



PRODUCT MANUAL

SINGLE GIRDER BRIDGE CRANE

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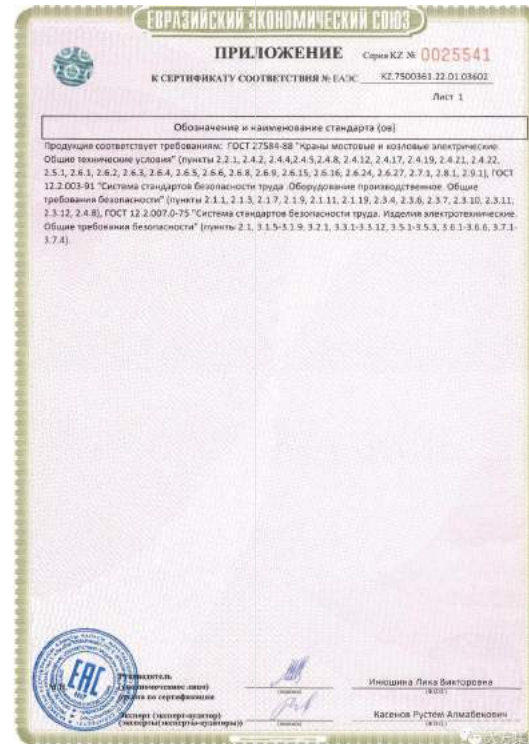
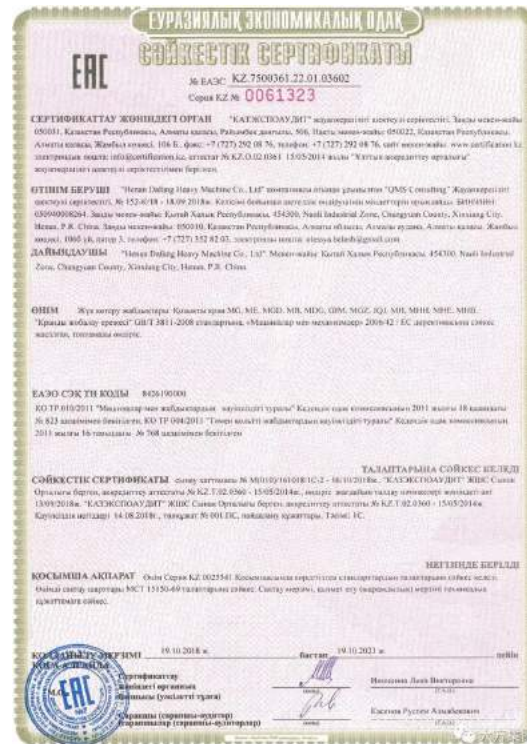
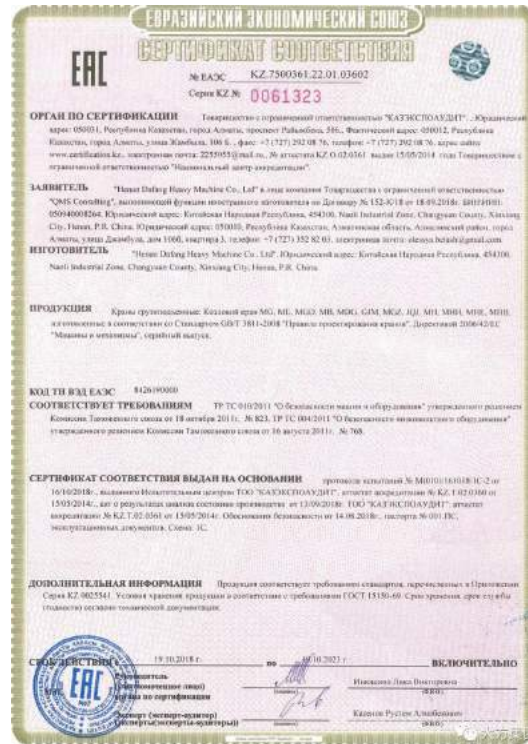
COMPANY

DFHOISTS is a company specialized in the design and production of new lifting equipment, mainly engaged in the production and sales of bridge, gantry cranes and light lifting equipment. With the deteriorating natural environment in the world, the global industry is developing towards low energy consumption and low emissions. The lifting equipment is also constantly being upgraded.

