



KX01 - Vertical Rail Orientation

Substrate: 16 Ga. Stud (50 ksi)
Rail Size: Alum L-60x40x2.0

MAXIMUM UNFACTORED WIND LOAD (PSF)

Dead Load (psf)	Bracket Sizes (mm)																	
	40 mm leg in bracket		60		90		120		150		60 mm leg in bracket		180	210	240	270		
2	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32
	24	32	21	16	61	41	31	61	41	31	61	41	31	61	41	31	61	41
3	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32
	24	32	21	16	61	41	31	61	41	31	61	41	31	61	41	31	61	41
4	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32
	24	32	21	16	61	41	31	61	41	31	61	41	31	61	41	31	61	41
5	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32
	24	32	21	16	61	41	31	61	41	31	61	41	31	61	41	31	61	41
8	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32
	24	32	21	16	61	41	31	61	41	31	61	41	31	61	41	31	61	41

GOVERNING DESIGN COMPONENT

Dead Load (psf)	Bracket Sizes (mm)																	
	40 mm leg in bracket		60		90		120		150		60 mm leg in bracket		180	210	240	270		
2	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32
	24	32	21	16	61	41	31	61	41	31	61	41	31	61	41	31	61	41
3	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32
	24	32	21	16	61	41	31	61	41	31	61	41	31	61	41	31	61	41
4	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32
	24	32	21	16	61	41	31	61	41	31	61	41	31	61	41	31	61	41
5	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32
	24	32	21	16	61	41	31	61	41	31	61	41	31	61	41	31	61	41
8	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32
	24	32	21	16	61	41	31	61	41	31	61	41	31	61	41	31	61	41

TABLE NOTES

The design wind loads above are based on the following:
 a) Analysis of the bracket, rail and mechanical attachments are in general accordance with NBCC 2015 using Limit States Design (LSD)
 b) Bracket: Kladfix KX01 Single Bracket - Aluminum 6063-T6; Fy = 200 MPa
 c) Aluminum Rail: To Bracket Fastener: SFS SD045 #12 x 7/8" Full SS 316 Self-driller Screw
 d) Steel Rail to Bracket Fastener: Generic #12-14 x 1" Full SS 316 Self-driller Screw
 e) Metal Stud Anchor: SFS B-Metal Self-Drilling SD2 1/4-14 x 2" Screw (CCRR-0387)
 f) Concrete Anchor: 1/4" x 2-1/4" Tapcon Screw Anchor (ESR-2202)
 g) CMU Anchor: 1/4" x 2" Tapcon Screw Anchor (ESR-1671)
 h) Vertical and horizontal rail deflection limited to L/360

The table above is intended to provide estimated design wind loads and is for advice and guidance based on NBCC 2015 and must be verified by a licensed engineer of record in the state or province where the product is to be installed. Analysis of the bracket, rail and mechanical attachments was conducted by MORRISON HERSHFELD. Results have not been verified by testing.

GOVERNING DESIGN COMPONENT TABLE LEGEND

ACRONYM	DESCRIPTION
ATB	Adapter fastener connection to bracket (horizontal orientation only)
ATR	Rail fastener connection to adaptor (horizontal orientation only)
Bracket	Aluminum bracket
BTS	Fastener connection of bracket-to-substrate
BTS-S	Fastener connection of bracket-to-substrate at double bracket (vertical only)
D-Bracket	Fastener connection of bracket-to-substrate at single bracket (vertical only)
Rail	Aluminum (dead load bracket (double) (vertical only)) Rail governs (either deflection or stress)
RTB-D	Rail to bracket fastener connection at double (dead load) bracket (vertical only)
RTB-S	Rail to bracket fastener connection at single (wind load) bracket (vertical only)
S-Bracket	Aluminum wind load bracket (single)



KX01 - Vertical Rail Orientation
 Substrate: 16 Ga. Stud (50 ksi)
 Rail Size: Steel L-60x40x1.27

MAXIMUM UNFACTORED WIND LOAD (PSF)

