Instruction Manual



Product:	
Column Mounted Jib Crane	
Manufacturer:	
Fyns Kran Udstyr A/S Thorndahlsvej 4, DK-9200 Aalborg SV	
Drawing number / revision:	WLL:
027-017-001-000 / 2	100 kg
Date:	
27 October 2024	



Created by:	Initials:
Stefan ChristiansenStefan Christiansen	SCH

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About this instruction manual

This instruction manual has been compiled by Fyns Kran Udstyr and must come with the column mounted jib crane

1.1. Purpose

The purpose of this instruction manual is to ensure the correct installation, use, handling and maintenance of the column mounted jib crane.

1.2. Reading guide

This instruction manual has been prepared in accordance with DS/EN ISO 20607:2019 Safety of machinery - Instruction manual - General principles for preparation and is the manufacturer's original instruction manual for the machine.

Familiarity

It is the employer's (the machine's owner) obligation to ensure that everyone who is to operate, service, maintain or repair the machine has read the instruction manual; at least those parts of it that are relevant to their work.

Furthermore, anyone who has to operate, service, maintain or repair the machine is required to consult the instruction manual.

Availability

The instruction manual must be kept in a place known to the personnel where it is easily accessible to operators and maintenance staff.

1.3. <u>Version</u>

Column mounted jib crane according to drawing 027-017-001-000 edition 2

1.4. Manufacturer

Name: Fyns Kran Udstyr A/S

Address: Brændekildevej 37, DK-5250 Odense SV

Phone: +45 70 15 20 15 Email: fku@fku.dk

Website: www.fyns-kran.dk

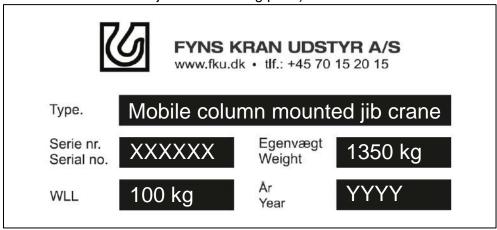
1.5. Designation

Mobile column mounted jib crane

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1.6. Relationship between this document and the machine

This instruction manual covers the use and maintenance of the column mounted jib crane (identical information is on the column mounted jib crane's rating plate):



The rating plate must not be removed and must be replaced if it is missing or damaged to the point of illegibility

1.7. Labels indicating compliance with mandatory/legal requirements

Column mounted jib crane labelled with a rating plate as specified in subsection 1.6. When the hoist is installed, an overall CE marking must be made.

1.8. Abbreviations

FKU: Fyns Kran Udstyr
WLL: Working Load Limit
Nm: Newton meter
Acc. to: According to

2. Saftey

2.1. Intended use, warnings about dangerous situations

The column jib crane is designed for hoist suspension with the following specifications:

- Maximum WLL of 100 kg.
- Maximum dead weight of 14 kg.
- Must be able to be mounted in the rigging eye.

Mounting other hoists can overload the column mounted jib crane.

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2.2. Predictable abuse, warning of dangerous situations

Mounting a different hoist than described may result in overloading. Do not hook a load outside the working area of the column mounted jib crane.

2.3. Residual risks

Risks related to the use and installation of the hoist, please refer to its instruction manual.

2.4. General warnings and precautions

The column mounted jib crane must be placed on a firm level floor that can withstand the load.

2.5. Use of personal protective equipment

Safety shoes minimum class S1 according to EN ISO 20345 must be worn when setting up a column mounted jib crane.

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3. Column mounted jib crane overview

