PRODUCT MANUAL

DOUBLE GIRDER OVERHEAD CRANE

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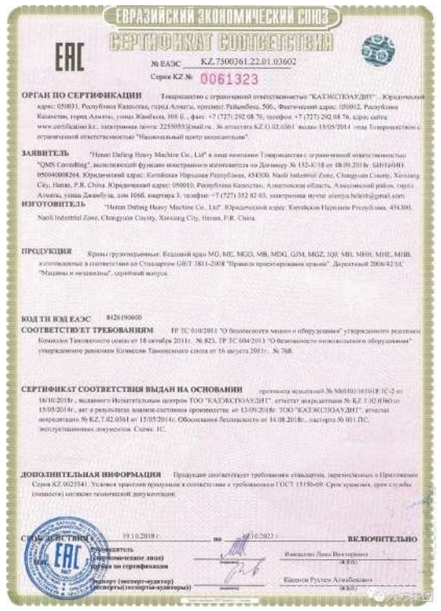
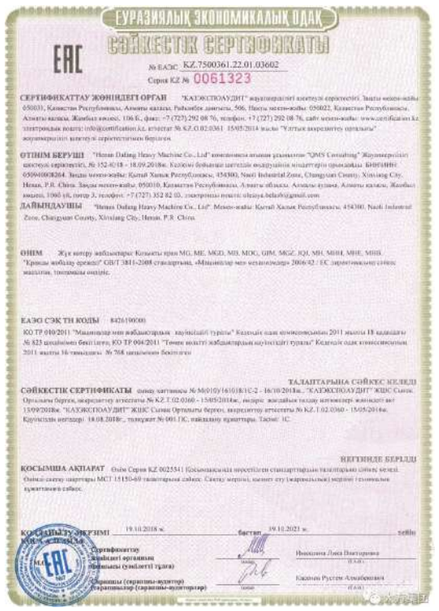
COMPANY

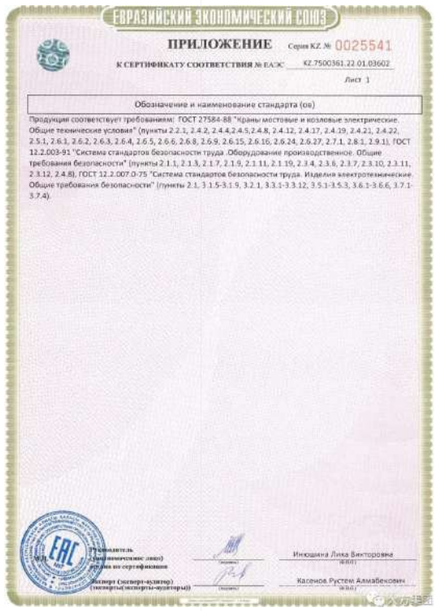
DFHOISTS is a company specialized in the design and production of new lifting equipment, mainly engaged in the production and sales of bridge, gantry cranes and light lifting equipment. With the deteriorating natural environment in the world, the global industry is developing towards low energy consumption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

Axis Parts Automatic Processing Line

U-groove Cold Rolling Forming Set

Plasma Cutting Machine

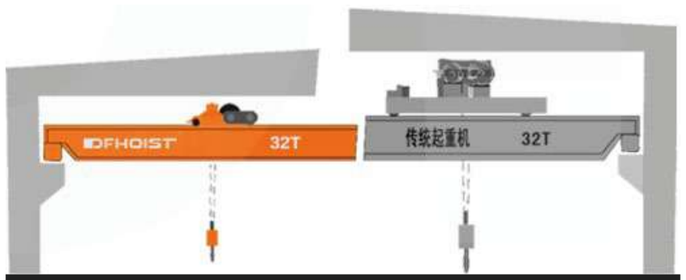
Large CNC Floor Milling And Boring Machine

Single Beam Welding Tilting Tooling

Four Gun Air Protection Gantry Welding

Cnc Machining Center

ADVANCED DESIGN



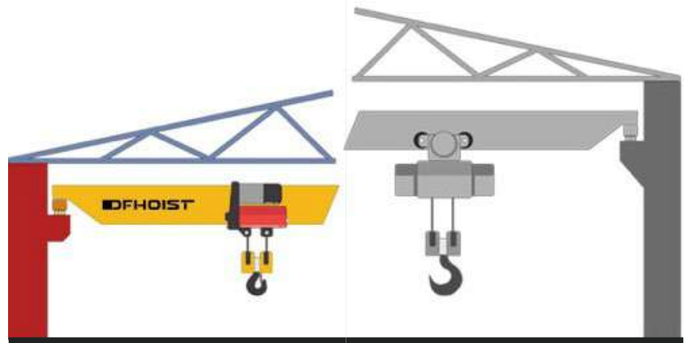
Light-Weighted Structure

• 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.