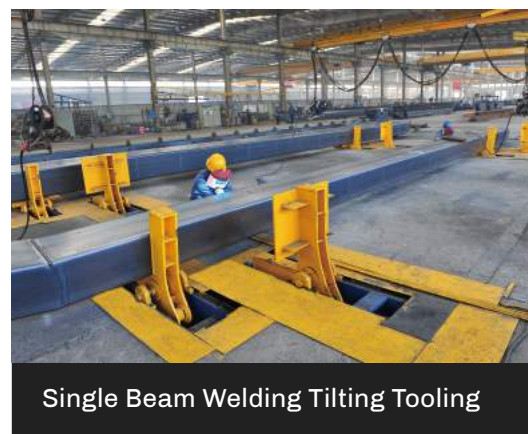
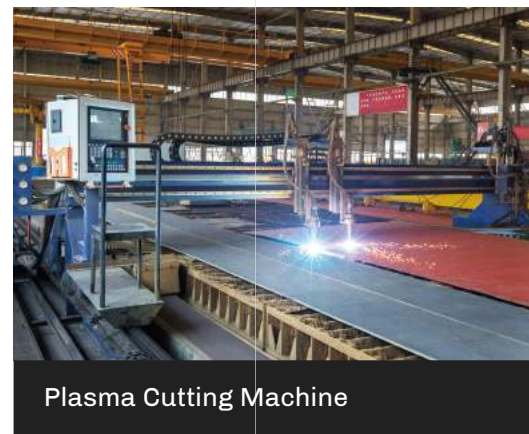
DFHOIST is based on crane optimization design, PLC and variable frequency drive technology. Our cranes are small in size, with light weight, low energy consumption, good maintenance-free performance and high work continuity. DFHOIST lifting equipment is designed according to FEM and ISO standards, and has passed CE, SGS, BV certification, ISO 9001:2015 quality system certification and ISO 14001:2015 environmental quality system certification.



► CERTIFICATE

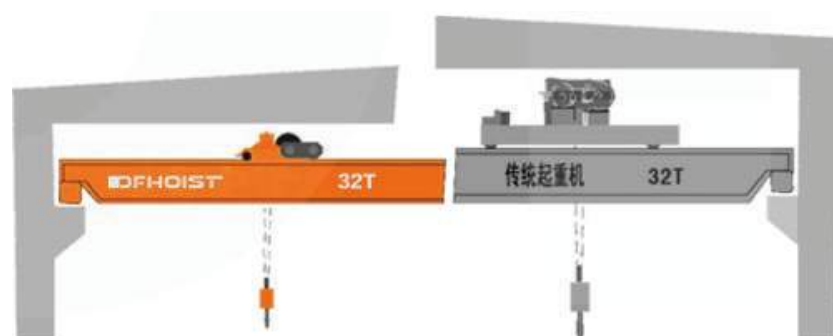


► Equipment and strength



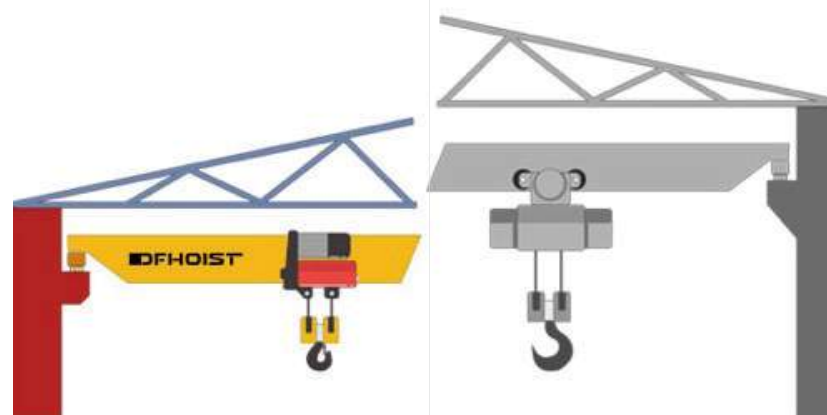


► ADVANCED DESIGN



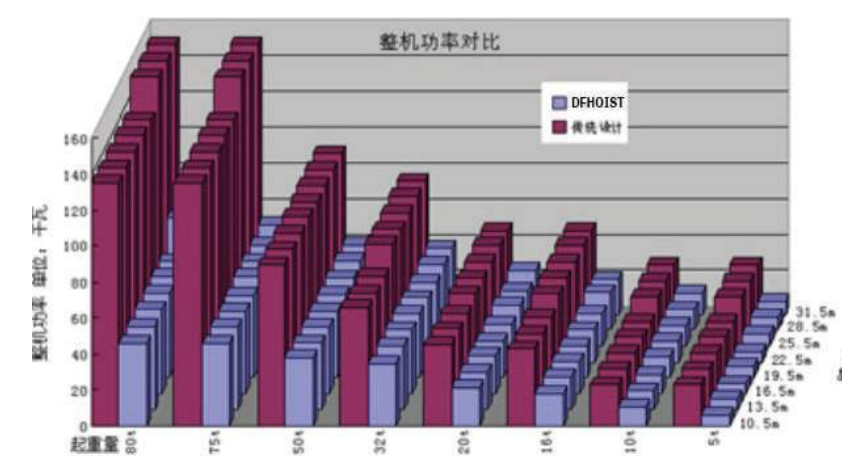
Light-Weighted Structure

- Our crane weight is just 60%-70% of the traditional cranes.
- Energy efficiency is just 30%-40% of the traditional cranes.
- We always advocate energy saving, and sound the time the bugle.
- Our manufacturing process is perfect, and we develop and expand Chinese ingenuity spirit.



Saving the Cost of Architecture

- Our Optimized Design Makes the Cranes More Compact and Low.
- In the Condition of the Same Workshop, Our Cranes Can Be Able to Increase the Lifting Height Extremely.
- If You Build a New Workshop, Our Cranes Can Be Able to Reduce the Height.
- If You Reconstruct the Old Workshop, Our Cranes Can Be Able to Reduce the Cost.



