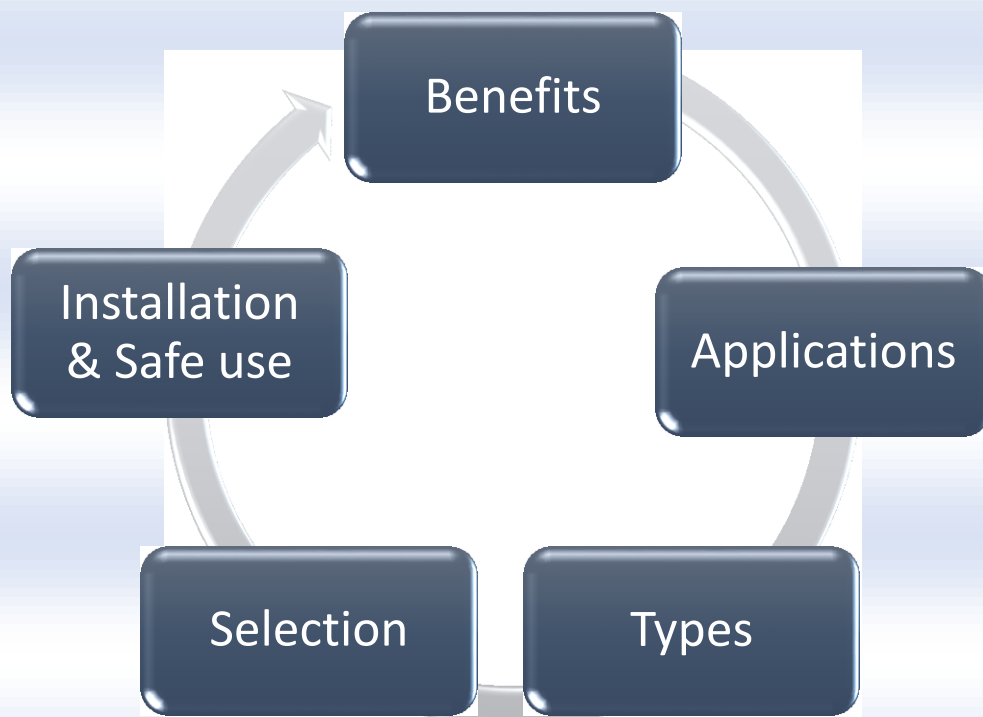


# DLH ONLINE

## A COMPLETE GUIDE TO WORKSTATION JIB CRANES



# Overview

In compiling this guide for swing jib cranes we have tried to address the questions and concerns that you may have when you are sourcing a better solution to workspace safety. And, where you may or may not be considering a swing jib crane as the best option. We have endeavoured to answer the most frequently asked questions that we receive from our customers. Of course, if you have a question not answered here, please feel free to contact our sales team on 0161 223 1990.

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# Q1. “Why use swing jibs cranes when we have forklifts?”

The answer is simple – Forklifts are dangerous!

**The HSE say: ‘You should always select work equipment which is suitable for its intended use in respect of health and safety. Lift trucks are particularly dangerous in the workplace. On average, lift trucks are involved in about a quarter of all workplace transport accidents.’**

If you are planning a new working environment or if your manufacturing operation has evolved, it may be time to make the switch from using forklifts to an overhead crane system.



**Forklifts can cause more harm than good!**

Forklifts can be effective for certain operations, such as loading / unloading vehicles, warehousing or for bringing materials or plant into a factory.

However they should always stop short of entering areas where they are liable to come into contact with people or working machinery. In close proximity handling operations forklifts can become a liability.

Forklifts lack a fine control, and when the forks or boom swings it is a potential safety issue for workers standing nearby and for the worker directing the forklift.

To find an safer alternative – please go to the next page >

## Q2. . “What are the specific benefits of installing swing jib cranes?”

Making the decision to overhaul an outdated, ineffective, or poorly managed material handling system can seem like a daunting prospect, but making the change will result in you having improved safety, production, efficiency, and work space savings - resulting in less down-time and cost.

Forklifts are simply not designed to do precision handling operations. If the forklift driver is manoeuvring a load, his or her vision can be greatly diminished. Navigating a forklift through tight spaces has greater potential for disaster. If a driver moves a few inches too far in any one direction, the result could be disastrous.



All of these issues can result in an ineffective operation with more expenses and less control. If you are looking to streamline your production process, or considering a forklift-free application—an overhead crane system may be the perfect remedy. Overhead cranes allow for greater hook height and more efficient use of space.

Continued on the next page>



Choosing an overhead crane system that can be designed specifically for your work area will give you precise control over your entire assembly, individual workstations, and transportation of products and materials.

### **SWING JIB CRANES – IMPROVE LIFTING AND HANDLING SAFETY!**

A swing jib crane may be the best option for your application because swing jib cranes are easier to access and faster in use and workers are more likely to use them to lift even smaller loads, you will greatly reduce the potential for workplace injuries.

Swing Jib cranes are specifically designed to handle goods inside a factory, plant, on a loading dock or to serve operative positions e.g. machine loading and maintenance where space is limited.

#### **Jib cranes have three important functions:**

- Lifting a load vertically using the hook of the lifting unit, generally consisting of a chain hoist or a wire rope hoist.
- Travel the load with the help of a hoist-carrying trolley, electric or manual, which run along the jib of the crane (with the exclusion of the crane with an articulated arm where the hoist fixed at the ends of the arm).
- To rotate the load, around the connection axis of the arm, using a manual push action on the load itself or electrically by means of a motor reducer, covering the circular area underneath it, bound by the rotation range of the arm.

Swing jib cranes are not only safer and more cost effective; they also require less space (no floor space is needed at all, for wall-mounted jibs) and lower maintenance costs.

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### Q3. “What type of crane should we consider is suitable for our needs?”

You should consider the Installation of an overhead travelling crane to cover the entire work area for heavy duty applications such as machinery placement or mould changes. But where cranes are to be used for repetitive handling tasks, waiting for the overhead crane to become available may result in operators attempting to handle loads manually. You should then opt for a swing jib crane:

#### **GETTING THE JOB DONE SAFELY HAS ADDED ADVANTAGES!**

Each workstation or operator will benefit from having their own handling system. Positioning a lighter capacity jib crane over each workstation for product handling will be much appreciated and even cost effective by increasing workflow and reducing manual handling musculoskeletal injuries and subsequent industrial injury claims.



