

## Erection Sequence

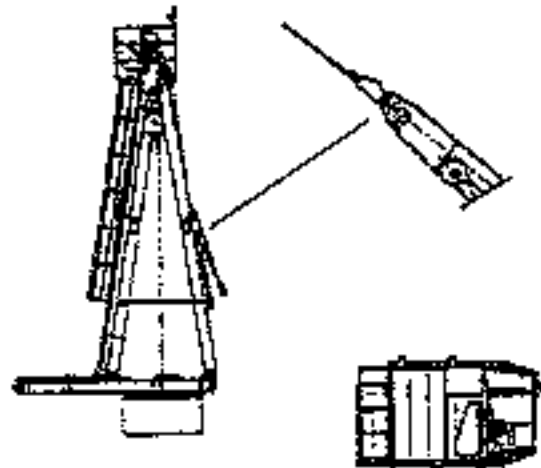
For Kroll Crane K800/1000

### Mast

After assembling the mast sections, each mast section consist of four parts, the mast is build up to required height.

All mast bolts should be tightened to the correct torque.

Weight of M32 mast section: 4.400 kg



### Slewing / Top tower

Fit the combined slewing / masthead on top of the mast.

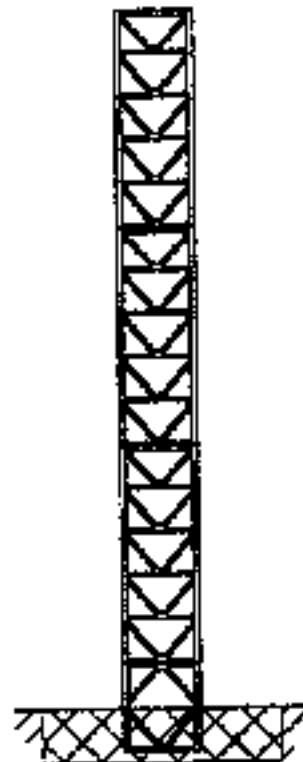
If sufficient crane capacity is available the top tower could be assembled on the slewing as well before fitting.

Weight of Slewing / masthead: 22.300 kg

Fit the top stays on the top tower as shown and fit the tower on the slewing.

Weight of top tower: 5.200 kg

Fit the drivers cabin: 2.000 kg



## Erection Sequence

For Kroll Crane KB00/1000

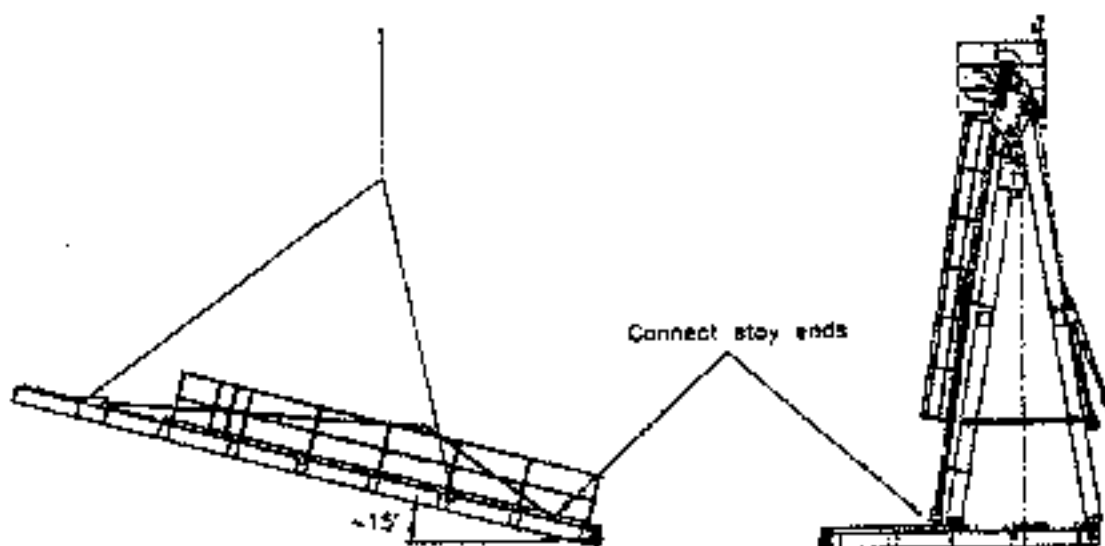
### Counter jib

Preassemble the counter jib complete with platforms, railings.

Weight of counter jib: 9.500 kg

When the pin bolts between counter jib and slewing is fitted,  
the stays should be connected.

The counter jib can now be lowered until it is carried by the stays



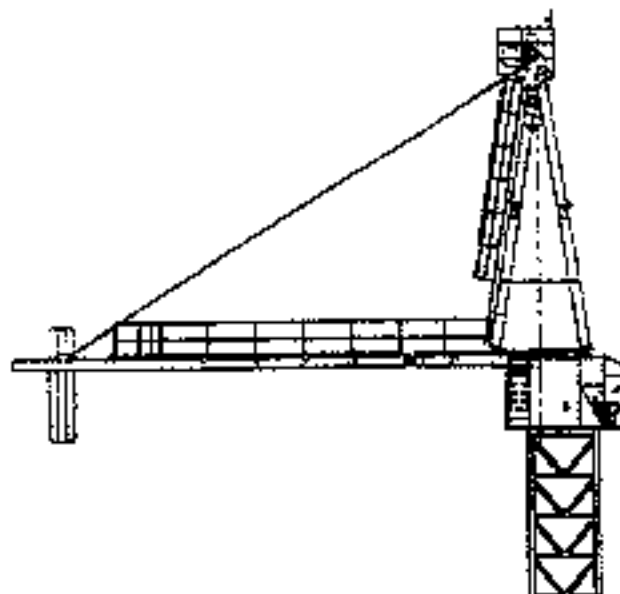
Erection Sequence 2/4

## Erection Sequence

For Kroll Crane K800/1000

Fit 2 x 11.700 kg counter weight blocks when the counter jib is fully fitted with stays on the slewing.

Install the power supply and make electrical connections.



Assemble 48 m inner jib sections on the ground.  
Assemble 24 m outer jib sections on the ground.

### Jib

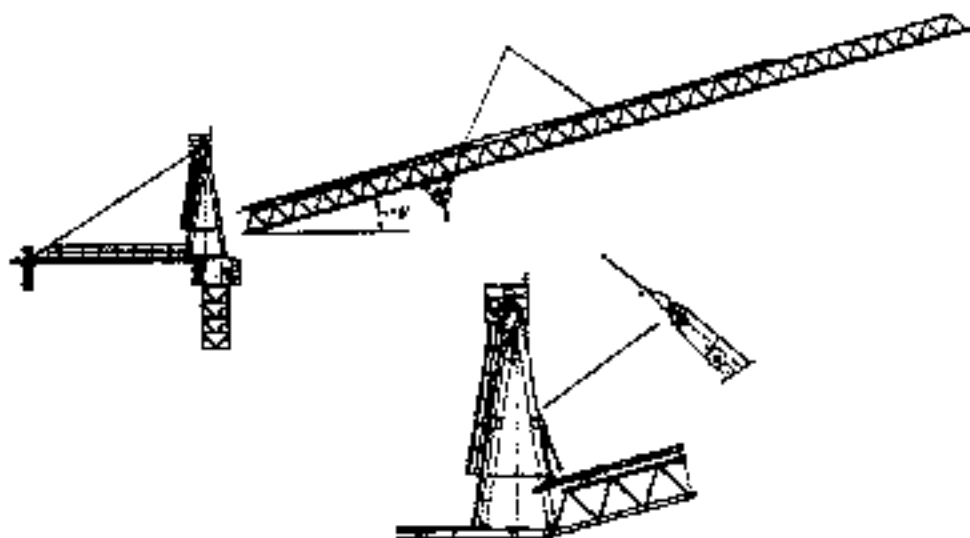
Fit trolley, hook block and intermediate block to the jib.  
Secure the trolley position, so it does not move during the lift.  
Fit all secondary equipment.

The remaining jib stays should be layed out on the jib and attached to the respective eye sections. The stay combination is shown on the specification sheet.

When pin bolts between jib and slewing are fitted, the stay ends should be assembled and pulled up with the hand driven winch in the tower.

## Erection Sequence

For Kroll Crane K800/1000



### Final Stages

Fit the remaining counter weight blocks.

Reeve the hoist rope using a hand line.

Make up the jib swivel connection.

The trolley rope can be reeved and the trolley securing clamp should be removed.

Make a check on all motions using the joy sticks in the drivers cabin.