Energy-saving, Low Carbon

- Light weight component, the application of flexible technology, the optimized design of main glider, our crane weight is just 60%-70% of the traditional cranes.
- Because of the new energy-saving technology application of smart driving and frequency conversion driving, our energy efficiency is just 30%-40% of the traditional cranes.
- We always advocate energy saving, and sound the time the bugle.

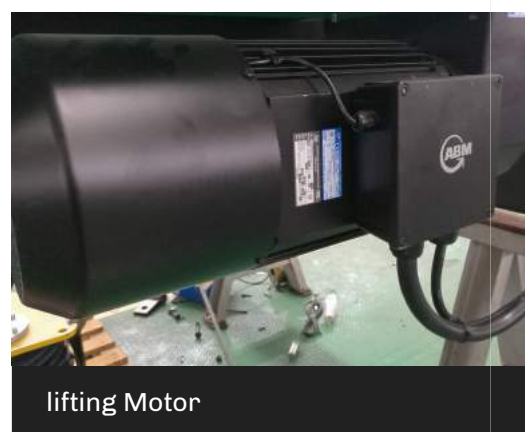
► Electric Hoist

DFhoist wire rope electric hoist adopts the European FEM design standard, with advanced concepts and beautiful appearance. The whole machine is compact in structure, easy to operate, safe and efficient. The hoist is in line with the contemporary requirements of low noise, energy conservation and environmental protection. It adopts frequency conversion speed regulation, which has small impact, accurate positioning advantages.

Electric hoist is equipped with an intelligent safety operation monitoring recorder which is similar to the aircraft "black box". It can continuously record crane working status information and prevent crane illegal operation. The whole hoist adopts the maintenance-free design with less wearing parts, which is convenient for maintaining.

Advantage:

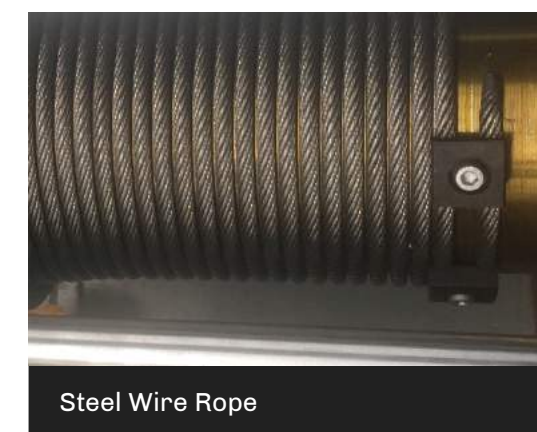
- 2160N/mm heavy duty galvanized wire rope
- Rotation lifting limit switch, 4 steps adjustable
- Reliable rope guider
- Super drum, longer rope lifetime
- Hardened gear
- DIN hook, class T
- Electromagnetic disk brake
- IP55 / H insulation
- Heavy duty motor, 60%ED rating
- Overheating, overloading protection
- Overload protection
- Overspeed protection



