



# **SUPPORT TOWER**

# Assembly & Owner's Manual

# Sukup Manufacturing Co.

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DATE	REVISION	PAGE
01/24/2023	– Updated ladder safety decal L0164	8
	Added guide to connecting tower sections	16
	Updated drawing showing attachment of handrails to adjustable service platform	24
	Updated drawings & parts lists for adjustable service platforms	25
	Updated drawing & list of external platform mounting kit parts	43
07/11/2022	<ul> <li>Updated safety icons as needed</li> </ul>	4-5
	Added 6' x 14' & 14' x 16' towers to anchor locations table	11
	Added weld size for 3/4" base plate	12
	Updated A & V brace kit numbers table	15
	Updated internal cross-bracing drawing & kits list	17
	Updated drawing & table for external distributor service platform	39
	Updated bracing kit drawings & parts lists	56-66
	Added parts list BT27341G for 10' side	59

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# **Table of Contents**

Limited Warranty	3
Safety	4
Bolt Tightening	9
Guide to Parts Lists, Stacking Order	13
Component Identification, Erection Steps	14
Internal Cross-bracing	17
Installing Platforms	21
Parts/Assemblies	50
Maintenance	67
Contact Information	66

# Introduction

This support tower was carefully designed to give years of dependable service and was manufactured with the finest materials available. This manual includes information relating to safety, installation and maintenance, and should be thoroughly read prior to erection of the support tower. Due to the scope of projects involving material handling equipment and the wide variety of situations, this manual cannot cover all aspects. Qualified civil engineers and contractors should be relied upon for site design, layout and construction. This manual is to be used as a guideline only. The reliability, safety and good service life of this equipment depends to a very large extent on the care taken in installing and otherwise preparing this equipment for its intended use.

# **Receiving and Inspection**

Carefully inspect the shipment for damage as soon as it is received. Verify quantity of parts or packages actually received corresponds to quantity shown on packing slip. Report any damage or shortage to delivering carrier as soon as possible. Sukup Manufacturing's responsibility for damage to equipment ended with acceptance by delivering carrier. Refer to bill of lading. Save all paperwork and documentation furnished with any of the elevator components.

# **Pre-Installation Information**

Support towers are designed to be site-specific and only support equipment specified by the customer. The equipment list must be provided to Sukup Manufacturing Co. at the time of quoting. This may include, but is not necessarily limited to, grain elevators, conveyors, distributors, spouting and catwalks. Unless specified on tower quotation, it is assumed that distributor is not tied to or supported by tower.

Sukup Manufacturing Co. is the provider of tower components, but does not assume responsibility for installation. Installation recommendations contained within this manual are general guidelines only. It is the responsibility of user and/or installer to consult a civil or structural engineer regarding installation, including but not limited to foundation, construction, supervision, and site-specific factors.

**NOTE:** The **MOST IMPORTANT** preparations are retaining a licensed engineer to plan installation and a qualified millwright or contractor to erect support tower and accompanying equipment and structures.

# Foundation

**DISCLAIMER:** It shall be the sole responsibility of the customer to obtain actual foundation drawings designed by and constructed to the specifications of a licensed professional structural engineer with knowledge of the actual soil and load specific to the project and location. Consideration should also include, but not be limited to, live loads, dead loads, wind loads, soil bearing loads, seismic zone, proper moisture run-off on top of base, and types of aeration applied for the project.

Sukup Manufacturing Co. will not be responsible for any damage to a product, including, but not limited to, any damage that results from poor soil conditions or inadequate concrete type, grade, bearing strength, and construction method. Soil bearing tests must be performed by a competent, independent, engineering firm. Concrete foundation construction must be done by a competent concrete contractor.



# Sukup Manufacturing Co.

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#### MATERIAL HANDLING SUPPORT STRUCTURE LIMITED WARRANTY

**SUKUP MANUFACTURING CO. (Sukup)** warrants to original retail purchaser that within time limits set forth, new equipment shall be free from defects in material and workmanship. A part will not be considered defective if it substantially fulfills performance specifications, such as cosmetic (appearance) issues that will not affect life of product. Should any part prove defective within the warranty period, the part will be replaced without charge F.O.B. Sukup Manufacturing Co., Sheffield, Iowa USA or Distribution Centers - Arcola, Illinois; Aurora, Nebraska; Defiance, Ohio; Jonesboro, Arkansas; Cameron, Missouri; Watertown, South Dakota. To obtain warranty, a copy of original invoice is required, see reverse side.

THE FOREGOING LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED. Sukup neither assumes nor authorizes anyone to assume for it any other obligation or liability in connection with said part, and will not be liable for incidental or consequential damages. THE REMEDIES STATED HEREIN SHALL BE THE EXCLUSIVE REMEDIES AVAILABLE UNDER THIS LIMITED WARRANTY.

Sukup reserves the right to change specifications, add improvements or discontinue manufacture of any of its equipment without notice or obligation to purchasers of its equipment. This warranty gives you specific legal rights. You may also have other rights which vary according to state or province.

WARRANTY EXCLUSIONS - Labor, transportation, or any cost related to a service call is not provided by Sukup. This Limited Warranty does not apply to damage resulting from misuse, neglect, normal wear, accident or improper installation or maintenance. ITEMS NOT MANUFACTURED BY SUKUP ARE COVERED UNDER WARRANTIES OF THEIR RESPECTIVE MANUFACTURERS AND ARE EXCLUDED FROM COVERAGE UNDER THE SUKUP WARRANTY. SUKUP MANUFACTURING CO. MAKES NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

**ENGINEERING** - Structural design is based on information provided by the customer. Sukup Manufacturing Co. will not assume any liability for designs based off of inaccurate information. All engineering data (i.e. base plate information, reactions, etc.) will be provided upon request only after a signed purchase order has been received. Sukup Manufacturing Co. engineering department recommendations shall be verified and approved by customer's Engineer of Record before using in subsequent design and construction.

Upon taking delivery of product, purchaser (dealer and/or end user) assumes responsibility for proper storage of all materials. Proper storage includes dry, temperature and humidity controlled facilities, which eliminate the potential of moisture, including condensation, from causing white rust and/or corrosion of any sort. Warranty does not extend to defects, damage or cosmetic (appearance) issues caused by improper storage, handling or erection.

**BASIC WARRANTY** - All Sukup manufactured products are warranted for one year from date of purchase. Part(s) must be returned to Sukup within 30 days in event of failure.

**WARRANTY CERTIFICATION** - Warranty registration card should be mailed within one month of product delivery to certify warranty coverage.

**UNAPPROVED PARTS OR MODIFICATION** - All obligations of Sukup under this warranty are terminated if unapproved parts are used, or if equipment is modified or altered in any way not approved by Sukup.



Read manual before installing or using product. Failure to follow instructions and safety precautions in manual can result in death or serious injury. Keep manual in a safe location for future reference.

# **General Safety Practices**

On safety decals, this symbol and the signal words Danger, Warning, Caution and Notice draw your attention to important instructions regarding safety.

They indicate potential hazards and levels of intensity.

# DANGER

RED - DANGER indicates an imminently hazardous

situation which, if not avoided, will result in death or serious injury.

# A WARNING

#### ORANGE - WARNING indicates a potentially

hazardous situation which, if not avoided, could result in death or serious injury.

# A CAUTION

YELLOW - CAUTION

indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



BLUE - NOTICE alerts you to practices unrelated to personal injury, such as messages related to property damage.

**IMPORTANT:** To prevent serious injury or death to you or your family, it is essential that safety decals are clearly visible, in good condition, and applied to the appropriate equipment.

#### FOLLOW MANUAL & SAFETY DECAL MESSAGES

Carefully read this manual and all safety decals on your equipment. Safety decals

must be kept in good condition. Replace missing or damaged safety decals by contacting Sukup Manufacturing Co. via mail at PO



Box 677, Sheffield, Iowa USA, 50475; by phone at 641-892-4222; or by e-mail at info@sukup.com.

It is the responsibility of the owner/operator to know what specific requirements, precautions, and work hazards exist. It is also the responsibility of the owner/operator to inform anyone operating or working in the area of this equipment of hazards and safety precautions that need to be taken to avoid personal injury or death. Always keep children away from bins and vehicles with flowing grain.

Make no unauthorized modifications to machine. Modifications may endanger function and/or safety of unit. Keep unit in good working condition. Keep shields in place. Replace worn or missing shields free of charge by contacting Sukup Manufacturing Co.

#### **GRAIN BIN SAFETY**

Owners/operators are responsible for developing site-specific confined space entry procedures. OSHA's confined space entry procedures (29CFR 1910.146) can be found at www.osha.gov.

#### If you must enter bin for repair or maintenance:

- Use a safety harness, safety line and respirator
- · Station another person outside of bin
- Avoid the center of the bin
- Wear appropriate personal protective equipment
- · Keep clear of all augers and moving parts



DANGER: Never enter bin unless all power is locked out and another person is present.



**Rotating augers** can kill or dismember!

#### **NEVER** enter bin when augers are running!

When bin is nearly empty, sweep auger will travel at an increasingly fast speed. Keep away from sweep and sump augers to avoid entanglement.



Failure to follow precautions above will result in death or serious injury.

**DANGER:** Flowing grain may trap and suffocate. If you enter a bin of flowing grain you can be completely submerged in grain in about 8 seconds.

Failure to heed this warning will result in death or serious injury.



To avoid electric shock or electrocution, all equipment must be properly wired and grounded according to electrical codes. Have unit wired by qualified electrician.



Have an electrician install a main power disconnect switch capable of being locked only in OFF position. Mark disconnect clearly as to equipment it operates.



Always lock out main power disconnect switch whenever equipment is not in use.

**WARNING:** When servicing equipment, never enter bin unless all power is locked out and another person is present. Always LOCK OUT all power and always check with voltage meter before servicing.

Failure to do so could result in death or serious injury.

Owners/operators are responsible for developing site-specific Lockout/Tagout procedures based on equipment at their work site. See OSHA's typical minimal lockout procedures (29CFR 1910.147 App A) at www.osha.gov.



# WARNING: KEEP CLEAR OF ALL MOVING PARTS.

Keep people (ESPECIALLY YOUTH) away from equipment, particularly during operation.

Keep away from all moving parts. Keep all shields in place. **SHUT OFF AND LOCK OUT** all power before servicing.



Failure to follow precautions above could result in death or serious injury.

WARNING: Metal is slippery when wet. To avoid falls, never carry items if climbing on bin. Maintain secure hand and foothold if climbing on bin. Failure to do so could result in death or serious injury.





**CAUTION:** Metal edges are sharp. To avoid injury, wear protective clothing and handle equipment and parts with care.

Failure to do so may result in minor or moderate injury.

# PERSONAL PROTECTIVE EQUIPMENT



Owners/Operators are responsible for developing site-specific personal protective equipment standards. OSHA's personal protective equipment standards (29CFR 1910.132) can be found at www.osha.gov.

#### **EMERGENCIES – KNOW WHAT TO DO**

Have emergency numbers and written directions to work site readily available in case of emergency. An area for emergency phone numbers to be recorded is provided below and at end of this manual.

### **Electrical Wire Clearances**

Check with your local electric utility, which may be able to provide assistance in planning a safe environment for everyone working around grain bins. State codes may vary regarding specific clearances for electrical lines around grain bins. Be certain your local county REC is in accordance with your state's regulations. **To prevent overhead safety issues, bury electrical lines.** 

The American National Standards Institute (ANSI) provides clearance envelopes for Grain Bins filled by permanently installed augers, conveyors, or elevators in (ANSI) C2 2007 "National Electrical Safety Code," Rule 234, page 120.