Modern lightweight workstation jib cranes are unique because of their enclosed profile track design, either in formed steel section or ultra-lightweight aluminium profiles. These components create a lighter system. This makes the modern jib much easier to rotate and position and with improved trolley components the hoist will roll along the track with little effort.

The operator of this type of system requires only one third of the power to move a load. Trolleys also run distinctly more quietly. These are measurable and noticeable ergonomics, for when a crane system runs easier, the more comfortable and health-preserving it can be to work with.

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Wall-mounted workstation jib cranes can be over-braced supported for the lowest cost or compression braced for additional headroom. This is especially useful for facilities with overhead obstructions or when supplementing a larger overhead crane system that runs the entire length of a workshop. Overall, using swing jib cranes in this type of application is a safer, more efficient method of material handling.

### **JIB CRANES COME WITH MANY ADDITIONAL FEATURES AND BENEFITS!**



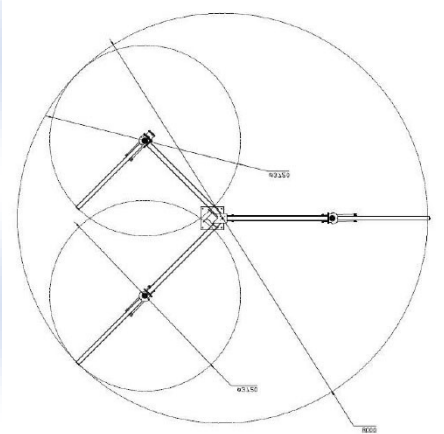
If you need extended reach, or to reach out over a void, it may be worthwhile to consider a power slewing model.

These give the operator improved handling as they can control the crane rotation using the same controller as the hoist.

Workstation jib cranes come in many designs. Including wall mounted or freestanding floor mounted rigid arm jibs or even an articulated (Knuckle) arm jib can be considered. These jibs have folding arms to avoid obstacles in the crane radius or can even reach around corners.

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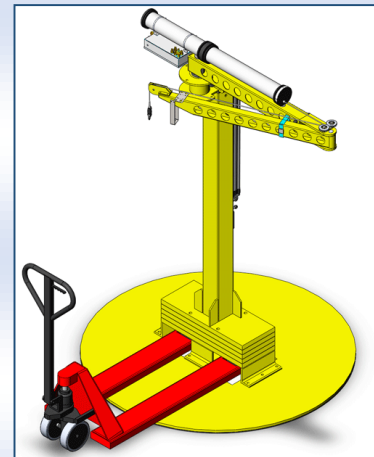
Jib cranes with an articulated arm are provided with a fixed hoist or manipulating handling system mounted on the end of the arm and exact positioning is easily achieved by swinging and then folding the arm to reach the precise position for lowering the load.

Jib cranes can even be supplied with underslung telescopic jibs which can reach into machinery or through openings.  
See photo right.



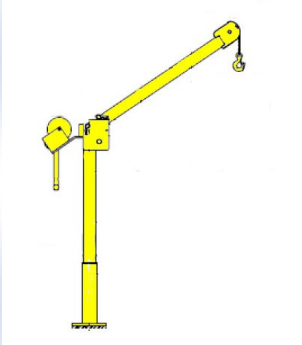
Another possible option are portable base models.

These portable jib cranes can be transported with a pallet truck for moving to work areas which require a temporary individual material handling solution



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Not strictly classed as swing jib cranes, davit lifting cranes are a cost effective solution for off-site or localised accessibility where a small reach is all that is needed, although longer reach options are available.



Jobs such as pump or motor retrieval can be accomplished with a demountable lifting davit crane with a floor or wall mounted socket.

Lifting davits are particularly effective for below floor level lifts and are manually transportable to different socket positions.

Lifting davits are available with manual or electric lifting winches or chain hoist for indoor and outdoor use.

### **WHAT IF I NEED MORE COVERAGE THAN A SWING JIB CAN GIVE ME?**

For much larger work areas a lightweight push pull bridge crane system may be a cost effective alternative to jib cranes.

The crane rails can either be suspended from the roof structure or supported on a floor mounted gantry, which can accommodate one or several bridge cranes.



These modern lightweight steel or aluminium systems, again use modern profile track and are as equally manoeuvrable as jib cranes. But have the added advantage of covering a larger working envelope.

Compared to forklifts, overhead cranes have a five to one safety factor, and the operator is not in danger of collision. Go to next question page >

## Q4. “What are our choices for suitable swing jib cranes?”

There is a massive range of models and features available for varied handling applications – on the following pages you will find some brief details on all the options available to you.

When you find the jib crane specification that should meet your needs, you can click through the red button(s) to the specific page(s) on our website for more information and or to request a written competitive quotation.

Alternatively, you are very welcome to contact our crane team by telephone to discuss you application on 0161 223 1990 or by email: [dale-lifting.co.uk](mailto:dale-lifting.co.uk).



Our advice is free and we are happy to answer any questions you may have.

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**GBA “C” Profile Channel Arm Column Mounted for lifting capacities from 63kg to 1000kg and jibs from 2m to 7m in reach.**

- The arm is made using a special section bar made of folded sheet metal, inside which the hoist-carrying trolley runs.
- The arm is fitted with one or two over-bracings which support the profile and connect it to the rotation tube. This version is characterised by the extreme ease of handling due to the low inertia derived from its own reduced weight.
- Over-braced arm - Column-mounted series, rotation 300°
- The arm is normally fitted with a special “channel” profile trolley, which allows it to be pushed with maximum fluidity.
- Electrical power supply feed - This is designed to power the hoist which run along the jib of the crane. It uses a connection box for the connection between the line and the power festoon cable, situated on the top of the column crane
- The column crane can be supplied, on request, with a main on/off line switch which can be padlocked. The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.

