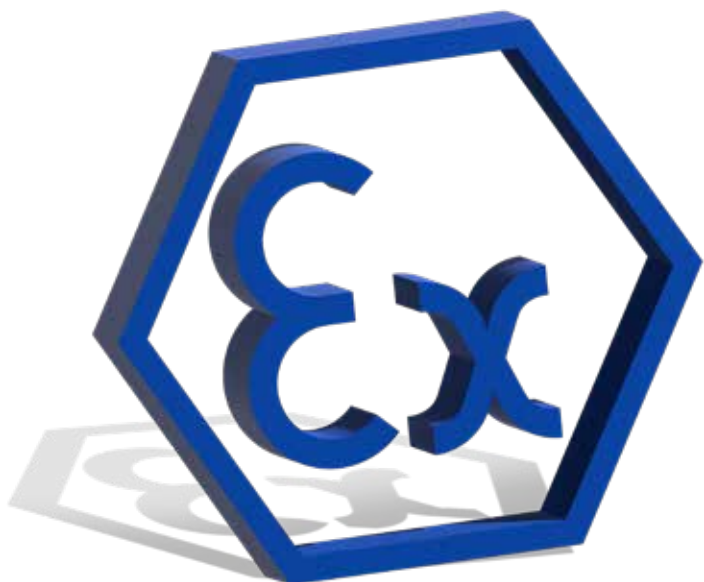


Movement by Perfection



The Royal League in ventilation, control and drive technology



Explosion protected fans

What you should know

Ex-Fans

Overview Ex-Fans ZIEHL-ABEGG – Axial-Fans



FE2owlet-ECQ Fan

Application: Gas
Ex atmosphere: Zone 2
Equipment protection level: Gc
Temperature class: T4
Explosion group: IIA
Fan range: 172 – 300 mm (5 sizes)
Legislation: ATEX



MAXventowlet Fan

Application: Gas and Dust
Ex atmosphere: Zone 1 / Zone 21
Equipment protection level: Gb / Db
Temperature class: T4 / T125°C
Explosion group: IIB + H2 / IIIC
Fan range: 315 – 1.400 mm (14 sizes)
Legislation: ATEX (IECEX coming soon)



FB Fan

Application: Gas
Ex atmosphere: Zone 1
Equipment protection level: Gb
Temperature class: T3/T4 (depends on motor)
Explosion group: IIB + H2
Fan range: 350 – 650 mm (5 sizes)
Legislation: ATEX (IECEX coming soon)

Overview Ex-Fans ZIEHL-ABEGG – Centrifugal-Fans



P-Range

Application: Gas
Ex atmosphere: Zone 1
Equipment protection level: Gb
Temperature class: T3/T4 (depends on motor)
Explosion group: IIB
Fan range: 200 – 400 mm (7 sizes)
Legislation: ATEX (IECEX coming soon)



Process Air Plug Fan

Application: Gas and Dust
Ex atmosphere: Zone 1 / Zone 21
Equipment protection level: Gb / Db
Temperature class: T4 / T125°C
Explosion group: IIB + H2 / IIIC
Fan range: 200 – 1.600 mm
Legislation: ATEX (others on demand)



M-Range

Application: Gas
Ex atmosphere: Zone 1
Equipment protection level: Gb
Temperature class: T3/T4 (depends on motor)
Explosion group: IIB
Fan range: 315 – 630 mm (7 sizes)
Legislation: ATEX (IECEX coming soon)



Process Air Housing Fan

Application: Gas and Dust
Ex atmosphere: Zone 1 / Zone 21
Equipment protection level: Gb / Db
Temperature class: T4 / T125°C
Explosion group: IIB + H2 / IIIC
Fan range: 200 – 2.000 mm
Legislation: ATEX (others on demand)



C-Range

Application: Gas
Ex atmosphere: Zone 1
Equipment protection level: Gb
Temperature class: T4
Explosion group: IIB
Fan range: 225 – 1.120 mm (13 sizes)
Legislation: ATEX (IECEX coming soon)

More
Ex-product highlights
from ZIEHL-ABEGG



ATEX

The ATEX Product Directive (ATmosphères EXplosives) 2014/34/EU specifies the conditions under which products used in potentially explosive atmospheres may be placed on the market. Its main purpose is to protect people who work in potentially explosive atmospheres or who could be affected by explosions. ATEX is a directive of the European Union; products with ATEX approval are therefore suitable for the European market.

IECEX

Similar to the ATEX Directive within the EU, IECEX standards define the marking of Ex products internationally with the aim of harmonising international regulations and establishing mutual recognition.

Ex-Zones

Zone	EPL (Equipment Protection Level)	Description
Zone 0/20	Ga/Da	Area in which an explosive atmosphere consisting of a mixture of air and combustible gas, vapour, mist or dust is present continuously, for long periods or frequently.
Zone 1/21	Gb/Db	Area in which an explosive atmosphere consisting of a mixture of air and combustible gas, vapour or mist can occasionally form during normal operation.
Zone 2/22	Gc/Dc	Area in which an explosive atmosphere consisting of a mixture of air and combustible gas, vapour, mist or dust not normally occur during normal operation, or only occurs for a short time.

Temperature Class

Temperature Class	Maximum Surface Temperature [°C]	Ignition Temperature T_z [°C]
T1	≤ 450	$450 < T_z$
T2	≤ 300	$300 < T_z \leq 450$
T3	≤ 200	$200 < T_z \leq 300$
T4	≤ 135	$135 < T_z \leq 200$
T5	≤ 100	$100 < T_z \leq 135$
T6	≤ 85	$85 < T_z \leq 100$

Explosion Groups

Gas			Dust	
MESG [mm] Minimum Experimental Safety Gap	MIC Minimum Ignition Current Ratio	Gas Group	Dust Group	Description
$> 0,9$	$> 0,8$	IIA	IIIA	Flammable lint
$0,5 \leq \text{MESG} < 0,9$	$0,45 < \text{MIC} < 0,8$	IIB	IIIB	Non-conductive dust
$< 0,5$	$< 0,45$	IIC	IIIC	Conductive dust

Examples of Classification

Temperature Class	T1	T2	T3	T4	T5	T6
Max. surface temperature	$\leq 450^\circ\text{C}$	$\leq 300^\circ\text{C}$	$\leq 200^\circ\text{C}$	$\leq 135^\circ\text{C}$	$\leq 100^\circ\text{C}$	$\leq 85^\circ\text{C}$
Gas Group	IIA	Acetone Ethane Ethyl acetate Ammonia Benzene Benzenamine Formic Acid Methane Methyl chloride	Methanol Propane Ethyl alcohol n-butane n-butyl alcohol	Petrol Turpentinol Diesel fuel Aviation fuel- Fuel oils n-Hexane	Acetaldehyde	Ethyl nitrite
	IIB	Hydrocyanic acid	Ethylene	Dimethoxymethane	Ethyl ether	
	IIC	Hydrogen	Acetylene			Carbon disulphide

The Royal League



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