

TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X± 0.040
.XX± 0.020
.XXX± 0.010
.XXXX± 0.0020
ANGLES± 1°

METRIC DIMENSIONS
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Assembly / Setup Instructions

The following instructions apply to 71230, 71231, 71232, 71233, 71234, 71236.

Equipment / Tools Required

This product is shipped partially disassembled to reduce shipping costs, and will require a one-time assembly procedure prior to its first use.

Before starting, you will need the following:

- Lifting equipment: Overhead crane, 34 ft lift height
- Lifting Straps, 2000 lbs (909 kgs) capacity;
- Suitable access and fall protection equipment to safely access and work at the assembled height of the structure during assembly operations.
- Basic hand tools including;
 - Two (2) 9/16" flat wrenches.
 - Two (2) 3/4" flat wrenches.
 - 9/16" and 3/4" DEEP sockets with ratchet handle.
 - Two (2) Crescent wrenches.
 - Rubber mallet.
 - Pry bars
 - Taper punches
 - Two (2) Large "C" Style Clamps.
 - Tape Measure (25ft).
 - Torque Wrench (3/8" - 1/2" Drive, 150 ft.lbs max.)

The set-up of this equipment must be overseen by a Qualified Person as defined by OSHA & ANSI, and the assembled product fully inspected by that person prior to use by others.

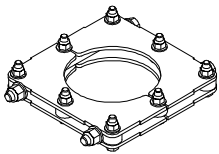
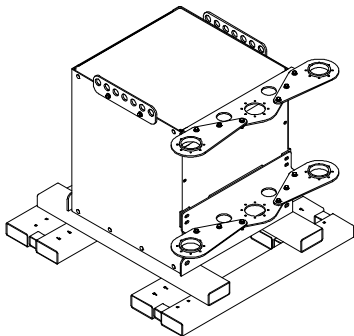
ITEM #	PART #	QTY	DESCRIPTION			
# Pcs per 1 unit		# Pcs for Workorder		# Pcs in STOCK		# Pcs to MFG
Tuff Built Products Inc.						
INVENTOR						
DRAWN BY: RB	CHECKED BY:	ENG. APPROVED BY:	MFG. APPROVED BY:	DIMENSIONS: INCHES (mm)		
DATE: 2023-05-10	DATE:	DATE:	DATE:	SCALE: NTS		
PROJECT:				DWG SIZE: A	REV #: 02	SHEET: 1 OF: 5
DESCRIPTION: Assembly Instructions, Pro-10-200				DWG #: PART #:	143906	

2	04JUL2025	Updated Torque value, Added Note	JS
1	06SEP2023	Added 71231	RGB
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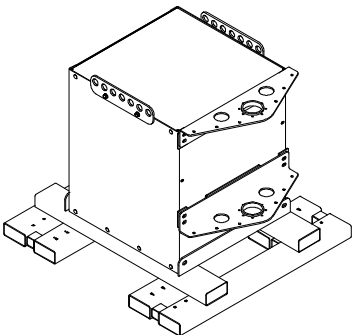


Cube Base;
Single, double or
triple mast setup.



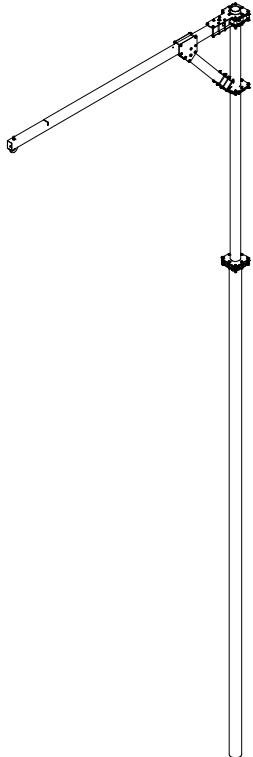
Pt# 71221
Ø5.00" Clamp
Three (3) pieces
required on every mast.

Cube Base;
Single mast setup.



Pt# 71541
Rotation Limiter
One (1) piece per mast
(if required)
refer to manual 135090 for
installation.

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Pt# 71371

Pt# 71373

Ø5.00 inch
mast assemblies.