<p><b>“C” Profile Over-braced Arm Column Mounted GBA</b></p>					
Maximum Reach	up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres
Maximum Height under beam	up to 5.0 metres	Up to 5.5 metres	Up to 5.5 metres	Up to 6.0 metres	Up to 6.0 metres
<p>All models can be supplied with foundation fixings or counter-plate for chemical bolt fixings</p>					
<p>* Standard capacities can be de-rated to suit your application</p>					



**GBP “C” Profile Channel Arm Wall Mounted for lifting capacities from 63kg to 1000kg and jibs from 2m to 7m in reach.**

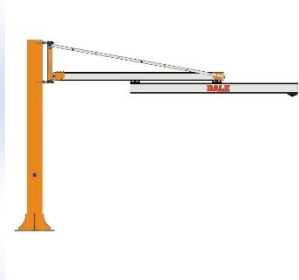
- The arm is made using a special section bar made of folded sheet metal, inside which the hoist-carrying trolley runs.
- The arm is fitted with one or two over bracings which support the profile and connect it to the rotation tube. This version is characterised by the extreme ease of handling due to the low inertia derived from its own reduced weight.
- Over-braced arm wall-mounted series, rotation 270°
- The arm is normally fitted with a special “channel” profile trolley, which allows it to be pushed with maximum fluidity.
- Electrical power supply feed - This is designed to power the hoist which runs along the jib of the crane. It uses a connection box for the connection between the line and the power festoon cable, situated near the bracket support in the wall version.
- The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.

<p><b>C” Profile Over-braced Arm Wall Mounted GBA</b></p>					
Maximum Reach	up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres
<p>All models can be supplied with wall fixing system by using brackets and stay-bolts</p>					
<p>* Standard capacities can be de-rated to suit your application</p>					

**EEPOS Aluminium profile over-braced arm column mounted Jib cranes, maximum lifting capacity 500 kg 2m to 6 m reach.**

- Innovative profile shapes for highest load and minimum deflection
- Absolutely light turning with a novel pivot mechanism
- Column mounted series, rotation 270°
- Four different crane profiles for optimal price-performance ratio and minimal motion forces
- Electrical power supply feed - The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.
- Special version available with secondary underslung run-out beam for access to machines etc. ①

<p><b>Aluminium Profile Over-braced Arm Column Mounted EEPOS</b></p>					
		Standard capacity	125 kg*	160 kg*	250 kg*
Maximum reach	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres
Maximum Height under beam	Subject to reach on request	Subject to reach on request	Subject to reach on request	Subject to reach on request	Subject to reach on request
<p>No foundation needed, fixed with high-duty anchors</p>					
<p>* Standard capacities can be de-rated to suit your application</p>					




**① Special run-out jib version**

Allows arm to reach beyond the swing radius.



**EEPOS Aluminium profile over-braced arm, wall mounted Jib cranes, maximum lifting capacity 500 kg 2m to 6 m reach.**

- Innovative profile shapes for highest load and minimum deflection.
- Absolutely light turning with a novel pivot mechanism.
- Wall mounted series, rotation 270°
- Four different crane profiles for optimal price-performance ratio and minimal motion forces.
- Electrical power supply feed - The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.
- Special version available with secondary underslung run-out beam for access to machines etc.

<p><b>Aluminium Profile Over-braced Arm Wall Mounted EEPOS</b></p>					
Maximum reach	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres
Supplied with wall fixing brackets					
* Standard capacities can be de-rated to suit your application					



**“T” Section (cantilever version) Column mounted for lifting capacities from 63kg to 2000kg and jibs from 2 m to 5 m**

- Column mounted rotation 270°
- The arm is made using a laminate T-beam form: the hoist-carrying trolley run on the lower flange of the T-beam.
- The girder is self-supporting and cantilevered, so it has over-braced support, and it is directly integral with the rotation tube.
- This version allows the optimum use of the available space at a height due to the absence of over- bracing and allows the maximum use of the hook run.
- The arm allows the addition of electrical or mechanical push-trolleys
- Electrical power supply feed - This is designed to power the hoist and/or electrical trolley. It uses a connection box for the connection between the line and the power festoon cable, situated on the top of the column crane.
- The column crane can be supplied, on request, with a main on/off line switch which can be padlocked. The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.

<p><b>“T” Section Arm Column Mounted GBA</b></p>		 <p>Column-mounted jib crane - Rotation 270°</p>				
Maximum Reach	up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres
Maximum Height under beam	up to 5.0 metres	Up to 5.5 metres	Up to 5.5 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres
<p>All models can be supplied with foundation fixings or counter-plate for chemical bolt fixings</p>						
<p>* Standard capacities can be de-rated to suit your application</p>						

**“T” Section (cantilever version) Wall mounted for lifting capacities from 63kg to 2000kg and jibs from 2 m to 5 m**



- Wall mounted rotation 270°
- The arm is made using a laminate T-beam form: the hoist-carrying trolley run on the lower flange of the T-beam.
- The girder is self-supporting and cantilevered, so it has no over-braced support, and it is directly integral with, via suitable reinforcements, the rotation tube.
- This version allows the optimum use of the available space at a height due to the absence of over- bracing and allows the maximum use of the hook run.
- The arm allows the addition of electrical or mechanical push-trolleys.
- Electrical power supply feed - This is designed to power the hoist and/or electrical trolley, which run along the jib of the crane. It uses a connection box for the connection between the line and the power festoon cable, situated near the bracket support in the wall version.
- The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.

<p><b>“T” Section Arm Wall Mounted GBP</b></p>		 <p>Wall-mounted jib crane - Rotation 250°</p>				
Maximum Reach	up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres	Up to 7.0 metres
<p>All models can be supplied with wall fixing system by using brackets and stay-bolts</p>						
<p>* Standard capacities can be de-rated to suit your application</p>						





**“H” over-braced version, column mounted for lifting capacities from 125kg to 2000kg and jibs from 4m to 8m in reach.**

- The arm is made using an H-beam section, the hoist-carrying trolley run on the lower flange of the H-beam.
- The arm is fitted with one or two over-bracings to support the profile which connects it to the rotation tube.
- This version allows the use of the jib crane for loads and jibs superior to those possible with the GBA - C and T versions.
- The arm allows the addition of electrical and mechanical push-trolleys.
- Electrical power supply feed - It uses a connection box for the connection between the line and the power festoon cable, situated on the top of the column crane. The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm

<p><b>“H” Section Arm Column Mounted GBA</b></p>							
Maximum Reach	up to 8.0 metres	Up to 8.0 metres	Up to 8.0 metres	Up to 8.0 metres	Up to 6.0 metres	Up to 6.0 metres	
Maximum Height under beam	up to 5.5 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	
<p>All models can be supplied with foundation fixings or counter-plate for chemical bolt fixings</p>							
<p>* Standard capacities can be de-rated to suit your application</p>							



**“H” over-braced version, wall mounted for lifting capacities from 125kg to 2000kg and jibs from 4m to 8m in reach.**

- The arm is made using an H-beam section, the hoist-carrying trolley run on the lower flange of the H-beam.
- The arm is fitted with one or two over-bracings to support the profile which connects it to the rotation tube.
- This version allows the use of the jib crane for loads and jibs superior to those possible with the GBA - C and T versions.
- The arm allows the addition of electrical and mechanical push-trolleys.
- Electrical power supply feed - It uses a connection box for the connection between the line and the power festoon cable, situated near the bracket support in the wall version. The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.

