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HU-C-SERIES STORAGE RACKS

INSTRUCTION MANUAL



Receiving instructions:

After delivery, IMMEDIATELY remove the packaging from the product in a manner that preserves the packaging and maintains the orientation of the product in the packaging; then inspect the product closely to determine whether it sustained damage during transport. **If damage is discovered during the inspection, immediately record a complete description of the damage on the bill of lading.** If the product is undamaged, discard the packaging.

NOTES:

1) Compliance with laws, regulations, codes, and non-voluntary standards enforced in the location where the product is *used* is exclusively the responsibility of the owner/end-user.

2) VESTIL is **not liable** for any injury or property damage that occurs as a consequence of failing to apply either:

a) Instructions in this manual; or b) information provided on labels affixed to the product. Neither is Vestil responsible for *any* consequential damages sustained as a result of failing to exercise sound judgment while assembling, installing, using or maintaining this product.

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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:



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.



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



Indicates a hazardous situation which, if not avoided, **COULD** result in **MINOR** or **MODERATE** injury.



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

Each person who assembles, installs, uses, or maintains this product should read the entire manual **in advance and fully understand the directions**. **If after reading the manual you do not understand an instruction, ask your supervisor or employer for clarification, because failure to adhere to the directions in this manual might result in serious personal injury.**

Hazards of use:

Vestil strives to identify foreseeable hazards associated with the use of its products. However, material handling is dangerous and no manual can address every conceivable risk. The end-user ultimately is responsible for exercising sound judgment at all times.



Electrocution might result if any part of the rack system or items or materials placed on the rack contacts electrified wires. **DO NOT install the rack in a location where contact with electrified wires will occur.**



If this product is used or assembled improperly or carelessly, people in the area might sustain serious personal injuries or even be killed. **ALWAYS** use the product properly:

- **Failure to read and understand the entire manual before assembling, installing, loading or servicing the product constitutes misuse.** Read the manual to refresh your understanding of proper use and maintenance procedures as necessary.
- DO NOT exceed the maximum rated load.
- Inspect the rack periodically (AT LEAST once per month). DO NOT continue to use the rack if the inspection reveals structural damage. Examples of structural damage include: 1) warped, deformed, or damaged posts (uprights) or base frame members; 2) cracked welds; 3) enlargement of bolt holes, etc.; 4) corrosion, severe wear, or other condition that affects the ability of the product to support applied weight; 6) damaged, deformed or cracked braces or cross bars. Immediately tag out the rack, unload it completely, and replace each part that fails to pass an inspection. DO NOT use the product until it is fully restored to normal condition. ONLY use manufacturer-approved replacement parts.
- DO NOT use the product if any unusual noise or movement is observed. If a malfunction occurs, completely unload the rack and remove it from service. Notify your supervisor or maintenance personnel about the issue.
- All loads stored on the rack must fit within the dimensions of the rack and arms. DO NOT store any load that hangs over the rack.
- DO NOT use the rack UNLESS it is securely anchored to the ground.
- ALWAYS evenly distribute and center the load on the rack.
- ONLY use this rack on even, level surfaces.
- DO NOT remove or obscure any label. All product labels must be readable and undamaged.
- DO NOT climb or sit on the rack.
- DO NOT modify the rack in any way. **Unauthorized modifications automatically void the limited warranty (see p. 9) and might make the rack unsafe to use.**



- Proper maintenance is essential for this product to function properly and to last as long as possible.
- Always use this product in accordance with the instructions in this manual and consistent with any training relevant to the storage of materials on racks.
 - Keep the rack clean & dry.

Product Specifications by Model:

Model	Height	Base support length	Capacity	Arm model	Net Weight
HU-C-8-18	96 in. 243.8 cm	28 ¹ / ₄ in. 71.8 cm	24,700 lb. 11,227.3 kg	HSA-C-18 or HIA-C-18	260 lb. 118.2 kg
HU-C-8-24	96 in. 243.8 cm	36 ¹ / ₂ in. 92.7 cm	21,500 lb. 9,772.7 kg	HSA-C-24 or HIA-C-24	270 lb. 122.7 kg
HU-C-8-36	96 in. 243.8 cm	48 ¹ / ₂ in. 123.2 cm	18,300 lb. or 16,000 lb. 8,318 kg or 7,272.7 kg	HSA-C-30 or HIA-C-30 HSA-C-36 or HIA-C-36	290 lb. 131.8 kg
HU-C-8-48	96 in. 243.8 cm	60 ¹ / ₂ in. 153.7 cm	14,200 lb. or 12,800 lb. 6,454.5 kg or 5,818.2 kg	HSA-C-42 or HIA-C-42 HSA-C-48 or HSA-C-48	312 lb. 141.8 kg
HU-C-10-18	120 in. 304.8 cm	28 ¹ / ₄ in. 71.8 cm	24,700 lb. 11,227.3 kg	HSA-C-18 or HIA-C-18	288 lb. 130.9 kg
HU-C-10-24	120 in. 304.8 cm	36 ¹ / ₂ in. 92.7 cm	21,500 lb. 9,772.7 kg	HSA-C-24 or HIA-C-24	307 lb. 139.5 kg
HU-C-10-36	120 in. 304.8 cm	48 ¹ / ₂ in. 123.2 cm	18,300 lb. or 16,000 lb. 8,318 kg or 7,272.7 kg	HSA-C-30 or HIA-C-30 HSA-C-36 or HIA-C-36	328 lb. 149.1 kg
HU-C-10-48	120 in. 304.8 cm	60 ¹ / ₂ in. 153.7 cm	14,200 lb. /or 12,800 lb. 6,454.5 kg or 5,818.2 kg	HSA-C-42 or HIA-C-42 HSA-C-48 or HSA-C-48	350 lb. 159.1 kg
HU-C-12-18	144 in. 365.8 cm	28 ¹ / ₄ in. 71.8 cm	24,400 lb. 11,090.9 kg	HSA-C-18 or HIA-C-18	340 lb. 154.5 kg
HU-C-12-24	144 in. 365.8 cm	36 ¹ / ₂ in. 92.7 cm	20,900 lb. 9,500 kg	HSA-C-24 or HIA-C-24	348 lb. 158.2 kg
HU-C-12-36	144 in. 365.8 cm	48 ¹ / ₂ in. 123.2 cm	17,800 lb. or 15,600 lb. 8,090.9 kg or 7,090.9 kg	HSA-C-30 or HIA-C-30 HSA-C-36 or HIA-C-36	370 lb. 168.2 kg
HU-C-12-48	144 in. 365.8 cm	60 ¹ / ₂ in. 153.7 cm	13,900 lb. or 12,400 lb. 6,318.2 kg or 5,636.4 kg	HSA-C-42 or HIA-C-42 HSA-C-48 or HSA-C-48	390 lb. 177.3 kg
HU-C-14-18	168 in. 426.7 cm	28 ¹ / ₄ in. 71.8 cm	23,400 lb. 10,636.4 kg	HSA-C-18 or HIA-C-18	380 lb. 172.7 kg
HU-C-14-24	168 in. 426.7 cm	36 ¹ / ₂ in. 92.7 cm	20,200 lb. 9,181.8 kg	HSA-C-24 or HIA-C-24	390 lb. 177.2 kg
HU-C-14-36	168 in. 426.7 cm	48 ¹ / ₂ in. 123.2 cm	17,600lb. or 15,400 lb. 8,000 kg or 7,000 kg	HSA-C-30 or HIA-C-30 HSA-C-36 or HIA-C-36	410 lb. 186.4 kg
HU-C-14-48	168 in. 426.7 cm	60 ¹ / ₂ in. 153.7 cm	13,700 lb. or 12,400 lb. 6,227.3 kg or 5,636.4 kg	HSA-C-42 or HIA-C-42 HSA-C-48 or HSA-C-48	430 lb. 195.5 kg

