Blast & Seismic Design

Load Tables

The Steel Network, Inc.
www.steelnetwork.com
1-888-474-4876

Background

Various specifications and design standards allow the use of nominal strength of material when calculating resistance values of components for special blast or seismic design. Beyond the use of nominal strength, some design codes allow the use of an increased nominal strength or an increased expected strength. The Steel Network has developed the following tables to present the LRFD design strength, nominal strength, and ultimate strength for each connector manufactured which can be used in special seismic and blast design and are compatible with the Static and Dynamic Strength Increase factors.

For additional information the full tech note, Strength Tables for Special Seismic and Blast Design of Cold Formed Steel Connections is available at **www.steelnetwork.com/Site/TechnicalNotes**

VertiClip® Series (lbs)

Connector	Load Direction	LRFD Design Strength	Nominal Strength	Ultimate Strength
SL362	F1	397	441	721
	F2	1,696	1,885	2,680
SL400	F1	318	353	600
	F2	1,817	2,019	3,074
SL600	F1	588	653	1,068
	F2	2,691	2,990	4,251
SL800	F1	579	643	1,052
	F2	2,994	3,327	4,730
SL1000	F1	664	738	1,206
	F2	2,521	2,801	4,266
SL1200	F1	611	679	1,110
	F2	2,863	3,182	4,845
SLD150	F2	82	91	139
SLD250	F2	254	282	430
SLD362/400	F2	575	639	973
SLD600	F2	648	720	1,302
SLD800	F2	1,091	1,212	1,844
SLB362	F1	364	405	661
	F2	2,563	2,848	4,381
SLB600	F1	364	405	661
	F2	2,563	2,848	4,381
SLB800	F1	357	397	604
	F2	2,563	2,848	4,381
SLB1000	F2	2,266	2,517	4,112
SLB1200	F2	2,266	2,517	4,112
SLBxxx-10, -12	F2	2,266	2,517	4,112
SLB600-HD, (2) ¼" Screws	F1	374	416	679
	F2	1,901	2,112	3,216
SLB600-HD, (1) ½" Anchor	F1	388	431	704
	F2	1,606	1,785	2,718
SLS362/400-9, -12	F2	1,991	2,096	3,821
SLS600-12	F2	3,315	3,489	5,237
SLS600-15, -18, -20	F2	3,398	3,577	5,750
SLS600-24	F2	3,036	3,196	5,137
SLS800-12, -15, -18, -20	F2	2,909	3,062	4,922
SLT9.5	F1	546	575	991
	F2	822	865	1,492
SLT(L)	F1	784	825	1,422
	F2	1,116	1,175	2,026
Splice600	F2	2,282	2,402	3,861
	F3	3,888	4,092	6,578
Splice800	F2	2,282	2,402	3,861
	F3	3,639	4,044	6,158

MasterClip® Series (lbs)

Connector (Application)	Load Direction	LRFD Design Strength	Nominal Strength	Ultimate Strength
VLB600 (Vertical Deflection)	F1	364	405	661
	F2	2,509	2,788	4,245
VLB600 (Rigid Connection)	F1	1,481	1,646	2,506
	F2	3,297	3,664	5,579
	F3	2,869	3,188	4,855

DriftClip® & DriftTrak® Series (lbs)

Connector	Load Direction	Fastener Pattern	LRFD Design Strength	Nominal Strength	Ultimate Strength
DSLB	F2	1	1,467	1,630	2,317
		2	916	1,018	1,663
DSLS600-12	F2	1	2,980	3,311	4,707
		2	2,788	3,098	4,405
DSLS600-15	F2	1	3,045	3,383	4,811
DSLS600-15[1]	F2	2	3,045	3,383	5,008
DSLD362	F2	1	186	207	317
		2	85	94	141
DSLD600	F2	1	286	317	481
		2	399	443	869
DSLD800	F2	1	318	354	578
		2	293	326	858
DSL362	F2	1	796	884	1,320
		2	397	441	720
DSL600	F2	1	1,242	1,380	2,254
		2	1,840	2,044	3,051
DSL800	F2	1	1,666	1,851	3,023
DSL800[1]	F2	2	1,666	1,851	4,122
DTSL	F2	8" Fastener Spacing - Pattern 1	1001	1,112	1,807
		8" Fastener Spacing - Pattern 2	770	856	1,303
		16" Fastener Spacing - Pattern 1	1,338	1,487	2,264
		16" Fastener Spacing - Pattern 2	774	860	1,309
DTSLB362/400, 600, 800	F2	8" Fastener Spacing - Patterns 1 & 2	1,292	1,435	2,186
		16" Fastener Spacing - Patterns 1 & 2	1,206	1,340	2,040
DTSLB-HD 362/400, 600, 800	F2	8" Fastener Spacing - Patterns 1 & 2	2,591	2,879	4,384
		16" Fastener Spacing - Patterns 1 & 2	1,640	1,822	2,775
DTLB600	F2	8" Fastener Spacing	1,292	1,435	2,186
	F3		2,434	2,704	4,118
DTLB800	F2	8" Fastener Spacing	1,292	1,435	2,186
	F3		2,434	2,704	4,118

Notes:

[1]LRFD strength limited by fastener pattern 1.