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DATE: 2023-05-10	DATE:	DATE:	DATE:	SCALE: NTS		
PROJECT:				DWG SIZE:	REV #:	SHEET: 2
DESCRIPTION:				A	02	OF: 5
Assembly Instructions, Pro-10-200				DWG #:	143906	
				PART #:		

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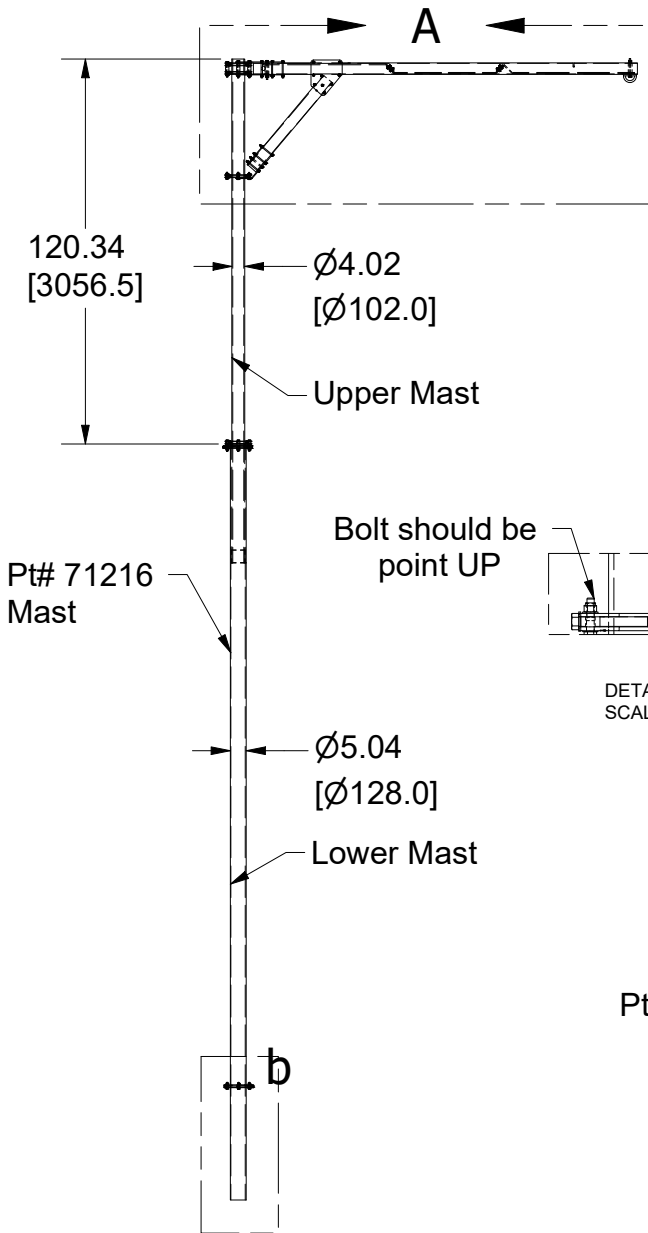
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Pt# 71216
MastBolt should be
point UPDETAIL C
SCALE 1 / 10

Pt# 71221

Ø5.04
[Ø128.0]DETAIL b
SCALE 1 / 201.00
[25.4]Pt# 71217
Arm Assembly
(Ø4.00 inch clamp)METRIC DIMENSIONS
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Install arm onto upper mast as shown.
Tighten ALL hardware;M10 = 41-47 Nm 3/8 = 30-35 lb.ft
M12 = 75-93 Nm 1/2 = 55-70 lb.ftDETAIL A
SCALE 1 / 30Ensure ALL Hardware is SNUG (doesn't freely rotate)
prior to Tightening to Specified Torque Value
DO NOT Over Tighten. Be Sure not to Crush the
Aluminum TubesStep 1; Assembly and Installation
of Mast / Arm / BracketThe Mast (Pt# 71216) has been shipped assembled.
The Arm (Pt# 71217) has been shipped assembled.
One (1) Ø5.00 inch Clamp (Pt#71221) has been
shipped assembled on the mast.

1. Position Arm assembly onto Upper mast, 1.00 inch down from TOP of STEEL TUBE.
2. "Snug" up 3/8" hardware.
3. "Snug" up 1/2" hardware.
4. Using torque wrench tighten 3/8" hardware.
5. Using torque wrench tighten 1/2" hardware.