**NOTE:** An electric utility company may refuse to provide electrical service to any grain bin built near an existing electric line that does not provide the clearance required by the American National Standards Institute (ANSI) and the National Electrical Safety Code.





Fig. 1 – Electrical Wire Clearances

# **Safety Decals**

Please see Safety section of Support Towers Ladders & Stairs Manual, L25068, for locations of safety decals for bucket elevator support towers.

# **Construction Safety**

On support tower construction sites, carelessness and/or error may result in serious injury or even death. Hazard control and accident prevention are dependent upon awareness, caution and proper training of personnel involved in construction. Be certain all crew members are properly trained and thoroughly familiar with all aspects of support tower construction and this manual.

Listed below are items construction crew members should be knowledgeable of to minimize risk of injury to personnel and damage to equipment. **NOTE:** Topics and items below are examples taken from a broad list of OSHA's Safety and Health Regulations for Construction. See <u>www.osha.gov</u>. Generally, these are common requirements/items necessary on building construction sites.

• Personal Protective Equipment

Head Protection Hearing Protection Eye and Face Protection Steel-Toed Boots/Shoes Gloves

- Concrete Construction
- Tools Hand and Power
- Welding and Cutting Tools
- Electrical Systems
- Ladders
- Scaffolds and Working Platforms

- Fall Protection
- Steel Erection
   Cranes
- Motorized Equipment
   Trenchers
   Forklifts
   Skid Steers
   Telehandlers
   Boom Lifts
- Cranes and Hoists
- Signs and Signals for Use of Motorized Equipment

# Support Tower Construction Safety Guidelines

- Read and fully understand operating procedures for your lifting equipment.
- Loads can shift in transit and may shift again in unloading. Keep hands and feet clear from beneath materials.
- Structure should be braced at all times before raising next part. Structure should be secure with temporary or permanent supports before release of lifting equipment or at end of day or work period. Erection contractor is responsible for all temporary bracing.
- All joints should be connected and all bolts in place before release.
- Hoist equipment should be kept clear of power lines.
- Power tools and cords should be kept in good repair and, where required, have a three-wire ground system. Each tool should be inspected periodically.
- Never use power tools while standing on wet ground.
- Workers should wear safety glasses and/or face shields when drilling, grinding or sawing.
- Use approved tie-offs, netting, rails and fall protection when working at potential dangerous heights.

When constructing a support tower, erectors/contractors are responsible for developing site-specific construction guidelines and procedures based on equipment, conditions and situations at their individual location. OSHA's Safety and Health Regulations for Construction (29CFR1926) can be obtained at <u>www.osha.gov</u>.

# Fall Restraints & Arrest Systems

When working on a support tower at a height where fall hazards exist, always use a fall restraint or fall arrest system. Inspect fall restraint and arrest components before each use for wear, damage and other deterioration. Remove defective components from service according to manufacturer's instructions. Failure to heed this warning may cause serious injury or death.

A **fall restraint system** consists of a body belt or harness, lanyard and anchor. The system is arranged so that the individual is prevented from falling. Fall restraint systems should be used in accordance with the manufacturer's recommendations and instructions.

A **fall arrest system** consists of a harness, lanyard, and anchor. The system stops a fall within specified parameters. Fall arrest systems should be used in accordance with manufacturer's recommendations and instructions.

Lifelines and safety harnesses are used with both systems. A **lifeline** is a component consisting of a flexible line (rope or cable) for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline). Lifelines also serve as a means for connecting other components of a fall protection system. A **safety harness** has straps that wrap around an individual in a manner that will distribute fall arrest forces over thighs, pelvis, waist, chest, and shoulders with a means of attaching it to other components of a fall protection system. Follow manufacturer's instructions when using a lifeline and safety harness.



Individuals who work on a support tower at heights where fall hazards exist should be equipped with a lifeline and harness. Have at least two other workers on-site. A single worker cannot go for help and give first aid simultaneously.

Lifeline should be connected to an OSHA-approved tie-off point.

# Sharp Edges & Obstacles



When working on or near a metal structure, remember that metal edges are sharp. Care must be taken when handling or working near various pieces of support tower. To avoid injuries, wear protective clothing and handle equipment and parts with care. An excellent safety practice is to keep sites clear of scrap iron and other foreign material that may get covered up by snow or tall grass. Any item or debris left near tower may interfere with safe, unobstructed movement around it.

#### Falls & Obstructions

Falls from towers of any height can cause injury or death. Ladders used in tower construction can become very slippery or icy in inclement weather. Maintain a secure handhold and foothold when climbing. Metal is slippery when wet. Never carry items while climbing on tower. Also, be certain no obstacles are in front of ladder.

Slippery metal, broken or loose ladder rungs and loose handholds can be very dangerous. Repair loose ladder rungs and handholds as soon as they are discovered. Follow maintenance guidelines listed at back of this manual.



# **Bolt Tightening**

### **Bolt Tightening**

Connections of tower sections to one another and connections of bracing used in tower sections require use of high-strength A325 (ASTM) bolts. Bolts must be pre-tensioned using "turn-of-nut" method described below. See specific tower section drawings and parts lists for bolt sizes used and locations.

Bolts must be installed in all designated holes of connections and brought to a "snug tight" condition. Snug tight is defined as the tightness that exists when plies of a joint are in firm contact. This may be attained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench.

Snug tightening must progress systematically from the most rigid part of the connection to the free edges. Bolts of connection must then be retightened in a similar systematic manner as needed until all bolts are simultaneously snug tight and connection is fully compacted.

After all bolts in assembly are snug tight, nuts must be tightened more. See Fig. 2 and Table 1. This additional tightening must again progress systematically from the most rigid part of the joint to its free edges. During this tightening there must be no rotation of parts not turned by wrench. Mark nut and protruding end of bolt after snug tight to aid in additional tightening and inspection.



Reuse of bolts that have previously been installed and tightened is not allowed.

For further information, see Research Council on Structural Connections (RCSC) Specification for Structural Joints Using High-Strength Bolts.

**IMPORTANT:** At no time should any bolts be substituted for those supplied by Sukup Manufacturing Co.

	Position of Outer Faces of Bolted Parts							
BOLT LENGTH	Both faces normal to bolt axis	One face normal to bolt axis, other sloped not more than 1:20 *	Both faces sloped not more than 1:20 from normal to bolt axis *					
Not more than 4(D)	1/3 turn	1/2 turn	2/3 turn					
More than 4(D) but not more than 8(D)	1/2 turn	2/3 turn	5/6 turn					
More than 8(D) but not more than 12(D)	2/3 turn	5/6 turn	1 turn					
* Beveled washer not used D = Bolt diameter								

Table 1 – Nut rotation from snug-tight condition for turn-of-nut pre-tensioning

#### Fig. 3 shows A325 hardware and types of connections for which they are used on support towers.



Connection of stair sections and platforms use SAE bolts. Tightening guidelines are on next page.

### **Bolt Tightening**

# UNIFIED INCH BOLT AND CAP SCREW TORQUE VALUES

SAE Grade and Head Markings	NO MARK	1 or $2^{\circ}$	
SAE Grade and Head Markings	NO MARK	2	

	Grade 1			Grade 2 <sup>b</sup>			Grade 5, 5.1, or 5.2			Grade 8 or 8.2						
Size	Lubrio	cated <sup>a</sup>	Di	'y <sup>a</sup>	Lubric	cateda	Dı	у <sup>а</sup>	Lubric	ated <sup>a</sup>	Dr	'y <sup>a</sup>	Lubrie	cated <sup>a</sup>	Dr	'y <sup>a</sup>
	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft
1/4	3.7	2.8	4.7	3.5	6	4.5	7.5	5.5	9.5	7	12	9	13.5	10	17	12.5
5/16	7.7	5.5	10	7	12	9	15	11	20	15	25	18	28	21	35	26
3/8	14	10	17	13	22	16	27	20	35	26	44	33	50	36	63	46
7/16	22	16	28	20	35	26	44	32	55	41	70	52	80	58	100	75
1/2	33	25	42	31	53	39	67	50	85	63	110	80	120	90	150	115
9/16	48	36	60	45	75	56	95	70	125	90	155	115	175	130	225	160
5/8	67	50	85	62	105	78	135	100	170	125	215	160	240	175	300	225
3/4	120	87	150	110	190	140	240	175	300	225	375	280	425	310	550	400
7/8	190	140	240	175	190	140	240	175	490	360	625	450	700	500	875	650
1	290	210	360	270	290	210	360	270	725	540	925	675	1050	750	1300	975
1-1/8	470	300	510	375	470	300	510	375	900	675	1150	850	1450	1075	1850	1350
1-1/4	570	425	725	530	570	425	725	530	1300	950	1650	1200	2050	1500	2600	1950

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Fasteners should be replaced with the same or higher grade. If higher-grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fastener threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nut to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

<sup>a</sup> "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.

<sup>b</sup> Grade 2 applies for hex cap screws (not hex bolts) up to 152 mm (6-in.) long. Grade 1 applies for hex cap screws over 152 mm (6-in.) long, and for all other types of bolts and screws of any length.

#### Fig. 4 & Table 2

**IMPORTANT:** At no time should any bolts be substituted for those supplied by Sukup Manufacturing Co.

#### **Anchor Placement**

#### **Anchor Placement**

Drawings below show anchor placement for cast-in-place anchor **plates** for support towers, depending on size of tower. If using anchor **bolts**, contact Sukup Manufacturing Co. for requirements.



TOWER SIZE	DIM. A	DIM. C
4' x 4'	4'	5' 7-7/8"
6' x 6'	6'	8' 5-13/16"
8' x 8'	8'	11' 3-3/4"
10' x 10'	10'	14' 1-11/16"
12' x 12'	12'	16' 11-5/8"
14' x 14'	14'	19' 9-9/16"
16' x 16'	16'	22' 7-1/2"
18' x 18'	18'	25' 5-1/2"
20' x 20'	20'	28' 3-7/16"

Fia	5 &	Table	3 -	Anchor	locations	for	square	tower
i ig.	3 6	Table	<b>J</b> –	Allollol	locations	101	Square	LOWEI



TOWER SIZE	DIM. A	DIM. B	DIM. C
2' x 8'	2'	8'	8' 2-15/16"
4' x 6'	4'	6'	7' 2-9/16"
4' x 8'	4'	8'	8' 11-15/16"
5' x 10'	5'	10'	11' 2-3/16"
6' x 8'	6'	8'	10'
6' x 14'	6'	14'	15' 2-3/4"
8' x 10'	8'	10'	12' 9-11/16"
8' x 12'	8'	12'	14' 5-1/16"
10' x 12'	10'	12'	15' 7-7/16"
10' x 14'	10'	14'	17' 2-7/16"
14' x 16'	14'	16'	21' 3-1/8"

Fig. 6 & Table 4 – Anchor locations for rectangular tower

#### **Anchor Placement**

When cast-in-place anchors are used, base plate on bottom of tower leg is welded to top of cast-in-place anchor. Base plates are solid (contain no holes for anchor rods) and measure either 12" square or 12-3/4" square. Base plate thickness ranges from 3/4" to 1-5/8". Use thickness of base plate on bottom leg of tower to determine required weld size. See Table 5. Use E70XX electrodes.

**NOTICE:** Base plates containing holes for anchor rods are not designed to be welded down. Attempting to do so could result in failure of plate and collapse of tower.



#### **Job-Specific Instructions**

# Guide to Parts Lists, Stacking Order

ORDER, FROM GROUND

LEVEL UPWARD (FIRST SECTION BEING LOWEST)

Each tower comes with a printout that contains job-specific parts lists and stacking order of sections. Images below show partial pages of lists. Be sure to read lists thoroughly before beginning assembly.