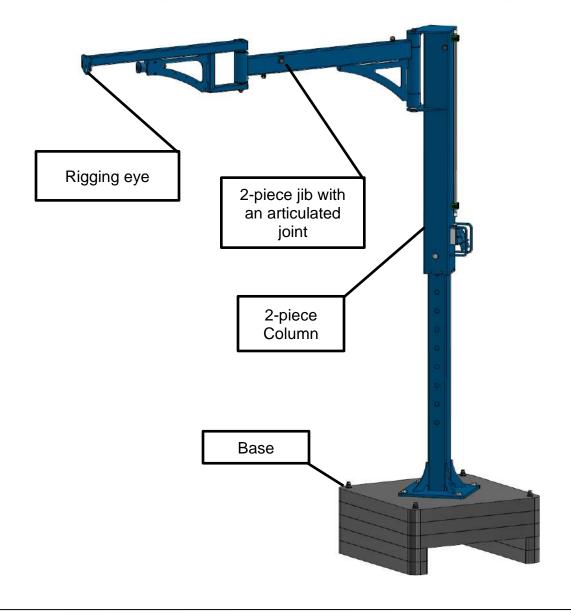
3.1. Column mounted jib crane description

The column mounted jib crane is a mobile crane and consists of a 2-part column with height adjustment, a swivelling jib with articulated joints mounted at the top and a solid base.

The height of the crane from the floor to the top of the jib is 2900 mm. The jib is 2000 mm long from the first bend point to the rigging eye

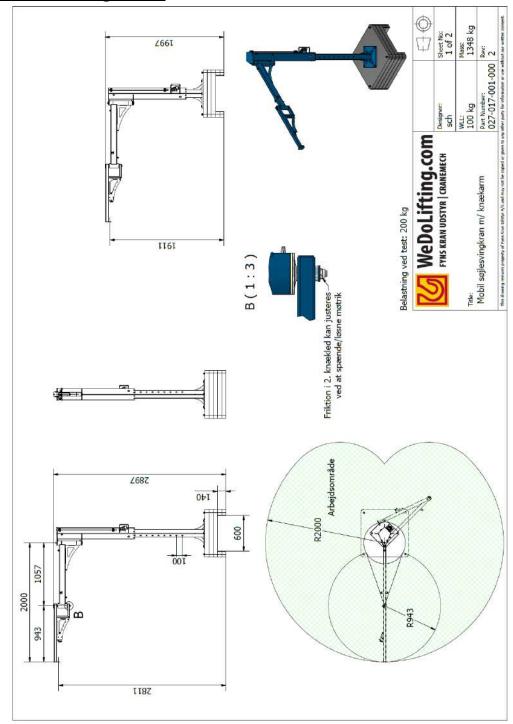
The friction in the jib's articulated joint can be adjusted.

The crane is made of steel and painted in RAL 5010. The base is made of steel and painted in RAL 9005.

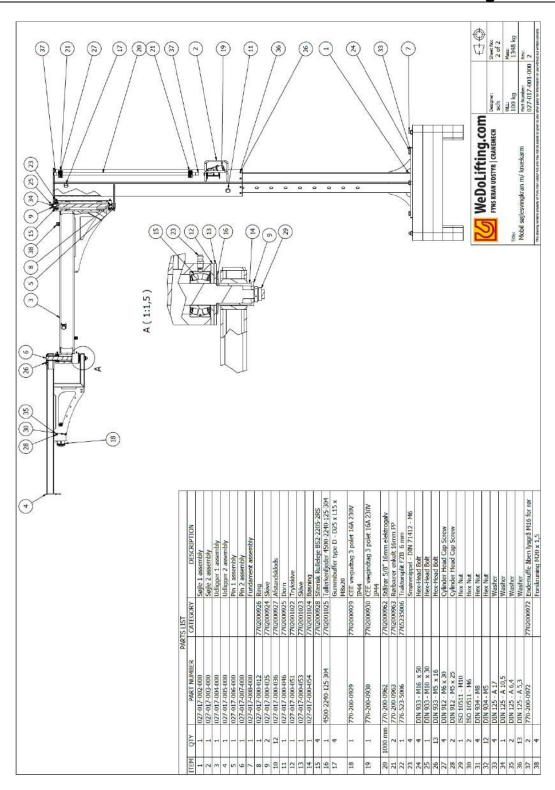


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3.2. Overview drawings, etc.



