Loads

Ultimate strength of single anchors with large spacing and large edge distance

Mean values[1]

FBS IN HW (zp) (carbon steel, zinc-plated)				Ø3/8 "		Ø1/2 "			Ø5/8 "	Ø3/4 "		
Nominal embedment depth		h_{nom}	[in]	1 5/8 "	2 1/2 "	2 1/4 "	3 "	4 1/4 "	3 1/4 "	4 "	5 1/2 "	6 1/4 "
Effective embedment depth		h_{ef}	[in]	1.21	1.98	1.66	2.30	3.37	2.54	3.14	4.41	5.05
Uncracked concrete												
Tension	**2,500 psi**	$\bar{N}_u$	[lb]	1,594	3,417	3,411	4,703	8,554	6,457	8,875	14,771	18,101
	8,000 psi	$\bar{N}_u$	[lb]	2,852	6,113	6,102	8,413	15,302	11,550	15,876	26,424	32,380
Shear	**≥ 2,500 psi**	$\bar{V}_u$	[lb]	2,123	*3,150*	3,411	5,564	*6,745*	*10,115*	*15,060*	*15,060*	*15,060*
Cracked concrete												
Tension	**2,500 psi**	$\bar{N}_u$	[lb]	823	2,006	1,543	3,189	5,937	3,571	5,034	8,377	10,046
	8,000 psi	$\bar{N}_u$	[lb]	1,472	3,588	2,760	5,704	10,621	5,687	9,006	14,985	17,970
Shear	**≥ 2,500 psi**	$\bar{V}_u$	[lb]	1,531	*3,150*	2,460	4,011	*6,745*	9,311	13,354	*15,060*	*15,060*

Ultimate strength of single anchors with large spacing and large edge distance

Mean values[1)2)]

FBS IN I (zp) (carbon steel, zinc-plated)				Ø1/4 "	
Nominal embedment depth		h_{nom}	[in]	1 5/8 "	2 1/2 "
Effective embedment depth		h_{ef}	[in]	1.24	2.01
Uncracked concrete					
Tension	**2,500 psi**	$\bar{N}_u$	[lb]	2,202	4,545
	8,000 psi	$\bar{N}_u$	[lb]	3,940	*4,585*
Shear	**≥ 2,500 psi**	$\bar{V}_u$	[lb]	*1,350*	*1,350*
Cracked concrete					
Tension	**2,500 psi**	$\bar{N}_u$	[lb]	691	1,234
	8,000 psi	$\bar{N}_u$	[lb]	1,101	1,966
Shear	**≥ 2,500 psi**	$\bar{V}_u$	[lb]	*1,350*	*1,350*

[1)] Above values base on fischer ENSO specification and apply for following requirements:
- Concrete strength based on ACI 318-19
- Steel failure decisive = *Figures in italics*

[2)] Above values for FBS IN I (Hex coupler) do not consider the steel insert element used and resulting values might be lower depending on the steel grade of the used steel insert element.