ACS U-CLIP™

TECHNICAL DATA SHEET

Update: August 10, 2026

ACS Composite Systems Inc.

DESCRIPTION

ACS Thermal Clips create a highly efficient attachment system that reduces the effect of thermal bridging. The ACS U-Clip™ is available for use in four different configurations: **Vertical Angle** (penetrating insulation); **Vertical Z-Girt** (outside insulation); **Horizontal Angle** (penetrating insulation); **Horizontal Z-Girt** (outside insulation).

Composed of **American-made** galvanized steel and utilizing the ACS Thermal Pad, the ACS U-Clip™ provides a balance between performance, ease of use and cost.

PHYSICAL SIZE

Available Size in Inches (mm)	2” (51) | 3” (76) | 4” (102) | 5” (127) | 6” (152) | 7” (178) | 8” (203)
Base Dimensions in Inches (mm)	1 ½” x 4” (38 x 102)

MATERIAL COMPOSITION

U-Clip™	16ga G90 galvanized steel (ASTM A653)
U-Angle™	14ga G90 galvanized steel (ASTM A653)
ACS Thermal Pad	High-density poly-iso closed-cell core structure placed between polymer coated glass fiber facings
Angle/Z-Girt Screws	#12-14 x ¾” Hex Washer Head #3 Drill Point Carbon Steel NZF 3000 Leland Master Driller®
Wall Attachment Screws	Wood: #14-10 x 2 ½” Hex Washer Head Carbon Steel NZF 3000 Coated Leland Master Gripper® Concrete/CMU: #14-15(TPI) x 2 ½” Hex Washer Head 410 Stainless Steel NZF3000 Leland Concrete Screw Steel Stud: #14-14 x 2 ½” Hex Washer Head #2 Drill Point Carbon Steel NZF 3000 Leland Master Driller®

Vertical Angle

Vertical Z-Girt

Horizontal Angle

Horizontal Z-Girt

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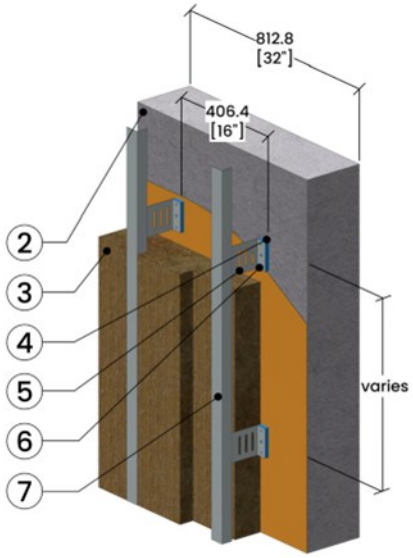
THERMAL TRANSMITTANCE—CONCRETE ASSEMBLY

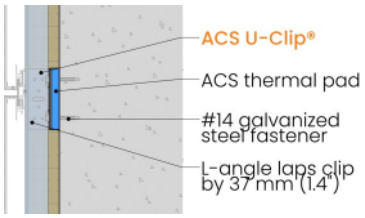
Table 1. Thermal Transmittance for Exterior Insulated Concrete Wall Assembly using Mineral Wool with Galvanized Steel ACS U-Clip™ and Vertical L-Angle Penetrating the Insulation[1]

Thickness of Exterior Mineral Wool Insulation	Exterior Insulation 1D R-Value[2]	16" x 24" Clip Spacing		16" x 36" Clip Spacing		16" x 48" Clip Spacing	
		R-Value	Transmittance	R-Value	Transmittance	R-Value	Transmittance
	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)
2" (51mm)	8.4 (1.48)	8.4 (1.49)	0.118 (0.672)	8.9 (1.57)	0.112 (0.636)	9.3 (1.63)	0.108 (0.612)
4" (102mm)	16.8 (2.96)	14.2 (2.50)	0.070 (0.400)	15.5 (2.73)	0.065 (0.366)	16.1 (2.84)	0.062 (0.353)
6" (152mm)	25.2 (4.44)	19.8 (3.49)	0.050 (0.287)	22.0 (3.87)	0.046 (0.259)	22.9 (4.04)	0.044 (0.247)
8" (203mm)	33.6 (5.92)	25.6 (4.50)	0.039 (0.222)	28.4 (5.00)	0.035 (0.200)	29.8 (5.25)	0.034 (0.191)

