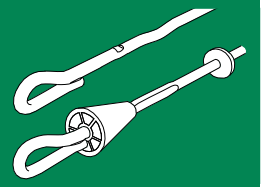




# HD Loop Ties

Steel Frame Modular Forming Hardware



SPL

Loop Panel Tie



Steel Dog® Heavy-Duty Loop Panel Ties are designed for industry-standard steel frame handset concrete forming panels.

### FEATURES:

- Available in a range of breakback depths
- Available with plastic cones for easier breakback and for subsequent wall patching
- Neoprene rubber washer waterseal available
- Heavy-duty load rating

### MATERIAL:

- Standard tie: medium carbon C1030 grade steel wire
- Available in 304 and 316 stainless steel: contact factory

**FINISH:** None. Zinc coating available: contact factory

**MAXIMUM SAFE WORKING LOAD:** 3000 lbs for standard tie, 2800 lbs for stainless ties (2-to-1 safety factor)

### INSTALLATION:

• **DO NOT BEND TIES!** Steel Dog® Loop Panel Ties, like any concrete form snap tie, are made with special crimped notches to provide breakback points for snapping off tie ends after stripping the forms. If the ties are bent at these breakback notches, the parts will be weakened and will not carry the full rate load of the tie.

• **DISCARD ANY BENT OR DAMAGED TIES.** Do not use ties that may have gotten bent, twisted, or deformed during handling or installation.

• Secure to steel frame form panels using standard wedge bolts. Do not force wedge bolts through loop ends: this may indicate a problem with tie length, panel alignment, or other problem.

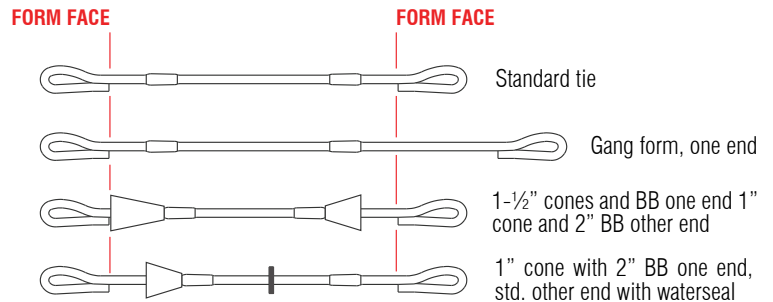
### REMOVAL:

• Remove wedge bolts and formwork. Do not snap tie ends until concrete has reached sufficient strength to prevent tie rotation.

• To snap off loop ends, use hammer claws, screwdriver, or other tool to twist loop approximately 90 degrees to snap the tie at the breakback point. Pull loop end out of wall with hammer claws. Plastic cones may be removed with special cone removal tool.

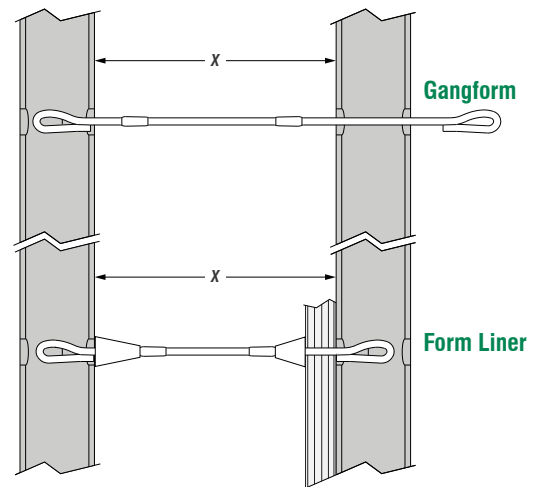
## Form Face to Form Face vs. Wall Thickness

Tie length is measured based on the distance between form faces not the finished wall thickness.



