

CT STUD LIMITING HEIGHTS & HORIZONTAL SPANS

1 Hour Shaftwall System - limiting heights

DEPTH	GAUGE	DESIGN (in)	mil	5 PSF				7.5 PSF				10 PSF			
				L/120	L/180	L/240	L/360	L/120	L/180	L/240	L/360	L/120	L/180	L/240	L/360
2-1/2"	25	0.0188	18	13'-3"f	11'-11"	10'-10"	9'-5"	10'-10"f	10'-5"	9'-5"	8'-3"	9'-5"f	9'-5"	8'-7"	7'-6"
4"	25	0.0188	18	17'-6"f	15'-4"	13'-11"	12'-2"	14'-3"f	13'-5"	12'-2"	10'-8"	12'-4"f	12'-2"	11'-1"	9'-8"
2-1/2"	20	0.0346	33	17'-7"	15'-5"	14'-0"	12'-3"	15'-5"	13'-5"	12'-3"	10'-8"	13'-0"	12'-3"	11'-1"	9'-8"
4"	20	0.0346	33	21'-11"f	19'-3"	17'-6"	15'-3"	17'-11"f	16'-10"	15'-3"	13'-4"	15'-6"f	15'-3"	13'-11"	12'-2"
6"	20	0.0346	33	24'-6"f	24'-6"f	24'-6"f	22'-7"	20'-0"f	20'-0"f	20'-0"f	19'-9"	17'-4"f	17'-4"f	17'-4"f	17'-4"f
4"	18	0.0451	43	21'-11"f	19'-3"	17'-6"	15'-3"	17'-11"f	16'-10"	15'-3"	13'-4"	15'-6"f	15'-3"	13'-11"	12'-2"
6"	18	0.0451	43	28'-1"f	28'-1"f	27'-10"	24'-3"	22'-11"f	22'-11"f	22'-11"f	21'-3"	19'-10"f	19'-10"f	19'-10"f	19'-3"

2 Hour Shaftwall System - limiting heights

DEPTH	GAUGE	DESIGN (in)	mil	5 PSF				7.5 PSF				10 PSF			
				L/120	L/180	L/240	L/360	L/120	L/180	L/240	L/360	L/120	L/180	L/240	L/360
2-1/2"	25	0.0188	18	14'-5"	12'-7"	11'-5"	10'-0"	12'-7"	11'-0"	10'-0"	8'-9"	11'-2"f	10'-0"	9'-1"	7'-11"
4"	25	0.0188	18	18'-6"	16'-2"	14'-8"	12'-10"	16'-0"f	14'-2"	12'-10"	11'-3"	13'-10"f	12'-10"	11'-8"	10'-2"
2-1/2"	20	0.0346	33	17'-0"	14'-10"	13'-6"	11'-9"	14'-10"	13'-0"	11'-9"	10'-4"	13'-6"	11'-9"	10'-9"	9'-4"
4"	20	0.0346	33	23'-8"	20'-8"	18'-9"	16'-5"	20'-8"	18'-1"	16'-5"	14'-4"	18'-9"	16'-5"	14'-11"	13'-0"
6"	20	0.0346	33	28'-10"f	28'-10"	26'-4"	23'-0"	23'-6"f	23'-6"	23'-0"	20'-1"	20'-5"f	20'-5"f	20'-5"f	18'-3"
4"	18	0.0451	43	23'-8"	20'-8"	18'-9"	16'-5"	20'-8"	18'-1"	16'-5"	14'-4"	18'-9"	16'-5"	14'-11"	13'-0"
6"	18	0.0451	43	30'-0"f	30'-0"f	28'-7"	25'-0"	24'-6"f	24'-6"f	24'-6"f	21'-10"	21'-2"f	21'-2"f	21'-2"f	19'-10"

2 Hour Stairwell System - limiting heights

DEPTH	GAUGE	DESIGN (in)	mil	5 PSF				7.5 PSF				10 PSF			
				L/120	L/180	L/240	L/360	L/120	L/180	L/240	L/360	L/120	L/180	L/240	L/360
2-1/2"	25	0.0188	18	15'-7"	13'-8"	12'-5"	10'-10"	12'-9"	11'-11"	10'-10"	9'-5"	11'-0"f	10'-10"	9'-10"	8'-7"
4"	25	0.0188	18	17'-9"f	17'-6"	15'-11"	13'-11"	14'-6"f	14'-6"f	13'-11"	12'-2"	12'-7"f	12'-7"f	12'-7"	11'-0"
2-1/2"	20	0.0346	33	19'-6"f	17'-5"	15'-10"	13'-10"	15'-11"f	15'-3"	13'-10"	12'-1"	13'-9"f	13'-9"f	12'-7"	11'-0"
4"	20	0.0346	33	22'-4"f	22'-4"f	20'-8"	18'-0"	18'-3"f	18'-3"f	18'-0"	15'-9"	15'-9"f	15'-9"f	15'-9"f	14'-4"
6"	20	0.0346	33	25'-1"f	25'-1"f	23'-5"	20'-6"	20'-5"f	20'-5"f	20'-5"f	17'-11"	17'-9"f	17'-9"f	17'-9"f	16'-3"
4"	18	0.0451	43	22'-4"f	22'-4"f	20'-8"	18'-0"	18'-3"f	18'-3"f	18'-0"	15'-9"	15'-9"f	15'-9"f	15'-9"f	14'-4"
6"	18	0.0451	43	28'-1"f	28'-1"f	26'-0"	22'-9"	22'-11"f	22'-11"f	22'-9"	19'-10"	19'-11"f	19'-11"f	19'-11"	18'-0"

Shaftwall Systems - Horizontal Spans (dead load only)

DEPTH	GAUGE	DESIGN (in)	mil	1 Hour				2 Hour			
				L/120	L/180	L/240	L/360	L/120	L/180	L/240	L/360
2-1/2"	25	0.0188	18	11'-7"f	10'-11"	9'-11"	8'-8"	12'-2"	10'-7"	9'-8"	8'-5"
2-1/2"	20	0.0346	33	15'-8"	13'-8"	12'-5"	10'-10"	13'-11"	12'-2"	11'-1"	9'-8"
4"	25	0.0188	18	15'-1"	14'-0"	12'-8"	11'-1"	14'-11"f	13'-7"	12'-4"	10'-9"
4"	20	0.0346	33	17'-11"	16'-10"	15'-3"	13'-4"	17'-6"f	16'-9"	15'-3"	13'-4"
6"	20	0.0346	33	19'-5"f	19'-5"f	19'-5"f	19'-5"f	18'-0"f	18'-0"f	18'-0"f	18'-0"
6"	18	0.0451	43	21'-7"f	21'-7"f	21'-7"f	20'-4"	18'-3"f	18'-3"f	18'-3"f	18'-3"f

Notes:
 (F) Indicates flexure controls
 24" o.c. only framing
 Horizontal spans do not carry live loads, equipment, lighting or storage loads.