

**COLGATE RENTALS CORP.**

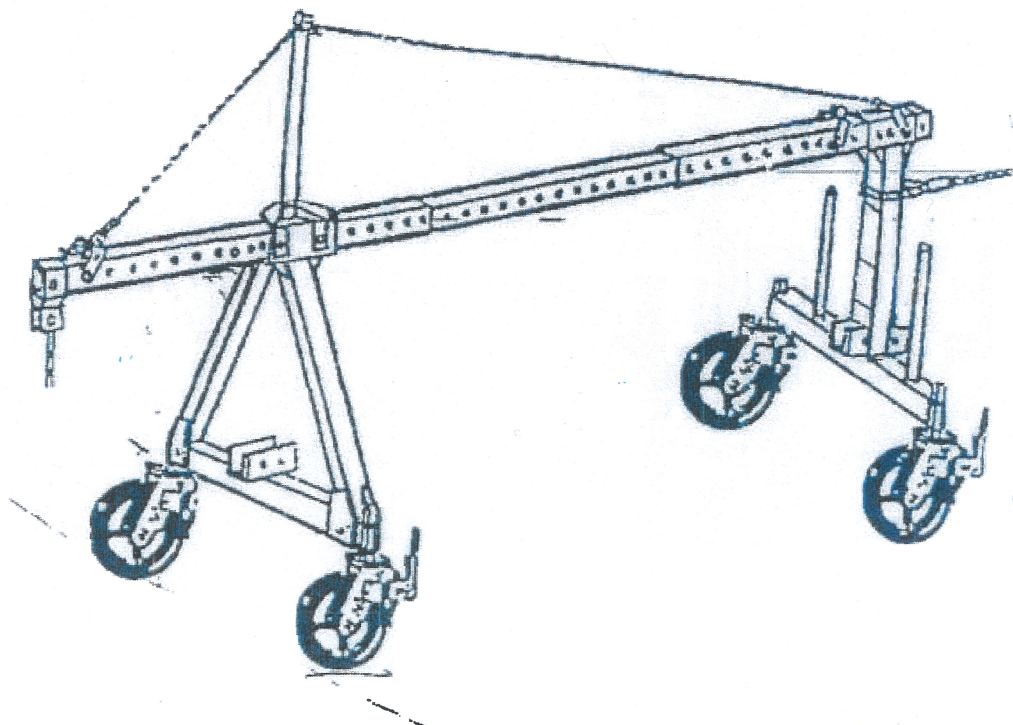
1470 BRUCKNER BOULEVARD, BRONX, NY 10473 ♦ TEL: (718) 589-4900 ♦ FAX: (718) 589-4949

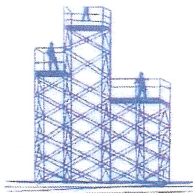
# **TRIANGULAR ROOF OUTRIGGER INSTRUCTION MANUAL**

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This instruction manual includes:

1. General Rigging Instructions.
2. Outrigger Description.
3. Where and How to use a Triangular Roof Outrigger.
4. Counterweight Calculation Chart.





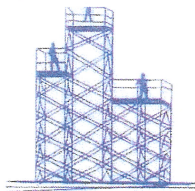
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### **GENERAL RIGGING INSTRUCTIONS FOR THE TRIANGULAR ROOF OUTRIGGER**

1. Only people familiar with the assembly, operation instruction manual and the equipment are authorized to assemble our TRIANGULAR ROOF OUTRIGGER.
2. Before assembling the TRIANGULAR ROOF OUTRIGGER, you must carefully inspect the roof conditions to ensure that the roof will be able to support the load of the hanging scaffold, triangular roof outrigger and counterweights.
3. You must periodically check all components before starting to work ( wire rope conditions, shackles, counterweights, bolts, etc. )
4. Whenever working on asphalt roofs be sure to place scaffold planks or steel channels under the triangular roof outrigger's wheels to protect the roof and increase load distribution.
5. Whenever possible, try extending both square telescopic beams to their maximum. This will allow the outrigger to require less amount of counterweights.
6. Be sure to check the chart located on the last page that calculates the required counterweights needed for your specific overhang.
7. Tiebacks are ALWAYS required when using the TRIANGULAR ROOF OUTRIGGER. Tiebacks must be installed following a continuous straight line from the telescopic square beams and must be installed leaving no "slack" and secured to a previously inspected permanent fixture.
8. Under no circumstances move the triangular roof outrigger while the suspended scaffold is hanging. First, lower the hanging scaffold to the ground and then move the triangular roof outrigger.
9. Be sure to lock the caster wheel brake as soon as assembly is completed and after each time that the Triangular Roof Outrigger is moved.



