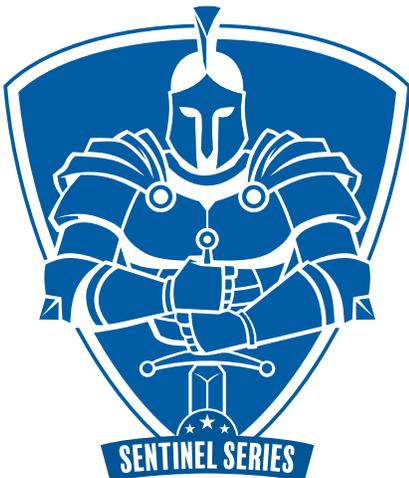


DOCK BUMPERS

SELECTION GUIDE



BLUE GIANT[®]

EFFECTIVE: JULY 1, 2016
PART # 038-1007E

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1.0 DOCK BUMPER APPLICATION GUIDELINES

STEP 1: Determine Industry Type

Refer to the guideline chart below for minimum bumper protection required based on the type of industry where the bumpers will be used:

| Industry Type | Load Weight | Frequency (trailers per day) | Minimum Protection Required |
|-------------------------------|----------------|------------------------------|-----------------------------|
| Commercial | Light | 1 – 2 | Molded Bumpers |
| | | 3 + | Laminated Bumpers |
| | Medium – Heavy | 3 + | Steel Faced Bumpers |
| Distribution and Warehousing | Light – Medium | 1 – 2 | Laminated Bumpers |
| | Medium – Heavy | 3 + | Steel Faced Bumpers |
| Manufacturing and Automotive | Light – Medium | All | |
| | Medium – Heavy | | |
| Beverage, Paper and Packaging | Heavy | | |

STEP 2: Determine Dock Usage and Conditions

Refer to this chart to understand the minimum bumper protection required for different types of traffic and loading conditions:

| Industry Type | Load Weight | Frequency (trailers per day) | Minimum Protection Required |
|-----------------------------|----------------|------------------------------|--|
| City Delivery and Cube Vans | All | All | Molded Bumpers (rec. Laminated Bumpers) |
| Forklift Loading | | | Laminated Bumpers (rec. Steel-Faced Bumpers) |
| Yard Jockey / Shunt Trucks | | | Steel-Faced Bumpers |
| B-Trains (double impact) | | | |
| Air-Ride Trailers | | | |
| Declined Approach | Light | All | Steel-Faced Bumpers |
| | Medium – Heavy | | |

1.0 DOCK BUMPER APPLICATION GUIDELINES CON'T.

STEP 3: Determine if extra bumper protection is required. Always use dock bumpers to keep truck a minimum of 4" away from any surface or equipment that could be damaged. Use this chart for information on specific conditions.

| Condition | Extra Bumper Protection Required? | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------------------------|---|------------------|---------------------------|---------------------------|----|----|----|----|----|----|----|----|----|----|-----|----|----|-----|----|----|-----|-----|----|-----|-----|----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Other dock equipment installed | Analysis Required | Always consult OEM specifications of other loading dock equipment installed at dock position (dock levelers, truck restraints, dock shelters, etc.) for specific dock bumper protection requirements. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inclined Approach  | No | In cases when a trailer is docked uphill into the building, standard 4" projection bumpers, if properly selected and installed, will offer adequate protection. (Unless other dock equipment requirements or special conditions exist.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Declined Approach  | Yes | <p>In cases when a trailer is docked downhill into the building, in most cases bumper protection must be extended to suit. The general rule is to add a minimum of 1" of bumper protection (beyond standard 4" or 6") for every 1% of decline.</p> <p>Eg. 3% decline = 4" bumper + 3" additional = 7" min. bumper protection.</p> <table border="1" data-bbox="824 913 1524 1444"> <thead> <tr> <th>Percent of Grade</th> <th>Optimum Bumper Protection</th> <th>Minimum Bumper Projection</th> </tr> </thead> <tbody> <tr><td>1%</td><td>7"</td><td>5"</td></tr> <tr><td>2%</td><td>8"</td><td>6"</td></tr> <tr><td>3%</td><td>9"</td><td>7"</td></tr> <tr><td>4%</td><td>10"</td><td>8"</td></tr> <tr><td>5%</td><td>11"</td><td>9"</td></tr> <tr><td>6%</td><td>12"</td><td>10"</td></tr> <tr><td>7%</td><td>13"</td><td>11"</td></tr> <tr><td>8%</td><td>14"</td><td>12"</td></tr> <tr><td>9%</td><td>15"</td><td>13"</td></tr> <tr><td>10%</td><td>16"</td><td>14"</td></tr> <tr><td>11%</td><td>17"</td><td>15"</td></tr> <tr><td>12%</td><td>18"</td><td>16"</td></tr> </tbody> </table> <p>NOTE: Declined approaches result in heavier trailer impact and heavier duty bumpers should be considered.</p> | Percent of Grade | Optimum Bumper Protection | Minimum Bumper Projection | 1% | 7" | 5" | 2% | 8" | 6" | 3% | 9" | 7" | 4% | 10" | 8" | 5% | 11" | 9" | 6% | 12" | 10" | 7% | 13" | 11" | 8% | 14" | 12" | 9% | 15" | 13" | 10% | 16" | 14" | 11% | 17" | 15" | 12% | 18" | 16" |
| Percent of Grade | Optimum Bumper Protection | Minimum Bumper Projection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1% | 7" | 5" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2% | 8" | 6" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3% | 9" | 7" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4% | 10" | 8" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5% | 11" | 9" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6% | 12" | 10" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7% | 13" | 11" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8% | 14" | 12" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9% | 15" | 13" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10% | 16" | 14" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11% | 17" | 15" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12% | 18" | 16" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yard Jockey or Shunt Trucks | Yes | <p>The yard jockey raises the nose of the trailer, thereby tilting the top-backside in towards the building. Add an extra 4" of protection to the bumpers to keep the trailer at a safe distance.</p> <p>NOTE: Yard jockey use causes more face damage to bumpers and heavier duty bumpers should be considered.</p> <p>NOTE: Extending bumper protection may negatively affect lip purchase of existing dock leveler and dock seal/shelter. Be careful!</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Increasing bumper protection can be accomplished in several ways:

1. Creating a cantilever dock by adding concrete to the face of the dock and moving dock forward.
2. Remove and reinstall existing dock bumpers, adding an **Extension Bracket** to extend bumper.
3. Installing an **Extra Projection Bumper** of the appropriate projection.

Please consult with Customer Support for assistance with further analysis of dock conditions.

1.0 DOCK BUMPER APPLICATION GUIDELINES CON'T.

STEP 4: Determine Height of Impact Range.

Ensuring adequate protection here will limit the potential damaging effects of truck over/under-ride. Once you know the lowest and highest impact points of trailers, refer to this chart to understand the minimum bumper protection height required.

| Height of Impact Range Difference | Bumper Height | Bumper Style |
|-----------------------------------|--------------------------|--------------|
| Up to 8" | 12" | Standard |
| 8 to 16" | 20" | Vertical |
| 16" to 20" | 24" | |
| 20" to 30" | 36" | |
| 30" or Higher | Contact Customer Support | — |

NOTES:

- 20" to 24" high vertical bumpers as minimum protection are **always** recommended.
- For extra width requirements – consider extra width laminated standard bumpers or side by side standard bumpers.
- Bumper mounting may require reference to the chart below.

STEP 5: Determine if "Above Dock" protection is required.

If the impact location of trailers is above dock level, Above Dock Riser Brackets will be required. Use the following chart as a basic guideline if trailer impact ranges are unknown.

| Dock Height (off grade) | Riser Bracket Required | Notes |
|-------------------------|------------------------|--|
| 46" or lower | Yes | Most traffic can over-ride bumpers mounted lower than 46" |
| 46" to 52" | Analysis Required | Bumpers mounted at dock level generally offer adequate protection, but if high-bedded trailers (e.g. refrigerated trailers or container beds) or other conditions exist which may raise the trailer above this height (e.g. packed snow/ice), use Above Dock Riser Brackets. |
| 52" or higher | No | Bumpers mounted at dock level generally offer adequate protection |

NOTE: Trade-off may be necessary when considering Above Dock Riser Brackets as they may cause intrusion into the door opening.