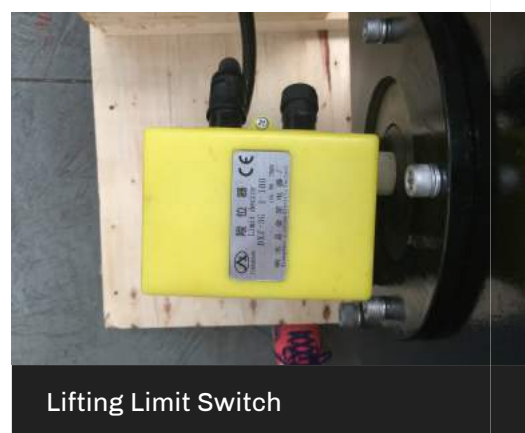
Lifting Motor



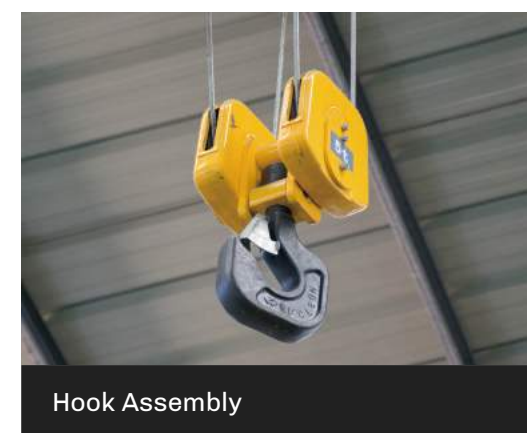
Lifting Control



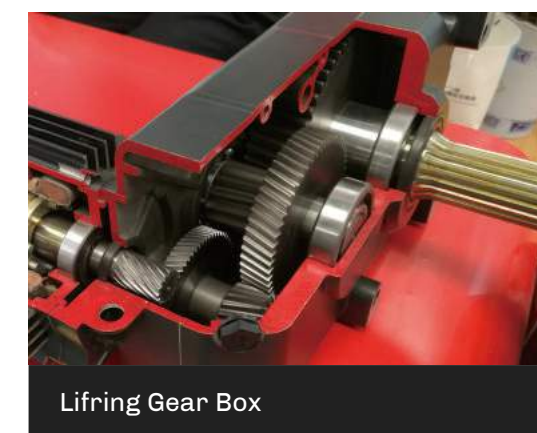
Steel Wire Rope



Lifting Limit Switch



Hook Assembly



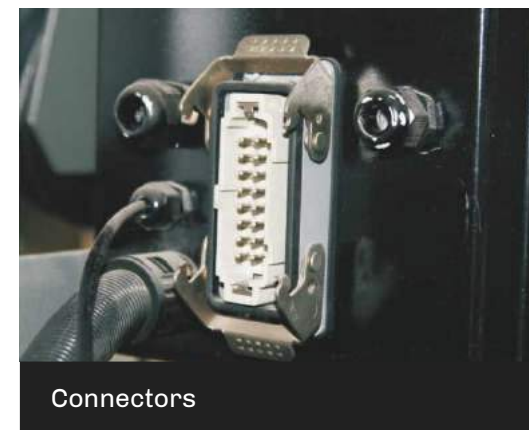
Lifting Gear Box

► Main Beam

Single welding box girder, beam deflection with DIN/FEM standard Steel Material: Fe37 or Fe52 (Equal to Chinese standard Q235B and Q345B) Whole length CNC cutting for complete web plate, to ensure the precision and smooth curve shape of the camber.

Trolley rail is made of high strength hot rolled flat steel (16 Mn) Automatic submerged arc welded main weld with NDT inspection Shot-blasting Sa2.5 for complete girder after welding, to achieve stress release Epoxy zinc-rich painting for one bottoms and two sides of 120pm thick, to achieve a long lifespan, beautiful appearance and good luster.

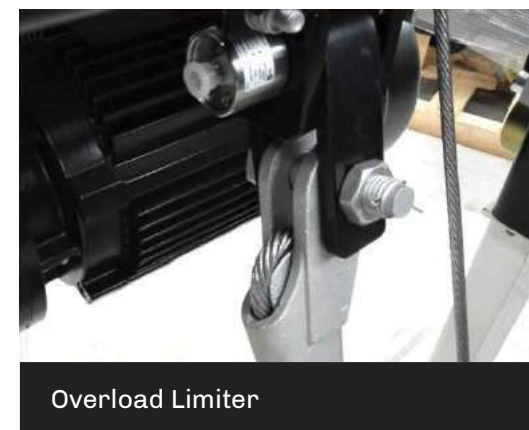
The girder and end beam are connected together by Class 10.9 high strength bolts to ensure the structure strength and precision of the whole machine.



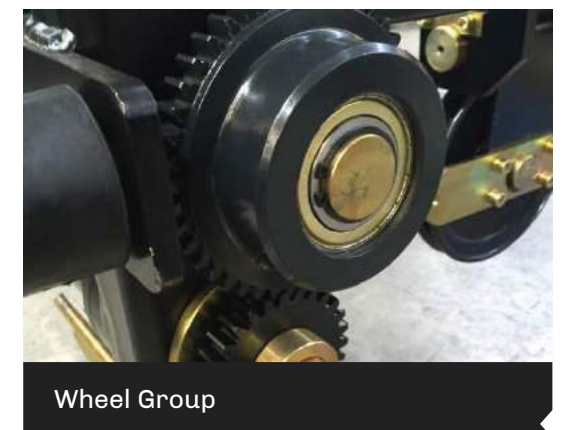
Connectors



Fixed Pulley



Overload Limiter



Wheel Group

► End Carriage

Crane end carriage can be divided into single girder crane end carriage, double girder crane end carriage and gantry crane end carriage.

The DFhoist end carriage designed by one time shaping design, the surface of which has been done shot blasting treatment, which is clean and beautiful.

Wheel set use module design, so the maintenance and replacement is convenient. The wheels and carrier shafts are forged, machined and heat treated by high quality alloy steel. The assembly can equip with high service life and high reliability bearings.



Motor:

- Integrated motor + brake + gearbox
- Spline shaft transmission, more stable in reverse driving Direct output without coupling, higher efficiency
- Stepless travelling
- Squirrel-cage, synchronous moto
- Heavy duty 60% ED rating

IP55 protection

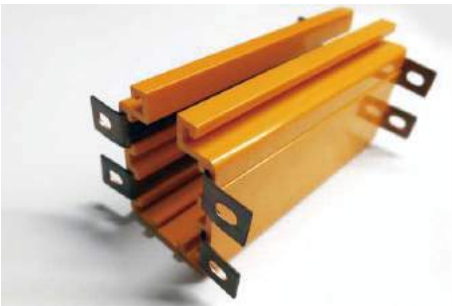


Wheel:

- DIN GGG70 casting wheels or 42CrMo4 forging wheels
- Q+T treatment, surface hardening
- Self-aligning bearing



► HFP series engineering plastic ducted type HSMX

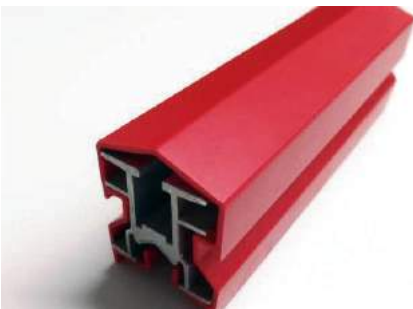


The shell of HFP series engineering plastic HFP series engineering plastic ducted-type HSMX shell is extruded by specific engineering plastic, which has the characteristics of safety and energy saving, acid and alkali corrosion and flame retardant.

