Installation and Maintenance Manual for
Spanco® Freestanding Modular Bridge Cranes & Monorails
TABLE OF CONTENTS

Assembly Instructions................................................................. 2
Important Dimensions for Modular Bridge Crane Installations ......................... 4-5
Important Dimensions for Modular Monorail Crane Installations ......................... 6-7
Preparation ................................................................................. 8
Column Installation ...................................................................... 8
Runway and Bracket Installation ...................................................... 8
Bridge End Truck Installation ......................................................... 9
Runway End Stop Installation ......................................................... 10
Hoist Installation ....................................................................... 10
Warnings and Maintenance ........................................................... 11
Design Factors ........................................................................... 12
Runway Alignment Tolerance ....................................................... 13
Adjustable Method of Column Anchorage ....................................... 14
Warranty and Service Policy ........................................................ 16

WARNING

This equipment, used as a crane, is NOT, in any way, designed for lifting, supporting, or transporting humans. Failure to follow specified load limitations can result in serious bodily injury or death.
Six-inch reinforced concrete is required for proper installation of system columns.
Properly sized anchor bolts are supplied by others.
Side loading of bridge or trolley is not allowed.
4 Column Kits: (ex. (4) SU3-10-CK)
2 Runway Kits: (ex. (2) RBR100-12-RK)
1 Bridge Kit Containing 1 Hoist Trolley: (ex. (1) RBR100-12-BK)

Concrete foundation and anchor bolts are provided by others.
MODULAR MONORAIL CRANE SYSTEM

Six-inch reinforced concrete is required for proper installation of system columns. Properly sized anchor bolts are supplied by others. Side loading of bridge or trolley is not allowed.

<table>
<thead>
<tr>
<th>CAPACITY (LBS)</th>
<th>F TCH (TROLLEY CLEVIS HEIGHT)</th>
<th>D</th>
<th>G</th>
<th>I</th>
<th>MAX BOLT LOADING (LBS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100/250</td>
<td>10'-0&quot; Nominal</td>
<td>1'-10&quot;</td>
<td>10'-11&quot;</td>
<td>1'-8&quot;</td>
<td>300 (100 LBS Capacity) 600 (250 LBS Capacity)</td>
</tr>
<tr>
<td>100/250</td>
<td>12'-0&quot; Nominal</td>
<td>1'-10&quot;</td>
<td>12'-11&quot;</td>
<td>1'-8&quot;</td>
<td>300 (100 LBS Capacity) 600 (250 LBS Capacity)</td>
</tr>
<tr>
<td>500</td>
<td>10'-0&quot; Nominal</td>
<td>2'-0&quot;</td>
<td>11'-2&quot;</td>
<td>1'-8&quot;</td>
<td>900</td>
</tr>
<tr>
<td>500</td>
<td>12'-0&quot; Nominal</td>
<td>2'-0&quot;</td>
<td>13'-2&quot;</td>
<td>1'-8&quot;</td>
<td>900</td>
</tr>
<tr>
<td>500</td>
<td>14'-0&quot; Nominal</td>
<td>2'-0&quot;</td>
<td>15'-2&quot;</td>
<td>1'-8&quot;</td>
<td>900</td>
</tr>
<tr>
<td>1000</td>
<td>10'-0&quot; Nominal</td>
<td>2'-1&quot;</td>
<td>11'-5&quot;</td>
<td>1'-11&quot;</td>
<td>1700</td>
</tr>
<tr>
<td>1000</td>
<td>12'-0&quot; Nominal</td>
<td>2'-1&quot;</td>
<td>13'-5&quot;</td>
<td>1'-11&quot;</td>
<td>1700</td>
</tr>
<tr>
<td>1000</td>
<td>14'-0&quot; Nominal</td>
<td>2'-1&quot;</td>
<td>15'-5&quot;</td>
<td>1'-11&quot;</td>
<td>1700</td>
</tr>
</tbody>
</table>
2 Column Kits: (ex. (2) SU3-10-CK)
1 Runway Kit: (ex. (1) RBR100-12-RK)
0 Bridge Kits
1 Hoist Trolley: (ex. (1) 1418-K836)

Concrete foundation and anchor bolts are provided by others.
PREPARATION

1. Before starting the installation, check the material list to be sure you have received all parts. The anchor bolts for the support columns are not included. Four 7/8” diameter holes are provided for anchor bolts, furnished by others, as required. When the system is properly mounted to the specified concrete, the system may exhibit slight swaying. If absolute rigidity is desired, sway bracing to a building may be used. Sway bracing is also furnished by others.