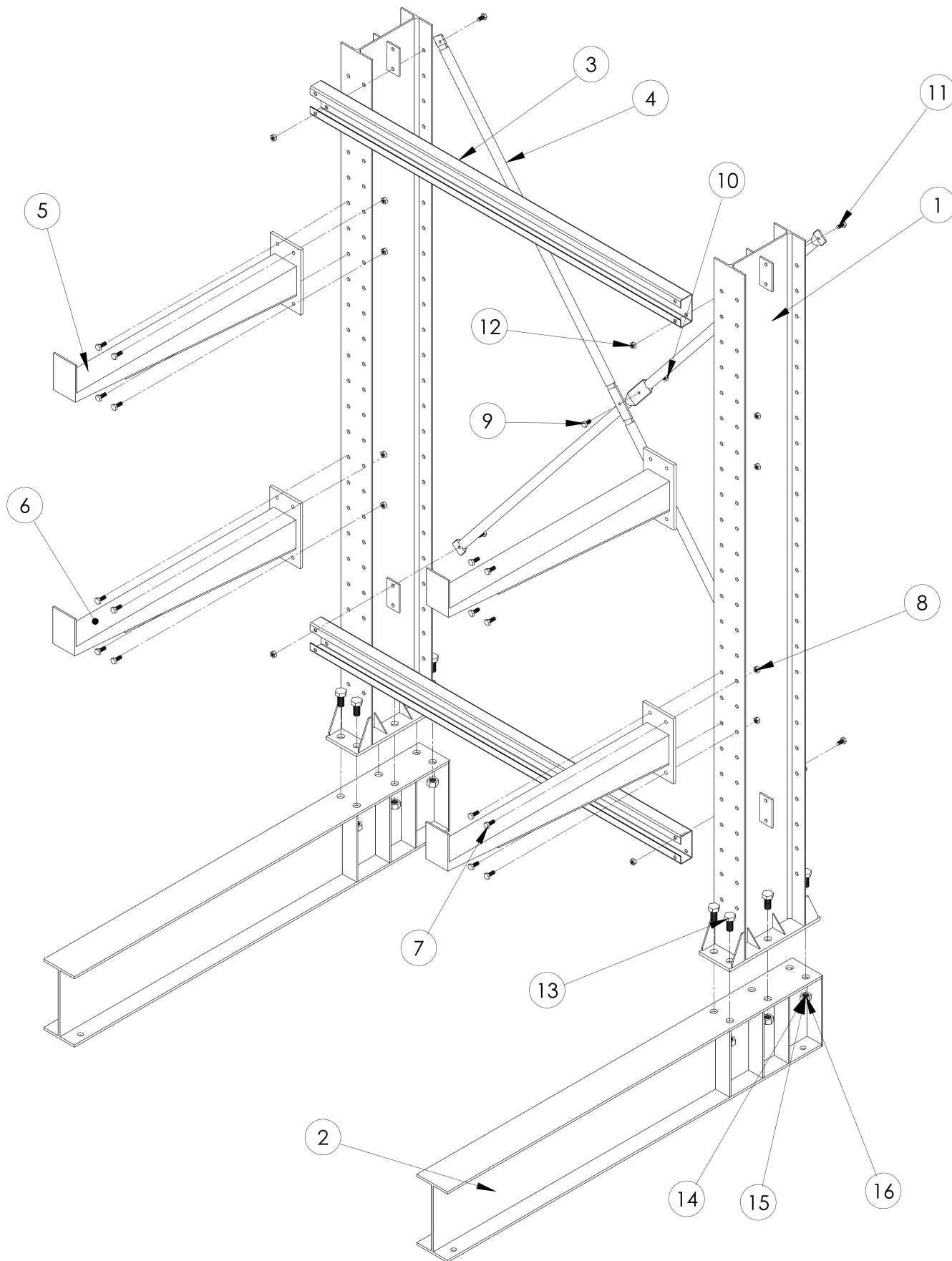
Straight arms

Model	Arm length	Capacity	Net weight
HSA-C-18	18 in. 45.7 cm	2,500 lb. 1,136.4 kg	16 lb. 7.3 kg
HSA-C-24	24 in. 61.0 cm	2,000 lb. 909.1 kg	19 lb. 8.6 kg
HSA-C-30	30 in. 76.2 cm	1,500 lb. 681.8 kg	21 lb. 9.5 kg
HSA-C-36	36 in. 91.4 c,	1,200 lb. 545. kg	24 lb. 10.9 kg
HSA-C-42	42 in. 106.7 cm	1,100 lb. 500 kg	27 lb. 12.3 kg
HSA-C-48	48 in. 121.9 cm	1,000 lb. 454.5 kg	30 lb. 13.6 kg

Inclined arms

Model	Arm length	Capacity	Net weight
HIA-C-18	18 in. 45.7 cm	2,500 lb. 1,136.4 kg	16 lb. 7.3 kg
HIA-C-24	24 in. 61.0 cm	2,000 lb. 909.1 kg	19 lb. 8.6 kg
HIA-C-30	30 in. 76.2 cm	1,500 lb. 681.8 kg	21 lb. 9.5 kg
HIA-C-36	36 in. 91.4 c,	1,200 lb. 545. kg	24 lb. 10.9 kg
HIA-C-42	42 in. 106.7 cm	1,100 lb. 500 kg	27 lb. 12.3 kg
HIA-C-48	48 in. 121.9 cm	1,000 lb. 454.5 kg	30 lb. 13.6 kg

FIG. 1A: HU-C-8 and HU-C-10 exploded parts diagram (corresponding bills of materials are provided on p. 5)



HU-C-8 Bill of Materials:

NOTE: You will receive straight and/or inclined arms as per your order.

