Hitachi Electric Chain Hoist

Super F2 series Inverter
VARIABLE SPEED CONTROL
Hitachi Super F2 Hoist has improved functionality from the previous Hitachi Chain Hoist, which has been used for a wide range of applications such as general machineries, automobiles, warehouses and furthermore. Compared to the previous Hitachi Chain Hoist, its speed, safety, durability and maintenance ability have been largely improved.

Hitachi Super F2 Hoist is aimed for an easier use and more convenience and make cargo handling more efficient and realize a higher safety.

### Super Functions

#### Faster hoisting speed

- Speedy
- 40% increase of hoisting speed with single chain for 3t
- 25% increase of hoisting speed with double chain for 5t

#### Easier control

- Safety
- Cushion starting/stopping & variable speed function

#### Higher durability

- Strong
- Rating 45%ED (High-speed 30% + Low-speed 15%)
- Protective structure against dust and water streams (IP55)

#### Higher safety

- Smooth
- Double brake function [Electric brake + Mechanical brake (at 2nd-stage gear)]
- Overload limiter + duplex winding prevention mechanism (Slip clutch + electric limit switch)
- Emergency stop button equipped as a standard
- Low voltage control(24V)
- Function of reverse phase inspection relay
- Anti-drop mechanism of a trolley equipped as a standard

#### Easier maintenance

- Simple
- All electric parts are assembled into one switch case
- One push lock type outlet
- Easy to attach/remove with fixed upper hook pin
- Display of maintenance information: number of starting times, operation hours
- Grease ▶ Lubrication oil: Easy to exchange lubrication just by changing oil
- Saving operation information to USB memory

### Specifications table

<table>
<thead>
<tr>
<th>Rated Load(kg)</th>
<th>2,000</th>
<th>3,000</th>
<th>5,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoist</td>
<td>2SFNH2</td>
<td>3SFNH2</td>
<td>5SFNH2</td>
</tr>
<tr>
<td>Trolley</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-speed</td>
<td>8.5</td>
<td>7.0</td>
<td>4.2</td>
</tr>
<tr>
<td>Low-speed</td>
<td>2.1</td>
<td>1.8</td>
<td>1.1</td>
</tr>
<tr>
<td>Motor output(kW)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-speed</td>
<td>3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-speed</td>
<td>0.75</td>
<td></td>
<td>0.9</td>
</tr>
<tr>
<td>Traveling speed(m/min)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-speed</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-speed</td>
<td>6.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor output(kW)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-speed</td>
<td>0.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-speed</td>
<td>0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Link chain</td>
<td>Dia.(mm)</td>
<td>No.of Falls</td>
<td>Rating</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-speed</td>
<td>30%ED,180starts/h</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Low-speed</td>
<td>15%ED,180starts/h</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Casing
Durable structure by aluminum die casting body

Oil bath
• Low noise
• Easy replacement

Brake
• Improved safety with a combination of electric & mechanical brake
• Higher safety with the mechanical brake at the 2nd gear in case the 2nd gear is broken

Suspension type

Upper hook
Easy to remove hook by pin method

Protection structure
Protected against dust and water stream (IP55)

With motorized trolley

Traveling motor
Higher durability

Controlling part
Easy maintenance by integrating electric parts in one assembly

Anti-drop metal
Prevent drops of fitting even when a wheel is broken.

Outlet
Easy to attach/remove outlet by "one push lock type"

Push button
The pendant type with an emergency stop button is standard equipment

Sprocket connected with the chain
Lower vibration with 5-tooth sprocket

Motor
Improved cooling with fin + cooling fan attached to the motor

Gears
Easy check-out on gears with a window

Controlling part
Easy maintenance by integrating electric parts in one assembly
Savings operation information to USB memory

Container
Seal aperture to prevent a chain from coming out of a container

Chain
21.3l: ø11.2x1
St: ø11.2x2

Lower hook
Improved on easy hanging by larger dimension of an aperture

Smooth

Safety

Simple

Strong

Speedy
Dimensions

<table>
<thead>
<tr>
<th>Suspension type</th>
<th>With motorized trolley-SFTN2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2t, 3t</td>
<td></td>
</tr>
</tbody>
</table>

Approximate weight
- Lift 3m: 125kg
- Lift 6m: 134kg

Approximate weight
- Lift 3m: 196kg
- Lift 6m: 205kg

5t

Approximate weight
- Lift 3m: 164kg
- Lift 6m: 181kg

- Lift 3m: 258kg
- Lift 6m: 273kg

Others products with changed specifications

| Lift change(extension) |

- The lift can be extended within the range in the following table, so specify as needed.

- Options other than those shown in the following table are also possible depending on the conditions, so contact Hitachi.

- It is necessary to use a chain container of a capacity fitted to the length of chain to be contained.

Other specifications(option)

<table>
<thead>
<tr>
<th>Item</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric limit switch</td>
<td>This interrupts motor power to prevent hook overtravel and hazardous condition such as chain kink</td>
</tr>
<tr>
<td>Optional voltage</td>
<td>200V</td>
</tr>
<tr>
<td>Tropical treatment added</td>
<td>The motor is varnish treated twice when it will be subjected to high humidity conditions.</td>
</tr>
<tr>
<td>On beam first stage</td>
<td>The SFTN2 trolley beam width is one grade higher than the standard.</td>
</tr>
<tr>
<td>Optional chain container</td>
<td>Plastic is a standard specification, but it can also be fixed to steel plate.</td>
</tr>
</tbody>
</table>

Technical materials

Hook dimension/load block weight/chain weight

<table>
<thead>
<tr>
<th>Type</th>
<th>Rated load(kg)</th>
<th>Chain specification</th>
<th>Chain length(m)</th>
<th>Lift(m) and name of container</th>
<th>Chain weight per 1m chain(kg)</th>
<th>Load block weight(kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SFN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Power cable allowable length

Allowable power cord length

When extending the power cable or relay cable, make a selection after referring to the following table.

When extending the power cable, cord length should be less than the values in this Table.

<table>
<thead>
<tr>
<th>Type</th>
<th>Cable size (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFN</td>
<td>2.0mm²</td>
</tr>
<tr>
<td>SFN</td>
<td>3.5mm²</td>
</tr>
</tbody>
</table>

Installation of trolley stopper

Runway beam width (mm) | Materials | H (mm) | Bolts and nuts |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>50×50×6</td>
<td>40</td>
<td>M16</td>
</tr>
<tr>
<td>125</td>
<td>60×60×6</td>
<td>60</td>
<td>M20</td>
</tr>
</tbody>
</table>

About the method with a stopper

Wheel stopper

After the trolley has been installed on the travel rail, always install a stopper on the end of the travel rail to prevent the trolley from dropping off. Avoid using the stopper to stop the trolley by letting it run into the stopper.

Using a stopper that is a different color from the travel rail is an effective means for preventing the trolley from striking the stopper because it makes the stopper stand out.

Avoid using the stopper to stop the trolley by letting it run into the stopper.

Damper

The damper should be used with rubber or other shock absorbing material to absorb the shock when the trolley hits the stopper. The rubber damper shown in the figure at right is available, so please make use of it.

- The damper shown in the figure at right is available, when the trolley hits the stopper. The rubber shock absorbing material to absorb the shock. The stopper should be used with rubber or other shock absorbing material to absorb the shock. After the trolley has been installed on the travel rail, always install a stopper on the end of the travel rail to prevent the trolley from dropping off. Avoid using the stopper to stop the trolley by letting it run into the stopper.

- Damper

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The Energy Saving Systems Division (Taga Division) of
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