<p><b>“H” Section Arm Wall Mounted GBP</b></p>							
Standard Capacity	125 kg*	250 kg*	500 kg*	1000 kg*	1600 kg*	2000 kg*	
Maximum Reach	up to 8.0 metres	Up to 8.0 metres	Up to 8.0 metres	Up to 8.0 metres	Up to 6.0 metres	Up to 6.0 metres	
Maximum Height under beam	up to 5.5 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	
<p>All models can be supplied with wall fixing system by using brackets and stay-bolts</p>							
<p>* Standard capacities can be de-rated to suit your application</p>							



**Manually rotated Jib cranes column mounted with articulated arm, for fixed hoists, lifting capacity from 125 kg to 500 kg and jibs from 2 m to 7 m.**

- Column-mounted series, manually rotated 360°
- Fitted with an arm made of two hinged “pantograph-shaped” segments which allow it to avoid fixed obstacles during rotation.
- The two semi-arms can be of different lengths and are able to rotate independently of each other.
- Allow the optimal use of the available space at a height due to the absence of over-bracing.
- Electrical power supply - This powers the hoist and for the connection between the line and the power cable has a main on/off line switch which can be padlocked is positioned on the column
- The distribution of energy takes place via cable.
- Electrical line with round multi-polar flexible cable inserted in a channel welded under the flange of the jib.

<p><b>Manually rotated Jib cranes Column Mounted with articulated arm CBB</b></p>			
<p>Standard Capacity</p>	<p>125 kg*</p>	<p>250 kg*</p>	<p>500 kg*</p>
<p>Maximum Reach</p>	<p>Up to 7.0 metres</p>	<p>Up to 7.0 metres</p>	<p>Up to 7.0metres</p>
<p>Maximum Height under beam</p>	<p>Up to 5.5 metres</p>	<p>Up to 5.5 metres</p>	<p>Up to 6.0 metres</p>
<p>All models can be supplied with foundation fixings or Counter-plate for chemical bolt fixings</p>			
<p>* Standard capacities can be de-rated to suit your application or hoist option</p>			

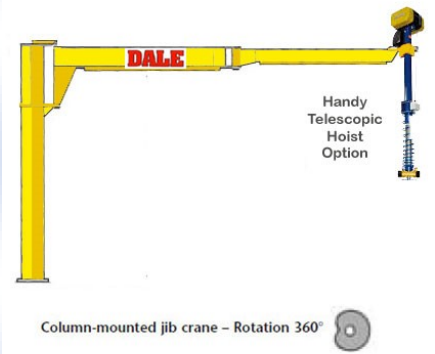

**Manually rotated Jib cranes wall mounted with articulated arm, for fixed hoist lifting capacity from 125 kg to 500 kg and jibs from 2 m to 7 m.**

- Wall-mounted series, manually rotated 360°
- Fitted with an arm made of two hinged “pantograph-shaped” segments which allow it to avoid fixed obstacles during rotation.
- The two semi-arms can be of different lengths and are able to rotate independently of each other.
- Allow the optimal use of the available space at a height due to the absence of over-bracing.
- Electrical power supply - This powers the hoist and for the connection between the line and the power cable terminal box near the support bracket in the wall version.
- The distribution of energy takes place via cable.
- Electrical line with round multi-polar flexible cable inserted in a channel welded under the flange of the jib.

<p><b>Manually rotated Jib cranes Wall mounted with articulated arm for fixed hoist MBB</b></p>			
<p>Standard Capacity</p>	<p>125 kg*</p>	<p>250 kg*</p>	<p>500 kg*</p>
<p>Maximum Reach</p>	<p>Up to 7.0 metres</p>	<p>Up to 7.0 metres</p>	<p>Up to 7.0metres</p>
<p>All models can be supplied with wall fixing system by using brackets and stay-bolts</p>			
<p>* Standard capacities can be de-rated to suit your application or hoist option</p>			


**Manually rotated Jib cranes column mounted with articulated arm, for manipulators, lifting capacity from 125 kg and jibs 3 m.**

- Column-mounted series, manually rotated 360°
- Fitted with an arm made of two hinged “pantograph-shaped” segments which allow it to avoid fixed obstacles during rotation.
- The two semi-arms can be of different lengths and are able to rotate independently of each other.
- Allows the optimal use of the available space at a height due to the absence of over-bracing.
- Electrical power supply - This powers the manipulator and for the connection between the line and the power cable has a main on/off line switch which can be padlocked is positioned on the column
- The distribution of energy takes place via cable.
- Electrical line with round multi-polar flexible cable inserted in a channel welded under the flange of the jib.
- Load manipulating hoists can be provided.

<p><b>Manually rotated Jib cranes</b>  <b>Column Mounted with articulated arm for manipulator CBB</b></p>		
<p>Standard Capacity</p>	<p>125 kg*</p>	
<p>Reach</p>	<p>Standard 3.0 metres</p>	
<p>Maximum Height under beam</p>	<p>Up to 5.0 metres</p>	
<p>All models can be supplied with foundation fixings or Counter-plate for chemical bolt fixings</p>		
<p>* Standard capacities can be de-rated to suit your application or hoist option</p>		

**“T” cantilever version column mounted electrically rotating Jib cranes with motorised arm, for loads from 500kg to 2000kg and jibs from 2m to 7m**

- Column-mounted series, electrically rotated 270°
- Electrically rotated jib cranes with a motorised arm are designed for handling goods in areas which are difficult to reach.
- They are used also when the frequency of manoeuvres, the entity of the load and the push forces, could cause excessive wear and tear if carried out manually.
- Made using solid section T-beam: the hoist-carrying trolley runs on the lower flange of the beam. The girder is self-supporting and cantilevered, so without support bracings above, and is directly integral with the rotation tube.
- Allows the optimal use of the available space at a height due to the absence of over-bracing and allows the maximum use of the hook run. The arm allows the addition of electrical or mechanical push-trolleys.
- A main on/off line switch on the column. The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.
- Push-button control pendant hanging from the hoist.

