



TECHNICAL BULLETIN

Issue Date: December 21, 2013

No. 01-346-23

Air and Water Infiltration Trap Tee 24 Ga.

On December 5, 2023, McElroy Metal, Inc. tested its Trap Tee Panel for air leakage and water penetration.

TEST METHODS:

Air Leakage: ASTM E1680-16, “Rate of Air Leakage Through Exterior Metal Roof Panel Systems”

Water Penetration: ASTM E1646-95 (2018), “Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference”

TEST SPECIMEN:

McElroy Metal, Inc. 24 Ga. 24 in. wide Trap Tee Roof Panels were attached to purlins with 8 in. 16 Ga standard panel clips using (2) #1/4-14 x 1 1/4” hex head self drilling fasteners per clip. Factory applied sealant was used in the panel seam. The panel seam was seamed mechanically.

TEST RESULTS:

*Results are extrapolated to different panel widths.

Specimen	Air Infiltration			Water Penetration			
	Static Pressure Differential (psf)	Air Infiltration rate (cfm/lf)	Air Infiltration rate (cfm/sf)	Static Pressure Differential (psf)	Rate (gal./hr/sf)	Test Duration (min)	Water Infiltration
Trap Tee 24” 24 Ga	+1.57	0.003	0.001	20.0	5	15	None
Trap Tee 24” 24 Ga	- 1.57	0.003	0.001				
Trap Tee 24” 24 Ga	+6.24	0.004	0.002				
Trap Tee 24” 24 Ga	-6.24	0.004	0.002				
Trap Tee 24” 24 Ga	+12.0	0.006	0.003				
Trap Tee 24” 24 Ga	- 12.0	0.006	0.003				
Trap Tee 24” 24 Ga	+20.0	0.008	0.004				
Trap Tee 24” 24 Ga	-20.0	0.008	0.004				

Test Report No. : 90-0095T-23

Dated : December 5, 2023

**Test results are valid for heavier gauges or thicknesses.

MANUFACTURING LOCATIONS

ADELANTO, CA ASHBURN, GA BOSSIER CITY, LA CLINTON, IL DIAMOND, MO HOUSTON, TX LEWISPORT, KY
 LOCKHART, TX MARSHALL, MI MAUSTON, WI MERKEL, TX PEACHTREE CITY, GA SUNNYVALE, TX WINCHESTER, VA