TOWER SECTIONS			SO#	508284	2/18/2015	Page 1 of 3
<u>SE</u>	CTION	<u>QTY</u>	ITEM	DESCRIPTION		
	1					
		48	BT12324G	SPACER,4"DIAM,5/8	8" THICK	
		16	BT14191G	BRACE,HORZ,3X3X1	/4",149.500"	
NUMBER FOR PROJEC	T	32	BT14192G	BRACE, DIAG, 4X4X1/	/4",128.00"	
FOLLOWED BY QUANTI	TIES, ID	8	BT14193G	PLATE,GUSSET,5/8P	2,3X3 HORZ	
OF PARTS IN EACH SEC	CTION	1	BT1419H	HDWR,BOX,BT1419	,TOWER LEG	
OF TOWER.		4	BT1420G	LEG,20',14X14,1.5,8	3X8X1/2,1.25	
		1	L2506	MANUAL, SUPPORT	TOWER,MH	
		16	BT12124G	SPACER,3"DIA,5/8"	THICK	
	2					
		16	BT14211G	BRACE, HORZ, 3X3X1	/4,154.250"	
FOR ATTACHING	N	1	L2506	MANUAL, SUPPORT	TOWER,MH	
		4	BT1422G	LEG,20',14X14,1.25,	,6X6X1/2,1.0	
HAS AN "H2" AT END		1	BT1421H2	HDWR,CARTON,TO	WER CONNECTION	
OF ITEM #.		1	BT1421H	HDWR,BOX,BT1421	,TOWER LEG	
ASSEMBLING SECTION		32	BT14212G	BRACE, DIAG, 3X3X3	/8,132.750"	
HAS AN "H" AT END (	OF	64	BT14064G	SPACER,3"DIAM,1/2	2"THICK	
IIEM#.		8	BT14213G	PLATE,GUSSET,1/2P	2,3X3 HORZ	
	3	4	DT4 400110			
		1	BT1423H2	HDWR,CARTON,TOV	WER CONNECTION	
		64	BT14064G	SPACER,3"DIAM,1/2	2"THICK	
TOWER SECTIONS			SO#	508284	2/18/2015	Page 3 of 3
			NC		2, 10, 2010	1 486 9 91 9
			NC	14' V 14' TOWER		
				TOWER HEIGHT 1/0	2	
					FD.	
				SWITCHBACK STAIR		
				ELEV CONNECT BRK		
				42"PULLEY ELEVATO	OR	
				42"PULLEY ELEVATO	OR	
				N/A (NO THIRD ELE)	VATOR)	
				SECTION 1: BT1419	G	
<b></b>			¬ /	SECTION 2: BT1421		
SECTION STA	CKING		<b>/</b>	SECTION 3 · BT1423	1	

SECTION 3: BT1423

SECTION 4: BT1425

SECTION 5: BT1427 SECTION 6: BT1429 SECTION 7: BT1429

# **Component Identification**

See Fig. 8 for identification of components used in support towers.

NOTE: Base, Top and Connection plates are welded to legs at factory.



# **Erection Steps**

Following are recommended steps to take in erecting support tower. **NOTE:** Contractor is responsible for means, methods and safety of assembly.

- Build tower sections. See drawings provided specifically for your tower.
- Attach brackets and supports.
- Stack tower sections. See job-specific instructions for stacking order. **NOTE:** Tower is commonly built as elevator leg is erected.
- Attach service platform.
- Attach access and stair platforms and stairs.



WARNING: Do not station a crew member in a position where he or she could be struck or crushed by a section of tower, stairs or platform that is being lowered into place by crane. Wind can blow lifted materials, potentially crushing, striking or pinning a person. Failure to heed this warning could result in death or serious injury.

# **Anchor Section Bracing**

Towers that are 8', 10' or 12' wide come standard with X-bracing on all four sides, but are equipped with tabs that permit alternate bracing on bottom 10' of section if tower is so ordered.

Towers that are 14' wide come standard with A bracing. It will accommodate most equipment. However, if alternate bracing is required on bottom 10' of section, contact Sukup Manufacturing Co.

Fig. 9 and Tables 7 and 8 identify different bracing patterns and kit numbers.



# STANDARD X-BRACE

Fig. 9 – Anchor section bracing patterns

#### A-BRACE



X-BRACE		8' 9	10' SIDE			
	3" TUBE	4" TUBE	5" TUBE	6" TUBE	3" TUBE	4" TUBE
2X2X1/8	BT09331G	BT09412G	BT09871G		BT27341G	BT26191G
2X2X3/16		BT09591G	BT08348G	BT09592G		BT25972G
3X2X3/16		BT09591G	BT08348G	BT09592G		BT25972G
3X2X1/4		BT09671G	BT08341G	BT81331G		BT26151G
3X2X5/16		BT09671G	BT08341G	BT81331G		BT26151G
3X3X3/8						

**Z-BRACE** 

Z-BRACE

**V-BRACE** 



#### Table 8 – Z brace kit numbers

Table 7 – A & V brace kit numbers

12' SIDE

4" & 5" & 6" TUBE

BT30264G

BT30201G

BT30201G

BT30091G

BT13109G

BT30351G

5" & 6" TUBE

BT26193G

BT15001G

BT15001G

BT25631G

BT25631G

BT26651G

X-BRACE	8' SIDE	10' SIDE	12' SIDE
2X2X1/8	BT09571G	BT11512G	BT81493G
2X2X3/16	BT09611G	BT11512G	BT12203G
3X2X3/16	BT09711G	BT26331G	BT13821G
3X2X1/4	BT09751G	BT26391G	BT30092G
3X2X5/16	BT09751G	BT26391G	BT13112G
3X3X3/8		BT26652G	BT13942G

SWST0188 07/06/2022; AGS

# **Tower Section End Plate Connection Guide**

Connect tower sections with hardware provided in H2 box. See Detail A for connections without tie-back brackets. See Detail B and use longer bolts provided if tie-back brackets are used.



Tab	le 9 –	Connection	hardware	

END PLATE SPLICE	WITH	TIEBACK

END PLATE 1	END PLATE 2	BOLT	TIE-BACK BOLT	WASHER	NUT
5/8"	5/8"	J09091 (1" X 3")	J09092 (1" X 3-1/2")	J11322	J10602
5/8"	3/4"	J09091 (1" X 3")	J09092 (1" X 3-1/2")	J11322	J10602
3/4"	3/4"	J09096 (1" X 3-1/4")	J09092 (1" X 3-1/2")	J11322	J10602
3/4"	1"	J09096 (1" X 3-1/4")	J09092 (1" X 3-1/2")	J11322*	J10602
1"	1"	J09093 (1" X 3-3/4")	J09093 (1" X 3-3/4")	J11322*	J10602
1-1/4"	1-1/4"	J99263 (1-1/4" X 4-1/2")	J99391 (1-1/4 X 4-3/4")	J1156	J10698
1-1/2"	1-1/2"	J09106 (1-1/2" X 5")	N/A	J11561	J10699

\* HEAD SIDE WASHER NOT REQUIRED

# **Internal Cross-bracing**



WARNING: Support tower must have internal cross-bracing at top of tower and at intervals of no more than 20 feet for entire length of tower. Cross-bracing must be installed as tower is erected. Failure to heed this warning could result in collapse of tower causing death or serious injury.

Internal bracing kits are available from Sukup Manufacturing Co. for towers without elevator inside of tower.

Use internal cross braces and tieback brackets provided to brace tower. See Fig. 11 and Table 10. Bolt tieback brackets to top of corner plates as shown in Fig. 11. Bolt braces to tieback brackets as shown.

INTERNAL E	BRACE KITS
TOWER SIZE	KIT NUMBER
4X6	BT46001G
4X8	BT48009G
5X10	BT59002G
6X6	BT60002G
6X8	BT68004G
6X14	BT60431G
8X8	BT59002G
8X10	BT81191G
10X10	BT11455G
10X14	BT15005G
12X12	BT12174G
14X14	BT15538G





# Tying Elevator to Tower

When an elevator is located within a support tower, erector is responsible for providing and installing adequate cross-bracing to secure elevator and provide rigidity to tower. Elevator tie-back brackets are available for purchase from Sukup Manufacturing Co. Bolt tie-back brackets to top of corner plates as shown.

Bolt or weld bracing to tie-back brackets and to tie angles at all four corners of elevator trunking. Do not attach bracing to horizontal or diagonal braces of tower. Use rigid members such as angle iron for bracing. Do not use cable. Use at least six (6) braces. See Fig. 12.



For towers with two or more elevators, install collar around elevators and brace each corner of collar to a corner plate of tower. See Fig. 13. Install cross bracing inside of collar as shown.



**DISCLAIMER:** It shall be the responsibility of the erector to provide and install adequate cross-bracing. Adequate cross-bracing should be determined by a qualified structural engineer. These instructions and diagrams are provided only as an illustration for a knowledgeable, trained erector and are based solely on the elevator positioning shown.

	PART NO.	BOLT DIA. USED	END PLATE SIZE
Table 11 – Tie-back brackets part numbers &	BT10026G	1.0"	12.75X12.75
bolts by end plate size	BT10027G	1.25"	16.00X16.00
	BT10031G	1.25"	18.00X18.00

# **Drainage Holes**

A rainwater drainage hole is provided at bottom of each base section of tower leg. If not present, drill a 1/2" diameter hole in each leg just above base weld as shown in Fig. 14.





# **Capping Posts**

Install post caps at top of tower as shown below to prevent rainwater from entering tower legs. Frozen water in legs can crack them.



Fig. 15 – Capping posts

# INSTALLING ADJUSTABLE SERVICE PLATFORM

Adjustable service platform mounts anywhere inside tower where platform clamps will not interfere with connection tabs on tower legs. If support tower has stairs, platform clamps must not interfere with stair support clamps.

Fig. 16 shows finished adjustable service platform.

**NOTE:** Bracing on tower may vary.

See Page 50 for drawing of leg clamp used. Instructions for connecting platform to tower are on Page 28.



Fig. 16 & Table 12 – Adjustable service platform sizes & part numbers

TOWER SIZE	PART #	INSIDE DIMS.*			
8' X 8'	BT5400	79-5/8" X 79-5/8"			
10' X 10'	BT5410	103-5/8" X 103-5/8"			
12' X 12'	BT5460	127-5/8" X 127-5/8"			
14' X 14'	BT5450	151-5/8" X 151-5/8"			
*Dimensions between quardrails					

vimensions between guardralis

# ASSEMBLING 8' x 8', 10' x 10' & 12' x 12' ADJUSTABLE SERVICE PLATFORMS BT5400, BT5410 & BT5460

Remove 1/2" bolts (QTY. 12) from locations marked "X" in Fig. 17. On 12' x 12' (BT5460) platform, also remove 1/2" bolts (QTY. 24) from locations marked "Y' below.

When "X" bolts are removed, corner brackets in locations marked "Z" below will fall out. Re-insert once halves are slid together. Once "Y" bolts are removed (only on BT5460), splice plates will be loose. Keep in position and re-bolt through both halves of platform after halves have been joined.



Fig. 17

Slide two halves of platform together and insert 1/2 x 1-1/4" bolts (J07282) through corner bracket and back-to-back C-channels. See Fig. 18. Secure with 1/2" flange nuts (J10401).

Insert six (6) 1/2 x 1-1/2" bolts (J07302) through each splice plate and outer C-channel. Secure with 1/2" flange nuts (J10401).

On 12' x 12' service platform (BT5460), back-to-back C-channels are spliced together. Ensure both splice plates are in position and bolt together with  $1/2 \times 1-1/2$ " bolts (J07302). Secure with 1/2" flange nuts (J10401).