2.0 APPLYING ABOVE DOCK RISER BRACKETS

STEP 1: Choose the desired RISE (A) based on the coverage needed. See Figure 1.

STEP 2: Ensure there is adequate installation space for the TOP PLATE (D) as it must be a minimum of 2" longer than the RISE (A) to offer maximum top impact protection. See Figure 2.

STEP 3: Choose the appropriate size dock bumper so that at least 60% of the entire height is "below dock". See figure 3.

STEP 4: Ensure the front plate of the bracket is a minimum of 2" longer than the bumper height. See figure 2 and 3.

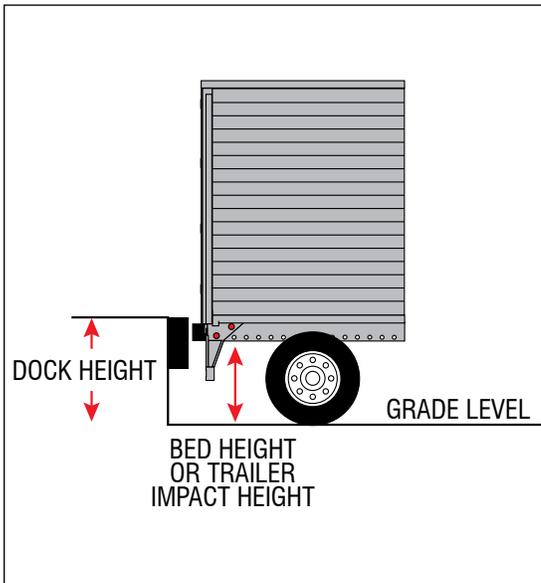


Figure 1

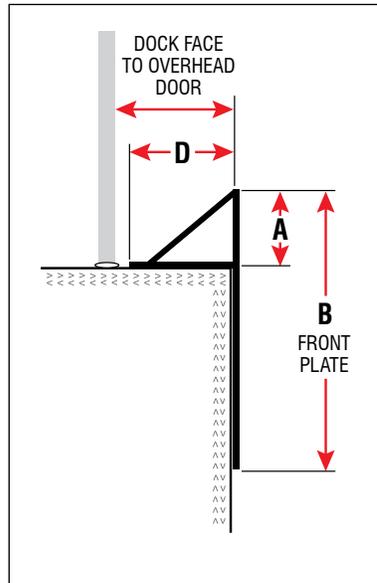


Figure 2

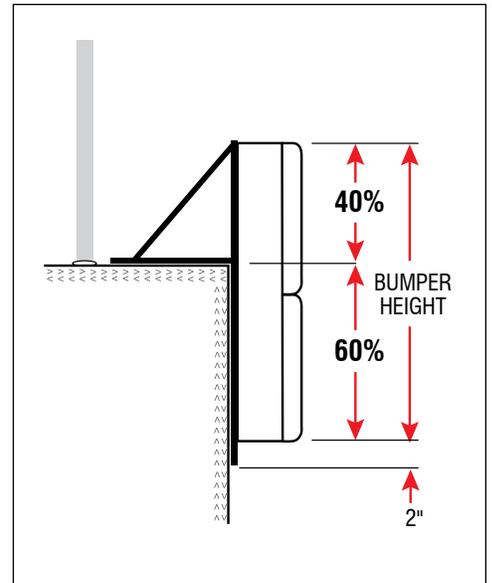


Figure 3

2.0 APPLYING ABOVE DOCK RISER BRACKETS CON'T.

STEP 5: Use this convenient chart to help you determine the correct sizes and bracket type:

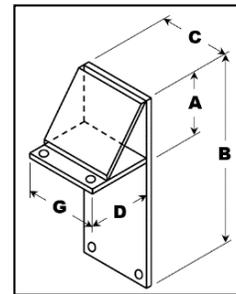
| A | D | B | Minimum Bumper Height | Bracket Type |
|-------------------------|---------------------------|------------------------------|-----------------------|--------------|
| Desired Rise | Min. Horizontal Top Plate | Min. Vertical Front Plate | | |
| 6" or less | 8" | 22" (20" w/extra proj. brkt) | 20" | Standard |
| 7" | 9" | | | |
| 8" | 10" | | | |
| 9" | 11" | 26" (24" w/extra proj. brkt) | 24" | High Rise |
| 10" | 12" | | | |
| 11" | 13" | | | |
| 12" | 14" | 32" (30" w/extra proj. brkt) | 30" | |
| 13" or higher | Consult Applications | | | |
| Drive-Thru Applications | | | | |

Then choose one of the following designs and supply dimensions for all the letters.

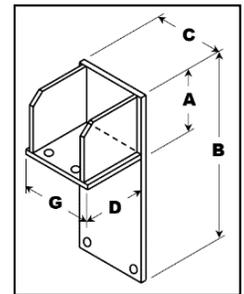
Standard Dimensions:

C = 10"

G = 10"



Standard Riser



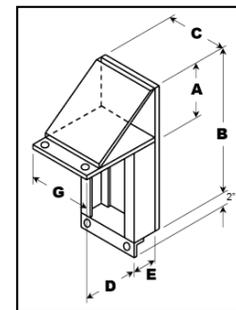
High Rise

STEP 6: Certain situations may require combining riser bracketing and extra bumper projection to achieve adequate bumper protection. In these cases, select one of the extra-projection risers or select extra-projection dock bumpers (and have them welded to riser brackets).

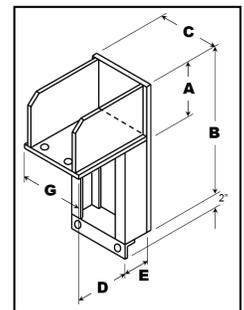
Standard Dimensions:

C = 10"

G = 10"



Standard Riser
with Extension



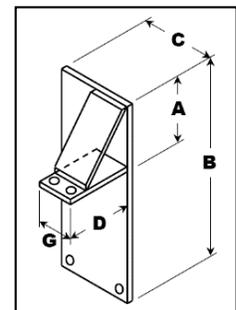
High Rise
with Extension

STEP 7: In dock applications where the door opening width is small and there is not enough space between the dock leveler and the wall for a standard width riser bracket, a riser with a cut-out can be manufactured. Select one of the following:

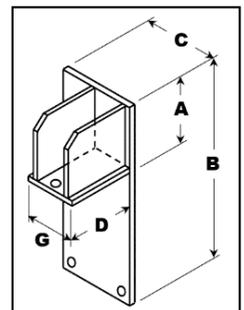
Standard Dimensions:

C = 10"

G = 5"



Standard Riser
with Cutout



High Rise
with Cutout

3.0 STEEL-FACED LAMINATED BUMPERS

Hard-wearing, long-lasting protection for the loading dock! Steel-Faced Laminated Dock Bumpers by Blue Giant offer low lifetime ownership cost because they will absorb more shock and abrasion than conventional bumpers. That means longer wear expectancy with fewer replacements. These bumpers give “Free Float” protection through structural tie rods that float through elongated holes in the face plate. That combines the impact absorption protection of conventional bumpers with the superior durability of a steel face plate.

Uses / Applications:

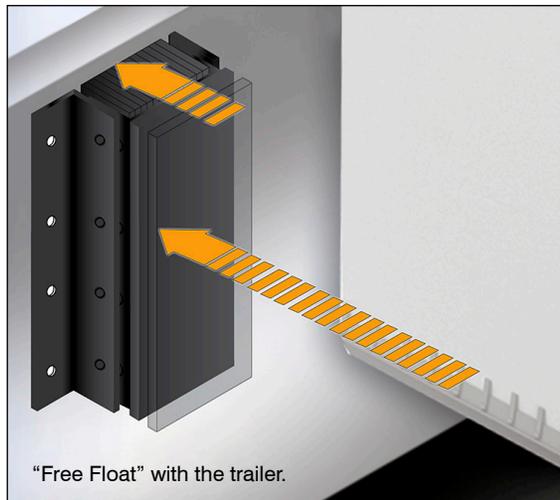
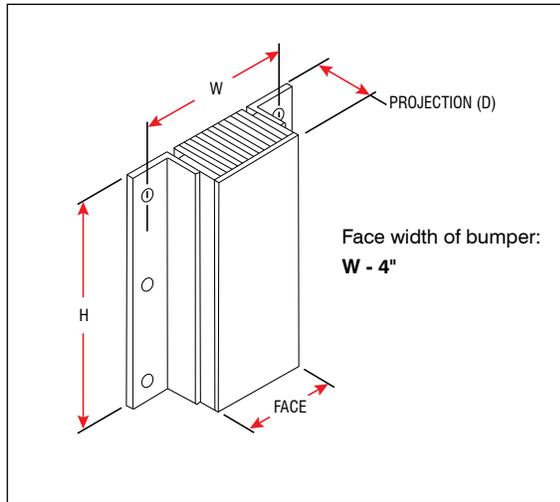
- Used on docks where excessive friction from up and down trailer movement occurs (yard jockeys, air ride trailers, etc.).
- Can be used in material handling application where medium to heavy dock protection is required.

