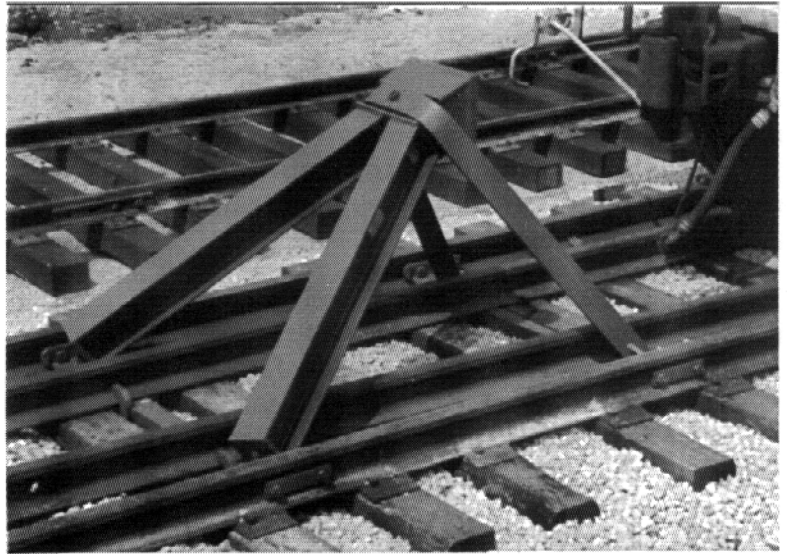


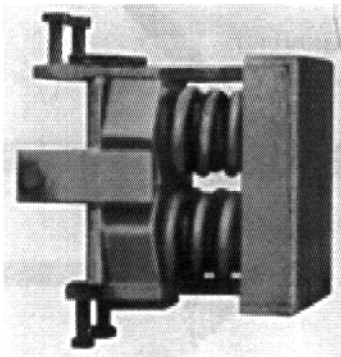
## Bumping Posts

**Modern Design  
Rugged  
All Steel**



### Western-Cullen-Hayes Bumping Posts Feature:

- Exclusive "H" beam compression members for unmatched strength
- Special designs for every application
- Easy to install
- No on site assembly
- Long life, with minimum maintenance
- Proven – effective design



### Hayco® Shock-Free® Cushion Head

Use the Hayco® Shock-Free® Cushion Head to:

- Extend the life of a Bumping Post.
- Reduce damage claims to equipment.

Clamp bolt design, installs quickly and easily.

Applies to a variety of commercially produced bumpers.

Use Hayco® attaching fixture for mounting Shock Free® Head to flat vertical surfaces.

## Facts about "Hayes®" bumping posts

Western-Cullen-Hayes Bumping Posts are designed to stop unauthorized movement of a railroad car beyond the rail end and to protect property, personnel, lading and equipment from damage. They also improve operating efficiencies by providing a positive stop against which train crews can switch while operating under standard procedure.

The bumping posts, when properly installed at track ends, engage the coupler and draft gear of a moving car and transfer the force of impact to ties, rail and ballast, bringing the car to a safe, sure stop. They are designed to accommodate normal switching speed.

Bumping posts are especially valuable in areas needing extra protection such as chemical storage areas, work yards, assembly lines, plant loading and unloading areas, etc.

### Theory of Design

**Rugged, All-Steel Construction**

**Designed Like A Bridge:** Post Head And Members Transfer Impact From Coupler To The Ballast

**Engineered For Easy Installation**

The W-C-H design employs two triangular units to make a complete post. A one-piece front (tension) unit (Figure 1) and one-piece rear (compression) unit (Figure 2) are combined to absorb and carry the stresses of the coupler impact to the track. Each unit has a strong angle cross member below the rails which helps prevent distortion of the post and track.

### How it works:

When a coupler strikes the Bumping Post the impact is taken in three directions:

(See Figure 3)

1. Horizontal thrust along the track
2. Upward push at the front
3. Downward load at the rear

In all W-C-H Posts the horizontal thrust is carried to the track rails by alloy steel bolts having double the strength of ordinary bolts. There is a W-C-H Bumping Post to meet most every requirement. Use the convenient chart to determine the type best suited to your particular needs.

A point to remember is that a bumping post is no stronger than the track on which it is mounted. For maximum track end security, proper installation is a must. Be sure to read the pertinent section of this brochure.

Western-Cullen-Hayes Bumping Posts are established as world-wide standards. A rating earned by superior design and quality of workmanship. The following sections of this brochure detail both Hayes® and Buda bumping posts, now all part of the Western-Cullen-Hayes family of renowned, reliable track appliances.

