DOUBLE GIRDER OVERHEAD CRANE

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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

Axis Parts Automatic Processing Line
U-groove Cold Rolling Forming Set
Plasma Cutting Machine
Single Beam Welding Tilting Tooling
Four Gun Air Protection Gantry Welding
Cnc Machining Center
Large CNC Floor Milling And Boring Machine

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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 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.
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
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 (18 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.
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 motor
- 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 ducted-type HSMX shell is extruded by specific engineering plastics, which has the characteristics of safety and energy saving, acid and alkali corrosion and flame retardant.

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.

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).

Sealmess type HSMX

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

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 requirement of high voltage & abnormal high temperature condition.

Specifications & Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Conduction Area</th>
<th>Current(A)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFP-4-10/50</td>
<td>10²</td>
<td>50</td>
<td>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.</td>
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<tr>
<td>HFP-4-15/80</td>
<td>15²</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>HFP-4-25/100</td>
<td>25²</td>
<td>100</td>
<td></td>
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<tr>
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<td>35²</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>HFP-4-50/180</td>
<td>50²</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>HFP-4-70/210</td>
<td>70²</td>
<td>210</td>
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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.

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3 Poles seamless HSMX

4 Poles seamless HSMX

Sheath: special polychlreprens(Butadiene-acrylonitrile rubber), it remains flexible at -15°C, 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

Anti-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
Crane Automation
- PLC Control
- Automatic Positioning
- Hook Route Programming
- Launching 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 DOUBLE GIRDER OVERHEAD CRANE

| Lifting capacity (t) | Span (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) |
|---------------------|---------|-------------------|------------------------|----------------------|-----------------------|----------------------|----------------------|-----------------|----------------|----------------|-------------------|-----------------------|-------------------|------------------|------------------|------------------|-----------------|-----------------|
| 7.5                 | 5       | 12                | 3.2:3.2                | 0.8/5.0              | CHD05E                | 2m/AS               | 2m/MN5              | 1700            | 3000           | 4100           | 1295              | 156                | 150               | -184             | 606              | 616              | 33              | 8.46            | 3714            |
| 10.5                | 7.5     | 12                | 3.2:3.2                | 0.8/5.0              | CHD10E                | 2m/AS               | 2m/MN5              | 1700            | 3000           | 4140           | 1295              | 206                | 150               | -184             | 606              | 616              | 38              | 8.46            | 4490            |
| 13.5                | 10.5    | 12                | 3.2:3.2                | 0.8/5.0              |                       |                      |                     |                 |                |                |                   |                      |                   |                  |                  |                  |                 |                 |                 |
| 16.5                | 13.5    | 12                | 3.2:3.2                | 0.8/5.0              |                       |                      |                     |                 |                |                |                   |                      |                   |                  |                  |                  |                 |                 |                 |
| 19.5                | 16.5    | 12                | 3.2:3.2                | 0.8/5.0              |                       |                      |                     |                 |                |                |                   |                      |                   |                  |                  |                  |                 |                 |                 |
| 22.5                | 19.5    | 12                | 3.2:3.2                | 0.8/5.0              |                       |                      |                     |                 |                |                |                   |                      |                   |                  |                  |                  |                 |                 |                 |
| 25.5                | 22.5    | 12                | 3.2:3.2                | 0.8/5.0              |                       |                      |                     |                 |                |                |                   |                      |                   |                  |                  |                  |                 |                 |                 |
| 28.5                | 25.5    | 12                | 3.2:3.2                | 0.8/5.0              |                       |                      |                     |                 |                |                |                   |                      |                   |                  |                  |                  |                 |                 |                 |
| 31.5                | 28.5    | 12                | 3.2:3.2                | 0.8/5.0              |                       |                      |                     |                 |                |                |                   |                      |                   |                  |                  |                  |                 |                 |                 |
| 35.0                | 31.5    | 12                | 3.2:3.2                | 0.8/5.0              |                       |                      |                     |                 |                |                |                   |                      |                   |                  |                  |                  |                 |                 |                 |
| 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 | Crane working class FEM/ISO | Trolley gauge Wx(mm) | Wheel base Wx(mm) | Wheel crane width Lx(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) |
|----------------------|-------------|-------------------|------------------------|----------------------|----------------------|-------------------------|-------------------------|-------------------|----------------|---------------------|------------------|------------------|-----------------|------------------|------------------|-----------------|------------------|-----------------|
| 7.5                  |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 10.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 13.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 16.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 19.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 22.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 25.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 28.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 31.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 35.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 38.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 40.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 45.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |
| 50.5                 |             |                   |                        |                      |                      |                         |                         |                   |                 |                     |                  |                  |                  |                  |                  |                 |                 |                |

### Table Data

- **Lifting capacity (t)**: The lifting capacity of the crane in tons.
- **Span $S$(m)**: The span of the crane in meters.
- **Lifting height (m)**: The maximum lifting height of the crane in meters.
- **Traveling speed (m/min)**: The traveling speed of the crane in meters per minute.
- **Lifting speed (m/min)**: The lifting speed of the crane in meters per minute.
- **Electric control code**: The code indicating the type of electric control.
- **Crane working class FEM/ISO**: The working class of the crane according to FEM/ISO standards.
- **Trolley gauge Wx(mm)**: The trolley gauge width in millimeters.
- **Wheel base Wx(mm)**: The wheel base in millimeters.
- **Wheel crane width Lx(mm)**: The wheel crane width in millimeters.
- **Height above rail H1(mm)**: The height above the rail in millimeters.
- **Hook top limit size H2(mm)**: The hook top limit size in millimeters.
- **Buffer height H3(mm)**: The buffer height in millimeters.
- **Height below rail H4(mm)**: The height below the rail in millimeters.
- **Left limit size A1 (mm)**: The left limit size in millimeters.
- **Right limit size A2 (mm)**: The right limit size in millimeters.
- **Max. wheel load (KN)**: The maximum wheel load in kilonewtons.
- **Total power (KW)**: The total power in kilowatts.
- **Dead weight (kg)**: The dead weight in kilograms.