Installation:

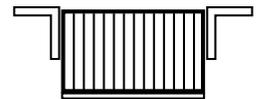
5/8" anchor bolts mounted through pre-drilled holes into concrete or can be welded to curb angle.

Material / Specifications:

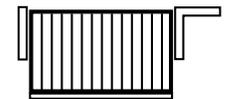
- Steel face is 3/8" thick, heavy duty, high carbon steel that is mounted over a laminated dock bumper.
- Plate to be welded to 2 or 3 steel support brackets which are to extend back to the 3/4" supporting rods. Brackets to be punched with elongated holes to allow steel face to “float” upon impact.



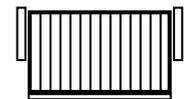
Flange Configurations
(specify with suffix):



STANDARD



P1 STYLE



P2 STYLE

Standard: Angles both sides
(eg. BGV420-11SF)

P1: Flat plate one side
(eg. BGV420-11SF-P1)

P2: Flat plate both sides
(eg. BGV420-11SF-P2)

3.0 STEEL-FACED LAMINATED BUMPERS CON'T.

| 4" DEEP SERIES | | | |
|-----------------------|--------------------|-------------------------------|-----------------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG410-14SF | BG410-14SF-C | 10" x 14" | 48 lbs |
| BG410-18SF | BG410-18SF-C | 10" x 18" | 60 lbs |
| BG410-24SF | BG410-24SF-C | 10" x 24" | 75 lbs |
| BG410-36SF | BG410-36SF-C | 10" x 36" | 121 lbs |
| BG412-14SF | BG412-14SF-C | 12" x 14" | 51 lbs |
| BG412-18SF | BG412-18SF-C | 12" x 18" | 64 lbs |
| BG412-24SF | BG412-24SF-C | 12" x 24" | 88 lbs |
| BG412-36SF | BG412-36SF-C | 12" x 36" | 145 lbs |
| BGV420-11SF | BGV420-11SF-C | 20" x 11" | 65 lbs |
| BGV424-11SF | BGV424-11SF-C | 24" x 11" | 77 lbs |
| BGV436-11SF | BGV436-11SF-C | 36" x 11" | 95 lbs |

| 5.25" DEEP SERIES | | | |
|--------------------------|--------------------|-------------------------------|-----------------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG52506-24SF | BG52506-24SF-C | 6" x 24" | 46 lbs |
| BG52506-36SF | BG52506-36SF-C | 6" x 36" | 72 lbs |
| BG52510-14SF | BG52510-14SF-C | 10" x 14" | 48 lbs |
| BG52510-18SF | BG52510-18SF-C | 10" x 18" | 59 lbs |
| BG52510-24SF | BG52510-24SF-C | 10" x 24" | 75 lbs |
| BG52510-36SF | BG52510-36SF-C | 10" x 36" | 121 lbs |
| BG52510-14SF | BG52510-14SF-C | 12" x 14" | 58 lbs |
| BG52510-18SF | BG52510-18SF-C | 12" x 18" | 63 lbs |
| BG52510-24SF | BG52510-24SF-C | 12" x 24" | 92 lbs |
| BG52510-36SF | BG52510-36SF-C | 12" x 36" | 145 lbs |
| BGV52520-11SF | BGV52520-11SF-C | 20" x 11" | 71 lbs |
| BGV52524-11SF | BGV52524-11SF-C | 24" x 11" | 84 lbs |
| BGV52536-11SF | BGV52536-11SF-C | 36" x 11" | 126 lbs |

NOTE:

All dock bumpers are considered, "Angle both sides". Please indicate other configurations with:

- For an angle on one side and flat plate on the other, specify "-P1" behind the model number. (e.g. BGV420-11SF-P1)
- For flat plates instead of angles, specify "-P2" behind the model number. (e.g. BGV420-11SF-P2)

3.0 STEEL-FACED LAMINATED BUMPERS CON'T.

| 6" DEEP SERIES | | | |
|-----------------------|--------------------|-------------------------------|-----------------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG610-14SF | BG610-14SF-C | 10" x 14" | 52 lbs |
| BG610-18SF | BG610-18SF-C | 10" x 18" | 68 lbs |
| BG610-24SF | BG610-24SF-C | 10" x 24" | 88 lbs |
| BG610-36SF | BG610-36SF-C | 10" x 36" | 138 lbs |
| BG612-14SF | BG612-14SF-C | 12" x 14" | 67 lbs |
| BG612-18SF | BG612-18SF-C | 12" x 18" | 84 lbs |
| BG612-24SF | BG612-24SF-C | 12" x 24" | 105 lbs |
| BG612-36SF | BG612-36SF-C | 12" x 36" | 166 lbs |
| BGV620-11SF | BGV620-11SF-C | 20" x 11" | 86 lbs |
| BGV624-11SF | BGV624-11SF-C | 24" x 11" | 99 lbs |
| BGV636-11SF | BGV636-11SF-C | 36" x 11" | 160 lbs |

| 6.75" DEEP SERIES | | | |
|--------------------------|--------------------|-------------------------------|-----------------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG67510-14SF | BG67510-14SF-C | 10" x 14" | 62 lbs |
| BG67510-18SF | BG67510-18SF-C | 10" x 18" | 73 lbs |
| BG67510-24SF | BG67510-24SF-C | 10" x 24" | 88 lbs |
| BG67510-36SF | BG67510-36SF-C | 10" x 36" | 138 lbs |
| BG67512-14SF | BG67512-14SF-C | 12" x 14" | 69 lbs |
| BG67512-18SF | BG67512-14SF-C | 12" x 18" | 75 lbs |
| BG67512-24SF | BG67512-24SF-C | 12" x 24" | 105 lbs |
| BG67512-36SF | BG67512-36SF-C | 12" x 36" | 166 lbs |
| BGV67520-11SF | BGV67520-11SF-C | 20" x 11" | 88 lbs |
| BGV67524-11SF | BGV67524-11SF-C | 24" x 11" | 104 lbs |
| BGV67536-11SF | BGV67536-11SF-C | 36" x 11" | 160 lbs |

NOTE:

All dock bumpers are considered, "Angle both sides". Please indicate other configurations with:

- For an angle on one side and flat plate on the other, specify "-P1" behind the model number. (e.g. BGV620-11SF-P1)
- For flat plates instead of angles, specify "-P2" behind the model number. (e.g. BGV620-11SF-P2)

4.0 LAMINATED RUBBER BUMPERS

Uses / Applications:

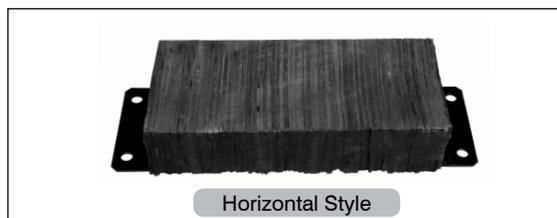
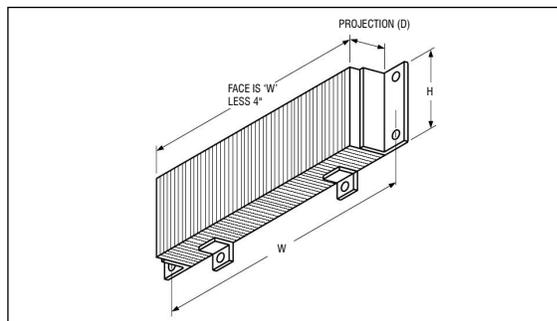
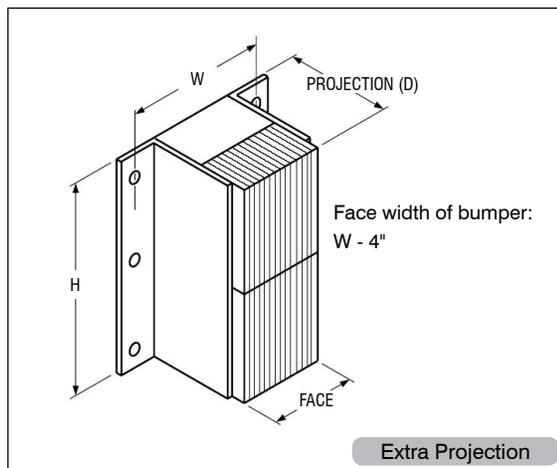
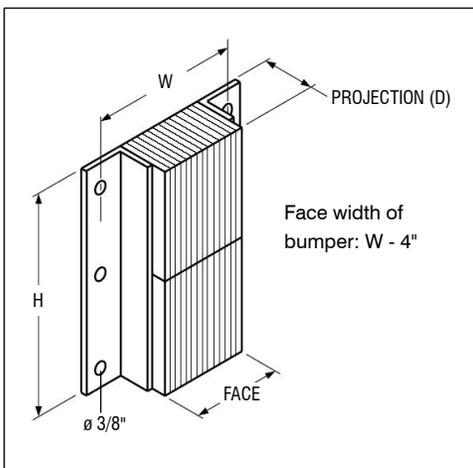
- Low to medium traffic loading docks in factories and warehouses
- Can be used as protection to absorb truck impact
- Customized construction features can accommodate unusual anchoring conditions (i.e. flat plate on one side for welding to dock leveler curb angle)

Installation:

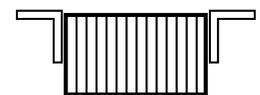
- 5/8" anchor bolts mounted through pre-drilled holes into wall or can be welded to curb angle

Material / Specifications:

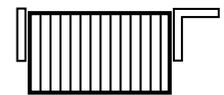
- Fabric reinforced rubber pads cut from recycled truck tires, laminated between 3/8" thick structural angles and secured with 3/4" rods
- Manufactured under pressure exceeding 1,500 lbs. Capable of absorbing over 80% of the total truck impact
- Anchor leg of angle extends a minimum of 3" beyond the rubber surface at either end and contains 2 or 3 anchor bolt holes as required (3/4")
- Finish for exposed metal parts is black shop primer
Optional water-based and lead free or hot-dip galvanized available



Flange Configurations
(specify with suffix):



STANDARD



P1 STYLE



P2 STYLE

Standard: Angles both sides
(eg. BGV420-11)

P1: Flat plate one side
(eg. BGV420-11-P1)

P2: Flat plate both sides
(eg. BGV420-11-P2)

Extra Anchorage Devices (AD)

| up to | Quantity |
|-----------|----------|
| 78" wide | 1 |
| 102" wide | 2 |
| 126" wide | 3 |

4.0 LAMINATED RUBBER BUMPERS CON'T.

| 4" DEEP SERIES | | | |
|----------------|-------------|------------------------|----------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG406-14 | BG406-14-C | 6" x 14" | 20 lbs |
| BG406-24 | BG406-24-C | 6" x 24" | 32 lbs |
| BG406-36 | BG406-36-C | 6" x 36" | 41 lbs |
| BG410-12 | BG410-12-C | 10" x 12" | 27 lbs |
| BG410-14 | BG410-14-C | 10" x 14" | 31 lbs |
| BG410-18 | BG410-18-C | 10" x 18" | 38 lbs |
| BG410-24 | BG410-24-C | 10" x 24" | 49 lbs |
| BG410-36 | BG410-36-C | 10" x 36" | 72 lbs |
| BG412-12 | BG412-12-C | 12" x 12" | 32 lbs |
| BG412-14 | BG412-14-C | 12" x 14" | 36 lbs |
| BG412-18 | BG412-18-C | 12" x 18" | 45 lbs |
| BG412-24 | BG412-24-C | 12" x 24" | 58 lbs |
| BG412-36 | BG412-36-C | 12" x 36" | 85 lbs |
| BGV420-11 | BGV420-11-C | 20" x 11" | 50 lbs |
| BGV424-11 | BGV424-11-C | 24" x 11" | 59 lbs |
| BGV436-11 | BGV436-11-C | 36" x 11" | 88 lbs |

| 6" DEEP SERIES | | | |
|----------------|-------------|------------------------|----------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG610-12 | BG610-12-C | 10" x 12" | 37 lbs |
| BG610-14 | BG610-14-C | 10" x 14" | 43 lbs |
| BG610-18 | BG610-18-C | 10" x 18" | 53 lbs |
| BG610-24 | BG610-24-C | 10" x 24" | 72 lbs |
| BG610-36 | BG610-36-C | 10" x 36" | 102 lbs |
| BG612-12 | BG612-12-C | 12" x 12" | 42 lbs |
| BG612-14 | BG612-14-C | 12" x 14" | 50 lbs |
| BG612-18 | BG612-18-C | 12" x 18" | 63 lbs |
| BG612-24 | BG612-24-C | 12" x 24" | 84 lbs |
| BG612-36 | BG612-36-C | 12" x 36" | 112 lbs |
| BGV620-11 | BGV620-11-C | 20" x 11" | 68 lbs |
| BGV624-11 | BGV624-11-C | 24" x 11" | 84 lbs |
| BGV636-11 | BGV636-11-C | 36" x 11" | 124 lbs |

NOTE:

All dock bumpers are considered, "Angle both sides". Please indicate other configurations with:

- For an angle on one side and flat plate on the other, specify "-P1" behind the model number. (e.g. BGV420-11-P1)
- For flat plates instead of angles, specify "-P2" behind the model number. (e.g. BGV420-11-P2)

4.1 LAMINATED RUBBER BUMPERS - EXTRA-PROJECTION

| 8" DEEP SERIES | | | |
|----------------|-------------|------------------------|----------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG810-14 | BG810-14-C | 10" x 14" | 52 lbs |
| BG810-24 | BG810-24-C | 10" x 24" | 87 lbs |
| BG810-36 | BG810-36-C | 10" x 36" | 107 lbs |
| BG812-12 | BG812-12-C | 12" x 12" | 56 lbs |
| BG812-14 | BG812-14-C | 12" x 14" | 67 lbs |
| BG812-18 | BG812-18-C | 12" x 18" | 91 lbs |
| BG812-24 | BG812-24-C | 12" x 24" | 117 lbs |
| BG812-36 | BG812-36-C | 12" x 36" | 129 lbs |
| BGV820-11 | BGV820-11-C | 20" x 11" | 80 lbs |
| BGV824-11 | BGV824-11-C | 24" x 11" | 99 lbs |

| 9" DEEP SERIES | | | |
|----------------|-------------|------------------------|----------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG910-14 | BG910-14-C | 10" x 14" | 53 lbs |
| BG910-24 | BG910-24-C | 10" x 24" | 88 lbs |
| BG910-36 | BG910-36-C | 10" x 36" | 108 lbs |
| BG912-12 | BG912-12-C | 12" x 12" | 57 lbs |
| BG912-14 | BG912-14-C | 12" x 14" | 68 lbs |
| BG912-18 | BG912-18-C | 12" x 18" | 90 lbs |
| BG912-24 | BG912-24-C | 12" x 24" | 118 lbs |
| BG912-36 | BG912-36-C | 12" x 36" | 130 lbs |
| BGV920-11 | BGV920-11-C | 20" x 11" | 81 lbs |
| BGV924-11 | BGV924-11-C | 24" x 11" | 100 lbs |

NOTE:

All dock bumpers are considered, "Angle both sides". Please indicate other configurations with:

- For an angle on one side and flat plate on the other, specify "-P1" behind the model number. (e.g. BGV420-11-P1)
- For flat plates instead of angles, specify "-P2" behind the model number. (e.g. BGV420-11-P2)