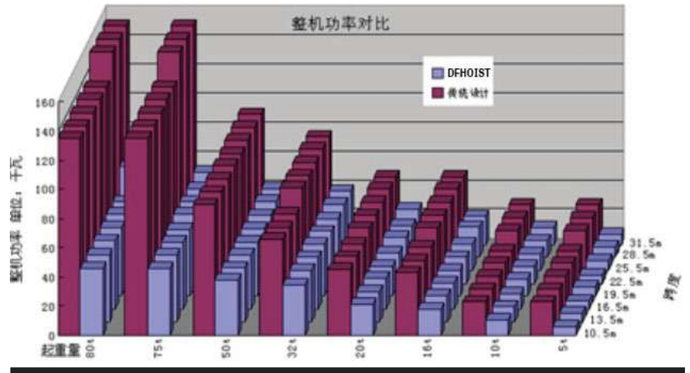
Saving the Cost of Archiecture

• 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.

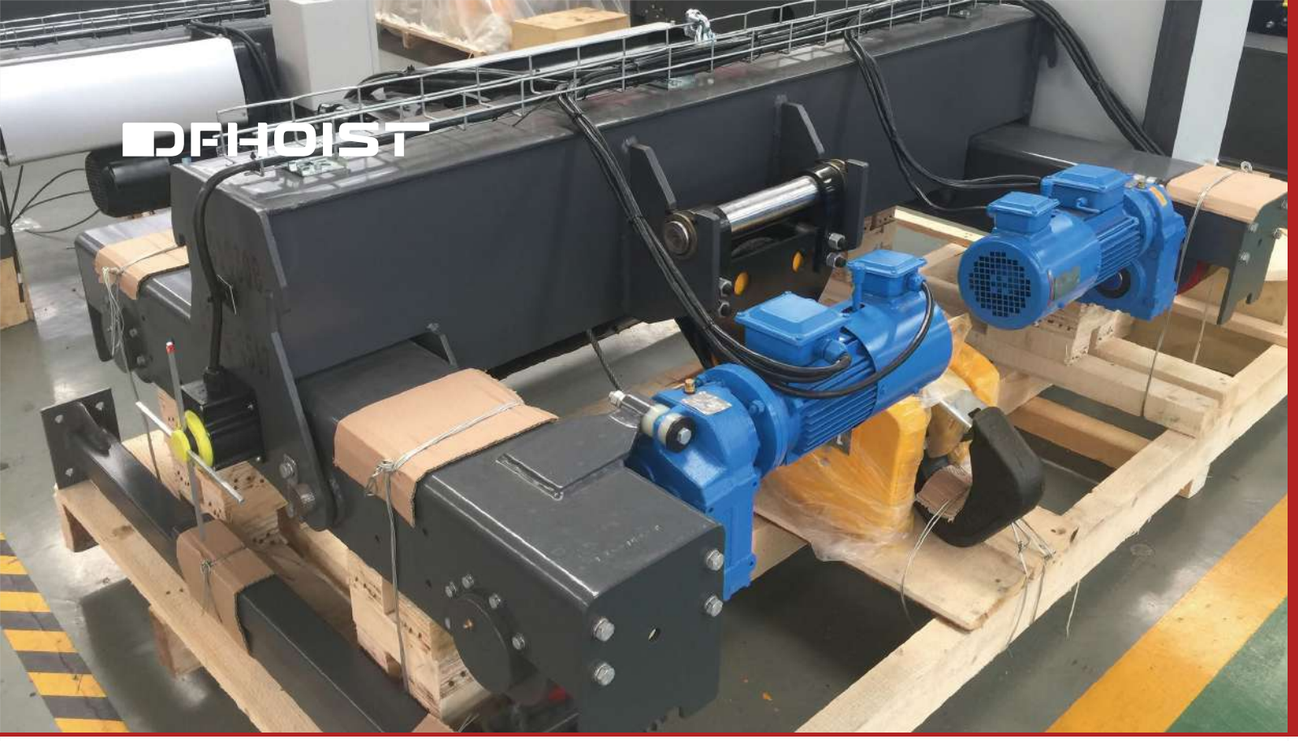


Energy-saving, Low Carbon

• Light weight component, the application of flexible technology, the optimized design of main glider, our care 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.

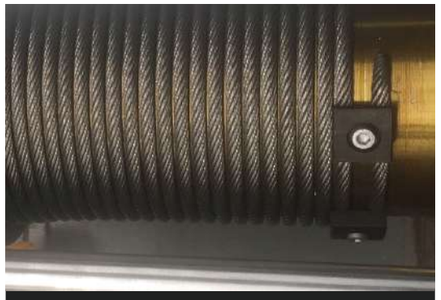
Electric hoist is equipped with an intelligent safety operation monitoring recorder which is similar to the aircraft "black box". It can continuously record crane working status information and prevent crane illegal operation. The whole hoist adopts the