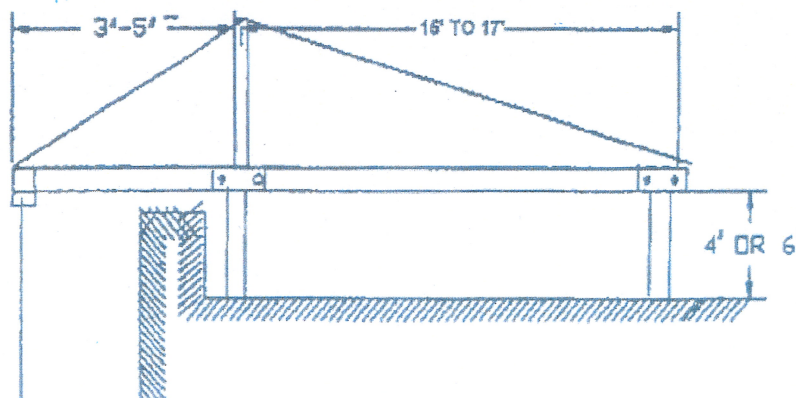
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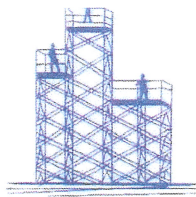
### WHERE AND HOW TO USE A TRIANGULAR ROOF OUTRIGGER

*The Triangular Roof Outrigger can be used with any suspended scaffold. The best and safest way is to install it and use it as shown in the picture below*

- a) Only people familiar with the assembly of the Triangular Roof Outrigger and people who have access to the Instructions Manual are allowed to assemble the Outrigger System
- b) Consult the Building Engineer for Roof Load Capacity
- c) Rigging of Triangular Outrigger System must be on a flat concrete roof. When using on all other roofs it is always recommended to put planks, plywood or steel channels under the caster wheels to obtain better load distribution and allow easier maneuvering
- d) Maximum overhang from front leg is never to exceed 5'
- e) Be sure to tighten reinforcing wire
- f) Consult the Counterweight Calculation Chart in the last page to find out required amount of counterweights required
- g) Tieback wire rope must always be used as explained in the General Instructions Section
- h) Never ride a scaffold without all necessary safety equipment
- i) Inspect the Triangular Roof Outrigger and scaffold periodically before starting work
- j) Remember to apply the Caster Wheel Brake when installing the Outrigger System and unlock only when moving of the outrigger is needed. Be sure to lock caster brakes each time after scaffold is moved
- k) Do not install the outrigger system on timber or metal roofs without first consulting with the building engineer for load capacities.
- l) Do not extend the square outrigger beam over 5' from the front leg
- m) Do not move the Triangular Roof Outrigger while the suspended scaffold is hanging off the ground.
- n) Do not use the roof's parapet wall instead of a front leg. The parapet wall is generally the weakest section of the roof
- o) Do not cut, alter or modified the square telescopic beams without first consulting the manufacturer
- p) Only use manufacturer issued parts. Do not alter or substitute any lost, worn or damaged parts. Consult your dealer for replacement parts for the TRIANGULAR ROOF OUTRIGGER







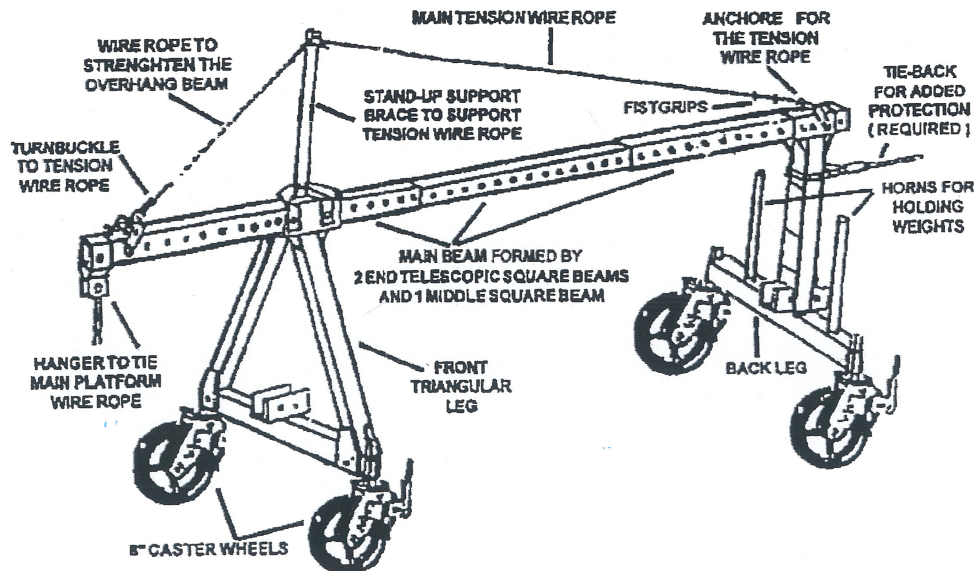
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### OUTRIGGER DESCRIPTION

