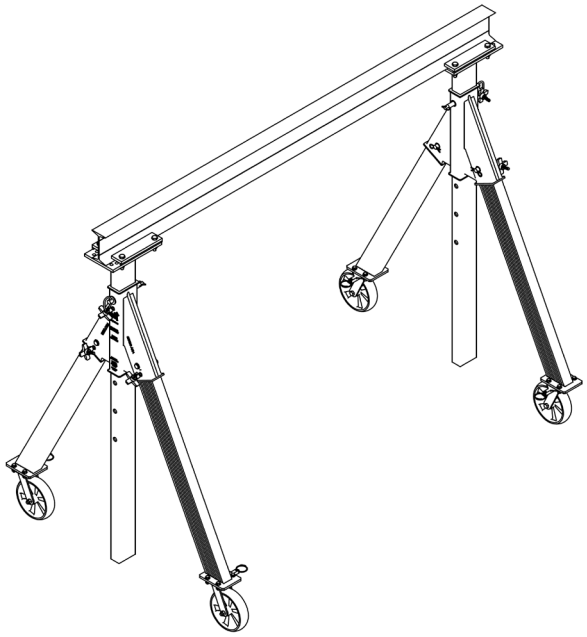
Vestil Manufacturing Corp.
2999 North Wayne Street, P.O. Box 507, Angola, IN 46703
Telephone: (260) 665-7586 -or- Toll Free (800) 348-0868
Fax: (260) 665-1339
Website: www.vestilmfg.com e-Mail: info@vestil.com

AHA-SERIES ALUMINUM ADJUSTABLE-HEIGHT GANTRY CRANE INSTRUCTION MANUAL



Receiving Instructions

After delivery, remove the packaging from the product. Inspect the product closely to determine whether it sustained damage during transport. If damage is discovered, record a complete description of it on the bill of lading. If the product is undamaged, discard the packaging.

NOTE: The end-user is solely responsible for confirming that product design, use, and maintenance comply with laws, regulations, codes, and mandatory standards applied where the product is used.

Technical Service & Replacement Parts

For answers to questions not addressed in these instructions and to order replacement parts, labels, and accessories, call our Technical Service and Parts Department at (260) 665-7586. The department can also be contacted online at http://www.vestilmfg.com/parts_info.htm.

Electronic copies of Instruction Manuals

Additional copies of this instruction manual may be downloaded from https://www.vestil.com/page-manuals.php.

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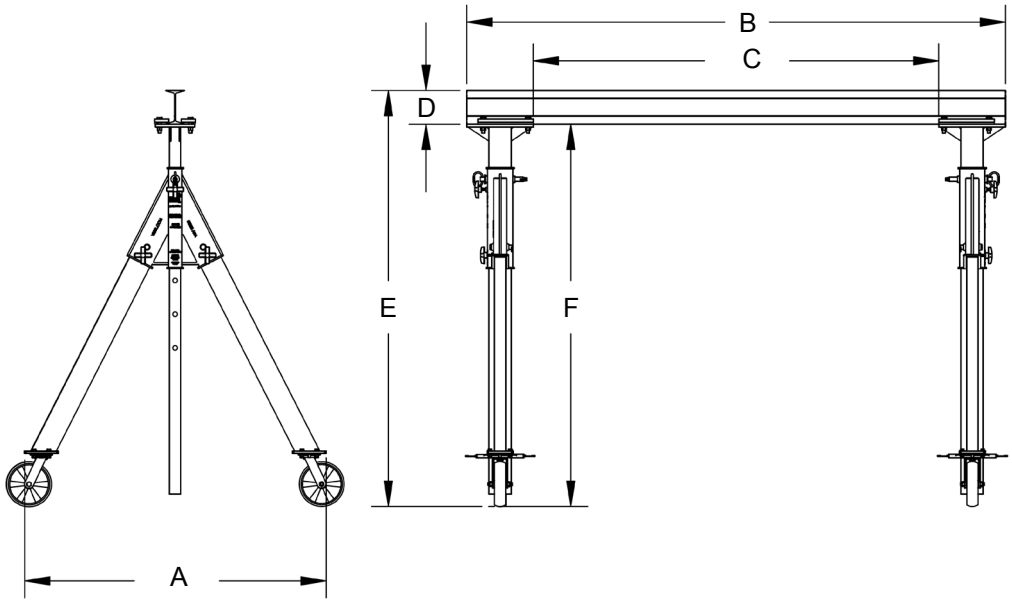
SPECIFICATIONS

Dimensions, net weight, and capacity information for each AHA-series crane is provided in the tables on pages 2, 3, and 4. However, minor changes in product design might alter specifications, particularly dimensions and net weight. To provide instant access to up-to-date information, documents that provide specifications for AHA series cranes are available online to anyone who visits the Vestil website. Acquire the appropriate specifications document by opening this webpage: https://www.vestil.com/product.php?FID=522 . Click the "Specifications" tab. Scroll the page to the entry for the specific model you purchased. Click the button in the "PDF" column that looks like a pencil inside a blue-bordered box. A PDF file will open. This file is the specifications document. Print a copy of the document as soon as your crane is delivered and keep it with your copy of this manual. If you encounter difficulties while trying to obtain a copy of the specifications document, contact *Technical Service*. Contact information is provided on the cover page of this manual.



Model	A: Overall width	B: Overall Beam Length	C: Usable beam length	D: Beam height	E: Overall height	F: Usable height range	Capacity	Net Weight
AHA-2-8-8	53 3/4 in. 136.5 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	6 in. 15.2 cm	(74-104) in. (188-264.2) cm	(68 – 98) in. (30.9 – 44.5) cm	2,000 lb. 909 kg	276 lb. kg
AHA-2-8-10	53 3/4 in. 136.5 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	6 in. 15.2 cm	(98-128) in. (249 - 325) cm	(92 – 122) in. (233.7 – 309.9) cm	2,000 lb. 909 kg	277 lb. kg
AHA-2-8-12	53 3/4 in. 136.5 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	6 in. 15.2 cm	(120 – 150) in. (304.8 – 381) cm	(114 – 144) in. (289.6 – 365.8) cm	2,000 lb. 909 kg	287 lb. kg
AHA-2-10-8	53 3/4 in. 136.5 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	6 in. 15.2 cm	(74 – 104) in. (188 – 264.2) cm	(68 – 98) in. (172.7 – 248.9)cm	2,000 lb. 909 kg	272 lb. kg
AHA-2-10-10	53 3/4 in. 136.5 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	6 in. 15.2 cm	(98 – 128) in. (248.9 – 325.1) cm	(92 – 122) in. (233.7 – 309.9) cm	2,000 lb. 909 kg	293 lb. kg
AHA-2-10-12	53 3/4 in. 136.5 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	6 in. 15.2 cm	(120 – 150) in. (304.8 – 381) cm	(114 – 144) in. (289.6 – 365.8) cm	2,000 lb. 909 kg	305 lb. kg
AHA-2-12-8	53 13/16 in. 136.7 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	8 in. 20.3 cm	(76 – 106) in. (193 – 268.2) cm	(68 – 98) in. (172.7 – 248.9) cm	2,000 lb. 909 kg	307 lb. kg
AHA-2-12-10	53 13/16 in. 136.7 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	8 in. 20.3 cm	(100 – 130) in. (254 – 330.2) cm	(92 – 122) in. (233.7 – 309.9) cm	2,000 lb. 909 kg	315 lb. kg
AHA-2-12-12	53 13/16 in. 136.7 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	8 in. 20.3 cm	(122 – 152) in. (309.9 – 386.1) kg	(114 – 144) in. (289.6 – 365.8) cm	2,000 lb. 909 kg	327 lb. kg
AHA-2-15-8	53 13/16 in. 136.7 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	8 in. 20.3 cm	(76 – 106) in. (193 – 269.2) cm	(68 – 98) in. (172.7 – 248.9) cm	2,000 lb. 909 kg	360 lb. kg
AHA-2-15-10	53 13/16 in. 136.7 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	8 in. 20.3 cm	(100 – 130) in. (254 – 330.2) cm	(92 – 122) in. (233.7 – 309.9) cm	2,000 lb. 909 kg	405 lb. kg
AHA-2-15-12	53 13/16 in. 136.7 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	8 in. 20.3 cm	(122 – 152) in. (309.9 – 386.1) kg	(114 – 144) in. (289.6 – 365.8) cm	2,000 lb. 909 kg	412 lb. kg
AHA-4-8-8	53 15/16 in. 137 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	8 in. 20.3 cm	(76 1/8 – 106 1/8) in. (193.5 – 269.7) cm	(68 1/8 – 98 1/8) in. (173.2 – 249.4) cm	4,000 lb. 1,818 kg	353 lb. kg
AHA-4-8-10	53 15/16 in. 137 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	8 in. 20.3 cm	(100 1/8 – 130 1/8) in. (254.3 – 330.5) cm	(92 1/8 – 122 1/8) in. (234 – 310.2) cm	4,000 lb. 1,818 kg	346 lb. kg
AHA-4-8-12	53 15/16 in. 137 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	8 in. 20.3 cm	(122 1/8 – 152 1/8) in. (310.2 – 386.4) kg	(114 1/8 – 144 1/8) in. (289.9– 366.1) cm	4,000 lb. 1,818 kg	372 lb. kg

AHA-4-10-8	53 15/16 in. 137 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	8 in. 20.3 cm	(76 1/8 – 106 1/8) in. (193.5 – 269.7) cm	(68 1/8 – 98 1/8) in. (173.2 – 249.4) cm	4,000 lb. 1,818 kg	339 lb. 135.5 kg
AHA-4-10-10	53 15/16 in. 137 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	8 in. 20.3 cm	(100 1/8 – 130 1/8) in. (254.3 – 330.5) cm	(92 1/8 – 122 1/8) in. (234 – 310.2) cm	4,000 lb. 1,818 kg	348 lb. Kg
AHA-4-10-12	53 15/16 in. 137 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	8 in. 20.3 cm	(122 1/8 – 152 1/8) in. (310.2 – 386.4) kg	(114 1/8 – 144 1/8) in. (289.9– 366.1) cm	4,000 lb. 1,818 kg	390 lb. Kg
AHA-4-12-8	53 15/16 in. 137 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	8 in. 20.3 cm	(76 3/16 – 106 3/16) in. (193.5 – 269.7) cm	(68 1/8 – 98 1/8) in. (173.2 – 249.4) cm	4,000 lb. 1,818 kg	353 lb. Kg
AHA-4-12-10	53 15/16 in. 137 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	8 in. 20.3 cm	(100 1/8 – 130 1/8) in. (254.3 – 330.5) cm	(92 1/8 – 122 1/8) in. (234 – 310.2) cm	4,000 lb. 1,818 kg	366 lb. Kg
AHA-4-12-12	53 15/16 in. 137 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	8 in. 20.3 cm	(122 1/8 – 152 1/8) in. (310.2 – 386.4) kg	(114 1/8 – 144 1/8) in. (289.9– 366.1) cm	4,000 lb. 1,818 kg	391 lb. Kg
AHA-4-15-8	53 15/16 in. 137 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	10 in. 25.4 cm	(78 3/16 – 108 3/16) in. (198.6 – 274.8) cm	(68 1/8 – 98 1/8) in. (173.2 – 249.4) cm	4,000 lb. 1,818 kg	399 lb. Kg
AHA-4-15-10	53 15/16 in. 137 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	10 in. 25.4 cm	(102 1/8 – 132 1/8) in. (259.4 – 335.6) cm	(92 1/8 – 122 1/8) in. (234 – 310.2) cm	4,000 lb. 1,818 kg	441 lb. Kg
AHA-4-15-12	53 15/16 in. 137 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	10 in. 25.4 cm	(124 1/8 – 154 1/8) in. (315.3 – 391.5) kg	(114 1/8 – 144 1/8) in. (289.9– 366.1) cm	4,000 lb. 1,818 kg	442 lb. Kg
AHA-6-8-8	64 11/16 in. 164.3 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	10 in. 25.4 cm	(84 - 108) in. (213.4 – 274.3) cm	(74 – 98) in. (188 – 249) cm	6,000 lb. 2,727 kg	444 lb. Kg
AHA-6-8-10	64 11/16 in. 164.3 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	10 in. 25.4 cm	(108 - 132) in. (274.3 – 335.3) cm	(98 – 122) in. (248.9 – 309.9) cm	6,000 lb. 2,727 kg	599 lb. kg
AHA-6-8-12	64 11/16 in. 164.3 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	10 in. 25.4 cm	(132 - 156) in. (335.3 – 396.2) cm	(122 – 146) in. (309.9 – 370.8) cm	6,000 lb. 2,727 kg	602 lb. kg
AHA-6-10-8	64 11/16 in. 164.3 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	10 in. 25.4 cm	(84 – 108) in. (213.4 – 274.3) cm	(74 – 98) in. (188.0 – 248.9) cm	6,000 lb. 2,727 kg	476 lb. kg
AHA-6-10-10	64 11/16 in. 164.3 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	10 in. 25.4 cm	(108 – 132) in. 274.3 – 335.3) cm	(98 – 122) in. (248.9 – 309.9) cm	6,000 lb. 2,727 kg	494 lb. kg
AHA-6-10-12	64 11/16 in. 164.3 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	10 in. 25.4 cm	(132 - 156) in. (335.3 – 396.2) cm	(122 – 146) in. (309.9 – 370.8) cm	6,000 lb. 2,727 kg	515 lb. kg
AHA-6-12-8	64 11/16 in. 164.3 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	12 in. 30.5 kg	(86 – 110) in. (218.4 – 279.4) kg	(74 – 98) in. (188 – 249) cm	6,000 lb. 2,727 kg	757 lb. kg
AHA-6-12-10	64 11/16 in. 164.3 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	12 in. 30.5 kg	(110 – 134) in. 279.4 – 340.4) cm	(98 – 122) in. (248.9 – 309.9) cm	6,000 lb. 2,727 kg	775 lb. kg
AHA-6-12-12	64 11/16 in. 164.3 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	12 in. 30.5 kg	(134 – 158) in. (340.4 – 401.3) kg	(122 – 146) in. (309.9 – 370.8) cm	6,000 lb. 2,727 kg	777 lb. kg
AHA-6-15-8	64 11/16 in. 164.3 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	12 in. 30.5 kg	(86 – 110) in. (218.4 – 279.4) cm	(74 – 98) in. (188 – 249) cm	6,000 lb. 2,727 kg	856 lb. kg
AHA-6-15-10	64 11/16 in. 164.3 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	12 in. 30.5 kg	(110 - 134) in. (279.4 – 340.4) cm	(98 – 122) in. (248.9 – 309.9) cm	6,000 lb. 2,727 kg	874 lb. kg
AHA-6-15-12	64 11/16 in. 164.3 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	12 in. 30.5 kg	(134 – 158) in. (340.4 – 401.3) kg	(122 – 146) in. (309.9 – 370.8) cm	6,000 lb. 2,727 kg	894 lb. kg

Adjustable Height Aluminum Gantry Cranes with Pneumatic Casters (suffix –PNU)								
AHA-15-8-8-PNU	53 3/4 in. 136.5 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	6 in. 15.2 cm	(80 1/4 - 110 1/4) in. (203.8 – 280.0) cm	(74 1/4 - 104 1/4) in. (188.6 – 264.8) cm	1,500 lb. 681.8 kg	268 lb. kg
AHA-15-8-10-PNU	53 3/4 in. 136.5 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	6 in. 15.2 cm	(104 1/4 - 134 1/4) in. (264.8 – 341.0) cm	(98 1/4 - 128 1/4) in. (249.6 – 325.8) cm	1,500 lb. 681.8 kg	279 lb. kg
AHA-15-8-12-PNU	53 3/4 in. 136.5 cm	96 in. 243.8 cm	72 1/4 in. 183.5 cm	6 in. 15.2 cm	(126 1/4 - 156 1/4) in. (320.7 – 396.8) cm	(120 1/4 - 150 1/4) in. (305.4 – 381.6) cm	1,500 lb. 681.8 kg	288 lb. kg
AHA-15-10-8-PNU	53 3/4 in. 136.5 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	6 in. 15.2 cm	(80 1/4 - 110 1/4) in. (203.8 – 280.0) cm	(74 1/4 - 104 1/4) in. (188.6 – 264.8) cm	1,500 lb. 681.8 kg	275 lb. kg
AHA-15-10-10-PNU	53 3/4 in. 136.5 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	6 in. 15.2 cm	(104 1/4 - 134 1/4) in. (264.8 – 341.0) cm	(98 1/4 - 128 1/4) in. (249.6 – 325.8) cm	1,500 lb. 681.8 kg	286 lb. kg
AHA-15-10-12-PNU	53 3/4 in. 136.5 cm	120 in. 304.8 cm	96 1/4 in. 244.5 cm	6 in. 15.2 cm	(126 1/4 - 156 1/4) in. (320.7 – 396.8) cm	(120 1/4 - 150 1/4) in. (305.4 – 381.6) cm	1,500 lb. 681.8 kg	295 lb. kg
AHA-15-12-8-PNU	53 3/4 in. 136.5 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	8 in. 20.3 cm	(82 1/4 - 112 1/4) in. (208.9 – 285.1) cm	(74 1/4 - 104 1/4) in. (188.6 – 264.8) cm	1,500 lb. 681.8 kg	297 lb. kg
AHA-15-12-10-PNU	53 3/4 in. 136.5 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	8 in. 20.3 cm	(106 1/4 - 136 1/4) in. (269.9 – 346.1) cm	(98 1/4 - 128 1/4) in. (249.6 – 325.8) cm	1,500 lb. 681.8 kg	308 lb. kg
AHA-15-12-12-PNU	53 3/4 in. 136.5 cm	144 in. 365.8 cm	120 1/4 in. 305.4 cm	8 in. 20.3 cm	(128 1/4 - 158 1/4) in. (325.8 – 402.0) cm	(120 1/4 - 150 1/4) in. (305.4 – 381.6) cm	1,500 lb. 681.8 kg	317 lb. kg
AHA-15-15-8-PNU	53 3/4 in. 136.5 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	8 in. 20.3 cm	(82 1/4 - 112 1/4) in. (208.9 – 285.1) cm	(74 1/4 - 104 1/4) in. (188.6 – 264.8) cm	1,500 lb. 681.8 kg	348 lb. kg
AHA-15-15-10-PNU	53 3/4 in. 136.5 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	8 in. 20.3 cm	(106 1/4 - 136 1/4) in. (269.9 – 346.1) cm	(98 1/4 - 128 1/4) in. (249.6 – 325.8) cm	1,500 lb. 681.8 kg	359 lb. kg
AHA-15-15-12-PNU	53 3/4 in. 136.5 cm	180 in. 457.2 cm	156 1/4 in. 396.9 kg	8 in. 20.3 cm	(128 1/4 - 158 1/4) in. (325.8 – 402.0) cm	(120 1/4 - 150 1/4) in. (305.4 – 381.6) cm	1,500 lb. 681.8 kg	368 lb. kg

Optional Equipment	Description
AHA-2/4-TLC	TOTAL LOCKING CASTERS (SET OF 4; ONLY FOR 2,000 & 4,000LB. CAPACITY MODELS)
AHA-PNU-RF	RETROFIT FOUR-WAY LOCKING PNEUMATIC CASTERS (1,500 POUND CAPACITY)
AHA-2/4-V	8IN. X 2IN. V-GROOVE WHEELS (SET OF 4; 2,000 & 4,000LB. CAPACITY MODELS ONLY)
AHA-2/4-V4	8IN. X 2IN. V-GROOVE WHEELS (SET OF 4 WITH 4-POSITION LOCK; ONLY FOR 2,000 & 4,000LB. CAPACITY MODELS)
AHA-KIT	(2) COME-ALONG FOR HEIGHT ADJUSTMENT ONLY

SIGNAL WORDS

This manual uses SIGNAL WORDS to indicate the likelihood of personal injuries, as well as the probable seriousness of those injuries, if the product is misused in the ways described. Other signal words call attention to uses of the product likely cause property damage. The signal words used appear below along with the meaning of each word:

DANGER — **Identifies a hazardous situation which, if not avoided, WILL result in DEATH or SERIOUS INJURY. Use of this signal word is limited to the most extreme situations.**

WARNING — **Identifies a hazardous situation which, if not avoided, COULD result in DEATH or SERIOUS INJURY.**

NOTICE — **Identifies practices likely to result in product/property damage, such as operation that might damage the crane.**

SAFETY INSTRUCTIONS

Vestil strives to identify foreseeable hazards associated with the use of its products. However, no manual can address every conceivable risk. The most effective way to avoid injury is to exercise sound judgment when assembling, using, inspecting, and maintaining this ladder. **Keep a copy of this manual with the crane at all times.** For example, put the copy inside a plastic pouch and attach the pouch to the frame. **Anyone who uses this crane must be made aware that a copy of the manual is available and where to find it.**

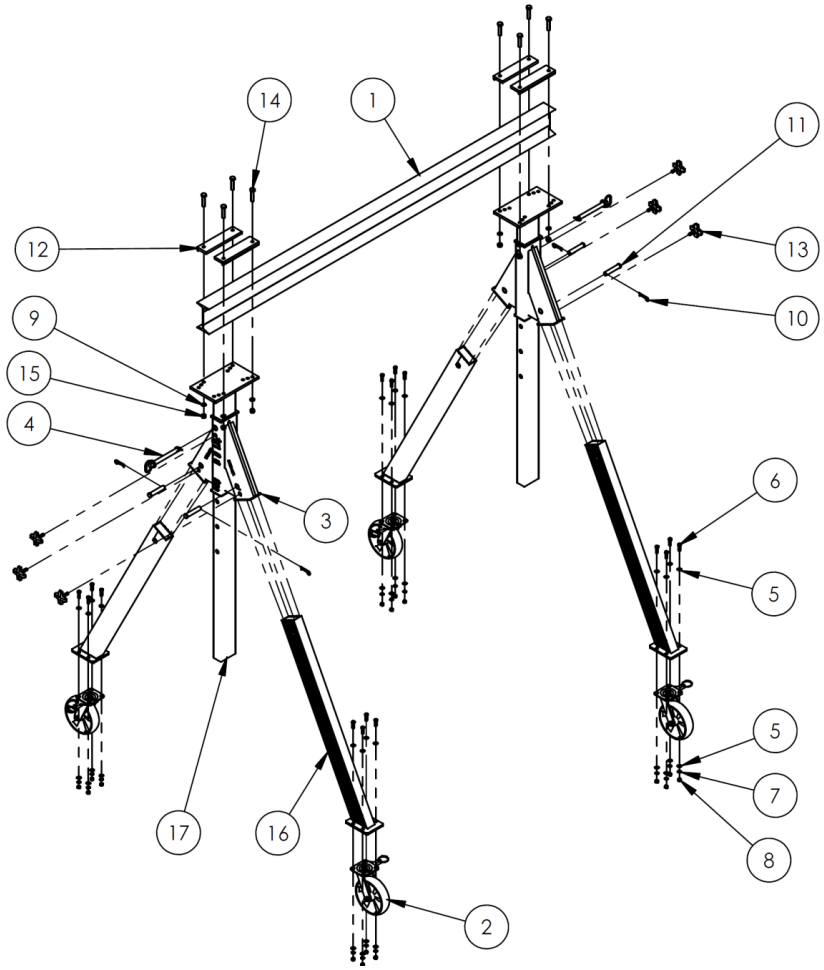
DANGER Electrocution might result if the crane contacts electrified wires.

- DO NOT assemble, maintain, or use the crane in an area where it could contact electrified wires.
- Regularly inspect electrical wiring in the area where the crane is used. DO NOT contact electrical wiring, especially wiring with exposed conductors (damaged insulation) with the crane.

WARNING Material handling is dangerous. Improper or careless operation might result in serious personal injuries. To reduce the risk of injury:

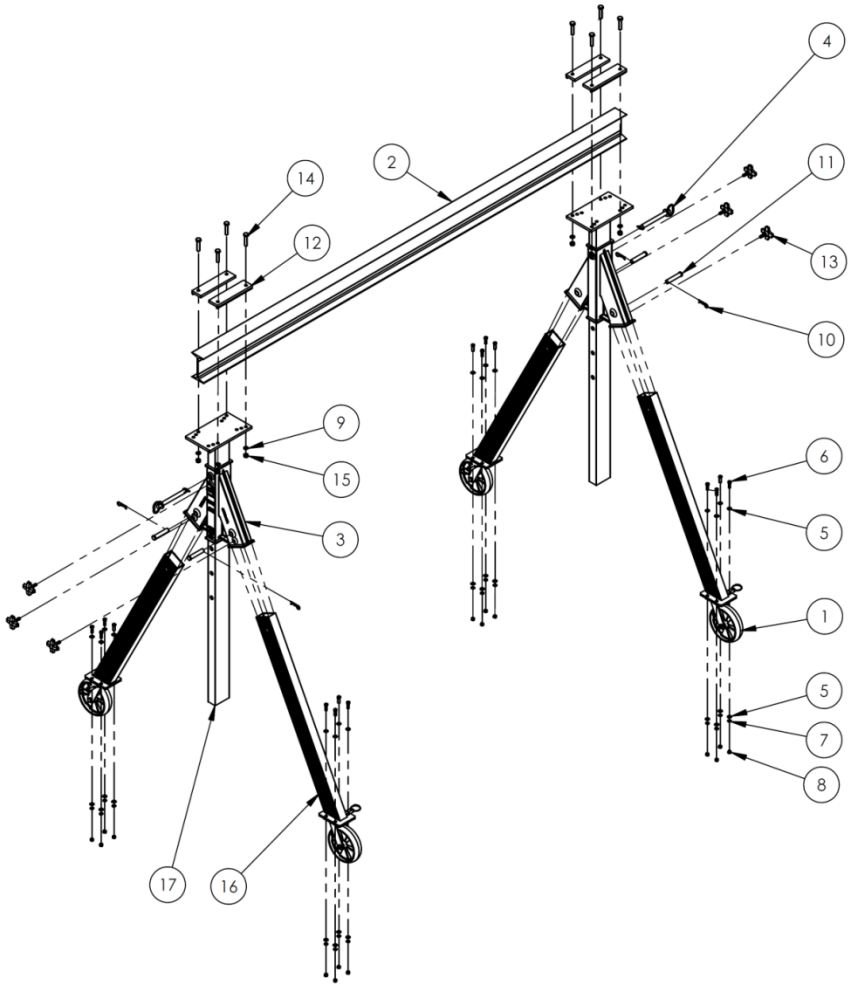
- Inspect the usage area each time the crane is used. Make sure that all debris on the ground is removed.
- DO NOT use a damaged or malfunctioning crane. ALWAYS inspect the crane before each use by following the *INSPECTIONS* instructions on p. 22-23. DO NOT use the crane unless it passes every part of the appropriate inspection. DO NOT use the crane unless it is in *SATISFACTORY CONDITION*. See *RECORD* page 21-22.
- DO NOT attempt to adjust the height of crane while a load is applied to it.
- Secure any hoist and/or trolley attached to the crane in the center of the I-beam before adjusting crane height.
- DO NOT attempt to lift a load that weighs more than the capacity of your crane. Capacity for each AHA model crane is provided in the *SPECIFICATIONS* tables on pages 2, 3, & 4. Capacity also appears in the *LABELING DIAGRAM* section of this manual on p. 23, as well as on capacity labels applied to the product.
- Keep clear of the suspended load. DO NOT put any part of your body under the load while it is suspended.
- Inform all persons in the usage area that you are going to use the crane; instruct them to stay clear of the crane and the load during operation.
- DO NOT lift people with the crane. DO NOT lift loads over people.
- DO NOT allow people to climb on the load or the crane.
- DO NOT operate manual motions with other than manual power.
- DO NOT push or pull the crane with a vehicle. Slowly and carefully push on the trailing end of the crane to move it. DO NOT stand beneath the I-beam while pushing the crane. Only traverse even, level ground.
- ALWAYS load the crane in accordance with *LOADING THE CRANE* recommendations on p. 21.
- DO NOT lift a load unless it is centered under your hoist. A swinging load might cause serious injury.
- DO NOT remove or obscure any label on the crane. DO NOT use the crane if any label is damaged, missing, or not easily readable. See *LABELING DIAGRAM* on p. 23. Contact Vestil for replacement labels.
- DO NOT modify the crane in any way without the express approval of Vestil in writing. Unapproved modifications automatically void the *LIMITED WARRANTY* and might make the crane unsafe to use.
- **DO NOT use the crane to transport loads. ONLY use the crane to lift loads!**

