Yale® HOISTS

YALELIFT 360° ATEX
FOR HAZARDOUS ENVIRONMENTS




COLUMBUS MCKINNON CORPORATION

With 140 years of engineering and manufacturing experience, Columbus McKinnon delivers innovative material handling products and systems to customers around the globe. We rely on our knowledge and expertise to specially engineer hoists and rigging products for a variety of industries, including:

- Oil & Gas
- Mining
- Chemical Processing
- Recycling & Waste Management
- Food Processing
- Agriculture & Farming

We understand the unique requirements and regulations of harsh and hazardous environments and specialize in hoists and trolleys with optional features like low headroom, explosion proofing, spark resistance and corrosion resistance. We also offer a wide selection of chain and rigging products, including DNV shackles.

Our extensive training programs focus on safe and proper product use to help prevent accidents and injuries in these potentially dangerous environments. Columbus McKinnon is dedicated to its customers and will continue to develop reliable, high-quality products that perform in even the toughest applications.

GENERAL INFORMATION

WHAT DOES EXPLOSION PROTECTION ACHIEVE?

Explosion protection can mean to generally prevent the occurrence of an explosive mixture. Explosion protection can also be achieved by eliminating potential ignition sources in advance, e.g. high temperatures and sparking, by designing components accordingly; permanently monitoring operation; or by using a flame-proof enclosure for the source of ignition to protect the surrounding area against possible effects of an internal explosion.

EXAMPLES OF EXPLOSION HAZARDS IN VARIOUS INDUSTRIES:

Chemical
In the chemical industry, combustible gases, liquids and solids are converted and processed in various procedures. Explosive mixtures may be created during these processes.

Waste disposal
At waste disposal sites, combustible gases may form. Comprehensive technical measures are required to prevent their uncontrolled escaping and possible ignition.

Energy production
Coal dust, which may form explosive dust/air mixtures, can occur during production, breaking and drying from coal lumps which themselves are not explosive with air.

Waste management
The fermentation gases released during treatment of waste water in waste water treatment plants may form explosive gas/air mixtures.

Gas suppliers
If natural gas escapes through leakages or similar methods, explosive gas/air mixtures may be created.

Metal processing
During the production of formed metal parts, explosive metal dusts may occur during surface treatment (grinding). This applies in particular to light metals. These metal dusts may cause an explosion risk in separators.

Wood processing
When processing wood workpieces, wood dust occurs, which may form explosive dust/air mixtures in filters or silos, for example.

Paint shops
Overspray, which may occur during painting of surfaces using spray guns as well as any released solvent vapors, may form an explosive atmosphere with air.

Agriculture
Some agricultural facilities operate systems for the production of biogas. If biogas escapes as a consequence of leakages, for example, explosive biogas/air mixtures may form.

Food
During the transportation and storage of grain, sugar, etc., explosive dusts may occur. When these are evacuated and separated using filters, an explosive atmosphere may occur in the filter.

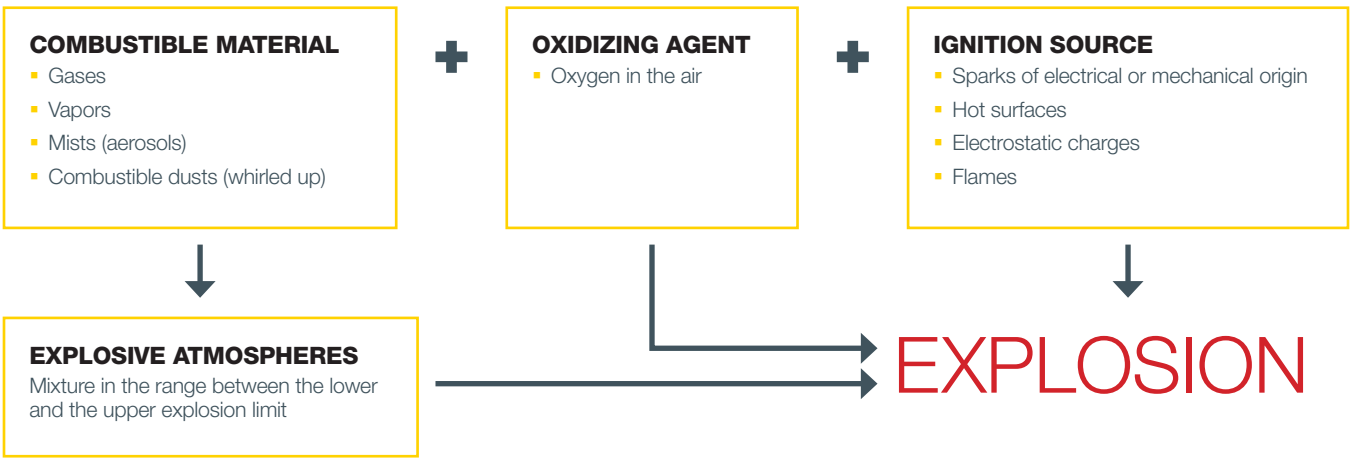
Pharmaceutical
In pharmaceutical production, alcohols are frequently used as solvents. Furthermore, active and auxiliary substances with a dust explosion hazard may also be used.