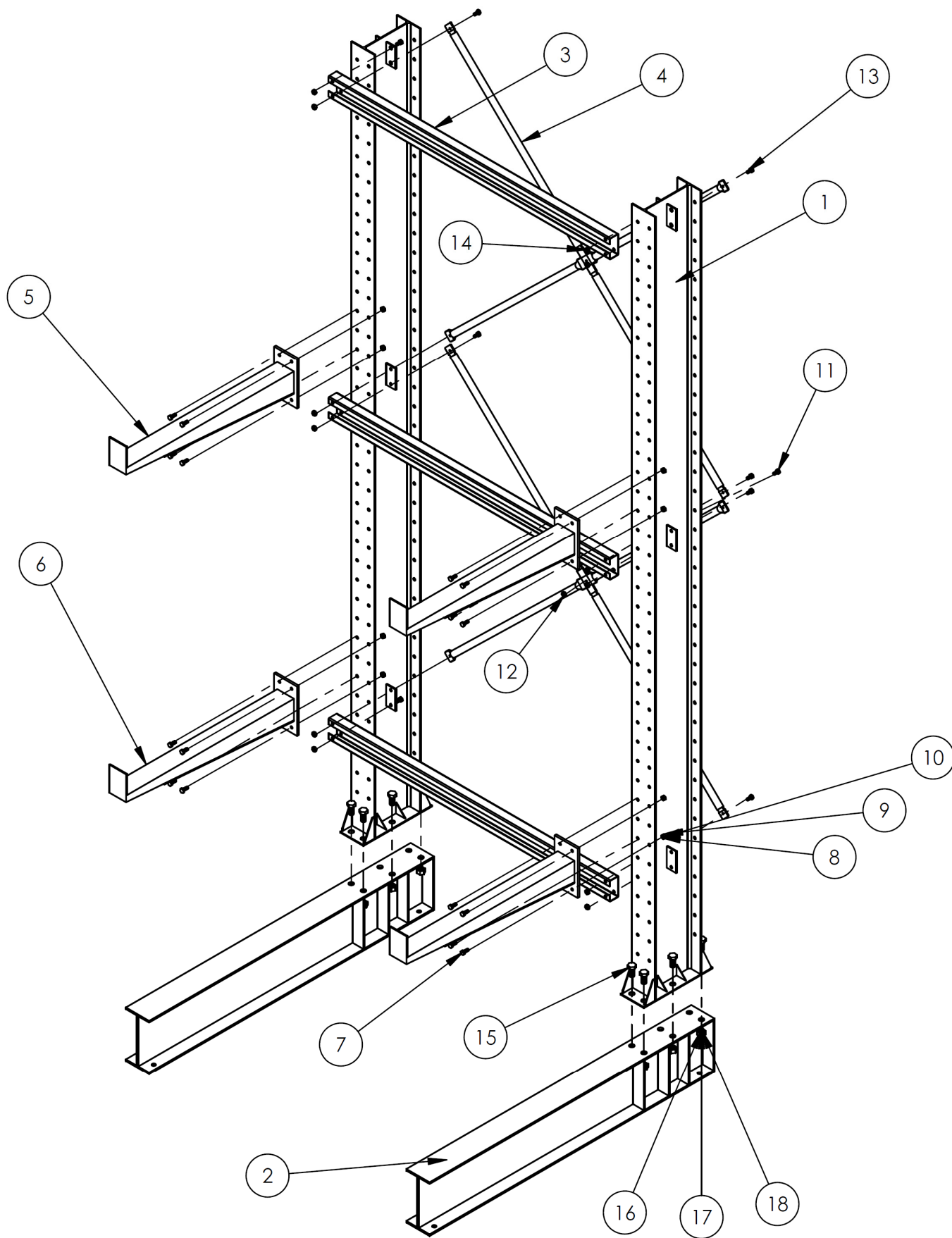
Item no.	Part no.	Description	Quantity
1	HU-1-UR-8	8ft. single-sided post	2
2	HU-2-SB-8	Single-sided base	2
3	HB-3-BB	Back brace (heavy duty)	as ordered
4	HB-4-CB	Cross bar (heavy duty)	as ordered
5	HSA HIA	Straight arm Inclined arm	as ordered
6	HDSA XHDSA	Heavy duty straight arm Extra-heavy duty straight arm	as ordered
7	HU-7-BOLT	M16-2.0 x 40mm bolt	4/arm
8	HU-8-LN	M16-2.0 nylock nut	4/arm
9	HU-9-BOLT	M10-1.5 x 32mm bolt	8
10	HU-10-LN	M10-1.5 nylock nut	8
11	HU-11-BOLT	M10-1.5 x 32mm	1
12	HU-12-LN	M10-1.5 nylock nut	1
13	HU-13-BOLT	M20-2.5 x 55mm bolt	12
14	HU-14-LW	M20 lock washer	12
15	HU-15-WA	M20 flat washer	12
16	HU-16-HN	M20-3.5 hex nut	12

HU-C-10 bill of materials

NOTE: You will receive straight and/or inclined arms as per your order.

Item no.	Part no.	Description	Quantity
1	HU-1-UR-10	10ft. single-sided post	2
2	HU-2-SB-10	Single-sided base	2
3	HB-3-BB	Back brace (heavy duty)	as ordered
4	HB-4-CB	Cross bar (heavy duty)	as ordered
5	HSA HIA	Straight arm Inclined arm	as ordered
6	HDSA XHDSA	Heavy duty straight arm Extra-heavy duty straight arm	as ordered
7	HU-7-BOLT	M16-2.0 x 40mm bolt	4/arm
8	HU-8-LN	M16-2.0 nylock nut	4/arm
9	HU-9-BOLT	M10-1.5 x 32mm bolt	8
10	HU-10-LN	M10-1.5 nylock nut	8
11	HU-11-BOLT	M10-1.5 x 32mm	1
12	HU-12-LN	M10-1.5 nylock nut	1
13	HU-13-BOLT	M20-2.5 x 55mm bolt	12
14	HU-14-LW	M20 lock washer	12
15	HU-15-WA	M20 flat washer	12
16	HU-16-HN	M20-3.5 hex nut	12

FIG. 1B: HU-C-12 and HU-C-14 exploded parts diagram (corresponding bills of materials are provided on p. 7)



HU-C-12 bill of materials

NOTE: You will receive straight and/or inclined arms as per your order.