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3.3. Intended use

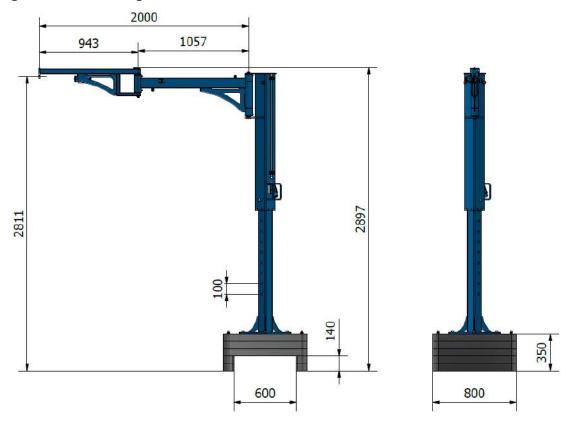
The column mounted jib crane is used to suspend the hoist.

3.4. Uses that are not permitted

Do not use for lifting people or radioactive material and molten steel. It is not allowed to hook into a load that is outside the crane's working area.

3.5. Specifications

3.5.1. Length, width and height



3.5.2. Weight

Total weight incl. electric chain hoist: 1350 kg

3.5.3. Operational limits

Hoist WLL 100 kg

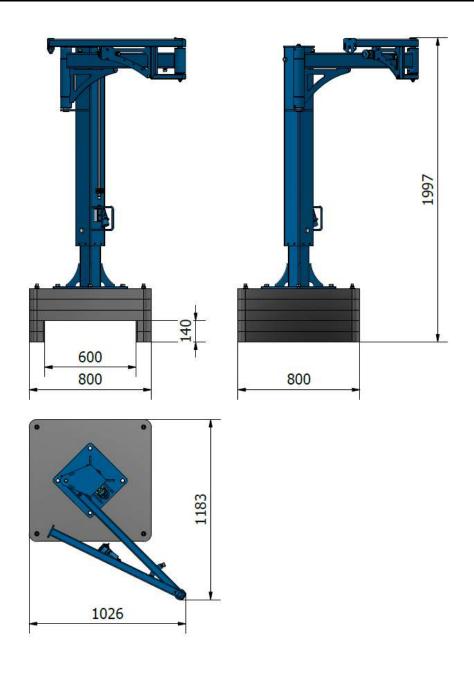
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3.5.4. Service life, column mounted jib crane

Expected service life is minimum 16,000 lifts, corresponding to 1,600 lifts/year for 10 years.

4. Transport, handling and storage

4.1. Dimensions and mass of the column mounted jib crane during transport



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Weight: 1350 kg

4.2. Transport and handling methods

4.2.1. Transport and handling methods

The column mounted jib crane is transported standing up. The column mounted jib crane is lifted by a forklift or stacker.

4.2.2. Training and equipment

National requirements regarding driving with forklifts and stackers must be followed. Lash the jib to the column by using a lashing strap between the elongated hole in the rigging eye and the elongated hole in the column's top plate.

4.3. Environmental requirements during storage

The column mounted jib crane must be stored dry between -10°C and 60°C

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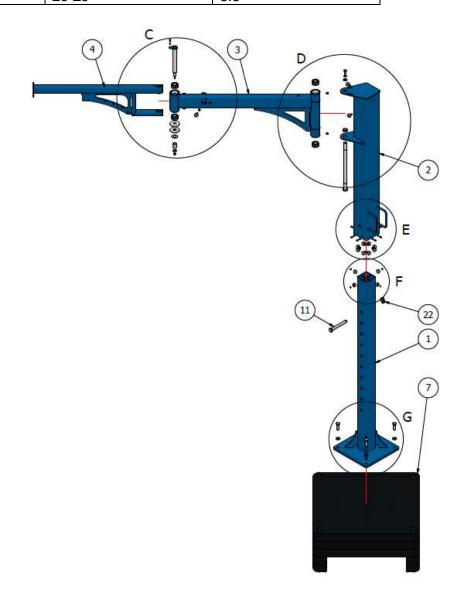
5. Assembly, installation and commissioning