FIG. 1: Exploded view of models AHA-2-8-8, AHA-2-8-10, & AHA-2-8-12



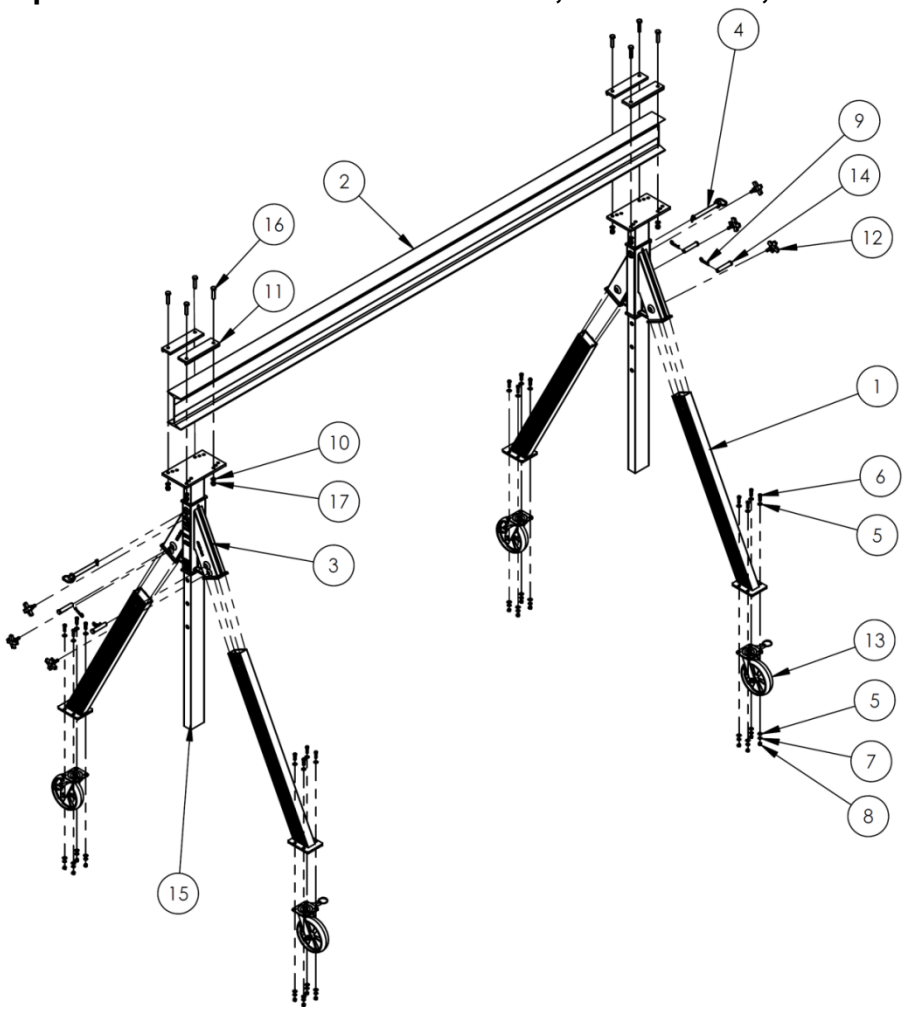
Item	Part no.	Description	Quantity
1	28-014-986-001	6in. (H) x 3.314 in. (W) x 96 in. (L) inch aluminum I-beam	1
2	GFN-8/2-S-4PSL (16-132-249)	Glass filled nylon 4-position swivel locking caster	4
3	28-014-190	Casting, aluminum 2k yoke	2
4	28-112-007	Pin, retaining, ¾ in. x 6 in. usable length	2
5	33082	$^{3}/_{8}$ in. zinc plated SAE flat washer	32
6	11107	$^{3}/_{8}$ in. – 16 x 1¼ HHCS #2 zinc-plated bolt	16
7	33622	$^{3}/_{8}$ in. zinc plated lock washer	16
8	36106	$^{3}/_{8}$ in. – 16 zinc plated hex nut	16
9	33626	½ in. zinc-plated lock washer	8
10	45286	$^{1}/_{8}$ in. x $2^{5}/_{8}$ in. #11 hitch pin clip	4
11	33-112-034	Pin, clevis, ¾ in. x $3^{1}/_{2}$ in. usable length	4
12	28-516-054	I-beam clamp weldment	4
13	08-025-007	Knob, $^{3}/_{8}$ in. – 16 UNC THD x $1^{1}/_{4}$ long	6
14 & 15	11134585	Structural nut and bolt combo: ½ in. – 13 x 2½ in. A325 galvanized ½ in. – 13 A325 galvanized	8
16	28-514-220	2k leg tube weldment	4
17	28-514-227 28-514-228 28-514-229	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-2-8-8 AHA-2-8-10 AHA-2-8-12	 2 2 2

FIG. 2: Exploded view of models AHA-2-10-8, AHA-2-10-10, & AHA-2-10-12



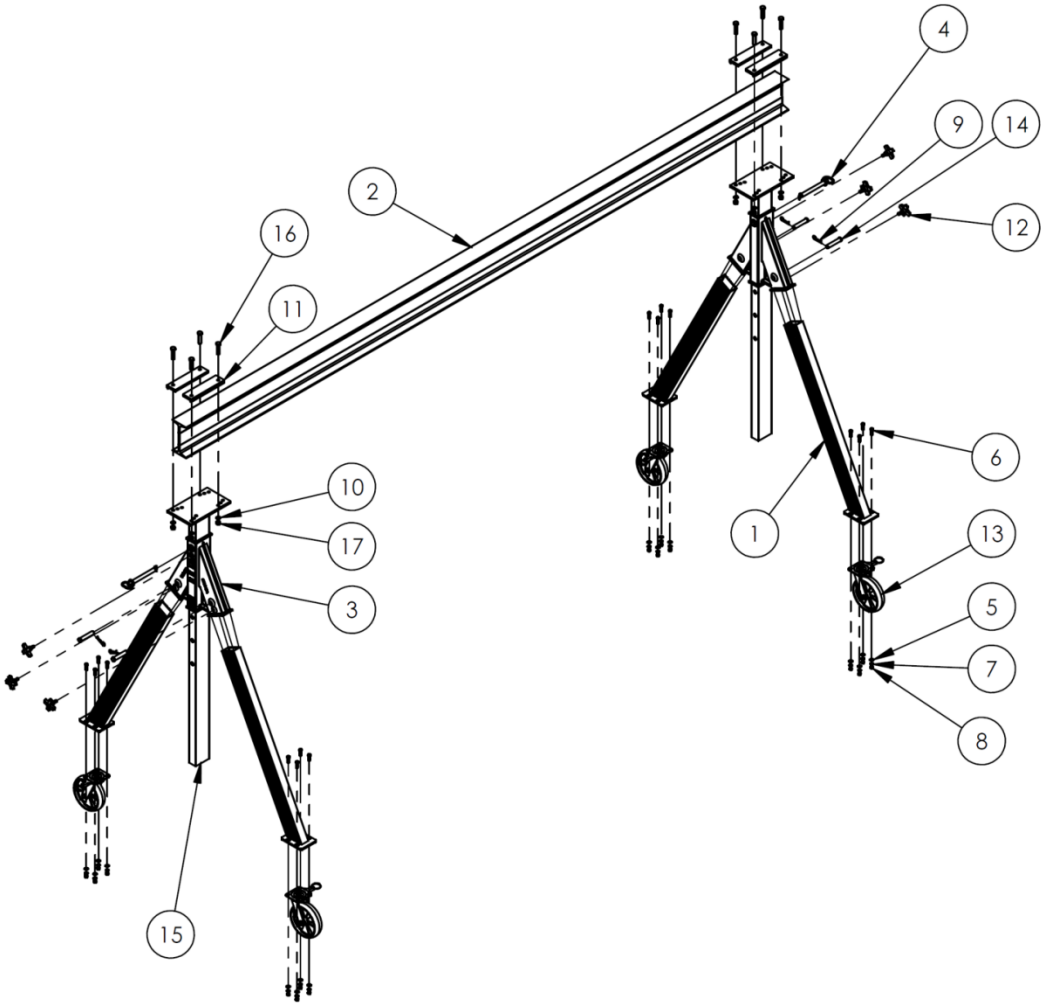
Item	Part no.	Description	Quantity
1	GFN-8/2-S-4PSL (16-132-249)	Glass filled nylon 4-position swivel locking caster	4
2	28-014-986-002	6in. (H) x 3.314 in. (W) x 120 in. (L) inch aluminum I-beam	1
3	28-014-190	Casting, aluminum 2k yoke	2
4	28-112-007	Pin, retaining, ¾ in. x 6 in. usable length	2
5	33082	$^{3}/_{8}$ in. zinc plated SAE flat washer	32
6	11107	$^{3}/_{8}$ in. – 16 x 1¼ HHCS #2 zinc-plated bolt	16
7	33622	$^{3}/_{8}$ in. zinc plated lock washer	16
8	36106	$^{3}/_{8}$ in. – 16 zinc plated hex nut	16
9	33626	½ in. zinc-plated lock washer	8
10	45286	$^{1}/_{8}$ in. x $2^{5}/_{8}$ in. #11 hitch pin clip	4
11	33-112-034	Pin, clevis, ¾ in. x $3^{1}/_{2}$ in. usable length	4
12	28-516-054	I-beam clamp weldment	4
13	08-025-007	$^{3}/_{8}$ in. – 16 UNC threaded knob, TT-18-PED	6
14 & 15	11134585	½ in. – 13 x 2½ in.A325 galvanized structural nut & bolt combo ½ in. – 13 A325 galvanized structural nut & bolt combo	8
16	28-514-220	2k leg tube weldment	4
17	28-514-227 28-514-228 28-514-229	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-2-10-8 AHA-2-10-10 AHA-2-10-12	2 2 2

FIG. 3: Exploded view of models AHA-2-12-8, AHA-2-12-10, & AHA-2-12-12



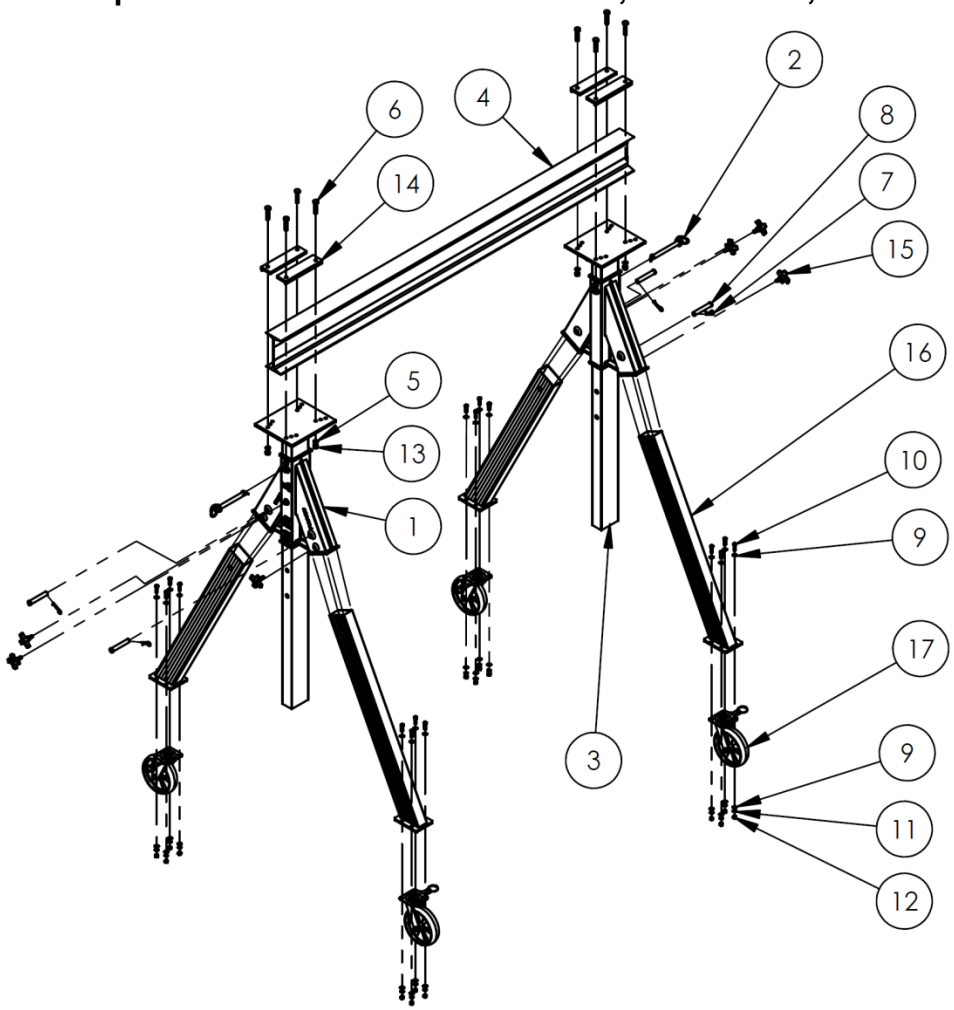
Item	Part no.	Description	Quantity
1	28-514-220	2k leg tube weldment	4
2	28-014-987-002	8 in. (H) x 4 in. (W) x 144 in. (L) aluminum I-beam	1
3	28-014-190	Casting, aluminum 2k yoke	2
4	28-112-007	Pin, retaining ¾ in. x 6 in. usable length	2
5	33082	$^{3}/_{8}$ in. zinc plated SAE flat washer	32
6	11107	$^{3}/_{8}$ in. – 16 x 1¼ HHCS #2 zinc-plated bolt	16
7	33622	$^{3}/_{8}$ in. zinc plated lock washer	16
8	36106	$^{3}/_{8}$ in. – 16 zinc plated hex nut	16
9	45286	$^{1}/_{8}$ in. x $2^{5}/_{8}$ in. #11 hitch pin clip	4
10	33626	½ in. zinc-plated lock washer	8
11	28-516-054	I-beam clamp weldment	4
12	08-025-007	$^{3}/_{8}$ in. – 16 UNC threaded knob, TT-18-PED	6
13	GFN-8/2-S-4PSL (16-132-249)	Glass filled nylon 4-position swivel locking caster	4
14	33-112-034	Pin, clevis, ¾ in. x $3^{1}/_{2}$ in. usable length	4
15	28-514-227 28-514-228 28-514-229	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-2-12-8 AHA-2-12-10 AHA-2-12-12	 2 2 2
16 & 17	11134585	½ in. – 13 x 2½ in.A325 galvanized structural nut & bolt combo ½ in. – 13 A325 galvanized structural nut & bolt combo	8

