

NWH Explosion-proof Cranes & Hoists



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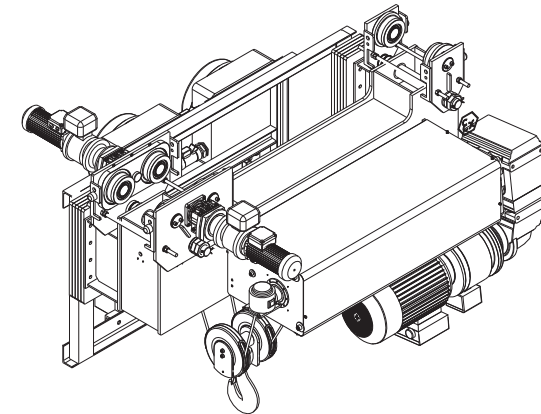




Customer satisfaction is always the driving force of Novocrane growth. We launch the brand new NWH explosion proof hoist range to ensure the high level of safety required for the hazardous atmospheres in chemical and petrochemical plants, oil refineries, gas power plants, wastewater treatment plants, paint shops and other industrial sites. Our cranes and components have been designed and build to provide years of reliable and safe operation.



Conforming to international EX regulations
Motivate the production safety



Loads:
500Kg ~ 20000Kg

Novocrane Explosion-proof products
comply with Euro standard:

- 1) Machinery Directive 2006/42/EC
- 2) ATEX Directive 2014/34/EU
- 3) EMC Directive 2004/108/EC
- 4) EN13463-1:2009
- 5) EN13463-5:2011
- 6) EN60079-0:2012+A11:2013
- 7) EN80079-36:2016
- 8) EN80079-37:2016

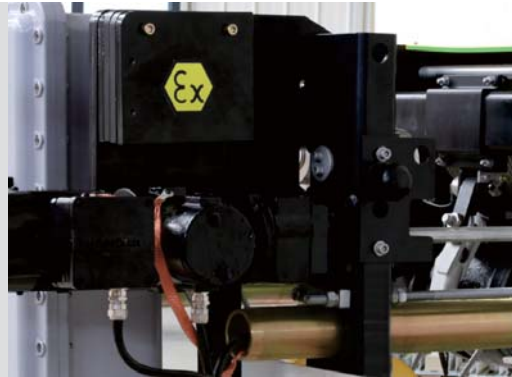
Protection Rating:

- 1) Gas Explosion-proof:  II 3 G c II C T4
- 2) Dust Explosion-proof:  II 2 D h III C T135°C

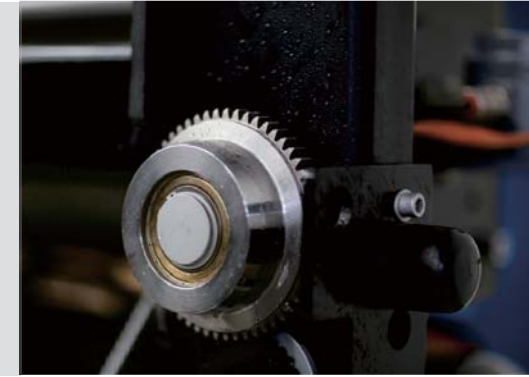
Protection Category :

- 1) Gas Explosion-proof: Zone 2
- 2) Dust Explosion-proof: Zone 21 & Zone 22
- 3) Temperature: -20°C~40°C

Adapting to green design concept Reliable quality create more value for customers



Novocrane combined rich experience in explosion-proof application with technological innovation capacity to develop products for gas and dust hazardous environments. In Ex explosion-proof crane range, all crane components are selected to conform to the update ATEX directives and the safety requirements of potential hazardous environments.



Ex Electric Cubicle

The electric cubicle provides protection rating IP 66 as standard.

Low voltage control for greater safety.



Sparkproof Hoist Motor

Tropicalized motor as standard for longer life span.

Power rating 60 % with motor cooling fan.



Limit Switch

Rope guide motivate upper and lower limit switch.

The limit switches, accessed on the front face of the drum, manage the hook's upper and lower



Rope Guide

Very high performance cable guide system. No guide system fouling to enable operation in the most difficult environments. Galvanized steel rope as standard with high safety factor (factor 4.6).



Trolleys and Pole Change Motors

Tropicalized motor as standard for longer life span. Power rating 40% with motor cooling fan. Optimal positioning of trolley wheels - the 4 trolley wheels share the load exactly to optimize your rail gauge.



Hoist Drum

Pully is made of ductile iron material, the very high wire rope/drum ratio (twice the standard ratio) increases wire rope life span.

The multi-level lifting limit switch installed on the bottom of drum, could control the operation speed from fast to slow to stop effectively, and increase the safety.



Ex Pendant Controller

Explosion-proof specific pendant controller for crane, protection rating EX IICT4, dustproof and waterproof level IP66.



Lifting hook

Over 60µm EX bronze treated hooks, could effectively prevent the sparkle caused by collision.



