



Installation and Parts Manual for SPANCO® T Series 3-Way Adjustable Gantry Cranes



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INTRODUCTION

These instructions have been written to help in the assembly and operation of your Spanco “T” Series Gantry. Please read completely before attempting assembly, or disassembly, or use of the gantry. For assembly, or disassembly, always select an area under an overhead hoist, or where a lift truck can be used to support and raise the I-beam. Be sure there is no machinery or clutter nearby that would hamper free movement. All personnel should be wearing applicable safety gear, such as hard hats and safety shoes.

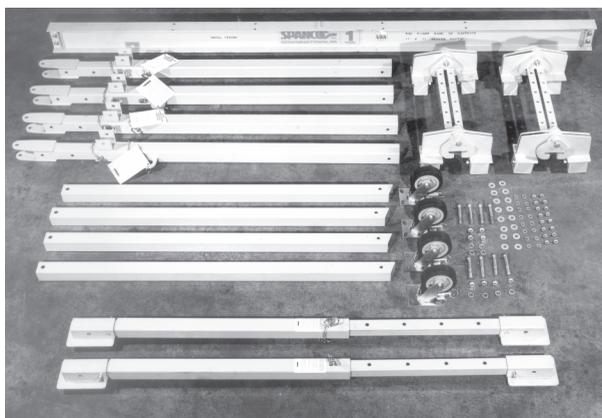
WARNING

- This gantry, used as a crane, is not to be used for lifting or supporting humans.
- Use a hoist with the same or lower capacity rating as gantry.
- Do not exceed rated capacity of the gantry or hoist.
- Do not push or pull gantry with a lift truck or any type of vehicle.
- Do not adjust the gantry height, span or tread, or disassemble gantry when it is under load.
- Do not stand under the gantry when it is being adjusted in height, span or tread, or while crane is being disassembled.
- Do not allow a load to swing or roll against leg members.
- Do not load the gantry on an incline.
- Do not cantilever a load while the gantry is in the outboard bracing configuration.
- Do not move gantry in the cantilever configuration while loaded.
- Do not cantilever a load from both ends of the I-beam. Only one end can be cantilevered at a time.
- Do not load the cantilevered end of the gantry without counter weighting the opposite end. For correct counterweight, consult the cantilever-loading chart attached to the gantry legs.
- Bring the load into the center of the span before moving gantry.
- When moving a loaded gantry, keep the load close to the floor.
- Push the gantry.....not the load.
- Increase the tread of the gantry as height is increased to maintain stability. Caster frame spread should be a minimum of 40% of overall height.

GANTRY ARRIVALS

Your "T" Series Gantry consists of the following components:

<u>Quantity</u>	<u>Description</u>
1	I-Beam
2	I-Beam Hardware Assemblies
4	Upper and Lower Main Leg Assemblies
4	Brace Legs
2	Caster Frame Assemblies (containing safety cable to prevent overspreading legs. DO NOT REMOVE OR DISCONNECT THIS CABLE!
4	Casters
1	Height Adjustment Kit (optional) Not Shown
1	Cart Kit (optional) Not Shown

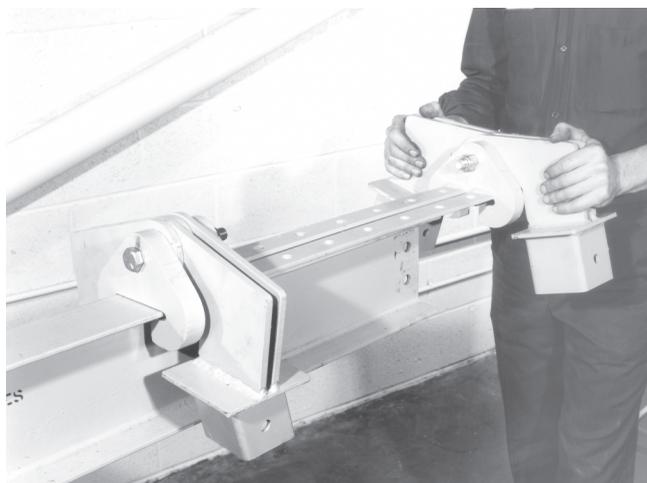


With the I-beam supported and secure up off the floor, remove the trolley stop angles from both ends of the I-beam. These stops will be reinstalled in a later step.

Install trolley and hoist onto the lower flange of the I-beam. Secure in the middle of the span, so that when raising the beam, the trolley will not roll.

Slide the I-beam hardware assembly into the top flange of the I-beam. Make sure that the angled brace tube connection is facing into the middle of the beam span.

NOTE: This is for standard inboard bracing. If outboard bracing is desired, turn I-beam hardware assembly opposite as above.





Set I-beam hardware assembly to desired position and line up a pair of holes in the SPANLOC plate with a pair of holes in the top flange of the I-beam. Secure the SPANLOC plate together with the two short hitch pins provided in the hardware kit (two for each end of the gantry) and insert the lynch pins through the ends of the hitch pins to lock them in place. This will prevent lengthwise movement of the I-beam during use.