Refineries
The hydrocarbons processed in refineries are all combustible and, depending on their flash point, are capable of causing an explosive atmosphere even at ambient temperatures.

Recycling
When processing recycling waste, explosion hazards may be caused by cans that are not completely empty or other containers with combustible gases and/or liquids. Explosion hazards may also be caused by paper or plastic dust.

PRECONDITIONS FOR AN EXPLOSION

Explosive atmospheres may occur wherever combustible gases, vapors, mists or dusts can form. These are mixtures that produce a chemical reaction when they meet oxygen in the air; this reaction may trigger an explosion, even if only an extremely small spark occurs.



NORTH AMERICAN AND INTERNATIONAL HAZARDOUS STANDARDS

WORLDWIDE, THE EX STANDARDS THAT WOULD BE USED FOR HAZARDOUS AREAS DIFFER.

USA & CANADA

The US and Canada follow two different approaches:

- The traditional "Class, Division" in accordance to the NEC 500 for the US and the CEC Annex J for Canada
- The new international zoning system under NEC 505 for the US and CEC Section 18 for Canada (see table below).

EUROPE & REST OF WORLD

The standards that are used in most countries outside North America are IEC / CEN and CENELEC. The IEC (International Electrotechnical Commission) has set basic standards for equipment and classification of areas. CEN[1]/CENELEC (European Technical Committee (CEN) or European Committee for Electrotechnical Standardization (CENELEC)) is a group that uses IEC standards as a base and harmonizes them with all member countries' standards.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement the European Standard:

Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

[1] CEN is responsible for non-electrial equipment for use in potentially explosive atmospheres

ATEX

The acronym ATEX is the abbreviation of the French term "Atmosphères explosibles", which means explosive atmospheres. This designation is currently still used as a synonym for these two directives of the European Union:

- Directive 2014/34/EU is primarily intended for manufacturers of explosion-proof equipment.
- Directive 99/92/EC is primarily intended for users of installations with a potentially explosive atmosphere.

		Explosion Atmosphere		
		Continuously, for a long period or frequently	Occur occasionally	Infrequently and for a short period
United States	NEC 505 NEC 500	Zone 0 Division 1	Zone 1 Division 1	Zone 2 Division 2
Canada	CEC Section 18 CEC Annex J	Zone 0 Division 1	Zone 1 Division 1	Zone 2 Division 2

ATEX, IEC and NEC 505 use the same protection concepts.

EQUIPMENT GROUP

	Equipment Group	Equipment Category		Equipment Safety	Explosive Atmosphere
Mines, firedamp and combustible dusts					
	I	M1		Very high level of protection: Equipment must feature integrated explosion protection measures.	High level of protection: Protection measures must ensure the required level of safety during normal operation also under arduous conditions and in particular heavy handling and under changing ambient conditions.
	I	M2		Equipment must continue to operate in an explosive atmosphere even in the event of rare faults.	It must be possible to switch off the equipment if an explosive atmosphere occurs.
Explosive atmospheres caused by mixtures of gas/air, vapors or mists					
	II	1G	Zone 0	Equipment which ensures a very high level of safety. (In the event of rare equipment faults)	Intended for use in areas in which explosive atmospheres caused by mixtures of air and gases, vapors or mists or by air/dust mixtures are present continuously, for long periods or frequently.
Yalelift 360 ATEX	II	2G	Zone 1	Equipment which ensures a high level of safety. (If equipment faults are to be expected)	Intended for use in areas in which explosive atmospheres caused by mixtures of air and gases, vapors or mists or by air/dust mixtures are likely to occur occasionally.
	II	3G	Zone 2	Equipment which ensures a normal level of safety. (For normal operation)	Intended for use in areas in which explosive atmospheres caused by gases, vapors or mists or whirled up dust are unlikely to occur or, if they do occur, are likely to do so only infrequently and for a short period.
Explosive atmospheres caused by mixtures of dust /air					
	II	1D	Zone 20	Equipment which ensures a very high level of safety. (In the event of rare equipment faults)	Intended for use in areas in which explosive atmospheres caused by mixtures of air and gases, vapors or mists or by air/dust mixtures are present continuously, for long periods or frequently.
Yalelift 360 ATEX	II	2D	Zone 21	Equipment which ensures a high level of safety. (If equipment faults are to be expected)	Intended for use in areas in which explosive atmospheres caused by mixtures of air and gases, vapors or mists or by air/dust mixtures are likely to occur occasionally.
	II	3D	Zone 22	Equipment which ensures a normal level of safety. (For normal operation)	Intended for use in areas in which explosive atmospheres caused by gases, vapors or mists or whirled up dust are unlikely to occur or, if they do occur, are likely to do so only infrequently and for a short period.

