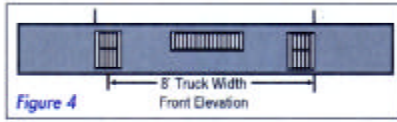
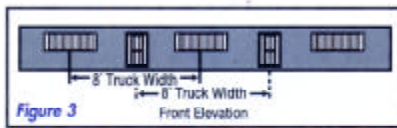


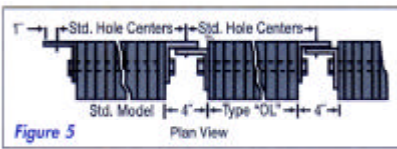
# Bumper Installation



## For Open Docks

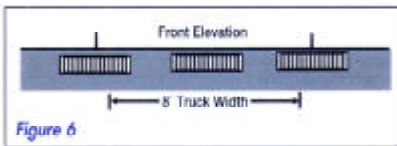
For open docks with no predetermined truck spots, combination installations provide maximum protection (Fig. 3).

If 36" horizontal length units are used, maximum spacing should be 24" between units - 5" on centers (Fig. 6).



For an angled truck approach, spacing should be reduced to prevent a truck corner from contacting the dock between units.

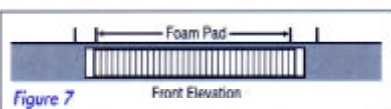
If continuous bumper protection is needed, overlapping installations on common anchor bolts are recommended and reduces anchor bolt costs by 50% (Fig. 5).



Overlapping reduces the spacing between each bumper to 4", and is applicable to any Durable laminated bumper model.

Overlapping angles on adjacent bumpers cuts installation costs and increases the protected area. To order, specify standard model for first bumper at left, and "OL" construction on successive bumpers. Special-length bumpers to fill out dock spaces are also available.

For open docks or wide bays, extra-length, one-piece bumpers can also be used for maximum coverage and appearance (Fig. 7).



## For 8', 9' or 10' Bays

For 8', 9' or 10' bays a variety of combinations exist. We recommend a combination of standard and vertical bumper designs (Fig. 3 & 4) for dock protection.

## For Refrigerated Doors

(With or without shelters)

Refrigerated doors require 4-1/2" or 6"-thick, extra-length, one-piece bumpers to completely seal the truck to the dock or shelter.

The same applies to doors sealed to maintain warm temperatures. With shelters, the rubber surface of the bumper must extend under the vertical members of the shelter pad to complete the all-around seal (Fig.7).

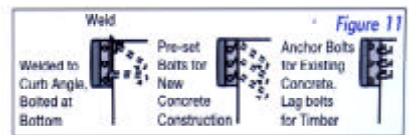
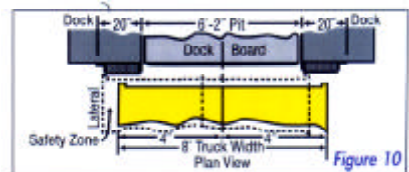
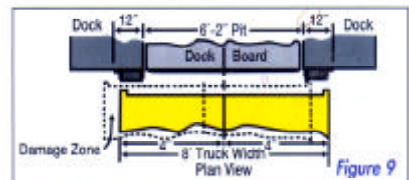
## For Portable Dock Plates

A 36" unit mounted in the center of the dock will automatically allow for dock plate insertion, even if a truck is spotted against the bumpers at the dock. With 3" angles on all bumpers, a 6" space is provided between units for the legs of the dock plate. Continue to fill the width of the bay with standard or vertical units as needed.

## For Adjustable Dock Boards

If using 14" lengths, height should be minimum 12", (Fig. 8a, 8b). Most dock boards handle 4-1/2" or 6" thick bumpers and will not impair lip penetration into the truck.

If using horizontal bumpers, use similar to 24" units but with steel plate replacing the inboard angle. Fig. 9 Fig. 10 shows "lateral safety zone" impact absorption advantage provided by longer bumpers.



## Bumper Installation

Install bumpers (Fig. 11) 1" to 2" below dock level. Use 3/4" or 5/8" bolts or sleeve anchors; minimum length 3" and use corresponding shield if required. Use 3/4" "J" bolts with a minimum length of 8" with 1-1/4" projection.