maintenance-free design with less wearing parts,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


Lifring 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 plastice, 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/HFP-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	$450m^2$	

Sealmess 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.

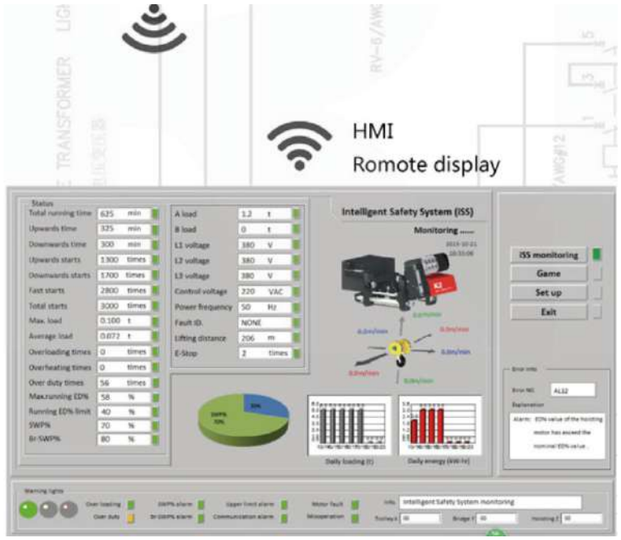
Cable Properties

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 0.75~95㎟

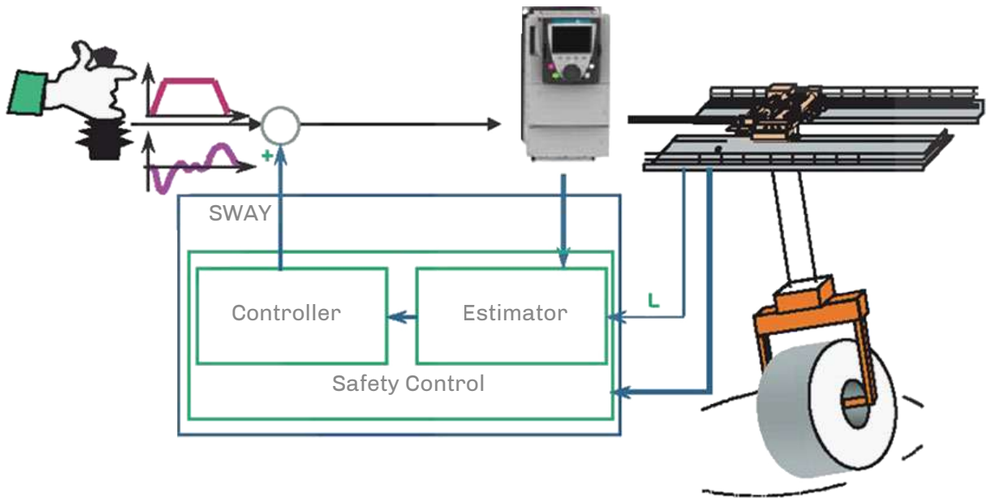
Sheath: special polychlreprens(Butadiene-acrylonitrile rubber), it remains fexible at -15℃, flame resistance and selfextinguishing.