ZONES

Explosive Atmosphere		Continuously, for a long period or frequently	Occur occasionally	Infrequently and for a short period
Gas [G]	CENELEC/IEC/NEC 505	Zone 0	Zone 1	Zone 2
	NEC 500 (Class I)	Division 1		Division 2
Dust [D]	CENELEC/IEC/NEC 506	Zone 20	Zone 21	Zone 22
	NEC 500 (Class II/III)	Division 1		Division 2

GROUPS

	IEC/CENELEC/NEC 505/NEC 506		NEC 500
Group I	Mines, firedamp and combustible dusts.		—
	Methane		
Group II	Explosive atmospheres caused by mixtures of gas/air, vapors or mists.		Class I
Explosion group	Typical gas		Subdivisions
II A II B II C	Propane Ethylene Hydrogen Acetylene	Propane Ethylene Hydrogen Acetylene	Class I Group D Class I Group C Class I Group B Class I Group A
Group III*	Explosive dust atmospheres.		Class II/III
Explosion group	Typical dust		Subdivisions
III A III B III C	Combustible flyings Non-conductive dust Conductive dust	Fibers/flyings Non-conductive dust Carbonaceous dust Combustible metal dust	Class III Class II Group G Class II Group F Class II Group E

Yalelift 360 ATEX

*acc to IEC (2007) and CENELEC (2009)

TEMPERATURE CLASSES

The ignition temperature is the lowest temperature of a heated surface at which the gas/air or vapor/air mixture ignites. In other words, it represents the lowest temperature value at which a hot surface is capable of igniting the corresponding explosive atmosphere.

Thus, the highest surface temperature of any equipment must always be less than the ignition temperature of the gas/air or vapor/air mixture.

TEMPERATURE CLASSES

	Permissible maximum surface temperature of the equipment	NEC 500/CEC	CENELEC / IEC (Group II)	
			NEC 505 / CEC	ATEX
Yalelift 360 ATEX	450° C (842° F)	T1	T1	T1
	300° C (572° F)	T2	T2	T2
	280° C (536° F)	T2A		
	260° C (500° F)	T2B		
	230° C (446° F)	T2C		
	215° C (419° F)	T2D		
	200 ° C (392° F)	T3	T3	T3
	180° C (356° F)	T3A		
	165° C (329° F)	T3B		
	160° C (320° F)	T3C		
	135° C (275° F)	T4	T4	T4
	120 ° C (248° F)	T4A		
	100° C (212° F)	T5	T5	T5
	85 ° C (185° F)	T6	T6	T6

For dust the max. surface temperature of the equipment is to indicate.

PROTECTION TYPES FOR NON-ELECTRICAL EQUIPMENT (SELECTION)

	Protection Type		Application	Standard
Yalelift 360 ATEX	Design safey	c	pumps / couplings / chain drives	EN 13463-5
	Flame-proof enclosures	d	brakes / couplings	EN 13463-3
	Liquid immersion	k	gear box	EN 13463-8

CLASSIFICATION OF COMBUSTIBLE GASES, VAPORS AND MISTS

Explosion groups and temperature classes of just some of the gases and vapors that can be found in work environments.

CLASSIFICATION OF COMBUSTIBLE GASES, VAPORS, MISTS

Ex group	Temperature classes					
	T1	T2	T3	T4	T5	T6
	Ignition temperature range of the mixtures					
	> 450 °C	> 300 ≤ 450 °C	> 200 ≤ 300 °C	>135 ≤ 200 °C	>100 ≤ 135 °C	>85 ≤ 100 °C
	Permissible max. surface temperature of the equipment					
	450 °C	300 °C	200 °C	135 °C	100 °C	85 °C
IIA	Acetone	Ethanol	Petrol (general)	Acetaldehyde		
	Ammonium	i-Amyl acetate	Diesel fuels			
	Benzene (pure)	n-Butane	Aircraft fuels			
	Acetic acid	n-Butanol	Fuel oil DIN 51603			
	Ethane	Cyclohexan	n-Hexane			
	Ethyl acetate	Acetic anhydride				
	Ethyl chloride					
	Carbon monoxide					
	Methane					
	Methanol					
	Methyl chloride					
	Naphthalene					
	Phenol					
	Propane					
	Toluene					
IIB	City gas	Ethylene	Ethylene glycol	Ethyl ether		
		Ethylene oxide	Hydrogen sulfide			
IIC	Hydrogen	Acetylene				Carbon disulphide

Yalelift 360 ATEX

DUST EXPLOSION PROTECTION

In many industries, powder or dust-like products are processed or are by-products of the production process.

