

Q-PEX

The maximum explosion volume for a single Q-PEX is mentioned in following table:

Type Volumen [m³]

Q-PEX-8	Q-PEX QS* DN 200	1,2 ³
Q-PEX-12	Q-PEX QS* DN 300	4 ³
Q-PEX-16	Q-PEX QS* DN 400	7 ³
Q-PEX-20	Q-PEX QS* DN 500	18 ³
Q-PEX-24	Q-PEX QS* DN 600	24 ³
Q-PEX-28	Q-PEX QS* DN 700	32 ³
Q-PEX-32	Q-PEX QS* DN 800	40 ³

*Quenching System

If more than one Q-PEX unit is installed on a vessel the maximum allowed volume can be calculated.

Example:

Installed Q-PEX: 3 x Q-PEX-32

Max. volume per unit: 40 m³

Max. total volume: 120 m³

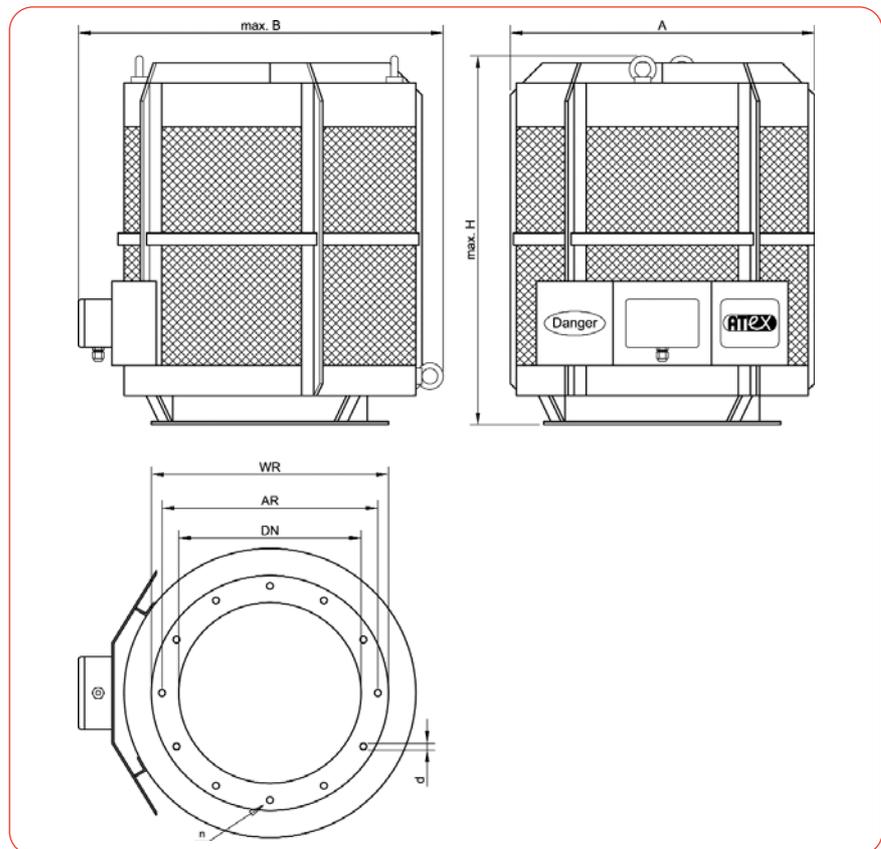
The Q-PEX sizes installed on one vessel shall be of the same size, or differ not more than one size to avoid an overload of the smaller unit.

The ratio of the room volume to the vented vessel volume has to be 15:1.

The installation of an Q-PEX shall be in such way that no dust deposits in front of the bursting disc occur. Vertical or upward installations should be preferred.

The Q-PEX is suitable for organic dusts with a KSt-Value of 250 bar x m/s, at a minimum ignition temperature (MIT) of $\geq 370^{\circ}\text{C}$ and a minimum ignition energy (MIE) of $> 3\text{ mJ}$ up to reduced explosion pressure of 1,3 bar g.

Around the Q-PEX a safety zone of 2.5 m must be marked. This zone shall not be entered during operation of the system. The safety zone can be reduced to 0.5 m by protection shields or similar means. The distance of the Q-PEX to walls or nearby equipment must be a minimum of 500 mm to guarantee the total venting and the



Type	Size	H (mm)	A (mm)	B (mm)	AR-Ø (mm)	BC-Ø (mm)	Ø d (mm)	n	Weight
Q-PEX-8	200/8"	600	350	410	268	243	8,5	8	25 KG
Q-PEX-12	300/12"	600	450	500	390	355	11	12	30 KG
Q-PEX-16	400/16"	900	550	600	500	443	13	16	48 KG
Q-PEX-20	500/20"	900	650	700	600	544	13	20	60 KG
Q-PEX-24	600/24"	1400	760	810	700	646	13	20	125 KG
Q-PEX-28	700/28"	1900	860	910	800	752	13	28	195 KG
Q-PEX-32	800/32"	2200	960	1010	900	854	13	28	240 KG

function of the Q-PEX. This covered area shall not be larger than 50% of the total surface. In this area it is not allowed to install flammable or temperature sensitive equipment.

The use of the Q-PEX beyond these limits is possible but must be approved and is only valid in combination with a written confirmation provided by ATEX.

The Q-PEX system works maintenance-free. The outside of the filter system must be free of dust deposits. Any dust accumulation has to be removed during standstill of the system with a soft brush and/or by a vacuum cleaner.

Wet cleaning on installation place is not allowed.

An activation of the Q-PEX must immediately shut down the plant by the integrated signalling unit. Optical and acoustical alarms shall force the personnel to leave the building for safety reasons.

Procedure after activation

The safety responsible person must be informed immediately. When the situation is under control and danger by burns or secondary explosions can securely be excluded get in contact with ATEX for further advice. The essential safety instructions for fire and explosion hazard has to be observed.

Installation of the Q-PEX

During transportation and installation, suspending of the Q-PEX is only allowed by using the 3 attached eyes. During installation of the Q-PEX pay attention to the following positions:

Connection flange

Compare the dimensions of the existing flange with the Q-PEX connection dimensions on the table. Clean the sealing surfaces at the mounting location and the gasket of the Q-PEX carefully.

After positioning the Q-PEX tighten all studs and nuts crosswise. The housing of the Q-PEX has to grounded.



Transformer Isolated Barrier with output: Relay

In the scope of delivery for an Q-PEX is a transformer isolated barrier. This electronic device must be installed in the main control room or at installation place in a separate box (min. degree of protection IP 54). The signalling unit (blue cable) of the integrated bursting disc is wired in the junction box of the Q-PEX. This wire must be connected to specified terminals of the transformer isolated barrier. The relay contact must lead to a shut down of the plant to avoid transport of glowing or burning material into other parts of plant.