FIG. 4: Exploded view of models AHA-2-15-8, AHA-2-15-10, & AHA-2-15-12



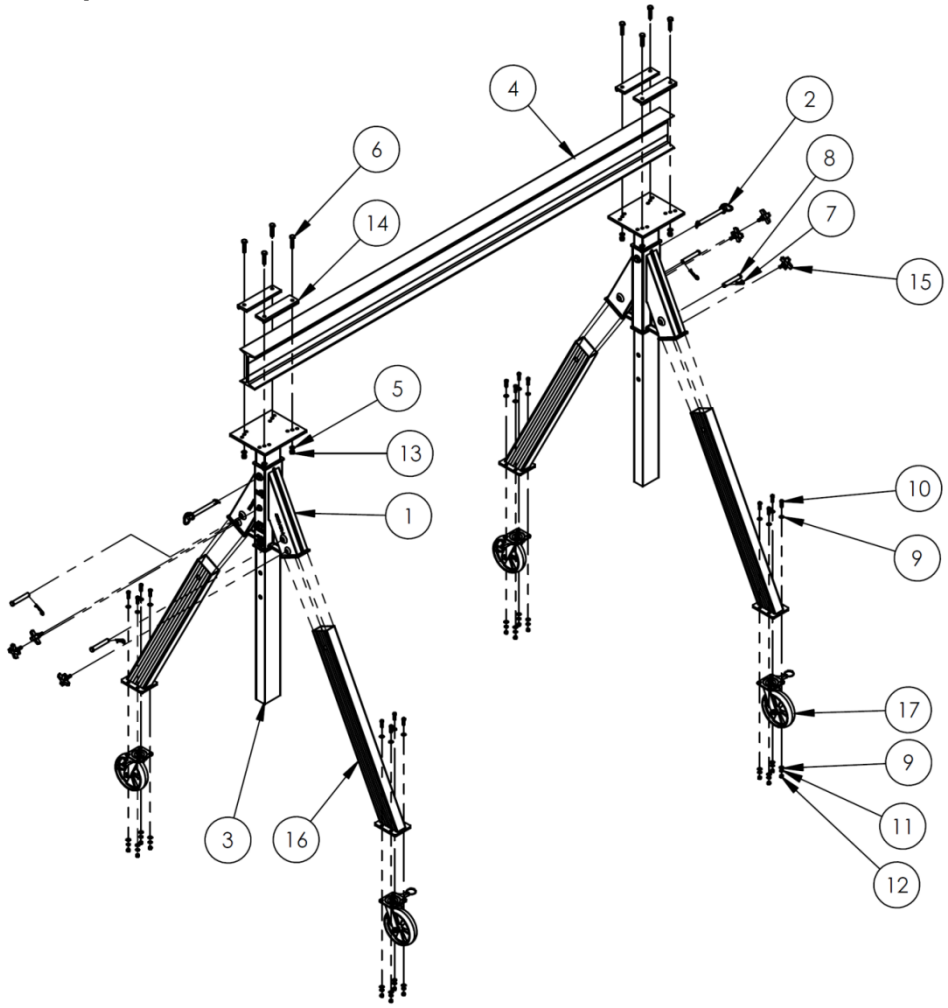
Item	Part no.	Description	Quantity
1	28-514-220	2k leg tube weldment	4
2	28-014-988-004	8 in. (H) x 4.17 in. (W) x 180 in. (L) aluminum I-beam	1
3	28-014-190	Casting, aluminum 2k yoke	2
4	28-112-007	Retaining, pin, ¾ in. x 6 in. usable length	2
5	33082	$^{3}/_{8}$ in. zinc plated SAE flat washer	32
6	11107	$^{3}/_{8}$ in. – 16 x 1¼ HHCS #2 zinc-plated bolt	16
7	33622	$^{3}/_{8}$ in. zinc plated lock washer	16
8	36106	$^{3}/_{8}$ in. – 16 zinc plated hex nut	16
9	45286	$^{1}/_{8}$ in. x $2^{5}/_{8}$ in. #11 hitch pin clip	4
10	33626	½ in. zinc-plated lock washer	8
11	28-516-054	I-beam clamp weldment	4
12	08-025-007	$^{3}/_{8}$ in. – 16 UNC threaded knob, TT-18-PED	6
13	GFN-8/2-S-4PSL (16-132-249)	Glass filled nylon 4-position swivel locking caster	4
14	33-112-034	Pin, clevis, ¾ in. x $3^{1}/_{2}$ in. usable length	4
15	28-514-227 28-514-228 28-514-229	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-2-15-8 AHA-2-15-10 AHA-2-15-12	 2 2 2
16 & 17	11134585	½ in. – 13 x 2½ in.A325 galvanized structural nut & bolt combo ½ in. – 13 A325 galvanized structural nut & bolt combo	8

FIG. 5: Exploded view of models AHA-4-8-8, AHA-4-8-10, & AHA-4-8-12



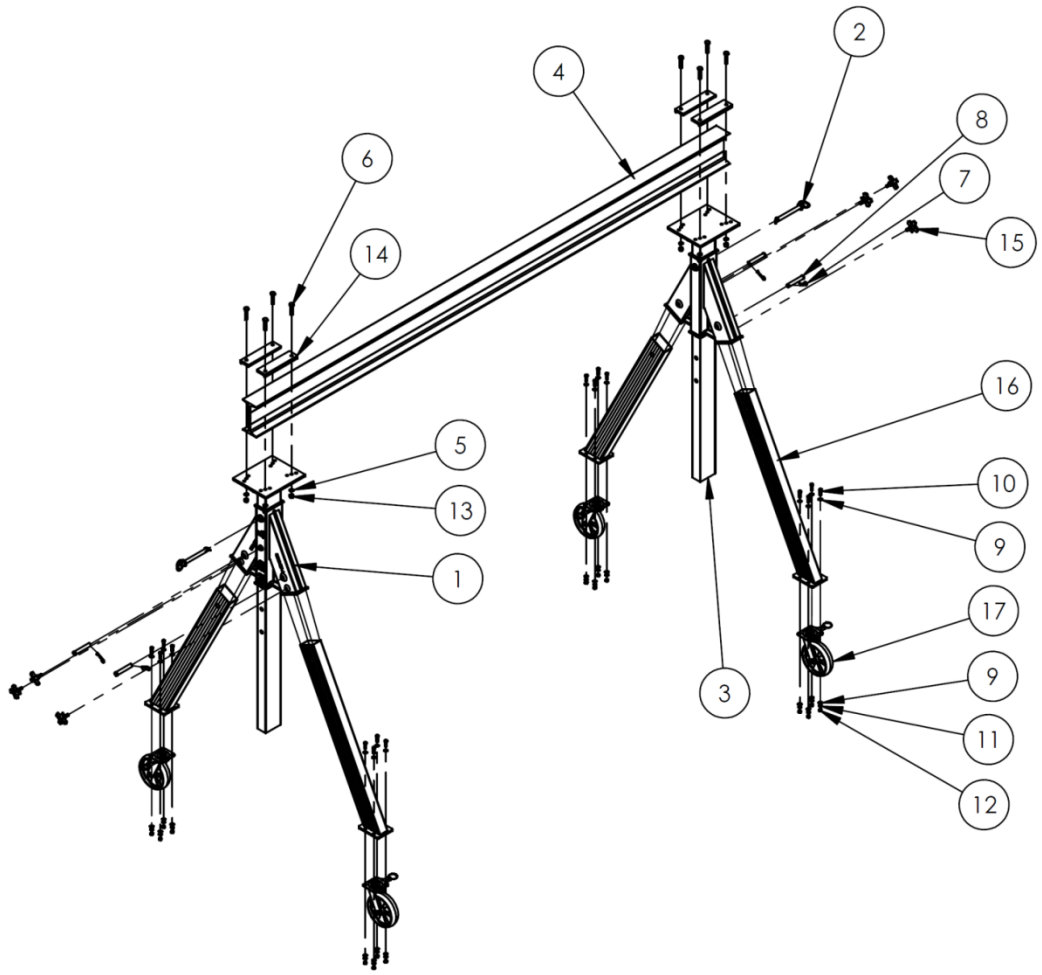
Item	Part no.	Description	Quantity
1	28-014-272	Aluminum 4k gantry casting	2
2	28-112-007	Retaining, pin, ¾ in. x 6 in. usable length	2
3	 28-514-230 28-514-231 28-514-232	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-4-8-8 AHA-4-8-10 AHA-4-8-12	 2 2 2
4	28-014-987-001	8 in. (H) x 4 in. (W) x 96 in. (L) aluminum I-beam	1
5	33626	½ in. zinc-plated lock washer	8
6 & 13	11134585	½ in. – 13 x 2½ in.A325 galvanized structural nut & bolt combo ½ in. – 13 A325 galvanized structural nut & bolt combo	8
7	45286	$^{1}/_{8}$ in. x $2^{5}/_{8}$ in. #11 hitch pin clip	4
8	28-112-031	Pin, clevis, ¾ in. x $4^{1}/_{4}$ in. usable length	4
9	33082	$^{3}/_{8}$ in. zinc plated SAE flat washer	32
10	11107	$^{3}/_{8}$ in. – 16 x 1¼ HHCS #2 zinc-plated bolt	16
11	33622	$^{3}/_{8}$ in. zinc plated lock washer	16
12	36106	$^{3}/_{8}$ in. – 16 zinc plated hex nut	16
14	28-516-054	I-beam clamp weldment	4
15	08-025-007	$^{3}/_{8}$ in. – 16 UNC threaded knob, TT-18-PED	6
16	28-514-221	4k leg tube weldment	4
17	GFN-8/2-S-4PSL (16-132-249)	Glass filled nylon 4-position swivel locking caster	4

FIG. 6: Exploded view of models AHA-4-10-8, AHA-4-10-10, & AHA-4-10-12



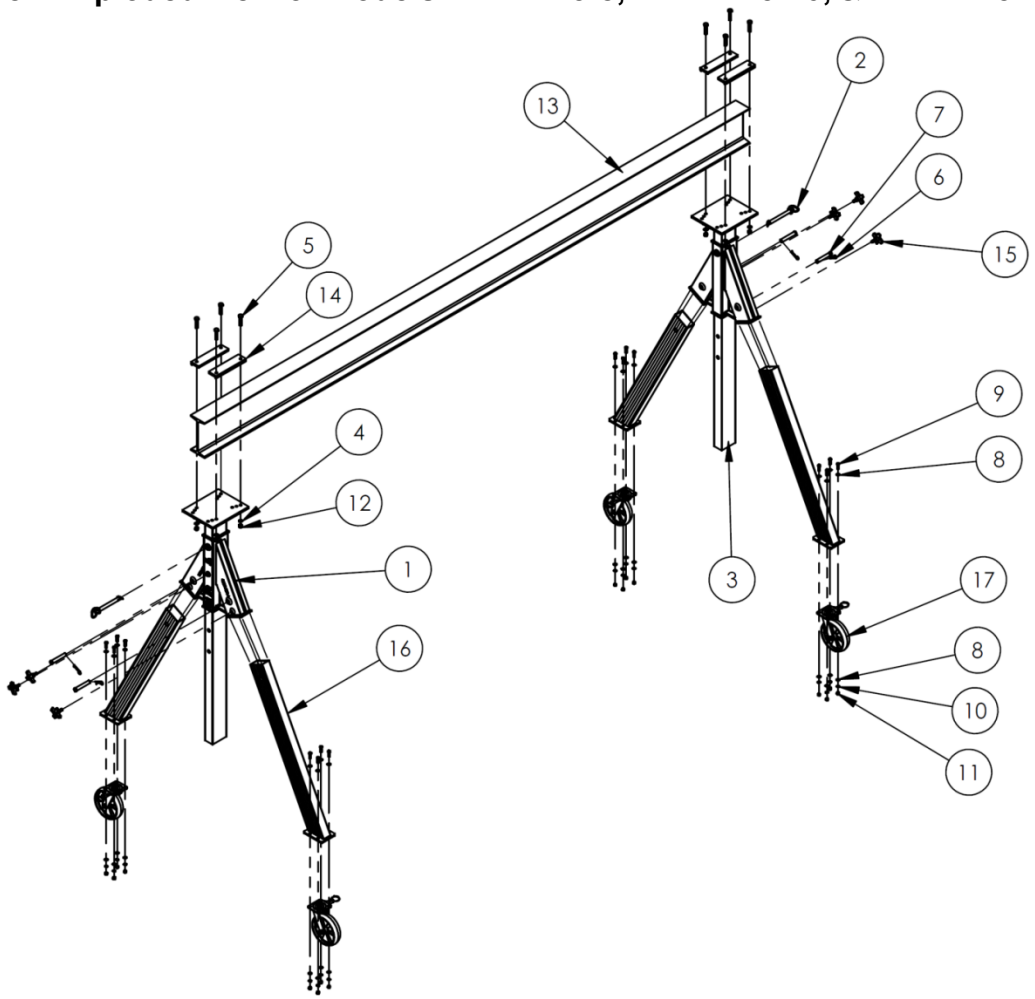
Item	Part no.	Description	Quantity
1	28-014-272	Aluminum 4k gantry casting	2
2	28-112-007	Pin, retaining, ¾ in. x 6 in. usable length	2
3	 28-514-230 28-514-231 28-514-232	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-4-8-8 AHA-4-8-10 AHA-4-8-12	 2 2 2
4	28-014-988-001	8 in. (H) 4.17 in. (W) x 120 in. (L) aluminum I-beam	1
5	33626	½ in. zinc-plated lock washer	8
6 & 13	11134585	½ in. – 13 x 2½ in.A325 galvanized structural nut & bolt combo ½ in. – 13 A325 galvanized structural nut & bolt combo	8
7	45286	$^{1}/_{8}$ in. x $2^{5}/_{8}$ in. #11 hitch pin clip	4
8	28-112-031	Pin, clevis, ¾ in. x $4^{1}/_{4}$ in. usable length	4
9	33082	$^{3}/_{8}$ in. zinc plated SAE flat washer	32
10	11107	$^{3}/_{8}$ in. – 16 x 1¼ HHCS #2 zinc-plated bolt	16
11	33622	$^{3}/_{8}$ in. zinc plated lock washer	16
12	36106	$^{3}/_{8}$ in. – 16 zinc plated hex nut	16
14	28-516-054	I-beam clamp weldment	4
15	08-025-007	$^{3}/_{8}$ in. – 16 UNC threaded knob, TT-18-PED	6
16	28-514-221	4k leg tube weldment	4
17	GFN-8/2-S-4PSL (16-132-249)	Glass filled nylon 4-position swivel locking caster	4