The vast majority of all dust-like substances pose a danger of fire or, under certain conditions, even explosion. A dust layer of only 1 mm in a closed room is sufficient to trigger an explosion when the dust is whirled up and ignited.

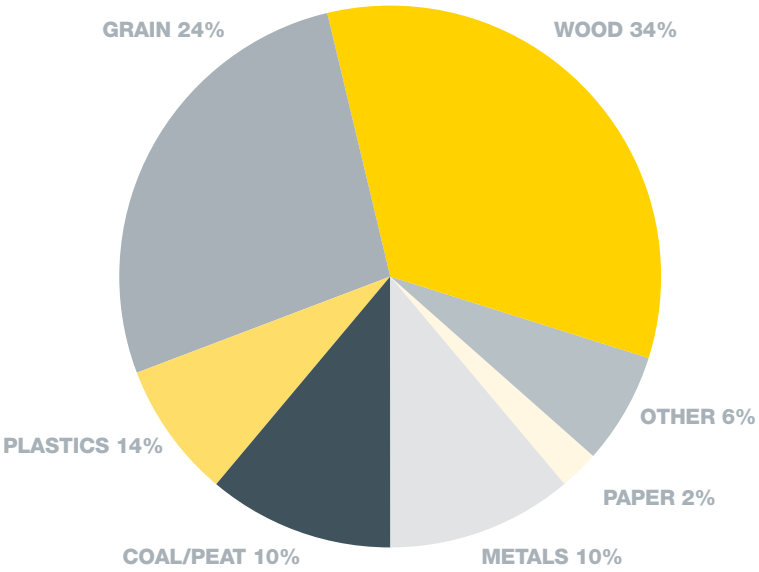
The graphic shows that many different industries are affected by the hazard of dust, ranging from the food and wood-processing industries, to paper and plastic material production, to the pharmaceutical industry.

Compared to gas explosions, dust explosions have a different process of propagation that may in some cases be much more devastating. If a gas/air mixture is ignited, the pressure of the resulting explosion causes the gas cloud to dissipate rapidly and thus dilutes the gas/air mixture to a concentration lower than that necessary for further combustion. If no further gas is added, the explosion is over after several milliseconds.

With combustible dusts it is different. If, for example, a draft of air whirls up a layer of dust, the dust, together with oxygen, forms a combustible dust/air mixture. If this mixture is ignited by an ignition source, an explosion is triggered.

The resulting blast wave whirls up further dust layers, which in turn also ignite. This process continues and, under adverse conditions, chain reactions such as these sweep through entire buildings or facilities and destroy them.

As is the case with gases, there are various ignition sources for dusts, such as sparks generated by electrical or mechanical processes, electric arcs, open flames, electrostatic discharges, electromagnetic waves and others.



DEFINITIONS IN DUST EXPLOSION PROTECTION

Term	Definition	Comments
Explosive dust atmosphere	Mixture with air, under atmospheric conditions, of combustible substances in the form of dust or fibers in which, after ignition, combustion spreads throughout the entire unconsumed mixture. (DIN EN 50281-1-1,3.4)	The condition is that the process ends only after one reactant has been entirely consumed.
Atmospheric condition	Range of pressure between 0.8 and 1.1 bar Temperature range between -20 °C and +60 °C	
Hazardous explosive atmospheres	Explosive atmosphere in hazardous amount. The presence of a hazardous explosive atmosphere must be assumed if ignition causes an exothermal reaction that endangers persons, domestic animals and property.	A thickness of a dust layer of less than 1 mm on the floor of a normal room is sufficient to fill it with a hazardous explosive atmosphere.