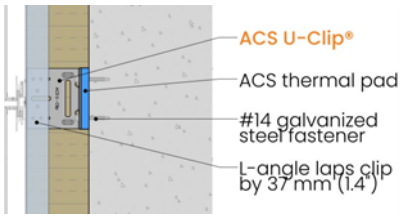
Components

1. Interior
2. 8" Concrete wall
3. Exterior Mineral Wool insulation (R-4.2/inch)
4. 1/2" (13 mm) ACS Thermal Pad (R-2.5)
5. 16-gauge steel ACS U-Clip™
6. 2 x #14 steel fasteners with 38 mm embedment
7. 18-gauge galvanized steel L-angle

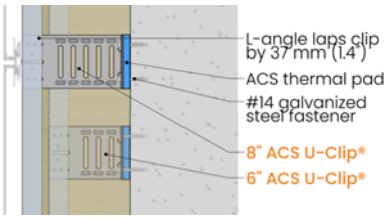




2" (51mm)



4" (102mm)



6"| 8" (152mm | 203mm)

[1] Thermal modeling for the ACS U-Clip™ was completed by building envelope specialists, EVOKE Buildings Engineering Inc., using Siemens Simcenter 3D thermal simulation software. Contact ACS Composite Systems Inc. for a copy of the full report.

[2] Exterior Insulation 1D R-Value does not include the impact of the back-up wall which adds R-24.3 to the overall nominal R-Value.

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THERMAL TRANSMITTANCE—STEEL STUD ASSEMBLY

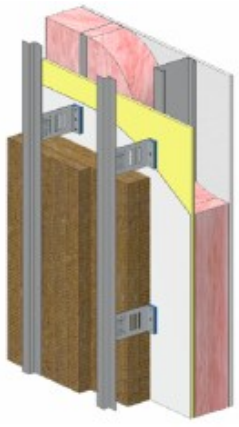
Table 1. **Thermal Transmittance for Exterior Insulated Steel-Framed Wall Assembly with Galvanized Steel ACS U-Clip™ with Mineral Wool Insulation and Z-Girt Outboard of Insulation[1]**

Exterior Insulated System

Thickness of Exterior Mineral Wool Insulation	Exterior Insulation 1D R-Value[2]	16" x 24" Clip Spacing		16" x 48" Clip Spacing	
		R-Value	Transmittance	R-Value	Transmittance
	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)
2" (51mm)	8.6 (1.52)	11 (1.93)	0.091 (0.517)	11.6 (2.04)	0.086 (0.490)
3" (76mm)	12.9 (2.27)	14.2 (2.5)	0.070 (0.400)	15.2 (2.68)	0.066 (0.373)
4" (102mm)	17.2 (3.03)	17.3 (3.06)	0.058 (0.327)	18.8 (3.31)	0.053 (0.302)
5" (127mm)	21.5 (3.79)	20.5 (3.61)	0.049 (0.277)	22.4 (3.95)	0.045 (0.253)
6" (152mm)	25.8 (4.55)	23.5 (4.14)	0.043 (0.241)	26.0 (4.58)	0.038 (0.218)
7" (178mm)	30.1 (5.31)	26.6 (4.68)	0.038 (0.214)	29.6 (5.21)	0.034 (0.192)
8" (203mm)	34.4 (6.07)	29.5 (5.19)	0.034 (0.193)	33.0 (5.81)	0.030 (0.172)

Table 2. **Thermal Transmittance for Split Insulated Steel-Framed Wall Assembly with Galvanized Steel ACS U-Clip™ with Mineral Wool Insulation and Z-Girt Outboard of Insulation[1]**

Thickness of Exterior Mineral Wool Insulation	Exterior Insulation 1D R-Value[2]	16" x 24" Clip Spacing		16" x 48" Clip Spacing	
		R-Value	Transmittance	R-Value	Transmittance
	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)
2" (51mm)	8.6 (1.52)	19.8 (3.49)	0.051 (0.287)	21.0 (3.71)	0.048 (0.270)
3" (76mm)	12.9 (2.27)	22.8 (4.01)	0.044 (0.249)	24.4 (4.30)	0.041 (0.232)
4" (102mm)	17.2 (3.03)	25.8 (4.54)	0.039 (0.220)	27.8 (4.90)	0.036 (0.204)
5" (127mm)	21.5 (3.79)	28.7 (5.06)	0.035 (0.198)	31.4 (5.52)	0.032 (0.181)
6" (152mm)	25.8 (4.55)	31.7 (5.58)	0.032 (0.179)	34.9 (6.15)	0.029 (0.163)
7" (178mm)	30.1 (5.31)	34.7 (6.12)	0.029 (0.163)	38.4 (6.77)	0.026 (0.148)
8" (203mm)	34.4 (6.07)	37.8 (6.65)	0.026 (0.150)	42.0 (7.40)	0.024 (0.135)



Split Insulated System

[1] Thermal modeling for the ACS U-Clip™ was completed by building envelope specialists, EVOKE Buildings Engineering Inc., using Siemens Simcenter 3D thermal simulation software. Contact ACS Composite Systems Inc. for a copy of the full report.