Move C-channel supports as needed to miss elevator legs. Use pre-drilled holes when adjusting C-channels. Avoid cutting supports if possible.

Field-cut planks as needed to allow elevator through platform.



Fig. 18

# ATTACHING HANDRAILS TO ADJUSTABLE SERVICE PLATFORMS

Attach top rail and mid rail (same part number) to handrail posts as shown in Fig. 19. Connect rails together with corner bracket as shown below. Use 5/16" hardware to attach rails. Hardware is located in platform hardware box (BT----H).



Fig. 19

Figs. 20-22 show completed 8' x 8' (BT5400)', 10' x 10' (BT5410), and 12' x 12' (BT5460) adjustable service platforms, along with parts lists. Hardware package used to assemble all three platforms is shown at bottom of page.



#### Fig. 20 & Table 13 – BT5400

DESCRIPTION	PART #	QTY.
PLATFORM,TOWER,8X8,ADJ,HALF	BT5401	2
HAND RAIL, TOP, 81.848", PLTFRM	BT54003	4
HARDWARE BOX	BT5400H	1
POST HAND RAIL TOWER PLTFRMS	BT52006	8



#### Fig. 21 & Table 14 – BT5410

DESCRIPTION	PART #	QTY.
PLATFORM,10X10 TWR,ADJ,HALF	BT5411	2
HAND RAIL, TOP, 105.848", PLTFRM	BT54117	4
HARDWARE BOX	BT5410H	1
POST, HANDRAIL, TOWER PLTFRMS	BT52006	8



Fig. 22 & Table 15 – BT5460

DESCRIPTION	PART #	QTY.
PLATFORM, 12X12 TWR, ADJ, HALF	BT5461	2
HAND RAIL, TOP, 129.875", PLTFRM	BT54617	4
HARDWARE BOX	BT5460H	1
POST HAND RAIL, TOWER PLTFRMS	BT52006	8

#### HARDWARE PACKAGE FOR 8' x 8', 10' x 10' & 12' x 12' ADJUSTABLE SERVICE PLATFORMS

Table	16 –	Hardware	packages	BT5400H,	BT5410H	& BT5460H
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DESCRIPTION	PART #	QTY.
CORNER SPLICE PLATE	BT54519	8
SCREW, 5/16 – 18 x 3/4"	J0536	63
NUT, 5/16" – 18	J1110	63
SCREW, 1/2 – 13 x 1-1/4"	J07282	6
SCREW, 1/2 – 13 x 1-1/2"	J07302	14
FLANGE NUT, 1/2" – 13	J10401	20
PLATFORM COLLAPSE WARNING DECAL	L01135	1

# ASSEMBLING 14' x 14' ADJUSTABLE SERVICE PLATFORM BT5450

Remove 1/2" bolts (QTY. 36) from locations marked "X" in Fig. 23. Slide four sections together. Re-position corner brackets in "Z" corners (should be loose from removing "X" bolts). Reinsert all "X" bolts

Insert rest of hardware from BT5450H hardware package.

**NOTE:** Make sure all holes/slots in splice plates and corner brackets are bolted securely.

See Page 24 for handrail attachment instructions.



Fig. 23

See Fig. 24 for assembly of 14' x 14' adjustable service platform sections.



Fig. 24 & Tables 17 & 18 – BT5450 platform sections & hardware

**NOTE:** Use  $1/2 \ge 1/2 \ge 1/2$  bolts on back-to-back C-channel connections. Use  $1/2 \ge 1/2 \ge 1/4$  bolts on other support channel connections. Use 5/16 hardware to connect handrails and toe kicks.

ITEM #	DESCRIPTION	PART #	QTY.
1	PLATFORM,QRT,INNER,14X14	BT5451	2
2	PLATFORM, INNER, QRT2, 14X14	BT5452	2
3	HAND RAIL, TOP, 153.819", PLTFRM	BT54516	8
4	HARDWARE PACKAGE	BT5450H	1

**NOTE:** Clamps, corner piece and connection hardware included in BT5450H. 5/16" hardware used for hand rails and toe kicks; 1/2" hardware used for C-channels and splice plates.

DESCRIPTION	PART #	QTY.
CORNER SPLICE PLATE, PLATFORM	BT54519	8
SCREW,5/16-18,0.75,PLT,G5,HHWZ	J0536	65
SCREW,1/2-13,1.25,PLT,GR5,HHCS	J07282	100
NUT,1/2-13,PLT,GR5,FLANGE	J10401	100
NUT,5/16-18,PLT,HHWZ	J1110	65
PLATFORM COLLAPSE WARNING DECAL	L01135	1

# Installing Adjustable Service Platform

Position platform clamps at desired height and adjust to size of legs. See Page 50 for clamp used.

Remove bolts from all four corners of service platform. See "A" in Fig. 25. **NOTE:** There will be eight (8) or 12 bolts at each corner, depending on size of platform.

Using a crane, lower service platform into tower section.

Position platform against clamp brackets and insert bolts at location marked "B" in drawing below. There will be a total of eight (8) or 12 bolts in each corner of platform, with four (4) or six (6) through each side of bracket, depending on size of platform. Use 1/2 x 1-1/2" bolts (J07282), 1/2" washers (J1125), and 1/2" flange nuts (J10401) to connect brackets to platform. Tighten all nuts. **NOTE:** Platforms up to 12' x 12' use eight-bolt connector; larger ones use 12-bolt connector.

Field-weld top and bottom of each clamp to tower leg as shown below.



If connection uses eight (8) bolts, field-weld clamp to platform as shown in Fig. 26 (view at left is from below platform).



# Internal Platform at Top of Tower

If internal platform is used at top of tower, walking surface will not be at same elevation as top of tower. Fig. 27 and Table 19 show minimum distance from top of tower to walking surface.



TOWER SIZE	DIM (A)
8X8	12-7/16''
10X10	11-5/16''
12X12	10-11/16
14X14	6-15/16''

Fig.	27	&	Table	19 –	Minimum	distance	between	top of	f tower	and	surface	of i	nternal	platforn	n
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# INSTALLING STATIONARY SERVICE PLATFORM

In certain situations, a stationary service platform may be used. It will come with a tower section that has Ibeams on two sides to support platform.

Fig. 28 shows finished stationary service platform. Table 20 shows platform part numbers.

**NOTE:** Bracing on tower may vary.





TOWER SIZE	PLATFORM PART #	A DIM.	B DIM.
12' X 12'	BT5473	132-3/8"	127-5/8"
14' X 14'	BT5474	155-11/16"	151-5/8"
16' X 16'	BT5464	175-1/2"	174-1/16"
20' X 20'	BT5470	224-1/16"	223-5/8

A Dimensions are from I-beam to I-beam B Dimensions are from support channel to support channel



See Fig. 29 and Table 21 for components of 12' x 12' platform. Assembly instructions begin on Page 35.



#### Fig. 29 & Tables 21 & 22 - BT5473 components & hardware

ITEM #	DESCRIPTION	PART #	QTY.
1	SUPPORT BEAM,PLTFRM,12' TWR	BT54731	1
2	SUPPORT CHANNEL,12' TWR	BT54732	4
3	PLANK,63.375L,10.625W,2.250T	BT54735	24
4	POST BRACKET, HNDRL, PLATFORM	BT54709	6
5	POST, HAND RAIL, TOWER PLTFRMS	BT52006	14
6	TOEKICK,PLATFORM,66.125"	BT54736	4
7	TOEKICK,PLATFORM,65.250"	BT54737	4
8	HANDRAIL, TOP/MID, 132.313"	BT54738	4
9	HANDRAIL,TOP/MID,127.625"	BT54739	4
10	TOEKICK SPLICE PLATE	BT54520	4
11	CORNER SPLICE PLATE, PLATFORM	BT54519	8
12	HARDWARE BOX	BT5473H	1

See Table 22 for contents of hardware box BT5473H.

DESCRIPTION	PART #	QTY.
NUT, WHIZ, 5/16-18	J1110	250
SCREW,5/16-18,3/4",PLT,GR5,HHWZ	J0536	250
NUT,1/2-13,PLT,GR5,FLANGE	J10401	30
SCREW,1/2-13,1.50,PLT,GR5,HHWZ	J07302	30
PLATFORM COLLAPSE WARNING DECAL	L01135	1



See Fig. 30 and Table 23 for components of 14' x 14' platform. Assembly instructions begin on Page 35.



BT5474H

1

16 See Table 24 for contents of hardware box BT5474H.

HARDWARE BOX

DESCRIPTION	PART #	QTY.
SCREW,5/16-18,3/4",PLT,GR5,HHWZ	J0536	340
SCREW, 1/2-13, 1.50, PLT, GR5, HHWZ	J07302	54
NUT,1/2-13,PLT,GR5,FLANGE	J10401	54
NUT, WHIZ, 5/16-18	J1110	340
PLATFORM COLLAPSE WARNING DECAL	L01135	1

16' x 16' STATIONARY SERVICE PLATFORM

See Fig. 31 and Table 25 for components of 16' x 16' platform. Assembly instructions begin on Page 35.



Fig.	31	&	Tables	25 &	. 26 –	BT5464	platform	components a	& hardware
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ITEM #	DESCRIPTION	PART #	QTY.
1	PLTFRM,CHANNEL SPPRT,16X16	BT54640	9
2	PLANK,86.25",16X16 TWR PLTFRM	BT54644	32
3	POST, HAND RAIL, TOWER PLTFRMS	BT52006	12
4	HAND RAIL, TOP, 179.856", PLTFRM	BT54646	4
5	HAND RAIL,174.00",PLTFRM	BT54647	4
6	BRKT, UPRIGHT, TOWER PLATFORM	BT5015	4
7	TOEKICK,16X16,PLTFRM,87.875"	BT54651	4
8	TOEKICK,16X16,PLTFRM,88.4375"	BT54652	4
9	CORNER SPLICE PLATE, PLATFORM	BT54519	8
10	TOEKICK SPLICE PLATE	BT54520	4
11	HARDWARE BOX	BT5464H	1

See Table 26 for contents of hardware box BT5464H.

DESCRIPTION	PART #	QTY.
SCREW,5/16-18,3/4",PLT,GR5,HHWZ	J0536	450
NUT, WHIZ, 5/16-18	J1110	450
WASHER, FLAT, 1/2	J1125	60
SCREW 1/2-13, 1.5, GR 5 HHCS	J0730	60
NUT,1/2-13,PLT,GR5,FLANGE	J10401	60
PLATFORM COLLAPSE WARNING DECAL	L01135	1

20' x 20' STATIONARY SERVICE PLATFORM

See Fig. 32 and Table 27 for components of 20' x 20' platform. Assembly instructions begin on next page.



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ITEM #	DESCRIPTION	PART #	QTY.
1	PLTFRM, END CHANNEL SPRT, 20X20	BT5471	2
2	PLTFRM,I-BEAM SPPRT,20X20	BT5472	7
3	POST, HAND RAIL, TOWER PLTFRMS	BT52006	18
4	POST BRACKET, HNDRL, PLATFORM	BT54709	6
5	PLANK,55.375",20X20 TWR PLTFRM	BT54703	80
6	TOEKICK,20X20,PLTFRM,113.2854"	BT54704	4
7	TOEKICK,20X20,PLTFRM,111.875"	BT54705	4
8	HAND RAIL, TOP, 227.856", PLTFRM	BT54706	4
9	HAND RAIL,223.500",PLTFRM	BT54707	4
10	CORNER SPLICE PLATE, PLATFORM	BT54519	8
11	TOEKICK SPLICE PLATE	BT54520	4
12	HARDWARE BOX	BT5470H	1

See Table 28 for contents of hardware box BT5470H.