SAFETY CHARACTERISTICS OF DUSTS

Characteristic	Definition/Description	Comments
Particle Size	Dust with a particle size larger than 400 µm is not considered to be ignitable. Dust particles are ignitable when they measure less than 20 µm up to 400 µm.	Due to abrasion, the transportation and processing of coarse dust result in the formation of fine dust.
Explosion Limits	For most dust/air mixtures of combustible substances, the lower explosion limit is approx. 20 to 60 g/m³ air and the upper explosion limit approx. 2 to 6 kg/m³ air.	In this case, allocation of particle size, density, humidity as well as the ignition point is decisive.
Maximum Explosion Pressure	In enclosed containers of simple design, combustible dust can reach explosion pressures of 8 to 10 bar.	For light metal dusts, the explosion pressure can exceed this value.
KSt Value	This is a classification value that expresses the shattering effect of the combustion. Numerically, it is equal to the value of the maximum rate of explosion pressure rise during the explosion of a dust/air mixture in a 1 m³ vessel.	This value is the basis for calculating explosion pressure relief surfaces.
Moisture	The moisture of a dust is a significant factor for its ignition and explosion behavior. Currently, it is only known that a higher moisture content requires a higher ignition energy and impedes the formation of dust swirls.	
Minimum Ignition Energy E_{min}	Lowest energy of an electrical spark that is sufficient to affect ignition of the critical (most easily ignitable explosive) dust/air mixture under defined framework conditions.	Not every spark is ignitable. The decisive factor is whether sufficient energy is introduced into the dust/air mixture to initiate a self-sustaining combustion of the entire mixture.
Ignition Temperature T_{ig}	The lowest temperature of a hot inner wall (e.g. furnace) on which the dust/air mixture is ignited after brief contact. The surface temperature must not exceed 2/3 of the ignition temperature in °C of the relevant dust/air mixture, e.g. starch/milk powder/gelatine. Ignition temperature 390 °C x 2/3 = 260 °C max. permissible surface temperature. $T_{max} \leq \frac{2}{3} Tig$	
Smouldering Temperature T_{sm}	The lowest temperature of a hot surface on which ignition occurs in a dust layer with a thickness of 5 mm. On surfaces where a dangerous deposit of ignitable dust is not effectively prevented, the surface temperature must not exceed the ignition temperature reduced by 75 K of the respective dust. With layer thicknesses over 5 mm, a further reduction of the temperature of the surface is necessary: e.g. wood, grinding dust. Ignition temperature 290 °C - 75 °C = 215 °C max. permissible surface temperature $T_{max} \leq T_{sm}$ - 75 K	The smoldering temperature is usually well below the calculated ignition temperature of a dust cloud. The smoldering temperature decreases almost linearly with an increase in the layer thickness. For the acceptable surface temperatures, safety clearances have to be adhered to.

EXPLOSION CHARACTERISTICS OF DUSTS

Generally applicable values for dust-specific characteristics cannot be specified. The table shows some limit values for selected products.

EXAMPLES OF EXPLOSION CHARACTERISTICS OF DUSTS

Substance	T_{ig} [°C]	T_{sm} [°C]	$ØE_{min}$ [mJ]	min [mJ]
Wood	≥ 410	≥ 200	≥ 100	6
Lignite	≥ 380	≥ 225	–	5
Coal	≥ 500	≥ 240	≥ 1000	13
PVC	≥ 530	≥ 340	≥ 5	< 1
Aluminium	≥ 560	≥ 270	≥ 5	< 1
Sulphur	≥ 240	≥ 250	10	5
Lycopodium	≥ 410	–	–	–

MARKING KEY (EXAMPLES)

Yalelift 360 ATEX

Non-Electrical Equipment							
ATEX	Ex	II 2G		c	IIC	T4	
Electrical Equipment							
ATEX	Ex	II 2G	Ex	d	IIC	T4	
IEC/CENELEC			Ex	d [ia]	IIC	T4	Gb*
NEC 505		Class I, Zone 1	AEx	d [ia]	IIC	T4	
NEC 500		Class I, Division 1			Group B	T4	

* When using the alternate symbols, the EPL can be left out.

YALELIFT 360™ ATEX
HAND CHAIN HOIST

CAPACITIES
1/4 to 12 Tons

LIFT
10 Feet Standard. Other lifts available upon request.

The Yalelift 360™ ATEX hand chain hoist is the ideal manual hoist for harsh environments. Exceeding requirements for a classic hand chain hoist, the Yalelift 360 ATEX is built for use in explosive atmospheres and features a unique patented hand chain cover that rotates a full 360 degrees to lift loads from virtually any angle.

FEATURES & BENEFITS

EXPLOSION PROTECTION & SPARK RESISTANCE
Designed for explosive environments with spark-resistant, copper-coated suspension and load hooks; stainless steel load chain and hand chain; and bronze trolley wheels.

CORROSION RESISTANT
Enclosed robust stamped steel housing protects internal components, even in the toughest conditions. Chain guide and internal gearbox are partially enclosed for protection in harsh environments.

For maximum corrosion protection, we use the MKS micro corrosion protection system consisting of Delta-Protekt® KL100 basecoat and Delta Seal® topcoat.

Delta Protekt® is an inorganic, micro-porous, layer-forming basecoat barrier with overlapping zinc and aluminum flakes that result in high anti-corrosion silver metallic properties. This basecoat layer helps ensure electrical conductivity so that the desired cathodic protection of the iron is present.

Delta Seal® is an organic, highly-cross linked microcrystalline, layer-forming topcoat that provides a firm chemical-resistant coating.

This two-coat system guaranties high-level protection against corrosion.

MEETS ATEX REQUIREMENTS
Hoist meets EU standards 2014/34/EU and 99/92/EC.

ULTIMATE VERSATILITY
Patented hand chain cover rotates a full 360 degrees to allow loads to be lifted, pulled or positioned from virtually any angle. In addition to providing maximum versatility, this unit offers a convenient way to maneuver loads without standing under the load.

LOW HEADROOM
Extremely low headroom allows for maximum use of the lifting height.

