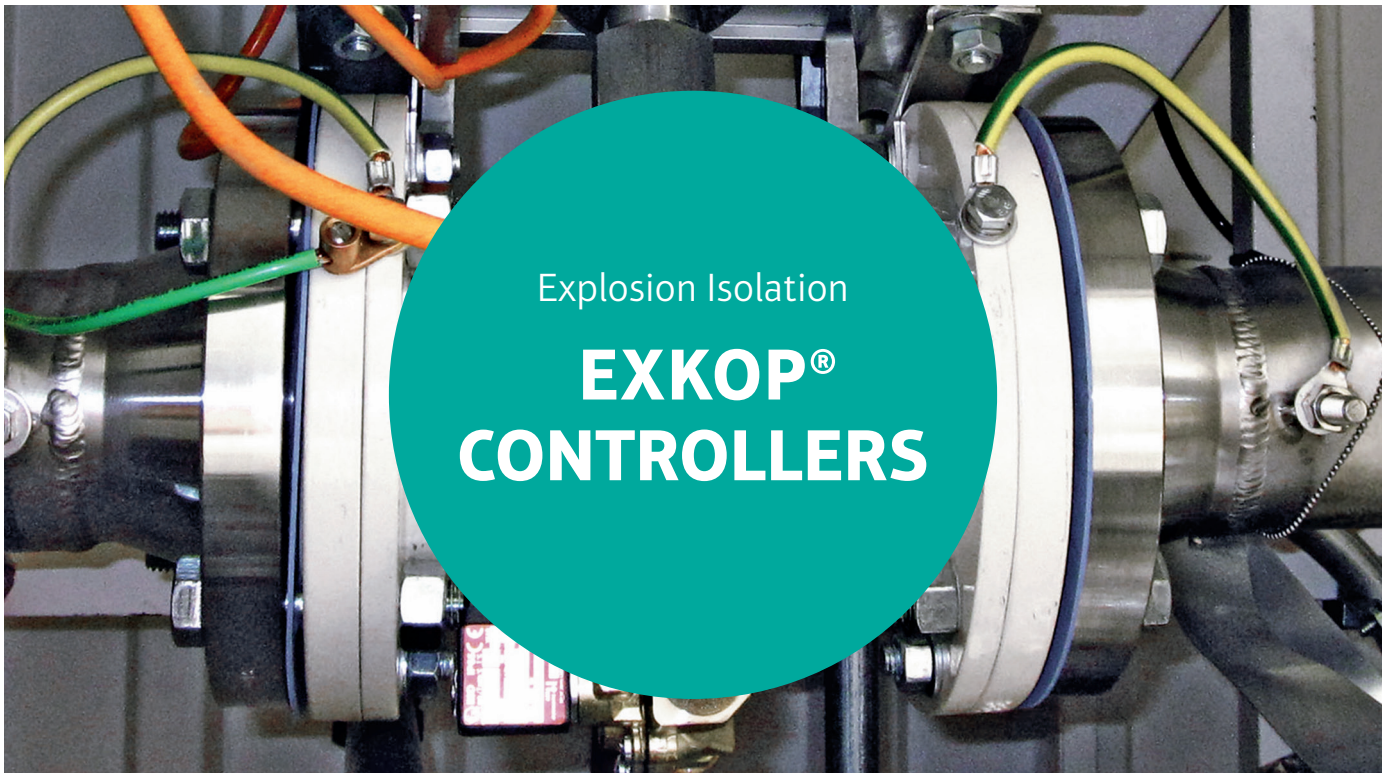

Explosion Isolation

EXKOP® CONTROLLERS

EXKOP® CONTROLLERS FOR VARIOUS ISOLATION SYSTEMS

Applications

In the case of an explosion, the EXKOP® controllers receive a trigger signal (e.g. from the signalling unit of the Q-Rohr®, an explosion vent, from a pressure sensor or IR-Flame detecor) and activate the connected isolation systems which prevents an explosion from propagating.

Certified in accordance with EN 15089

ATEX
EC type examination certificate no.
FSA 04 ATEX 1537 X
FSA 15 ATEX 1659 X
GEX 19 ATEX 1003X

Your advantages

EXKOP® TriCon	EXKOP® Express
• **Fail-safe, compact control centre** for the QV II Quenchvalve. • Developed for **simplified commissioning** of small applications.	• **One controller for all isolation systems** (Quench valves QV II and QV III, Q-Bic™ as well as slide valves RSV and REDEX® Slide). • **Self-monitoring safety electronics with operating data storage up to 100.000 events**. • **Compatible with REMBE® iQ.** • **System status and clear messages reported immediately via the touch panel (optional).** • **Online remote access possible (optional).**