FIG. 7: Exploded view of models AHA-4-12-8, AHA-4-12-10, & AHA-4-12-12



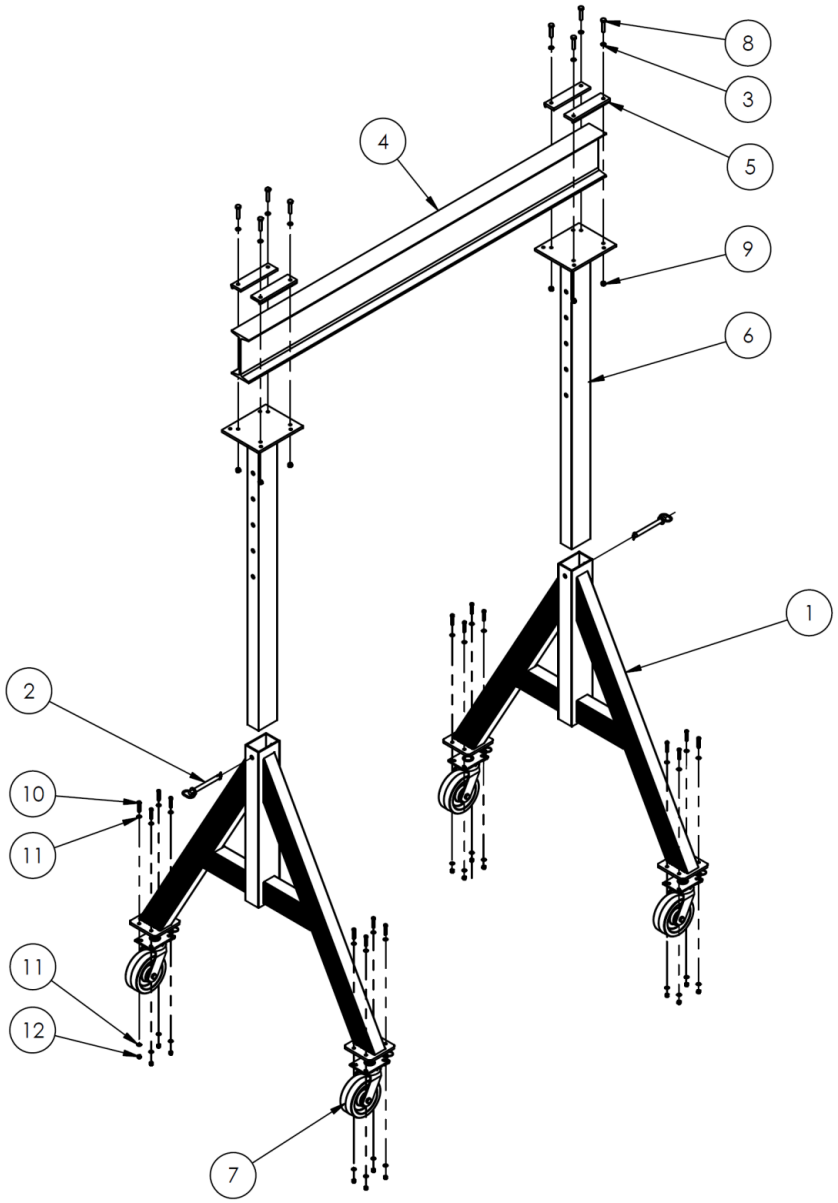
Item	Part no.	Description	Quantity
1	28-014-272	Aluminum 4k gantry casting	2
2	28-112-007	Pin, retaining, ¾ in. x 6 in. usable length	2
3	28-514-230 28-514-231 28-514-232	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-4-12-8 AHA-4-12-10 AHA-4-12-12	 2 2 2
4	28-014-988-002	8in. (H) x 4.17in. (W) x 144in. (L) aluminum I-beam	1
5	33626	½ in. zinc-plated lock washer	8
6 & 13	11134585	½ in. – 13 x 2½ in.A325 galvanized structural nut & bolt combo ½ in. – 13 A325 galvanized structural nut & bolt combo	8
7	45286	$^{1}/_{8}$ in. x $2^{5}/_{8}$ in. #11 hitch pin clip	4
8	28-112-031	Pin, clevis, ¾ in. x $4^{1}/_{4}$ in. usable length	4
9	33082	$^{3}/_{8}$ in. zinc plated SAE flat washer	32
10	11107	$^{3}/_{8}$ in. – 16 x 1¼ HHCS #2 zinc-plated bolt	16
11	33622	$^{3}/_{8}$ in. zinc plated lock washer	16
12	36106	$^{3}/_{8}$ in. – 16 zinc plated hex nut	16
13	11134585	½ in. – 13 A325 galvanized structural nut & bolt combo	8
14	28-516-054	I-beam clamp weldment	4
15	08-025-007	$^{3}/_{8}$ in. – 16 UNC threaded knob, TT-18-PED	6
16	28-514-221	4k leg tube weldment	4
17	GFN-8/2-S-4PSL (16-132-249)	Glass filled nylon 4-position swivel locking caster	4

FIG. 8: Exploded view of models AHA-4-15-8, AHA-4-15-10, & AHA-4-15-12



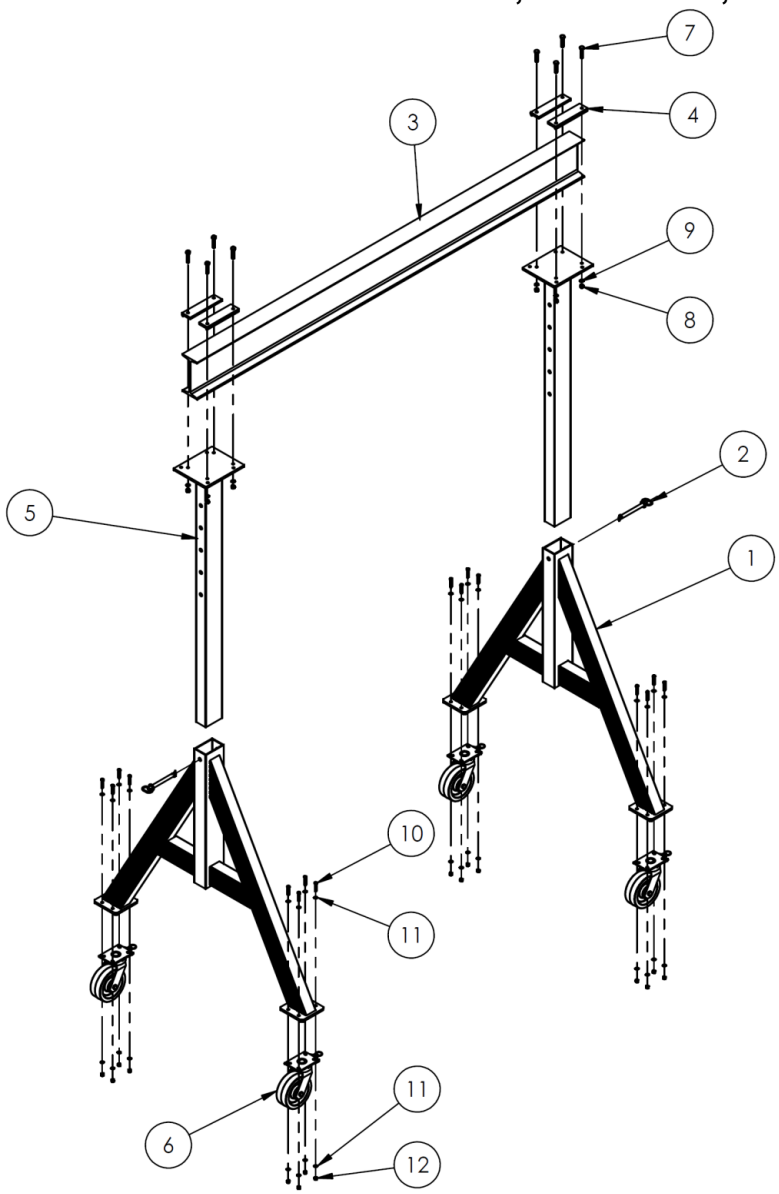
Item	Part no.	Description	Quantity
1	28-014-272	Aluminum 4k gantry casting	2
2	28-112-007	Pin, retaining, ¾ in. x 6 in. usable length	2
3	28-514-230 28-514-231 28-514-232	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-4-15-8 AHA-4-15-10 AHA-4-15-12	 2 2 2
4	33626	½ in. zinc-plated lock washer	8
5 & 12	11134585	½ in. – 13 x 2½ in.A325 galvanized structural nut & bolt ½ in. – 13 A325 galvanized structural nut & bolt	8
6	45286	$^{1}/_{8}$ in. x $2^{5}/_{8}$ in. #11 hitch pin clip	4
7	28-112-031	Pin, clevis, ¾ in. x $4^{1}/_{4}$ in. usable length	4
8	33082	$^{3}/_{8}$ in. zinc plated SAE flat washer	32
9	11107	$^{3}/_{8}$ in. – 16 x 1¼ HHCS #2 zinc-plated bolt	16
10	33622	$^{3}/_{8}$ in. zinc plated lock washer	16
11	36106	$^{3}/_{8}$ in. – 16 zinc plated hex nut	16
13	28-014-236	10 in. (H) x 4.66 in. (W) x 180 in. (L) aluminum I-beam	1
14	28-516-054	I-beam clamp weldment	4
15	08-025-007	$^{3}/_{8}$ in. – 16 UNC threaded knob, TT-18-PED	6
16	28-514-221	4k leg tube weldment	4
17	GFN-8/2-S-4PSL (16-132-249)	Glass filled nylon 4-position swivel locking caster	4

FIG. 9: Exploded view of models AHA-6-8-8, AHA-6-8-10, & AHA-6-8-12



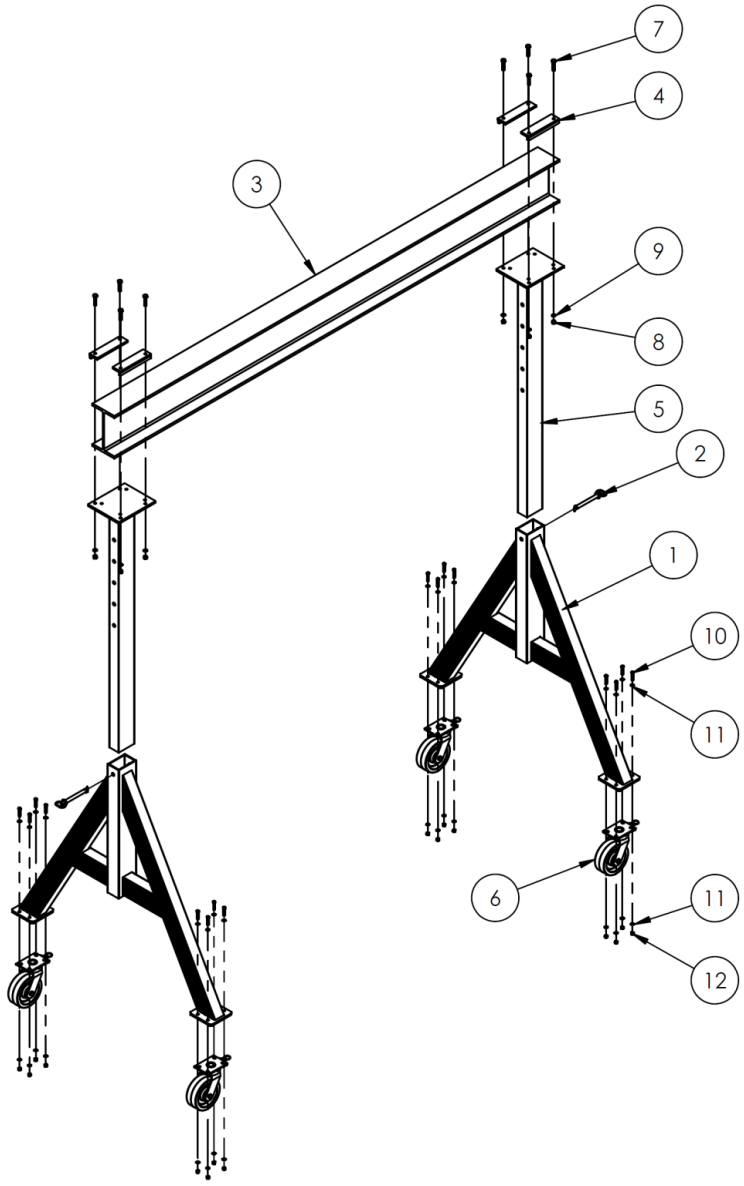
Item	Part no.	Description	Quantity
1	28-514-189	Leg set weldment	2
2	28-112-007	Pin, retaining, ¾ in. x 6 in. usable length	2
3	33626	½ in. zinc-plated lock washer	8
4	28-014-355	10 in.(H) x 4.66 in. (W) x 96 in. (L) aluminum I-beam	1
5	28-516-054	I-beam clamp weldment	4
6	28-514-233 28-514-234 28-514-235	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-6-8-8 AHA-6-8-10 AHA-6-8-12	 2 2 2
7	PH-F-8/3-S-4PSL (16-132-064)	8in. x 3in. phenolic 4-way swivel lock caster	4
8 & 9	11134585-B	½ in. – 13 x 2½ in. A325 galvanized structural nut & bolt ½ in. -13 A325 galvanized structural nut & bolt	8
10	11109	$^{3}/_{8}$ in. – 16 x 1$^{1}/_{2}$ in. HHCS #2 zinc-plated bolt	16
11	33008	$^{3}/_{8}$ in. USS zinc-plated flat washer	32
12	37024	$^{3}/_{8}$ in. nylock insert nut	16