Specifications & Model		Conduction Area	Current(A)	Remarks
HFP-4-10/50	HFPE-4-10/50	10 ²	50	Standard size of 4m can be made into 3 pole or 5 poles match with current collector HFP-4-40/H-FP-4-60/HFP-4-150, double carbon brush collector as an option.
HFP-4-15/80	HFPE-4-15/80	15 ²	80	
HFP-4-25/100	HFPE-4-25/100	25 ²	100	
HFP-4-35/130	HFPE-4-35/130	35 ²	130	
HFP-4-50/180	HFPE-4-50/180	50 ²	180	
HFP-4-70/210	HFPE-4-70/210	70 ²	210	

Remarks: 1. The above specification can be made of various curved ducts with a radius greater than 1M;
2. HFPF is a dustproof sliding contact line.

► JDC-H type, single pole combined sliding contact line



JDC-H single-polar combined type HSMX is made from rare earth alloy, large amount of river closure and small voltage. Using the stainless steel strip with good wear resistance in the aluminum guide rail and brush friction parts, to ensure that the mobile guide and valid service life.

Model	Specifications	Remarks
JDC-H-150A	90m ²	Standard size of 6m can be made into 3 poles and any poles.
JDC-H-250A	145m ²	
JDC-H-320A	180m ²	
JDC-H-500A	300m ²	
JDC-H-800A	450m ²	

► Seamless type HSMX

Material: non-oxygen copper, contains copper 99.95% above.
More tha 100% conductivity.



3 Poles seamless HSMX

Model	Specifications	Weight(KG)
HFE302-10mm ²	10mm ²	0.72/m
HFE302-15mm ²	15mm ²	0.82/m
HFE302-25mm ²	25mm ²	1.07/m

4 Poles seamless HSMX

Model	Specifications	Weight(KG)
HFE402-10mm ²	10mm ²	0.88/m
HFE402-15mm ²	15mm ²	1.00/m
HFE402-25mm ²	25mm ²	1.38/m

► JGH high temperature rigid body sliding contact line

JGH type high temperature rigid body sliding contact line is made up of trapezoidal type copper wire and steel tank bracket in a certain length of split phase group, with high strength special insulating pillar, forming of various sliding contact line indoor and outdoor, it can meet the bad environment requirment of high voltage & abnormal high temperature condition.

► Cable Properties

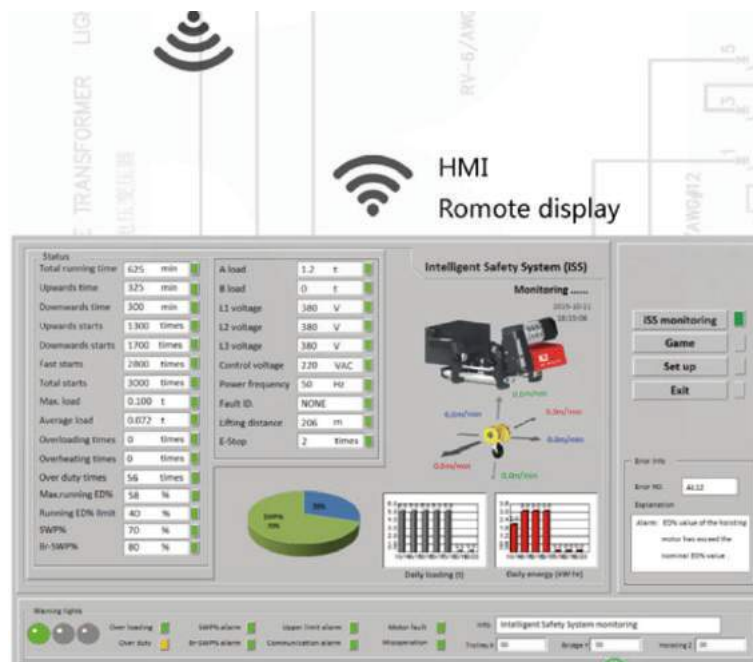


Thin structure with a minimum bending radius of 10cm, suitable for quick rewinding device, oil resistant and cold resistant, the power cord and communication line can be added in the core (and can also produce the circular structure).