Made in Germany

iQ Safety Cockpit™

You can find detailed information and contact details for enquiries relating to EXKOP® controllers 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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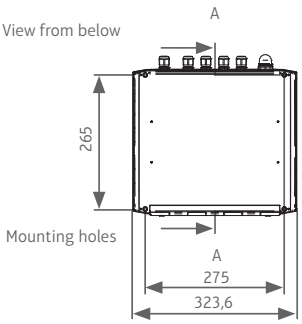
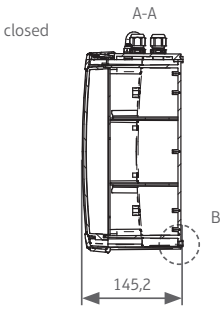
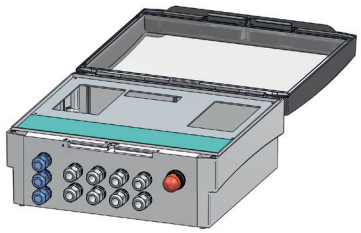
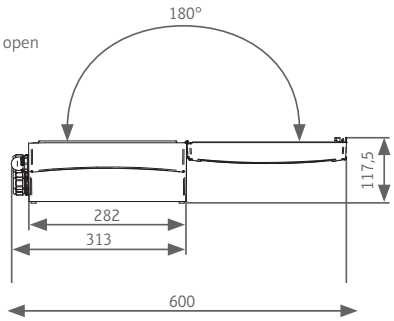
PRODUCT INFORMATION

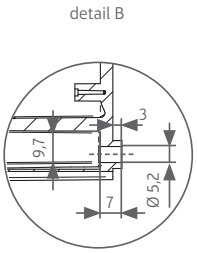
EXKOP® TriCon











Technical data*

	EXKOP® TriCon	EXKOP® Express
EC type examination certificate	FSA 15 ATEX 1660 X	GEX 19 ATEX 1003X
Supply voltage	110 V AC/60 Hz – 230 V AC/50 Hz	110 V AC/60 Hz – 230 V AC/50 Hz**
Max. no. of connectable detectors (lines)	3	2 to 36 (x3)
Isolation systems	QV II	QV II, QV III, Q-Bic™, RSV, REDEX® Slide
Max. no. of connectable isolation units	3	Depends on the special application
Power consumption	ca. 150 W	Depends on the special size
Potential-free relay contacts	4 (max. 250 V, 6A)	from 4 to 64
Wire cross-section (fine wire with ferrule)	0,5 – 0,75 mm²	0,5 – 1,5 mm²
Ambient temperature	0 – 50 °C (32–122 °F)	0 – 50 °C
Protection type	IP 65	IP 54
ATEX category	Zone-free	Zone-free
Housing material	Polycarbonate housing with lockable transparent front	Sheet steel housing with powder-coated front
Dimensions (W × H × D)	ca. 324 × 313 × 145 mm	Depending on the number of detectors and decoupling systems
Weight	ca. 4 kg	Depending on the number of detectors and decoupling systems
Remote access	-	optional
Touch Panel	-	available

*Our specialists will be pleased to assist you in finding a solution that matches your specific operating conditions.
**Depends on the size of the controller.

EXKOP® TriCon

EXKOP® Express

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REMBE® GmbH Safety+Control

Gallbergweg 21 | 59929 Brilon, Germany | T +49 2961 7405-0 | F +49 2961 50714
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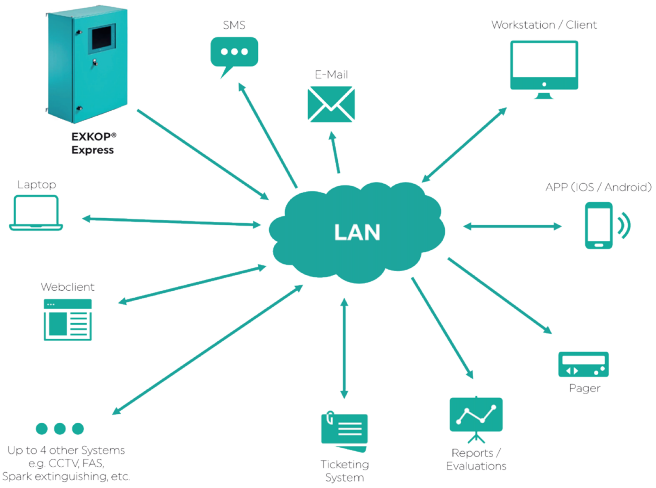
PRODUCT INFORMATION

REMBE® iQ SAFETY COCKPIT™ – SAFETY AT A GLANCE

Digitisation is becoming increasingly important in large-scale industrial applications. Even though the autonomous protective systems and safety accessories from REMBE® operate completely independently and control all safety-related plant states, the interface to the operator is often a weakness. Is it really clear to every plant operator what to do in the event of a disruption or an explosion, which safety-related or key operational initial measures are to be initiated and who is to be informed?

With the iQ Safety Cockpit™, REMBE® offers a system to ensure that plants can be operated more safely and more reliably in the future. In addition to the system statuses, which can be monitored in real time, if desired, even mobile from anywhere in the world, the plant operator on site is relieved of the pressure to initiate the important and correct first steps.



