



GERDAU AMERISTEELTM

Customer Newsletter

The Steel Edge

May 2005

CALL: 800-237-0230 (U.S.); 800-263-2662 (Canada)

SPECIAL EDITION SPECIAL EDITION SPECIAL EDITION SPECIAL EDITION

For years there has been a need for alternatives that would fill a gap in miscellaneous channels between the MC 12 x 10.6# and the C 12 x 20.7#. Gerdau Ameristeel has produced an entirely new section of miscellaneous channel at our Calvert City, Ky., mill that's specially designed for stair stringer applications: the new MC 12 x 14.3#.

In some applications the MC 12 x 10.6# was just too light for today's heavier loads. The MC 12 x 14.3# saves weight and cost when the only other

option was the C12 x 20.7#. The smaller flange of the new section also saves valuable square footage in construction when compared to the C12 x 20.7 by reducing the amount of space required for the stair itself. While saving space, the MC 12 x 14.3# flange of 2 1/8 inches is still large enough to allow a railing post to be fully welded all around for improved strength or the use of a 3/4 inch rod in the flange, as illustrated in **A** below.

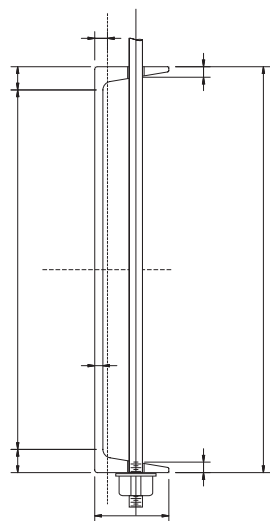
With a section modulus that's 38 percent larger than the MC 12 x 10.6#, this new section will allow more versatility

in stair width and length while also providing more strength to meet today's load requirements.

If you are a builder, talk to your architect about using the new MC 12 x 14.3#. If you're a distributor, tell your customers about it. This section is produced to conform to ASTM A36 but may also be produced in other structural grades.

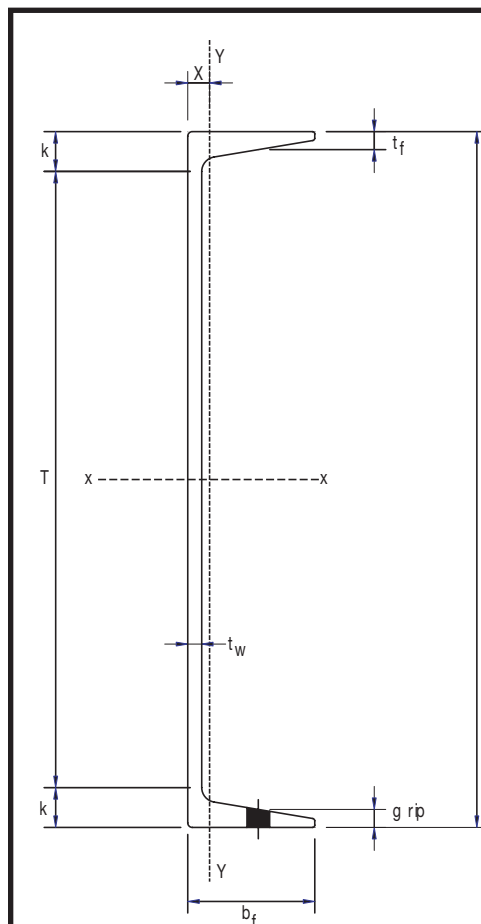
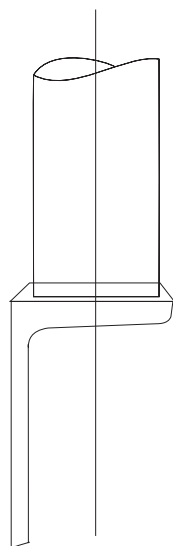
For more information and availability, contact Gerdau Ameristeel at 800-237-0230 (U.S.) or 800-263-2662 (Canada).

A



The illustration above shows the use of a 3/4" rod through the flange of the MC 12 x 14.3#.

To the right, a rail post attached to the flange.



MC 12 x 14.3 Stair Stringer Channel

$d = 12.00 \text{ in.}$
 $tw = 0.250 \text{ in.}$
 $bf = 2.125 \text{ in.}$
 $tf(\text{avg}) = 0.313 \text{ in.}$
 $k = 11/16 \text{ in.}$
 $T = 10 \text{ } 5/8 \text{ in.}$
 $A, \text{ Area} = 4.19 \text{ in.}^2$
 $\text{Wgt. Per foot} = 14.3 \text{ lbs/ft.}$
 $\text{Grip} = 5/16 \text{ in.}$
 $x = 0.379 \text{ in.}$
 $I_{xx} = 76.3 \text{ in.}^4$
 $S_{xx} = 12.7 \text{ in.}^3$
 $R_{xx} = 4.27 \text{ in.}$
 $I_{yy} = 1.02 \text{ in.}^4$
 $S_{yy} = 0.586 \text{ in.}^3$
 $R_{yy} = 0.494 \text{ in.}$

The dimensions and properties listed are nominal only. Dimensional tolerances will be based on permitted variations in sectional dimensions listed in ASTM A6 for C and MC shapes.