Dead Load (psf)	I, S _w , S _h → (in)	Bracket Sizes (mm)																																																				
		40 mm leg in bracket			60 mm leg in bracket			90 mm leg in bracket			120 mm leg in bracket			150 mm leg in bracket			180 mm leg in bracket			210 mm leg in bracket			240 mm leg in bracket			270 mm leg in bracket																												
		16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32																							
2	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11		
	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7
	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6
	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6	6	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6	
	3	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	
36		38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7
48		16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6
60		8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6		
4		24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	
	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7
	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6
	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6		
	5	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	
36		38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7
48		16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6
60		8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6		
8		24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	
	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7
	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6
	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6		
	8	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	
36		38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7
48		16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6
60		8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6		
8		24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	
	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7
	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6	48	16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6
	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6	60	8	5	5	22	14	11	22	14	11	22	14	11	22	14	11	20	13	10	14	10	7	11	7	6	6		
	8	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	24	78	52	39	78	52	39	78	52	39	78	52	39	70	47	35	25	36	24	18	28	18	14	22	15	11	
36		38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7	36	38	25	19	52	35	26	52	35	26	52	35	26	47	31	23	17	24	16	12	24	16	12	9	15	10	7
48		16	11	8	39	26	19	39	26	19	39	26	19	35	23	17	25	16	12	18	12	14	9	7	11	7	6	48	16	11	8	39	26	19	39																			



KX01 - Vertical Rail Orientation

Substrate: 18 Ga. Stud (33 ksi)
Rail Size: Alum L-60x40x2.0

MAXIMUM UNFACTORED WIND LOAD (PSF)

Dead Load (psf)	I, S _w , S _h → (in)	Bracket Sizes (mm)																											
		40 mm leg in bracket			60			90			120			150			180			210			240			270			
2	24	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	
	36	14	9	7	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	
	48	8	5	7	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15
3	24	32	21	16	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	
	36	14	9	7	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	
	48	8	5	7	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15
4	24	32	21	16	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	
	36	14	9	7	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	27	18	14	
	48	8	5	7	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15	10	8	15
5	24	32	21	9	43	23	9	43	23	9	43	23	9	43	23	9	43	23	9	43	23	9	43	23	9	43	23	9	43
	36	14	9	6	27	15	6	27	15	6	27	15	6	27	15	6	27	15	6	27	15	6	27	15	6	27	15	6	27
	48	8	5	7	15	10	7	15	10	7	15	10	7	15	10	7	15	10	7	15	10	7	15	10	7	15	10	7	15
8	24	31			31			31			31			31			31			31			31			31			
	36	14			21			21			21			21			21			21			21			21			
	48	8			15			15			15			15			15			15			15			15			

GOVERNING DESIGN COMPONENT

Dead Load (psf)	I, S _w , S _h → (in)	Bracket Sizes (mm)																										
		40 mm leg in bracket			60			90			120			150			180			210			240			270		
2	24	Rail	Rail	Rail	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
3	24	Rail	Rail	Rail	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
4	24	Rail	Rail	Rail	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
5	24	Rail	Rail	Rail	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
8	24	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D
	36	Rail	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D
	48	Rail	BTS-D	BTS-D	Rail	BTS-D	BTS-D	Rail	BTS-D	BTS-D	Rail	BTS-D	BTS-D	Rail	BTS-D	BTS-D	Rail	BTS-D	BTS-D	Rail	BTS-D	BTS-D	Rail	BTS-D	BTS-D	Rail	BTS-D	BTS-D

TABLE NOTES

The design wind loads above are based on the following:
 a) Analysis of the bracket, rail and mechanical attachments are in general accordance with NBCC 2015 using Limit States Design (LSD)
 b) Bracket: Kladfix KX01 Single Bracket - Aluminum 6063-T6; F_y = 200 MPa
 c) Aluminum Rail: To Bracket Fastener: SFS SD045 #12 x 7/8" Full SS 316 Self-driller Screw
 d) Steel Rail to Bracket Fastener: Generic #12-14 x 1" Full SS 316 Self-driller Screw
 e) Metal Stud Anchor: SFS Bi-Metal Self-Drilling SD2 1/4-14 x 2" Screw (CCRR-0387)
 f) Concrete Anchor: 1/4" x 2-1/4" Tapcon Screw Anchor (ESR-2202)
 g) CMU Anchor: 1/4" x 2" Tapcon Screw Anchor (ESR-1671)
 h) Vertical and horizontal rail deflection limited to L/360
 The table above is intended to provide estimated design wind loads and is for advice and guidance based on NBCC 2015 and must be verified by a licensed engineer of record in the state or province where the product is to be installed.
 Analysis of the bracket, rail and mechanical attachments was conducted by MORRISON HERSHFELD. Results have not been verified by testing.

