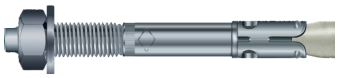
Sup-R-Stud® TZ



Sup-R-Stud® TZ

Available Materials
- Steel Zinc plated

Features/Advantages
- ACI 318 category 1 anchor for cracked or uncracked concrete
- Suitable for resisting seismic design loads
- Required hole diameter equals anchor diameter
- Can be loaded immediately
- Nut and washer included with anchor
- Simple to install
- For medium to heavy loads

Concerns
- Hole diameter is critical
- Concrete only

Approvals/Listings
- ACI 318 Category 1
- ICC ESR - 2461
- Contact customer service for approvals / listings for state DOT's

Anchor Dimensions	Order Code	Th [in]	d_o [in]	h_o [in]	h_{nom} [in]	h_{ef} [in]	L [in]	t_{max} [in]	T_{inst} [ft-lbs]	d_c [in]	WS [in]
											
1/2 X 3 3/4	2112334	1/2	1/2	3 1/4	2 7/8	2 1/2	3 3/4	1/4	35	9/16	3/4
1/2 X 4 1/2	2112412	1/2	1/2	3 1/4	2 7/8	2 1/2	4 1/2	1	35	9/16	3/4
1/2 X 5 1/2	2112512	1/2	1/2	3 1/4	2 7/8	2 1/2	5 1/2	2	35	9/16	3/4
1/2 X 7	2112700	1/2	1/2	3 1/4	2 7/8	2 1/2	7	3 1/2	35	9/16	3/4
5/8 X 4 3/4	2158434	5/8	5/8	4 1/8	3 3/4	3 1/4	4 3/4	1/4	65	11/16	15/16
5/8 X 6	2158600	5/8	5/8	4 1/8	3 3/4	3 1/4	6	1 1/2	65	11/16	15/16
5/8 X 8 1/2	2158812	5/8	5/8	4 1/8	3 3/4	3 1/4	8 1/2	4	65	11/16	15/16
5/8 X 10*	2158100	5/8	5/8	4 1/8	3 3/4	3 1/4	10	5 1/2	65	11/16	15/16

* ICC listing is pending

→ Steel zinc plated

→ Approved for cracked or uncracked concrete

→ ACI 318, Category 1

Load & Performance Data	Conc. (psi)	Symbol	Units	1/2″	5/8″
Cracked Concrete					
Avg.ultimate load,tension	4,000	N_{pn}	lbs	4,447	9,603
Avg. ultimate load, shear	4,000	V_n	lbs	9,621	14,859
Allowable loads, tension[1]	2,500	N_{allow}	lbs	1,305	2,312
	4,000	N_{allow}	lbs	1,650	2,925
	6,000	N_{allow}	lbs	2,021	3,582
	8,500	N_{allow}	lbs	2,406	4,264
Uncracked Concrete					
Allowable loads, tension[1]	2,500	N_{allow}	lbs	2,087	3,264
	4,000	N_{allow}	lbs	2,640	4,129
	6,000	N_{allow}	lbs	3,234	5,057
	8,500	N_{allow}	lbs	3,849	6,019
Cracked and Uncracked Concrete					
Allowable loads, shear[1]	2,500	V_{allow}	lbs	3,360	4,980
	>4,000	V_{allow}	lbs	3,445	5,115
Spacing & Edge Distance					
Effective anchorage depth		h_{ef}	in	$2^1/_2$	$3^1/_4$
Critical Edge Distance		C_{ac}	in	8	$9^3/_4$
Minimum Spacing for Edge Distance C		S_{min}/C	in	$2^1/_2$ / 5	3 / 6
Minimum Edge Distance for Spacing S		C_{min}/S	in	3 / 6	$3^1/_2$ / $9^1/_2$
Minimum thickness of concrete slab		h_{min}	in	5	$6^1/_2$
Installation Parameters					
Drilled hole diameter		d_o	in	$^1/_2$	$^5/_8$
Diameter of clearance hole		d_c	in	$^9/_{16}$	$^{11}/_{16}$
Depth of drilled hole		h_o	in	$3^1/_4$	$4^1/_8$
Installation torque		T_{inst}	ft-lbs	35	65
Wrench size		WS	in	$^3/_4$	$^{15}/_{16}$

1) A safety factor of 1.4 was used to calculate the allowable loads. This is based on a load combination of 50% dead loads and 50% live loads.