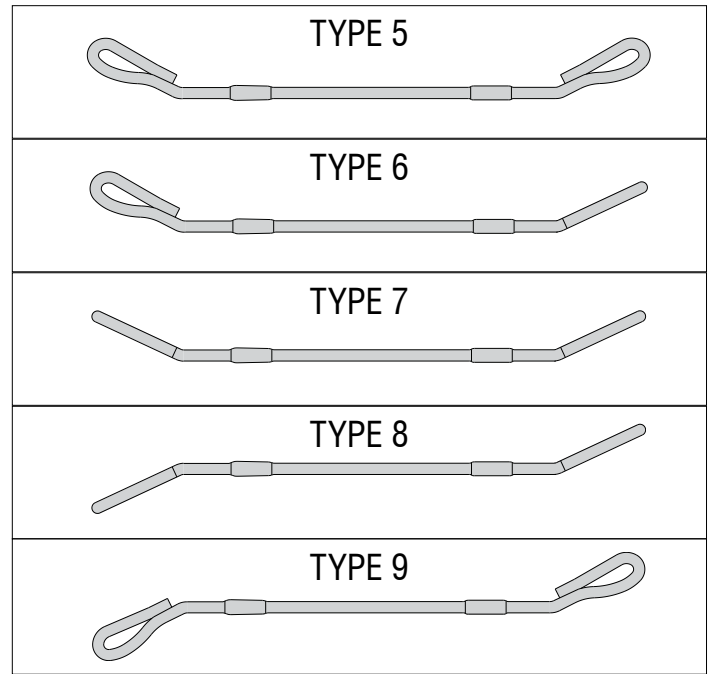
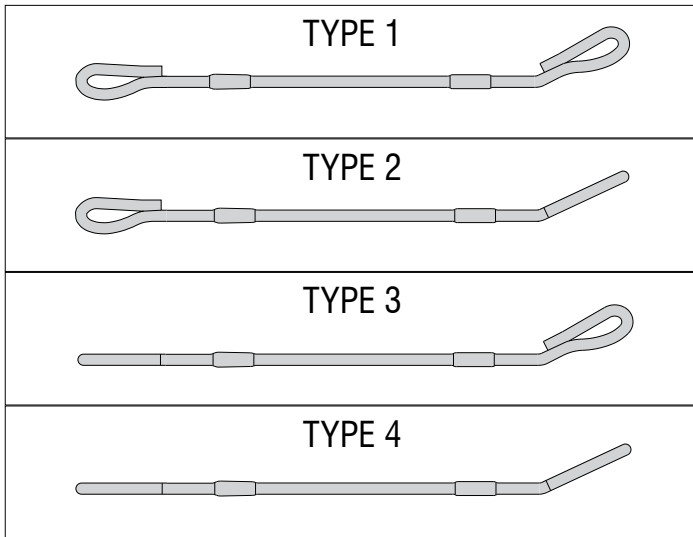
## Form Liners and Gangform

Tie length is measured based on the distance between form faces not the finished wall thickness.



# BENT TIES

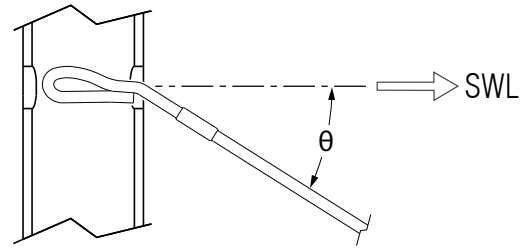
Bend direction is determined by different bend types - indicated below.



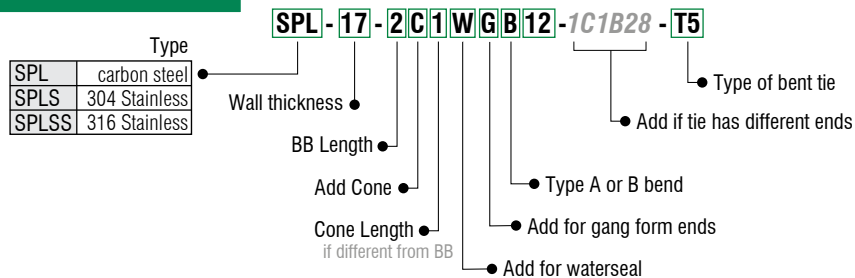
## Determining Safe Working Load

Bent Ties have a lower load rating than standard straight end loop ties. To calculate the safe working load perpendicular to the form face use the formula below; for ties with differently bent ends apply formula to the largest angle.

**Standard Steel:  $SWL = 3000 \cos \theta$**   
**Stainless Steel:  $SWL = 2800 \cos \theta$**



## Determining Product Code



## Order Info

Safe working load standard tie <sup>1</sup>	3000 lbs, 2-to-1 safety factor
Safe working load stainless tie <sup>1</sup>	2800 lbs, 2-to-1 safety factor
Wall thickness range	4 inches to 50 feet, in any fraction, to 1/16"
Wire material	Carbon steel, 304 stainless <sup>2</sup>
Waterseal available	Neoprene washer
Cone lengths available	1", 1-1/2", 2" <sup>3</sup>

<sup>1</sup> Safe working load is based on a 2-to-1 Safety Factor  
<sup>2</sup> 316 stainless available on special order  
<sup>3</sup> Cone diameter 1" standard; other diam's available

## Typical Examples:

