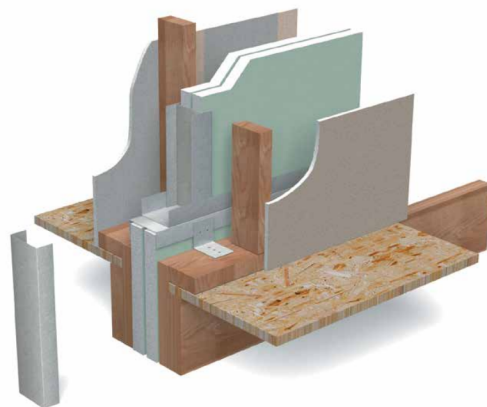


Installation Procedures

- 1 Install C-runner along the floor in the desired position.
- 2 An additional track is installed vertically at the end of the wall.
- 3 Two 1" thick shaftliner panels are then inserted into the bottom and side tracks.
- 4 An H-stud is inserted into the lower track and slid over the edges of the shaftliner.
- 5 Repeat steps 3 and 4 until the desired wall length is achieved.
- 6 Cap the end and top of the wall with C-runner.
- 7 Confirm that the wall is plumb and then secure the assembly to the adjacent wall using aluminum burn clips on both sides of the wall.
Make sure to leave a 3/4" gap between the area separation wall and adjacent wall. Clip spacing is dependent on the height of the wall. Wall assemblies can be stacked to a maximum height of 50' or per the details of the applicable UL assembly.



FIRE-RATED SYSTEMS

2 Hour UL Listings:

- U336 (1-3/8" flange) Max. height 66ft.
- U347 (1-3/8" flange) Max. height 66ft.
- U373 (1-1/2" flange) Max. height 44ft.
- U388 (1-3/8" flange) Max. height 66ft.
- V411 (1-3/8" flange)
- U366 (1-3/8" flange) Max. height 70ft.
- U375 (1-3/8" flange) Max. height 66ft.

3 Hour Design Assemblies:

UL Design No. W454 (National Gypsum Co.)

(2) Layers of 1" thick gypsum board liner panels fit into H-Studs w/ (1) layer of 5/8" thick gypsum board on each side of wall assembly. Standard 2-1/2" long Aluminum Breakaway Clips can be used to secure assembly.

UL Design No. W467 (CertainTeed Gypsum)

(2) Layers of 1" thick gypsum board liner panels fit into H-Studs w/ (1) layer of 5/8" thick gypsum board on each side of wall assembly. Standard 2-1/2" long Aluminum Breakaway Clips can be used to secure assembly.

GA File No. ASW-2600 (USG Corporation)

(2) Layers of 1" thick gypsum board liner panels fit into H-Studs w/4" min. aluminum burn clips required to accommodate the 2" mineral insulation.

GA File No. ASW-2601(GP Gypsum Corporation)

(2) Layers of 1" thick gypsum board liner panels fit into H-Studs w/4" min. aluminum burn clips required to accommodate the 2" mineral insulation.

Aluminum Burn Clip

Clips melt away under intense heat.

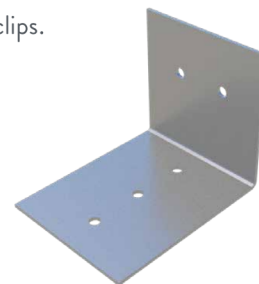
ClarkDietrich aluminum burn clips are used as part of the H-stud area-separation wall assembly and are designed to melt and break away when exposed to fire. The clips are used to hold the area-separation wall assembly in place at the floor, roof, and truss line between adjacent units. Should a fire break out in one unit, the Aluminum Burn Clips on the fire-ridden side of the area-separation wall

will melt, allowing the wall structure for that side to collapse. The burn clips on the non-fire side will remain intact and hold the area-separation wall in place as a barrier to contain the fire within the unit of origin.

Note: Check listed fire assembly for details of construction, thickness and length of required burn clips.

INSTALLATION PROCEDURES

- 1 Attach an aluminum burn clip to the completed area-separation wall assembly.
- 2 One clip should be located at each H-stud on both sides of the wall.
- 3 Attach the aluminum burn clip to the H-stud with a screw.
- 4 Attach to the adjacent framing with a screw or a nail, as applicable.



Area Separation Wall Systems

Fire-resistance protects lives and property.