Item no.	Part no.	Description	Quantity
1	HU-1-UR-12	12ft. single-sided post	2
2	HU-2-SB-12	Single-sided base	2
3	HB-3-BB	Back brace (heavy duty)	as ordered
4	HB-4-CB	Cross bar (heavy duty)	as ordered
5	HSA HIA	Straight arm Inclined arm	as ordered
6	HDSA XHDSA	Heavy duty straight arm Extra-heavy duty straight arm	as ordered
7	HU-7-BOLT	M16-2.0 x 40mm bolt	4/arm
8	HU-8-LN	M16 flat washer	4/arm
9	HU-9-BOLT	M16 lock washer	4/arm
10	HU-10-LN	M16-2.0 nylock nut	4/arm
11	HU-11-BOLT	M10-1.5 x 30mm	14
12	HU-12-LN	M10-1.5 nylock nut	14
13	HU-13-BOLT	M10-1.5 x 30mm bolt	14
14	HU-14-LW	M10-1.5 nylock nut	14
15	HU-15-WA	M20-2.5 x 40mm bolt	12
16	HU-16-HN	M20 flat washer	12
17	HU-17-LW	M20 lock washer	12
18	HU-18-HN	M20-2.5 hex nut	12

HU-C-14 bill of materials

NOTE: You will receive straight and/or inclined arms as per your order.

Item no.	Part no.	Description	Quantity
1	HU-1-UR-14	12ft. single-sided post	2
2	HU-2-SB-14	Single-sided base	2
3	HB-3-BB	Back brace (heavy duty)	as ordered
4	HB-4-CB	Cross bar (heavy duty)	as ordered
5	HSA HIA	Straight arm Inclined arm	as ordered
6	HDSA XHDSA	Heavy duty straight arm Extra-heavy duty straight arm	as ordered
7	HU-7-BOLT	M16-2.0 x 40mm bolt	4/arm
8	HU-8-LN	M16 flat washer	4/arm
9	HU-9-BOLT	M16 lock washer	4/arm
10	HU-10-LN	M16-2.0 nylock nut	4/arm
11	HU-11-BOLT	M10-1.5 x 30mm	14
12	HU-12-LN	M10-1.5 nylock nut	14
13	HU-13-BOLT	M10-1.5 x 30mm bolt	14
14	HU-14-LW	M10-1.5 nylock nut	14
15	HU-15-WA	M20-2.5 x 40mm bolt	12
16	HU-16-HN	M20 flat washer	12
17	HU-17-LW	M20 lock washer	12
18	HU-18-HN	M20-2.5 hex nut	12

Assembly instructions:

Assembly requires lifting and manipulating very heavy components. At least 3 people should work together to assemble this rack.

1. Assemble the rack on a level, even surface. Be certain to account for necessary aisle space, for example to accommodate lifting equipment, when selecting the assembly location.
2. Position the base frame pieces (HU-C-SB-#) in their desired locations. There are 6 bolt holes through the flange near one end of each base piece. These bolt holes must be on top.
3. Look at an upright/post (HU-1-UR-#) and notice the bolt plate welded to the bottom end of the post. There are six bolt holes in the bolt plate.
4. Align the bolt holes in the bolt plate with the bolt holes in the base frame. Insert M20-2.5 x 55mm bolts (HU-C-8 & HU-C-10) M20-2.5 x 40mm bolts (HU-C-12 & HU-C-14) through each of the 6 bolt holes; then secure them with an M30 flat washer, M30 lock washer, and M30-2.5 hex nut. (See FIGS. 2A & 2B).
5. Fasten another post to another base frame piece in the manner described in Step 4.