Specification & model: YFFB 0.75~95mm²

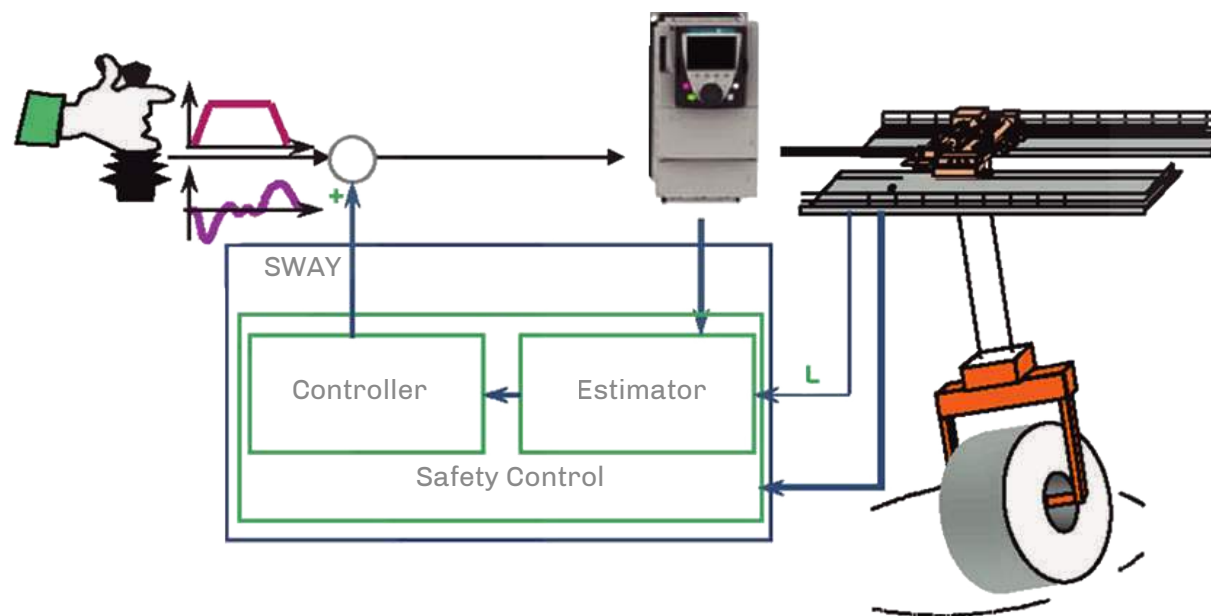
Sheath: special polychlreprens(Butadiene-acrylonitrile rubber), it remains flexi-ble at -15℃ , flame resistance and selfextinguishing.

► ELECTRICAL CONTROL



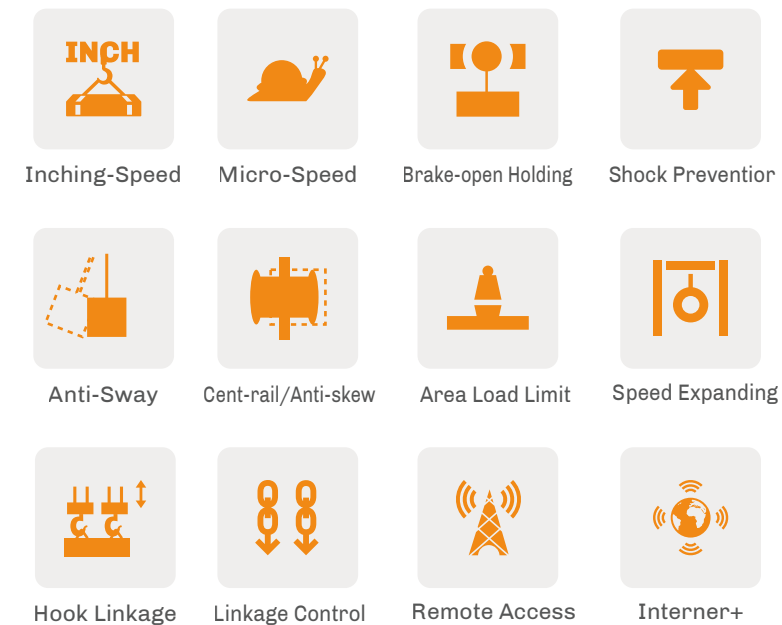
Intelligent Safety System (Iss)

- Hoist Safe Working Period Counter (SWP%)
- Lifting Running Time Counter
- Overloading Counter
- Motor Starts Counter
- Overload Protection
- Brake-Ware Supervision
- Ethernet/4g Remote Access