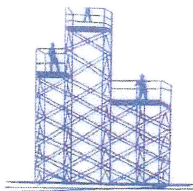
The outrigger set consists of the following:

QTY	DESCRIPTION
2	Front Triangular Legs
2	Back Legs
4	End Telescopic Square Beams
2	Middle Square Beams
2	Stand Up Support Braces
2	Hangers with Grade 5 Bolts
2	Main Tension Wire Ropes
6	Anchors for Tension Wire
2	5/8" Turnbuckles
4	Counterweight Bars
8	8" Caster Wheels
28	5/8" Bolts & Nuts
8	3/8" Bolts & Nuts
4	Spring Locks
*	50 Lb Counterweights
6	Fistgrips



*\*Required amount of counterweights depends on load and overhang. Check the chart in the last page for counterweight requirement  
Check Manufacturer's load capacities for all other components used with the Outriggers*





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### COUNTERWEIGHT CALCULATION CHART

\*This chart shows the required counterweight needed for different lifting loads and when the square telescopic beam is fully extended.

LIFTING LOAD	3' OVERHANG	4' OVERHANG	5' OVERHANG
1000 LB Capacity	Counterweight load	Counterweight load	Counterweight load
→	800 lbs.	1065 lbs.	1335 lbs.

\* This chart is accurate only when the Square telescopic beams are extended to their full length of 20 feet.

To find the counterweight required per suspension jib, use the following formula:

$$W = \frac{L \times a \times 4}{b} \quad \text{*Valid for a safety factor of 4.}$$

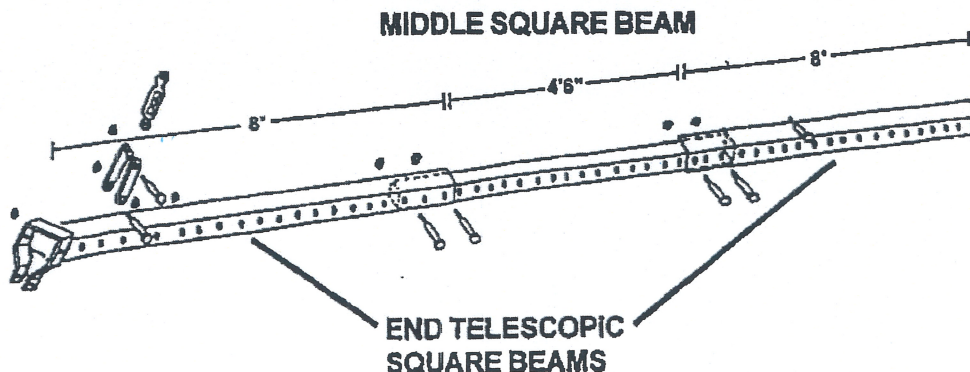
Example:

- maximum permissible load per jib  
= nominal hoist capacity L = 1000 lbs.
- overhang a = 3 ft.
- distance between front (A) and rear (B) fulcrums b = 15 ft.

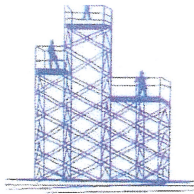
$$W = \frac{1000 \times 3 \times 4}{15} = 800 \text{ lbs.}$$

Each of the 2 rear Height Adjusters must be loaded with 800 lbs. Since our counterweights weight 50 lbs. each it is necessary to use 2 x 800 lbs. or 2 x 16 counterweights.

When assembling the Triangular Roof Outrigger, remember to Insert each of the END TELESCOPIC SQUARE BEAMS on each end of the MIDDLE SQUARE BEAM. When assembling the beams, remember that you must overlap them by 2 holes and then secure them by inserting two 5/8" bolts through the holes and securing them with nuts.



IF YOU CANNOT EXTEND THE BEAMS TO THEIR FULL LENGTH, MORE COUNTERWEIGHTS WILL BE REQUIRED. CONSULT CHART ABOVE AND APPLY FORMULA.



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