<p><b>“T” cantilever version column mounted electrically rotating Jib cranes CBE</b></p>			<p><b>Find out more or request a quote</b></p>
<p>Standard Capacity</p>	<p>500 kg*</p>	<p>1000 kg*</p>	<p>2000 kg*</p>
<p>Maximum Reach</p>	<p>Up to 7.0 metres</p>	<p>Up to 6.0 metres</p>	<p>Up to 4.0metres</p>
<p>Maximum Height under beam</p>	<p>Up to 6.0 metres</p>	<p>Up to 6.0 metres</p>	<p>Up to 6.0 metres</p>
<p>All models can be supplied with foundation fixings or counter-plate for chemical bolt fixings</p>			
<p>* Standard capacities can be de-rated to suit your application</p>			


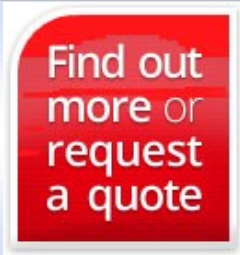
**“T” cantilever version wall mounted electrically rotating Jib cranes with motorised arm, for loads from 500kg to 2000kg and jibs from 2m to 7m**

- Wall-mounted series, electrically rotated 290°
- Electrically rotated jib cranes with a motorised arm are designed for handling goods in areas which are difficult to reach.
- They are used also when the frequency of manoeuvres, the entity of the load and the push forces, could cause excessive wear and tear if carried out manually.
- Made using solid section T-beam: the hoist-carrying trolley runs on the lower flange of the beam. The girder is self-supporting and cantilevered, so without support bracings above, and is directly integral with the rotation tube.
- Allows the optimal use of the available space at a height due to the absence of over-bracing and allows the maximum use of the hook run. The arm allows the addition of electrical or mechanical push-trolleys.
- Electrical power supply feed - This is designed to power the hoist and/or electrical trolley, which run along the jib of the crane. It uses a connection box for the connection between the line and the power festoon cable, situated near the bracket support in the wall version.
- Push-button control pendant hanging from the hoist.

<p><b>“T” cantilever version wall mounted electrically rotating Jib cranes MBE</b></p>				
Standard Capacity	500 kg*	1000 kg*	2000 kg*	
Maximum Reach	Up to 7.0 metres	Up to 6.0 metres	Up to 4.0metres	
<p style="text-align: center;">All models can be supplied with wall fixing system by using brackets and stay-bolts</p>				
<p style="text-align: center;">* Standard capacities can be de-rated to suit your application</p>				

**“H” Over-braced version column mounted electrically rotating Jib cranes with motorised arm, for loads from 250kg to 2000kg and jibs from 4m to 8m**


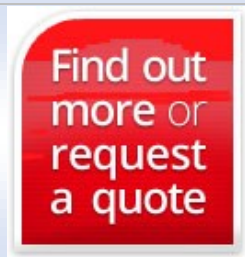
- Column-mounted series, electrically rotated 280°
- Electrically rotated jib cranes with a motorised arm are designed for handling goods in areas which are difficult to reach.
- They are used also when the frequency of manoeuvres, the entity of the load and the push forces, could cause excessive wear and tear if carried out manually.
- The arm is made using an H-beam section, the hoist-carrying trolley run on the lower flange of the H-beam.
- The arm is fitted with one or two over-bracings to support the profile which connects it to the rotation tube.
- The arm allows the addition of electrical and mechanical push-trolleys.
- Electrical power supply feed - It uses a connection box for the connection between the line and the power festoon cable, situated on the top of the column crane. The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.
- A main on/off line switch on the column. The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.
- Push-button control pendant hanging from the hoist.

<b>“H” Over-braced version column mounted electrically rotating Jib cranes CBE</b>					
Standard Capacity	250 kg*	500 kg*	1000 kg*	1600 kg*	2000 kg*
Maximum Reach	Up to 8.0 metres	Up to 8.0 metres	Up to 8.0 metres	Up to 6.0 metres	Up to 6.0 metres
Maximum Height under beam	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres
All models can be supplied with foundation fixings or counter-plate for chemical bolt fixings					
* Standard capacities can be de-rated to suit your application					





**“H” Over-braced version wall mounted electrically rotating Jib cranes with motorised arm, for loads from 250kg to 2000kg and jibs from 4m to 8m**

- Wall-mounted series, electrically rotated 290°
- Electrically rotated jib cranes with a motorised arm are designed for handling goods in areas which are difficult to reach.
- They are used also when the frequency of manoeuvres, the entity of the load and the push forces, could cause excessive wear and tear if carried out manually.
- The arm is made using an H-beam section, the hoist-carrying trolley run on the lower flange of the H-beam.
- The arm is fitted with one or two over-bracings to support the profile which connects it to the rotation tube.
- The arm allows the addition of electrical and mechanical push-trolleys.
- Electrical power supply feed - It uses a connection box for the connection between the line and the power festoon cable, situated near the bracket support in the wall version.
- The distribution of energy takes place via a flat festoon cable which slides on trolley along the arm.
- A main on/off line switch on the column.
- Push-button control pendant hanging from the hoist.

<b>“H” Over-braced version Wall mounted electrically rotating Jib cranes CBE</b>					
Standard Capacity	250 kg*	500 kg*	1000 kg*	1600 kg*	2000 kg*
Maximum Reach	Up to 8.0 metres	Up to 8.0 metres	Up to 8.0 metres	Up to 6.0 metres	Up to 6.0 metres
Maximum Height under beam	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres
All models can be supplied with wall fixing system by using brackets and stay-bolts					
* Standard capacities can be de-rated to suit your application					

**Continuously electrically rotating jib cranes, lifting capacity from 1,000k up to 10.000kg and jibs from 4m up to 10.5m.**







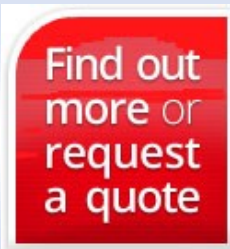
- Column-mounted series, electrically rotated 360°
- The electrically rotated jib cranes are used to handle loads whose mass (high or bulky) does not allow manual handling.
- Press-forged steel section welded to the tubular structure with polygonal section.
- Rotating arm made with an H beam or with a box beam designed to guarantee the maximum flexi-torsional stability
- Motor reducer on the arm, fitted with a self-braking motor with progressive start-up and braking Fixing system
- Electrical power supply for powering the hoist and trolley which run along the arm of the crane as well as to power the rotation motor reducer
- The electrical line to power the trolley-hoist formed of flat flexible multipolar cables festooned on the trolleys which slide inside a channel section and a suspended push-button control box.