COLUMN INSTALLATION

2. Refer to the previous pages for dimensions to aid column layout. Be sure the columns are correctly positioned for proper runway and/or bridge installation for later. Bolt the columns to the floor as required. (See Pg. 14 for an adjustable method of column anchorage - optional only)

RUNWAY AND BRACKET INSTALLATION

3. Attach two set screws to temporarily hold the two brackets. Position the runway up to the headers and bolt with the provided 5/8” or 3/4” bolts, nuts, and lock washers. Use 108 ft-lbs for 5/8” bolts, and 196 ft-lbs for 3/4” bolts. Use 10” runway overhangs on each end (see Fig. 2). After these bolts are tightened, tighten the bracket set screws. The two center top set screws should be tightened slightly to push the tracks against the base of the sleeve. Tighten all top set screws, then tighten all side set screws for correct track alignment.
BRIDGE END TRUCK INSTALLATION

4. Insert the bridge track into the sleeves of the end trucks. Locate the center of the end trucks approximately 10” from each end of the bridge. One end truck is secured to the bridge track with set screws, furnished with the sleeve. The other end truck is allowed to slide freely on the bridge track in order to accommodate any slight misalignment between the parallel runway tracks (see Fig. 3). Install the bridge crane by inserting the end trucks into the runway tracks at one end of the runway. Adjust and tighten the bridge end truck set screws to provide a minimum clearance of 2” between the ends of the bridge and the support columns.

Figure 3
RUNWAY END STOP INSTALLATION

5. Secure end stop assemblies, end stop bolts, and lock nuts at both ends of runway tracks and at both ends of the bridge (where applicable).

6. Once installation is completed, the bridge and runways should be leveled. The total system should then be checked for tightness of all nuts and bolts.

HOIST INSTALLATION

7. Attach hoist to hoist trolley. Use washers on hoist mounting pin to center hoist inside hoist trolley. Reinstall washer on outside of hoist trolley (both sides) before installing or reinstalling cotter pins to secure hoist mounting pin. Replace cotter pin(s) if worn or broken. Bend cotter pin around mounting pin (see Fig. 4).

WARNING: Do not operate hoist or crane if cotter pins are not in place and properly bent over on both sides of the hoist trolley. Check regularly that the cotter pins are in place and securing the hoist on the hoist trolley.

Figure 4
WARNING, SAFETY, OR CAPACITY LABELS

8. 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

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

IMPORTANT MAINTENANCE INFORMATION

At the end of the first month after a new installation, an inspection of the system should be performed. All nuts, bolts, and screws should be checked for tightness. All end stops, cotter pins, and hoist trolleys should be checked for abnormal wear or breakage. Check all track splices for alignment and that end trucks travel smoothly through the joints. Adjust as necessary.

Thereafter, a complete inspection of all fasteners and connections should be performed annually or every 2,000 hours, whichever comes first. It is important to note that every system application and use will be different, therefore some conditions of use could require more frequent inspection. Examples of such conditions might be two or three shift operations, high repetition, or fast movement of the crane.

It is expected that every time an operator uses a workstation crane or monorail system, they will visually inspect the crane 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 maintenance.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CHECK</th>
</tr>
</thead>
<tbody>
<tr>
<td>nuts, bolts, screws</td>
<td>tightness</td>
</tr>
<tr>
<td>endstops, cotter pins, hoist trolley(s),</td>
<td>abnormal wear or breakage</td>
</tr>
<tr>
<td>track, and supports</td>
<td>alignment and smooth travel through joints</td>
</tr>
</tbody>
</table>
DESIGN FACTORS

Nameplate bridge capacities represent the rated load on the hoist hook. The load rating of a hoist shall not exceed the bridge rating. Spanco’s design includes an allowance of 15% of nameplated capacity for trolley and hoist deadweight. An additional 25% of nameplate capacity is also included for impact.