FIG. 10: Exploded view of models AHA-6-10-8, AHA-6-10-10, & AHA-6-10-12



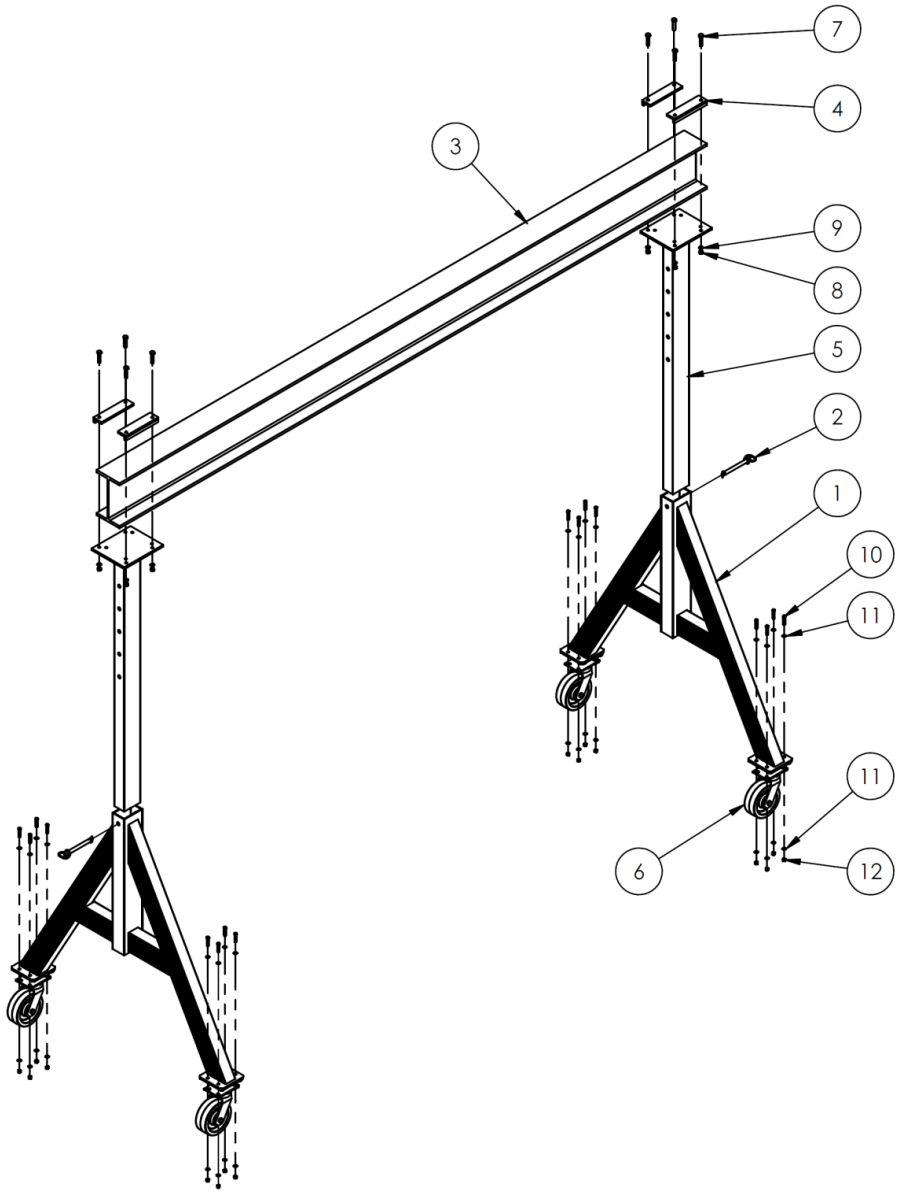
Item	Part no.	Description	Quantity
1	28-514-189	Frame, leg set weldment	2
2	28-112-007	Pin, retaining, ¾ in. x 6 in.	2
3	28-014-356	10 in. (H) x 4.66 in. (W) x 120 in. (L) aluminum I-beam	1
4	28-516-054	I-beam clamp weldment	4
5	28-514-233 28-514-234 28-514-235	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-6-10-8 AHA-6-10-10 AHA-6-10-12	 2 2 2
6	PH-F-8/3-S-4PSL (16-132-064)	8in. x 3in. phenolic 4-way swivel lock caster	4
7 & 8	11134585	½ in. – 13 x 2½ in. A325 galvanized structural nut & bolt ½ in. -13 A325 galvanized structural nut & bolt	8
9	33626	½ in. zinc-plated lock washer	8
10	11109	$^{3}/_{8}$ in. – 16 x $1^{1}/_{2}$ in. HHCS #2 zinc-plated bolt	16
11	33008	$^{3}/_{8}$ in. USS zinc-plated flat washer	32
12	37024	$^{3}/_{8}$ in. Nylock insert nut	16

FIG. 11: Exploded view of models AHA-6-12-8, AHA-6-12-10, & AHA-6-12-12



Item	Part no.	Description	Quantity
1	28-514-189	Leg set weldment	2
2	28-112-007	Pin, retaining, ¾ in. x 6 in. usable length	2
3	28-014-357	12 in. (H) x 7 in. (W) x 144 in. (L) heavy duty aluminum I-beam	1
4	28-516-061	I-beam clamp weldment	4
5	28-514-233 28-514-234 28-514-235	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-6-12-8 AHA-6-12-10 AHA-6-12-12	 2 2 2
6	PH-F-8/3-S-4PSL (16-132-064)	8in. x 3in. phenolic, 4-way, swivel-lock caster	4
7 & 8	11134585	½ in. – 13 x 2½ in. A325 galvanized structural nut & bolt ½ in. -13 A325 galvanized structural nut & bolt	8
9	33626	½ in. zinc-plated lock washer	8
10	11109	$^{3}/_{8}$ in. – 16 x $1^{1}/_{2}$ in. HHCS #2 zinc-plated bolt	16
11	33008	$^{3}/_{8}$ in. USS zinc-plated flat washer	32
12	37024	$^{3}/_{8}$ in. Nylock insert nut	16

FIG. 12: Exploded view of models AHA-6-15-8, AHA-6-15-10, & AHA-6-15-12



Item	Part no.	Description	Quantity
1	28-514-189	Leg set weldment	2
2	28-112-007	Pin, retaining, ¾ in. x 6 in. usable length	2
3	28-014-358	12 in. (H) x 7 in. (W) x 180 in. (L) heavy duty aluminum I-beam	1
4	28-516-061	I-beam clamp weldment	4
5	28-514-233 28-514-234 28-514-235	Adjustable upright weldment: (when ordering replacements, only sold as a pair) AHA-6-15-8 AHA-6-15-10 AHA-6-15-12	 2 2 2
6	PH-F-8/3-S-4PSL (16-132-064)	8in. x 3in. phenolic, 4-way, swivel-lock caster	4
7 & 8	11134585	½ in. – 13 x 2½ in. A325 galvanized structural nut & bolt ½ in. -13 A325 galvanized structural nut & bolt	8
9	33626	½ in. zinc-plated lock washer	8
10	11111	$^{3}/_{8}$ in. USS zinc-plated flat washer	16
11	33008	$^{3}/_{8}$ in. -13 zinc-plated hex nut	32
12	37024	$^{3}/_{8}$ in. – 16 x $1^{1}/_{2}$ in. HHCS #2 zinc-plated bolt	16

ASSEMBLING THE CRANE

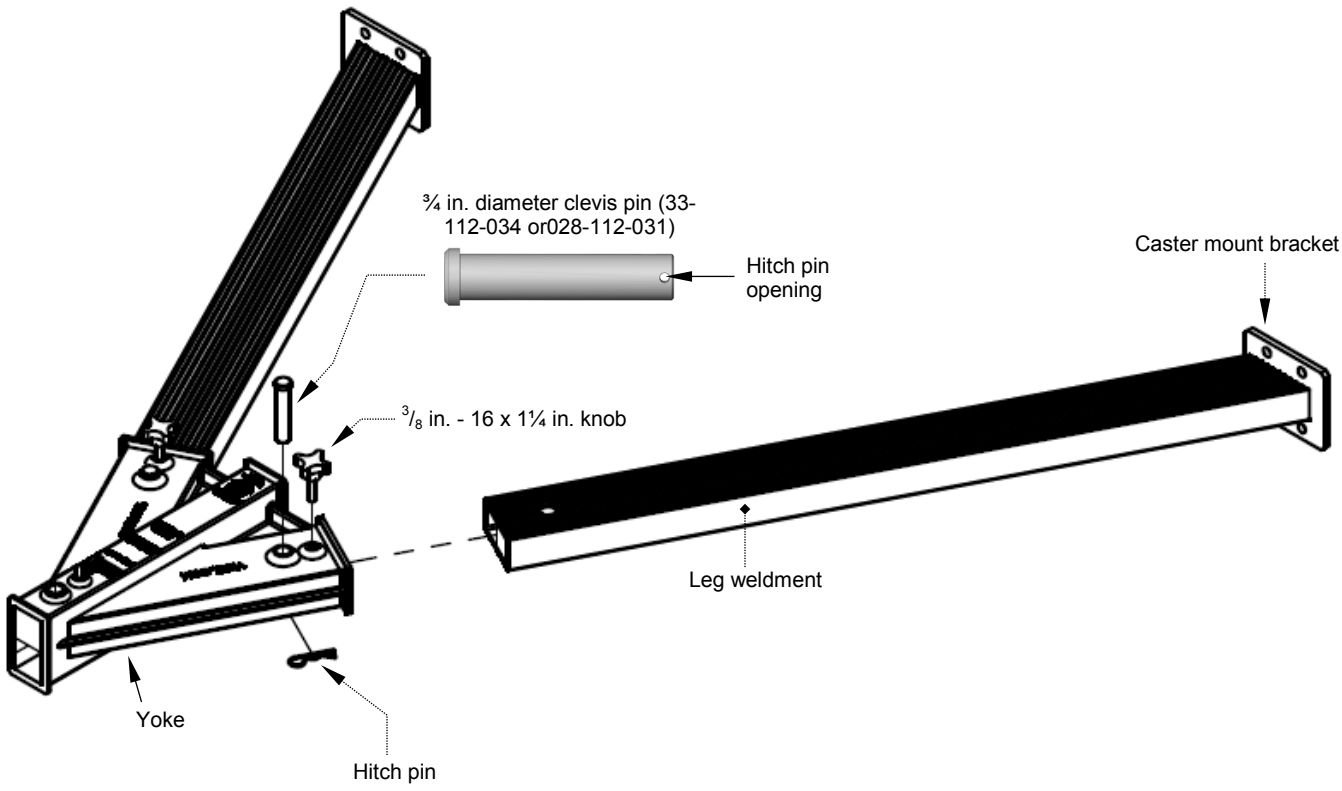
WARNING If the crane is improperly assembled, it might malfunction and result in serious personal injuries. Read this instruction manual in its entirety before assembling the crane; only assemble the crane if you fully understand both the associated risks and the manufacturer-approved assembly procedure discussed below.

- Follow the assembly procedure described in Steps 1-8. If you have any questions about the assembly process, contact *TECHNICAL SERVICE*.
- ONLY qualified personnel should assemble the crane.
- **DO NOT** modify the crane in any way. Modifying the carne automatically voids the *LIMITED WARRANTY* on p. 24 and might make the crane unsafe to use.
- **DO NOT** use the crane if you notice damage to, or deformation of, the beam, uprights, or any part of the leg assemblies. Using the crane despite weakness of a structural component could result in crane collapse.
- **DO NOT** use the crane if any of the hardware (bolts, nuts, clamps, etc.) is damaged or missing. Contact the *Replacement Parts Dept.* to order replacement parts.
- **DO NOT** use the crane if any of the casters are damaged. A damaged caster may cause the crane to tip over, and the possibility that the crane will tip increases while it is used to hoist or support a load.

Step 1**:** [2,000 lb. (AHA-2-#-#) and 4,000 lb. (AHA-4-#-#) models only] Attach the leg weldments and yokes

Insert the end of each leg into one of the leg openings in the yoke as shown below. Fasten the legs to the yoke with clevis pins (33-112-034 or 28-112-031) and secure the clevis pins with hitch pins. Wind a knob into the yoke until the end of the knob presses firmly against the leg.

Diagram 1: Attach leg weldments to yoke

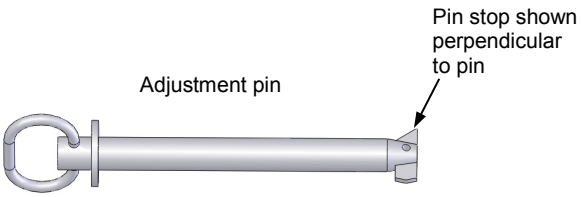


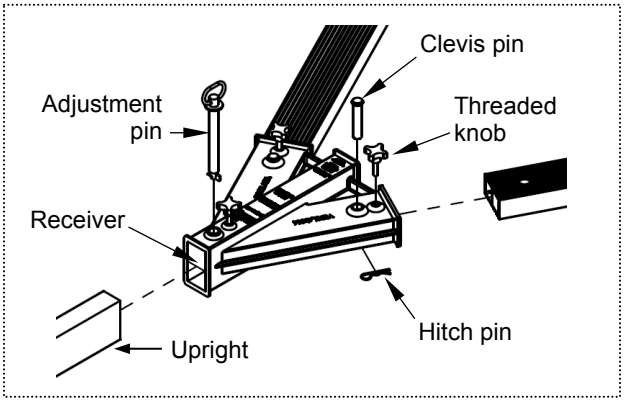
Step 2**:** [NOTE: If you ordered a "Come-along" kit, perform Step 8 on p. 21 first.] Fasten uprights to leg assemblies (AHA-6-#-# series; 6,000 lb. capacity models) or yokes (2,000 lb. and 4,000 lb. models).

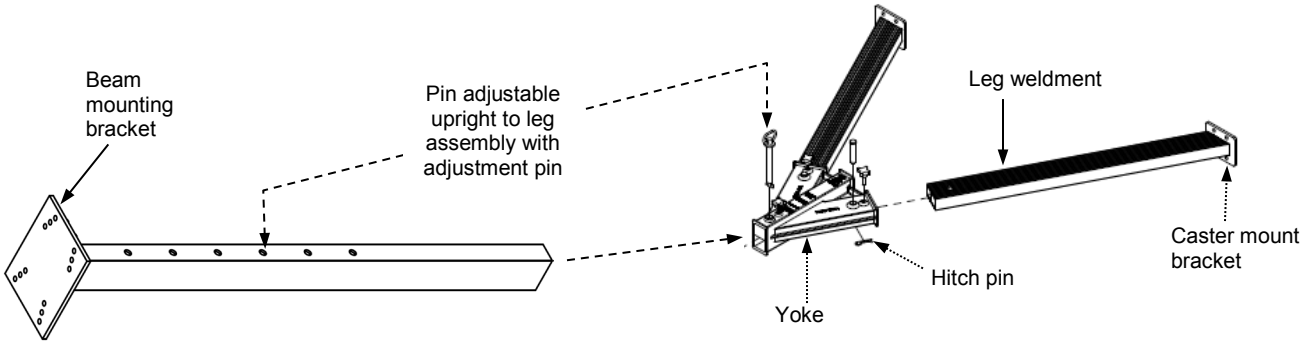
Insert the uprights into the receivers of the leg assemblies or yokes (yoke shown in diagrams). Align the 3rd pinhole in each upright with the pinhole in the leg receivers as is depicted in Diagram 2 below.

Pin each adjustable upright to a leg assembly through the same (3rd) pinhole with adjustment pins. See Diagram 2A below as well as the exploded views on p. 5-16. Turn the pin stops to be perpendicular to the adjustment pins to secure the pins in place.