<p><b>Continuously electrically rotating column mounted jib cranes GBR</b></p>					
Maximum reach	Up to 10.5 metres	Up to 10.5 metres	Up to 10.5 metres	Up to 10.5 metres	Up to 10.5 metres
Maximum height	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0metres
Capacity	5000 kg	6300 kg	8000 kg	10000 kg	
Maximum reach	Up to 10.5 metres	Up to 8.5 metres	Up to 6.5 metres	Up to 5.5 metres	
Maximum height	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	Up to 6.0 metres	
<p>All models can be supplied with foundation fixings</p>					

**Specialised Repetitive Handling Jib Cranes with manually rotated articulated arm handling tasks up to 100 kg manually rotated 360°**

Fitted with Pneumatic load manipulators and a range of special attachments e.g. vacuum cups, magnets or mechanical and auto grabs.

- Ceiling or bridge crane mounted
- Wall mounted
- Floor mounted
- Mobile base mounted

<b>Specialised Repetitive Handling Jib Cranes Flexi Crane</b>		<b>Maximum Capacity 65 kg</b>			
Type					
Maximum reach	2.0 m	2.0 m	2.0 m	2.0 m	
Adjustable Height	2.15 - 2.75 m	2.15 - 2.75 m	-	-	
<b>Specialised Repetitive Handling Jib Cranes Maxi Crane 100 kg capacity</b>					
Maximum reach	4.0 metres				
Height under beam	2.75 metres				
No foundation needed, fixed with high-duty anchors					

## Q5. “What are the construction specifications for your swing jib cranes?”

### **DESIGN and CONSTRUCTION OF STANDARD JIB CRANES**

#### **Column-mounted model**

The column is made of press-forged steel with a tubular structure with a polygonal section. This allows a high rigidity and stability of the crane and is fixed to the base with a base plate and a system of bolts and log bolts. In the upper part a pair of plates support the arm and allow it to rotate.

#### **Wall-mounted model**

The wall-mounted jib crane consists of a bracket support structure. This is formed by a pair of plates made of press-forged steel, fixed to the wall or anchored to a pillar with stay-bolts or screws which act as a support to the arm and allow it to rotate.

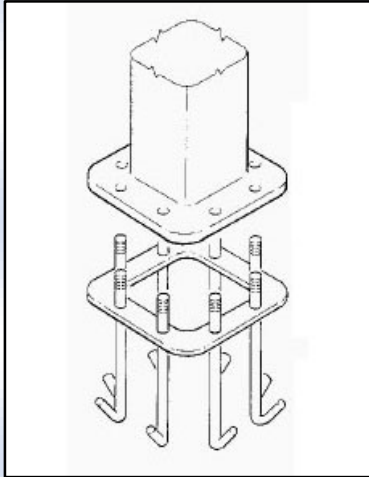
#### **Rotating arm**

The arm, rotating around its own axis, consists of a supporting girder for the run of the hoist-carrying trolley. Depending on the model it can be made in profile or channel version.

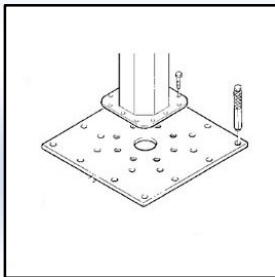
#### **Braking device of the arm**

The arm of the manually rotated jib crane is usually fitted in standard models with a braking system. The brake, having a clutch with asbestos-free friction material, allows the regulation of the force of rotation of the arm and ensures the stability of positioning.

## FIXING SYSTEMS FOR STANDARD JIB CRANES



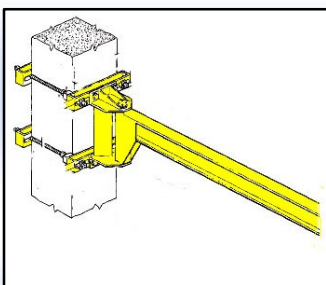
Foundation frame with log bolts - The jib cranes are generally designed to be fixed to the ground using the foundation frame with log bolts inserted in a foundation plinth.



Installation cost was often a stumbling block for larger capacity floor mounted jib cranes, as traditionally a concrete foundation had to be provided, and although this remains a worthwhile option for new build applications - Now you can opt for a counter-plate fixture to spread the load and mount the column onto. This makes it so simple to install on your existing concrete floor using chemical fixing bolts. You could

be up and running the same day!

Some smaller capacity models may not require a counter-plate where the concrete base is suitable. Please contact us for advice.



Wall brackets and stay-bolts unit - This is used for fixing the bracket jib crane to a supporting pillar and is fitted with a pressure screws system which guarantees a better adhesion of the stay-bolts to the pillar.

For more details on fixings and dimensions, please refer to our [web page](#) for the type of swing jib crane required.

## CONSTRUCTION SPECIFICATIONS

### A) Lifting equipment

**Jib Cranes** - Electric chain hoists are mostly used and for higher loads electric wire rope hoists with 1 or 2 lifting speed and moving speeds. For occasional use hand chain blocks are sometimes still requested. Pneumatic chain hoists, tool balancers and manipulators are also available for special applications

**Repetitive Handling Jib Cranes** - Pneumatic (air-powered) device that can be used to balance or lift a load.

### B) The height of columns and the length of arms

**Standard Swing Jib Cranes** - This range of standard jib cranes is characterised by a vast availability of standard models and made-to-measure in special models - Up to 6m in height and up to 10m reach.