TRUSTED RELIABILITY
- Braking power of our Weston-style braking system provides positive load control and reliable performance. Zinc plated or yellow chromated to protect against corrosion.
- Minimal maintenance and easily disassembled with no special tools.

BUILT TO LAST
- All internal gears and pinions are made of heat-treated steel for high strength and long life.
- Precision 4-pocket liftwheel and chain guide provide better chain fit and alignment, reducing wear and increasing chain life.

SUPERIOR HOOK DESIGN
Drop-forged load and suspension hooks made of high-tensile steel yield under overload instead of breaking. Hooks rotate 360° and are fitted with robust safety latches.

OPTIONAL OVERLOAD PROTECTION
Load Limiter™ offers simple, automatic overload protection.

MEETS ASME B30.16 & EUROPEAN CE STANDARD

With the Yalelift hoist's patented 360° rotating chain cover, operators are able to
lift loads from any angle.

THE YALELIFT 360™ ATEX
HAND CHAIN HOIST

SPECIFICATIONS FOR YALELIFT 360 ATEX

YALELIFT 360 ATEX II 2 GD C IIC T4

Model Number	Product Code	Standard Lift (ft.)	Capacity (tons)	Chain Dimensions d x p (mm)	Chain Falls	Hand Chain Over-Hauled to Lift One Meter	Pull on Hand Chain at WLL daN	Weight lb. (kg)
YL ATEX 250	192021793	10	1/4	6 x 18	1	49	30	28.6 (13)
YL ATEX 500	192021796	10	1/2					
YL ATEX 1000	192021797	10	1					
YL ATEX 1500	192021798	10	1-1/2	10 x 30		87	38	63.9 (29)
YL ATEX 2000	192021799	10	2					
YL ATEX 3000	192021800	10	3		2	174	34	83.7 (38)
YL ATEX 4000	192021801	10	4					
YL ATEX 5000	192021802	10	5		3	261	44	156.5 (71)
YL ATEX 6000	192021803	10	6					
YL ATEX 8000	192021804	10	8		6	552	2 x 44	432.1 (196)
YL ATEX 10000	192021805	10	10					
YL ATEX 12000	192021806	10	12					

YALELIFT ITP ATEX WITH INTEGRATED PUSH-TYPE TROLLEY II 2 GD C IIC T4

Model Number	Product Code	Standard Lift (ft.)	Capacity (tons)	Size*	Beam Flange Width b (mm)	Beam Flange Thickness t max. (mm)	Curve Radius min. (m)	Weight lb. (kg)	Weight with Locking Device lb. (kg)
YLITP ATEX 250	192021814	10	1/4	A	50 - 180	19	0.9	59.5 (27)	77.1 (35)
YLITP ATEX 500	192021815	10	1/2	A					
YLITP ATEX 1000	192021816	10	1	A					
YLITP ATEX 1500	192021817	10	1 1/2	A	74 - 180	27	1.5	169.7 (77)	189.5 (86)
YLITP ATEX 2000	192021818	10	2	A					

*Size B on request.

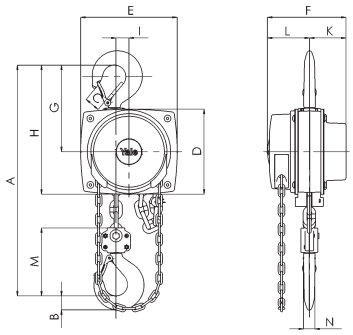
YALELIFT ITG ATEX WITH INTEGRATED GEARED-TYPE TROLLEY II 2 GD C IIC T4

Model Number	Product Code	Standard Lift (ft.)	Capacity (tons)	Size*	Beam Flange Width b (mm)	Beam Flange Thickness t max. (mm)	Curve Radius Min. (m)	Weight lb. (kg)	Weight with Locking Device lb. (kg)
YLITG ATEX 250	192021819	10	1/4	A	50 - 180	19	0.9	70.5 (32)	88.1 (40)
YLITG ATEX 500	192021821	10	1/2	A					
YLITG ATEX 1000	192021822	10	1	A					
YLITG ATEX 1500	192021823	10	1 1/2	A	74 - 180	27	1.5	180.7 (82)	200.6 (91)
YLITG ATEX 2000	192021824	10	2	A					
YLITG ATEX 3000	192021825	10	3	A	98 - 180	27	2.0	286.6 (130)	308.6 (140)
YLITG ATEX 4000	192021826	10	4	A					
YLITG ATEX 5000	192021827	10	5	B	125 - 310	40	1.8	on request	on request
YLITG ATEX 6000	192021828	10	6	B					
YLITG ATEX 8000	192021829	10	8	B	180 - 310	40	5.0	on request	on request
YLITG ATEX 10000	192021830	10	10	B					
YLITG ATEX 12000	192021831	10	12	B					

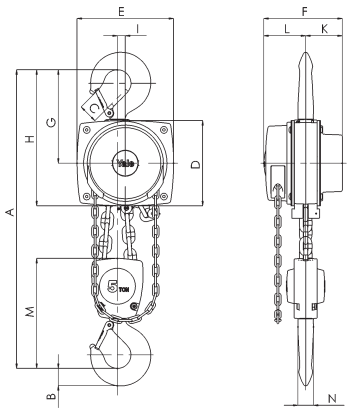
*Size B on request.