4.1 LAMINATED RUBBER BUMPERS - EXTRA-PROJECTION CON'T.

| 10" DEEP SERIES | | | |
|-----------------|--------------|------------------------|----------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG1010-14 | BG1010-14-C | 10" x 14" | 59 lbs |
| BG1010-24 | BG1010-24-C | 10" x 24" | 94 lbs |
| BG1010-36 | BG1010-36-C | 10" x 36" | 114 lbs |
| BG1012-12 | BG1012-12-C | 12" x 12" | 63 lbs |
| BG1012-14 | BG1012-14-C | 12" x 14" | 74 lbs |
| BG1012-18 | BG1012-18-C | 12" x 18" | 96 lbs |
| BG1012-24 | BG1012-24-C | 12" x 24" | 124 lbs |
| BG1012-36 | BG1012-36-C | 12" x 36" | 136 lbs |
| BGV1020-11 | BGV1020-11-C | 20" x 11" | 87 lbs |
| BGV1024-11 | BGV1024-11-C | 24" x 11" | 106 lbs |
| 12" DEEP SERIES | | | |
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG1210-14 | BG1210-14-C | 10" x 14" | 60 lbs |
| BG1210-24 | BG1210-24-C | 10" x 24" | 95 lbs |
| BG1210-36 | BG1210-36-C | 10" x 36" | 115 lbs |
| BG1212-12 | BG1212-12-C | 12" x 12" | 64 lbs |
| BG1212-14 | BG1212-14-C | 12" x 14" | 75 lbs |
| BG1212-18 | BG1212-18-C | 12" x 18" | 97 lbs |
| BG1212-24 | BG1212-24-C | 12" x 24" | 125 lbs |
| BG1212-36 | BG1212-36-C | 12" x 36" | 136 lbs |
| BGV1220-11 | BGV1220-11-C | 20" x 11" | 88 lbs |
| BGV1224-11 | BGV1224-11-C | 24" x 11" | 107 lbs |

NOTE:

All dock bumpers are considered, "Angle both sides". Please indicate other configurations with:

- For an angle on one side and flat plate on the other, specify "-P1" behind the model number. (e.g. BGV420-11-P1)
- For flat plates instead of angles, specify "-P2" behind the model number. (e.g. BGV420-11-P2)

4.2 LAMINATED RUBBER BUMPERS - EXTRA-WIDE

| 4" DEEP SERIES | | | |
|----------------|-------------|------------------------|----------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG406-89 | BG406-89-C | 6" x 89" | 128 lbs |
| BG406-101 | BG406-101-C | 6" x 101" | 143 lbs |
| BG410-53 | BG410-53-C | 10" x 53" | 101 lbs |
| BG410-54 | BG410-54-C | 10" x 54" | 103 lbs |
| BG410-65 | BG410-65-C | 10" x 65" | 125 lbs |
| BG410-66 | BG410-66-C | 10" x 66" | 127 lbs |
| BG410-77 | BG410-77-C | 10" x 77" | 146 lbs |
| BG410-78 | BG410-78-C | 10" x 78" | 148 lbs |
| BG410-89 | BG410-89-C | 10" x 89" | 174 lbs |
| BG410-90 | BG410-90-C | 10" x 90" | 176 lbs |
| BG410-101 | BG410-101-C | 10" x 101" | 194 lbs |
| BG410-102 | BG410-102-C | 10" x 102" | 196 lbs |
| BG410-113 | BG410-113-C | 10" x 113" | 217 lbs |
| BG410-114 | BG410-114-C | 10" x 114" | 219 lbs |
| BG410-125 | BG410-125-C | 10" x 125" | 240 lbs |
| BG410-126 | BG410-126-C | 10" x 126" | 242 lbs |
| BG412-53 | BG412-53-C | 12" x 53" | 121 lbs |
| BG412-54 | BG412-54-C | 12" x 54" | 123 lbs |
| BG412-65 | BG412-65-C | 12" x 65" | 150 lbs |
| BG412-66 | BG412-66-C | 12" x 66" | 152 lbs |
| BG412-77 | BG412-77-C | 12" x 77" | 176 lbs |
| BG412-78 | BG412-78-C | 12" x 78" | 178 lbs |
| BG412-89 | BG412-89-C | 12" x 89" | 204 lbs |
| BG412-90 | BG412-90-C | 12" x 90" | 206 lbs |
| BG412-101 | BG412-101-C | 12" x 101" | 233 lbs |
| BG412-102 | BG412-102-C | 12" x 102" | 235 lbs |
| BG412-113 | BG412-113-C | 12" x 113" | 261 lbs |
| BG412-114 | BG412-114-C | 12" x 114" | 263 lbs |
| BG412-125 | BG412-125-C | 12" x 125" | 288 lbs |
| BG412-126 | BG412-126-C | 12" x 126" | 290 lbs |

NOTE:

All dock bumpers are considered, "Angle both sides". Please indicate other configurations with:

- For an angle on one side and flat plate on the other, specify "-P1" behind the model number. (e.g. BG410-54-P1)
- For flat plates instead of angles, specify "-P2" behind the model number. (e.g. BG410-54-P2)

4.2 LAMINATED RUBBER BUMPERS - EXTRA-WIDE CON'T.

| 6" DEEP SERIES | | | |
|----------------|-------------|------------------------|----------------|
| Model (STD) | Model (CAN) | Standard Sizes (H x W) | Approx. Weight |
| BG610-53 | BG610-53-C | 10" x 53" | 152 lbs |
| BG610-54 | BG610-54-C | 10" x 54" | 154 lbs |
| BG610-65 | BG610-65-C | 10" x 65" | 188 lbs |
| BG610-66 | BG610-66-C | 10" x 66" | 190 lbs |
| BG610-77 | BG610-77-C | 10" x 77" | 221 lbs |
| BG610-78 | BG610-78-C | 10" x 78" | 223 lbs |
| BG610-89 | BG610-89-C | 10" x 89" | 256 lbs |
| BG610-90 | BG610-90-C | 10" x 90" | 258 lbs |
| BG610-101 | BG610-101-C | 10" x 101" | 292 lbs |
| BG610-102 | BG610-102-C | 10" x 102" | 294 lbs |
| BG610-113 | BG610-113-C | 10" x 113" | 327 lbs |
| BG610-114 | BG610-114-C | 10" x 114" | 329 lbs |
| BG610-125 | BG610-125-C | 10" x 125" | 361 lbs |
| BG610-126 | BG610-126-C | 10" x 126" | 363 lbs |
| <hr/> | | | |
| BG612-53 | BG612-53-C | 12" x 53" | 182 lbs |
| BG612-54 | BG612-54-C | 12" x 54" | 185 lbs |
| BG612-65 | BG612-65-C | 12" x 65" | 225 lbs |
| BG612-66 | BG612-66-C | 12" x 66" | 228 lbs |
| BG612-77 | BG612-77-C | 12" x 77" | 264 lbs |
| BG612-78 | BG612-78-C | 12" x 78" | 267 lbs |
| BG612-89 | BG612-89-C | 12" x 89" | 306 lbs |
| BG612-90 | BG612-90-C | 12" x 90" | 309 lbs |
| BG612-101 | BG612-101-C | 12" x 101" | 350 lbs |
| BG612-102 | BG612-102-C | 12" x 102" | 353 lbs |
| BG612-113 | BG612-113-C | 12" x 113" | 392 lbs |
| BG612-114 | BG612-114-C | 12" x 114" | 395 lbs |
| BG612-125 | BG612-125-C | 12" x 125" | 432 lbs |
| BG612-126 | BG612-126-C | 12" x 126" | 435 lbs |

NOTE:

All dock bumpers are considered, "Angle both sides". Please indicate other configurations with:

- For an angle on one side and flat plate on the other, specify "-P1" behind the model number. (e.g. BG610-54-P1)
- For flat plates instead of angles, specify "-P2" behind the model number. (e.g. BG610-54-P2)

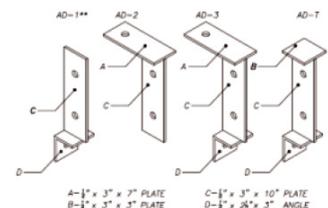
Extra Anchorage Devices / Extra-Length Bumpers

Extra-length laminated bumpers are manufactured with additional anchorage devices. * Type "AD-1" is supplied as standard. Please specify if another type is required. Anchorage devices are supplied as follows:

53" to 66" Bumper Width (1)

67" to 102" Bumper Width (2)