**Repetitive Handling Jib Cranes** – Designed specifically for manual handling tasks the column is up to 2.5m in height and up to 3.0m reach

### C) Standard finish

**Standard Swing Jib Cranes** - Protection from atmospheric agents and environmental ones (dust, gas, etc.) is guaranteed by the varnishing treatment which includes the application of yellow paint with a base coat of a thickness of 40 microns and a top coat of thickness of 40 microns, subject to preparation of the surfaces by metallic sandblasting with SA2 grade. The drying in an oven for 40 minutes at a temperature of 80° C concludes the cycle.

**Repetitive Handling Jib Cranes** – Lacquered: Red (RAL 3020)

### D) Service class

The structural elements of the manually or electrically rotated, column-mounted or wall-mounted, jib cranes are dimensioned in the class of service ISO A5 (according to ISO 4301/88).

### **E) Protection and insulation of electrical parts**

- Rotation motor: Protection IP54 (motors) IP23 (brakes); insulation class “F” (where necessary)
- Electrical panel: Minimum protection IP55 – Maximum power of insulation 1500V (where necessary)
- Push-button panel: Protection IP65 - Maximum tension of insulation 500V (where necessary)
- Collector: Protection IP65 – Maximum power of insulation 600V (where necessary)
- Rotation limit switch: Protection IP65 – Maximum power of insulation 500V (where necessary).
- Connector blocks: Minimum protection IP65 – Maximum power of insulation 1500V
- Cables: CEI 20/22 – Maximum power insulation 450/750V.

### **F) Standard electrical power supply**

The electrical jib cranes are designed to be powered with alternate electric power three-phase of: 400V according to IEC38-1. Column and wall electrically rotated jib cranes must be powered with alternate electrical power with three-phase power +neutral + earth (-3+N+T).

### **G) Environmental conditions of use**

- Use temperature: minimum –10°C; maximum +40°C
- Maximum relative humidity: 80% - Maximum altitude 1000m above sea level.
- The standard crane must be installed in a ventilated environment, free from corrosive vapours (acid vapours, saline clouds, etc.) and is designed for use in an indoor area (Protected from bad weather).
- On request the crane can be supplied designed for outdoor use.

## **H) Noise**

The level of acoustic pressure emitted by the hoist is always lower than 85dB (A).

The incidence of environmental characteristics such as transmission of sound by metallic structures, reflection caused by combined machines and walls, is not included in the figure shown.

## **I) Bespoke Models**

On request the following can be supplied for all of the standard cranes:

- Special anti-corrosive paint or in non-standard special bespoke models a galvanised finish with stainless steel rotation pin.
- Protection cover (Dog kennel) for motors and control panel.
- Rotation motor with stainless steel brake blocks and /or tropicalisation (for electrically rotated cranes).
- Anti-condensation heaters.
- Area limiters (Slewing stops)
- Supplementary electrical safety limit switches.
- Power supply voltages different from the standard ones (for electrically rotated cranes).
- Columns with double arms.
- Special column heights and arm lengths.



Q6. “What decisions do we need to make to select the right swing jib crane for our use?”

### **CRITERIA OF CHOICE AND LIMITS OF USE OF THE STANDARD JIB CRANES**

To obtain the complete responsiveness of the jib cranes, for the service they are intended for, it is necessary to check the parameters which characterise the limits of use and, thus, the right choice.

These are essentially the effective carrying capacity, the state of stress and the functional parameters:

#### **1) Actual lifting capacity**

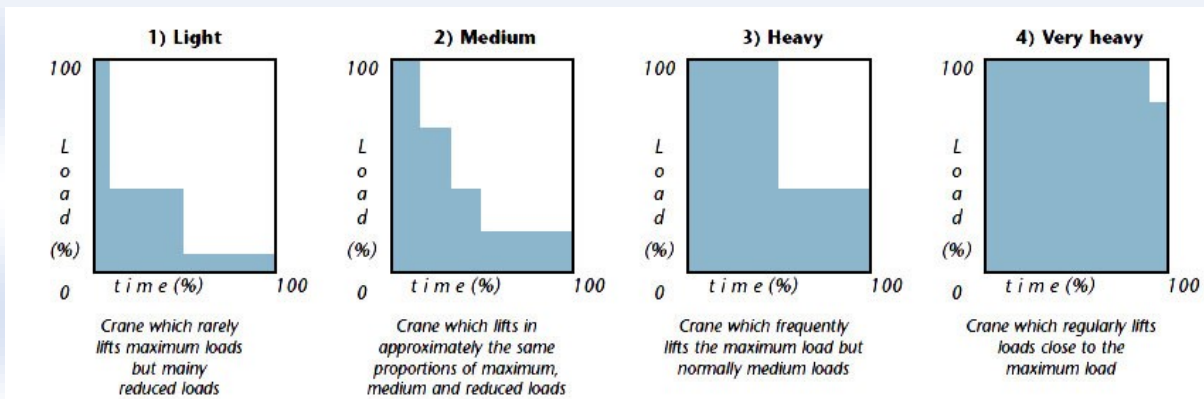
This is determined by the heaviest load to be lifted

#### **2) Stress level**

The stress level is determined considering the actual entity of the loads to be lifted and it is ascribable to one of the four load regimes shown below.

Check, on the basis of the state of stress intended for the crane, that the limits of use, type of service and n° of cycles intended in 10 years of work is not in contrast with the following table.

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Limits of use of the jib cranes of the service class ISO A5 (according to ISO 4301/88)				
State of stress	1) Light	2) Medium	3) Heavy	4) Very heavy
Type of service	intense irregular use	intermittent regular use	regular light use	irregular use
Conditions of Use	<b>U 6</b>	<b>U 5</b>	<b>U 4</b>	<b>U 3</b>
N° of operative cycles in 10 years <sup>1</sup>	1.000.000	500.000	250.000	125.000

### 3) Functional parameters

The functional parameters which must be carefully considered in the choice of jib cranes are:

- Functional dimensions: height of the arm, which determines the hook run of the hoist, and its jump (jib) must be selected so as to guarantee the functional coverage of the area to be served in consideration of the surrounding encumbrances.
- Type of movement (where necessary): manual or electric in relation to the characteristics of the mass to handle and the type of arm already selected.
- Nature of the load: delicate or not, determines by its positioning the choice of the most suitable speeds of handling (lifting and moving). In some cases it is indispensable to use hoists with two speeds with a slow speed of positioning.
- Area of use: the jib crane is characterised, by its conception, by intrinsic high elasticity which becomes even more evident when it is used for handling with loads close to the maximum lifting capacity and/or with prevalent localisation at the ends of the arm.