Figure 1. Tension Unit

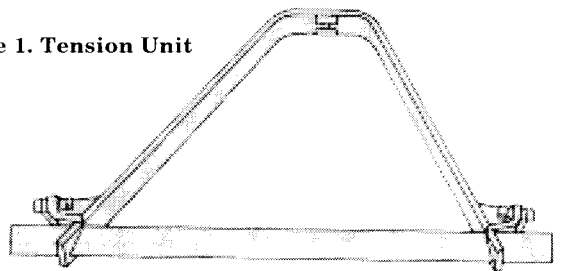


Figure 2. Compression Unit

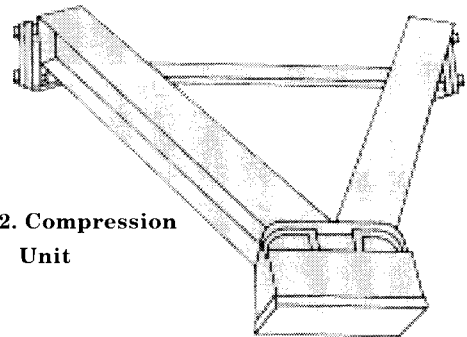
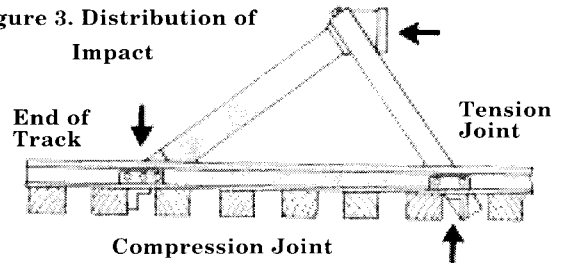


Figure 3. Distribution of Impact



WESTERN-CULLEN-HAYES, INC.

2700 W. 36TH PLACE  
(773) 254-9600

CHICAGO, IL. 60632  
FAX (773) 254-1110

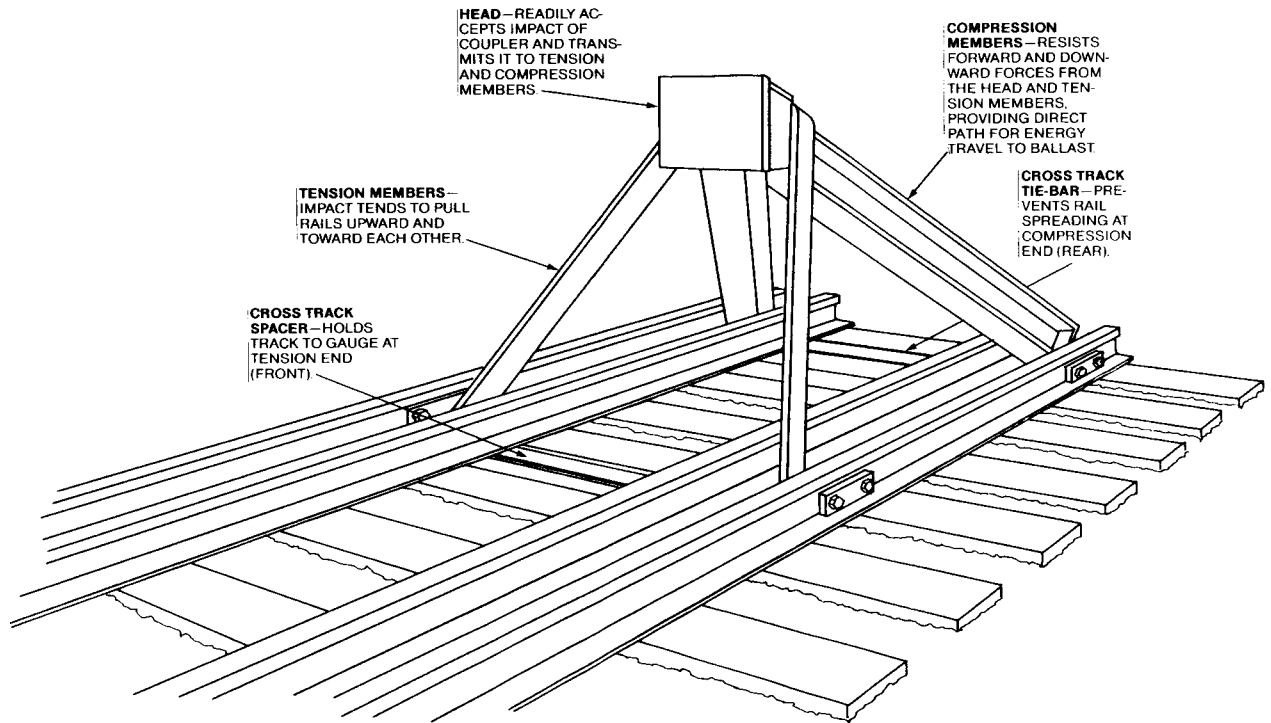


WESTERN-CULLEN-HAYES, INC.