ELECTRICAL CONTROL



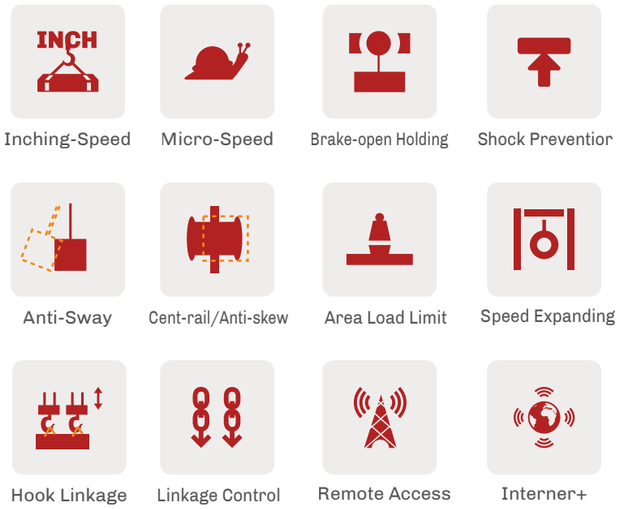
Intelligent Safety System (Iss)

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



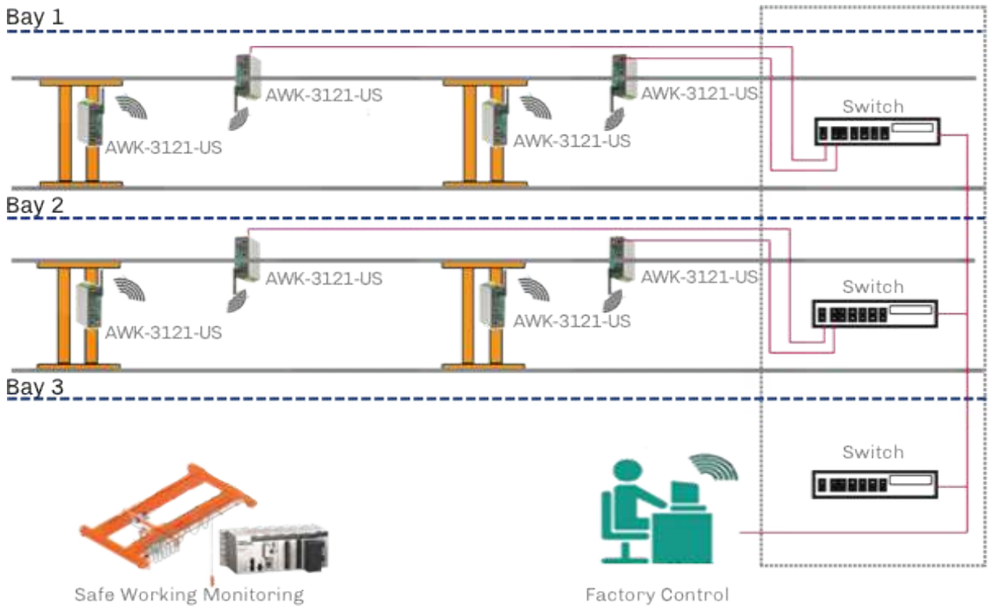
Anty-sway

- 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
- Lnching Control
- WMS (warehouse Managmet 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
- Analysis and suggestions
- The experienced team of engineers
- DFhoist's service pack can also be applied to cranes and hoists produced by other manufacturers

PARAMETERS OF DOUBLE GIRDER OVERHEAD CRANE

Lifting capacity (t)	Span S(m)	Lifting height (m)	Traveling speed (m/min)	Lifting speed (m/min)	Electric control code	Crane working class FEM/ISO	Hoist working class FEM/ISO	Trolley gauge W1(mm)	Wheel base W(mm)	Crane width L(mm)	Height above rail H1(mm)	Hook top limit size H2(mm)	Buffer height H3(mm)	Height below rail H4(mm)	Left limit size A1 (mm)	Right limit size A2 (mm)	Max. wheel load (KN)	Total power (KW)	Dead weight (kg)
5	7.5	12	3.2-32	0.8/5.0	CHD05E	2m/A5	2m/MN5	1700	3000	4140	1295	156	150	-184	606	616	33	8.46	3714
	10.5								3000	4140	1295	206	150	-184	606	616	36	8.46	4490
	13.5								3000	4140	1195	206	150	-84	606	616	39	8.46	5476
	16.5								3000	4190	1231	206	150	16	606	616	43	9.16	6790
	19.5								3000	4190	1181	256	150	66	606	616	46	9.16	7717
	22.5								3500	4240	1157	256	150	116	606	616	50	9.16	9488
	25.5								3500	4290	1207	306	150	118	606	616	55	9.16	11401
	28.5								4000	4790	1324	423	250	53	606	616	61	9.16	13622
	31.5								4500	5290	1374	473	250	53	606	616	64	9.16	14931
10	7.5	12	3.2-32	0.8/5.0	CHD10E	2m/A5	2m/MN5	1700	3000	4090	1295	46	150	-184	669	703	57	12.56	4250
	10.5								3000	4190	1261	96	150	-84	669	703	62	12.56	5361
	13.5								3000	4190	1261	96	150	16	669	703	66	12.56	6421
	16.5								3000	4290	1261	96	150	116	669	703	70	12.56	8048
	19.5								3000	4340	1326	161	250	151	669	703	76	13.36	9575
	22.5								3500	4490	1476	311	250	101	669	703	81	13.36	11734
	25.5								3500	4490	1478	313	250	153	669	703	88	13.36	14349
	28.5								4000	4910	1533	368	250	148	669	703	95	13.36	17044
	31.5								4500	5360	1683	518	250	98	669	703	101	13.36	19501
12.5	7.5	12	3.2-32	0.8/5.0	CHD12E	2m/A5	2m/MN5	1700	3000	4190	1245	46	150	-134	669	703	68	12.56	4380
	10.5								3000	4190	1311	146	150	-84	669	703	74	12.56	5539
	13.5								3000	4290	1311	146	150	16	669	703	79	12.56	6874
	16.5								3000	4340	1326	161	250	101	669	703	84	13.36	8724
	19.5								3000	4340	1376	211	250	153	669	703	89	13.36	10171
	22.5								3500	4490	1476	311	250	153	669	703	96	13.36	12785
	25.5								3500	4660	1533	368	250	148	669	703	104	13.36	15636
	28.5								4000	4910	1583	418	250	198	669	703	110	14.76	17852
	31.5								4500	5410	1683	518	250	198	669	703	118	14.76	21078
16	7.5	12	3.2-32	0.6/4.0	CHD16E	2m/A5	2m/MN5	2000	3500	4490	1402	21	150	-134	854	907	81	20.9	4799
	10.5								3500	4490	1452	71	150	-82	854	907	90	20.9	5952
	13.5								3500	4640	1569	188	250	3	854	907	98	20.9	7995
	16.5								3500	4640	1569	188	250	153	854	907	104	20.9	10020
	19.5								3500	4810	1624	243	250	98	854	907	112	20.9	11978
	22.5								3500	4860	1674	293	250	148	854	907	119	22.3	14568
	25.5								3500	4910	1724	343	250	248	854	907	126	22.3	16899
	28.5								4000	5010	1824	443	250	200	854	907	134	22.3	20101
	31.5								4500	5360	1874	493	250	250	854	907	141	22.3	22663

Lifting capacity (t)	Span S(m)	Lifting height (m)	Traveling speed (m/min)	Lifting speed (m/min)	Electric control code	Crane working class FEM/ISO	Hoist working class FEM/ISO	Trolley gauge W1(mm)	Wheel base W(mm)	Crane width L(mm)	Height above rail H1(mm)	Hook top limit size H2(mm)	Buffer height H3(mm)	Height below rail H4(mm)	Left limit size A1 (mm)	Right limit size A2 (mm)	Max. wheel load (KN)	Total power (KW)	Dead weight (kg)
20	7.5	12	3.2-32	0.6/4.0	CHD20E	2m/A5	lAm/M4	2000	3500	4640	1517	136	250	-99	854	907	99	22.3	5393
	10.5								3500	4640	1567	186	250	-47	854	907	109	22.3	6702
	13.5								3500	4640	1619	238	250	53	854	907	118	22.3	8712
	16.5								3500	4810	1624	243	250	48	854	907	126	22.3	10942
	19.5								3500	4910	1674	293	250	148	854	907	134	22.3	13104
	22.5								3500	4910	1724	343	250	200	854	907	141	22.3	15471
	25.5								4000	5024	1828	447	250	146	854	907	150	22.3	18652
	28.5								4000	5024	1878	497	350	246	854	907	157	22.3	21331
	31.5								4500	5424	1928	547	350	296	854	907	168	22.3	25357
25	7.5	12	3.2-32	0.8/3.2	CHD25E	2m/A5	3m/M6	2400	4000	5160	1772	0	250	-206	915	1005	126	27	7349
	10.5								4000	5160	1872	100	250	-106	915	1005	141	27	9340
	13.5								4000	5310	1874	102	250	-6	915	1005	149	27	10586
	16.5								4000	5310	1974	202	250	-4	915	1005	161	27	13950
	19.5								4000	5274	2024	252	350	96	915	1005	171	27	16653
	22.5								4500	5474	2074	302	350	146	915	1005	181	27	19798
	25.5								4500	5474	2124	352	350	246	915	1005	189	27	22610
	28.5								4500	5524	2174	402	350	296	915	1005	198	28.6	25751
	31.5								4500	5524	2226	454	350	396	915	1005	211	28.6	30746
32	7.5	12	3.2-32	0.8/3.2	CHD32E	2m/A5	2m/M5	2400	4500	5240	1664	-108	150	-86	980	1040	78	28.6	7329
	10.5								4500	5190	1764	-8	150	-36	980	1040	87	28.6	10258
	13.5								4500	5240	1814	42	150	64	980	1040	92	28.6	11506
	16.5								4500	5290	1929	157	250	149	980	1040	98	28.6	14793
	19.5								4500	5340	1979	207	250	199	980	1040	103	28.6	16807
	22.5								4500	5460	2034	262	250	344	980	1040	108	28.6	20449
	25.5								4500	5510	2084	312	250	394	980	1040	114	28.6	24198
	28.5								4500	5660	2134	362	250	444	980	1040	119	30.6	27738
	31.5								4500	5710	2134	362	250	544	980	1040	124	30.6	31698
40	7.5	12	3.2-32	0/4.9	CHD40E	2m/A5	2m/M5	2400	4500	5240	1826	-148	150	-186	980	1040	95	49.8	8366
	10.5								4500	5240	1976	2	150	-136	980	1040	106	49.8	10564
	13.5								4500	5290	1993	19	250	1	980	1040	113	49.8	13305
	16.5								4500	5290	1993	19	250	201	980	1040	120	49.8	16112
	19.5								4500	5460	2048	74	250	246	980	1040	126	49.8	18939
	22.5								4500	5510	2098	124	250	346	980	1040	131	49.8	22334
	25.5								4500	5510	2148	174	250	446	980	1040	137	49.8	26094
	28.5								4500	5660	2198	224	250	496	980	1040	143	49.8	29861
	31.5								4500	5724	2348	374	350	496	980	1040	150	49.8	35330
50	7.5	12	3.2-32	0.53/3.2	CHD50E	2m/A5	2m/M5	3000	5500	6410	1898	-86	250	-204	980	1040	117	49.8	10418
	10.5								5500	6410	1998	14	250	-154	980	1040	129	49.8	12563
	13.5								5500	6360	1998	14	250	-46	980	1040	138	49.8	15140
	16.5								5500	6410	1998	114	250	96	980	1040	146	49.8	18038
	19.5								5500	6410	2198	214	250	196	980	1040	152	49.8	21069
	22.5								5500	6410	2248	264	250	296	980	1040	158	49.8	24584
	25.5								5500	6360	2298	314	250	396	980	1040	164	52.8	28487
	28.5								5500	6424	2298	314	350	448	980	1040	172	52.8	33413
	31.5								5500	6424	2398	414	350	498	980	1040	177	52.8	37387