FIG. 2A: Post fastened to base frame

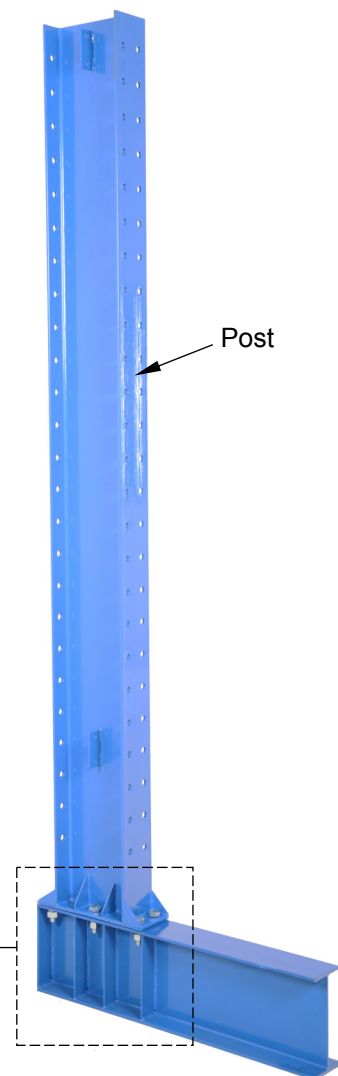
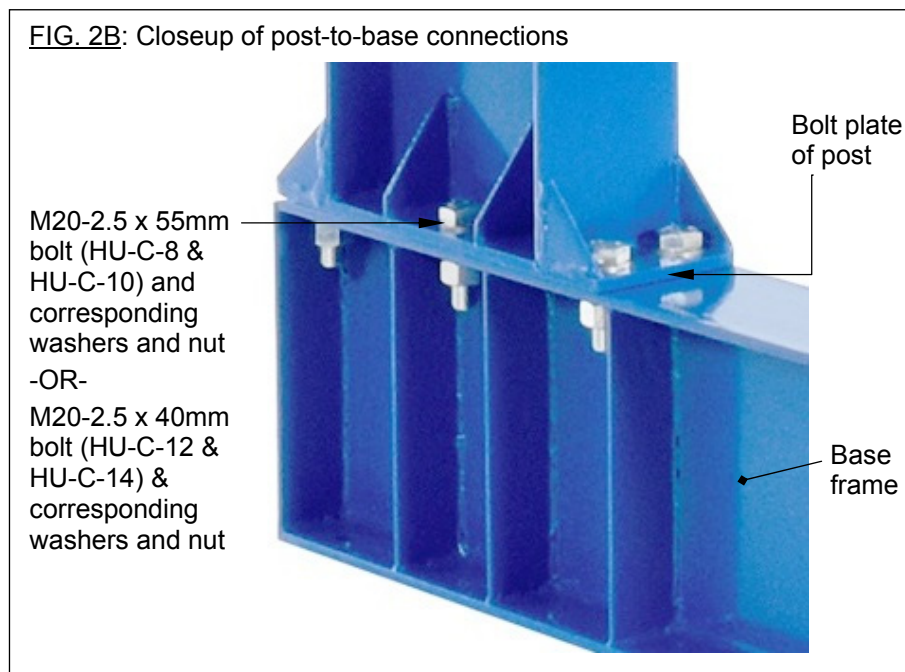


FIG. 2B: Closeup of post-to-base connections



6. Attach braces (MB-3-BB) to the posts. Fasten the braces to the posts with M10-1.5 x 30mm bolts and M10-1.5 hex nuts. (See FIG. 3A & 3B below).
7. Attach cross bars to the back braces:
 - a. First, insert M10 x 30mm bolts through the bolt holes at the ends of the upper brace (See bold arrows near the top of FIG. 3A; connection also shown in FIG. 3B and FIG. 3C).
 - b. Slide the circular end of a turnbuckle onto the end of each bolt (through the upper back brace); then apply an M10 flat washer and an M10 lock nut. (See Fig. 3C).
 - c. Connect one end of a cross bar to the hooked end of the turnbuckle. (See Fig. 3C).
 - d. Align the other end of the cross bar with the bolt holes in the lower back brace; then insert an M10 x 65mm bolt through the end of the cross bar and through the bolt hole in the back brace. Secure the end of the bolt with an M10 flat washer and an M10 lock nut. (See FIG. 3D).

