Technical Bulletin No. 7

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Subject: Capacity of Timberlinx composite standoffs	

Product Description

Timberlinx WCS composite standoffs (Figures 1 through 3) are designed to separate the bottom end of a timber post from a concrete or steel surface while resisting the axial compression load between them. The plastic standoffs are 1" tall and square, with steeply sloped lateral faces and filleted corners. Two models are available as follows:

1. **WCS5** – with top surface having side length 4-7/8" and net bearing area 22.8 in^2 (intended for 6 x 6 posts) and bottom surface having side length 5-3/8"
2. **WCS7** – with top surface having side length 6-7/8" and net bearing area 46.3 in^2 (intended for 8 x 8 posts) and bottom surface having side length 7-3/8"

The standoffs have a centered hole with Ø1" at the top surface that flares to Ø1-1/8" at the bottom surface, accommodating Timberlinx connector assemblies. Four Ø5/32" holes surrounding the center hole enable the standoff to be screwed to the post bottom.

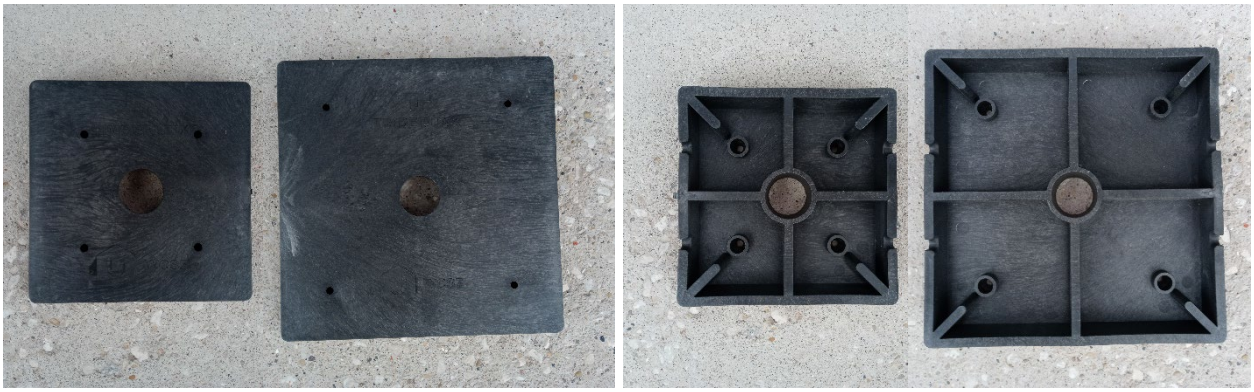

Figure 1. (L) Top and (R) bottom views of the Timberlinx WCS5 and WCS7.

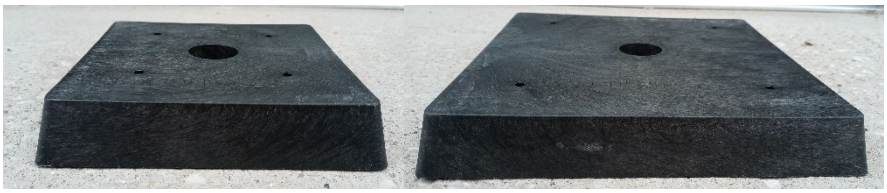

Figure 2. Perspective view of the Timberlinx WCS5 and WCS7 "from the side."

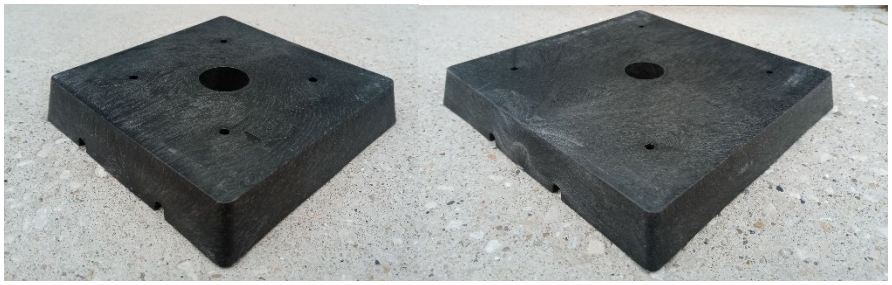

Figure 3. Perspective view of the Timberlinx WCS5 and WCS7 "from the corner."

Product Capacity

The compression load design capacity of the WCS standoffs (Table 1) have been determined from limited physical testing and Weibull analyses, with fifth percentile peak compression load values being adjusted by appropriate safety factors.

Table 1. Compression load design capacities for Timberlinx WCS standoffs.

Model	Compression Load Design Capacity (lb)[1,2,3]	
	ASD	LRFD
WCS5	14,500	20,800
WCS7	23,400	33,700

Footnotes:

1. These design capacities are valid only if the top and bottom surfaces of the standoff make full contact with the timber post end and supporting surface, respectively (i.e., the full net bearing areas of the standoff are engaged). The supporting surface must be concrete, steel, or masonry with a smooth finish.
2. These design capacities control over the parallel-to-grain bearing design capacities of the timber post on the standoff given the following:
    - The timber has an oven-dry specific gravity greater than 0.30.
    - The timber is subjected to loads of any duration.
    - The timber is subjected to wet or dry service conditions.
    - The timber is not subjected to sustained elevated temperatures greater than 100ºF.
3. These design capacities are valid only for typical construction tolerances and eccentricities. The standoffs are not designed for intentional eccentric loading.