Wheels

With special Ex treatment of vacuum hardening, wheels are made of stainless steel, which could not only prolong the service life, but also avoid sparkle by the friction of wheels and rails.



Overhead Crane Carriage



Main technical features:

- Protection Rating: EEx de IIB T4
- End carriage supplied with channels and adjustable trolleys
- 2 travelling speeds
- 2 geared wheels per carriage
- Drive units with brake
- Motor protection IP55, insulation class F
- Motor thermal protection

More Options:

Special voltage / Travel limit switch / Tropicalized motors / Greater sparkproof protection / Non standard wheel groove



Suspension Crane Carriage



Main technical features:

- Protection Rating: EEx de IIB T4
- End carriage supplied with channels and adjustable trolleys
- 2 travelling speeds
- Drive units with brake
- Motor protection IP55, insulation class F
- Motor thermal protection

More Options:

Special voltage / Travel limit switch / Tropicalized motors / Greater sparkproof protection

Product Range:

Single girder explosion-proof crane specification

Type	Load (t)	ISO	Hoisting Speed m/min	Hoisting Power Kw	Travelling Speed m/min	Travelling Power Kw
HWM	20	M4	3.4/0.5	12.5/2	15/3.6	2.2
	16	M5				
	12.5	M6	3.4/0.5	12.5/2	15/3.6	1.1
	16	M4				
	12.5	M5	4.2/0.7	12.5/2	15/3.6	1.1
	10	M6				
	12.5	M4	5.4/0.8	12.5/2	15/3.6	1.1
	10	M5				
	10	M4	6.4/1.0	12.5/2	15/3.6	1.1
	8	M5				
	6.3	M6	4.0/0.7	7.6/1.2	15/3.6	1.1
	10	M5				
	8	M6	6.4/1.0	7.6/1.2	15/3.6	1.1
	6.3	M4				
	5	M5	6.4/1.0	7.6/1.2	15/3.6	0.55
	4	M6				
	3.2	M5	5.0/0.8	3.2/0.45	15/3.6	0.55
	2.5	M6				

Double girder explosion-proof crane specification

Type	Load (t)	ISO	Hoisting Speed m/min	Hoisting Power Kw	Travelling Speed m/min	Travelling Power Kw
HWM	20	M4	3.4/0.5	12.5/2	15/4.0	2.2
	16	M5				
	12.5	M6	3.4/0.5	12.5/2	15/4.0	1.1
	16	M4				
	12.5	M5	4.2/0.7	12.5/2	15/4.0	1.1
	10	M6				
	12.5	M4	5.4/0.8	12.5/2	15/4.0	1.1
	10	M5				
	8	M6	6.4/1.0	12.5/2	15/4.0	1.1
	10	M4				
	8	M5	4.0/0.7	7.6/1.2	15/4.0	1.1
	6.3	M6				
	10	M5	6.4/1.0	7.6/1.2	15/4.0	1.1
	8	M6				
	6.3	M4	5.0/0.8	3.2/0.45	15/4.0	1.1
	5	M5				
	4	M6	5.0/0.8	3.2/0.45	15/4.0	1.1
	3.2	M5				
	2.5	M6				

Crane Components

Ex range of visual and audible warning system



Ex lighting system



Ex cable gland with increased safety



Ex push button range for hoists and cranes

Push button box sealed, IP65 protection with 2, 4 or 6 buttons
48V low voltage control, emergency stop button



Ex Explosion-proof power feed Systems Round and flat cable types



Suspended crane electric cubicle

Complete cubicle with aluminium base, and hinged steel cover
Includes terminals and 48v transformer, crane travel contactors
Main contactor, thermal trip relays
EEX de IIB T4 protection

More option:EEX de IIC T4 protection.



Explosion group and temperature classes

Zone	0	1	2	Safe area
Flammable/mixed gas	Constant or for long periods	Occasionally during normal operation	Rarely or for short periods	Practically never
	20	21	22	Safe area
Flammable dust	Constant or for long periods	Occasionally during normal operation	Rarely or for short periods	Practically never

Maximum surface temperature

Maximum surface temperature of I equipment should not exceed:

- 150°, when coal dust heap up on equipment surface occasionally
- 450°, when it is forecast that no coal dust heap up on equipment surface:
 - Mark maximum temperature on equipment
 - Mark "X" on equipment, and clarify the special safety instruction on the equipment operation manual

II equipment :

- II equipment should conform to following rules:
- Categorized in advance according to the table below
 - Or defined by real maximum surface temperature
 - Or if applicable, limited on use of specific gas or steam and mark the proper label

II Equipment maximum surface temperature category

Category	Maximum surface temperature (C)
T1	450
T2	300
T3	200
T4	135
T5	100
T6	85

EC Marking

CE	...	Ex	II	2	G	and	D	Dust	EEx	de	IIB	T4
								Gas				
								Equipment category : present zone 1				
								Equipment group for surface				
								Use Equipment group for potentially explosive atmospheres				
								Identification number of notified body				
EC marking												
								Temperature class				
								Explosion group				
								Type of protection				
								Symbol for materials manufactured in accordance with European norms				