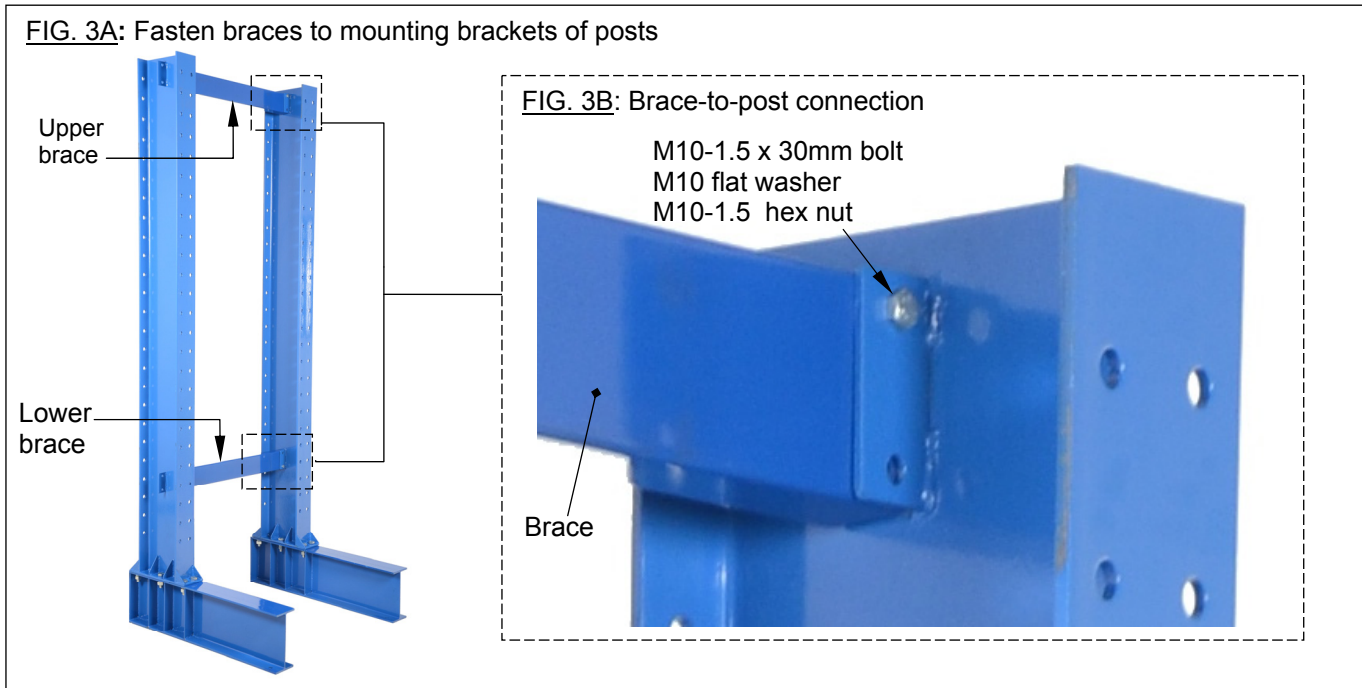
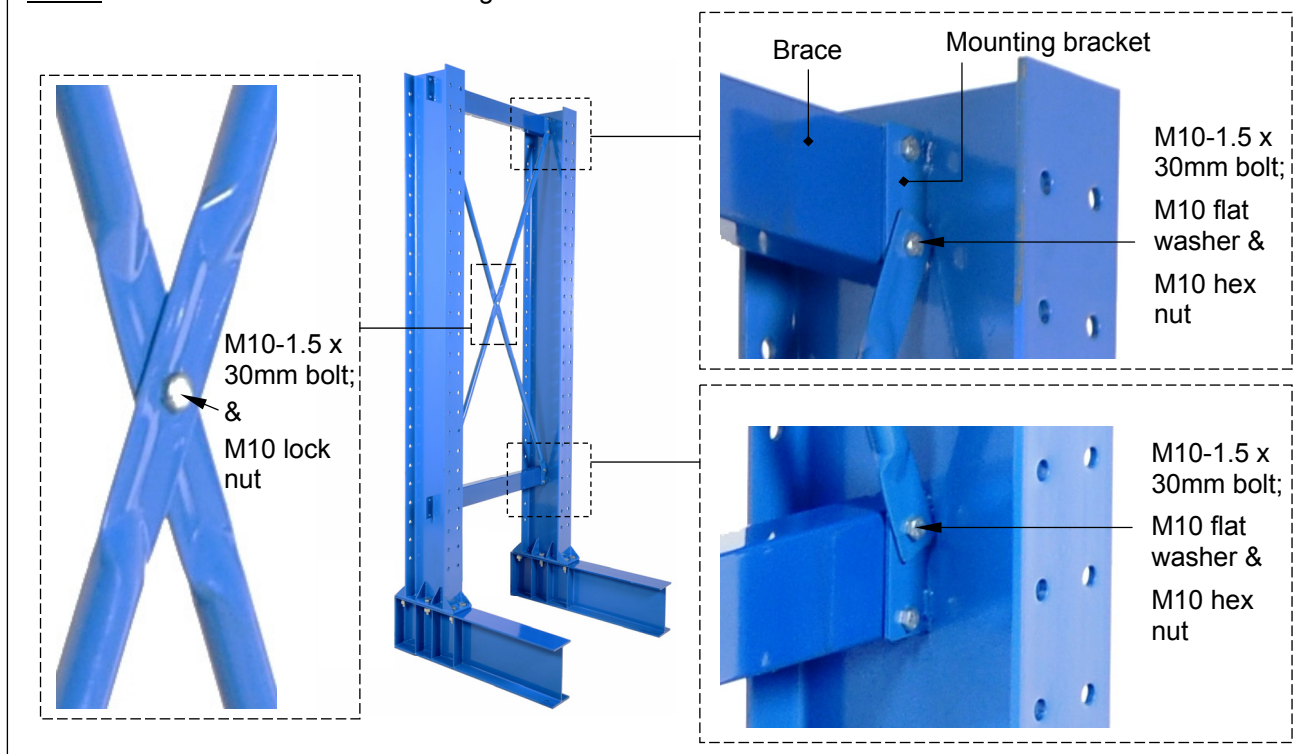


FIG. 4: Connect cross bars to mounting brackets and back braces



8. Install the arms. Regardless of whether you purchased inclined or straight arms, the arms will all have a post bracket on one end and a material retention plate on the other end (see FIG. 5A. Attach the arm pieces (HSA; HIA; HDSA; or XHDSA-type) to the posts. Be sure to attach arms at the same level on both posts so that material stored on the rack will be level.