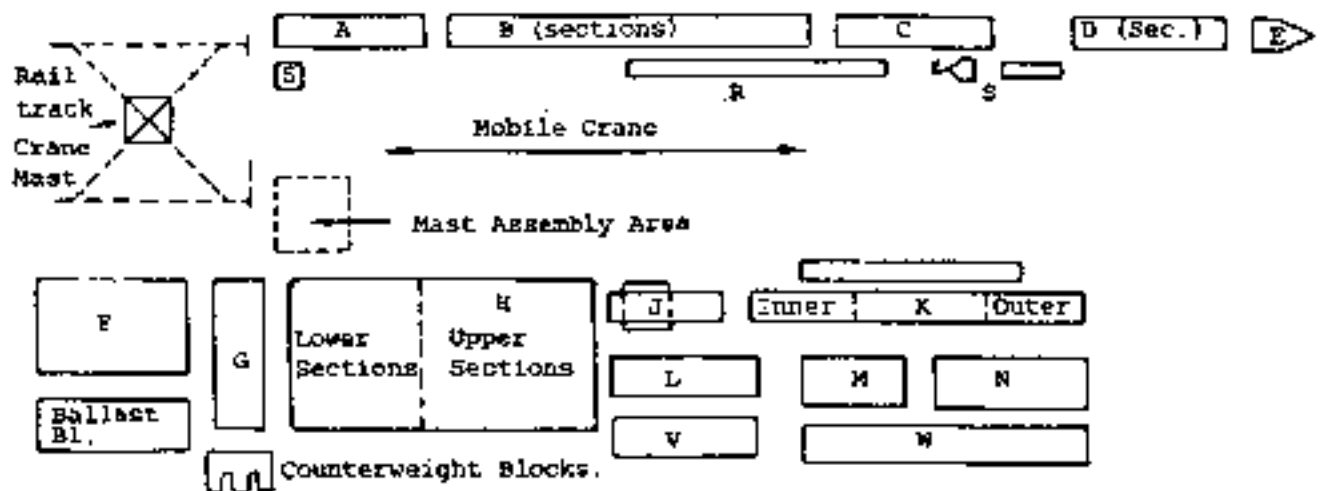
The crane is now ready for test loading.

# **PRE-ERECTION INFORMATION**



## **KRØLL GIANT CRANES A/S**

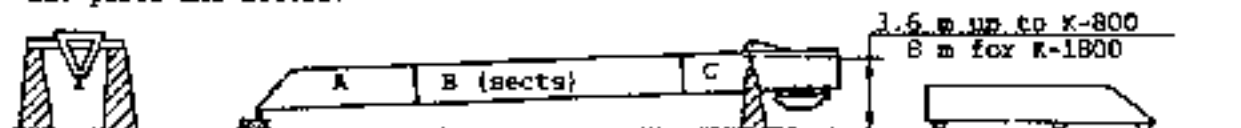
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- |                              |                        |   |
|------------------------------|------------------------|---|
| A - Jib inner section        | H - Mast sections      | R - Jib stays                             |
| B - Jib intermediate section | J - Slewing            | S - Hook-trolley                          |
| C - Jib eye section          | K - Counter jib        | T - C/jib stays                           |
| D - Jib outer section        | L - Tower              | V - Jib/C jib part stays fitted to tower  |
| E - Jib tip section          | M - Hoist winch        | W - Diverse platforms, bolts (trafo) etc. |
| F - Bogies, B-K, portal etc. | N - Cabin & Beams etc. |   |
| G - Mast ladders             | P - Hoist wire         |   |

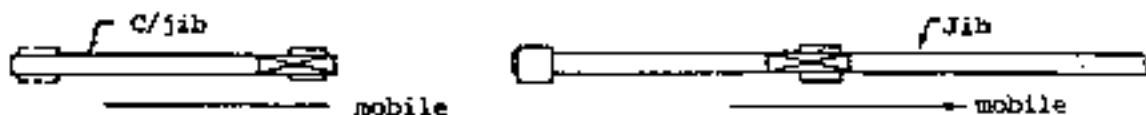
(The mast assembly area is required only for masts TM 32 type and over.)

All parts should be raised off the ground on timber blocks.  
If there is any standing period under inclement weather conditions cover el. parts and motors.

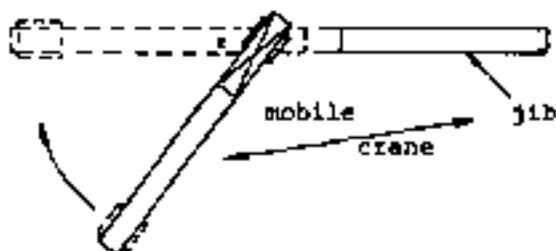


When the jib is assembled the heel of the inner section should rest on wood block. A jib support is required to fit the trolley/hook and reeve the hoist rope. The support will be placed under the top members of the eye section (C) below the stay connections.

Final Assembly Area with a Clear Area for Mobile.



Final Assembly Area with a Limited Area for Mobile Crane.



The slewing unit is turned to the required angle, on the ground before lifting into position. The counter jib is then fitted with a reduced number of counter weights. The complete slewing and C/jib after is turned to an in-line position to fit the jib.

PRE-ERECTION RESPONSIBILITY OF THE PURCHASER IS AS FOLLOWS:

A

- 1) Counterweight blocks have been prepared and are on site
- 2) Ballast blocks (when required) have been prepared and are on site
- 3) Test load blocks are weight-checked, marked, and on site
- 4) Crane base is prepared
 

Bottom cross	-	
Expendable base	-	
Rail-mounted	-	
- 5) Crane main electr. supply point is installed in a position near erection area
- 6) Electr. supply point for power tools, welding set, etc. (if required)
- 7) Electr. supply and floodlights (if required)
- 8) Tarpaulins for covering parts (mainly electr.) if delay between delivery and erection.
- 9) Timber blocks for support of parts on delivery.

Information sheet E

"	"	E
"	"	L1
"	"	A
"	"	A
"	"	F

NOTE

KRÖLL main electr. installation is from the electr. panel on the hoist unit out to all motors & control gear. Feeder cable size & length required is as ordered - from the hoist unit to the supply point.

B

- 1) Cleared site with space to lay out parts on delivery
- 2) Unloading area space for mobile crane
- 3) Firm access road for long road delivery vehicles with turn-out area, or road, if possible
- 4) Purchaser's/contractor's own labour available (if required)
- 5) Booking of mobile crane
- 6) Certified wire/chain slings
- 7) Site shelter with lockable storage facilities
- 8) Jib support
- 9) Hoist rope reel support (if required)
- 10) Steel plate approx. 3 x 250 x 800 mm (3/16 x 10 x 32 ins.) for levelling (applies to bottom-cross cranes)
- 11) Large diameter dial hook-fitting weight scale and test load blocks

Unless otherwise agreed by KRÖLL (or agents) KRÖLL (or agents) accept no responsibility for on-site loss of delivered goods & tools

SEE ERECTION INSTR.

Consult KRÖLL (or their agents) if these items not available

C

- 1) Tools
  - 3-ton pull lift
  - 20-ton hydr. jacks (2)
  - Crowbars (2)
  - Electr. drill 20 mm (3/4") cap.
  - Hand wrench & die for anchor bolt threads  
(applied to bottom-cross cranes)
  - Wrenches & spanners up to 1 in. and 24 mm.
  - Welding set
  - Gas cutting equipment
  - Disc grinding equipment

Consult KRÖLL (or their agents) if these items will not be available

These items should be instantly available, if required. (Otherwise, consult KRÖLL (or their agents)).

- 2) Telephone/First-aid equipment

KRÖLL's (or agents') personnel should be informed on arrival at site of location points

- 3) Site access

Site clearance permission for KRÖLL's (or their agents') personnel

\* THE CRANE TOOL BOX IS FOR MAINTAINING THE MACHINE AND DOES NOT PROVIDE FOR THE REQUIREMENTS ON AN ERECTION CREW.



PRE-ERECTION CHECKS TO BE CARRIED OUT BY KRÖLL'S (OR AGENT'S) TECHN. ASSISTANT

A EXPENDABLE-BASE-MOUNTED CRANES

- Check - The foundation pad has had sufficient curing time
- Mast bolt diagonal centres
  - With a level, the mast bolt block connection surfaces
  - There is a min. of 400 mm (15 3/4") between underside of mast bolt block and the foundation top.

