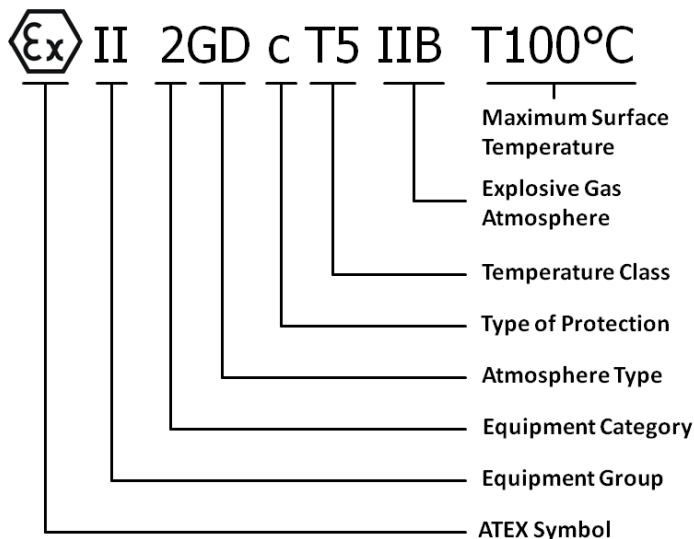


Hoists intended for use in potentially explosive atmospheres require measures to reduce the risk of explosions. Requirements for such measures come from the European Directive 2014/34/EU (previously 94/9/EC), commonly referred to as the ATEX Directive (ATEX is from the French ATmospheres EXplosibles), and its supporting standards.

The explosion protection and prevention measures for non-electrical equipment such as air hoists differ from those applied to electrical equipment. Requirements for non-electrical equipment are provided in the EN 13463 series of standards. Hoists that meet the appropriate requirements of the EN 13463 standards and file the product's TCF with a Notified Body satisfy the ATEX Directive and can be used in potentially explosive atmospheres.


Harrington's AL/W/S air hoists and RCB/RTS manual chain hoist/trolley use the "constructional safety" type of protection in accordance with EN 13463-5 *Non-electrical equipment intended for use in potentially explosive atmospheres - Part 5: Protection by constructional safety 'c'*. This standard defines constructional safety as ignition protection in which constructional measures are applied so as to protect against the possibility of ignition from hot surfaces, sparks and adiabatic compression generated by moving parts. Constructional measures that satisfy EN 13463-1 and 13463-5 include use of materials that reduce or eliminate the risk of sparks produced by impact or friction. This can generally be considered equivalent to the term "spark-resistant features."

The ATEX Directive and the EN 13463 standards require detailed markings to assure the hoists are used correctly. These markings define the applications, the type and duration of the potentially explosive atmospheres, the type of protection, and the maximum surface temperature.





Marking	Definition	AL/AW Hoist	AS Hoist	RCB Hoist	RTS w/RCB*	RTS w/AL*
ATEX Symbol	Equipment suitable for potentially explosive atmospheres in accordance with the ATEX Directive.	Ex	Ex	Ex	Ex	Ex
Equipment Group	'I' means suitable for use in mines susceptible to firedamp and/or coal dust. 'II' means suitable for non-mine locations that could be endangered by potentially explosive atmospheres.	II	II	II	II	II
Equipment Category	'1' means for use in areas where an explosive atmosphere is present continuously, for long periods, or frequently. '2' means for use in areas where an explosive atmosphere is likely to occur in normal operation. '3' means for use in areas where an explosive atmosphere is unlikely to occur in normal operation.	2	2	2	2	2
Atmosphere Type	'G' means suitable for Gas. 'D' means suitable for Dust.	GD	GD	GD	GD	GD
Type of Protection	This letter indicates the type of protection method used. There are several. "c" means constructional safety.	c	c	c	c	c
Temperature Class	Designation that indicates the maximum surface temperature the hoist will have during normal operation. There are several designations. T5 = 100°C	T5	T5	T4	T4	T5
Explosive Gas Atmosphere	Designation that indicates the type of gases, vapors and mists the hoist is suitable for. Designations applicable to Equipment Group II: 'IIA' means atmosphere containing methane, propane, or similar gases. 'IIB' means atmosphere containing ethylene or similar gases. IIB includes IIA gases. 'IIC' means atmospheres containing hydrogen, acetylene, or similar gases. IIC includes IIB/IIA gases.	IIB	IIC	IIB	IIB	IIB
Maximum Surface Temperature	The maximum surface temperature the hoist will have during normal operation.	T100°C	T100°C	T135°C	T135°C	T100°C

Actual Nameplate Markings:

AL/AW Hoist:  II 2GD c T5 IIB T100°C

AS Hoist:  II 2GD c T5 IIC T100°C

RCB Hoist:  Ex II 2G c IIB T4
Ex II 2D c T135 °C

RTS Trolley if
w/RCB hoist:  Ex II 2G c IIB T4
Ex II 2D c T135 °C

RTS Trolley if
w/AL hoist:  Ex II 2G c IIB T5
Ex II 2D c T100°C

*Note: The ATEX rating for a hoist/trolley “package” is limited to the lowest rated component. For this reason, the R1PTS/R1GTS will carry a different rating depending on the hoist with which it is coupled. The trolley temperature during normal operation will not exceed 100C (T5), but when it is coupled with an R1CB hoist, then the trolley will be marked with a T4 rating to match the rating of the hoist.