Area separation walls are non-load bearing, 2-hour and 3-hour rated vertical wall assemblies that provide fire-resistant protection between adjacent living units in apartment buildings, condominiums and townhouses. They are also referred to as party walls, firewalls, multi-family walls and H-stud assemblies.

Assembled between two independent walls, area separation walls form a commonly shared party wall that extends from the foundation through the roof line. The walls are assembled with two 1" thick gypsum panel liners vertically installed between 2" H-studs spaced 24" o.c. At the top and bottom of the walls, C-runners are installed back-to-back between vertically stacked panels. Overall stacked area separation wall assemblies cannot exceed 50 feet or the limits of the applicable UL Fire Assembly.

H-Stud



ClarkDietrich H-studs are nominal 2" wide vertical members used to secure two 1" thick pieces of gypsum shaftliner in area separation wall assemblies. H-studs are inserted into C-runners and slid over gypsum panel liner edges, repeating until the desired wall length is achieved. Once the wall is plumbed, it is secured with aluminum burn clips.

Product code	Thickness			Size	
	Gauge	Mils	Design thickness (in)	Width (in)	Length (ft)
HSN	25	18	0.0188	2-1/8	8
					10
					12

NOTE: H-Studs are manufactured in accordance with the minimum requirements of AISI S220.

C-Runner

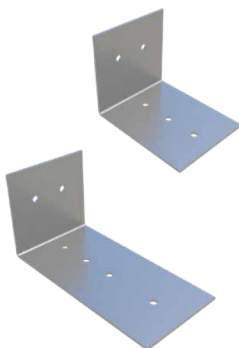


ClarkDietrich C-runner is used to secure H-stud and gypsum shaftliner panels in area separation wall assemblies. Attached to the foundation with power-actuated fasteners, C-runner is also used as top track to cap the H-stud and 1" gypsum shaftliner panels, with a second track screwed back-to-back to the lower runner, to hold the next level of assembly.

Product code	Thickness			Size	
	Gauge	Mils	Design thickness (in)	Width (in)	Length (ft)
HRN1	25	18	0.0188	2-1/8	8
					10

NOTE: C-Runners are manufactured in accordance with the minimum requirements of AISI S220.

Aluminum Burn Clip



ClarkDietrich aluminum burn clips are used as part of the H-stud area separation wall assembly and are designed to melt when exposed to fire. The clips hold the area separation wall assemblies in place at the floor, roof and truss line between adjacent units. In a fire, the aluminum burn clips on the fire-ridden side of the wall will melt, allowing the wall structure for that side to collapse.

Product code	Thickness (in)	Size (in)	Packaging Pcs./Bucket
AB	0.050	2 x 2 x 2-1/2	500
AB63	0.063	2 x 2 x 2-1/2	500
AB30	0.063	2 x 2 x 3	250
AB35	0.063	2 x 2 x 3-1/2	250
AB40*	0.063	2 x 2 x 4	250
AB45	0.063	2 x 2 x 4-1/2	250

*For use with 3-hour Design Assembly based on GA File No. ASW 2600 other custom breakaway clip lengths available.

Check listed fire assembly for details of construction, thickness and length of required burn clips. All Burn Clips are manufactured using 5052 H32 aluminum.