Diagram 2: Connect Uprights to Leg Assembly

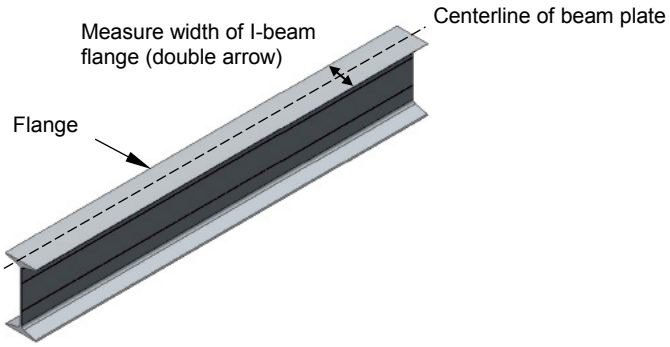






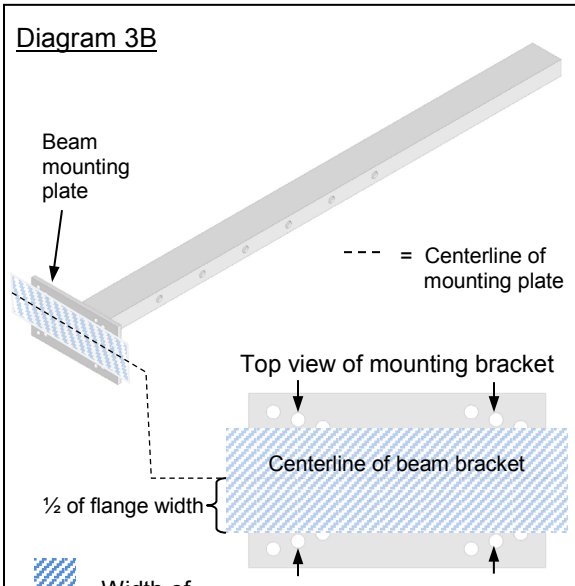
Step 3: Attach the uprights to the I-beam

Diagram 3A



1. Measure the flange width of the I-beam (see Diagram 3A).
2. Mark the centerline of the beam bracket and measure half the width of the flange on either side of the centerline. (See Diagram 3B).
3. Identify the 4 bolt holes in the bracket that lie just outside the width of the beam flange.

Diagram 3B



Step 4: Fasten the I-beam to the uprights.

a. As shown in Diagram 4A, insert $^1/_2$in. structural bolts through the bolt holes of a beam clamp and through the selected bolt holes in the beam bracket. Then, slide a lock washer onto each bolt and secure the bolts with $^1/_2$in. structural nuts. Do not fully tighten the nuts at this point.

b. As shown in Diagram 4C, insert the flange of the I-beam into the gap between the beam clamp and the beam bracket; then install another beam clamp on the other side of the beam to secure the flange on both sides. Diagram 4B shows

Diagram 4A: Clamp I-beam flange to beam brackets of uprights

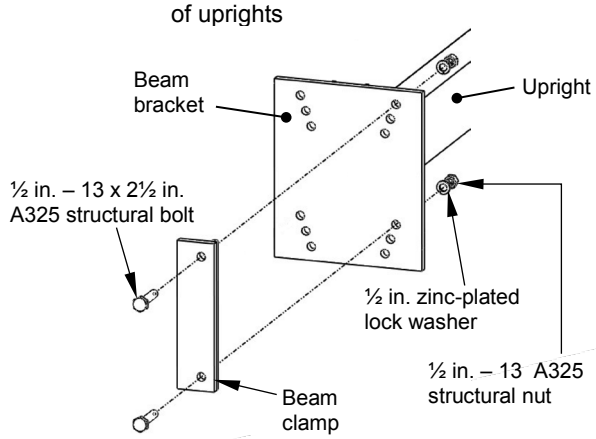


Diagram 4B: Properly clamped flange

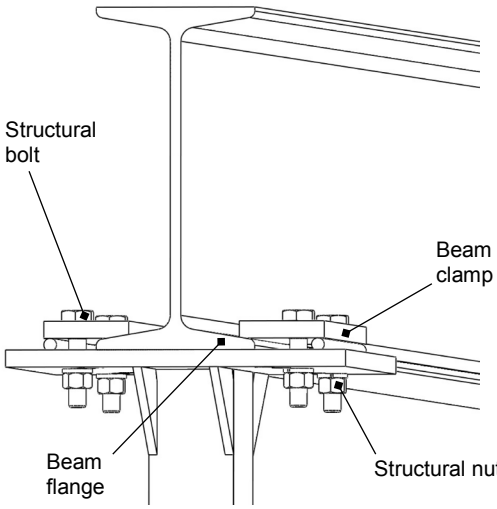
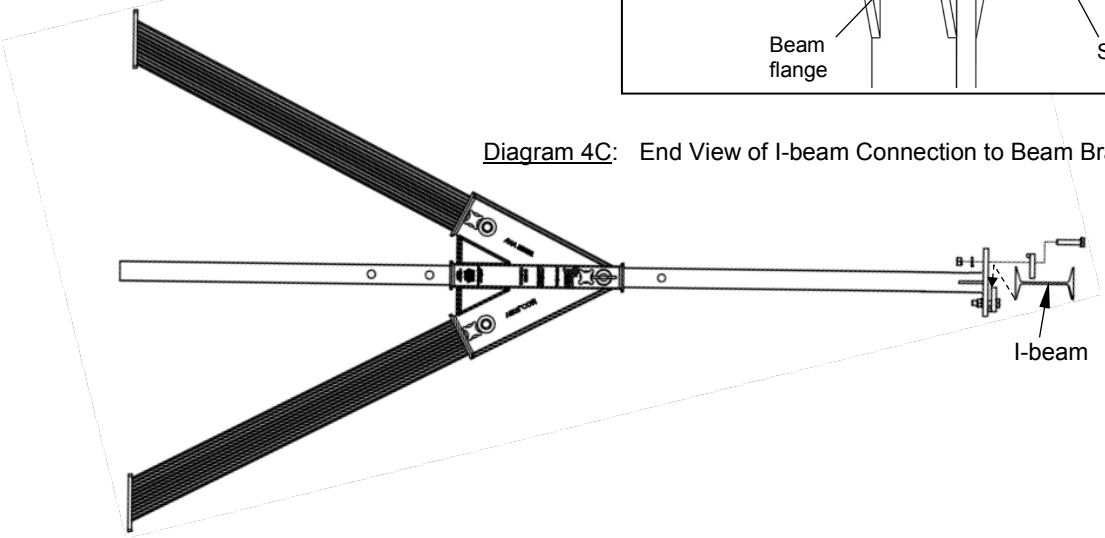


Diagram 4C: End View of I-beam Connection to Beam Bracket



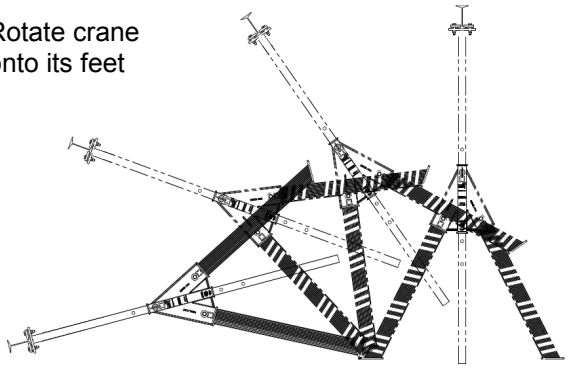
Step 5: Make sure that the I-beam is centered on both beam plates and that the beam clamps significantly overlap the flange on both sides. **Tighten the nuts to 50 - 52 ft·lb of torque**.

Step 6: Stand the crane on its feet.

Rotate the crane onto its feet in a *controlled* manner. [For instance, attach a hoist chain to the I-beam and then *slowly* raise the beam until the crane rotates to stand on its feet. Alternatively, raise the crane with a fork truck. Position the forks under the beam and slowly raise it until the crane rotates onto its feet.]

Approach the crane with a fork truck from this side, and slide the forks under the I-beam. Slowly raise the beam while slowly driving forward until the crane stands on its feet.
⚠WARNING DO NOT raise the beam unless all other persons have moved to a location away from and behind the fork truck.

Diagram 6: Rotate crane onto its feet



Step 7: Connect the casters to the legs.
Attach a caster to each caster bracket of each leg using the hardware shown in Diagrams 7A & 7B (diagrams show standard casters). Raise the crane 8 to 10 inches off of the ground with a fork lift or hoist. Position a caster underneath each foot as shown in the diagram below and fasten it to the caster mount bracket. **Tighten hardware to 15-20ft·lb with a torque wrench.**

Diagram 7A: Caster installation for 2,000 lb. and 4,000 lb. capacity models (AHA-2-#-# and AHA-4-#-#)

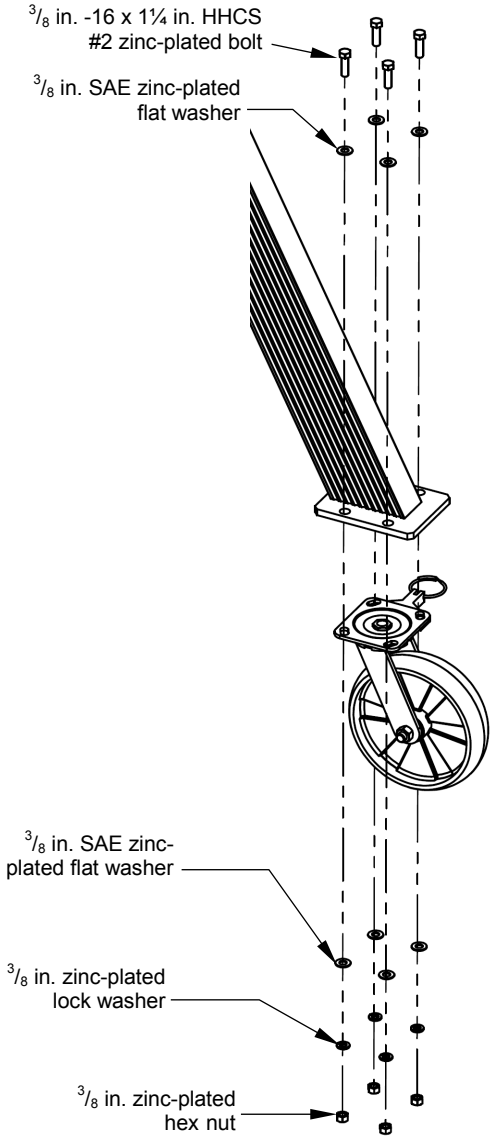
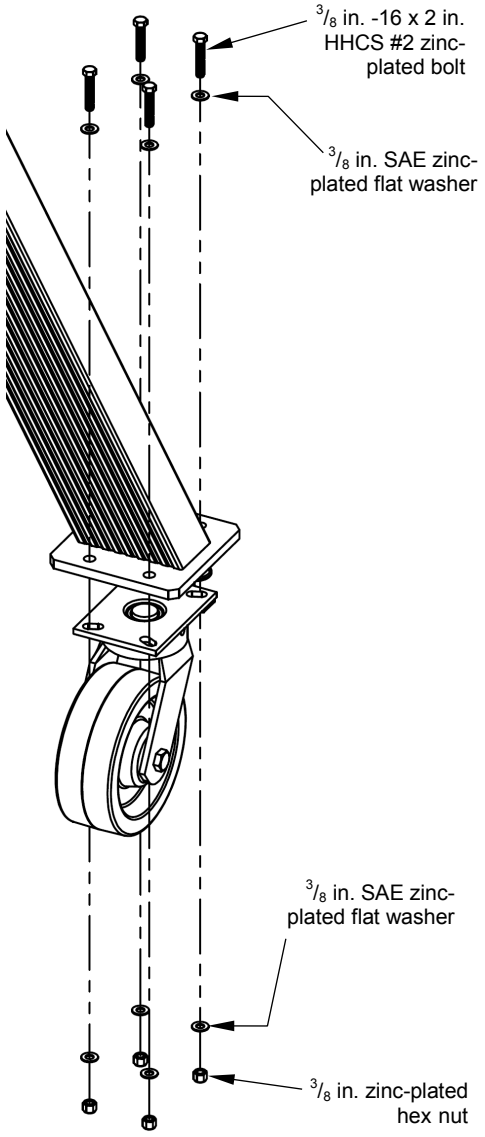
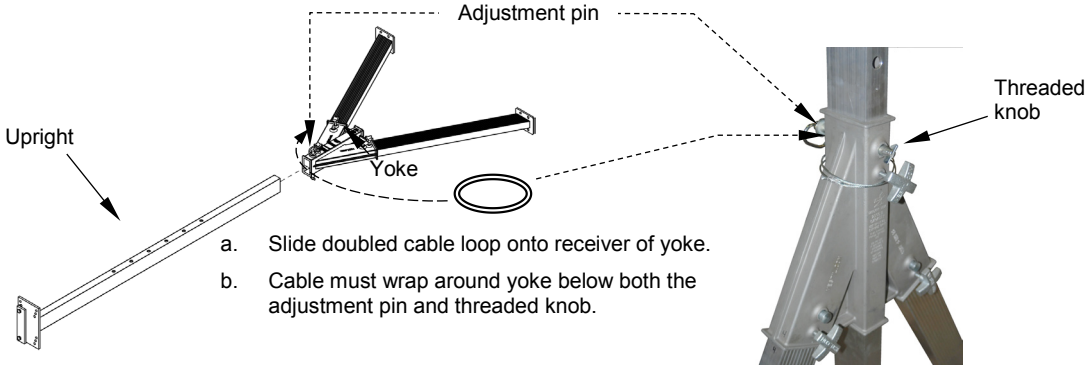


Diagram 7B: Caster installation for 6,000 lb. capacity models (AHA-6-#-#)



Step 8: If you have a "Come-Along" kit used to adjust the height of the crane, install the cable loops before inserting the uprights into the receivers (of the yokes). Twist the cable loops into an "8" and fold the top of the 8 over the bottom part of the 8 (this will double loop the cable). Slide the doubled loop around the receiver and insert an upright.



USING THE CRANE

Before using the crane for the first time: 1) Perform a "*Before and after each use" inspection* (*INSPECTIONS & MAINTENANCE, part A,* p. 22); and 2) Conduct a load test (*INSPECTIONS & MAINTENANCE, part C, p. 22).*

⚠WARNING Operate the crane in a safe manner to reduce the risk of serious personal injuries or death.

- Only use this crane if you are qualified and trained to use it. The operating instructions in this manual *supplement* safe crane and hoist operation practices applied at your work site. Acquire a copy of the most recent edition of ASME B30.17 and apply all operation, inspection, maintenance, and care recommendations.
- ALWAYS apply the safe material handling practices learned from your training program.
- All personnel not participating in the use of the crane must stay out of the area during use. Be certain no part of any person or object is under any part of the boom (I-beam) or the suspended load at any time and particularly before lowering it. Instruct all persons to remain at a safe distance during operation.
- Always carefully watch the boom and any load hanging from it while using the crane.
- Always follow the hoist and trolley manufacturers' instructions regarding proper use of their products.
- BEFORE the load is connected to the hoist, lock or immobilize the casters, for example with chocks.
- Only use this crane on level concrete (or equal) surface.
- DO NOT use the crane and notify your supervisor and authorized maintenance personnel if: 1) you observe any damage or hear unusual noise during operation; or 2) you observe any warping or deformation of the I-beam, the adjustable uprights, the load hook or hoist chain/cable.
- DO NOT operate a hoist with a twisted, kinked, or damaged chain or rope. DO NOT operate a rope hoist unless the rope is properly seated in its groove.