GOVERNING DESIGN COMPONENT TABLE LEGEND

ACRONYM	DESCRIPTION
ATB	Adapter fastener connection to bracket (horizontal orientation only)
A/R	Rail fastener connection to adaptor (horizontal orientation only)
Bracket	Aluminum bracket
BTS	Fastener connection of bracket-to-substrate
BTS-D	Fastener connection of bracket-to-substrate at double bracket (vertical only)
D-Bracket	Aluminum dead load bracket (double) (vertical only)
Rail	Rail governs (either deflection or stress)
RTB-D	Rail to bracket fastener connection at double (dead load) bracket (vertical only)
BTS-S	Rail to bracket fastener connection at single (wind load) bracket (vertical only)
S-Bracket	Aluminum wind load bracket (single)



KX01 - Vertical Rail Orientation
Substrate: 18 Ga. Stud (33 ksi)
Rail Size: Steel L-60x40x1.27

MAXIMUM UNFACTORED WIND LOAD (PSF)

Dead Load (psf)	I, S _v , S _h → (in)	Bracket Sizes (mm)																										
		40 mm leg in bracket			60			90			120			150			180			210			240			270		
2	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	
	24	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21
	36	29	19	14	29	19	14	29	19	14	29	19	14	29	19	14	29	19	14	29	19	14	29	19	14	29	19	14
3	16	8	5	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	6
	24	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21	43	29	21
	36	29	19	14	29	19	14	29	19	14	29	19	14	29	19	14	29	19	14	29	19	14	29	19	14	29	19	14
4	16	8	5	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	6
	24	43	29	16	43	29	16	43	29	16	43	29	16	43	29	16	43	29	16	43	29	16	43	29	16	43	29	16
	36	29	19	10	29	19	10	29	19	10	29	19	10	29	19	10	29	19	10	29	19	10	29	19	10	29	19	10
5	16	8	5	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	6
	24	43	23	9	43	23	9	43	23	9	43	23	9	43	23	9	43	23	9	43	23	9	43	23	9	43	23	9
	36	29	15	6	29	15	6	29	15	6	29	15	6	29	15	6	29	15	6	29	15	6	29	15	6	29	15	6
8	16	8	5	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	17	11	9	6
	24	31	5	17	9	17	9	17	9	17	9	17	9	17	9	17	9	17	9	17	9	17	9	17	9	17	9	6
	36	21	17	31	17	31	17	31	17	31	17	31	17	31	17	31	17	31	17	31	17	31	17	31	17	31	17	31

GOVERNING DESIGN COMPONENT

Dead Load (psf)	I, S _v , S _h → (in)	Bracket Sizes (mm)																											
		40 mm leg in bracket			60			90			120			150			180			210			240			270			
2	16	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	
	24	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
3	16	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	
	24	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
4	16	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	
	24	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
5	16	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	
	24	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
8	16	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	
	24	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail

TABLE NOTES

The design wind loads above are based on the following:
 a) Analysis of the bracket, rail and mechanical attachments are in general accordance with NBCC 2015 using Limit States Design (LSD)
 b) Bracket: Kladfix KX01 Single Bracket - Aluminum 6063-T6; F_y = 200 MPa
 c) Aluminum Rail To Bracket Fastener: SFS SDAS #12 x 7/8" Full SS 316 Self-Driller Screw
 d) Steel Rail to Bracket Fastener: Generic #12-14 x 1" Full SS 316 Self-Driller Screw
 e) Metal Stud Anchor: SFS Bi-Metal Self-Drilling SD2 1/4-14 x 2" Screw (CCRR-0387)
 f) Concrete Anchor: 1/4" x 2-1/4" Tapcon Screw Anchor (ESR-2202)
 g) CMU Anchor: 1/4" x 2" Tapcon Screw Anchor (ESR-1671)
 h) Vertical and horizontal rail deflection limited to L/360

The table above is intended to provide estimated design wind loads and is for advice and guidance based on NBCC 2015 and must be verified by a licensed engineer of record in the state or province where the product is to be installed. Analysis of the bracket, rail and mechanical attachments was conducted by MORRISON HERSHFELD. Results have not been verified by testing.