120 N. 3rd Street, P.O. Box 756, Richmond, Indiana 47374  
(765) 962-0526

FAX (765) 966-5374

# Anatomy of a Bumping Post



## Design Parameters

Components have been carefully selected to provide maximum strength at minimum weight. Posts are listed in order of strength rating. Generally speaking, Western-Cullen-Hayes Bumping Posts are designed to accommodate normal switching speeds.

Type Post	Weight In Pounds	Tension Units		Compression Units	
		In Inches	Area— Sq. Inches	Steel Symbol	Least I*
WCT	850	2 dia.	3.14	C10 25 lb.	3
WCTS	1160	2 dia.	3.14	C10 25 lb.	3
WK	705	1 x 4	4	W6 20 lb.	13.3
WD	800	1 x 4	4	W6 25 lb.	17.1
WDC	825	1 x 4	4	W6 25 lb.	17.1
WG	1250	1-1/2 x 4	6	W8 31 lb.	37.0
WGC	1280	1-1/2 x 4	6	W8 31 lb.	37.0
WA	1655	1-1/2 x 6	9	W8 40 lb.	49.0
WAC	1705	1-1/2 x 6	9	W8 40 lb.	49.0

\*NOTE: "Least I" refers to resistance to compression or bending. The full term is "Least Moment of Inertia". It is the most accurate way to determine bumping post strength.

## How to select the bumping posts you need

Using the chart below, and the Design Parameters chart on the preceding page, choose the type bumping post that matches your application requirements and conditions.

Bumping posts can be made to meet special situations. Designs are available for all components above rail base. Special requirements for steel mill and mining cars, a typical rail heights wide and narrow gauges and unique track configurations are also available.\*

### Type

### Bumping Post

### Application

WK	Recommended for industry stub end track with three car capacity or less, without descending grades to track end.
WD	General service. Long industrial tracks outside of buildings, flat switching yards, no descending grades or hazards at track end. Installation-strengthening "middle rails"*** can be used with this post.
WDC	Same as WD but with a curved striking face for passenger car couplers.
WG	For active track, where frequent striking face contact demands greater car stopping ability. Also, for active track within buildings; metropolitan, flat switching yards and TOFC track-ends. Installation-strengthening "middle rails"*** can be used with this post.
WGC	Same as WG but with a curved striking face for passenger car couplers.
WA	The strongest post ever built as a standard product. For track-end service where greatest car-stopping ability is needed. Lay track with heaviest rail available, full-spike ties, use plenty of good ballast and tamp thoroughly. Installation-strengthening "middle rails"*** can be used with this post.
WAC	Same as WA but with a curved striking face for passenger car couplers.
WCT	General service post. Clamp to rail design. No holes to drill in rail.
WCTS	Same as WCT but with spring-loaded striking face and anti-climb ribs. For use in rapid transit service.
WP*	Portable one-piece cushion post.
WR	Special design post—heavy service for special gauge and cars. Standard or modified gauge. See page 8.

All standard Bumping Posts are made in one size which will fit any rail from 5 to 7-1/2 inches high (except Type WA which fits any rail from 5-3/8 to 8 inches high). For rail smaller than 5 inches, or larger than 7-1/2 inches please give height of rail.

NOTE : All bumping posts are sold without the HAYCO® SHOCK-FREE® CUSHION HEAD. If you are interested in this addition see pages 7 and 8 for further information. The SHOCK-FREE® HEAD slips on the contact face and assists in prolonging the life of the bumping post, providing additional cushioning and reducing lading damage.

\* Consult factory for information

\*\* Not provided with bumping post; (use locally available relay rail).

WESTERN-CULLEN-HAYES, INC.

2700 W. 36TH PLACE  
(773) 254-9600

CHICAGO, ILL. 60632  
FAX (773) 254-1110



WESTERN-CULLEN-HAYES, INC.

