IRON ATTACH

IA-TB-100T

3-SECTION TELESCOPING TRUSS BOOM

PRODUCT MANUAL

ENGINEERED TO OUTPERFORM.

MODEL IA-TB-100T · REVISION 1.0 · 2026 · MANUFACTURED IN THE USA

Engineered to meet or exceed ASME BTH-1-2023 (Category B) and ASME B30.20.

6	16 FT	820 LB
RATED POSITIONS	MAX REACH	ATTACHMENT WEIGHT

1 INTRODUCTION & ENGINEERING COMPLIANCE

The **IA-TB-100T** is a professional-grade, 3-section telescoping truss boom for forklifts and telehandlers, built for high-capacity lifting and extended reach out to 16 feet. It is engineered to eliminate unsafe, improvised lifting of suspended or awkward loads. Every capacity on this boom was earned before the first piece of steel was cut: designed to the lifting-industry safety standard, stress-tested on the computer at every reach, and checked against independent hand calculations.

- **Compliance:** Designed and analyzed per **ASME BTH-1-2023** (Design of Below-the-Hook Lifting Devices), Design Category B, and **ASME B30.20** (marking, inspection, and use). Validated by finite element analysis and verified against independent hand calculation.
- **Design margin:** Every published rating carries at least a 3 to 1 design factor (Nd = 3.0), the standard for below-the-hook lifting equipment.
- **Materials:** Certified US structural steel throughout: A500 tube and A572 lift-lug material, with continuous welds at every structural joint. The lug and pad design is scaled from the field-proven **IA-JB-60T** jib boom.
- **Proof test:** The first article is pull-tested to 125 percent of every rating, before finish coating so the welds are inspected bare.
- **Country of origin:** Designed and **manufactured in the USA**.

2 TECHNICAL SPECIFICATIONS

SPECIFICATION	VALUE
Model	IA-TB-100T
Type	3-section telescoping truss boom, fork-mounted
Weight	820 lb
Length retracted	96 in (8 ft)
Length extended	198 in (16 ft 6 in)
Width	39 in (across fork pockets)
Height	15.5 in
Tip reach	7.5-16 ft (retracted to full)
Load center range	24-192 in (2-16 ft)
Lift points	2 fixed lift lugs + telescoping tip shackle (4 pin positions)
Construction	A500 Gr B/C HSS tube, A572-50 lift lugs, continuous welds
Fork pocket ID (inside)	7.63 in (W) x 3.63 in (H)
Fork pocket length	44 in

SPECIFICATION	VALUE
Fork pocket spacing	30 in center-to-center (fixed weldment)
Fork pocket span	22.38 in inside gap / 37.63 in outside
Fork retention	Retaining pins behind fork heels
Safety retention	Safety chain with locking mechanism
ASME BTH-1 Design Category	B (Nd = 3.0)
ASME BTH-1 Service Class	0
Finish	Premium Plascoat®, Anthracite Grey

3 STRUCTURAL CAPACITY TABLE

The IA-TB-100T has two kinds of rated lift point: two fixed **lift lugs** on the boom body (rated with the boom fully retracted) and the **tip shackle** at the end of the telescoping boom (rated by extension pin position). The table below defines the **structural limits** of the attachment. Every rating requires the boom level.

LIFT POINT	LOAD CENTER (IN)	PIN (MID / INNER)	MAX LOAD (LB)	BOOM CG FWD (IN)
Rear lug (retracted)	24	1 / IN	10,000	39.7
Forward lug (retracted)	66	1 / IN	6,000	39.7
Tip, Pos 1 (retracted)	90	1 / IN	4,000	39.7
Tip, Pos 2	114	2 / IN	3,250	49.3
Tip, Pos 3	138	3 / IN	2,750	59.0
Tip, Pos 4 (full 16 ft)	192	3 / OUT	2,000	68.4

Set **BOTH** extension pins to the marked setting before lifting. The lift lugs are rated with the boom **fully retracted only**. A tip rating applies only at its pinned extension, boom level. Load center is measured from the fork face to the lift point.

CRITICAL WARNING: These figures represent the attachment's structural capacity only. They do not reflect the safe lifting capacity of the host machine. Adding an attachment and reaching out in front of the forks reduces machine capacity significantly.

3.1 Obtaining De-Rated Capacities

Official “New Down-Rated Capacity” for any lift truck must be obtained from the lift truck manufacturer. Capacity for any lift is the **lower** of the boom rating above or the host machine's own de-rated capacity chart.

For a machine capacity-chart lookup, combine the boom and its maximum load into one equivalent weight at one load center:

CONFIGURATION	COMBINED WEIGHT (LB)	EQUIVALENT LOAD CENTER (IN)
Rear lug (24 in), retracted	10,820	25
Forward lug (66 in), retracted	6,820	63
Tip, retracted (90 in)	4,820	82
Tip, 9.5 ft (114 in)	4,070	101
Tip, 11.5 ft (138 in)	3,570	120
Tip, 16 ft (192 in)	2,820	157

To estimate net capacity for your specific machine and configuration, use the digital **Load Capacity Calculator** in the Technical Hub.

- Scan the QR code on the **Technical Hub** label or the **Load Chart** label.
- Select the lift point, enter your machine's rated capacity and load center, and read the safe working load.

4 INSTALLATION & OPERATIONAL SAFETY

4.1 Installation

1. **Insert forks:** Insert the forklift tines fully into the 44 in fork pockets until the boom seats against the fork heel stops.
2. **Set extension pins:** Set **both** extension pins to the marked position for your lift (see the load chart, Section 3). A tip rating applies only at its pinned extension.
3. **Retaining pins:** Install the retaining pins behind the heel of each fork.
4. **Safety chain:** Wrap the safety chain around a structural part of the carriage and secure it to the chain anchor points. Keep the chain as level as possible (angle < 45°) and secure the locking grab hook.
5. **Verification:** Do not operate without the retaining pins, the safety chain, and **both** extension pins properly set.

4.2 Operating Rules

- **Boom level:** Every rating requires the boom level. Level the boom before taking the load.
- **Lugs, retracted only:** The lift lugs are rated with the boom fully retracted only. Do not lift from a lug with the boom extended.
- **Vertical lift only:** Lift straight up. Do not pull, drag, or side-load the boom.
- **Pinch point awareness:** Keep hands clear of the telescoping sections during extension and retraction.
- **Personnel safety:** Maintain a minimum 10-foot fall zone in all directions around the load. Never carry or lift personnel.
- **Host machine:** Never exceed the host machine capacity chart. Capacity is the lower of this boom's chart or the machine's chart.

5 INSPECTION & MAINTENANCE

Inspect before every use:

- **Structural:** Check for excessive wear, cracked paint, elongated holes, or broken welds along all structural joints and at the lug pads.
- **Rigging hardware:** Ensure the tip shackle, retaining pins, extension pins, and safety chain are present and in good condition.
- **Bolted end plates:** Confirm the bolted middle-boom end cap and tip end plate are tight and secure.
- **Sliding sections:** Keep the telescoping faces clean of spatter and debris; lightly lubricate the sliding surfaces and pin holes so the sections move freely and pins seat fully.
- **Finish care:** Wash the Plascoat® finish with mild soap and lukewarm water; avoid abrasive pads and harsh chemicals.
- **Decals:** Verify all labels are present and legible, including the **Load Chart**, **Technical Hub QR**, and **warning** decals.

6 LIMITED WARRANTY

IRON ATTACH™ provides the following warranty to the original purchaser:

- **3-year structural warranty:** Covers the main boom and fork pocket weldment against defects in workmanship or materials.
- **1-year component warranty:** Covers hardware, including the shackle, pins, and safety chain.
- **Exclusions:** Misuse, accidental damage, normal wear and tear, or field repairs or alterations without prior written authorization.

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