SERVICE FACTOR

All Spanco workstation cranes are designed for moderate usage (Class C Normal/Industrial service) as defined:

• System or equipment is used where operational time is up to 100% of the work period and lifted load is at or below 50% of rated capacity.

• System or equipment is used where operation time is less than 50% of work period and lifted load is greater than 50% of rated capacity.

• Applications involving vacuums, magnets, or other high-impact lifters are considered severe usage and require special design considerations. Contact Spanco, Inc. for special design pricing.

• Consult Spanco, Inc. for usage other than moderate and all instances of high cycle rates or high-impact applications such as high-speed air or electric hoists, vacuum lifters, or magnets.
Because Spanco Enclosed Track Systems provide a very high ease of movement, Spanco recommends bridge and runway slope of no more than 1/4” in 20’-0” to prevent bridge trolley drifting. Diagrams courtesy of Monorail Manufacturers Association MH27.1 and MH 27.2.
ADJUSTABLE METHOD OF COLUMN ANCHORAGE
(OPTIONAL)

ALTERNATE, ADJUSTABLE METHOD OF
COLUMN ANCHORAGE.

ADJUST COLUMN HEIGHT BY
ADJUSTING NUT HEIGHT.

ALL-THREAD CHEMICAL ANCHORS
(AVAILABLE FROM COMPANIES
SUCH AS HILTI)

BACKFILL WITH GROUT AFTER
FINAL ADJUSTMENT.
SPANCO® WARRANTY

Spanco, Inc. warrants its products to be free from defects in material and workmanship as follows:

- **Manual Systems & Equipment**: Ten Years
- **Motorized Systems & Equipment**: One Year
- **Paint & Finishes for Non-Aluminum Components**: Two Years

**Ten-Year Warranty Coverage:**
- Defects in equipment material and workmanship of manual systems and equipment
- Wearable parts (workstation bridge crane end trucks and hoist trolley wheels only)

Spanco, Inc. warrants its manual workstation bridge crane, jib crane, 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.

**One-Year Warranty Coverage:**
- Defects in equipment material and workmanship of motorized systems and equipment

Spanco, Inc. warrants motorized equipment to be free from defects in material and workmanship for a period of one (1) year or 2,000 hours, commencing on the date of shipment to the first retail purchaser.

**Two-Year Warranty Coverage:**
- Paint coatings and finishes for non-aluminum components

Spanco, Inc. warrants its paint and finishes for a period of two (2) years. Warranty claims related to coatings must be accompanied by documentation of the product's application and environmental conditions from time of delivery to time of claim.

**WARRANTY TERMS & CONDITIONS**

All warranty claims must be approved by Spanco before any work is performed. Spanco's obligation under this warranty is limited to the replacement or repair of Spanco products at the factory or separate location approved by Spanco. **Other than the above mentioned warranty, Spanco will not honor any other warranties—whether expressed, implied, or statutory—and disclaims any warranties of merchantability or fitness for a particular purpose.** Spanco has the right to reject any warranty claim due to harsh and/or inappropriate environmental conditions.

**Spanco Is Not Liable for:**

- Indirect, incidental, or consequential damages including lost profits, operating costs, loss of production, or travel expenses
- Components or accessories not manufactured by Spanco
- Defective equipment or system failure caused by misuse, negligence, and improper installation or maintenance
- Equipment that has been used in excess of its rated capacity or beyond its service factors
- Equipment that has been altered without Spanco's written authorization
- Damage incurred by freight carriers
- Any loss, injury, or damage to persons or property resulting from failure or defective operation of material or equipment

**Reimbursement Disclaimer:**

- Written notice of any claimed system defect must be given to Spanco within ninety (90) days of shipment.
- All requests for reimbursement must be accompanied by proper documentation.
- Reimbursement is provided in the form of a credit unless otherwise approved by Spanco management.
- Reimbursement for labor will be provided at a maximum rate of $75 per hour.
- All reimbursement is subject to approval by Spanco management.

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