5.1. Column mounted jib crane assembly

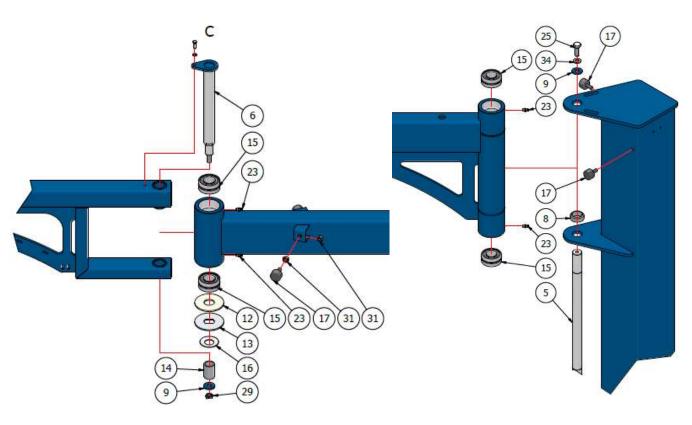
The column mounted jib crane is delivered assembled and ready for lifting.

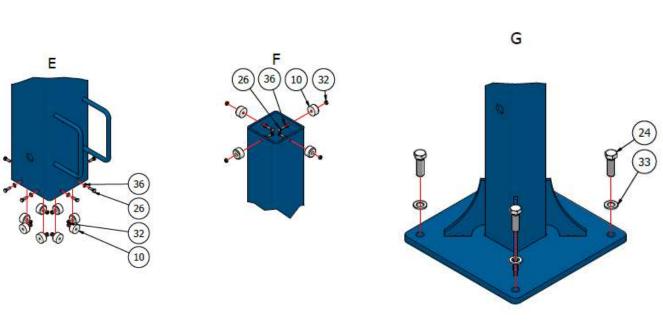
When disassembling and assembling the column mounted jib crane, follow the illustrations below and tighten the bolted joints with torque according to the table.

and boltou jointo man torqu	io according to the tablet	
Bolt size [mm]	Torque [Nm]	Strength class
M16	170 ±10	8.8
M10	25 ±5	8.8



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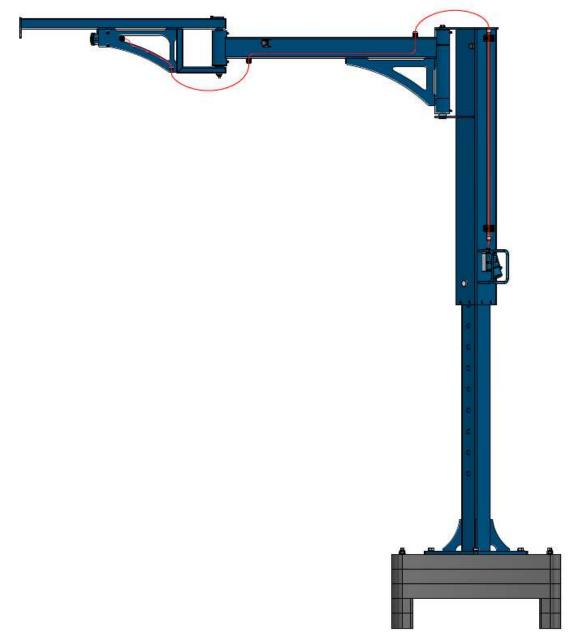




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5.1.1. Cable routing

The crane is designed for internal cable routing. The illustration below shows the cable route (red) between CE connectors. The cable bend between moving parts must be large enough to avoid damage to the cable. Minimum bending radius of cables is 57 mm.



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5.2. Column mounted jib crane placement

Place the crane on a firm, level floor.

The load from the crane during operation is maximum 15.2kN, without a safety factor. Giving a surface pressure of 0.1 N/mm².

5.3. Checking the installation

The installation is checked by a statutory test load according to the Danish Working Environment Authority's instruction no. 2.3.0.3. Test lifts are performed with 200 kg. If the hoist cannot carry the test load, the crane must be loaded separately.

After the test lift, the crane is checked.

5.4. Commissioning

The column mounted jib crane can be put into operation after overall CE marking and a test lift has been performed.

5.5. **Training**

5.5.1. Operators

Operators are trained according to the instruction manual on the electric chain hoist and other applicable national rules for the use of cranes.

5.5.2. Service personnel

Service personnel must have training equivalent to a machinist, blacksmith or similar trade training.