DESCRIPTION	PART #	QTY.
WASHER, FLAT, 1/2	J1125	100
SCREW, 1/2"-13, 1.25, PLT, GR5, HHCS	J0728	100
NUT, DETAILA ,GR5,FLANGE	J10401	100
NUT, WHIZ, 5/16-18	J1110	700
SCREW,5/16-18,3/4",PLT,GR5,HI DETAIL B	J0536	120
SCREW, 5/16-18, 1.00, PLT, G5, HHWZ	J0537	580
PLATFORM COLLAPSE WARNING DECAL	L01135	1

# Installing Stationary Service Platform Between I-Beam Supports

Space C-channels (whether single or back-to-back) as needed to avoid elevator legs. Avoid cutting C-channels if possible. See Table 29 for maximum spans.

Mount channels to beams as shown in Fig. 33.



SWST0121 02/03/2016; AGS

Fig. 33 & Table 29 – Maximum C-channel spans

\* Holes in I-beam supports for 14' x 14' tower allow adjustment only up to 36-1/2". If 42" O.C. is desired, field-drill holes through beam.

After C-channels are spaced and mounted between I-beams, attach handrail posts as shown in Fig. 34. Posts marked with an "X" are attached to C-channels with an upright bracket and can be placed on any C-channel. See Details A and B.



USE POST BRACKET BT54709 WHEN I-BEAM SUPPORT MEMBERS ARE USED. USE POST BRACKET BT5015 WHEN C-CHANNEL SUPPORT MEMBERS ARE USED.



Mount toe kicks to handrail posts as shown in Fig. 35. Field-drill and bolt (or weld) toe kicks to posts when a post bracket is used. If a post bracket is not used, bolt toe kicks to posts using pre-drilled holes.

**NOTE:** Quantities of platform supports and handrail posts will vary depending on size of platform.



Cut floor planks as needed where elevator legs will go through platform. See Fig. 36. Attach planks to C-channels using 5/16" hardware. Field-weld planks to C-channel where a plank splice is used on a single C-channel.

Mount handrails to posts as shown in Fig. 37. Field-drill and bolt (or weld) handrails to posts when a post bracket is used. When no post bracket is used, bolt handrails to post using pre-drilled holes in handrails.

Field-modify handrails and toe kicks where access to platform from stairs will be located.





# Installing External Distributor Service Platform

External distributor service platform can mount anywhere outside of tower where platform mounting plates will not interfere with tower end plates. If tower has stairs, mounting plates must not interfere with stair support clamps. See manual L25068 for mounting external platform with stairs.

Fig. 38 shows 4' wide platform attached to 4' wide tower. Table 30 shows part numbers of other platforms.



Fig. 38 – External distributor service platform

Table 30 – External distributor service platform part numbers

TOWER SIDE	4' WIDE	5' WIDE	6' WIDE
8FT	BT5507		
10FT	BT5509	BT5528	BT5508
12FT	BT5500	BT5502	BT5503





Fig. 39 & Table 31 – External distributor service platform dimensions

PLATFORM SIZE	DIM (A)	DIM (B)	DIM (C)
4'X8'	48"	95 3/4"	57 5/8"
5'X8'	60"	95 3/4"	69 5/8"
6'X8'	72"	95 3/4"	81 5/8"
4'X10'	48"	121 3/4"	57 5/8"
5'X10'	60"	121 3/4"	69 5/8"
6'X10'	72"	121 3/4"	81 5/8"
4'X12'	48"	143 3/4"	57 5/8"
5'X12'	60"	143 3/4"	69 5/8"
6'X12'	72"	143 3/4"	81 5/8"

See Fig. 40 to prepare external distributor platform before attachment to support tower without stairs.

Attach mounting brackets to both sides of platform before lifting into position. **NOTE:** Field-cut bracket as shown for mounting to 5" or 6" tube. Attach kicker brackets as shown.



# **Mounting External Platform to Tower**

Lift platform into position and attach BT55056 braces with 1/2" hardware. See Detail B.

Level and align platform, then field-weld mounting brackets to leg tube. See weld detail.



# **External Platform Mounting Kit, BT55021**

See Fig. 42 and Table 32 for components of external platform mounting kit.

Depending on layout, not all parts will be used when attaching external platform.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	BT55052	MOUNTING TAB, TWR PLTFRM	2
2	BT55053	BRACE TAB, TWR PLTFRM	2
3	BT55054	TAB, KICKER, 40 DEG, EXT PLTFRM	2
4	BT55055	TAB, KICKER, LOWER, PLTFRM	2
5	BT55056	BRACE, KICKER, PLTFRM SPRT, 72"	4
6	BT55057	BRACE, KICKER, PLTFRM SPRT 17.25	4
7	BT55058	TAB,KICKER,23 DEG, EXT PLTFRM	2
8	BT02	SPACER,2.5X2.0,1/4T,#2	4
9	BT55006	MOUNTING BRACKET 3	2
10	BT55093	STEP, PLTFRM, TOWER, 8"X33"	2
11	BT57369	PLATFORM BRACKET SIDE	4
12	BT57136	POST,C,1.831X1.285X48.750,3/8B	1
13	BT55021H	MOUNTING KIT HARDWARE	1

# **Attaching Oversized Top Platform**

See Ladders & Stairs Manual L25068 for stairs-to-platform attachment instructions.

Attach oversized top platform to tower using hardware provided in H2 box. Use four 1" x 3" bolts per tower leg. See Detail A. Apply a ring of caulk around bleed holes of all four legs prior to setting platform.

See job-specific drawings for assembly of platform.



DETAIL A

# **Oversized Top Platform Dimensions**

See Fig. 44 and Table 34 for dimensions of oversized top platform.



Fig. 44 & Table 34 – Dimensions of oversized top platform

TOWE	R SIZE	OUTSIDE T	O OUTSIDE	INSIDE T	O INSIDE	OVER	HANG
DIM (A)	DIM (B)	DIM (C)	DIM (D)	DIM (E)	DIM (F)	DIM (G)	DIM (H)
96"	96''	151-1/16"	188-5/8''	143-5/16"	180-15/16"	46-5/16"	48-5/16"
120"	120"	175-1/16"	212-5/8"	167-5/16''	204-15/16"	46-5/16"	48-5/16"
144"	144"	199-1/16"	236-5/8"	191-5/16''	228-15/16"	46-5/16"	48-5/16"
168"	168"	223-1/16"	260-5/8"	215-5/16"	252-15/16"	46-5/16"	48-5/16"

SWST0202 02/14/2019; JJS

# **Attaching Standard Top Platform**

See Ladders & Stairs Manual L25068 for stairs-to-platform attachment instructions.

Attach oversized top platform to tower using hardware provided in H2 box. Use four 1" x 3" bolts per tower leg. See Detail A. Apply a ring of caulk around bleed holes of all four legs prior to setting platform.

See job-specific drawings for assembly of platform.



# **Standard Top Platform Dimensions**

See Fig. 46 and Table 36 for dimensions of standard top platform.





TOWER SIZE		OUTSIDE TO OUTSIDE		INSIDE TO INSIDE		
DIM (A)	DIM (B)	DIM (C)	DIM (D)	DIM (E)	DIM (F)	
96''	96"	100-9/16"	104-1/2"	93-1/8"	97-1/16''	
120"	120''	124-9/16"	128-1/2"	117-1/8"	121-1/16"	
144"	144''	148-9/16"	152-1/2"	141-1/8"	145-1/16"	
168"	168''	172-9/16"	176-1/2"	165-1/8''	169-1/16"	

SWST0272 12/30/2019; JJS

# **Installing Optional 1-ton Hoist Beam**

Fig. 47 shows a 1-ton hoist beam attached to top section of a support tower.

**NOTE:** Trolley and hoist are not provided.



Assemble tower section except for two opposing horizontals and cross-bracing on one side as shown in Fig. 48. Depending on elevator size, tower section height will vary. See Table 37.



Bolt hoist support beams to tower section with 1" A325 hardware as shown in Fig. 49.



48

Position trolley track beam as shown in Fig. 50 with one end 4" from support beam and other end 72" from support beam. Dimensions "X" and "Y" are determined in field depending on elevator location.



Clamp trolley track beam in desired position and field-weld to both support beams as shown in Fig. 51.



# PARTS/ASSEMBLIES

#### ADJUSTABLE SERVICE PLATFORM BRACKETS

BT5429 (3" & 4" tubes)



BT5425 (5" & 6" tubes)



**NOTE:** Table below shows bill of materials for service platform brackets BT5429 and BT5425.

		BT542	29	BT542	25
ITEM #	DESCRIPTION	PART #	QTY.	PART #	QTY.
1	TUBE CLAMP, ADJ, PLTFRM, WELD	BT54291	1	BT54252	1
2	TUBE CLAMP, ADJ, TUBE, WELD	BT54292	1	BT54253	1
3	ADJ CLAMP, FLANGE, SPLICE, PLATE	BT54554	2	BT54554	2
4	TUBE CLAMP BACK BRACKET	BT54293	1	BT54254	1
5	SCREW, 3/8-16, 1, GR8, HHWZ	J0611	14	J0611	14
6	NUT, 3/8-16 FLANGE WHIZLOK	J1017	14	J1017	14
7	NUT,1/2-13,PLT,GR5,FLANGE	J10401	6	J10401	6
8	SCREW,1/2-13,2.75,PLT,GR5,HHWZ	J07464	6	J07464	6

# SERVICE PLATFORM MOUNTING KITS

Kit BT0034 is for 3" or 4" tube legs. Kit BT0056 is for 5" or 6" tube legs. There are four clamps per kit.



See previous page for assembly of brackets depending on size of tower legs.

See table below for contents of kits BT0034 and BT0056.

		BT0034		BT0056	
ITEM #	DESCRIPTION	PART #	QTY.	PART #	QTY.
1	ADJ,PLATFORM,TUBE CLAMP	BT5429	4	BT5425	4
2	HARDWARE BOX	BT0034H	1	BT0056H	1

See table below for contents of hardware packages BT0034H and BT0056H.

DESCRIPTION	PART #	QTY.
SCREW 1/2-13, 1.25, GR 5 HHWZ	J07282	48
NUT,1/2-13,PLT,GR5,FLANGE	J10401	48

# OPTIONAL 1 TON HOIST BEAM, 12' X 12' TOWER



ITEM #	DESCRIPTION	PART #	QTY.
1	LIFT BEAM SUPPORT WLDMNT	BT12021	2
2	LIFT BEAM,220",TROLLEY TRACK	BT12024	1

See table below for contents of hardware package BT12020H2.

