



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

www.vestilmfg.com e-mail: sales@vestil.com

**GR-D SERIES GUARD RAILING
 GR-TP SERIES POSTS
 Installation 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 provided in this manual; or
 - b) Information appearing 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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Product specifications

The standard GR-series system is **NOT** designed for installation on public streets or highways. [Guard rail systems that comply with Department of Transportation requirements are available as special orders.] Rail-mounting hardware is included with each post. Concrete anchor kits are sold separately.

Dimensions and other product specifications appear in the following table:

Model	Height	Length	Number of posts required	Net weight
GR-D-4	12in. (30.5cm)	42in. (107cm)	2	44 lb. (20kg)
GR-D-6	12in. (30.5cm)	54in. (137cm)	2	66 lb. (30kg)
GR-D-8	12in. (30.5cm)	66in. (168cm)	2	89 lb. (40.5kg)
GR-D-10	12in. (30.5cm)	78in. (198cm)	3	112 lb. (50.9kg)
GR-D-12	12in. (30.5cm)	90in. (229cm)	3	133 lb. (60.5kg)

Safety Principles

This manual will acquaint persons authorized to install and/or maintain this guard rail with proper installation and maintenance procedures. **Therefore, each person involved in installing or maintaining the guard rail system should read and understand every instruction BEFOREHAND.** Users should have access to the manual at all times and should routinely review the directions.

This manual uses SIGNAL WORDS to classify personal injury risks and situations that might lead to property damage, as well as to draw attention to safety message(s). The reader must understand that each signal word indicates the seriousness of the identified hazard.



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 assembly, installation, etc. that might unnecessarily damage the guard rail.

Employers are responsible for training employees to use the product properly. If you do not understand an instruction, ask your supervisor or employer for assistance, because failure to follow the directions in this manual might result in serious personal injury or even death. Vestil is **not liable** for any injury or property damage that occurs as a consequence of failing to apply either: 1) the instructions in this manual; or 2) the information provided on labels affixed to the product (if applicable).

Safety Considerations

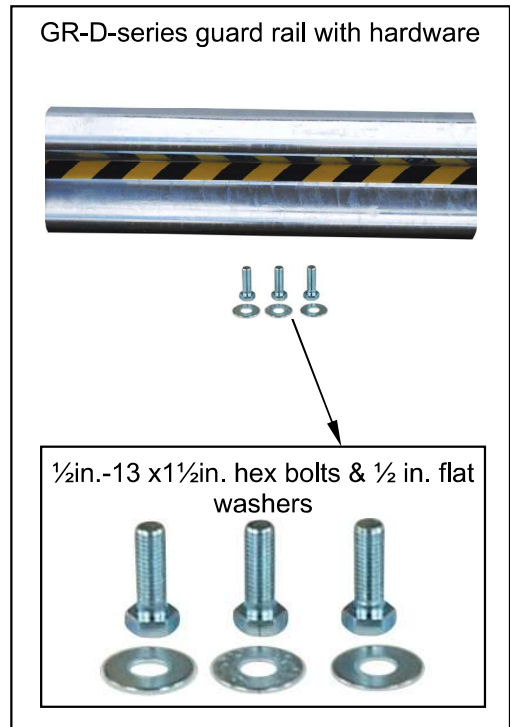
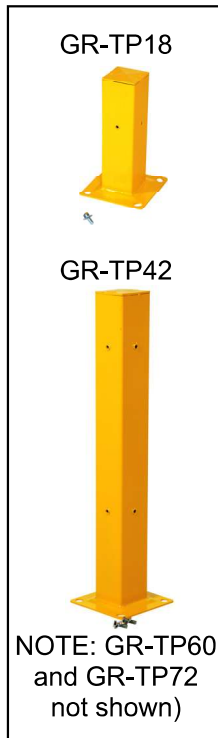
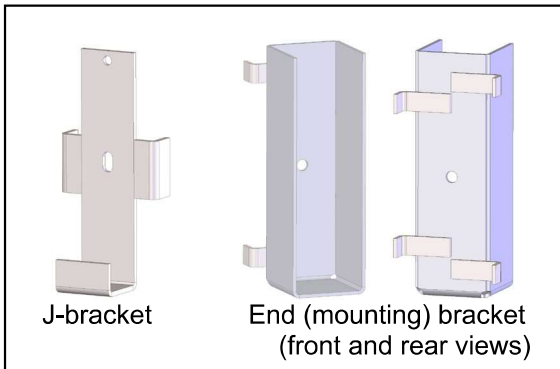


This guard rail system is designed for installation on private property, including private roadways. Standard units do not provide the level of performance recommended by the U.S. Dept. of Transportation (DOT), that is, they are **NOT** designed for installation on public roadways. DOT compliant posts are available as special orders.

Improper or incomplete installation constitutes misuse of the guard rail system. Securely anchor each post to the supporting surface, e.g. concrete or asphalt, and securely fasten each rail section to 2 posts as described in this manual.

Replace any component of this system after it sustains impact damage.