DIMENSIONS
YALELIFT 360 ATEX

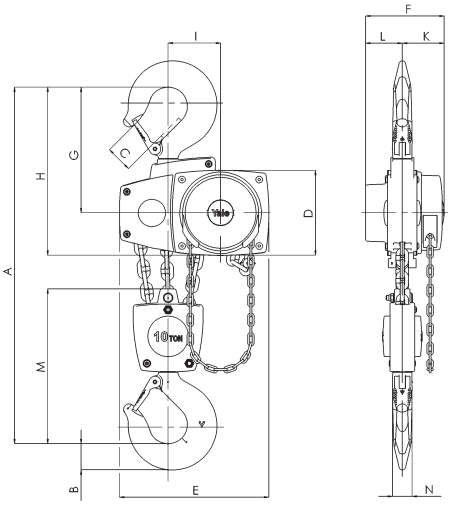
Capacity (ton)	Dimensions in. (mm)												
	A	B	C	D	E	F	G	H	I	K	L	M	N
¼, ½ & 1	13.19 (335)	0.87 (22)	1.14 (29)	6.14 (156)	6.89 (175)	6.58 (167)	6.46 (164)	9.53 (242)	0.95 (24)	2.76 (70)	3.82 (97)	4.92 (125)	0.75 (19)
1½ & 2	20.47 (520)	1.50 (38)	1.58 (40)	8.66 (220)	9.84 (250)	8.62 (219)	8.86 (225)	13.19 (335)	1.34 (34)	3.74 (95)	4.88 (124)	7.01 (178)	1.18 (30)
3 & 4	25.75 (654)	1.77 (45)	1.85 (47)	8.66 (220)	9.84 (250)	8.62 (219)	9.53 (242)	13.86 (352)	0.83 (21)	3.74 (95)	4.88 (124)	11.22 (285)	1.46 (37)
5 & 6	32.48 (825)	2.68 (68)	2.68 (68)	8.66 (220)	15.08 (383)	8.62 (219)	12.84 (326)	17.17 (436)	5.35 (136)	3.74 (95)	4.88 (124)	15.79 (401)	1.97 (50)
8, 10 & 12	39.76 (1010)	3.35 (85)	2.52 (64)	11.93 (303)	21.85 (555)	9.84 (250)	15.39 (391)	19.72 (501)	–	15.59 (396)	4.92 (125)	18.54 (471)	2.21 (56)



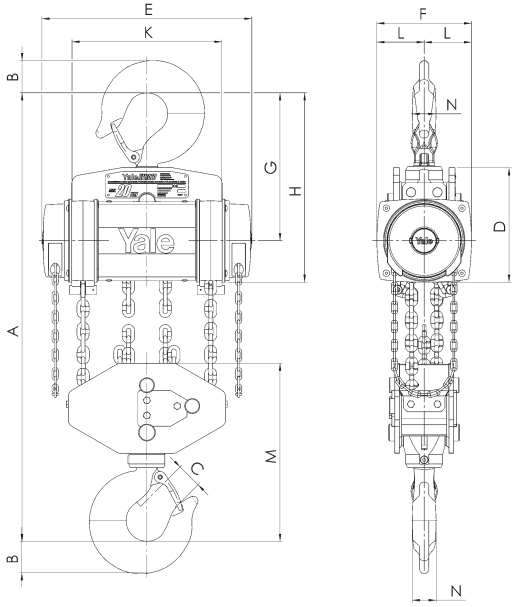
Model Yalelift 360 ATEX, 1/4 to 2 ton, single fall



Model Yalelift 360 ATEX, 3 to 4 ton, double fall



Model Yalelift 360 ATEX, 5 to 6 ton, three fall



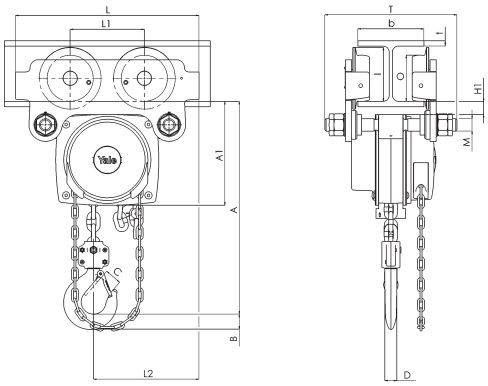
Model Yalelift 360 ATEX, 8 to 12 ton, six fall