Reinstall trolley stop angles along with the counterweight lug as originally attached to the beam. (Counterweight lug supplied for one end only)

Fastener Size	Torque
1/4"	10 ft./lbs.
5/16"	19 ft./lbs.
3/8"	33 ft./lbs.
7/16"	54 ft./lbs.
1/2"	58 ft./lbs.
9/16"	114 ft./lbs.
5/8"	162 ft./lbs.
3/4"	288 ft./lbs.



Attach the casters to the caster frame assembly with the hardware provided. Remove caster frame spreader pin and extend caster frame to maximum length. Replace spreader pin and secure with lynch pin attached.

⚠ WARNING

Caster frames contain a preassembled aircraft cable assembly inside the tubes to prevent accidental overspreading of the legs. Do not remove this cable or unbolt the bolts on each end of the caster frame to which the cable is attached.

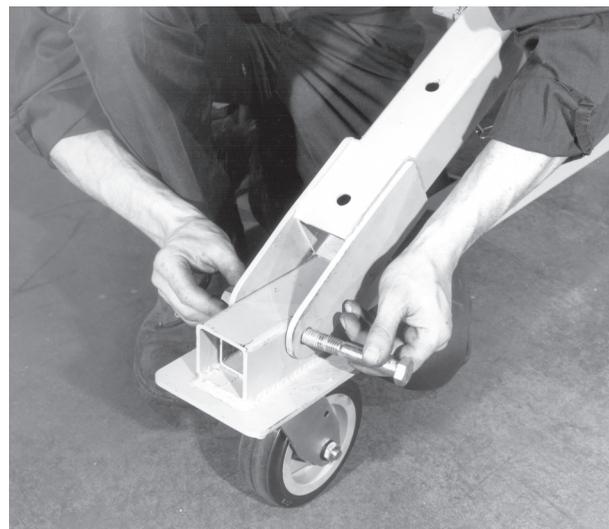
Attach brace leg to upper and lower main leg assembly using hardware supplied. Make sure that the angle cut on the brace leg is at the top of the leg assembly and is facing up toward main leg.



With the beam supported, trolley secure, and I-beam hardware set at desired position, the legs may now be installed. Attach main support leg and brace leg assemblies to their respective connections by sliding the leg into the leg caps and securing with the hardware supplied. Adjust each main support leg to the minimum height and secure with the push/pull pins (make sure to use both sets of pins.)



Slowly raise the partially assembled gantry to a point where the leg assembly can be raised to fit over the caster frame. Secure the leg assembly to the caster frame on each end with the hardware supplied.





Continue to slowly raise the gantry while holding the unconnected leg assemblies up off the floor. This will allow the unconnected end of each caster frame to pass under the leg assemblies.



When the caster frame is in position, lower the leg assembly over it and secure with the hardware supplied. The gantry is now ready for use, or can now be adjusted to the desired height.

If the tread of the gantry needs to be other than maximum, slightly raise the unit. This should only be done with the push/pull pins inserted and secure in their correct place in the main leg. Remove the caster frame spreader pin and shorten the tread to desired length. Reinsert the caster frame spreader pin and check that the same number of holes are visible on each.

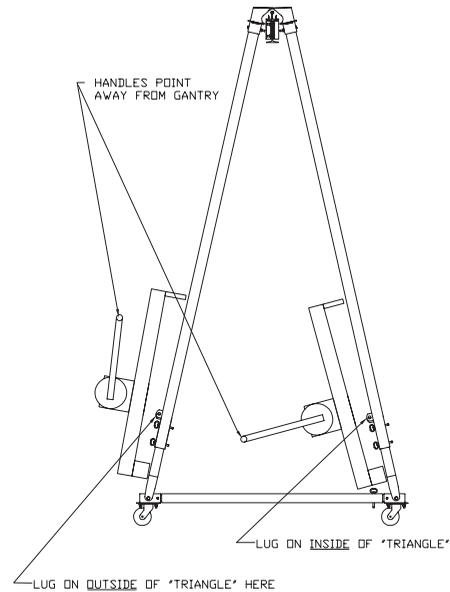
Caster frame spread should be a minimum of 40% of overall height to maintain stability.