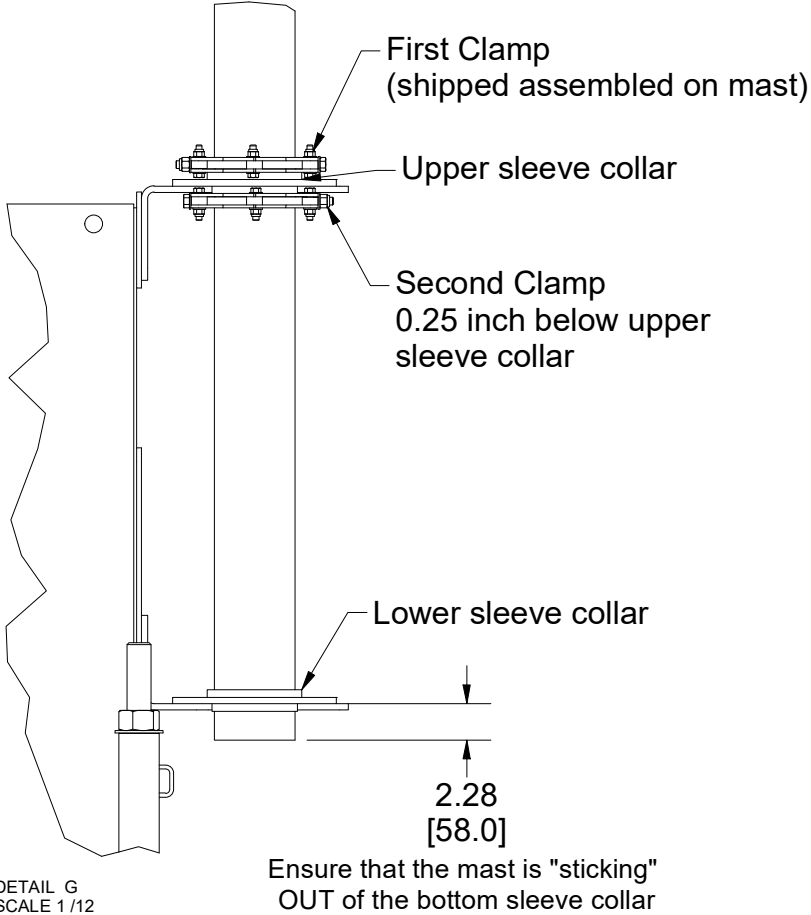
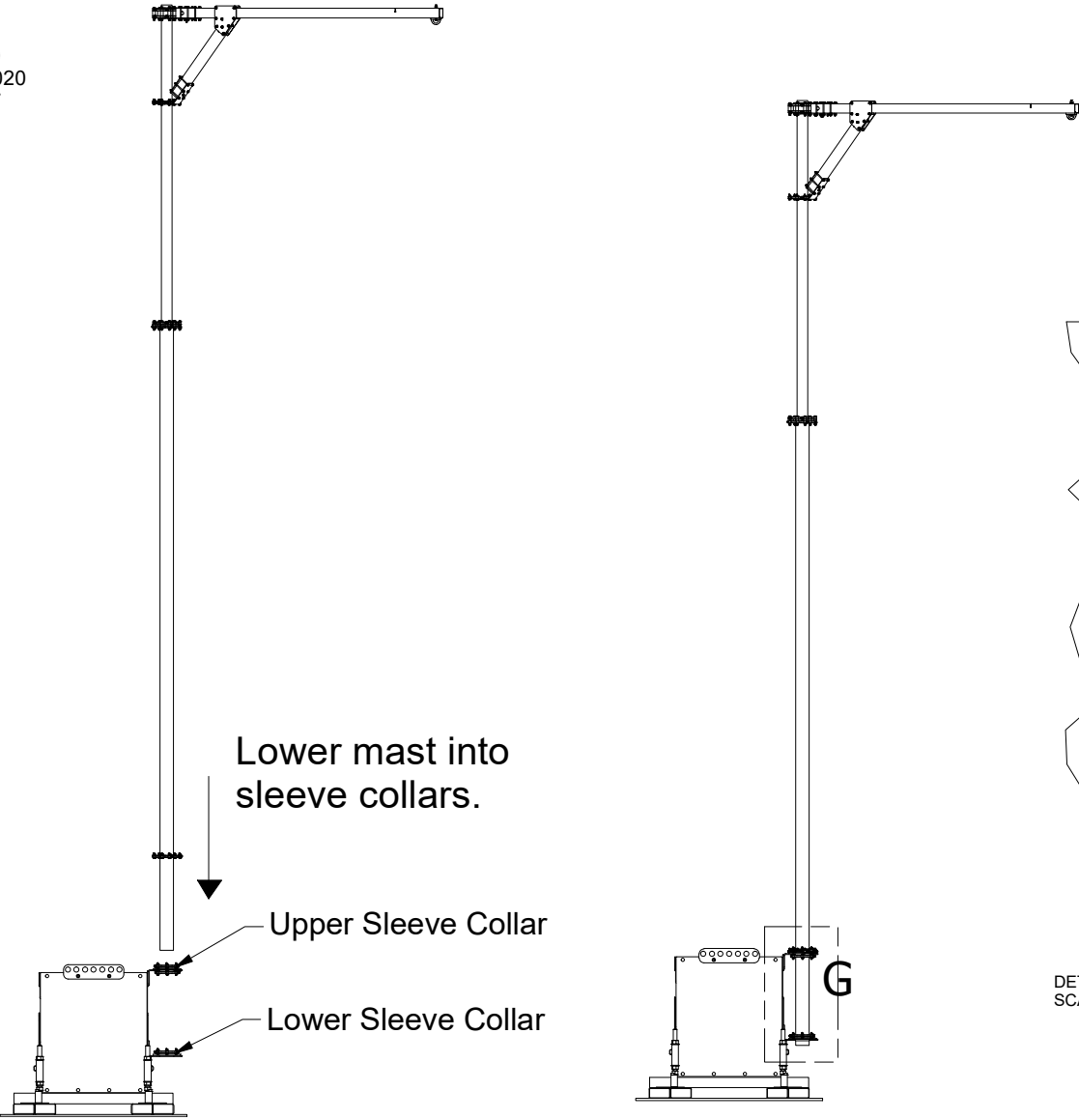
If supplied with multiple mast repeat per mast
assembly. ONLY ONE (1) ARM ASSEMBLY
CAN BE MOUNTED PER MAST TUBE.