B BOTTOM-CROSS (B-X) MOUNTED CRANES

- Check - The foundation pad has had sufficient curing time
- Cast-in anchor bolt centres
  - Cast-in anchor bolt height
  - Clearance under the cross within the mast area
  - Level of the base at anchor bolt position
  - Packing plate available if required for levelling
  - Hand wrench & die available for anchor bolt threads

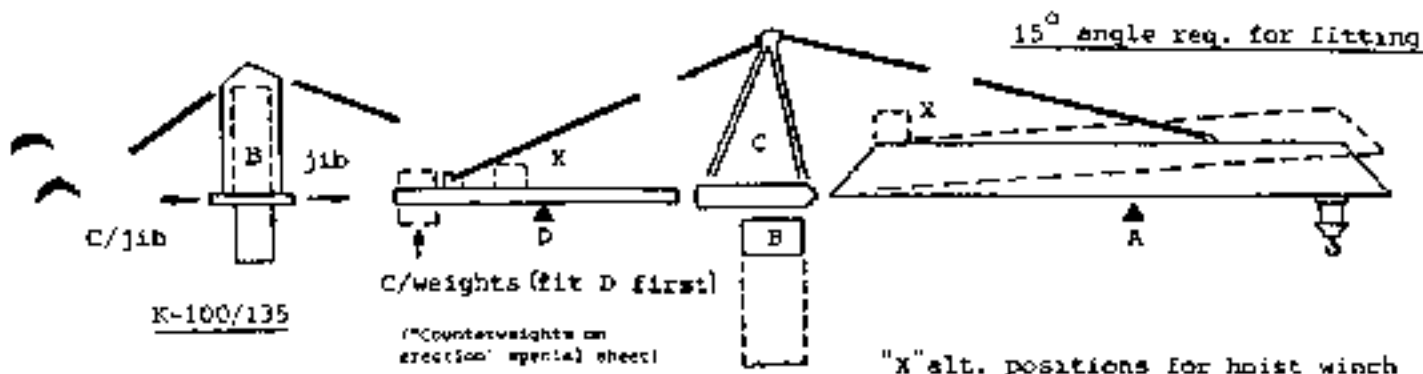
C RAIL-MOUNTED CRANES

- Check - Rail bed, bed drainage, sleeper type, sleeper quantity per meter (yard)
- Source of rail bed calculation
  - Rail joints (fish-plate, bolts, tools available), rail joint alignment & sleeper support
  - Rail to sleeper fitting, rail head (on used rails), rail spacing tie rods
  - Earthing arrangement, end buffers, electr. stop arrangement
  - Position/installation of power cable pick-up
  - Power cable bed (if trailing cable), provisions for power cable if curve-running
  - Special instructions for position of bogie motors, cable drum, access ladder
  - Number of ballast blocks on site, dimensions, quality, marked-up weight, total weight, quantity required

D ALL CRANES

- Check - Pre-erection information complied with
- Weather conditions likely for the period of erection, site drainage, equipment protection
  - Power supply, also whether to be drawn on by other equipment
  - Counterweights on site, dimensions, quality, marked-up weight, total weight, quantity required
  - Parts for transport damage
  - Parts against packing lists
  - Booking of adequate size mobile crane (hooks & slings)
  - Availability of contractor labour
  - Required lubricants are on site
  - Crane tool box on site
  - Storage or transport defects/deficiencies of any supplied tool items (e.g. hydr. torque wrench)
  - Storage or transport defects/deficiencies of any climbing/telescoping equipment
  - Storage or transport defects/deficiencies of any KROLL (or agents) hired-out equipment (e.g. mech./hydr. erection equipment)
  - Electrical equipment for transport/storage damage
  - Weather/storage deterioration of any items
  - For long jib cranes, provision for wind ballasting.
  - Test loading equipment available

ALL FAULTS/DEFICIENCIES TO THE ABOVE LIST WILL BE RECORDED ON KROLL (OR AGENTS) ERECTION REPORTS.



The crane is supplied with the module hoist winch fitted at one of the "X" positions, see crane sheet. On K-100 and K-135 the winch is always on the counterjib.

FOR MOBILE CRANE HOOK CAPACITY ADD ON WEIGHT OF SLINGS ETC.

For the hook height of the mobile crane add 12 m min. [K-100 to K-400] or 18 m min. (for K-800-1800) to the known height under hook of the erected KROLL machine.

If adequate mobile capacity is available, to slewing B can be added tower C, also cabin and beams.

- Jib weight includes part stays, trolley winch, wire, trolley/hook, hoist wire - WITHOUT THE HOIST WINCH MODULE.
- Slewing weight included slewing ring and mast head (without cabin).
- Tower weight includes part stays.
- Counter jib weight includes part stays - WITHOUT THE HOIST WINCH MODULE.

TYPE/REACH	Kg.	Kg.	Kg.	Kg.	D. Radius	TYPE/REACH	Kg.	Kg.	Kg.	Kg.	D. Radius					
m	A	B	C	D	m	m	A	B	C	D	m					
K-100 -36	4200	6500	-	1800	14	K-800-60t Hook Assy	42	29800	21000	9100	7200	22				
40	4500					48	31600									
44	4800					54	33300									
K-135 40	8200	7200	-	1800	14	30t Hook Assy	60	34000	21000	9100	9800	28				
44	8600					66	35600									
K-154 36	8200					5800	2900	2500					15.3	72	37500	
40	8700	K-1800-65	49500*	33000	14500				14200	36						
44	9200	*incl. 6800 for combined hoist/trolley winch														
48	9700															
K-2000 40	10700	7800	2900	2500	15.3	Type 3 - 600 kg	}	Cabin plus Beams and access (can be added to B)								
44	11300															
48	11900															
52	12300															
K-4000 35	16400	12500	5800	4000	15	50 HP	2100 kg	}	Hoist Winch Modules							
40	17600					6100	21						75 HP	2200 -		
45	20200												10300	27	125 HP	3000 -
50	21500														200 HP DC	4700 -
55	22500															
60	24800															
65	25800															
70	27000															

AFTER ERECTION THE CRANE WILL BE TEST LOADED.

For this purpose a number of blocks will be required.

These blocks should be kept with the crane and used for making periodical checks on the setting of load moment and over-load devices fitted, and also after the crane has been subject to any form of shock load.

Test load blocks should be checked and marked with their weight, and the weight  $\frac{1}{2}$  for jib tip and max. load.

Regulations for load testing vary either from country to country or according to the crane norm as to indication requirements.

As a general guide the main blocks should make up to 94% of the requirement (including mean tolerance) plus smaller blocks of 3.2 and 1%. As an example, some authorities require settings to the 100% load line, others will allow a tolerance over 100%, to allow for the working tolerance of the indicators.

In other instances a prior warning setting is required on approach to the 100% allowed load. It is to these variations that the block weights be computed. Sling weight or beam weight should also be included into test loads.

ALL TEST LOAD WEIGHTS AND DATES OF TEST LOADING SHOULD BE REGISTERED IN THE CRANE LOG BOOK.

KNOWN INSTALLATION FAULTS WHICH HAVE OCCURRED BECAUSE OF NONE OR INSUFFICIENT PRE-PLANNING.

#### FOUNDATIONS

Base tilt when crane is in operational use because of none checking of ground holding pressure.

#### BALLAST AND COUNTERWEIGHTS

Concrete not to specification. Blocks crumble with weathering.  
Blocks removed too early from forms and blocks stacked leaning, upright or on uneven ground - result blocks when required are bowed or twisted and cannot be fitted.

#### RAIL TRACKS

Tracks not designed to carry the given max. corner load.  
Used rail of different type laid-result steps at rail joints.  
Rail curve laid with inclination.  
No support at rail joints, fishplates loose or only part of bolt quantity fitted - result rail spring as the crane moves over the joint.



Check Level before concreting



Check Ground Holding Pressure first



D-1 Foundation Relieve the Base Canting.



Weathering Resale Concrete mix to be to correct crushing strength.



Removed before curing stored incorrectly



Removed from form before curing. Stored incorrectly, use a min. of 4 supports.



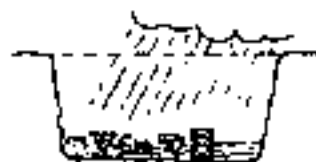
Power Supply to Site



Don't store close to Main Access Dirt Roads.



Don't forget to close doors and packages after delivery, if opened.



Don't forget the Weather Forecast.



Fit Sleepers after the 2nd Stop

Fit 21 Stop Activating Ramps.



Check for Loose Fill Trenches.



Check used Nails



Support Track Joints. Use correct Fish Plate. Tighten Bolts.



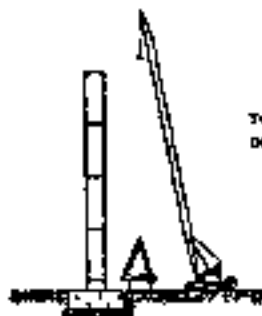
Don't save on Track Spacers



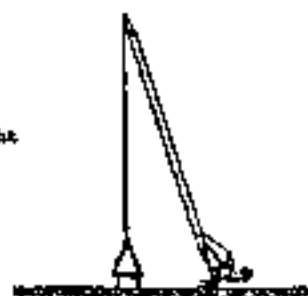
Don't trench close to the Track.