- Strength values provided are those of the clip only (one clip). Attachment to stud framing and to structure must be evaluated independently.
- Nominal Strength is calculated as LRFD Strength divided by an average resistance factor of 0.9.
- Ultimate Strength is the average maximum load obtained from tests.
- When dynamic analysis is used for blast design, the Nominal Strength may be allowed to be increased by a Static Increase Factor (SIF) and a Dynamic Increase Factor (DIF).

Visit **www.steelnetwork.com/Site/TechnicalNotes** to view the full technical note on Blast and Seismic Design.

StiffClip® Series (lbs or in-lbs)				
Connector	Load Direction	LRFD Design Strength	Nominal Strength	Ultimate Strength
AL362	F1	1,177	1,308	2,137
	F2	2,493	2,770	4,219
	F3	4,522	5,025	7,652
AL600	F1	1,388	1,542	2,348
	F2	3,493	3,882	5,911
	F3	4,830	5,366	8172
AL800	F1	2,827	3,141	4,784
	F2	4,022	4,469	6,806
	F3	9,798	10,887	16,579
LB362	F1	1,481	1,646	2,506
	F2	3,297	3,664	5,579
	F3	4,256	4,729	7,202
LB600	F1	1,481	1,646	2,506
	F2	3,297	3,664	5,579
	F3	3,080	3,423	5,212
LB800	F1	1,993	2,214	3,617
	F2	3,297	3,664	5,579
	F3	6,188	6,875	10,470
LB800-4" Offset	F1	1,993	2,214	3,617
	F2	3,297	3,664	5,579
	F3	2,496	2,773	4,223
LB1000	F1	1,465	1,627	2,658
	F2	2,270	2,522	4,120
	F3	2,872	3,191	4,859
LB1000 - 4" Offset	F2	2,270	2,522	4,120
	F3	2,506	2,784	4,240
LB1200	F1	1,465	1,627	2,658
	F2	2,270	2,522	4,120
	F3	3,041	3,379	5,146
LB600-HD, (2) ¼" Screws	F1	1,764	1,959	2,984
	F2	1,810	2,011	3,062
	F3	3,149	3,499	5,328
HE(L)-43	F2	1,003	1,114	1,696
	F3	4,901	5,446	8,293
HE(H)-68	F2	1,739	1,932	2,943
	F3	8,880	9,867	15,026
HE(S)-68	F2	1,739	1,932	2,943
	F3	4,753	5,281	8,043
HS362	F2*	4,420	8,840	11,492
	F3	1,773	1,970	3,000
HS600	F2*	6,630	13,260	17,238
	F3	2,943	3,270	4,980
HS800	F2*	6,630	13,260	17,238
	F3	3,885	4,317	6,574

StiffClip® Series (lbs or in-lbs)				
Connector	Load Direction	LRFD Design Strength	Nominal Strength	Ultimate Strength
CL362/400-118	F1	2,267	2,519	4,122
	F2	3,071	3,412	4851
	F3	1,842	2,047	3,349
	M1 (in-lbs)	2,888	3,209	5,251
CL362/400-118	F1	3,880	4,311	6,129
	F2	7,090	7,878	11,201
	F3	3,611	4,012	6,565
	M1 (in-lbs)	6,299	6,999	11,453
CL362/400-118H	F1	4,160	4,622	6,572
	F2	7,973	8,858	12,595
	F3	9,150	10,167	14,455
	M1 (in-lbs)	10,750	11,944	19,545
CL600-68	F1	2,275	2,528	3,594
	F2	4,020	4,467	6,351
	F3	1,932	2,147	3,513
	M1 (in-lbs)	4,978	5,531	9,050
CL600-118	F1	4,131	4,590	7,147
	F2	6,578	7,308	10,391
	F3	3,561	3,956	6,474
	M1 (in-lbs)	9,126	10,140	16,592
CL600-118H	F1	6,659	7,399	10,520
	F2	10,337	11,485	16,330
	F3	9,620	10,689	15,197
	M1 (in-lbs)	9,958	11,065	18,106
CL800-68	F1	2,298	2,553	3,630
	F2	4,263	4,736	6,734
	F3	1,724	1,916	3,135
	M1 (in-lbs)	4,578	5,086	8,323
CL800-118	F1	5,375	5,972	8,491
	F2	10,265	11,406	16,217
	F3	4,270	4,744	8,291
	M1 (in-lbs)	13,170	14,634	23,946
CL800-118H	F1	7,713	8,570	12,185
	F2	13,251	14,723	20,933
	F3	11,925	13,250	18,839
	M1 (in-lbs)	17,834	19,815	32,425
TD	F3	17,149	19,055	20,863

Notes:

- Strength values provided are those of the clip only (one clip). Attachment to stud framing and to structure must be evaluated independently.
- Nominal Strength is calculated as LRFD Strength divided by an average resistance factor of 0.9.
- Ultimate Strength is the average maximum load obtained from tests.
- When dynamic analysis is used for blast design, the Nominal Strength may be allowed to be increased by a Static Increase Factor (SIF) and a Dynamic Increase Factor (DIF).
- Clip connectors or load directions marked with an (*) have their LRFD, nominal, and ultimate strength values all calculated using AISI S100-12 provisions.