INSTRUCTION FOR HEIGHT ADJUSTMENT WITHOUT HEIGHT ADJUSTMENT KIT

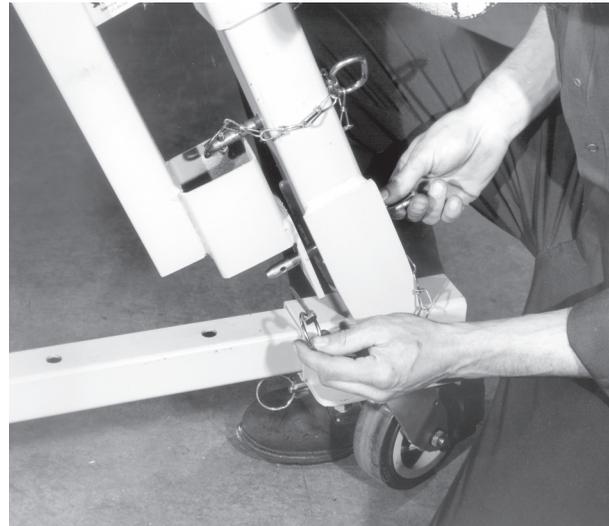
If you did not purchase a height adjustment kit and need to adjust the gantry height follow these instructions: Secure the trolley and hoist in the center of the I-Beam Span. You can adjust the gantry height with an existing overhead crane or a lift truck. Slightly raise the gantry to relieve the weight from the push/pull pin. Remove the push/pull pins and slowly raise or lower gantry to desired height. **NOTE: ALL FOUR LEGS WILL NOT ADJUST AT THE SAME PACE.** When each leg reaches the desired height reinsert the push/pull pin and secure with the lynch pin attached. Remember to reinsert the second push/pull pin in the first hole showing under the upper main leg and secure with the lynch pin attached. This pin must be in place prior to making any lift. Check that the same number of holes are visible on each of the lower legs.

WITH HEIGHT ADJUSTMENT KIT

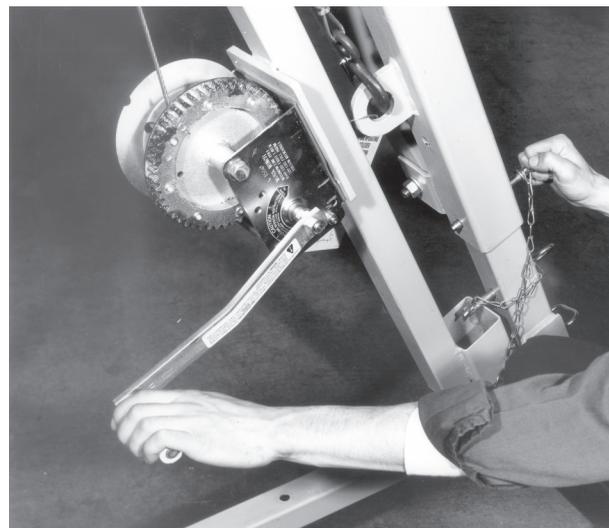
The height adjustment kit is installed on the upper and lower leg assembly. The winch can be mounted to either the inside or the outside of the leg assembly. **NEVER ADJUST HEIGHT WHEN GANTRY IS UNDER LOAD. NEVER STAND UNDER THE BRIDGE BEAM WHILE HEIGHT ADJUSTMENTS ARE BEING MADE. ALWAYS STAND TO THE OUTSIDE OF THE GANTRY FRAMES WHEN ADJUSTING HEIGHT. NEVER STAND UNDER GANTRY WHILE HEIGHT ADJUSTMENTS ARE BEING MADE, OR WHILE CRANE IS BEING DISASSEMBLED.**

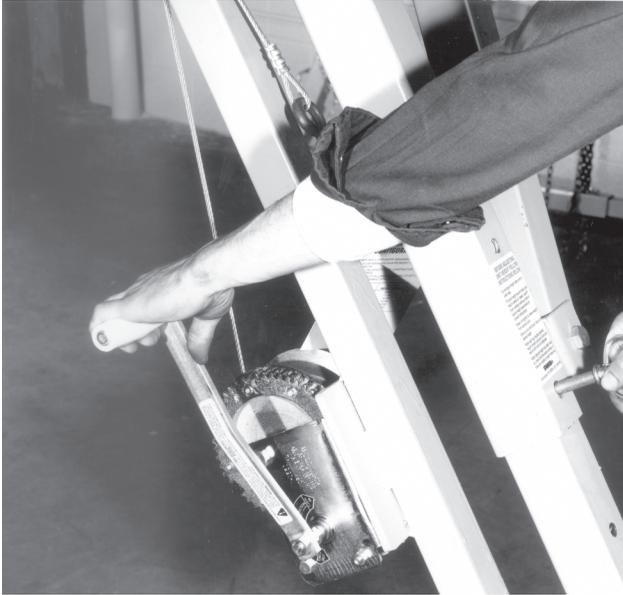


Attach the height adjustment kit to the lower leg using the push/pull pin supplied with the height adjustment kit and secure with the lynch pin attached. Located at the top of the height adjustment kit is a cable lanyard with a loop and snap hook. This is to encircle the upper main leg. The hook of the height adjustment kit can then be attached to the lug on the upper main leg assembly.