GOVERNING DESIGN COMPONENT TABLE LEGEND

ACRONYM	DESCRIPTION
ATB	Adapter fastener connection to bracket (horizontal orientation only)
A/R	Rail fastener connection to adaptor (horizontal orientation only)
Bracket	Aluminum bracket
BTS	Fastener connection of bracket-to-substrate
BTS-D	Fastener connection of bracket-to-substrate at double bracket (vertical only)
BTS-S	Fastener connection of bracket-to-substrate at single bracket (vertical only)
D-Bracket	Aluminum dead load bracket (double) (vertical only)
Rail	Rail governs (either deflection or stress)
Rail-D	Rail to bracket fastener connection at double (dead load) bracket (vertical only)
Rail-S	Rail to bracket fastener connection at single (wind load) bracket (vertical only)
S-Bracket	Aluminum wind load bracket (single)



KX01 - Vertical Rail Orientation

Substrate: CMU
Rail Size: Alum L-60x40x2.0

MAXIMUM UNFACTORED WIND LOAD (PSF)

Dead Load (psf)	I, S _w , S _h → (in)	Bracket Sizes (mm)																															
		40 mm leg in bracket			60 mm leg in bracket			90 mm leg in bracket			120 mm leg in bracket			150 mm leg in bracket			180 mm leg in bracket			210 mm leg in bracket			240 mm leg in bracket			270 mm leg in bracket							
		16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32		
2	24	32	21	16	36	24	18	36	24	15	36	24	12	36	20	8	36	17	36	13	36	10	28	10	22	6	24	32	32				
	36	14	9	7	24	16	12	24	16	8	24	13	6	24	10	11	24	8	24	6	15	14	6	14	6	15	15	11	11				
	48	8	5	7	15	10	8	15	10	8	15	10	6	15	10	7	10	7	10	5	15	10	10	10	10	9	9	9	9				
3	24	32	21	10	36	22	10	36	17	5	36	12	30	6	25	20	14	30	6	20	13	10	10	10	8	6	24	32	32				
	36	14	9	7	24	15	7	24	11	20	8	20	8	20	17	17	17	15	15	12	10	10	10	10	10	10	10	10	10	6			
	48	8	5	7	15	10	5	15	9	15	10	6	15	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	6			
4	24	32	14	36	14	36	14	36	14	31	24	24	17	9	6	24	11	6	24	9	20	11	6	24	11	6	24	11	6	24	11		
	36	14	9	24	9	24	9	20	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16		
	48	8	5	15	7	15	7	15	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
5	24	29	6	21	21	6	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21		
	36	14	20	14	20	14	20	14	20	14	20	14	20	14	20	14	20	14	20	14	20	14	20	14	20	14	20	14	20	14	20	14	
	48	8	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
8	24	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
	36	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	48	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

GOVERNING DESIGN COMPONENT

Dead Load (psf)	I, S _w , S _h → (in)	Bracket Sizes (mm)																																
		40 mm leg in bracket			60 mm leg in bracket			90 mm leg in bracket			120 mm leg in bracket			150 mm leg in bracket			180 mm leg in bracket			210 mm leg in bracket			240 mm leg in bracket			270 mm leg in bracket								
		16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32			
2	24	Rail	Rail	Rail	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S			
	36	Rail	Rail	Rail	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S		
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail		
3	24	Rail	Rail	Rail	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D	BTS-D		
	36	Rail	Rail	Rail	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	
4	24	Rail	BTS-D	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	
	36	Rail	Rail	Rail	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
5	24	Rail	BTS-D	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	
	36	Rail	Rail	Rail	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
8	24	Rail	BTS-D	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	
	36	Rail	Rail	Rail	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail

TABLE NOTES

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ATB	Adapter fastener connection to bracket (horizontal orientation only)
A/R	Rail fastener connection to adaptor (horizontal orientation only)
Bracket	Aluminum bracket
BTS	Fastener connection of bracket-to-substrate
BTS-D	Fastener connection of bracket-to-substrate at double bracket (vertical only)
BTS-S	Fastener connection of bracket-to-substrate at single bracket (vertical only)
D-Bracket	Aluminum dead load bracket (double) (vertical only)
Rail	Rail governs (either deflection or stress)
RTB-D	Rail to bracket fastener connection at double (dead load) bracket (vertical only)
RTB-S	Rail to bracket fastener connection at single (wind load) bracket (vertical only)
S-Bracket	Aluminum wind load bracket (single)