To fasten an arm to a post:

- a. Align the 4 bolt holes in the post bracket with the appropriate bolt holes in a post. The material retention plate should point upwards.
- b. Insert M16-2.0 x 40mm bolts through the post bracket and post, and attach them with M16 flat washers, M16 lock washers and M16 hex nuts (see FIG. 5B).

FIG. 5A: Complete assembly

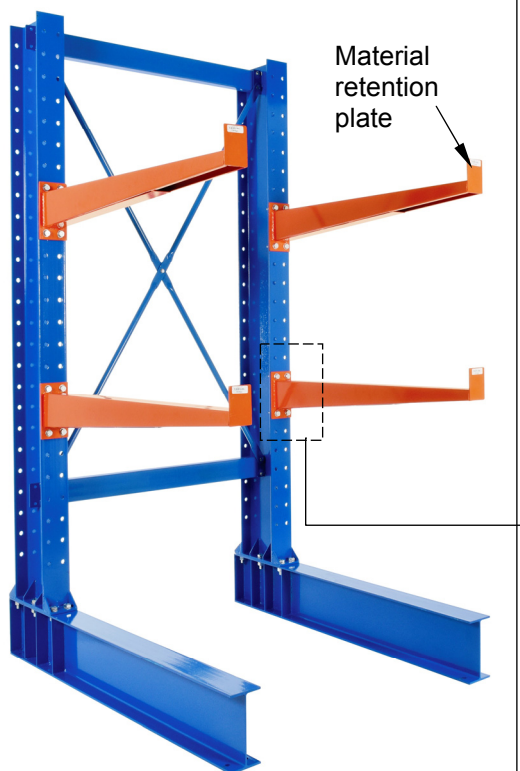
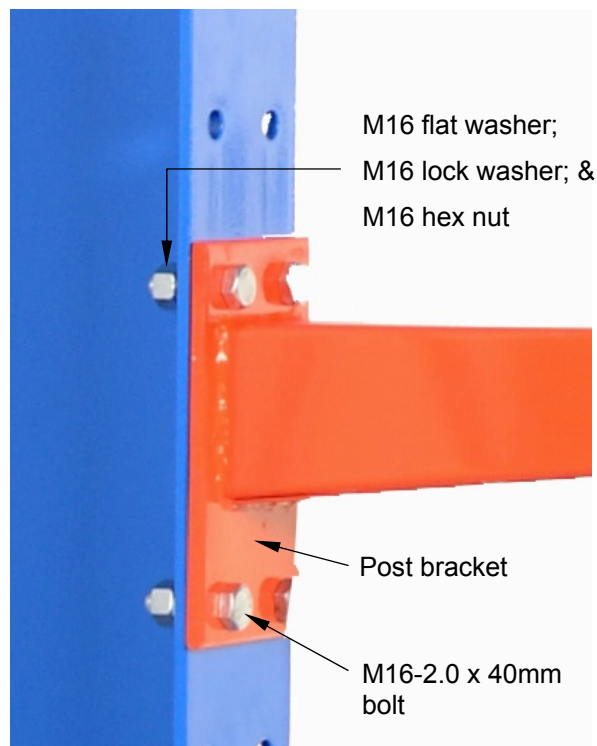


FIG. 5B: Arm-to-post attachment



Maintenance:

At least once per month, inspect the rack:

1. Check all hardware/fasteners to verify that nuts, bolts and washers are in normal condition and are securely fastened together.
2. Look for damage or corrosion that might compromise the structural integrity of any base frame member or upright frame piece. If any structural damage is present, immediately tag the rack out of service. Replace all damaged components and do not use the rack again until it has been fully restored to normal condition.
3. Verify that all racks are level, plumb and square.

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 if the part is 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.

What is an “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 any of the following methods:

Mail
Vestil Manufacturing Corporation
2999 North Wayne Street, PO Box 507
Angola, IN 46703

Fax
(260) 665-1339
Phone
(260) 665-7586

Email
sales@vestil.com

In the written request, list the parts believed to be defective and include the address where replacements should be delivered.

What is covered under the warranty?

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 may require you to send the entire product, or just the defective part or parts, to its facility in Angola, IN. The warranty covers defects in the following original dynamic components: motors, hydraulic pumps, electronic controllers, switches 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 30 days. For wearing parts, the warranty period is 30 days. The warranty periods begin on the date when 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 the warranty periods 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?

1. Labor;
2. Freight;
3. Occurrence of any of the following, which automatically voids the warranty:
 - Product misuse;
 - Negligent operation or repair;
 - Corrosion or use in corrosive conditions;
 - Inadequate or improper maintenance;
 - Damage sustained during shipping;
 - Accidents involving the product;
 - Unauthorized modifications: DO NOT modify the product IN ANY WAY without first receiving written authorization from Vestil. Modification(s) might make the product unsafe to use or might cause excessive and/or abnormal wear.

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.