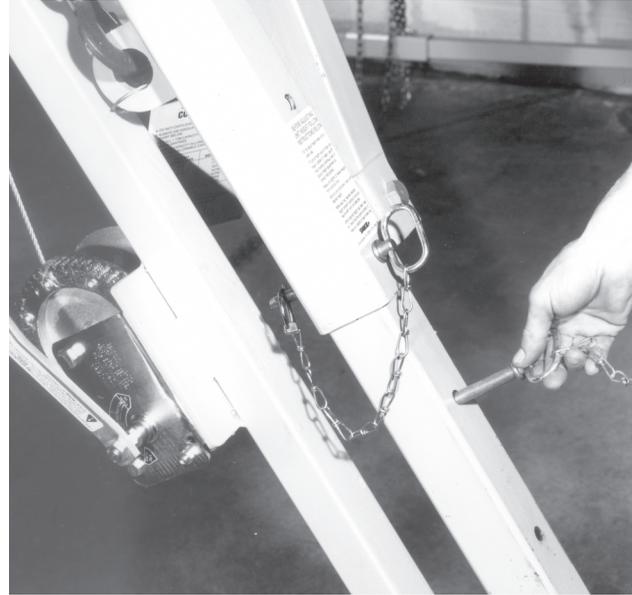


To adjust the gantry height secure the trolley and hoist in the center of the I-Beam Span. Slightly raise the gantry using the height adjustment kit to relieve the weight from the push/pull pin of the leg assembly. Remove the push/pull pin and slowly raise or lower the gantry no more than 1 foot at a time on a single leg. Reposition jack kit to make adjustments beyond 1 foot.



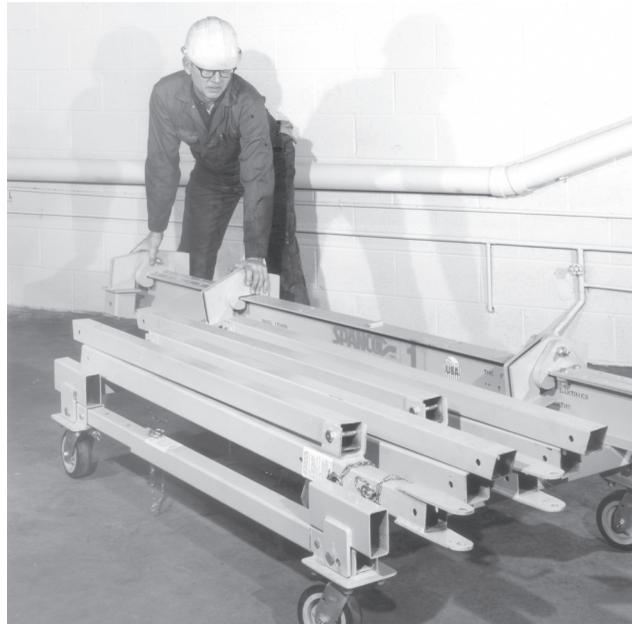


When desired height has been reached reinsert the push/pull pin and secure with the lynch pin attached. Check that the same number of holes are visible on each of the lower main legs.



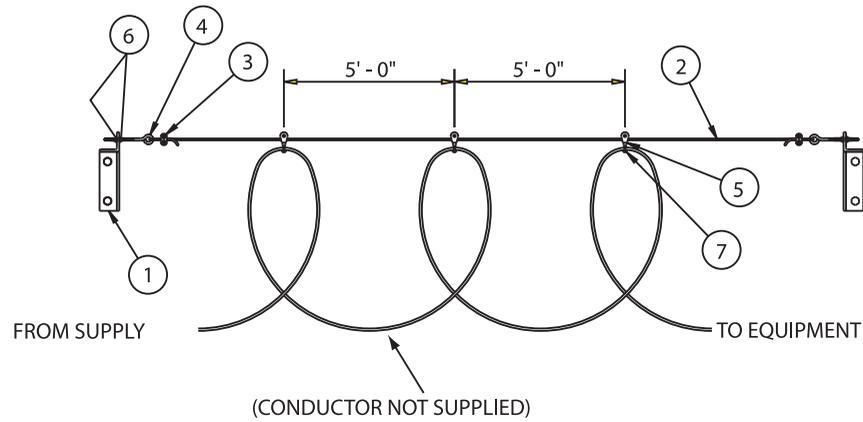
Remember to install the second push/pull pin in the first hole showing under the main leg and secure with the lynch pin attached. This pin must be in place prior to making any lift.

GANTRY CART KIT



The gantry cart kit in combination with the caster frame assemblies make a portable cart for storage of the "T" Series Gantry. The gantry cart kits sits on top of the caster frames and uses the same hardware to attach as the leg assembly. To adjust the carts length remove the push/pull pin and adjust to desired length. Reinsert the push/pull pin and secure with the lynch pin attached.