Applications

The REMBE® iQ Safety™ can be used in addition to the process display in the control centre or another manned position. In the event of a system disruption or explosion event, the operator can be instructed, in a targeted manner, using pre-defined and individually plant-configured applications and process scenarios according to the emergency management procedures.

Enhanced mechanism

Since the REMBE® iQ Safety Cockpit™ can be used with any analogue or digital signal, there are almost unlimited possibilities for use. In additon to the autonomous protective systems such as active explosion isolation systems or safety accessories such as the REMBE® NIMU for overpressure rupture discs, GreCon spark extinguishing systems, camera systems or even fire detectors can be combined and connected to the cockpit: Safety at a glance!

Your advantages

- **Optimal personal and plant safety** through direct notification in case of a plant disruption to the desired communication medium.
- **Quick response time** by a prepared emergency management.
- **Reduced downtime** due to optimised and targeted determination of the cause.
- **Practical implementation** in any plant area thanks to the customised solutions.
- **Continuous optimisation** of your processes through detailed documentation and evaluation of all results.

Made in Germany

You can find detailed information and contact details for enquiries relating to the REMBE® iQ Safety Cockpit™ 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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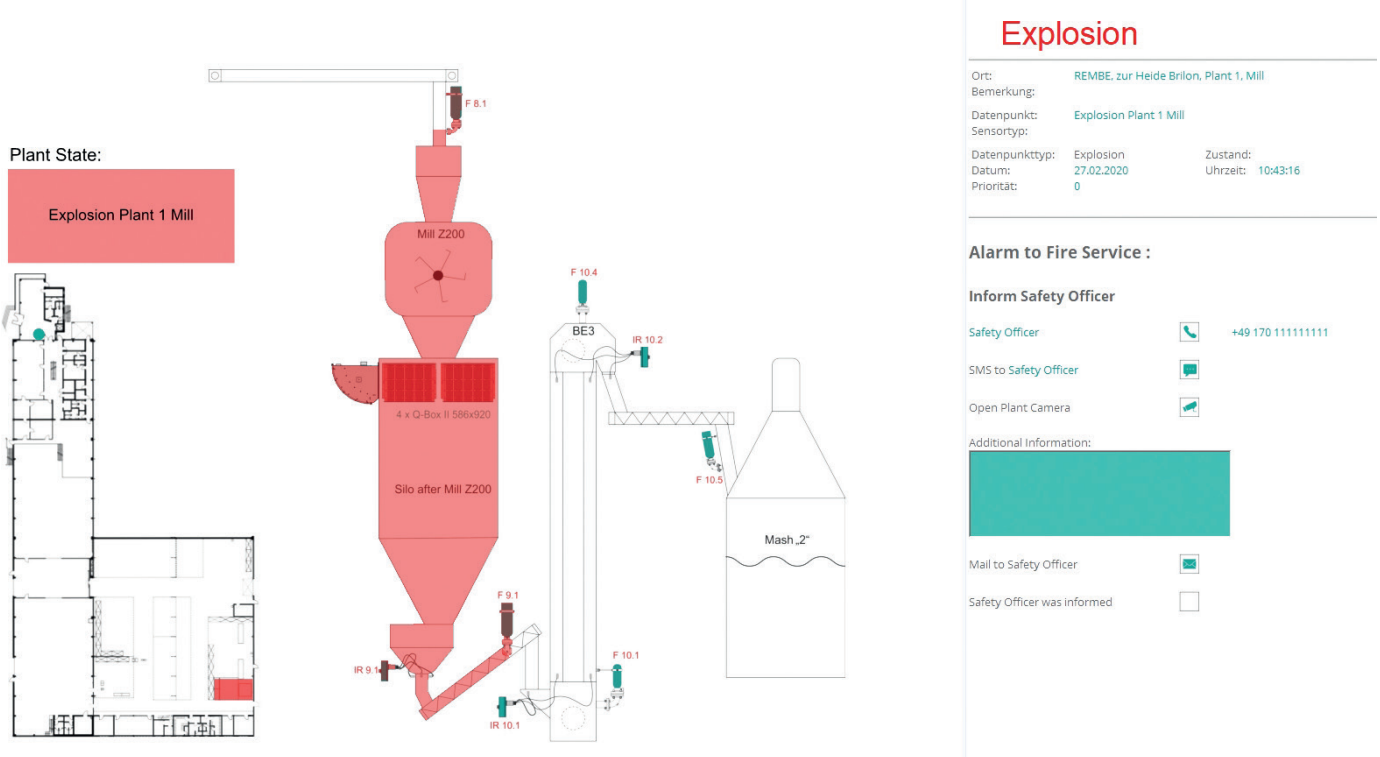
PRODUCT INFORMATION

Visualisation of the plant monitoring with the REMBE® iQ Safety Cockpit™

Monitoring the plant condition in real time.



Example of individually configured application and process scenarios.

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