5.5.3. Cleaning personnel

Cleaning can be done by staff without additional prerequisites or training.

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6. Operation

All users (operators) must be trained before operating the crane for the first time. Training should ensure that operators are aware of the risks and hazards that exist on the crane. For training, please read the complete instruction manual included with the crane/electric hoists.

6.1. User environment

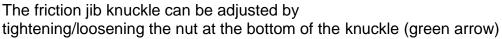
Indoors:

Unheated rooms with fluctuating temperature and humidity. Low frequency of air condensation and low air pollution.

6.2. Setting and adjusting

The column mounted jib crane has 10 adjustable height positions at 100 mm intervals. A forklift must be used for adjusting.

- Adjustment is made by carefully lifting the forklift under the jib's bend point (red arrow).
- Then remove the pin and raise the column to the desired position.
 - Be careful not to raise the column above the top position.
- Insert the pin and secure with a ring split.





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7. Inspection, testing and maintenance

7.1. Planned service life

Minimum 16,000 lifts at full WLL. Normal use 1,600 lifts/year.

7.2. <u>Inspections (nature, frequency, criteria)</u>

Daily:

Visual inspection of crane.

Perform daily or before use.

No visible flaws or defects.

Roller bearings are lubricated, and the jib can flex freely, if they are not lubricated or the jib cannot flex freely, they must be lubricated.

Annually:

Checking the bolts.

If loose, tighten with torque as specified in subsection 5.1

Inspection of paint. Paint peeling is repaired according to the paint specification, see Appendix A. Lubrication of roller bearings.

7.3. Spare parts, specification

Description	FKU item number	Execution	Material
Spherical Roller Bearing BS2-2205-2RS	770-200-0928		Steel
CEE wall socket 3 pole 16A 230V IP44	770-200-0929		Plastic
CEE wall outlet 3 pole 16A 230V IP44	770-200-0930		Plastic
Belleville spring 4500-2240-125-304	770-200-1025		Steel
Thrust washer	770-200-1022		Plastic
Ring split 6 mm	776-523-5006		Steel
Set screw M16 x 50	776-121-6050	DIN 933	Steel 8.8
Set screw M10 x 30	776-121-0030	DIN 933	Steel 8.8
Spacing block	770-200-0927		Plastic
Rubber cable 3G1.5 H07RN-F RG50	770-200-0973		Plastic/copper

7.4. Substances used, properties

Universal grease, Lithium 12 hydroxystearate lubricant code K2K-30

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7.5. Safe execution of maintenance operations

7.5.1. Maintenance requiring technical knowledge or skills

Tightening and changing bolts requires training equivalent to a machinist, blacksmith or similar trade training. Paint repair requires training similar to machinist, blacksmith or similar trade training. Electrical work on a column mounted jib crane requires knowledge of high voltage current.

7.5.2. Maintenance not requiring technical knowledge or skills

Crane cleaning. Lubrication of roller bearings.

7.6. Equipment needed for maintenance

7.6.1. Tools

Torque wrench that can tighten up to 170 Nm for jaw spans of 17 and 24. Brush
Grease gun

7.6.2. Cleaning equipment

Bucket Soft brush Cloth

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7.7. Spare parts list

Description	Quantity
Spherical Roller Bearing BS2-2205-2RS	4
CEE wall socket 3 pole 16A 230V IP44	1
CEE wall outlet 3 pole 16A 230V IP44	1
Belleville spring 4500-2240-125-304	1
Thrust washer	1
Ring split 6 mm	1
Set screw M16 x 50	4
Set screw M10 x 30	2
Spacing block	12

7.8. Maintenance plan

Description	Frequency	Operator	Service staff
Washing/drying the crane	Monthly	X	
Checking set screws	12 months		X
Lubrication of roller bearings	12 months		X

7.9. Safety-related inspection, testing and maintenance

7.9.1. Topics covered

Column mounted jib crane assembled

7.9.2. Frequency

At least every 12 months

7.9.3. Method

Visual

7.9.4. Criteria for acceptance/non-acceptance

No deformation and no rust/corrosion

7.9.5. Required actions in case of non-acceptance

In case of deformation, the column mounted jib crane must no longer be used and must be discarded. Rust/corrosion must be repaired as soon as possible