120 N. 3rd Street, P.O. Box 756, Richmond, Indiana 47374  
(765) 962-0526

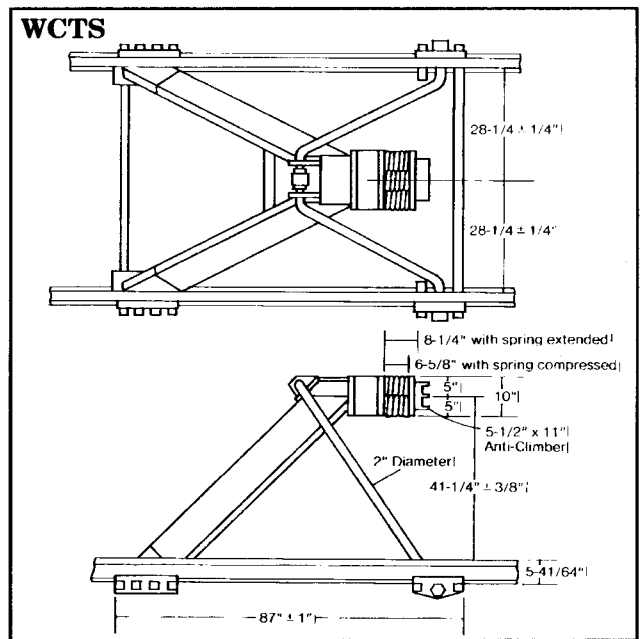
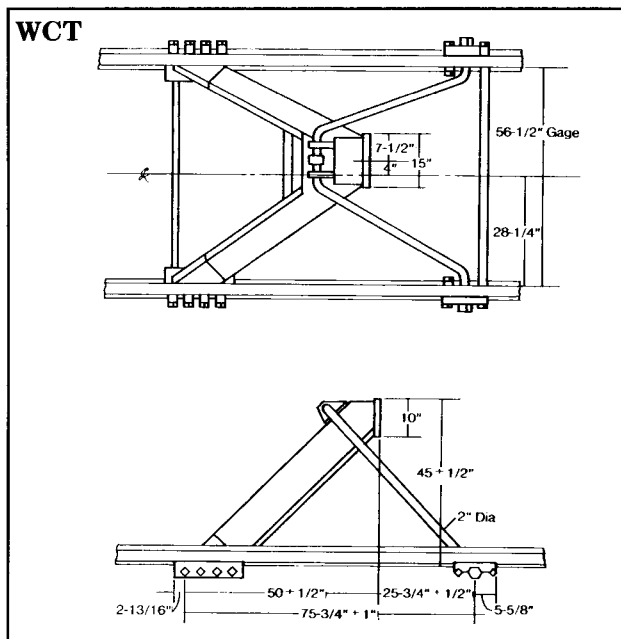
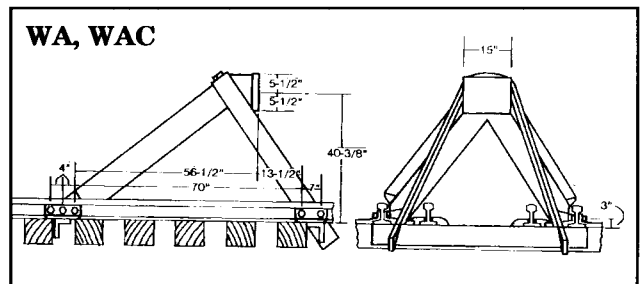
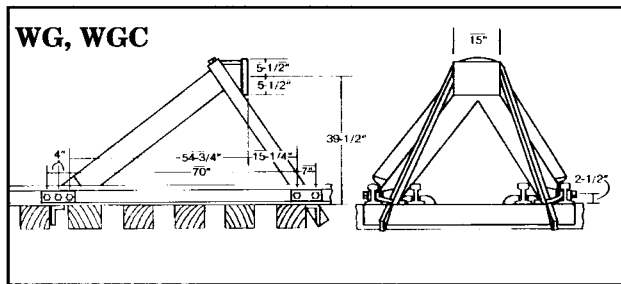
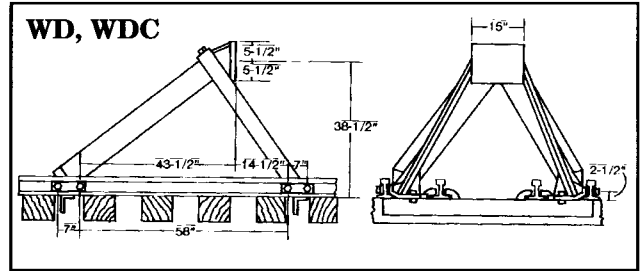
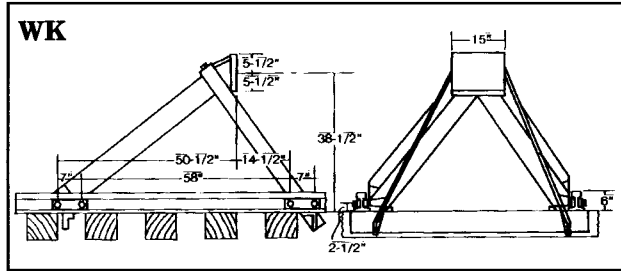
FAX (765) 966-5374

## General dimensions for the bumping posts you order

You know which types of bumping posts you need. The next step is to determine the dimensions and other requirements for installation. The following drawings will give you the data you need.