KX01 - Vertical Rail Orientation

Substrate: CMU

Rail Size: Steel L-60x40x1.27

MAXIMUM UNFACTORED WIND LOAD (PSF)

Dead Load (psf)	I, S _w , S _h → (in)	Bracket Sizes (mm)																												
		40 mm leg in bracket			60			90			120			150			180			210			240			270				
2	24	24	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32	16	24	32		
	36	24	36	24	18	36	24	18	36	24	12	36	20	8	36	17														
	48	16	12	24	16	24	16	8	24	16	8	24	13	6	24	11	18	12	6	18	12	6	18	12	6	18	12	6	18	12
3	24	36	22	10	36	22	10	36	17	5	36	12	30	6	36	25	20	14	36	20	14	36	14	36	9	36	8	36	8	
	36	24	15	7	24	15	7	24	11	24	8	24	8	20	17															
	48	16	11	5	18	11	5	18	9	18	6	18	6	15	7	12	10	10	12	10	10	10	10	10	10	10	10	10	10	6
4	24	36	14		36	14		36	14		36	14		36	14		36	14		36	14		36	14		36	14		36	14
	36	24	9	9	24	9	9	24	9	20	11	24	9	20	11	6														
	48	16	7	18	7	18	7	18	7	12	8	18	7	12	8	7														
5	24	29	6		29	6		29	6		29	6		29	6		29	6		29	6		29	6		29	6		29	6
	36	20	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20
	48	15	15		15	15		15	15		15	15		15	15		15	15		15	15		15	15		15	15		15	15
8	24		8			8			8			8			8			8			8			8			8			8
	36																													
	48																													

GOVERNING DESIGN COMPONENT

Dead Load (psf)	I, S _w , S _h → (in)	Bracket Sizes (mm)																												
		40 mm leg in bracket			60			90			120			150			180			210			240			270				
2	24	BTS-S	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	BTS-D	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
3	24	BTS-S	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	BTS-S	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
4	24	BTS-S	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	BTS-S	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
5	24	BTS-S	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	BTS-S	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail
8	24	BTS-S	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	36	BTS-S	BTS-D	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S	BTS-S
	48	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail

TABLE NOTES

The design wind loads above are based on the following:
 a) Analysis of the bracket, rail and mechanical attachments are in general accordance with NBCC 2015 using Limit States Design (LSD)
 b) Bracket: Kladfix KX01 Single Bracket - Aluminum 6063-T6; F_y = 200 MPa
 c) Aluminum Rail To Bracket Fastener: SFS SDAS #12 x 7/8" Full SS 316 Self-Driller Screw
 d) Steel Rail to Bracket Fastener: Generic #12-14 x 1" Full SS 316 Self-Driller Screw
 e) Metal Stud Anchor: SFS Bi-Metal Self-Drilling SD2 1/4-14 x 2" Screw (CCRR-0387)
 f) Concrete Anchor: 1/4" x 2-1/4" Tapcon Screw Anchor (ESR-2202)
 g) CMU Anchor: 1/4" x 2" Tapcon Screw Anchor (ESR-1671)
 h) Vertical and horizontal rail deflection limited to L/360

The table above is intended to provide estimated design wind loads and is for advice and guidance based on NBCC 2015 and must be verified by a licensed engineer of record in the state or province where the product is to be installed. Analysis of the bracket, rail and mechanical attachments was conducted by MORRISON HERSHFELD. Results have not been verified by testing.

GOVERNING DESIGN COMPONENT TABLE LEGEND

ACRONYM	DESCRIPTION
ATB	Adapter fastener connection to bracket (horizontal orientation only)
ATR	Rail fastener connection to adaptor (horizontal orientation only)
Bracket	Aluminum bracket
BTS	Fastener connection of bracket-to-substrate
BTS-D	Fastener connection of bracket-to-substrate at double bracket (vertical only)
BTS-S	Fastener connection of bracket-to-substrate at single bracket (vertical only)
D-Bracket	Aluminum dead load bracket (double) (vertical only)
Rail	Rail governs (either deflection or stress)
Rail-D	Rail to bracket fastener connection at double (dead load) bracket (vertical only)
Rail-S	Rail to bracket fastener connection at single (wind load) bracket (vertical only)
S-Bracket	Aluminum wind load bracket (single)