



TEMPERATURE CONTROLLERS... PORTABLE CHILLERS... CENTRAL CHILLERS... PUMP TANK STATIONS... TOWER SYSTEMS...

SUBJECT: SLENDERNESS RATIO AND TANK BANDING

#5-A-146

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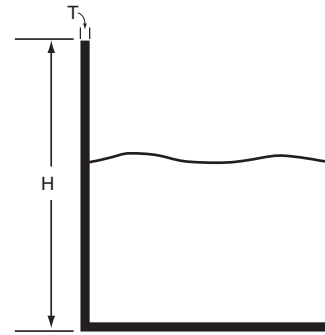
Advantage **PTS & CPTS** pump tank stations with mild or stainless steel reservoirs use banding to increase tank wall strength without increasing wall thickness.

The **SLENDERNESS RATIO** is used to compare strength of wall thickness and height. The slenderness ratio is a measure of tank strength. A lower ratio means a stronger tank.

Competitive tanks that do not use banding must use a thicker wall to equal the Advantage slenderness ratio. Thicker walls mean increased product weight and shipping costs for comparable size tanks.

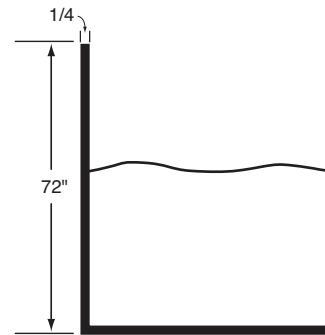


Close up detail of tank banding.



SLENDERNESS RATIO IS CALCULATED BY DIVIDING THICKNESS OF TANK WALL INTO THE HEIGHT OF THE TANK.

EQUATION: H/T

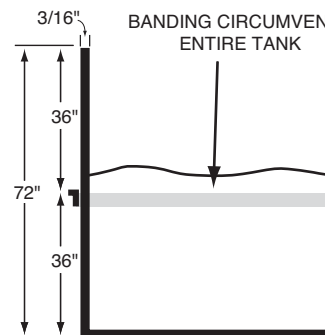


TANK WITH NO BANDING

NO BANDING... SLENDERNESS RATIO CALCULATED ON FULL TANK HEIGHT.

EQUATION: $72 / .25 = 288$

SLENDERNESS RATIO = 288



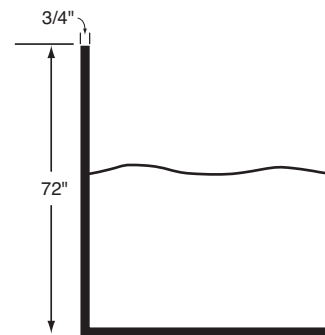
BANDING CIRCUMVENTS ENTIRE TANK

TANK WITH BANDING

BANDING EFFECTIVELY "SPLITS" HEIGHT. SLENDERNESS RATIO CALCULATED ON SECTIONS.

EQUATION: $36 / .1875 = 96$

SLENDERNESS RATIO = 96



TANK WITH NO BANDING

TO ACHIEVE THE SAME SLENDERNESS RATIO AS A TANK WITH BANDING, THE TANK WALL MUST BE 3/4".

EQUATION: $72 / .75 = 96$

SLENDERNESS RATIO = 96