Please note that all bumping post heads except on the Type WCTS and WCT are built 2-1/2 inches to the right of centerline of track. This accommodates standard car coupler position.

### Bumping Posts Type



## Installing W-C-H "Hayes" Bumping Posts

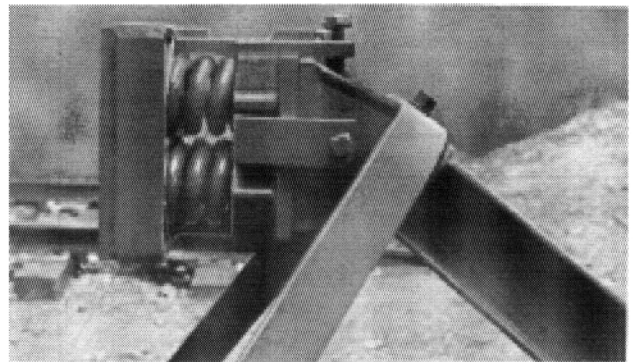
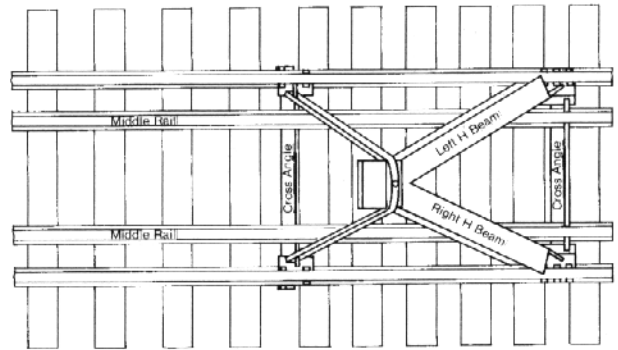
Specific installation instructions are included with each unit. However, time and experience have established several measures that must be taken to insure a maximum service life from your bumping post investment.

Much of the car-stopping effectiveness of any bumping post depends upon the track to which it is secured. This is the post's "foundation" and it should be as adequate to the job as the foundation for any other type of structure.

Generally, the heavier the rail, the better the foundation. Use sound ties, fully spiked, and fully-bolted rail joints ahead of the post. Be sure you have good, well-tamped ballast.

A special feature (rail clips on rear crossmember) furnished with types WD, WG and WA Bumping Posts allows the use of "middle rails". These "helper" rails are supplied by the customer and should be spiked between the running rails to increase track strength. Two pieces of heavy rail not less than 18 feet long should be used. These pieces of rail should extend about three feet beyond the post toward the rear and should be spiked for their entire length. A drawing displaying a typical installation with "middle rails" is shown above.

The Shock-Free® Head option (shown at right) will extend the life of any bumping post installation. It is described in detail in a following section of this brochure.



### Experience insures dependability.

For maximum dependability, Western-Cullen-Hayes recommends that all bumping post installations be made by experienced trackmen. Where industries are concerned, local railroad contractors or the serving railroad have experienced personnel who can provide competent, reliable guidance and installation.

### Special Bumping Posts

Western-Cullen-Hayes produces a wide variety of special use stopping devices.

- Hydraulic units with over 1,000,000 ft. lbs. capacity for high demand locations.
- Two-way bumpers for limiting movement from two directions.
- Special rolling equipment or moving material such as Cranes, Transfer Cars - ingots.
- Hinged units for fast clearance, both manual and powered, to allow through movement of equipment.

Please write, fax or telephone with your requirements or to request more information.

### How to order Bumping Posts

It's easy. Specify type of bumping post desired and quantity required. Be sure that the product you receive is reliable, specify "Western-Cullen-Hayes."

**WESTERN-CULLEN-HAYES, INC.**

2700 W. 36TH PLACE CHICAGO, IL. 60632  
(773) 254-9600 FAX (773) 254-1110



**WESTERN-CULLEN-HAYES, INC.**

120 N. 3rd Street, P.O. Box 756, Richmond, Indiana 47374  
(765) 962-0526 FAX (765) 966-5374