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JOB NAME _____
CUSTOMER _____
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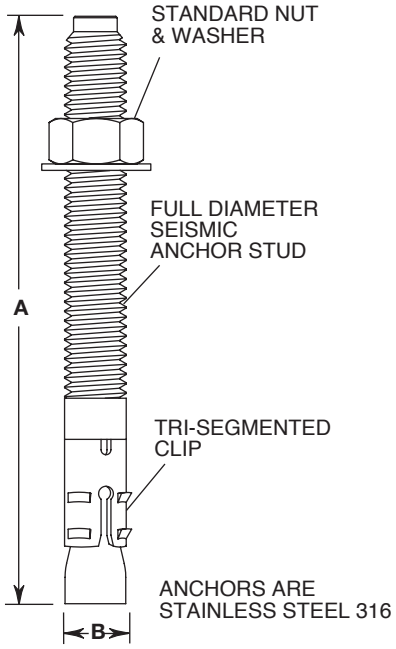
DWG No. _____

SAS & SASE

STAINLESS STEEL 316 SEISMIC ANCHOR STUD WITH NUT & WASHER (Standard & Extended Length)



TYPE SAS STANDARD LENGTH ANCHOR STUD RATINGS BASED ON ALLOWABLE STRESS DESIGN (ASD)* installed into 2500 psi (17.2 Mpa) Normal Weight or Sand– Lightweight Concrete

Type and Size	Embedment Depth (Nominal) (in)	*(mm)*	Normal Weight Concrete Tension† (lbs)	*(kg)*	Normal Weight Concrete Shear (lbs)	*(kg)*	Lightweight Concrete Tension† (lbs)	*(kg)*	Lightweight Concrete Shear (lbs)	*(kg)*
SAS-3/8	1 7/8	*48*	530	*241*	570	*259*	320	*145*	345	*157*
SAS-1/2	2 3/4	*70*	870	*395*	1055	*480*	525	*239*	630	*286*
SAS-5/8	3 3/8	*86*	1320	*600*	2850	*1295*	790	*359*	1710	*777*
SAS-3/4	4 1/8	*105*	1800	*818*	3870	*1759*	1080	*491*	2325	*1057*

TYPE SASE EXTENDED LENGTH ANCHOR STUD RATINGS BASED ON ALLOWABLE STRESS DESIGN (ASD)* installed into 2500 psi (17.2 Mpa) Normal Weight or Sand– Lightweight Concrete

Type and Size	Embedment Depth (Nominal) (in)	*(mm)*	Normal Weight Concrete Tension† (lbs)	*(kg)*	Normal Weight Concrete Shear (lbs)	*(kg)*	Lightweight Concrete Tension† (lbs)	*(kg)*	Lightweight Concrete Shear (lbs)	*(kg)*
SASE-3/8	2 7/8	*73*	965	*439*	1400	*636*	580	*264*	1400	*636*
SASE-1/2	3 7/8	*98*	1470	*668*	2775	*1261*	880	*400*	2325	*1057*
SASE-5/8	5 1/8	*130*	2230	*1014*	4895	*2225*	1340	*609*	3580	*1627*
SASE-3/4	5 3/4	*146*	2810	*1277*	6845	*3111*	1685	*766*	4190	*1905*

TYPE SAS & SASE ANCHOR STUD RATINGS BASED ON ALLOWABLE STRESS DESIGN (ASD)* installed in the Soffit of 3000 psi (20.7 Mpa) Normal Weight or Sand-Lightweight Concrete-filled Profile Steel Deck Assemblies (minimum 20 gauge 3" *76mm* profile). Anchors must be installed in either the lower or upper flutes of the profile deck no more than 1" *25mm* from flute centerline.

Type and Size	Embedment Depth (Nominal) (in)	*(mm)*	Tension† (lbs)	*(kg)*	Shear (lbs)	*(kg)*
SAS-3/8	2	*51*	420	*191*	780	*355*
SASE-3/8	3 3/8	*86*	800	*364*	1055	*480*
SAS-1/2	2 3/4	*70*	680	*309*	820	*373*
SASE-1/2	4 1/2	*114*	870	*895*	1120	*509*
SAS-5/8	3 3/8	*86*	600	*273*	1105	*502*
SASE-5/8	5 5/8	*143*	1370	*623*	1885	*857*

For combined allowable stress design tension and shear forces on anchors, use the following equation:

$$\frac{T_{Applied}}{T_{Allowable\ (ASD)}} + \frac{V_{Applied}}{V_{Allowable\ (ASD)}} \leq 1.2$$

TYPE SAS & SASE ANCHOR STUD DIMENSIONS

Type and Size	A (in)	*(mm)*	B (in)	*(mm)*	Maximum Tightening Torque (Ft-lbs)	*(N-m)*
SAS-3/8	3 1/2	*89*	3/8	*10*	30	*41*
SAS-1/2	4 1/4	*108*	1/2	*13*	60	*81*
SAS-5/8	5	*127*	5/8	*16*	80	*108*
SAS-3/4	6 1/4	*159*	3/4	*19*	150	*203*
SASE-3/8	5	*127*	3/8	*10*	30	*41*
SASE-1/2	5 1/2	*140*	1/2	*13*	60	*81*
SASE-5/8	7	*178*	5/8	*16*	80	*109*
SASE-3/4	8 1/2	*216*	3/4	*19*	150	*203*

Anchors have the following Code Reports:
- ICC-ES-ESR-3037 and City of Los Angeles RR25891 for cracked & uncracked concrete
- Florida Statewide Product Approval FL15731
- Underwriter laboratories file EX3605
- Factory Mutual #3043442

* These values are applicable when the anchors are installed with periodic special inspection as set forth in Section 1701.5.2 of the UBC, Section 1704.13 of the 2006/2003 IBC or Section 1704.15 of the 2009 IBC.

† The Tension values may be increased for greater compressive strength, up to 8000 psi (55.2 MPa), by multiplying the value by $(F'_c/2500)^A$, where F'_c is the specified strength of concrete in psi, and A is 0.3 for 3/8 anchors, 0.5 for 1/2 and 3/4 anchors, and 0.4 for 5/8 anchors.
For example: SAS-1/2 in 4000 psi normal weight concrete

$$T = \left(\frac{4000}{2500}\right)^{0.5} \times 980\ \text{lbs} = 1240\ \text{lbs}$$

NOTES:
1. All values are for single anchors with no edge distance or spacing reduction and assume supplementary reinforcement condition B. Shear values exclude consideration of the concrete breakout failure mode.
2. Anchorage must be designed in accordance with ACI 318-05 Appendix D.
3. Allowable loads are for the attachment of non-structural components.
4. Allowable loads are based on 100% seismic loading in seismic design categories C-F.

Mason Industries designs are in accordance with ACI 318-08 Appendix D.

QTY	SIZE	TAG

QTY	SIZE	TAG