NOTICE This crane can be used outdoors. However, it should be sheltered from the weather when not in use.

LOADING THE CRANE

Position the trolley and hoist directly above the load. Center the trolley and hoist above the center of the load and position the long axis of the I-beam above the center of the load. Proper positioning is illustrated in Diagrams 8A & 8B.

Connect the load to the hoist chain/cable, according to the instructions supplied with your hoist and the method applied at your work site; then raise the load only as high as is necessary to position it. Once the load is properly centered above the work location, lower the load until it is fully supported by the ground or work surface and disconnect the load from the hoist. Return the crane to its storage locations.

If you must move the load to a different location, return the load to the ground or other supporting surface, e.g. pallet, and disconnect it from the hoist. **Move the crane and load separately to the work location. Only use the crane to lift loads.**

If your crane is equipped with V-Groove casters (option AHA-2/4-V or AHA-2/4-V4) and V-Track is installed, the crane can be moved on the track while loaded**.** The hoist must be immobilized and the load lowered. Push the trailing end of the crane, not the load.

Diagram 8A: Center hoist above center of load

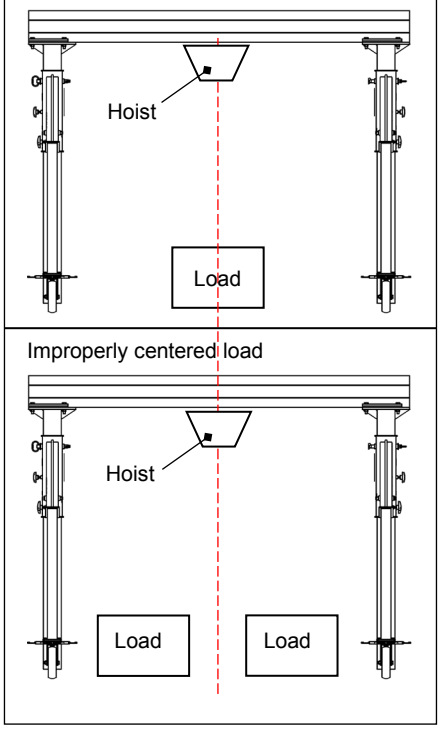
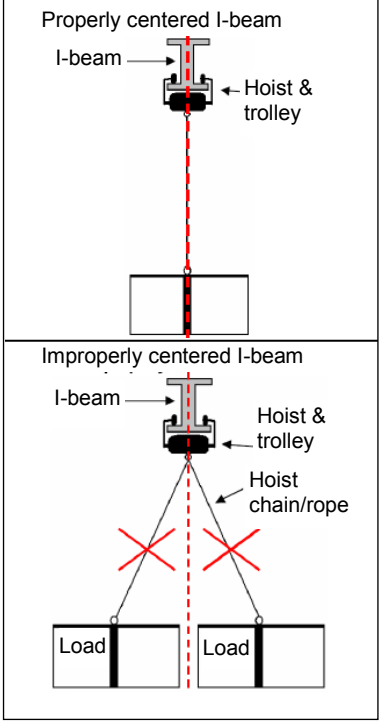


Diagram 8B: Center the long axis of the I-beam above the center of the load.



RECORD OF SATISFACTORY CONDITION (THE "RECORD")

Thoroughly inspect the crane after assembling it and before putting it into service. Record the condition and appearance of each of the frame members (I-beam, tube weldments, yokes, uprights), the wheels and/or casters, beam clamp, and all fasteners (bolts, nuts, etc.). Thoroughly photograph the crane from multiple angles. Include close range photographs of the casters and/or wheels, all labeling, and all beam clamp connections. Add the photographs to the record. Collate all photographs and writings into a single file. This file is a record of the crane in satisfactory condition. Compare the results of all *INSPECTIONS* to this Record to determine whether the crane is in satisfactory condition. Do not use the crane unless it is in satisfactory condition. Purely cosmetic changes, like damaged paint or

powdercoat, are not changes from satisfactory condition. However, touchup paint should be applied as soon as damage occurs. If your crane is comprised of unfinished metal parts, touchup paint is not required.

NATIONAL STANDARDS

This product is a portable A-frame gantry crane (PGC). ASME standard B30.17 (the "Standard") applies to PGC's. You *should* acquire a copy of the latest version of the standard. Follow all use and maintenance/care instructions provided in the Standard as well as all other provisions for PGC owners and users. If any content in this manual conflicts with any recommendations or mandatory provision(s) in the Standard, apply the provision(s) from the Standard. Vestil encourages you to immediately contact *Technical Service* if you discover any inconsistencies.

INSPECTIONS AND MAINTENANCE

NOTE: Inspection procedures are included in the most current revision of ASME B30.17. As stated above in the *NATIONAL STANDARDS* section, Vestil recommends that you acquire a copy of the most recent revision of this standard. Apply all use and maintenance/care instructions in the standard. Vestil also recommends that you contact your local occupational health and safety authority to determine if any laws, regulations, codes, ordinances, etc. apply inspection requirements where the crane is used.

Inspections and all necessary repairs should be performed by qualified persons. Compare the results of each inspection to the *RECORD OF SATISFACTORY CONDITION*. Do not use the crane unless every part is in satisfactory condition. **DON'T GUESS! If you have any questions about the condition of your crane, contact the *Technical Service* department.** The phone number is provided on the cover page of this manual. *Never make temporary repairs of damaged or missing parts*. Only use manufacturer-approved replacement parts to restore the crane to satisfactory condition.

A. **Before and after each use**, including first use, unload the crane and inspect the following components:
   1) **I-Beam –** Examine the entire beam, especially the lower flanges, for bends, cracks, and other damage.
   2) **Beam clamps and beam clamp fasteners** – Clamp connections are shown in *Step 4* on p. 19. Visually verify that all lock washers are fully compressed. The clamps should equally overlap the I-beam flange.
   3) **Beam brackets –** Look for cracks, elongations around bolt holes, warps, bends, etc.
   4) **Casters and caster fasteners** – Examine each caster for cracks, warps, tears, grooves, pitting, and significant wear. Push the crane a short distance. All 4 casters should be in continuous contact with the ground. Confirm that the casters roll smoothly without wobbling or skidding. Make sure that caster fasteners are tightly connected. Fastener connections are shown in *Step 8* on p. 20.
   5) **Pins** – Check both adjustment pins (all models) and all 4 clevis pins (AHA-2 and AHA-4 models only). Pinned connections are shown in *Step 2* on p. 18. Both adjustment pins should be fully inserted and pin stops should be perpendicular to the pins to secure them in place. All 4 of the clevis pins should be fully inserted and secured in place with cotter pins.
   6) **Yokes (AHA-2 & AHA-4 models) –** Closely examine both yokes. Look for cracks, bends, chips, warps, and other forms of damage. Pay particular attention to the openings in the yoke. Make sure that there are no elongations, warps, or cracks around the openings.
   7) **Leg tubes (AHA-2 & AHA-4 models)** – Check all 4 of the leg tubes for damage.
   8) **Leg assemblies (AHA-6 & AHA-8 models) –** Inspect both leg assemblies. Look for cracks, bends, warps, and other forms of damage. Pay particular attention to pin holes and bolt holes. Look for elongations, cracks, etc.

B. **Monthly inspections** – Unload the crane and inspect the following:
   1) **Beam clamps and beam clamp fasteners** – Use a torque wrench to tighten each bolt and nut to 50-52ft·lb. Examine all of the clamps for damage such as deformations and cracks. The I-beam flange should be solidly/immovably clamped to the tops of the uprights.
   2) Lay the crane over so that the I-beam is on the ground and inspect:
      a) Pins
         i. Adjustment pins (all models): One at a time, remove each adjustment pin and examine it. Look for cracks, warps, pitting, and other forms of damage. Confirm that the pin stop operates normally. Reinsert each pin after inspecting it.
         ii. Clevis pins (AHA-2 & AHA-4 models): One at a time, inspect each clevis pin. Closely examine the clevis pin and its cotter pin for damage. Remove the leg tube and perform the indicated inspection. When the inspection is finished, reinstall the clevis pin and its cotter pin.
      b) **Leg tubes** – Examine the pin holes in the top end of each leg. Look for elongations, cracks, and other forms of damage. Reinstall each leg once its inspection is finished.

C. **Once per year**: Perform a load test of the crane. Lift a load equal to 125% of its rated load (capacity). Only lift the load high enough to ensure that it is entirely supported by the crane. Transport the load by means of your hoist (or hoist & trolley) the full usable length of the I-beam (dimension C in *SPECIFICATIONS* table). Return the test load to the ground. Perform inspections A (Before and after each use) and B (Monthly).

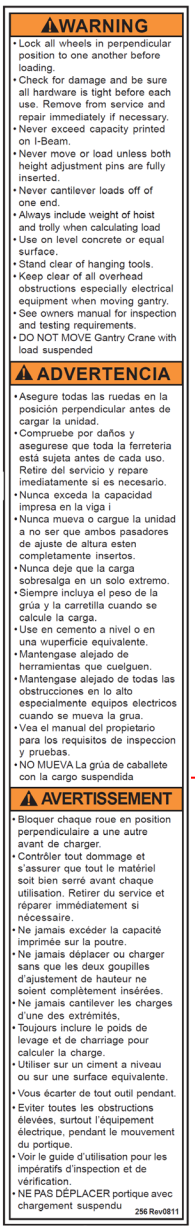
NOTE: Perform this part C (Load test and a Before & after use inspection) whenever the crane is partially or fully disassembled and reassembled, e.g. after installing replacement parts.

LABELING DIAGRAM

Each unit should be labeled as shown in the diagram. Label content and location are subject to change so your product might not be labeled exactly as shown. Compare the diagram below to your *Record of Satisfactory Condition*. If there are any differences between actual labeling and this diagram, contact *Technical Service*.

Replace all labels that are damaged, missing, or not easily readable (e.g. faded). To order replacement labels or to inquire whether your unit is properly labeled, contact the technical service and parts department online at http://www.vestilmfg.com/parts_info.htm or by calling (260) 665-7586 and asking for the Parts Department.

Label 256:



Label 599:

OR

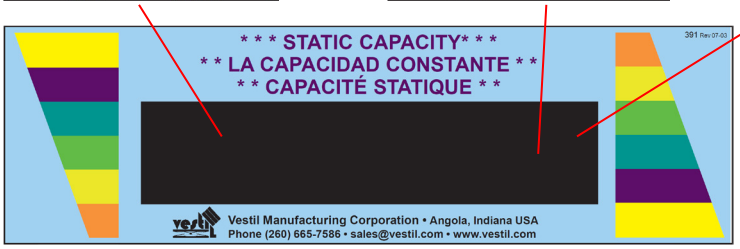
Label 397:

OR

Label 398:

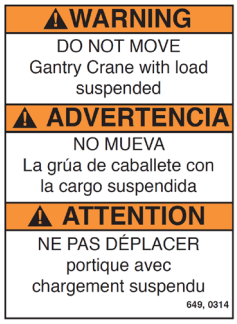
OR

Label 400:



(Both Sides of I-Beam) Label 391

Label 649:



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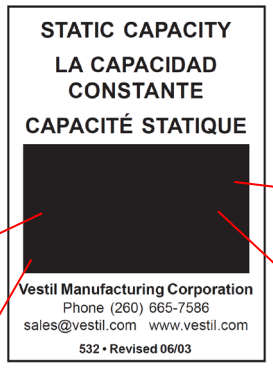

Label 420:

OR

Label 601:

OR

Label 395:

OR

Label 392:

LIMITED WARRANTY

Vestil Manufacturing Corporation ("Vestil") warrants this product to be free of defects in material and workmanship during the warranty period. Our warranty obligation is to provide a replacement for a defective, original part covered by the warranty after we receive a proper request from the Warrantee (you) for warranty service.

Who may request service?

Only a warrantee may request service. You are a warrantee if you purchased the product from Vestil or from an authorized distributor AND Vestil has been fully paid.

Definition of "original part"?

An original part is a part used to make the product as shipped to the Warrantee.

What is a "proper request"?

A request for warranty service is proper if Vestil receives: 1) a photocopy of the Customer Invoice that displays the shipping date; AND 2) a written request for warranty service including your name and phone number. Send requests by one of the following methods:

US Mail	Fax	Email
Vestil Manufacturing Corporation	(260) 665-1339	info@vestil.com
2999 North Wayne Street, PO Box 507	Phone	Enter "Warranty service request"
Angola, IN 46703	(260) 665-7586	in the subject field.

In the written request, list the parts believed to be defective and include the address where replacements should be delivered. After Vestil receives your request for warranty service, an authorized representative will contact you to determine whether your claim is covered by the warranty. Before providing warranty service, Vestil will require you to send the entire product, or just the defective part (or parts), to its facility in Angola, IN.

What is covered under the warranty?

The warranty covers defects in the following original, dynamic parts: motors, hydraulic pumps, motor controllers, and cylinders. It also covers defects in original parts that wear under normal usage conditions ("wearing parts"), such as bearings, hoses, wheels, seals, brushes, and batteries.

How long is the warranty period?

The warranty period for original dynamic components is 1 year. For wearing parts, the warranty period is 90 days. Both warranty periods begin on the date Vestil ships the product to the Warrantee. If the product was purchased from an authorized distributor, the periods begin when the distributor ships the product. Vestil may, at its sole discretion, extend a warranty period for products shipped from authorized distributors by up to 30 days to account for shipping time.

If a defective part is covered by the warranty, what will Vestil do to correct the problem?

Vestil will provide an appropriate replacement for any *covered* part. An authorized representative of Vestil will contact you to discuss your claim.

What is not covered by the warranty?

The Warrantee (you) is responsible for paying labor costs and freight costs to return the product to Vestil for warranty service.

Events that automatically void this Limited Warranty.

- Misuse;
- Negligent assembly, installation, operation or repair;
- Installation/use in corrosive environments;
- Inadequate or improper maintenance;
- Damage sustained during shipping;
- Collisions or other accidents that damage the product;
- Unauthorized modifications: Do not modify the product IN ANY WAY without first receiving written authorization from Vestil.

Do any other warranties apply to the product?

Vestil Manufacturing Corp. makes no other express warranties. All implied warranties are disclaimed to the extent allowed by law. Any implied warranty not disclaimed is limited in scope to the terms of this Limited Warranty. Vestil makes no warranty or representation that this product complies with any state or local design, performance, or safety code or standard. Noncompliance with any such code or standard is not a defect in material or workmanship.