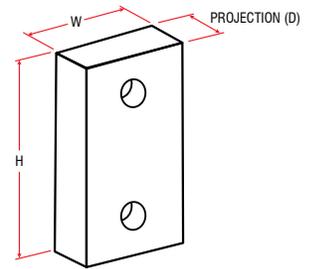
103" to 126" Bumper Width (3)



5.0 MOLDED RUBBER BUMPERS

Material / Specifications:

- Manufactured from reinforced prime rubber
- Impact recovery of 98% plus or minus 2
- Tensile Strength 8.3 N/mm² plus or minus 0.5 (ASTM D792)
- Elongation of 500% plus or minus 20 (ASTM D792)
- Durometer 75 plus or minus 5 (ASTM D2240)
- Density of 1.1 g/cm³ plus or minus 0.1 (ASTM D412C)
- All bumpers have pre-drilled, countersunk mounting holes for easy installation, and are drilled to accept 3/4" anchor bolts



HOLE QUANTITY & LOCATION VARIES



| Item | MODEL |
|------|-------------|
| 1 | BG-MT422-22 |
| 2 | BG-M410-13 |
| 3 | BG-M410-13T |
| 4 | BG-M218-18 |
| 5 | BG-M410-18 |
| 6 | BG-M412-13 |
| 7 | BG-ML418-18 |
| 8 | BG-M312-24 |
| 9 | BG-M410-24 |
| 10 | BG-M3535-6 |
| 11 | BG-M410-30 |
| 12 | BG-M345-10 |
| 13 | BG-M345-20 |
| 14 | BG-M345-30 |

NOTE: Add "-C" at the end for Canadian model numbers

5.0 MOLDED RUBBER BUMPERS CON'T.

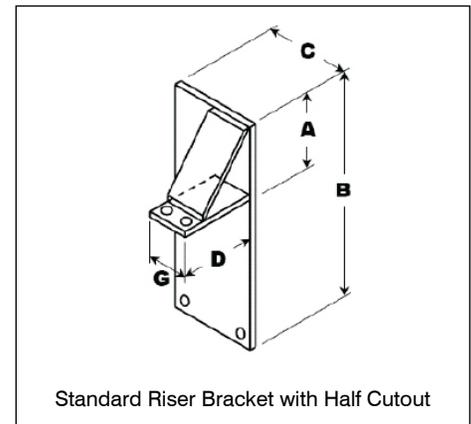
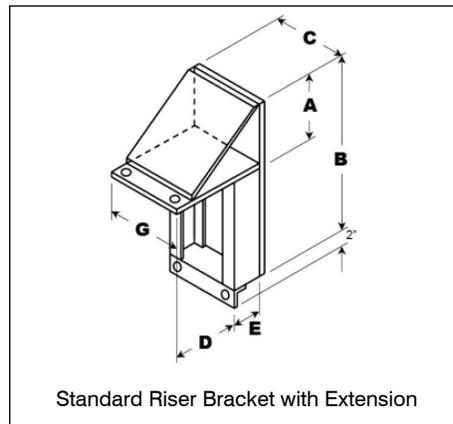
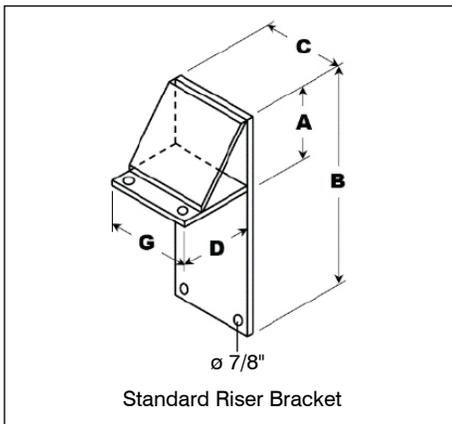
| Item | MODEL / DESCRIPTION | | Standard Sizes (D x H x W) | Approx. Weight |
|------|--|--|----------------------------|----------------|
| | STD | CAN | | |
| 1 | BG-MT422-22 | BG-MT422-22-C | 4" x 22" x 22" | 40 lbs |
| 2 | BG-M410-13 | BG-M410-13-C | 4" x 10" x 13" | 24 lbs |
| 3 | BG-M410-13T | BG-M410-13T-C | 4" x 10" x 13" | 16 lbs |
| 4 | BG-M218-18 | BG-M218-18-C | 2" x 8" x 18" | 14 lbs |
| 5 | BG-M410-18 | BG-M410-18-C | 4" x 10" x 18" | 28 lbs |
| 6 | BG-M412-13 | BG-M412-13-C | 4" x 12" x 13" | 22 lbs |
| 7 | BG-ML418-18 | BG-ML418-18-C | 4" x 18" x 18" | 41 lbs |
| 8 | BG-M312-24 | G-M312-24-C | 3" x 12' x 24" | 33 lbs |
| 9 | BG-M410-24 | BG-M610-18-C | 4" x 10" x 24" | 37 lbs |
| * | BG-M610-18 | BG-M610-18-C | 6" x 10" x 18" | 42 lbs |
| 10 | BG-M410-30 | BG-M410-30-C | 4" x 10" x 30" | 47 lbs |
| 11 | BG-M3535-6 | BG-M3535-6-C | 3.5" x 3.5" x 6" | 3 lbs |
| 12 | BG-M345-10 | BG-M345-10-C | 3" x 4.5" x 10" | 6 lbs |
| 13 | BG-M345-20 | BG-M345-20-C | 3" x 4.5" x 20" | 12 lbs |
| 14 | BG-M345-30 | BG-M345-30-C | 3" x 4.5" x 30" | 18 lbs |
| * | BG-MD4-12 D4-12" Extruded Bumper w/Washer | BG-MD4-12-C 12" Extruded Bumper w/Washer | 3.75" x 4.5" x 12" | 5 lbs |
| * | BG-MD4-18 D4-18" Extruded Bumper w/Washer | BG-MD4-18-C 18" Extruded Bumper w/Washer | 3.75" x 4.5" x 18" | 7 lbs |
| * | BG-MD4-24 D4-24" Extruded Bumpers w/Washer | BG-MD4-24-C 24" Extruded Bumper w/Washer | 3.75" x 4.5" x 24" | 10 lbs |
| * | BG-MD4-36 D4-36" Extruded Bumpers w/Washer | BG-MD4-36-C 36" Extruded Bumper w/Washer | 3.75" x 4.5" x 36" | 15 lbs |

* Product image not shown on previous page.

6.0 ABOVE DOCK RISER BRACKETS FOR 6" ABOVE DOCK OR LESS

- 1/2" thick steel, painted with one (1) coat black shop primer, mounting holes are 7/8" diameter
- Does not include bumper

| MODEL | | Standard Riser Bracket | A | B | C | D | E | G | Weight |
|---------------|-----------------|---|----|-----|-----|----|-----|-----|--------|
| STD | CAN | | | | | | | | |
| BG-SRB-4 | BG-SRB-4-C | 4" | 4" | 26" | 10" | 8" | N/A | 10" | 58 lbs |
| BG-SRB-6 | BG-SRB-6-C | 6" | 6" | | | | | | |
| BG-SRB-8 | BG-SRB-8-C | 8" | 8" | | | | | | |
| MODEL | | Standard Riser Brackets with Extensions | A | B | C | D | E | G | Weight |
| STD | CAN | | | | | | | | |
| BG-SRB-4-EXT2 | BG-SRB-4-EXT2-C | 4" x 2" | 4" | 24" | 10" | 8" | 2" | 10" | 72 lbs |
| BG-SRB-4-EXT3 | BG-SRB-4-EXT3-C | 4" x 3" | | | | | 3" | | 75 lbs |
| BG-SRB-4-EXT4 | BG-SRB-4-EXT4-C | 4" x 4" | | | | | 4" | | 80 lbs |
| BG-SRB-6-EXT2 | BG-SRB-6-EXT2-C | 6" x 2" | 6" | 24" | 10" | 8" | 2" | 10" | 72 lbs |
| BG-SRB-6-EXT3 | BG-SRB-6-EXT3-C | 6" x 3" | | | | | 3" | | 75 lbs |
| BG-SRB-6-EXT4 | BG-SRB-6-EXT4-C | 6" x 4" | | | | | 4" | | 80 lbs |
| BG-SRB-8-EXT2 | BG-SRB-8-EXT2-C | 8" x 2" | 8" | 24" | 10" | 8" | 2" | 10" | 72 lbs |
| BG-SRB-8-EXT3 | BG-SRB-8-EXT3-C | 8" x 3" | | | | | 3" | | 75 lbs |
| BG-SRB-8-EXT4 | BG-SRB-8-EXT4-C | 8" x 4" | | | | | 4" | | 80 lbs |
| MODEL | | Standard Riser Brackets with Cutout | A | B | C | D | E | G | Weight |
| STD | CAN | | | | | | | | |
| BG-SRB-4-CUT | BG-SRB-4-CUT-C | 4" | 4" | 26" | 10" | 8" | N/A | 5" | 48 lbs |
| BG-SRV-6-CUT | BG-SRV-6-CUT-C | 6" | 6" | | | | | | |
| BG-SRV-8-CUT | BG-SRV-8-CUT-C | 8" | 8" | | | | | | |



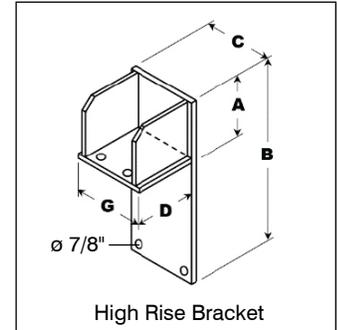
ORDERING NOTES:

1. Please specify the **A**, **B**, **C**, **D**, **E** and **G** dimensions when ordering these brackets.
2. When welding bumper to bracket the bumper is offset to one side, thereby creating lefts and rights - if ordering one or the other, please specify.
3. Standard riser brackets with cutouts will always be lefts and rights.
4. Left and right is assumed to be standing on the outside looking into the dock position.

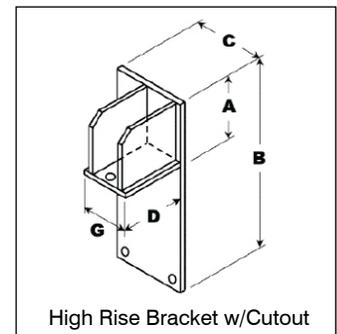
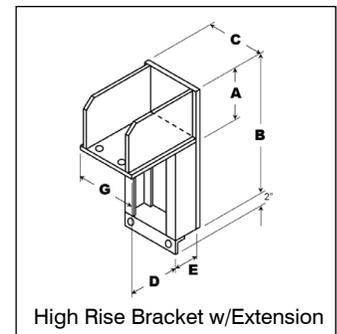
6.1 HIGH RISER BRACKETS FOR 7" ABOVE DOCK AND HIGHER

- 1/2" thick steel, painted with one (1) coat black shop primer, mounting holes are 7/8" diameter
- Does not include bumper

| High Rise Bracket | A | B | C | D | E | G | Weight |
|--------------------|-----|-----|-----|-----|---|-----|---------|
| MODEL (STD) | | | | | | | |
| BG-HRB-7 | 7" | 26" | 10" | 9" | — | 10" | 68 lbs |
| BG-HRB-8 | 8" | | | 10" | | | 74 lbs |
| BG-HRB-9 | 9" | | | 11" | | | 81 lbs |
| BG-HRB-10 | 10" | | | 12" | | | 88 lbs |
| BG-HRB-11 | 11" | 32" | 10" | 13" | — | 10" | 105 lbs |
| BG-HRB-12 | 12" | | | 14" | | | 113 lbs |



| High Rise Bracket with Extension | A | B | C | D | E | G | Weight |
|----------------------------------|-----|-----|-----|-----|----|-----|---------|
| MODEL (STD) | | | | | | | |
| BG-HRB-7-EXT2 | 7" | 24" | 10" | 9" | 2" | 10" | 87 lbs |
| BG-HRB-8-EXT2 | 8" | | | 10" | | | 97 lbs |
| BG-HRB-9-EXT2 | 9" | | | 11" | | | 107 lbs |
| BG-HRB-10-EXT2 | 10" | | | 12" | | | 119 lbs |
| BG-HRB-11-EXT2 | 11" | 30" | 10" | 13" | — | 10" | 140 lbs |
| BG-HRB-12-EXT2 | 12" | | | 14" | | | 153 lbs |
| BG-HRB-7-EXT3 | 7" | 24" | 10" | 9" | 3" | 10" | 93 lbs |
| BG-HRB-8-EXT3 | 8" | | | 10" | | | 100 lbs |
| BG-HRB-9-EXT3 | 9" | | | 11" | | | 108 lbs |
| BG-HRB-10-EXT3 | 10" | | | 12" | | | 115 lbs |
| BG-HRB-11-EXT3 | 11" | 30" | 10" | 13" | — | 10" | 135 lbs |
| BG-HRB-12-EXT3 | 12" | | | 14" | | | 144 lbs |
| BG-HRB-7-EXT4 | 7" | 24" | 10" | 9" | 4" | 10" | 104 lbs |
| BG-HRB-8-EXT4 | 8" | | | 10" | | | 111 lbs |
| BG-HRB-9-EXT4 | 9" | | | 11" | | | 118 lbs |
| BG-HRB-10-EXT4 | 10" | | | 12" | | | 125 lbs |
| BG-HRB-11-EXT4 | 11" | 30" | 10" | 13" | — | 10" | 147 lbs |
| BG-HRB-12-EXT4 | 12" | | | 14" | | | 156 lbs |



| High Rise Bracket with Cutout | A | B | C | D | E | G | Weight |
|-------------------------------|-----|-----|-----|-----|---|----|--------|
| MODEL (STD) | | | | | | | |
| BG-HRBC-7-CUT | 7" | 26" | 10" | 9" | — | 5" | 60 lbs |
| BG-HRBC-8-CUT | 8" | | | 10" | | | 67 lbs |
| BG-HRBC-9-CUT | 9" | | | 11" | | | 74 lbs |
| BG-HRBC-10-CUT | 10" | | | 12" | | | 81 lbs |
| BG-HRBC-11-CUT | 11" | 32" | 10" | 13" | — | 5" | 88 lbs |
| BG-HRBC-12-CUT | 12" | | | 14" | | | 95 lbs |

NOTES:

1. Add "-C" at the end for Canadian model numbers
2. When welding bumper to bracket the bumper is offset to one side, thereby creating lefts and rights - if ordering one or the other, please specify
3. High Riser brackets with Cutouts will always be lefts and rights
4. Left and right is assumed to be standing on the outside looking into the dock position

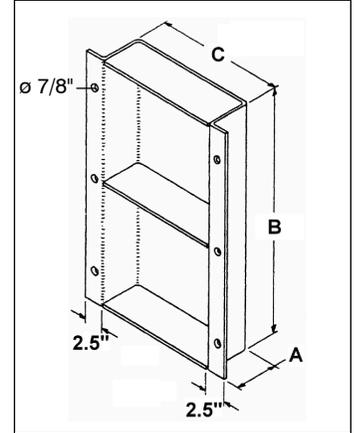
7.0 EXTENSION BRACKETS

- 1/4" thick steel, painted with one (1) coat black shop primer, mounting holes are 7/8" diameter
- Does not include bumper

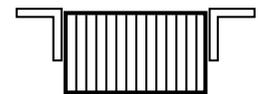
| 12" VERTICAL FACE (B) | | | | | | |
|-----------------------|---------------|--------------------------------|----|-----|------|--------|
| MODEL | | Steel Bumper Extension Bracket | A | B | C | Weight |
| STD | CAN | | | | | |
| BG-SBEB-112 | BG-SBEB-112-C | 1" x 12" | 1" | 12" | *12" | 7 lbs |
| BG-SBEB-212 | BG-SBEB-212-C | 2" x 12" | 2" | | | 12 lbs |
| BG-SBEB-312 | BG-SBEB-312-C | 3" x 12" | 3" | | | 18 lbs |
| BG-SBEB-412 | BG-SBEB-412-C | 4" x 12" | 4" | | | 21 lbs |
| 20" VERTICAL FACE (B) | | | | | | |
| MODEL | | Steel Bumper Extension Bracket | A | B | C | Weight |
| STD | CAN | | | | | |
| BG-SBEB-120 | BG-SBEB-120-C | 1" x 20" | 1" | 20" | *12" | 11 lbs |
| BG-SBED-220 | BG-SBED-220-C | 2" x 20" | 2" | | | 15 lbs |
| BG-SBEB-320 | BG-SBEB-320-C | 3" x 20" | 3" | | | 20 lbs |
| BG-SBEB-420 | BG-SBEB-420-C | 4" x 20" | 4" | | | 32 lbs |
| 24" VERTICAL FACE (B) | | | | | | |
| MODEL | | Steel Bumper Extension Bracket | A | B | C | Weight |
| STD | CAN | | | | | |
| BG-SBEB-124 | BG-SBEB-124-C | 1" x 24" | 1" | 24" | *12" | 14 lbs |
| BG-SBEB-224 | BG-SBEB-224-C | 2" x 24" | 2" | | | 24 lbs |
| BG-SBEB-324 | BG-SBEB-324-C | 3" x 24" | 3" | | | 36 lbs |
| BG-SBEB-424 | BG-SBEB-424-C | 4" x 24" | 4" | | | 42 lbs |

ORDERING NOTES:

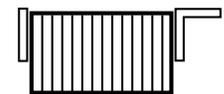
1. *When welding bumper to bracket, the width of the bracket (dimension **C**) is 1/2" wider than the bumper width, unless specified. If width of bumper bracket or dimension **C** is larger than bumper width, then the bumper would be offset to one side and left(s) or right(s) must be specified.
2. Left and right is assumed to be standing on the outside looking into the dock position.
3. P2 style recommended for these extensions.



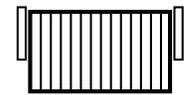
Flange Configurations (specify with suffix):



STANDARD



P1 STYLE

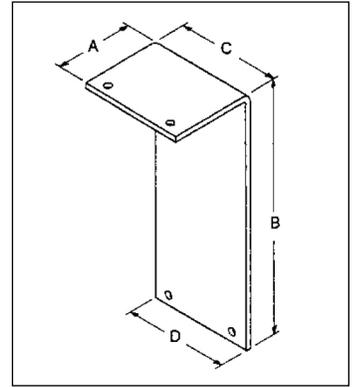


P2 STYLE

Standard: Angles both sides
(eg. BG-SBEB-112)
P1: Flat plate one side
(eg. BG-SBEB-112-P1)
P2: Flat plate both sides
(eg. BG-SBEB-112-P2)

8.0 BUMPER MOUNTING PLATES

1. Please specify the **A**, **B**, **C**, and **D** dimensions when ordering these brackets. Note that 'C' is the finished bumper width (outside plate to outside plate). i.e. BGV420-11-P2 has a finished width of 7.75" (8" nominal), and therefore 'C' dim would be 8.25" – 8.5" unless otherwise specified.
2. *When welding bumper to bracket, the bumper is offset to one side, thereby creating lefts and rights—if ordering one or the other, please specify.
3. Left and right is assumed to be standing on the outside looking into the dock position.
4. Note: For easier installation, specify "Weld to Bumper" option.
5. Note: For mounting plates for molded bumpers, specify "Stud for Molded Bumper" option.



| MODEL | | Steel Thickness | Weight |
|-----------|-------------|-----------------|----------|
| STD | CAN | | |
| BG-BMP-12 | BG-BMP-12-C | 1/2" | 0.14 lbs |
| BG-BMP-38 | BG-BMP-38-C | 3/8" | 0.11 lbs |
| BG-BMP-14 | BG-BMP-14-C | 1/4" | 0.07 lbs |

ORDERING NOTES:

1. Please specify the **A**, **B**, **C**, and **D** dimensions when ordering these brackets. Note that 'C' is the finished bumper width (outside plate to outside plate). i.e. BGV420-11-P2 has a finished width of 7.75" (8" nominal), and therefore 'C' dim would be 8.25" – 8.5" unless otherwise specified.
2. When welding bumper to bracket where the bumper is offset to one side, thereby creating lefts and rights – if ordering one or the other, please specify.
3. Left and right is assumed to be standing on the outside looking into the dock position.

9.0 GRADE SURVEY

DRIVE APPROACH MATERIAL

ASPHALT CONCRETE OTHER (DESCRIBE): _____

IS THE GRADE OF THE DRIVEWAY

LEVEL INCLINE DECLINE (SHOWN BELOW)

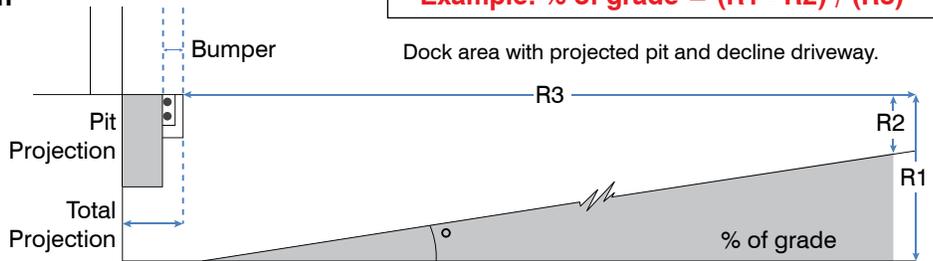
GRADE CALCULATION (IN INCHES OR MM)

| DOCK HEIGHT (R1) | RISE (R2) | RUN (R3) | % GRADE |
|------------------|-----------|----------|---------|
|------------------|-----------|----------|---------|

Sloped Driveway Grade Calculation

Rise is the elevation difference between the parked dock and the driveway surface where the rise is measured.

Run is the actual distance on the driveway where the rise is measured (i.e. 50 ft. to match the average 'over the road' trailer length).



Example: % of grade = (R1 - R2) / (R3)

To determine these totals on site, use a 600" string line. Restrict general access to the dock leveler and loading dock area. While observing all appropriate safety precautions, secure the string line to the dock leveler floor or the top of the lip spool when the dock leveler is in the cross-traffic position. Walk out a distance of 600" and measure the vertical drop to grade. Use level for accurate height level.

10.0 BUMPER SURVEY

BUMPER TYPE

NEW REPLACEMENT
 STEEL-FACED LAMINATED MOLDED
 DUAL FLANGE SINGLE FLANGE NO FLANGE

MEASUREMENTS

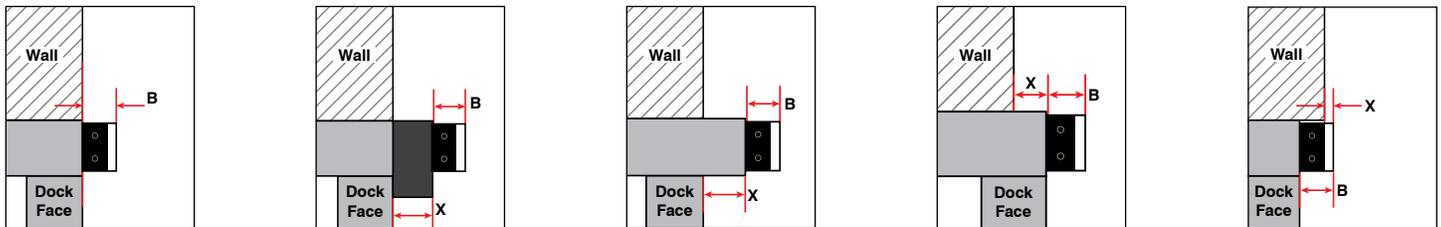
| | |
|-------------------------------|----------------------------|
| DISTANCE BETWEEN BUMPER FACES | BUMPER SIZE (D" x H" x W") |
|-------------------------------|----------------------------|

CENTER HORIZONTAL BUMPER (STEP VAN PROTECTION)

NO YES (SPECIFY): _____

Wall to Front of Bumper - Common Conditions

Flush is the optimal condition where **X** (Wall) = 0 and **B** (Bumper) is the size of the bumper.



| | | | | |
|---------------------------------------|--|--|--|---|
| <input type="checkbox"/> Flush | <input type="checkbox"/> Edge-of-Dock | <input type="checkbox"/> Cantilever | <input type="checkbox"/> Wall Setback | <input type="checkbox"/> Wall Overhang |
| B= _____ | B= _____ | B= _____ | B= _____ | B= _____ |
| X= 0 | X= _____ | X= _____ | X= _____ | X= _____ |

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