Pre-Form Fall Curves



Too small or too light



YIPPEE COMES HEAVY - some faults and non-attention to preplanning - some with expensive or disastrous results which have been met with over the years by our Service Department.

## MONTAGE/ERECTION

### MONTAGEMODVÆGTE

**DANSK** Ved montage/demontage af kombinationskraner med lastspilmodul på bagbroen skal nedennævnte modvægt desuden være anbragt på bagbroen, når udliggeren monteres eller demonteres:

### MONTAGE-GEGENGEWICHTE

**DEUTSCH** Bei der Montage/Demontage der Kombinationskrane mit Hubwerk-Modul auf dem Gegenausleger muss u.g. Gegengewicht zusätzlich auf dem Gegenausleger angeordnet sein, ehe der Auslager montiert oder demontiert wird:

### ERECTION COUNTERWEIGHTS

**ENGLISH** On the erection/dismantling of combination cranes, other than the hoist winch module the below mentioned counterweight must also be on the counter jib before fitting or removing the jib:

KRANTYPE	ANTAL KLOOSER	VEGT PR. KLOOS	TOTALVEGT
KRANTYP	ANZAHL DER STEINE	GEWICHT PER STEIN	GESAMTGEWICHT
CRANE TYPE	NUMBER OF BLOCKS	WEIGHT PER BLOCK	TOTAL WEIGHT
		kg	kg
K-620	1	1500	1500
K-100	1	1510	1510
K-135	2	1510	3020
K-154	2	1970	3940
K-2000	3	1970	5910
K-4005	5	3000	15000

Andre krantyper efter forespørgsel

Andere Krantypen auf Anfrage

Other crane types on request

**FEEDER & CONTROL CABLE SUSPENSION**

The electr. cables should be suspended either in the king pin assy or in the slewing assy, depending on the crane type.

For cranes with max. height under hook, the distance between the points of suspension must not exceed the values given in the table below.

Feeder cable dimension in mm	Outside cable diameter in mm min/max	Cable sock manufacture KABLET	Max. cable length between each suspension down the mast m
4 x 16	25/32	M-157124 AH	35
5 x 16	28/36	-	30
4 x 25	30/38	-	35
5 x 25	33/41	M-157126 AH	30
4 x 35	34/42	-	30
5 x 35	36/45	-	25
4 x 50	39/49	M-157128 AH	30
5 x 50	45/55	-	25
4 x 70	44/55	-	25
5 x 70	50/60	-	20

**NOTE:** - Do not suspend the feeder cable from ladders or ladder diagonal members.

For each cable sock use one 8-mm (3/8") dia. wire rope, length = 4.7 m (15½ ft), plus two wire rope clamps type "EUREKA S", dimension 2-8 mm. The cable sock is suspended between the mast corner angles on a single wire. The suspended cable can then find its own centre line of suspension.

**CONTROL CABLE ø25-mm DIA.**

If the cable is taken down through the mast, it should be suspended either in the king pin assy or the slewing assy according to crane type. Below this point it should be suspended every 30 m (100 ft) of length. Use a cable sock type KABLET M-157124 AH. For climbing cranes, no control cable socks are supplied with the crane, irrespective of the length of the cable.



## KRØJNING UNDER OPSTILLING

Under opstilling af kombinationskraner kan det være ønskeligt at krøje, før kranens normale strøm-forsyning tilsluttes.

## KRANER MED TURBOKOBLING - A.C. DRIFT

Ved kraner med turbokobling er krøjning ikke mulig ved et drejs langsomt på koblingen. I stedet kan følgende fremgangsmåde benyttes:

- Krøjebremser løsnes (se vejledning for K-bremse, instr. nr. 5001).
- Ved hjælp af et kabel med tværsnit min.  $4 \times 2,5 \text{ mm}^2$  tilsluttes én af kranemotorerne direkte til 380V - 50Hz. Motoren sikres med max. 25A sikring. Det anbefales at indskyde en overskifter med 0-stilling.

ØBS: - Krøjebremser skal betjenes manuelt.

## KRANER MED TRINLØST REGULEREDE EL-MOTORER

Indhent oplysning i vor el-afd.

## BETRIEBS DES DREHWERKS BEI DER AUFSTELLUNG

Bei der Aufstellung von Kombinationskranen kann es erforderlich sein, das Drehwerk vor dem Anschluss der normalen Stromversorgung zu betätigen.

## KRANE MIT TURBOKUPPLUNG - DREHMSTROMBETRIEB

Bei Kranen mit Turbokupplung ist dies jedoch nicht durch langsames Drehen der Kupplung möglich. Hier kann wie folgt vorgegangen werden:

- Die Drehwerkabremse lösen (siehe Anleitung für die K-Bremse, Blatt Nr. 5001).
- Mit Hilfe eines Kabels mit mindestens  $4 \times 2,5 \text{ mm}^2$  Querschnitt, welches durch höchstens eine 25A Sicherung abgesichert ist, wird einer der Drehwerkamotoren direkt an 380V - 50Hz angeschlossen. Es empfiehlt sich, einen Umschalter mit Nullstellung vorzuschalten.

NB: - Die Drehwerkabremse ist von Hand zu betätigen.

## KRANANTRIEBE MIT STUFENLOSEM DREHZAHLBEREICH

Unsere E-Abteilung erteilt Auskunft.

## SLEWING DURING ERECTION

During erection of combination cranes it may be necessary to turn the slewing assembly before the normal power supply is connected.

## TURBO COUPLING DRIVE UNITS - A.C. OPERATION

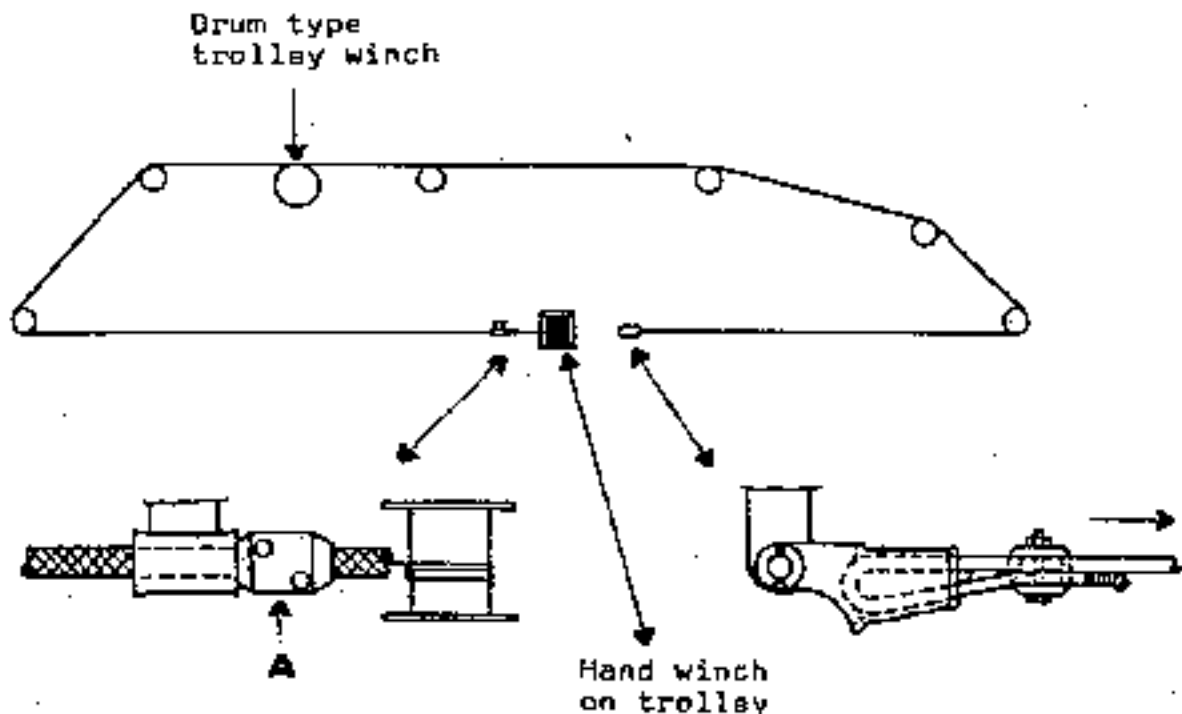
On cranes with this type of drive it cannot be done by slowly turning the coupling. Instead, the following procedure can be used:

- Release the slewing brake (see K-brake instr. sheet No. 5001).
- Connect one slewing motor to either a 380V - 50Hz or 480V - 50Hz supply. The cable used must be  $4 \times 2,5 \text{ sq. mm}$ . A 25A max. fuse must be in the circuit. It is advisable to fit a two-way and stop centre switch in the circuit.

NOTE: - Operate the slewing brake manually.

## CRANE DRIVES WITH STEPLESS CONTROL

Please contact our electr. dept., for information.