SPECIFICATIONS FOR YALELIFT 360 ATEX

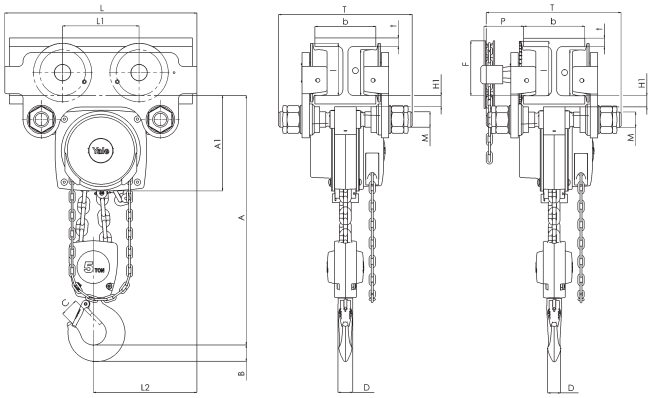
DIMENSIONS MODEL YALELIFT IT ATEX

Dimensions in. (mm)																		
Capacity (ton)	A min.	A1	A2	B	C	D	F Geared trolley	H1	I Pushed trolley	I Geared trolley	L	L1	L2	M	O	P Geared trolley	T (Area A)	T (Area B)
1/4, 1/2 & 1	10.71 (272)	7.01 (178)	–	0.87 (22)	1.14 (29)	0.75 (19)	3.62 (92)	0.94 (24)	2.81 (71.5)	3.01 (76.5)	12.20 (310)	5.12 (130)	6.89 (175)	M 22	2.36 (60)	4.33 (110)	11.42 (290)	16.14 (410)
1-1/2 & 2	15.04 (382)	9.92 (252)	–	1.50 (38)	1.57 (40)	1.18 (30)	4.21 (107)	1.26 (32)	5.16 (131)	5.22 (132.5)	17.52 (445)	7.09 (180)	10.08 (256)	M 30	4.41 (112)	4.41 (112)	12.60 (320)	17.32 (440)
3 & 4	21.65 (550)	10.26 (260.5)	–	1.77 (45)	1.85 (47)	1.46 (37)	5.89 (149.5)	1.20 (30.5)	5.61 (142.5)	5.85 (148.5)	20.67 (525)	8.23 (209)	11.14 (283)	M 42	4.92 (125)	4.61 (117)	14.33 (364)	19.06 (484)
5 & 6	30.87 (784)	14.96 (380)	–	2.68 (68)	2.68 (68)	1.97 (50)	4.45 (113)	2.17 (55)	6.65 (169)	6.65 (169)	16.93 (430)	7.87 (200)	10.28 (261)	M 48	5.91 (150)	6.22 (158)	–	21.26 (540)

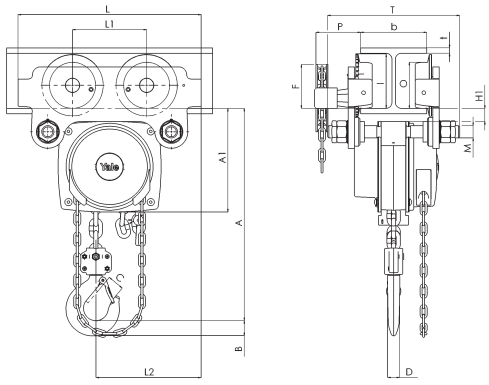
Dimensions for 8, 10 & 12-ton capacities available upon request.



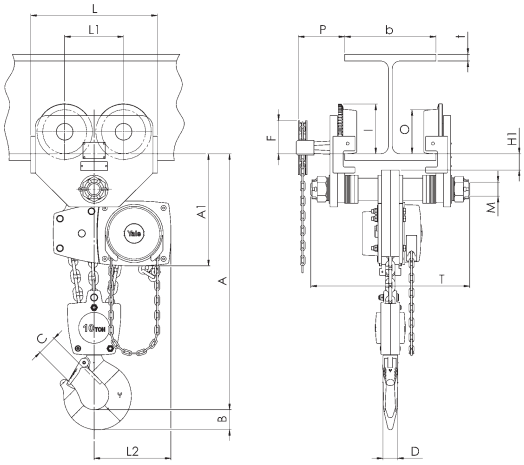
Model Yalelift ITP ATEX, 1/4 - 2 ton, single fall



Model Yalelift ITG ATEX, 3 - 4 ton, double fall



Model Yalelift ITG ATEX, 1/4 - 2 ton, single fall



Model Yalelift ITG ATEX, 5 - 6 ton, three fall

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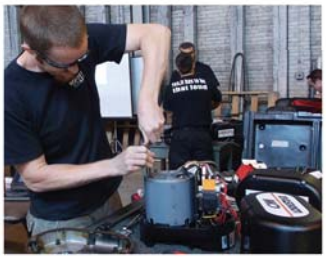

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