- Area of use: the standard jib cranes are intended to be used inside and/or in a covered area, sheltered from bad weather and wind. In the case of use outside, measures must be taken in relation to the surface treatment (sandblasting - painting) as well as: in the case of manually rotated cranes: a system of stopping brake and an adequate protection cover for the hoist-trolley. In the case of electrically rotated cranes: adequate protection covers for the hoist-trolley, for the motor-reducer and for the electrical panel.
- Frequency of use: if use is very high (frequent and/or repeated manoeuvres) with loads close to the maximum load the consequent fatigue of the operator due to the manual handling must be taken into consideration.

## Q7. “What do we need to do regarding the installation of a swing jib crane?”

### **DUTIES AND RESPONSIBILITIES OF THE CLIENT AND/OR THE INSTALLER OF THE JIB CRANE**

Preparation of the place of installation of the jib crane

To allow the installation of the jib crane it is necessary to carry out the following operations in advance:

- Check suitability, adequacy of the support structures, obtaining the relevant declaration signed by an expert, qualified technician;
- Check there are no obvious defects on the support structures and the fixing;
- Check the suitability of the manoeuvring areas (rotation) available to the jib crane, especially if it operates in areas where there are other cranes and manufacturing machines;
- Check the suitability and the correct functioning of the electrical power supply:
  - 1) Compatibility between the voltages of the power line with the voltage for the motors
  - 2) That there is a suitable switch, selector of the electric line;
  - 3) Adequacy of the section of cable of the electric power line;
  - 4) The presence and suitability of the earthing system

## **Proof Load Testing**

Set up the weights for the test runs as equal to: nominal lifting capacity x 1

Set up the weights for the static runs as equal to: nominal lifting capacity x 1.25.

Set up the equipment for the slinging and the lifting of the weights for the load runs.

## **Installation of the jib crane**

The installation of the jib crane, for the importance of the operations, if not carried out correctly can cause serious risks for the safety of people nearby in the assembly stage and the successive phase of use of the crane.

In any case this task should be entrusted to specialised installers for the assembly of industrial systems (Dale Lifting and Handling may be able to offer a competitive quotation for installation and testing, subject to location, on pre-prepared suitable foundations. Any civil works would need to be carried out by others). Following careful evaluation of the following parameters:

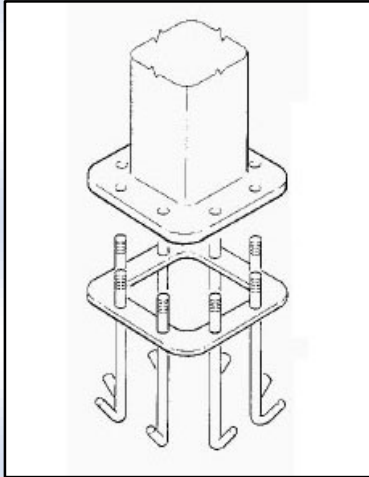
- Environmental characteristics of the place of work (e.g. working surface, etc.)
- Height of the work level at a height with respect to the load level
- Dimensions and weight of the parts to be installed
- Available space for the handling of the parts to be installed.

## **Fixing of the crane to the structures**

The check of the suitability of the anchorages to the pillar or to the floor as well as the sizing of the plinths must always be carried out by expert, qualified technicians who will formally assume their responsibilities.

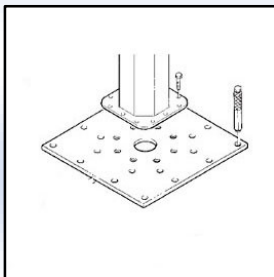
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## FIXING SYSTEMS FOR STANDARD JIB CRANES



Foundation frame with log bolts - The jib cranes are generally designed to be fixed to the ground using the foundation frame with log bolts inserted in a foundation plinth.

Full details are available on webpage for each model.

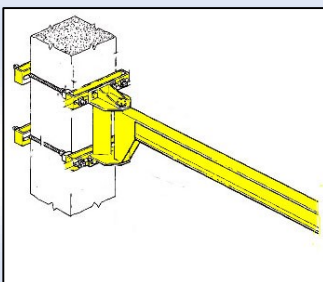


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Wall brackets and stay-bolts unit - This is used for fixing the bracket jib crane to a supporting pillar and is fitted with a pressure screws system which guarantees a better adhesion of the stay-bolts to the pillar.

Full details are available on webpage for each model.

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## Assembly of the jib crane

Before proceeding to the assembly of the parts and to the putting into action of the jib crane, the installer must ensure that the characteristics of the crane are adequate to the use which it is intended for and in particular:

1. The lifting capacity of the crane is  $\geq$  with respect to the loads to lift.
2. The characteristics of the fixing structures (plinth, floor, wall, pillar, etc.) have been “declared suitable” by the user or by expert technicians, engaged by the user.
3. The characteristics of the lifting unit (trolley/hoist), if not part of the supply, are compatible with those of the jib crane in relation to:
  - a. Lifting capacity of the hoist: must be  $\leq$  with respect to the lifting capacity of the jib crane.
  - b. Weight of the trolley/hoist: must be  $\leq$  with respect to the maximum ones intended
  - c. Lifting/moving speed: must be  $\leq$  with respect to the maximum ones allowed.
  - d. Headroom of the figure of the hoist trolley: must be  $\leq$  with respect to those allowed.
  - e. Reactions on the trolley wheels: must be  $\leq$  with respect to the maximum ones allowed.

In the case of the jib crane with laminate girder, check the width of the flange of the girder which must correspond to that intended for the wheels of the trolley.

Following the installation activities of the jib cranes, it is the precise duty of the installer to:

- 1) Lead the activities of the putting into service as described in the manual of “Instructions for use”
- 2) Fill in the report of the “check and correct installation” of the crane, deliberating over the “suitability for use”
- 3) Take care of the complete checking of the responsibility of parts as intended in the checks register.

For more information please refer to the tables provided in the Jib cranes section of our [website](#)

### Contact Us

For further advice on the above or for enquiries for swing jib cranes to your requirements, please contact our sales team on:

0161 223 1990 or by email: [sales@dale-lifting.co.uk](mailto:sales@dale-lifting.co.uk)

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