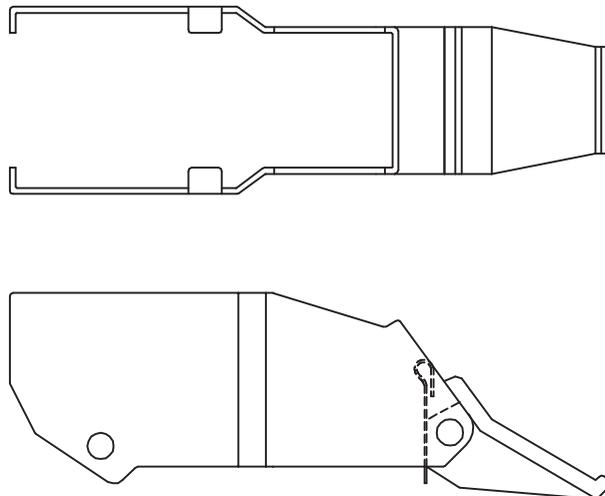
OPTIONAL ACCESSORIES



BILL OF MATERIAL		
ITEM	DESCRIPTION	QTY
7	CABLE TIES	5
6	HEX NUTS	4
5	PULLEYS	5
4	EYE BOLTS	2
3	CABLE CLAMPS	2
2	TAGLINE CABLE	1
1	TROLLEY STOPS	2

WHEEL BRAKE ASSEMBLY INSTALLATION

For 6" and 8" diameter Casters



To set brake while assembling the caster:

1. Inspect the brake mechanism to ensure it is in working order.
2. Make sure the brake pedal is in the "off" position (pedal is in the up position).
3. Position the brake brackets over the outside fork legs. Line the bolt holes over each fork's bolt holes.
4. Insert the wheel between the fork legs and palce the axle through the brake/fork holes and the wheel hub.
5. Thread the nut on the axle and tighten.

NOTE: NEVER CHANGE CASTERS WITH A LOAD ON GANTRY!

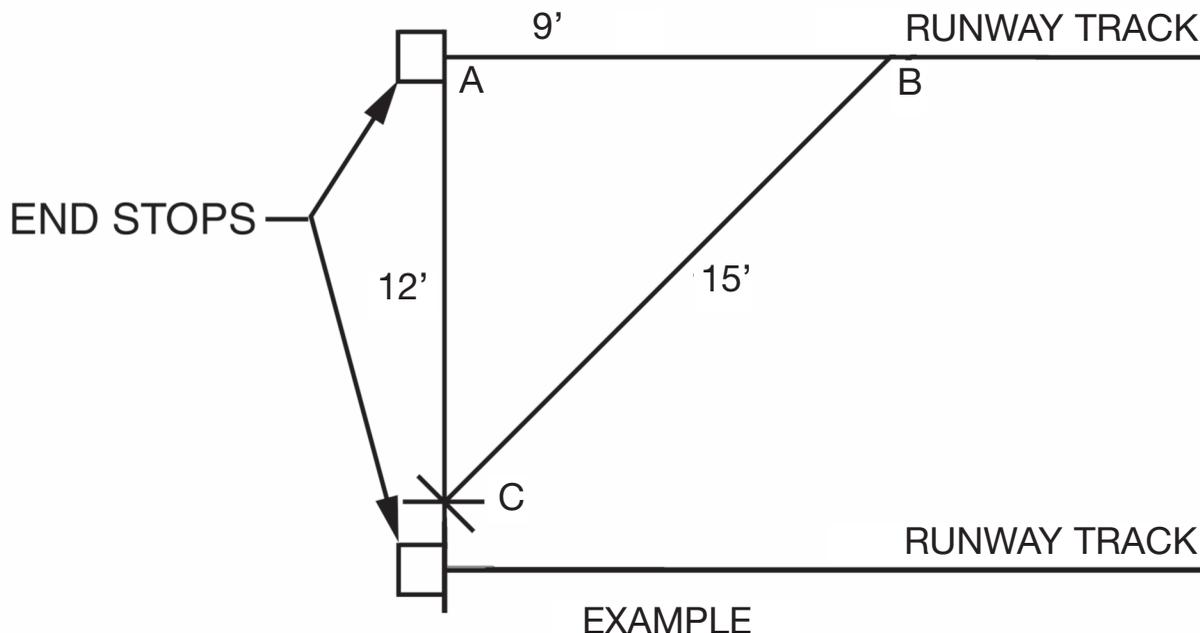
V-GROOVE TRACK INSTALLATION

Fasten V-groove track to the floor using 3/8" lag bolts and suitable anchors. For track supplied by SPANCO use a bolt in each hole, otherwise space bolts approximately 3'-0" apart on each side of the track in a staggered arrangement. Use shims or grouting as required to keep track level and alignment pins at joints to keep track true. End stops are required at each end of both trucks.