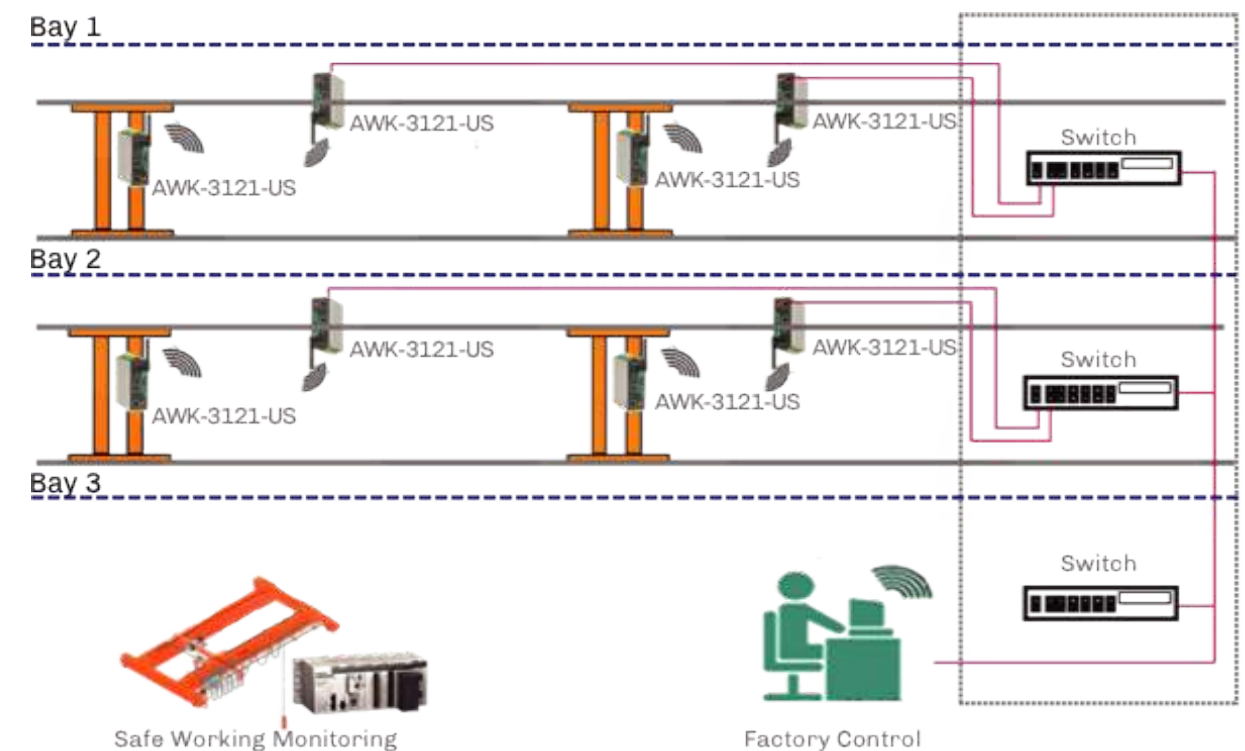
Anty-sway

- Crane Anti-Sway Card Is an Efficient Tool for Operator.
- Liberates the Operator From Swing Control.
- Allows More Time for Observing the Working Environment.



Intelligent Features

The intelligent features of Anti-sway, Inching-speed, Micro-speed, Brake-open holding and the internet technology of telecommunication, distance diagnosis working with our precise components make DFHOIST step to a new time of intelligent manufacture.



Remote Access

Remote Access Optimizes Automation and Wireless Control via Ethernet TCP/IP and Web Technology.



Crane Automation

- PLC Control
- Automatic Positioning
- Hook Route Programming
- Latching Control
- WMS (warehouse Management System)
- AS/RS
- Automatic Diagnose



Remote Control

- Easy to control, unnecessary to add professional driver
- Double block button to achieve safety stop
- Remote control distance 200 meters
- Protection class IP65
- Lifespan: 500,000 times

► SERVICE



- Our service solutions are specially made based on different requirements of individual clients.
- Meeting their standards could remove any of their worries. Including: Customized solutions
- Reliable, efficient and safe crane equipment
- High quality packaging
- Installation and assembly & test running
- Professional training
- Plenty of spare parts
- Maintenance

- DFhoist's service pack is safe & cost less
- Intelligent crane design software
- DFhoist's service pack can also be applied to cranes and hoists produced by other manufacturers
- Analysis and suggestions
- The experienced team of engineers