DESCRIPTION	PART #	QTY.
BOLT,1-8,2.75,A325,STRUC	J09095	16
WASHER FLAT, 1", ASTM F436	J11322	32
NUT,1-8,A563 GRADE DH	J10602	16

# 4' X 8' EXTERNAL PLATFORM, BT5507



ITEM #	DESCRIPTION	PART #	QTY.
1	CHNL,MAIN,6X2.25,8GA,95.750	BT55071	2
2	CHANNEL SUPPORT,6X2.25,47.250	BT55012	3
3	PLATFORM SHIPPING CHANNEL	BT55016	2
4	BRKT,CORNER,1/4T,3/8B	BT55010	6
5	BRACE, DIAG, 1.25X64.000, 3/8B	BT55072	4
6	TOEKICK,6.000X3.750,95.500	BT55074	2
7	TOEKICK,6.000X1.750,50.500	BT55018	2
8	POST,C,49.500,6.000 CHNL,3/8B	BT54184	8
9	PLANK,47.00L,11.625W,1.875H	BT55015	8
10	HANDRAIL,TOP/MID,95.500	BT55075	4
11	HANDRAIL, END, 50.75", PLTFRM	BT55003	2
12	RAIL,HMD,MID,16.188,5/16B	BT55091	2
13	RAIL,HMD,MID,36.250,5/16B	BT55092	2
14	SCREW,3/8-16,1.00,GR8,HHWZ	J0611	38
15	NUT, 3/8-16 FLANGE WHIZLOCK	J1017	38
16	SCREW,5/16-18,3/4',PLT,GR5,HHWZ	J0536	90
17	NUT,WHIZ,5/16-18	J1110	90
18	MOUNTING KIT	BT55021	1

# 4' X 10' EXTERNAL PLATFORM, BT5509



ITEM #	DESCRIPTION	PART #	QTY.
1	CHNL,MAIN,6X2.25,8GA,119.750	BT55081	2
2	CHANNEL SUPPORT,6X2.25,47.250	BT55012	3
3	PLATFORM SHIPPING CHANNEL	BT55016	2
4	BRKT,CORNER,1/4T,3/8B	BT55010	6
5	BRACE, DIAG, 1.25X72.438, 3/8B	BT55090	4
6	TOEKICK,L,6.00X3.75,119.500	BT55082	2
7	TOEKICK,6.00X1.750,50.500	BT55018	2
8	POST,C,49.500,6.00 CHNL,3/8B	BT54184	8
9	PLANK,47.00L,11.625W,1.875H	BT55015	10
10	RAIL,TOP/MID,119.500,5/16B	BT55083	4
11	HANDRAIL, END, 50.75", PLTFRM	BT55003	2
12	RAIL,HMD,MID,16.188,5/16B	BT55091	2
13	RAIL,HMD,MID,36.250,5/16B	BT55092	2
14	SCREW,3/8-16,1.00,GR8,HHWZ	J0611	38
15	NUT,3/8-16 FLANGE WHIZLOCK	J1017	38
16	SCREW,5/16-18,3/4",PLT,GR5,HHWZ	J0536	106
17	NUT,WHIZ,5/16-18	J1110	106
18	MOUNTING KIT	BT55021	1

# 6' X 10' EXTERNAL PLATFORM, BT5508



ITEM #	DESCRIPTION	PART #	QTY.
1	CHNL,MAIN,6X2.25,8GA,119.750	BT55081	2
2	CHNL,CRS SPRT,6X2.25,71.250	BT55041	3
3	CHNL,SHIPPING,3.50X1.25,71.000	BT55047	2
4	BRKT,CORNER,1/4T,3/8B	BT55010	6
5	STRAP,8GA,1.25X89.750,3/8B	BT55084	4
6	TOEKICK,L,6.00X3.75,119.500	BT55082	2
7	TOEKICK,L,6.00X1.75,74.500	BT55042	2
8	POST,C,49.500,6.000 CHNL,3/8B	BT54184	8
9	PLANK,71.00L,11.625W,1.875H	BT55043	10
10	RAIL,TOP/MID,119.500,5/16B	BT55083	4
11	RAIL,TOP/MID,75.125,5/16B	BT55044	2
12	RAIL,HMD,MID,36.250,5/16B	BT55092	2
13	RAIL,HMD,MID,40.188,5/16B	BT55095	2
14	SCREW,3/8-16,1.00,GR8,HHWZ	J0611	38
15	NUT, 3/8-16 FLANGE WHIZLOCK	J1017	38
16	SCREW,5/16-18,3/4",PLT,GR5,HHWZ	J0536	102
17	NUT,WHIZ,5/16-18	J1110	102
18	MOUNTING KIT	BT55021	1

# 4' X 12' EXTERNAL PLATFORM, BT5500



ITEM #	DESCRIPTION	PART #	QTY.
1	SUPPORT CHANNEL,6X2.25,71.875	BT55011	4
2	CHANNEL SUPPORT,6X2.25,47.250	BT55012	4
3	CHANNEL, SPLICE, 5.56X2.25, 1/2B	BT55014	2
4	BRKT,CORNER,1/4T,3/8B	BT55010	8
5	BRACE,DIAG,1.25X65.625,3/8B	BT55037	4
6	BRACE, DIAG, 1.25X63.500, 3/8B	BT55038	2
7	PLANK,47.00L,11.625W,1.875H	BT55015	12
8	POST,C,49.500,6.000 CHNL,3/8B	BT54184	10
9	SPLICE PLATE, TOEKICK, PLTFRM	BT55008	2
10	TOEKICK,6.000X3.750,71.750	BT55017	4
11	TOEKICK,6.000X1.750,50.500	BT55018	2
12	PLATFORM SHIPPING CHANNEL	BT55016	2
13	HANDRAIL, TOP, 142.75", PLTFRM	BT55001	4
14	HANDRAIL,END,50.75",PLTFRM	BT55003	2
15	RAIL,HMD,MID,16.188,5/16B	BT55091	2
16	RAIL,HMD,MID,36.250,5/16B	BT55092	2
17	SCREW, 1/2-13, 1.00, PLT, GR5, HHWZ	J07252	24
18	NUT,1/2-13,PLT,GR5,FLANGE	J10401	24
19	SCREW,3/8-16,1.00,GR8,HHWZ	J0611	75
20	NUT,3/8-16 FLANGE WHIZLOCK	J1017	75
21	SCREW,5/16-18,3/4",PLT,GR5,HHWZ	J0536	100
22	NUT,WHIZ,5/16-18	J1110	100
23	MOUNTING KIT	BT55021	1

# 5' X 12' EXTERNAL PLATFORM, BT5502



ITEM #	DESCRIPTION	PART #	QTY.
1	SUPPORT CHANNEL,6X2.25,71.875	BT55011	4
2	CHANNEL, SPLICE, 5.563X2.25, 1/2B	BT55014	2
3	STRAP,8GA,1.25X72.750,3/8B	BT55022	2
4	STRAP,8GA,1.25X74.594,3/8B	BT55023	4
5	CHNL,SHIPPING,3.50X1.25,59.250	BT55035	2
6	CHNL,CRS SPRT,6X2.25,59.000	BT55031	4
7	BRKT,CORNER,1/4T,3/8B	BT55010	8
8	POST,C,49.500,6.000 CHNL,3/8B	BT54184	10
9	TOEKICK,6.000X3.750,71.750	BT55017	4
10	TOEKICK,L,6.00X2.25,62.500	BT55033	2
11	SPLICE PLATE, TOEKICK, PLTFRM	BT55008	2
12	PLANK,59.00L,11.625W,1.875H	BT55032	12
13	RAIL,TOP/MID,62.750,5/16B	BT55034	2
14	HANDRAIL, TOP, 142.75", PLTFRM	BT55001	4
15	RAIL,HMD,MID,28.188,5/16B	BT55094	2
16	RAIL,HMD,MID,36.250,5/16B	BT55092	2
17	SCREW, 1/2-13, 1.00, PLT, GR5, HHWZ	J07252	24
18	NUT,12-13,PLT,GR5,FLANGE	J10401	24
19	SCREW, 3/8-16, 1.00, GR8, FLANGE	J0611	75
20	NUT,3/8-16 FLANGE WHIZLOCK	J1017	75
21	SCREW,5/16-18,3/4",PLT,GR5,HHWZ	J0536	100
22	NUT,WHIZ,5/16-18	J1110	100
23	MOUNTING KIT	BT55021	1

# 6' X 12' EXTERNAL PLATFORM, BT5503



ITEM #	DESCRIPTION	PART #	QTY.
1	SUPPORT CHANNEL,6X2.25,71.875	BT55011	4
2	CHNL,CRS SPRT,6X2.25,71.250	BT55041	4
3	CHANNEL, SPLICE, 5.56X2.25, 1/2B	BT55014	2
4	BRKT,CORNER,1/4T,3/8B	BT55010	8
5	STRAP,8GA,1.25X84.344,3/8B	BT55045	4
6	STRAP,8GA,1.25X82.719,3/8B	BT55046	2
7	PLANK,71.00L,11.625W,1.875H	BT55043	12
8	POST,C,49.500,6.000 CHNL,3/8B	BT54184	10
9	SPLICE PLATE, TOEKICK, PLTFRM	BT55008	2
10	TOEKICK,6.000C3.750,71.750	BT55017	4
11	TOEKICK,L,6.00X1.75,74.500	BT55042	2
12	CHNL,SHIPPING,3.50X1.25,71.000	BT55047	2
13	HANDRAIL, TOP, 142.75", PLTFRM	BT55001	4
14	RAIL,TOP/MID,75.125,5/16B	BT55044	2
15	RAIL,HMD,MID,36.250,5/16B	BT55092	2
16	RAIL,HMD,MID,40.188,5/16B	BT55095	2
17	SCREW, 1/2-13, 1.00, PLT, GR5, HHWZ	J07252	24
18	NUT,1/2-13,PLT,GR5,FLANGE	J10401	24
19	SCREW,3/8-16,1.00,GR8,HHWZ	J0611	75
20	NUT,3/8-16 FLANGE WHIZLOCK	J1017	75
21	SCREW,5/16-18,3/4",PLT,GR5,HHWZ	J0536	100
22	NUT,WHIZ,5/16-18	J1110	100
23	MOUNTING KIT	BT55021	1

# ACCESS PORTAL BRACING KITS FOR A & V STYLE BRACING

(8' Side)



B	тл	83	<u>1</u> 0	C
Б	10	03	40	С.

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,HORZ,2.5X2.5X3/16,82.50	BT08102G	2
2	BRACE,DIAG,3X3X3/16,107.50	BT08471G	4
3	PLT,8'S,12.50X11.88,1/4T,5/8B	BT08460G	1
4	SPACER,2.5X2.0,1/4T,#2	BT02	2
5	SPACER,3.5X2.75,1/4T,#4	BT04	6
6	BOLT,5/8-11,1.75,A325,STRUC	J07811	23
7	WASHER, FLAT, 5/8", ASTM F436	J11291	23
8	NUT,5/8-11,A563 GRADE DH	J10465	23

BT09592G DESCRIPTION PART # QTY.