V-GROOVE INSTALLATION INSTRUCTIONS FOR GANTRY CRANES

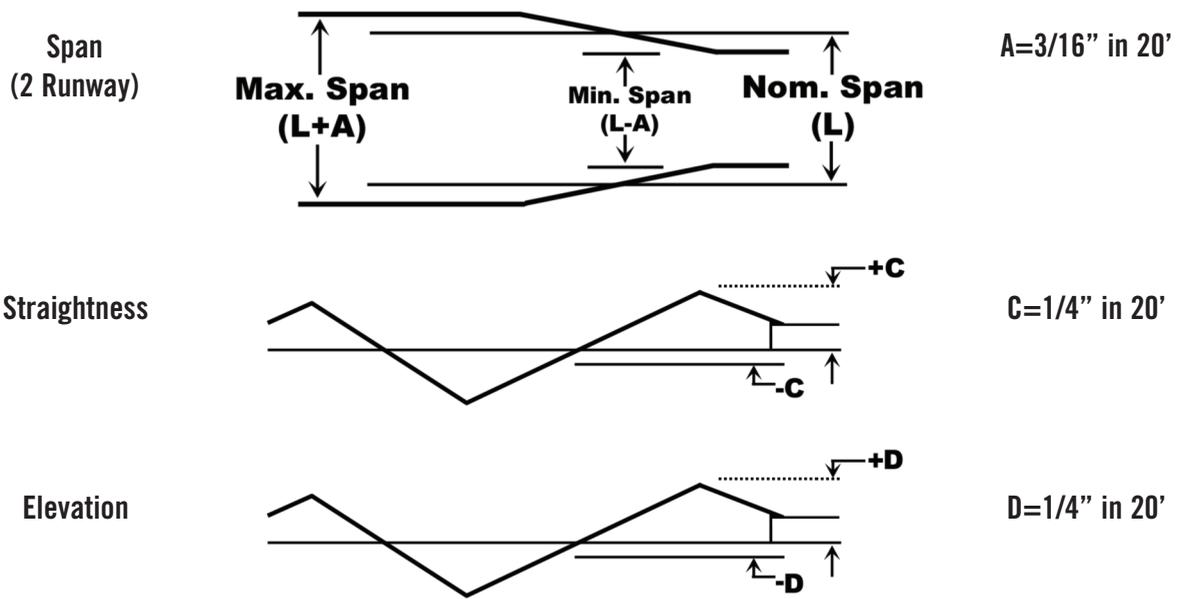
The exact span of the crane may vary from the design span. We recommend installing the track on one side making sure that the track is straight and level. Lay one or two sections of the track down at the design span, assemble crane on the tracks following assembly instructions and operate the crane back and forth a few times, being careful not to run the crane off the tracks. The loose sections of track will float and set the track to the crane span. Once the operating span is determined, attach all the other sections of track to the floor making sure the track is straight, level, parallel, and at the same elevation as the first track. The end stops should be set square with the 3-4-5 right triangle. The sides and the hypotenuse can be multiplied by any convenient number such as three used in the example.

Set one end stop at point A, measure along runway track nine feet from point A to point B. With B as a center and fifteen feet as a radius, draw a circular arc on the floor, with point A as a center and 12 ft. as a radius. Draw a circular arc on the floor intersecting the other arc at C. A line running through points A and C is perpendicular, or square, with the runway track. Extend this line to the other runway track to locate the end stop on that runway. Repeat the process at the other end of the runway, or measure along each runway the same distance from these end stops for locating the stops at the other end of the runways.



NOTE: SPANCO recommends lagging with 3/8" lag bolts every 3'-0" staggered.

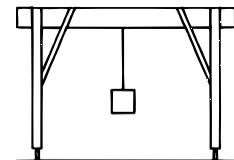
RUNWAY ALIGNMENT TOLERANCE



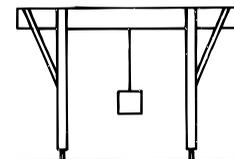
CORRECT CONFIGURATIONS FOR "T" SERIES GANTRY

Figures below illustrate those positions considered stable in lifting and transporting loads when all requirements for operation are met.

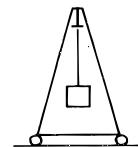
Brace legs are directed inward to center of beam span. This allows maximum clearspan. **LOAD MUST BE WITHIN MAIN SUPPORT LEGS.**



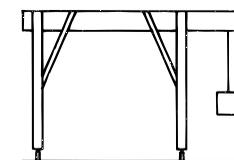
Brace legs are directed outward to the ends of beam. This allows minimum floor length. **LOAD MUST BE WITHIN MAIN SUPPORT LEGS TO PREVENT ACCIDENTAL CANTILEVERING OF LOAD.**



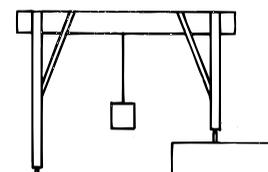
Gantry is adjusted to maximum height and caster frame spread is adjusted to maximum. Caster frame spread should be a minimum of 40% of overall height for stability.