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8. Cleaning & disinfection

8.1. Necessary equipment and procedures

8.1.1. Tools, equipment, cleaning agents

Universal cleaner R1 from Würth or equivalent products Water, lukewarm (approx. 37°C)
Bucket
Soft brush
Cloth

8.1.2. Personal protective equipment

Rubber gloves according to DS/EN 374: Penetration time >480 min Glove thickness: 0.4 mm Protective goggles according to EN 166-S

8.1.3. The machine's operating mode during cleaning

Do not use the crane during cleaning.

8.1.4. Interrupting, diverting or isolating energy

The crane must be disconnected from the mains during cleaning.

8.1.5. Cleaning procedures

The column mounted jib crane is washed with a brush and universal cleaner. Rinse with clean water and wipe with a cloth.

8.1.6. Resumption of operation

After wiping with a cloth, the column mounted jib crane must be checked daily before it can be put into operation.

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9. Repair

Damage to paint is repaired as soon as possible according to the paint specification, see Appendix A. Paint repairs may only be performed with ventilation.

9.1. Personal protective equipment

In connection with repairing paint:
Respirators EN 405 FFA2P3 R D
Protective goggles according to EN 166-S
Rubber gloves according to DS/EN 374:
Penetration time >480 min
Glove thickness: 0.4 mm

10. Disassembly, deactivation and scrapping

10.1. Interrupting, diverting or isolating energy

Electrical parts, hoist and any other equipment mounted on the column mounted jib crane must be removed before starting to disassemble the column mounted jib crane. This also applies to electrical equipment.

10.2. Specific risk reduction measures

Please note the dead weight of the various individual parts and their centre of gravity as indicated under subsection 3.2

10.3. Personal protective equipment

Safety shoes of at least grade S1 according to EN ISO 20345 must be worn.

10.4. Dismantling

Dismantle the column mounted jib crane by separating all bolted joints.

10.5. Disposal

The column mounted jib crane is made of steel and must be disposed of as steel.

10.6. Recycling

Steel should be sent for recycling in accordance with current recycling rules

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11. Documents and drawings

11.1. EC Declaration of Incorporation

Machinery Directive 2006/42/EC Annex II B

The undersigned manufacturer, authorised to draw up the technical documentation, for the partly completed machinery and, on request, will supply the technical file:

Name: Stefan Christiansen

Manufacturer: Fyns Kran Udstyr A/S

Address: Brændekildevej 37

Postcode and city DK-5250 Odense SV

The undersigned hereby declares that the type of sub-machine: Mobile column mounted jib crane

Serial number: 650723

Is manufactured in accordance with the following essential health and safety requirements of the Machinery Directive 2006/42/EC Annex I

The following harmonised standards have been applied:

EN 12100

EN 1993-1-1

EN 1993-1-8

EN 1993-6

The partly completed machinery must not be put into service until the finished machine into which it is to be incorporated has been conformity assessed and found to comply with all relevant health and safety requirements of 2006/42/EC and other relevant directives

Aalborg, 27 October 2024

Carsten Møller Sørensen / Director

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12. Appendix

12.1. Appendix A, paint specification

12.1.1. Column Mounted Jib Crane

- Sandblasted to sa 2.5
- Primed with sigma fast 205 in grey primer
- $\bullet~$ Painted with sigmafast 210 hs in ral 5010, for corrosion class c3 layer thickness 120 μ Repair:
 - Damage cleaned with thinners
 - Sanded with 80 grit sandpaper
 - Prime with SigmaFast 205
 - Top coat sigmafast 210 hs ral 5010

12.1.2. Base

- Sandblasted to sa 2.5
- Primed with sigma fast 205 in grey primer
- $\bullet~$ Painted with sigmafast 210 hs in ral 9005, for corrosion class c3 layer thickness 120 μ Repair:
 - Damage cleaned with thinners
 - Sanded with 80 grit sandpaper
 - Prime with SigmaFast 205
 - Top coat sigmafast 210 hs ral 9005