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DATE: 2023-05-10	DATE:	DATE:	DATE:	SCALE: NTS		
PROJECT:				DWG SIZE:	REV #:	SHEET: 3
DESCRIPTION:				A	02	OF: 5
Assembly Instructions, Pro-10-200				DWG #:	143906	
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Step 2; Installation of Mast into Cube base
One (1) piece of Pt# 71221, Ø5.00" Clamp are required here.

- 1. Lift the assembled mast up and position over the cube base.
- 2. Align with the UPPER "sleeve" collar and lower the mast.
- 3. Ensure that the mast goes THROUGH the LOWER "sleeve" collar.
- 4. The clamp bracket on the mast should SIT on the UPPER "sleeve" collar.
- 5. Once installed, install the second clamp bracket onto the mast under the upper sleeve collar.

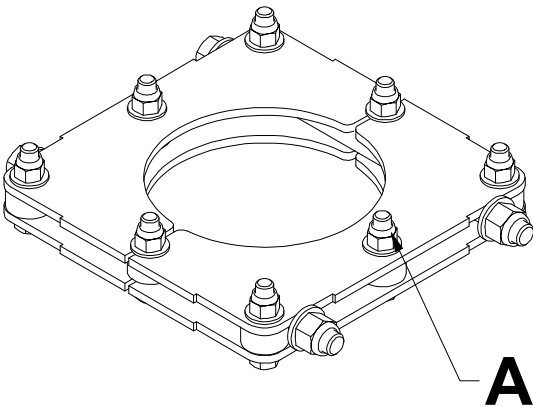
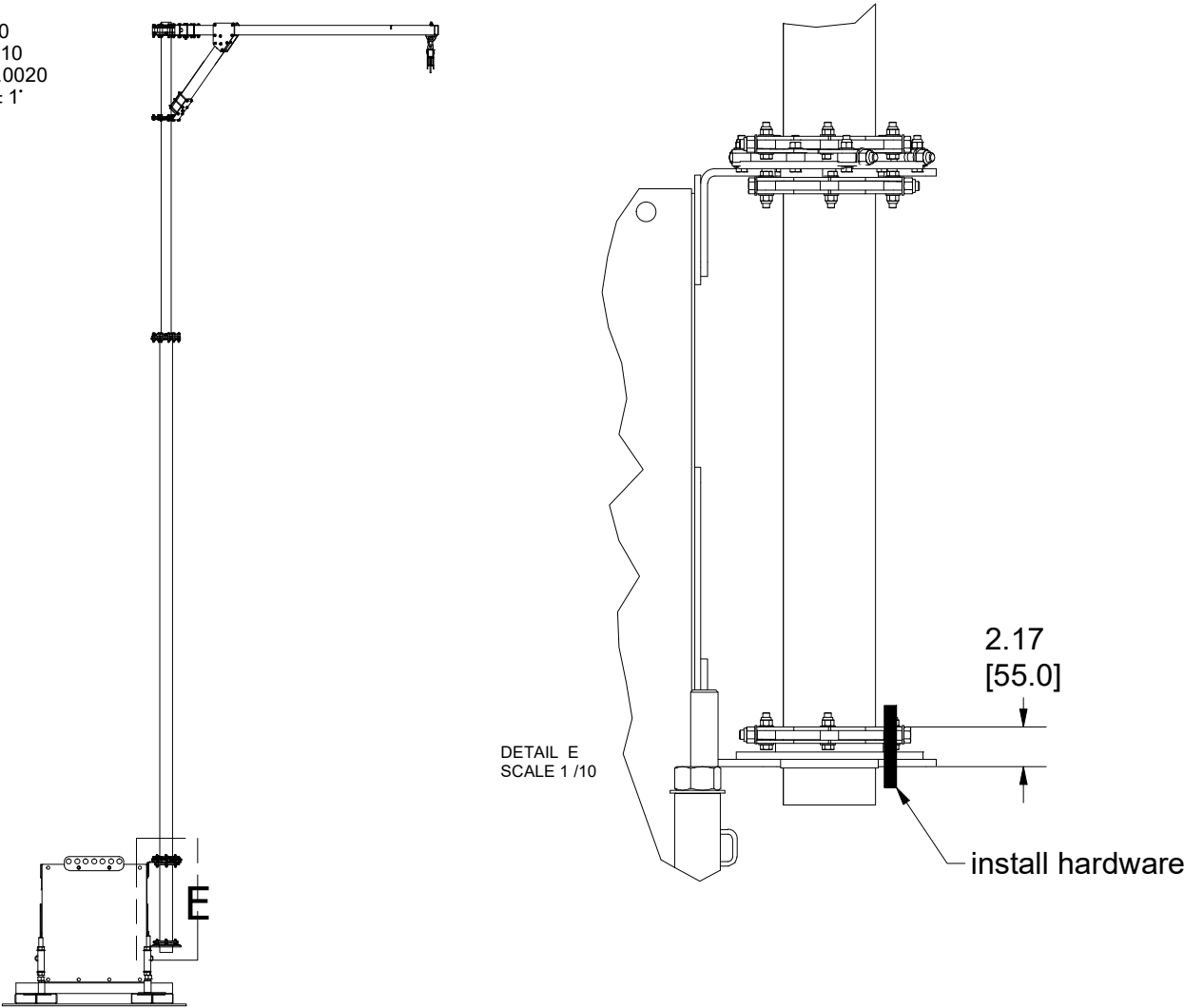
If supplied with multiple mast repeat per mast assembly.

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PROJECT:				DWG SIZE: A	REV #: 02	SHEET: 4 OF 5
DESCRIPTION: Assembly Instructions, Pro-10-200				DWG #:	143906	
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The following would LOCK the mast into one position with NO rotation feature.

Step 3; Installation of the Mast rotation lock clamp

- 1. Remove hardware "A"
- 2. Position the third clamp above the lower sleeve collar, with hardware pointed UP.
- 3. Align "A" with any hole located in the plate below the collar.
- 4. Install hardware and tighten.
- 5. Tighten clamp hardware.

The hardware install through "A" does not have to be over tight, it is there to prevent the mast from rotating.

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DATE: 2023-05-10	DATE:	DATE:	DATE:	SCALE: NTS		
PROJECT:				DWG SIZE: A	REV #: 02	SHEET: 5 OF: 5
DESCRIPTION:				DWG #:	143906	
Assembly Instructions, Pro-10-200				PART #:		

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