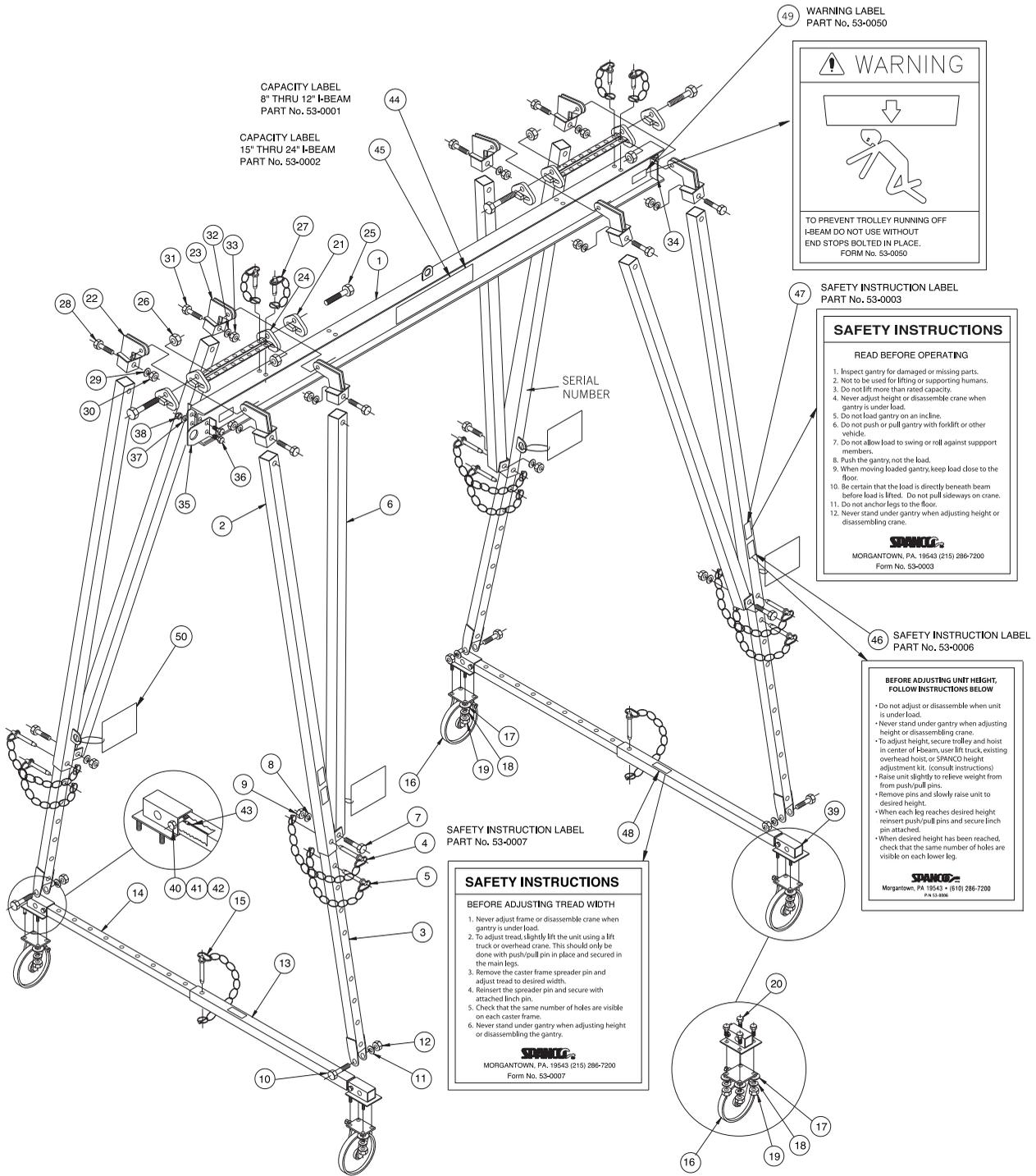
I-beam overhangs one side of gantry support legs. **ALWAYS USE ADEQUATE COUNTER WEIGHT ON ANY CANTILEVER OPERATION.** Consult cantilever loading chart attached to instructions and to gantry legs.



Legs adjusted to different heights. Legs should be adjusted so that the I-beam is level.



PARTS BREAKDOWN



IMPORTANT:

IF ANY LABELS ARE MISSING OR DAMAGED, PLEASE CALL SPANCO AT 1-800-869-2080 FOR FREE REPLACEMENTS.

BILL OF MATERIAL

REFERENCE NO.	QUANTITY	BILL OF MATERIAL
1	1	I- BEAM
2	4	UPPER LEG
3	4	LOWER LEG
4	4	PUSH/PULL PIN
5	4	PUSH/PULL SAFETY PIN
6	4	BRACE LEG
7	4	HEX BOLT
8	4	LOCK WASHER
9	4	HEX NUT
10	4	HEX BOLT
11	4	LOCK WASHER
12	4	HEX NUT
13	2	OUTER CASTER TUBE
14	2	INNER CASTER TUBE
15	2	PUSH/PULL
16	8	SINGLE CASTER
17	16	FLAT WASHER
18	16	LOCK WASHER
19	16	HEX NUT
20	16	HEX BOLT
21	4	I- BEAM HANGER
22	4	HANGER ASSEMBLY-MAIN LEG
23	4	HANGER ASSEMBLY-BRACE LEG
24	2	I-BEAM HANGER ASSEMBLY
25	4	HEX BOLT
26	4	LOCK NUT
27	4	PUSH/PULL PIN
28	4	HEX BOLT
29	4	LOCK WASHER
30	4	HEX NUT
31	4	HEX BOLT
32	4	LOCK WASHER
33	4	HEX NUTS
34	3	END STOPS
35	1	COUNTER WEIGHT LUG
36	4	HEX BOLT
37	4	LOCK WASHER
38	4	HEX NUT
39	4	CASTER MOUNTING PLATE-SINGLE CASTER
40	4	HEX BOLT
41	4	HEX NUT
42	4	LOCK WASHER
43	2	SAFETY CABLE
44	2	CAPACITY DECAL
45	2	CAPACITY DECAL
46	4	SAFETY INSTRUCTION LABEL
47	4	SAFETY INSTRUCTION LABEL
48	4	SAFETY INSTRUCTION LABEL
49	4	WARNING LABEL
50	4	CANTILEVER CHART
ITEM NUMBER 44 IS FOR 8" THRU 12" I BEAMS		
ITEM NUMBER 45 IS FOR 15" THRU 24" I BEAMS		