► PARAMETERS OF HD SINGLE GIRDER OVERHEAD CRANE

Lifting capacity (t)	Span S(m)	Lifting height (m)	Traveling speed (m/min)	Lifting speed (m/min)	Crane working class FEM/ISO	Height above rail H1 (mm)	Buffer height H3(mm)	Crane width L(mm)	Wheel base W(mm)	Top limit size A0(mm)	Left limit size A1 (mm)	Right limit size A2(mm)	Height of main girder H2(mm)	Max. wheel load (KN)	Total power (KW)	Self-weight (kg)
3.2	7.5	12	3.2-32	0.8/5.0	2m/A5	432	150	2012	1600	536	768	1032	417	18.2	5.2	1441
	10.5					532	150	2012	1600	536	768	1032	517	19.5	5.2	1731
	13.5					632	150	2512	2100	536	768	1032	617	20.9	5.2	2199
	16.5					732	150	3012	2600	536	768	1032	717	22.5	5.2	2781
	19.5					832	150	3512	3100	536	768	1032	817	24.9	5.85	3713
	22.5					882	150	4012	3600	536	768	1032	867	26.6	5.85	4393
	25.5					932	150	4012	3600	536	768	1032	917	28.7	5.85	5230
5	7.5	12	3.2-32	0.8/5.0	2m/A5	534	150	2012	1600	564	768	1032	519	26.5	8.8	1537
	10.5					634	150	2012	1600	564	768	1032	619	28.2	8.8	1936
	13.5					734	150	2512	2100	564	768	1032	719	29.9	8.8	2457
	16.5					834	150	3012	2600	564	768	1032	819	32.8	8.8	3529
	19.5					934	150	3512	3100	564	768	1032	919	34.8	8.8	4267
	22.5					984	150	4012	3600	564	768	1032	969	37.6	8.8	5355
	25.5					1034	150	4012	3600	564	768	1032	1019	40.6	8.8	6356
6.3	7.5	12	3.2-32	0.8/5.0	2m/A5	540	150	2012	1600	560	768	1032	525	32.5	8.8	1637
	10.5					640	150	2012	1600	560	768	1032	625	34.7	8.8	2180
	13.5					740	150	2512	2100	560	768	1032	725	36.7	8.8	2742
	16.5					840	150	3012	2600	560	768	1032	825	39.5	8.8	3754
	19.5					940	150	3512	3100	560	768	1032	925	41.7	8.8	4576
	22.5					990	150	4012	3600	560	768	1032	975	45.2	8.8	5939
	25.5					1045	150	4012	3600	560	768	1032	1025	48.1	8.8	7051
8	7.5	12	3.2-32	0.8/5.0	2m/A5	542	150	2512	2100	720	796	1138	527	41.7	12.65	2155
	10.5					692	150	2512	2100	720	796	1138	677	44.2	12.65	2660
	13.5					792	150	2512	2100	720	796	1138	777	46.7	12.65	3372
	16.5					897	150	3012	2600	720	796	1138	877	49.7	12.65	4397
	19.5					997	150	3512	3100	720	796	1138	977	53.3	12.65	5748
	22.5					1047	150	4012	3600	720	796	1138	1027	56.3	13.45	6885
	25.5					1112	250	4136	3600	720	796	1138	1077	59.6	13.45	8164

Lifting capacity (t)	Span S(m)	Lifting height (m)	Traveling speed (m/min)	Lifting speed (m/min)	Crane working class FEM/ISO	Height above rail H1 (mm)	Buffer height H3(mm)	Crane width L(mm)	Wheel base W(mm)	Top limit size A0(mm)	Left limit size A1 (mm)	Right limit size A2(mm)	Height of main girder H2(mm)	Max. wheel load (KN)	Total power (KW)	Self-weight (kg)
10	7.5	12	3.2-32	0.8/5.0	2m/A5	544	150	2512	2100	718	796	1138	529	50.8	13.45	2288
	10.5					699	150	2512	2100	718	796	1138	679	54	13.45	2990
	13.5					849	150	2512	2100	718	796	1138	829	56.9	13.45	3803
	16.5					949	150	3012	2600	718	796	1138	929	59.8	13.45	4733
	19.5					1014	250	3636	3100	718	796	1138	979	63.7	13.45	6164
	22.5					1114	250	4136	3600	718	796	1138	1079	67	13.45	7404
	25.5					1214	250	4136	3600	718	796	1138	1179	70.2	13.45	8609
12.5	7.5	12	3.2-32	0.8/5.0	2m/A5	603	150	2512	2100	716	796	1138	663	62.5	13.45	2644
	10.5					768	250	2636	2100	716	796	1138	813	66.6	13.45	3453
	13.5					918	250	2636	2100	716	796	1138	963	69.8	13.45	4339
	16.5					968	250	3136	2600	716	796	1138	1013	73	13.45	5367
	19.5					1068	250	3636	3100	716	796	1138	1113	76.4	13.45	6555
	22.5					1173	250	4236	3600	716	796	1138	1213	81.3	13.45	8413
	25.5					1223	250	4236	3600	716	796	1138	1263	85.5	13.45	10019
16	7.5	12	3.2-32	0.6/4.0	2m/A5	624	250	2636	2100	772	1131	1317	589	76.7	20.9	3394
	10.5					774	250	2636	2100	772	1131	1317	739	82.7	20.9	4360
	13.5					924	250	2636	2100	772	1131	1317	889	87.2	20.9	5398
	16.5					1024	250	3136	2600	772	1131	1317	989	92.3	22.3	6938
	19.5					1129	250	3736	3100	772	1131	1317	1089	98.4	22.3	9054
	22.5					1179	250	4236	3600	772	1131	1317	1139	102.5	22.3	10477
	25.5					1233	250	4236	3600	772	1131	1317	1193	107.5	22.3	12339
20	7.5	12	3.2-32	0.6/4.0	2m/A5	680	250	2636	2100	768	1131	1317	645	94.2	22.3	3732
	10.5					830	250	2636	2100	768	1131	1317	795	100.8	22.3	4623
	13.5					930	250	2636	2100	768	1131	1317	895	106.5	22.3	5919
	16.5					1085	250	3236	2600	768	1131	1317	1045	112.8	22.3	7859
	19.5					1185	250	3736	3100	768	1131	1317	1145	118.5	22.3	9744
	22.5					1235	250	4236	3600	768	1131	1317	1195	123.2	22.3	11322
	25.5					1289	250	4236	3600	768	1131	1317	1249	128.2	22.3	13128