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,HORZ,2.5X2.5X3/16,82.50"	BT08102G	2
2	BRACE,DIAG,3X3X3/16,106.250	BT08731G	4
3	PLT,8'S,12.50X11.88,1/4T,5/8B	BT08460G	1
4	SPACER,2.5X2.0,1/4T,#2	BT02	2
5	SPACER,3.5X2.75,1/4T,#4	BT04	6
6	BOLT,5/8-11,1.50,A325,STRUC	J07829	23
7	WASHER,FLAT,5/8",ASTM F436	J11291	23
8	NUT,5/8-11,A563 GRADE DH	J10465	23

BT09591G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,HORZ,2.5X2.5X3/16,82.50"	BT08102G	2
2	BRACE, DIAG, 3X3X3/16, 108.750	BT08901G	4
3	PLT,8'S,12.50X11.88,1/4T,5/8B	BT08460G	1
4	SPACER,2.5X2.0,1/4T,#2	BT02	2
5	SPACER,3.5X2.75,1/4T,#4	BT04	6
6	BOLT,5/8-11,1.50,A325,STRUC	J07829	23
7	WASHER,FLAT,5/8",ASTM F436	J11291	23
8	NUT,5/8-11,A563 GRADE DH	J10465	23

(8' Side)



#### BT09671G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,HORZ,3X3X3/16,82.500	BT08751G	2
2	BRACE,DIAG,3X3X1/4,108.750	BT09672G	4
3	PLT,8'S,12.50X12.13,3/8T,7/8B	BT08753G	1
4	SPACER,3.5X3.0,3/8T,#7	BT07	8
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	23
6	WASHER, FLAT, 7/8", ASTM F436	J11312	23
7	NUT,7/8-9,A563 GRADE DH	J10583	23

#### BT08341G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,HORZ,3X3X3/16,82.500	BT08751G	2
2	BRACE, DIAG, 3X3X1/4, 107.500	BT08342G	4
3	PLT,8'S,12.50X12.13,3/8T,7/8B	BT08753G	1
4	SPACER,3.5X3.0,3/8T,#7	BT07	8
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	23
6	WASHER, FLAT, 7/8", ASTM F436	J11312	23
7	NUT,7/8-9,A563 GRADE DH	J10583	23

	BT81311G		
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,HORZ,3X3X3/16,82.500	BT08751G	2
2	BRACE, DIAG, 3X3X1/4, 106.250	BT08752G	4
3	PLT,8'S,12.50X12.13,3/8T,7/8B	BT08753G	1
4	SPACER,3.5X3.0,3/8T,#7	BT07	8
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	23
6	WASHER, FLAT, 7/8", ASTM F436	J11312	23
7	NUT,7/8-9,A563 GRADE DH	J10583	23

#### BT09331G DESCRIPTION PART # **ITEM #** QTY. BRACE,HORZ,2X2X1/8,83.000 BRACE,DIAG,2.5X3/16,111.625 BT09332G 2 1 2 BT09333G 4 3 PLT,8'S,12.50X10.88,3/16T,5/8B BT09335G 1 SPACER, 3.0X2.0, 3/16T, #1 BT01 4 8 BOLT,5/8-11,1.50,A325,STRUC WASHER,FLAT,5/8",ASTM F436 5 J07829 23 J11291 23 23 6 NUT,5/8-11,A563 GRADE DH 7 J10465

BT09871G	
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ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,HORZ,2X2X1/8,82.500	BT09413G	2
2	BRACE, DIAG, 2.5X3/16, 108.063	BT09872G	4
3	PLT,8'S,10.88X11.13,3/16T,5/8B	BT09415G	1
4	SPACER,3.0X2.0,3/16T,#1	BT01	8
5	BOLT,5/8-11,1.50,A325,STRUC	J07829	23
6	WASHER,FLAT,5/8",ASTM F436	J11291	23
7	NUT,5/8-11,A563 GRADE DH	J10465	23

#### BT09412G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,HORZ,2X2X1/8,82.500	BT09413G	2
2	BRACE, DIAG, 2.5X3/16, 109.313	BT09414G	4
3	PLT,8'S,10.88X11.13,3/16T,5/8B	BT09415G	1
4	SPACER,3.0X2.0,3/16T,#1	BT01	8
5	BOLT,5/8-11,1.50,A325,STRUC	J07829	23
6	WASHER, FLAT, 5/8", ASTM F436	J11291	23
7	NUT,5/8-11,A563 GRADE DH	J10465	23

(10' Side)



#### BT26812G DESCRIPTION

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 2.5X2.5X3/16, 100.50	BT26814G	4
2	BRACE,HORZ,2.5X2.5X3/16,106.25	BT26813G	2
3	PLT,10'S,12.44X9.81,1/4T,5/8B	BT26815G	1
4	SPACER,2.5X2.0,1/4T,#2	BT02	8
5	BOLT,5/8-11,1.75,A325,STRUC	J07811	23
6	WASHER,FLAT,5/8",ASTM F436	J11291	23
7	NUT,5/8-11,A563 GRADE DH	J10465	23

#### BT25631G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X1/4, 113.750	BT25421G	4
2	BRACE,HORZ,3X3X3/16,106.25	BT11753G	2
3	PLT,10'S,12.50X11.50,3/8T,7/8B	BT25422G	1
4	SPACER,3.5X3.0,3/8T,#7	BT07	8
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	23
6	WASHER, FLAT, 7/8", ASTM F436	J11312	23
7	NUT.7/8-9.A563 GRADE DH	J10583	23

BT26191G					
ITEM #	DESCRIPTION	PART #	QTY.		
1	BRACE,DIAG,2.5X2.5X3/16,116.00	BT26192G	4		
2	BRACE,HORZ,2.5X2.5X3/16,106.25	BT11571G	2		
3	PLT,10'S,12.50X11.25,1/4T,5/8B	BT59213G	1		
4	SPACER,2.5X2.0,1/4T,#2	BT02	8		
5	BOLT,5/8-11,1.75,A325,STRUC	J07811	23		
6	WASHER, FLAT, 5/8", ASTM F436	J11291	23		
7	NUT,5/8-11,A563 GRADE DH	J10465	23		

#### BT26193G

ITEM #	DESCRIPTION	PART #	QTY.		
1	BRACE, DIAG, 2.5X2.5X3/16, 113.75	BT26194G	4		
2	BRACE,HORZ,2.5X2.5X3/16,106.25	BT11571G	2		
3	PLT,10'S,12.50X11.25,1/4T,5/8B	BT59213G	1		
4	SPACER,2.5X2.0,1/4T,#2	BT02	8		
5	BOLT,5/8-11,1.75,A325,STRUC	J07811	23		
6	WASHER,FLAT,5/8",ASTM F436	J11291	23		
7	NUT,5/8-11,A563 GRADE DH	J10465	23		

#### BT26151G DESCRIPTION ITEM # QTY. PART # BRACE, DIAG, 3X3X1/4, 116.000 BT26152G 4 1 BRACE,HORZ,3X3X3/16,106.25 2 BT11753G 2 PLT,10'S,12.50X11.50,3/8T,7/8B 3 BT25422G 1 4 SPACER, 3.5X3.0, 3/8T, #7 BT07 8 BOLT,7/8-9,2.00,A325,STRUC 5 J08254 23 WASHER, FLAT, 7/8", ASTM F436 6 J11312 23 NUT,7/8-9,A563 GRADE DH 23 7 J10583

#### BT26651G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X5/16, 113.750	BT25505G	4
2	BRACE,HORZ,3X3X1/4,106.250	BT25504G	2
3	PLT,10'S,12.50X11.50,1/2T,7/8B	BT25502G	1
4	SPACER,3.5X3.0,1/4T,#6	BT06	16
5	BOLT,7/8-9,2.50,A325,STRUC	J08256	23
6	WASHER, FLAT, 7/8", ASTM F436	J11312	23
7	NUT,7/8-9,A563 GRADE DH	J10583	23

(10' Side)



BT25972G				BT15001G				
ITEM #	DESCRIPTION	PART #	QTY.		ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,DIAG,3X3X3/16,116.000	BT25952G	4		1	BRACE, DIAG, 3X3X3/16, 113.750	BT25382G	4
2	BRACE,HORZ,2.5X2.5X3/16,106.25	BT11571G	2		2	BRACE,HORZ,2.5X2.5X3/16,106.25	BT11571G	2
3	PLT,10'S,12.50X11.25,1/4T,5/8B	BT59213G	1		3	PLT,10'S,12.50X11.25,1/4T,5/8B	BT59213G	1
4	SPACER,2.5X2.0,1/4T,#2	BT02	2		4	SPACER,2.5X2.0,1/4T,#2	BT02	2
5	SPACER,3.5X2.75,1/4T,#4	BT04	6		5	SPACER,3.5X2.75,1/4T,#4	BT04	6
6	BOLT,5/8-11,1.75,A325,STRUC	J07811	23		6	BOLT,5/8-11,1.75,A325,STRUC	J07811	23
7	WASHER, FLAT, 5/8", ASTM F436	J11291	23		7	WASHER, FLAT, 5/8", ASTM F436	J11291	23
8	NUT,5/8-11,A563 GRADE DH	J10465	23		8	NUT,5/8-11,A563 GRADE DH	J10465	23
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BT27341G				
ITEM #	DESCRIPTION	PART #	QTY.	
1	BRACE, DIAG, 2.5X3/16, 116.500	BT27343G	4	
2	BRACE,HORZ,2.5X2.5X3/16,107.00	BT27342G	2	
3	PLT,10'S,11.81X11.00,1/4T,5/8B	BT27344G	1	
4	SPACER,2.5X2.0,1/4T,#2	BT02	8	
5	BOLT,5/8-11,1.50,A325,STRUC	J07829	23	
6	WASHER,FLAT,5/8",ASTM F436	J11291	23	
7	NUT,5/8-11,A563 GRADE DH	J10465	23	



(12' Side)

# BT13109G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X1/4, 119.000	BT13072G	4
2	BRACE,HORZ,3X3X5/16,130.250	BT13181G	2
3	PLATE,GUSSET,1/2T,7/8B,AV	BT13713G	1
4	SPACER,3.5X3.0,1/4T,#6	BT06	16
5	BOLT,7/8-9,2.50,A325,STRUC	J08256	23
6	WASHER, FLAT, 7/8", ASTM F436	J11312	23
7	NUT,7/8-9,A563 GRADE DH	J10583	23

#### BT30091G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X1/4, 119.000	BT13072G	4
2	BRACE,HORZ,3X3X1/4,130.250	BT13071G	2
3	PLATE,GUSSET,3/8T,7/8B	BT13073G	1
4	SPACER,3.5X3.0,3/8T,#7	BT07	8
5	BOLT,7/8-9,2.25,A325,STRUC	J08255	23
6	WASHER, FLAT, 7/8", ASTM F436	J11312	23
7	NUT,7/8-9,A563 GRADE DH	J10583	23

	BT30264G		
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 2.5X2.5X3/16, 119.00	BT30261G	4
2	BRACE,HORZ,2.5X2.5X3/16,130.25	BT30263G	2
3	PLT,12'S,15.38X12.25,1/4T,5/8B	BT30262G	1
4	SPACER,2.5X2.0,1/4T,#2	BT02	8
5	BOLT,5/8-11,1.50,A325,STRUC	J07829	23
6	WASHER,FLAT,5/8",ASTM F436	J11291	23
7	NUT,5/8-11,A563 GRADE DH	J10465	23

	BT30351G			
ITEM #	DESCRIPTION	PART #	QTY.	
1	BRACE, DIAG, 3.5X3.5X1/4, 119.000	BT13134G	4	
2	BRACE,HORZ,3.5X3.5X1/4,130.250	BT13099G	2	
3	PLT,12'S,15.38X12.75,1/2T,7/8B	BT13135G	1	
4*	SPACER,3.5X3.0,1/4T,#6	BT06	16	
5	BOLT,7/8-9,2.25,A325,STRUC	J08255	23	
6	WASHER, FLAT, 7/8", ASTM F436	J11312	23	
7	NUT,7/8-9,A563 GRADE DH	J10583	23	

\*Use 2 at each location

BT30201G			
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X3/16, 119.000	BT13462G	4
2	BRACE,HORZ,3X3X3/16,130.250	BT13461G	2
3	PLT,12'S,15.38X12.50,1/4T,5/8B	BT13463G	1
4	SPACER,3.5X2.75,1/4T,#4	BT04	8
5	BOLT,5/8-11,1.75,A325,STRUC	J07811	23
6	WASHER, FLAT, 5/8", ASTM F436	J11291	23
7	NUT,5/8-11,A563 GRADE DH	J10465	23



BT08641G			
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X3/16, 139.000	BT08642G	2
2	SPACER,3.0X2.0,3/16T,#1	BT01	3
3	BOLT,5/8-11,1.50,A325,STRUC	J07829	7
4	WASHER, FLAT, 5/8", ASTM F436	J11291	7
5	NUT,5/8-11,A563 GRADE DH	J10465	7

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X3/16, 137.000	BT09572G	2
2	SPACER,3.5X2.75,1/4T,#4	BT04	3
3	BOLT,5/8-11,1.75,A325,STRUC	J07811	7
4	WASHER, FLAT, 5/8", ASTM F436	J11291	7
5	NUT,5/8-11,A563 GRADE DH	J10465	7