WARNING, SAFETY, OR CAPACITY LABEL

If at any time these labels are lost, stolen, removed, or become illegible, contact SPANCO at 800-869-2080 for free replacements. Please order by part number on the label or by the facsimiles in this manual.

ACCEPTANCE TEST

After the SPANCO crane has been installed, OSHA requires an acceptance test before operating and also after any modifications. This acceptance test should be performed by an authorized dealer or installer.

CAUTION: READ BEFORE OPERATING

Inspect unit for damaged or missing parts. If any parts are missing or damaged, contact SPANCO for replacement. Any substitution of parts not approved by SPANCO will void the warranty. In order to maintain peak performance of your "T" series adjustable gantry, it is recommended that you establish a regular schedule of inspection and lubrication. At a bare minimum, inspection of all parts should be made once every month (at more frequent intervals if the loading conditions and usage warrants). At this time, all loose parts should be tightened according to specifications and all damaged parts should be replaced immediately.

Since the lubrication schedule will depend heavily upon the usage of the gantry, no fixed lubrication schedule is provided. However, it is suggested that at a bare minimum, all parts be thoroughly lubricated at one month intervals. This time interval should either be shortened or lengthened depending upon the determination of the gantry operator and/or maintenance engineer. The only points on the "T" series gantry that require lubrication are the casters **RECOMMENDED LUBRICATION:** In most situations, it is recommended that NLG1 No. 1 and No. 2 greases be used for lubrication purposes. No. 3 and heavier greases should be avoided because of their tendency to channel; resulting in lubrication starvation and eventually material failure.

It is important to note that every system application and use will be different, therefore some conditions of use should require more frequent inspection. Examples of such conditions might be two or three shift operations, highly repetitive and fast movement of the crane.

NOTE: Contact of crane with stops or any obstruction should be made with caution.

It is expected that every time an operator uses a SPANCO crane or monorail system, they visually inspect the system before using it and note any unusual or abnormal operation of the system while using it. Meticulous, careful operation of the system will help minimize system maintenance.



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TEN-YEAR SPANCO WARRANTY

Products covered under the Ten-Year Warranty:

- Manual Steel Freestanding, Ceiling Mounted Workstation Bridge Cranes, and Monorails
- Manual Aluminum (Alu-Track®) Workstation Bridge Cranes and Monorails
- Manual Jib Cranes (I-Beam, Articulating, and Workstation Jib Cranes)
- Manual Gantry Cranes and Tripods

What the Ten-Year Warranty covers:

- Defects in Equipment material and workmanship
- Wearable parts (end truck and hoist trolley wheels only)

Spanco, Inc. warrants its manual workstation bridge crane products, jib crane products, and gantry crane products to be free from defects in material and workmanship for a period of ten (10) years or 20,000 hours, commencing on the date of shipment to the first retail purchaser. This warranty extends to non-wearable parts only, with the exception of the wheels supplied on manually operated workstation end trucks and hoist trolleys. This warranty does not cover defective equipment or system failure caused by misuse, negligence, improper installation or maintenance, or equipment that has been used in excess of its rated capacity or beyond its service factors. It does not apply to equipment that has been altered without Spanco's written authorization.

Written notice of any claimed system defect must be given to Spanco within thirty days of discovery. Spanco's obligation under this warranty is limited to the replacement or repair of Spanco's products at the factory or separate location approved by Spanco. The purchaser is responsible for all freight and transportation costs relating to equipment repair or replacement. **Other than the abovementioned warranty, Spanco will not honor any other warranties—whether express, implied, or statutory—and disclaims any warranties of merchantability or fitness for a particular purpose. Spanco is not liable—under any circumstances—for any indirect, incidental, or consequential damages including but not limited to lost profits, increased operating costs, or loss of production.**

This warranty does not extend to components or accessories not manufactured by Spanco. The purchaser's remedy for such components and accessories will be determined by the terms and conditions of any the warranty provided by the manufacturer of such components and accessories.

NOTE: *All motorized Spanco products come with a One-Year Warranty on drive components.*