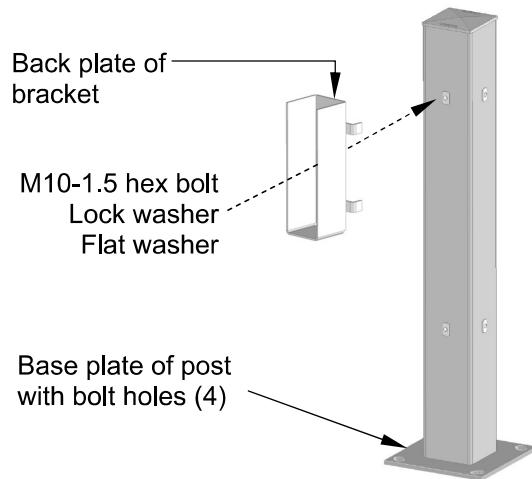
Guard rail system components:



Installation:

1. Place the posts in the desired installation locations.
2. Attach the end mounting brackets to the posts as described below and as shown in FIG. 1. Put a flat washer onto a 1/2 in.-13 x 1 1/2 in. hex bolt. Align the bolt hole in the brackets with the appropriate bolt hole in a post. Insert a bolt into the hole and tighten the connection.

FIG. 1: Fasten mounting brackets to posts



3. Lower the guardrail segment into the mounting brackets; then adjust the positions of the posts. The guardrail should be able to slide relatively easily, which requires ~1/2 in. gap between the end of the guardrail and the back plate of the bracket. (See FIG. 2).

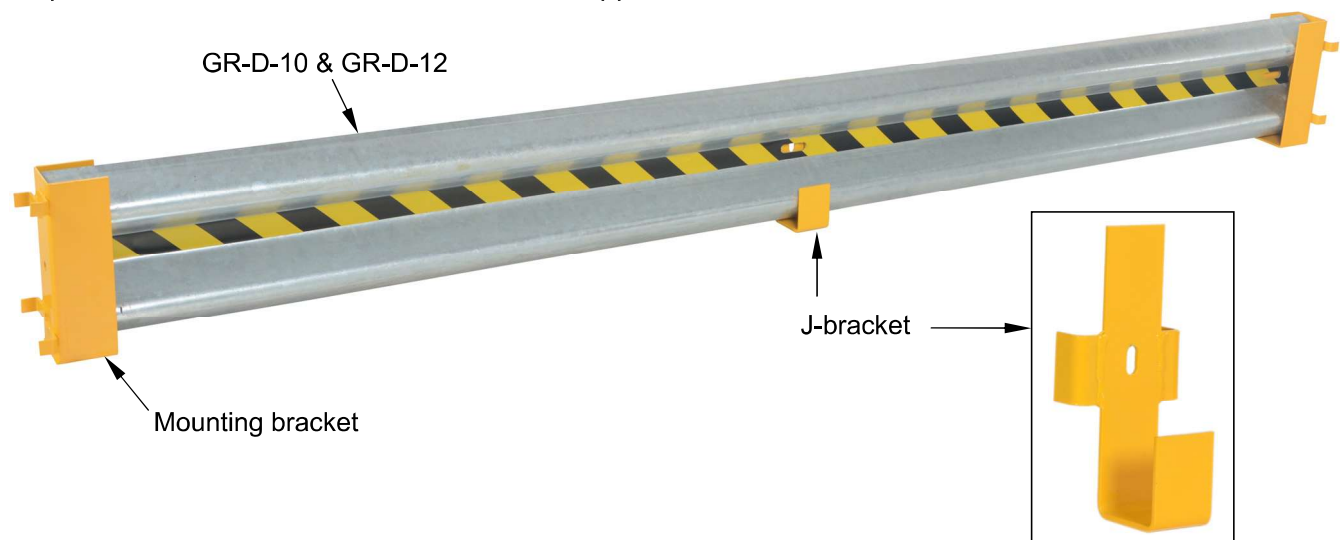


FIG. 2: Adjust positions of posts

4. The base plate of each post (see FIG. 1 above) includes 4 bolt holes (15/16 in.). Mark the concrete with the location of each bolt hole; then move the posts aside.

5. Using a hammer drill and a $\frac{3}{4}$ in. masonry bit, drill holes no more than $3\frac{1}{4}$ in. deep into the concrete.
6. Set the posts in place and align the bolt holes in the base plates with the holes drilled into the concrete.
7. Put a $\frac{3}{4}$ in. flat washer followed by a hex nut onto the threaded end of each wedge anchor bolt; then tap the bolts through the base plates and into the drilled holes with a hammer. The nut should stick up above the end of the bolt so that the hammer strikes the nut rather than the end of the bolt.
8. Tighten the nuts to expand the anchoring mechanism against the walls of the bolt holes.

Models GR-D-10 and GR-D-12 (10ft. and 12ft. guardrails) require an additional support. The following steps describe how to install the additional support.



9. Fasten a J-bracket to the post. Put a flat washer onto a $\frac{1}{2}$ in.-13 x $1\frac{1}{2}$ in. hex bolt. Align the bolt hole in the bracket with the hole in the post and fasten them together with the hex bolt.
10. Lift the guardrail and move the post and J-bracket into position at the midpoint of the guardrail; then lower the guardrail into the bracket.
11. Mark the concrete with the location of each bolt hole in the base plate of the post; then move the post aside. Use a hammer drill and a $\frac{3}{4}$ in. masonry bit to drill holes no more than $3\frac{1}{4}$ in. deep into the concrete. Anchor the post to the ground (see step 7 above).
12. Reinstall the guardrail.

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:

<u>Mail</u>	<u>Fax</u>	<u>Email</u>
Vestil Manufacturing Corporation 2999 North Wayne Street, PO Box 507 Angola, IN 46703	(260) 665-1339 <u>Phone</u> (260) 665-7586	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 components is 30 days. The warranty period begins on the date when Vestil ships the product to the warrantee. If the product was purchased from an authorized distributor, the period begins when the distributor ships the product. Vestil may extend the warranty period for products shipped from authorized distributors by up to 30 days to the duration necessary 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