Limiting Heights Table

C-T STUD LIMITING HEIGHTS : PER ICC-ES ESR-5050

Stud Depth	Mil (gauge)	Yield Strength (psi)	Design Thickness (in)	Design Deflection Limit	Limiting Height (feet - inches) Design Pressure (psf)			
					5 psf	7.5 psf	10 psf	15 psf
2-1/2"	22mil (25ga)	33,000	0.0231	L/120	16'-10"	13'-8"	11'-10" *	8'-6" *
				L/180	13'-8"	11'-3"	9'-10"	8'-3"
				L/240	11'-10"	9'-10"	8'-8"	7'-3"
				L/360	9'-10"	8'-3"	7'-3"	6'-2"
	33mil (20ga)	33,000	0.0346	L/120	16'-10"	14'-4"	12'-11"	11'-1"
				L/180	14'-4"	12'-4"	11'-1"	9'-6"
				L/240	12'-11"	11'-1"	9'-11"	8'-7"
				L/360	11'-1"	9'-6"	8'-7"	7'-5"
	43mil (18ga) ¹	50,000	0.0451	L/120	17'-11"	15'-10"	14'-6"	12'-10"
				L/180	15'-10"	14'-0"	12'-10"	—
				L/240	14'-6"	12'-10"	—	—
				L/360	12'-10"	—	—	—
4"	22mil (25ga)	33,000	0.0231	L/120	21'-8"	16'-6" *	12'-5" *	8'-3" *
				L/180	18'-1"	15'-3"	12'-5" *	8'-3" *
				L/240	16'-0"	13'-7"	12'-1"	8'-3" *
				L/360	13'-7"	11'-6"	10'-4"	8'-3" *
	33mil (20ga)	33,000	0.0346	L/120	23'-0"	21'-0"	18'-7"	15'-5" **
				L/180	21'-0"	17'-9"	15'-10"	13'-6"
				L/240	18'-7"	15'-10"	14'-1"	12'-1"
				L/360	15'-10"	13'-6"	12'-1"	10'-4"
	43mil (18ga) ¹	50,000	0.0451	L/120	25'-7"	22'-2"	20'-0"	17'-4"
				L/180	22'-2"	19'-2"	17'-4"	15'-1"
				L/240	20'-0"	17'-4"	15'-8"	13'-7"
				L/360	17'-4"	15'-1"	13'-7"	11'-10"
6"	33mil (20ga)	33,000	0.0346	L/120	30'-3" **	24'-9" **	20'-6" *	13'-8" *
				L/180	30'-3"	24'-9" **	20'-6" *	13'-8" *
				L/240	26'-6"	22'-2"	19'-7"	13'-8" *
				L/360	22'-2"	18'-8"	16'-7"	13'-8" *
	43mil (18ga) ¹	50,000	0.0451	L/120	36'-5"	30'-8"	27'-3"	23'-2"
				L/180	30'-8"	26'-0"	23'-2"	19'-9"
				L/240	27'-3"	23'-2"	20'-8"	17'-8"
				L/360	23'-2"	19'-9"	17'-8"	—

¹ 43mil (18ga) only available in select markets. 43mil (18ga) is for interior systems only.

Note:

- *Reduced for End Reaction Capacity. ** Reduced for Flexural Strength Capacity.
- The values in this table are based on testing ASTM E72 and represent the limiting height capacity for strength using a 1.5 Safety Factor.
- Minimum base steel thickness is 95% of design thickness.
- Limiting Height values shown, were assessed from the **lowest** Flexural Strength value of Gypsum tested.

Horizontal Spans

MAXIMUM HORIZONTAL SPANS FOR CORRIDOR CEILINGS

Stud Depth	Mil (gauge)	Yield Strength (psi)	Design Thickness (in)	2 Hour (2) 1/2" Type C + (1) 1-in Shaftliner				2 Hour (2) 5/8" Type X + (1) 1-in Shaftliner			
				L/120	L/180	L/240	L/360	L/120	L/180	L/240	L/360
2-1/2"	22mil (25ga)	33,000	0.0231	8'-8"	8'-8"	8'-6"	7'-5"	8'-2"	8'-2"	8'-2"	7'-2"
	33mil (20ga)	33,000	0.0346	10'-6"	10'-6"	9'-10"	8'-7"	9'-11"	9'-11"	9'-6"	8'-3"
4"	22mil (25ga)	33,000	0.0231	11'-8"	11'-8"	11'-8"	10'-8"	11'-0"	11'-0"	11'-0"	10'-3"
	33mil (20ga)	33,000	0.0346	14'-3"	14'-3"	14'-1"	12'-4"	13'-6"	13'-6"	13'-6"	11'-10"
6"	43mil (18ga) ¹	50,000	0.0451	19'-1"	16'-8"	15'-2"	13'-3"	18'-5"	16'-1"	14'-7"	12'-9"
	33mil (20ga)	33,000	0.0346	18'-9"	18'-9"	18'-9"	16'-10"	17'-9"	17'-9"	17'-9"	16'-3"
6"	43mil (18ga) ¹	50,000	0.0451	22'-9"	22'-9"	20'-9"	18'-2"	20'-5"	20'-5"	20'-0"	17'-6"

¹ 43mil (18ga) only available in select markets. 43mil (18ga) is for interior systems only.

Note:

- Dead Load of assembly ONLY is considered.
- Not designed to carry any Live Loads, Mechanical equipment, Storage Loads or Lighting.
- Studs must be one piece, full span.
- Minimum base steel thickness is 95% of design thickness.
- Horizontal corridor use permitted per IBC section 708.4 Continuity, Exception 3.