[2] Exterior Insulation 1D R-Value does not include the impact of the back-up wall which adds R-24.3 to the overall nominal R-Value.

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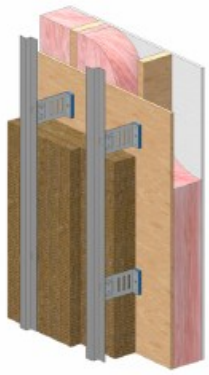

THERMAL TRANSMITTANCE—WOOD FRAME ASSEMBLY

Table 1. Thermal Transmittance for Split Insulated Wood-Framed Wall Assembly with Galvanized Steel ACS U-Clip™ with Vertical Z-Girt Outboard of Insulation[1]

Thickness of Exterior Mineral Wool Insulation	Exterior Insulation 1D R-Value[2]	16" x 24" Clip Spacing		16" x 36" Clip Spacing		16" x 48" Clip Spacing	
		R-Value	Transmittance	R-Value	Transmittance	R-Value	Transmittance
	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)
2" (51mm)	8.6 (1.52)	29.1 (5.12)	0.034 (0.195)	29.6 (5.21)	0.034 (0.192)	29.8 (5.24)	0.034 (0.191)
3" (76mm)	12.9 (2.27)	32.5 (5.72)	0.031 (0.175)	33.3 (5.86)	0.030 (0.171)	33.6 (5.92)	0.030 (0.169)
4" (102mm)	17.2 (3.03)	35.8 (6.30)	0.028 (0.159)	36.9 (6.49)	0.027 (0.154)	37.4 (6.58)	0.027 (0.152)
5" (127mm)	21.5 (3.79)	39.0 (6.86)	0.026 (0.146)	40.4 (7.11)	0.025 (0.141)	41.1 (7.24)	0.024 (0.138)
6" (152mm)	25.8 (4.55)	42.0 (7.41)	0.024 (0.135)	43.8 (7.72)	0.023 (0.129)	44.7 (7.88)	0.022 (0.127)

Table 2. Thermal Transmittance for Split Insulated Wood-Framed Wall Assembly with Galvanized Steel ACS U-Clip™ with Vertical L-Angle Penetrating Exterior Insulation[1]

Thickness of Exterior Mineral Wool Insulation	Exterior Insulation 1D R-Value[2]	16" x 24" Clip Spacing		16" x 36" Clip Spacing		16" x 48" Clip Spacing	
		R-Value	Transmittance	R-Value	Transmittance	R-Value	Transmittance
	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)	$ft^2 \cdot hr \cdot °F/Btu$ ($m^2 \cdot K/W$)	$Btu/ft^2 \cdot hr \cdot °F$ ($W/m^2 \cdot K$)
2" (51mm)	8.6 (1.52)	28.6 (5.03)	0.035 (0.199)	29.0 (5.10)	0.035 (0.196)	29.1 (5.13)	0.034 (0.195)
3" (76mm)	12.9 (2.27)	32.0 (5.64)	0.031 (0.177)	32.7 (5.76)	0.031 (0.173)	33.0 (5.82)	0.030 (0.172)
4" (102mm)	17.2 (3.03)	35.3 (6.21)	0.028 (0.161)	36.4 (6.40)	0.028 (0.156)	36.8 (6.48)	0.027 (0.154)
5" (127mm)	21.5 (3.79)	38.5 (6.77)	0.026 (0.148)	39.9 (7.03)	0.025 (0.142)	40.5 (7.14)	0.025 (0.140)
6" (152mm)	25.8 (4.55)	41.5 (7.31)	0.024 (0.137)	43.3 (7.63)	0.023 (0.131)	44.1 (7.77)	0.023 (0.129)

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[2] Exterior Insulation 1D R-Value does not include the impact of the back-up wall which adds R-24.3 to the overall nominal R-Value.