**TROLLEY ROPE REEVING**

Reeving should be carried out when the jib is assembled at ground level.

Reeving is as shown on the illustration. The length of rope required and take-up for stretch is controlled at the trolley-mounted hand winch.

**THIS HAND WINCH IS ONLY FOR TIGHTENING THE ROPE AND WINDING ON THE LOOSE REMAINING LENGTH:**

Note the position of the grip A. This grip fits into a socketed tube to take the rope pull.

After hoist rope reeving and before test loading the crane, tension the trolley rope correctly.

## HOIST ROPE UP TO 22-MM DIAMETER

## ERECTION

Average hoist rope weight:

- 13-mm diameter - 1 kg/m (0.7 lbs/ft)
- 22-mm " - 7.2 kg/m (1.5 lbs/ft)

HOIST ROPE REEVING WITH JIB-  
OR COUNTER-JIB-MOUNTED WINCH

### 1 PRIOR ASSEMBLY

- The jib is assembled and trolley fitted (see Erection Instruction).
- From chain/wire/or hooks of reinforcing rod, form a suitable suspension to hold the hook assembly directly under the trolley when the jib is lifted. (Certain heavy-lift hook assemblies are provided with holes for a temporary bolt attachment between trolley block and trolley.)

### 2 TOOL REQUIREMENT

- Cable sock (for connecting 2 ropes (cables) end to end. The connection must be capable of 180-degree turns round the hoist rope pulleys).
- Cable grips (of a type which does NOT deform the rope).
- Hand line 12 mm ( $\frac{1}{2}$ " diameter or wire 10 mm ( $\frac{3}{8}$ " diameter. The length will be determined by the method of fitting and reaving the hoist rope.
- Support and axle for the hoist rope spool.
- Hammer/drift/awful tools.

### 3 REEVING

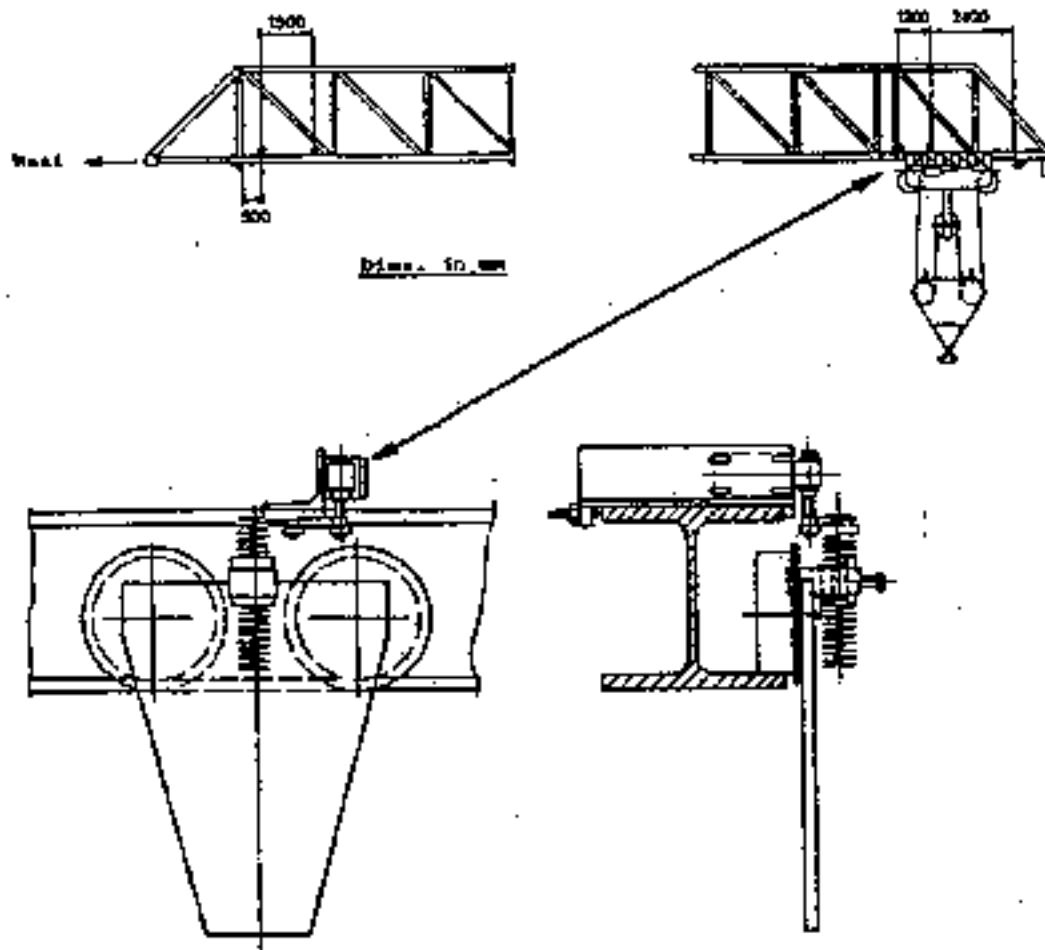
- Final fitting of the hoist rope onto the winch drum can take place after the crane is erected.
- The reaving through the jib guide pulleys, overload device, trolley/hook assembly to the hoist rope wedge/swivel connection should be done at ground level.
- The rope can be hand-reaved or alternatively, the hand line is reaved first, the hoist rope attached to it by the cable sock and drawn through.
- The hoist rope spool with its support axle can be positioned on the jib. Cable grips are fitted to prevent slack rope through the reaving.

### NOTES TO THE ABOVE

- A Carry out all necessary lubrication (see Lubrication Sheet) while at ground level.
- B The trolley rope should also be fitted at ground level (see Trolley Rope Reaving Instr.).
- C Before fitting the hoist rope to the winch drum, disconnect the drive to the height/depth limit switches.
- D This instruction is applicable whether power is available or not.

# TROLLEY END STOPS

(SINGLE TROLLEY)

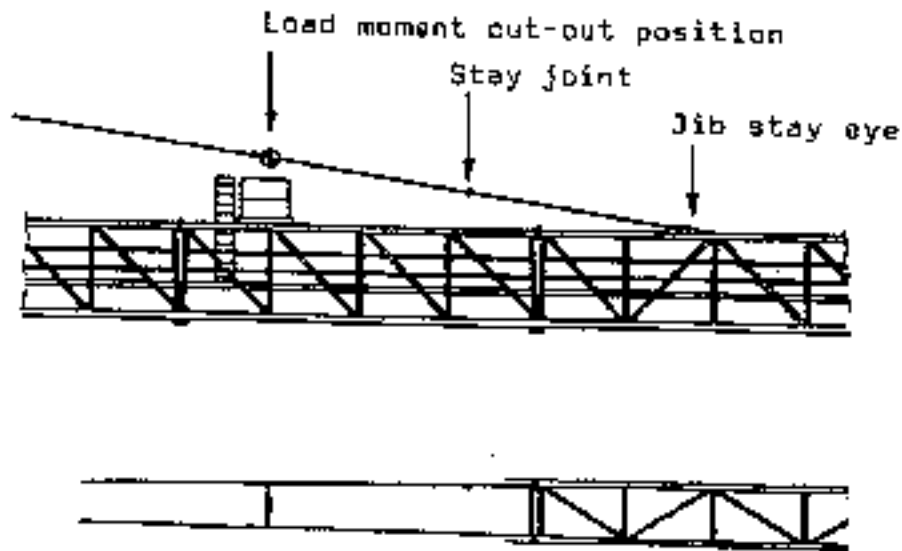


The trolley speed reduction (2) & end (2) switches are positioned as shown on the diagram.

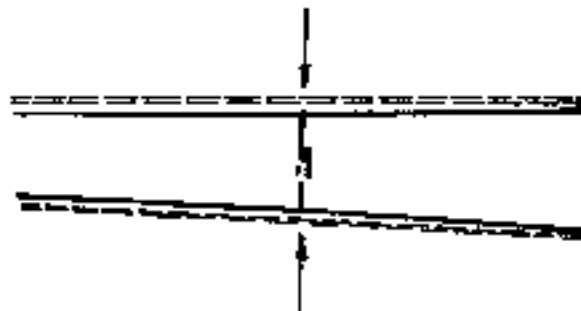
Operation of the switch arm is by a coil spring attached to the rear bogie of the trolley.

The dimensions given are for guidance only and a slight adjustment may be necessary when the crane is checked over prior to test loading.

The cable from the jib tip switches is taken through the jib at handrail level.

**LOAD MOMENT CUT-OUT POSITION**

Deflection of stays - approx. 40 mm (1 5/8")



The load moment cut-out is positioned approx. 1/3 of the total stay length back from the jib stay eye connection.

On cranes fitted with steel stays which taper in from the jib to a central position on the tower, the cut-out is placed below and adjacent to a stay joint.