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ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3.5X3.5X1/4, 137.000	BT09752G	2
2	SPACER,3.5X3.0,3/8T,#7	BT07	3
3	BOLT,7/8-9,2.00,A325,STRUC	J08254	7
4	WASHER,FLAT,7/8",ASTM F436	J11312	7
5	NUT,7/8-9,A563 GRADE DH	J10583	7

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X3/16, 137.000	BT09572G	2
2	SPACER,3.0X2.0,3/16T,#1	BT01	3
3	BOLT,5/8-11,1.75,A325,STRUC	J07811	7
4	WASHER FLAT, 5/8", ASTM F436	J11291	7
5	NUT,5/8-11,A563 GRADE DH	J10465	7

BT09711G			
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X1/4, 137.000	BT48008G	2
2	SPACER, 3.5X2.75, 1/4T, #4	BT04	3
3	BOLT,3/4-10,1.75,A325,STRUC	J08284	7
4	WASHER, FLAT, 3/4", ASTM F436	J11301	7
5	NUT,3/4-10,A563 GRADE DH	J10514	7

BT09491G

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ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X3/16, 139.000	BT08642G	2
2	SPACER,3.0X2.0,3/16T,#1	BT01	3
3	BOLT,5/8-11,1.75,A325,STRUC	J07811	7
4	WASHER, FLAT, 5/8", ASTM F436	J11291	7
5	NUT,5/8-11,A563 GRADE DH	J10465	7



	BT11512G		
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X1/4, 154.750	BT11513G	2
2	SPACER,3.5X2.75,1/4T,#4	BT04	3
3	BOLT,5/8-11,1.75,A325,STRUC	J07811	7
4	WASHER, FLAT, 5/8", ASTM F436	J11291	7
5	NUT,5/8-11,A563 GRADE DH	J10465	7

3.5X2.75,1/4T,#4	BT04	3
-11,1.75,A325,STRUC	J07811	7
,FLAT,5/8",ASTM F436	J11291	7
1,A563 GRADE DH	J10465	7

BT26301C	

	D1203910		
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3.5X3.5X1/4, 154.750	BT26392G	2
2	SPACER,3.5X3.0,3/8T,#7	BT07	3
3	BOLT,7/8-9,2.00,A325,STRUC	J08254	7
4	WASHER,FLAT,7/8",ASTM F436	J11312	7
5	NUT,7/8-9,A563 GRADE DH	J10583	7

D120331G		
DESCRIPTION	PART #	QTY.
BRACE, DIAG, 3.5X3.5X1/4, 154.750	BT26332G	2
SPACER,3.5X2.75,1/4T,#4	BT04	3
BOLT,3/4-10,1.75,A325,STRUC	J08284	7
WASHER,FLAT,3/4",ASTM F436	J11301	7
NUT,3/4-10,A563 GRADE DH	J10514	7
	DESCRIPTION BRACE,DIAG,3.5X3.5X1/4,154.750 BPACER,3.5X2.75,1/4T,#4 BOLT,3/4-10,1.75,A325,STRUC VASHER,FLAT,3/4",ASTM F436 JUT,3/4-10,A563 GRADE DH	DESCRIPTION         PART #           BRACE,DIAG,3.5X3.5X1/4,154.750         BT26332G           BPACER,3.5X2.75,1/4T,#4         BT04           BOLT,3/4-10,1.75,A325,STRUC         J08284           VASHER,FLAT,3/4",ASTM F436         J11301           JUT,3/4-10,A563 GRADE DH         J10514

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BT26652G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 4X4X1/4, 154.750	BT26653G	2
2*	SPACER,5.0X4.0,1/4T,#10	BT10	6
3	BOLT,1-8,2.25,A325,STRUC	J09090	7
4	WASHER, FLAT, 1", ASTM F436	J11322	7
5	NUT,1-8,A563 GRADE DH	J10602	7
	*Use 2 at each location	1	

BT26796G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,DIAG,3X3X1/4,154.750	BT26797G	2
2	SPACER,3.5X2.75,1/4T,#4	BT04	3
3	BOLT,5/8-11,1.75,A325,STRUC	J07811	7
4	WASHER, FLAT, 5/8", ASTM F436	J11291	7
5	NUT,5/8-11,A563 GRADE DH	J10465	7

	BT26816G		
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X1/4, 154.750	BT26817G	2
2	SPACER,3.5X2.75,1/4T,#4	BT04	3
3	BOLT,5/8-11,1.75,A325,STRUC	J07811	7
4	WASHER,FLAT,5/8",ASTM F436	J11291	7
5	NUT 5/8-11 A563 GRADE DH	.110465	7



	BT13942G		
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 4X4X1/4, 172.000	BT13941G	2
2*	SPACER,5.0X4.0,1/4T,#10	BT10	6
3	BOLT,1-8,2.50,A325,STRUC	J09097	7
4	WASHER, FLAT, 1", ASTM F436	J11322	7
5	NUT,1-8,A563 GRADE DH	J10602	7

\*Use 2 at each location

BT1382	1G
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ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3.5X3.5X1/4, 172.000	BT13822G	2
2	SPACER,3.5X2.75,1/4T,#4	BT04	3
3	BOLT,3/4-10,1.75,A325,STRUC	J08284	7
4	WASHER,FLAT,3/4",ASTM F436	J11301	7
5	NUT,3/4-10,A563 GRADE DH	J10514	7

	BT81493G		
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3X3X1/4, 172.000	BT81494G	2
2	SPACER,3.5X2.75,1/4T,#4	BT04	3
3	BOLT,5/8-11,1.75,A325,STRUC	J07811	7
4	WASHER, FLAT, 5/8", ASTM F436	J11291	7
5	NUT,5/8-11,A563 GRADE DH	J10465	7

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE,DIAG,4X4X1/4,172.000	BT13113G	2
2*	SPACER,5.0X4.0,1/4T,#10	BT10	6
3	BOLT,7/8-9,2.25,A325,STRUC	J08255	7
4	WASHER, FLAT, 7/8", ASTM F436	J11312	7
5	NUT,7/8-9,A563 GRADE DH	J10583	7

\*Use 2 at each location

#### BT12203G

ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3.5X3.5X1/4, 172.000	BT12201G	2
2	SPACER,3.5X2.75,1/4T,#4	BT04	3
3	BOLT,5/8-11,1.75,A325,STRUC	J07811	7
4	WASHER,FLAT,5/8",ASTM F436	J11291	7
5	NUT,5/8-11,A563 GRADE DH	J10465	7

	BT30092G		
ITEM #	DESCRIPTION	PART #	QTY.
1	BRACE, DIAG, 3.5X3.5X1/4, 172.000	BT30093G	2
2	SPACER,3.5X3.0,3/8T,#7	BT07	3
3	BOLT,7/8-9,2.00,A325,STRUC	J08254	7
4	WASHER, FLAT, 7/8", ASTM F436	J11312	7
5	NUT,7/8-9,A563 GRADE DH	J10583	7

## **INTERNAL BRACING KITS**



BT46001G – Internal bracing kit for 4' x 6' tower

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE,INTERNAL,3X2X1/4,65.875"	BT46002G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.25,A325,STRUC	J08255	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

BT48009G – Internal bracing kit for 4' x 8' tower

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE,INTERNAL,3X2X1/4,87.563"	BT48006G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.25,A325,STRUC	J08255	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE,INTERNAL,3X2X1/4,114.375	BT08061G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.25,A325,STRUC	J08255	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

BT59002G – Internal bracing kit for 5' x 10' or 8' x 8' tower

#### BT60002G – Internal bracing kit for 6' x 6' tower

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE,INTERNAL,3X2X1/4,80.500	BT60001G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.25,A325,STRUC	J08255	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

# BT11455G – Internal bracing kit for 10' x 10' tower

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE,INTERNL,3X3X1/4,148.375	BT11456G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.25,A325,STRUC	J08255	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

#### BT15005G – Internal bracing kit for 10' x 14' tower

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE,INTERNL,3X3X3/16,185.500	BT15004G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.25,A325,STRUC	J08255	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

# BT81191G – Internal bracing kit for 8' x 10' tower

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE, INTERNAL, 3X2X1/4, 132.500	BT81192G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.25,A325,STRUC	J08255	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE,INTERNL,3X3X3/16,182.313	BT12173G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.25,A325,STRUC	J08255	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

BT12174G – Internal bracing kit for 12' x 12' tower

#### BT15538G – Internal bracing kit for 14' x 14' tower

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE, INTERNAL, 3X3X3/16, 216.25	BT15539G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.00,A325,STRUC	J08254	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

BT60431G – Internal bracing kit for 6' x 14' tower

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE,INTERNL,3X3X3/16,163.438	BT60432G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.00,A325,STRUC	J08254	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

# BT68004G – Internal bracing kit for 6'x 8' tower

ITEM #	DESCRIPTION	PART #	QTY.
1	TOWER, ELEV TIE BACK BRKT	BT10026G	4
2	BRACE,INTERNAL,3X2X1/4,98.938"	BT68003G	2
3	SPACER,3.5X3.0,1/4T,#6	BT06	2
4	BOLT,7/8-9,2.25,A325,STRUC	J08255	1
5	BOLT,7/8-9,2.00,A325,STRUC	J08254	4
6	WASHER,FLAT,7/8",ASTM F436	J11312	5
7	NUT,7/8-9,A563 GRADE DH	J10583	5
8	BOLT,1-8,3.5,A325,STRUC	J09092	8

#### Maintenance

#### Maintenance

Proper maintenance of support tower will help ensure many years of extended service. Guidelines below provide tips on maintenance inspections that should be performed on a regular basis. See Construction Safety section of this manual for safety guidelines.

## **Platforms and Stairs**

- At least twice a year, check for any debris on platforms and stairs. Not cleaning debris can cause rust to develop on metal.
- Support tower load ratings vary according to size of tower and local codes. If an excessive amount of ice accumulates or builds up unevenly on platforms or stairs, it must be removed. Take care to avoid hitting fasteners.
- When on platform and/or stairs, inspect them for any loose pieces or unusual wear.
- Clean any stains, dirt or rust that is found.
- Replace any missing nuts and/or bolts immediately.

#### **Braces, Legs & Connection Plates**

• Inspect tower on a regular basis. Check for any unusual changes in its appearance. Pay particular attention to joints. Replace any missing nuts and/or bolts immediately. Note any bending or cracks, which are signs of over-stress. If a serious structural problem is detected, contact Sukup Manufacturing Co.

# Foundation

- Inspect support tower and foundation for structural problems. Uneven foundation settling will compromise structural strength.
- Inspect concrete routinely for exposed rebar, unusual cracking, or spalling of concrete.
- Be sure all anchor bolts are tight and undamaged. Cracks that develop around anchor bolts result in tower being susceptible to wind damage. Be certain base of tower is uniformly anchored to foundation and all anchor bolts are tight.

#### **Contact Information**

# **Contact Information**

Owner's manuals are available from Sukup and additional copies can be requested at the address, phone number, or e-mail address shown below. Please indicate manual number L2506 when requesting the Support Tower Assembly and Owner's Manual.

#### **Sukup Dealer Information**

Dealer name:		
Address:		
Cell phone:		
Office phone:		
Fax:		

#### **Emergencies – Know What to Do**

Have emergency numbers and written directions to work site readily available in case of emergency. A place for emergency phone numbers to be recorded has been provided below.

Ambulance • Fire • Police: 9-1-1	
Bin rescue team:	
Emergency medical squad:	
911 Address of work site:	
Directions to work site:	



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