

Test Procedure: Testing was performed on a computer-monitored and -controlled SATEC 50UD Universal Testing Machine (Y002011).

Perpendicular Direction: Each raised seam specimen was clamped to the rigid base of the testing machine with a steel section running parallel to the raised seam. Each roof clamp product was then centered on the raised seam and the set-screws were alternately tightened to a torque value of 90 in/lbs. Using a fixture that grips the underside of the bolt head, the testing machine was then attached to the threaded bolt extending from the roof block. Specimens were loaded in tension at a rate of 0.1 inch per minute while load and deflection data were recorded. The test continued until a maximum load was recorded or disengagement of the roof block from the raised seam occurred. See Photo No. 9 in Appendix A for a typical perpendicular test assembly.

Parallel Direction: Each raised seam specimen was clamped to a steel knee support bolted to the rigid base of the testing machine such that the raised seam was positioned vertically. Each roof clamp product was then centered on the raised seam and the set-screws were alternately tightened to a torque value of 90 in/lbs. The testing machine was used to apply a parallel load to the side of the roof block at a rate of 0.1 inch per minute while load and deflection data were recorded. A large washer was attached to the threaded bolt extending from the roof block in order to keep the loading device from deflecting and slipping from the roof block. See Photo No. 10 in Appendix A for a typical parallel test assembly.

Test Results: Test results are summarized in the tables below. Photographs of the testing are provided in Appendix A. Detailed test results are included in Appendix B.

Average Shear Load Resistance				
Clamp	Double Lock Panel		Englert 24 GA Snap Panel	
	Load (lb_f)	Failure Mode	Load (lb_f)	Failure Mode
RC	1,898	Panel Deformation / Anchor Disengagement	1,318	Panel Deformation / Anchor Disengagement
RCT	1,661		1,184	
"T" Shaped Seam			"Bulb" Shaped Seam	
RCT	2,165	Panel Deformation / Anchor Disengagement	1,398	Panel Deformation / Anchor Disengagement