On cranes fitted with steel stays which run parallel from the jib to the tower, the cut-out is placed adjacent to a stay joint.

On cranes fitted with wire stays, the cut-out is placed a minimum of 1 m (40") from any intermediate stay joint.

The cut-out is fitted between the two stay lines.

The screw shackle is adjusted until the total deflection of the stays is approx. 40 mm (1 5/8").

Position the platform (and access ladder) in relation to the cut-out for service and inspection.

**FEEDER & CONTROL CABLE SUSPENSION**

The electr. cables should be suspended either in the king pin assy or in the slewing assy, depending on the crane type.

For cranes with max. height under hook, the distance between the points of suspension must not exceed the values given in the table below.

Feeder cable dimension in mm	Outside cable diameter in mm min/max	Cable sock manufacture KABLET	Max. cable length between each suspension down the mast m
4 x 16	25/32	M-157124 AH	35
5 x 16	28/36	-	30
4 x 25	30/38	-	35
5 x 25	33/41	M-157126 AH	30
4 x 35	34/42	-	30
5 x 35	36/45	-	25
4 x 50	39/49	M-157128 AH	30
5 x 50	45/55	-	25
4 x 70	44/55	-	25
5 x 70	50/60	-	20

**NOTE:** - Do not suspend the feeder cable from ladders or ladder diagonal members.

For each cable sock use one 8-mm (3/8") dia. wire rope, length = 4.7 m (15½ ft), plus two wire rope clamps type "EUREKA S", dimension 2-8 mm. The cable sock is suspended between the mast corner angles on a single wire. The suspended cable can then find its own centre line of suspension.

**CONTROL CABLE ø26-mm DIA.**

If the cable is taken down through the mast, it should be suspended either in the king pin assy or the slewing assy according to crane type. Below this point it should be suspended every 30 m (100 ft) of length. Use a cable sock type KABLET M-157124 AH. For climbing cranes, no control cable socks are supplied with the crane, irrespective of the length of the cable.

## KRØBING UNDER OPSTILLING

Under opstilling af kombinationskraner kan det være ønskeligt at kraner, før kranens normale strømforstyrning tilsluttes.

## KRANER MED TURBOKOBLING - A.C. DRIFT

Ved kraner med turbokobling er kraning ikke mulig ved at dreje langsomt på koblingen. I stedet kan følgende fremgangsmåde benyttes:

• Kraftebremser løsnes (se vejledning for K-bremser, instr. nr. 5001).

• Ved hjælp af et kabel med tværsnit min.  $4 \times 2,5 \text{ mm}^2$  tilsluttes én af kranmotorerne direkte til 380V - 50Hz. Motoren sikres med max. 25A sikring. Det anbefales at indskyde en omskifter med 0-stilling.

DBS: - Kraftebremser skal betjenes manuelt.

## KRANER MED TRINLØST REGULEREDE EL-MOTORER

Indhent oplysning i vor el-afd.

## BETÄTIGEN DES DREHWERKS BEI DER AUFSTELLUNG

Bei der Aufstellung von Kombinationskranen kann es erforderlich sein, das Drehwerk vor dem Anschluss der normalen Stromversorgung zu betätigen.

## KRANE MIT TURBOKUPPLUNG - DREHSTROMBETRIEB

Bei Kranen mit Turbokupplung ist dies jedoch nicht durch langsames Drehen der Kupplung möglich. Hier kann wie folgt vorgegangen werden:

• Die Drehwerksbremse lösen (siehe Anleitung für die K-Bremse, Blatt Nr. 5001).

• Mit Hilfe eines Kabels mit mindestens  $4 \times 2,5 \text{ mm}^2$  Querschnitt, welches durch höchstens eine 25A Sicherung abgesichert ist, wird einer der Drehwerksmotoren direkt an 380V - 50Hz angeschlossen. Es empfiehlt sich, einen Umschalter mit Nullstellung vorzuschalten.

NB: - Die Drehwerksbremse ist von Hand zu betätigen.

## KRANANTRIEBE MIT STUFENLOSEM DREHZAHNBEREICH

Unsere E-Abteilung erteilt Auskunft.

## SLEWING DURING ERECTION

During erection of combination cranes it may be necessary to turn the slewing assembly before the normal power supply is connected.

## TURBO COUPLING DRIVE UNITS - A.C. OPERATION

On cranes with this type of drive it cannot be done by slowly turning the coupling. Instead, the following procedure can be used:

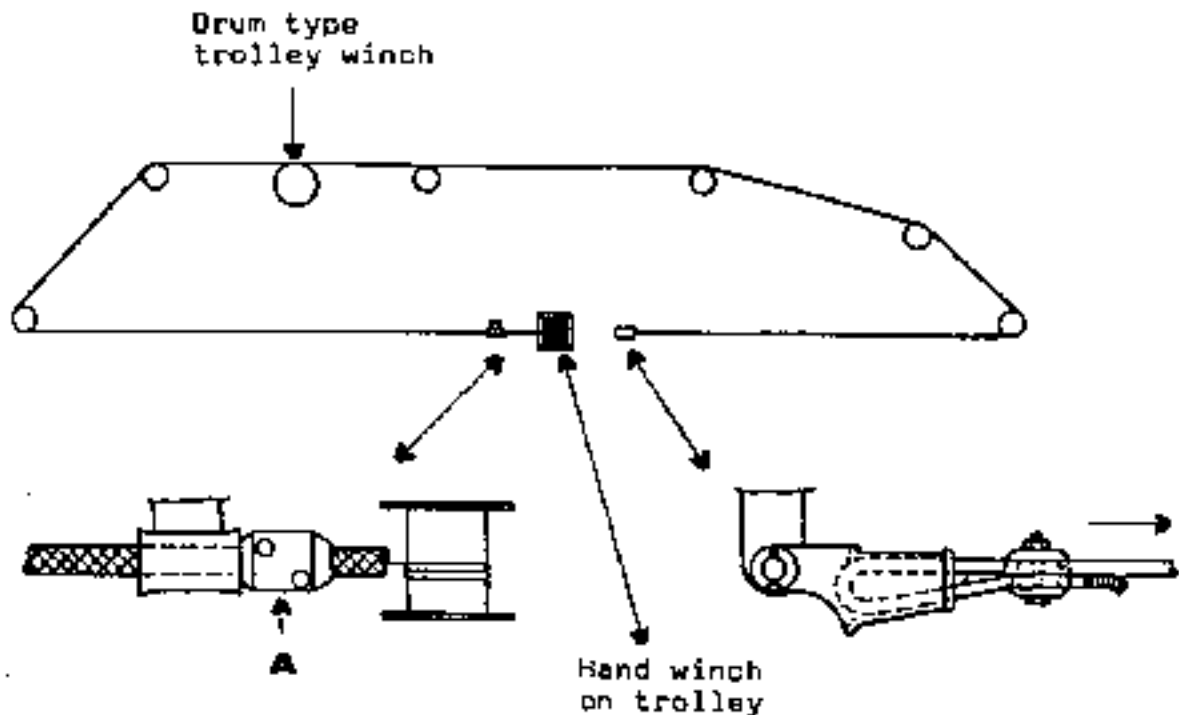
• Release the slewing brake (see X-brake instr. sheet No. 5001).

• Connect one slewing motor to either a 380V - 50Hz or 480V - 60Hz supply. The cable used must be  $4 \times 2,5 \text{ mm}^2$  sq. min. A 25A max. fuse must be in the circuit. It is advisable to fit a two-way end stop centre switch in the circuit.

NOTE: - Operate the slewing brake manually.

## CRANE DRIVES WITH STEPLESS CONTROL

Please contact our electr. dept., for information.

**TROLLEY ROPE REEVING**

Reeving should be carried out when the jib is assembled at ground level.

Reeving is as shown on the illustration. The length of rope required and take-up for stretch is controlled at the trolley-mounted hand winch.

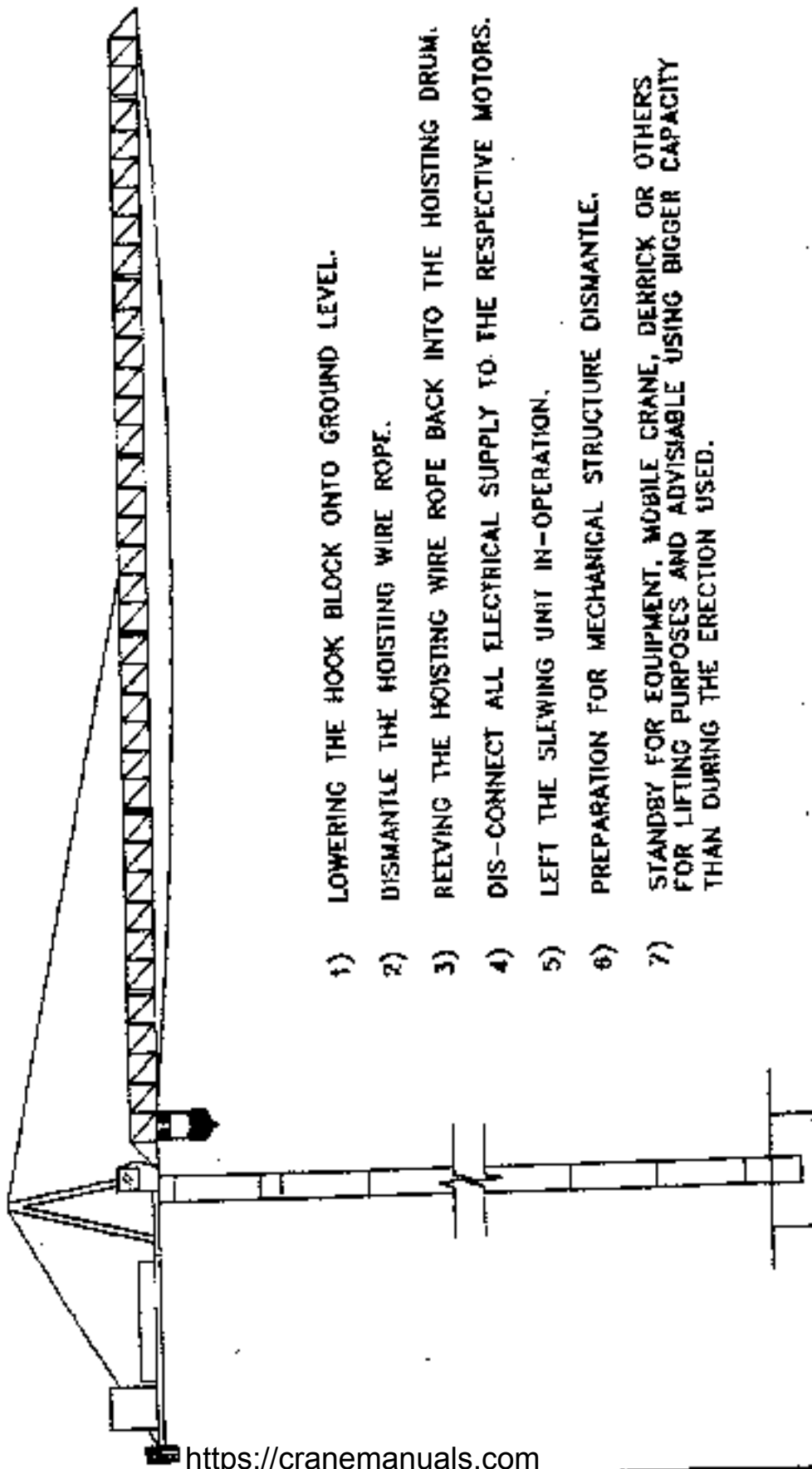
**THIS HAND WINCH IS ONLY FOR TIGHTENING THE ROPE AND WINDING ON THE LOOSE REMAINING LENGTH!**

Note the position of the grip A. This grip fits into a socketed tube to take the rope pull.

After hoist rope reeving and before test loading the crane, tension the trolley rope correctly.



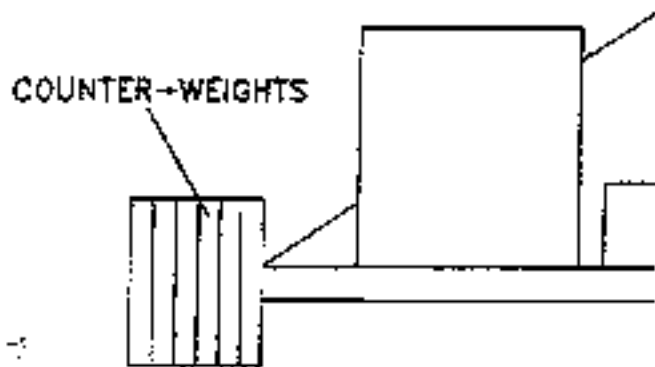
# DISMANTLE 1



- 1) LOWERING THE HOOK BLOCK ONTO GROUND LEVEL.
- 2) DISMANTLE THE HOISTING WIRE ROPE.
- 3) REEVING THE HOISTING WIRE ROPE BACK INTO THE HOISTING DRUM.
- 4) DIS-CONNECT ALL ELECTRICAL SUPPLY TO THE RESPECTIVE MOTORS.
- 5) LEFT THE SLEWING UNIT IN-OPERATION.
- 6) PREPARATION FOR MECHANICAL STRUCTURE DISMANTLE.
- 7) STANDBY FOR EQUIPMENT, MOBILE CRANE, DERRICK OR OTHERS FOR LIFTING PURPOSES AND ADVISABLE USING BIGGER CAPACITY THAN DURING THE ERECTION USED.

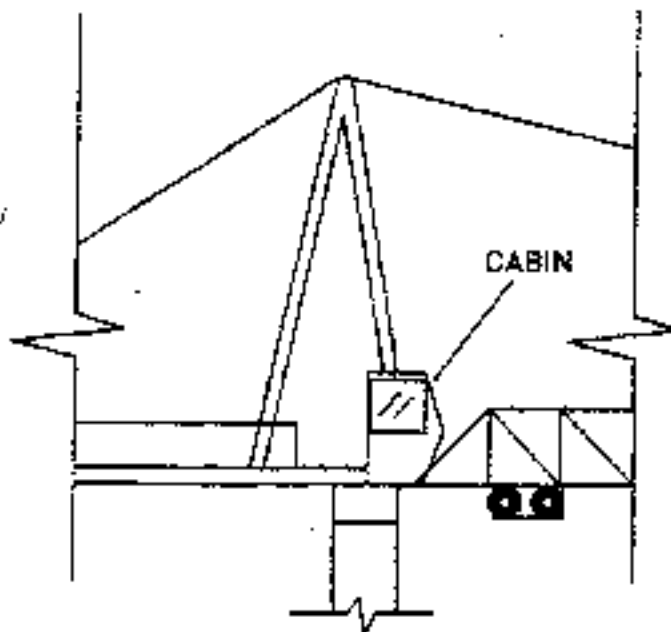


## DISMANTLE 2



### DISMANTLE COUNTER-WEIGHTS & OPERATOR CABIN

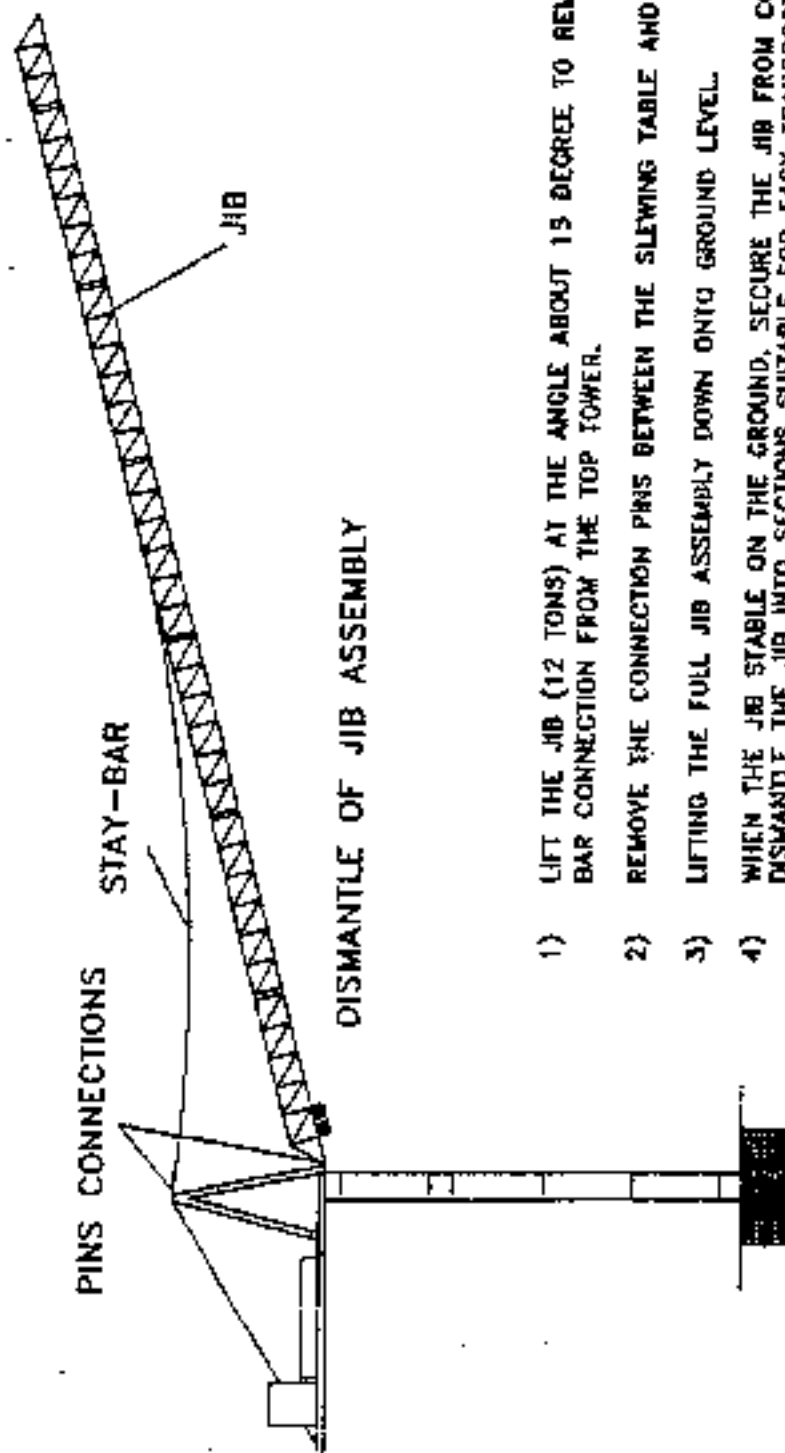
- 1) LIFT-DOWN THE COUNTER-WEIGHTS, EACH WEIGHED 2,500 KG (MAXIMUM). LEFT THE REQUIRED WEIGHTS OF 3,000 KG FOR BALANCING THE JIB.



- 2) CAREFULLY LIFT THE OPERATOR CABIN, LOOSE THE BOLTS & NUTS CONNECTED THE OPERATOR CABIN ON THE SLEWING TABLE



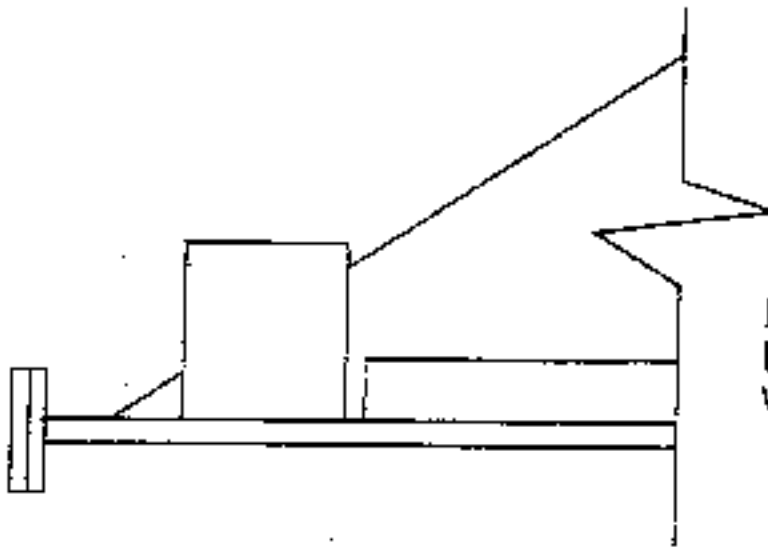
## DISMANTLE 3



- 1) LIFT THE JIB (12 TONS) AT THE ANGLE ABOUT 15 DEGREE TO REMOVE THE STAY BAR CONNECTION FROM THE TOP TOWER.
- 2) REMOVE THE CONNECTION PINS BETWEEN THE SLEWING TABLE AND JIB.
- 3) LIFTING THE FULL JIB ASSEMBLY DOWN ONTO GROUND LEVEL.
- 4) WHEN THE JIB STABLE ON THE GROUND, SECURE THE JIB FROM COLLAPSE. DISMANTLE THE JIB INTO SECTIONS SUITABLE FOR EASY TRANSPORTATION & HANDLING.



## DISMANTLE 4



DISMANTLE OF  
BALANCE COUNTER-  
WEIGHTS

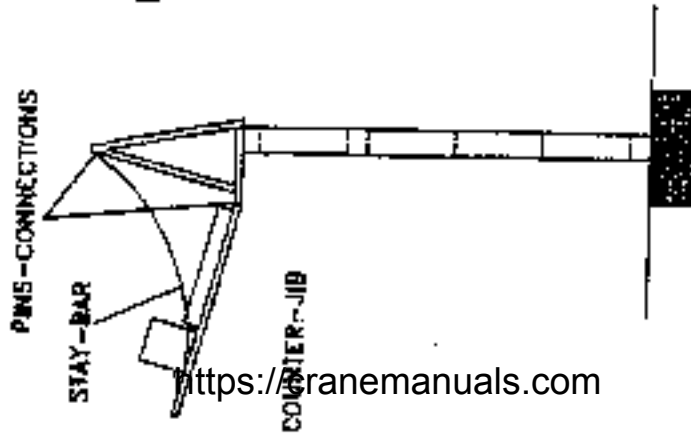
REMOVE OF THE BALANCE COUNTER-WEIGHTS FROM THE COUNTER-JIB.  
THIS MUST BE DONE SLOWLY AND GENTLE, NOT TO HAVE ANY UNNECESSARY  
MOVEMENT ADDED TO THE COUNTER-JIB STRUCTURE.



## DISMANTLE 5

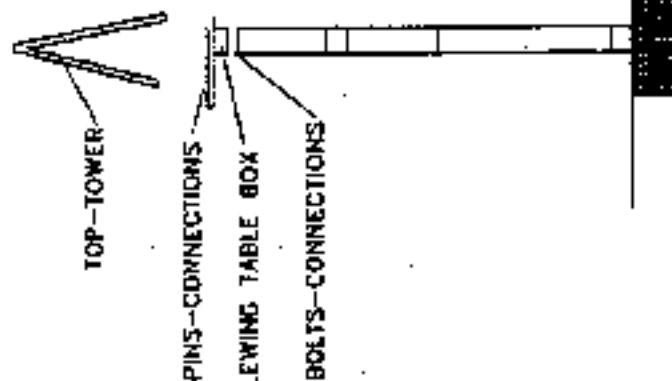
### DISMANTLE OF COUNTER--JIB

- 1) LIFT THE WHOLE COUNTER--JIB (5.5 TONS), 15 DEGREE AS SHOWN ON THE DIAGRAM.
- 2) REMOVE THE CONNECTION PINS BETWEEN THE STAY--BAR AND THE TOP TOWER.
- 3) REMOVE THE CONNECTION PINS BETWEEN THE SLEWING TABLE AND COUNTER--JIB.
- 4) LOWER THE WHOLE COUNTER--JIB ASSEMBLY ONTO GROUND LEVEL.



## DISMANTLE 6

### DISMANTLE THE TOP TOWER & SLEWING TABLE.



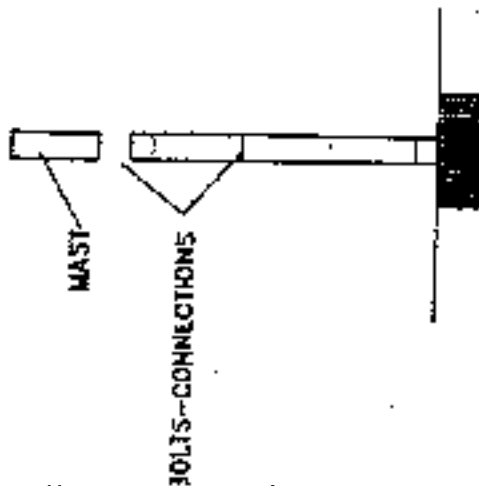
- 1) TOP TOWER (3.2TONS) CAN BE DISMANTLE SEPARATELY FROM THE SLEWING TABLE (5.7TONS) DEPEND ON THE LIFTING CAPACITY OF THE MOBILE CRANE / DERRICK.
- 2) LIFT THE TOP OF THE TOP TOWER, REMOVE THE PINS CONNECTIONS BETWEEN THE TOP-TOWER AND SLEWING TABLE. LOWER TO THE GROUND LEVEL.
- 3) LIFT THE SLEWING TABLE, REMOVE THE BOLTS CONNECTIONS BETWEEN THE SLEWING TABLE BOX AND THE MAST. LOWER TO THE GROUND LEVEL.

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# DISMANTLE 7

## DISMANTLE THE MAST SECTIONS



MAST CAN BE DISMANTLE TOGETHER WITH FEW SECTIONS  
DEPEND ON THE LIFTING CAPACITY OF THE MOBILE CRANE /  
DERRICK USED. (EACH SECTION 2.2TONS)

ALL MASTS ARE BOLTS CONNECTED AND CAN BE DISMANTLE  
IN 4M HEIGHT.

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