

Design strength of single anchors with large spacing and large edge distance											
Design values ⁹⁾											
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	ϕN_n	[lb]	907	1,944	1,412	2,263	4,083	3,158	4,131	6,112
	8,000 psi	ϕN_n	[lb]	1,622	3,477	2,525	4,049	7,304	5,648	7,390	10,934
Shear	≥ 2,500 psi	ϕV_n	[lb]	1,118	1,890	1,797	2,930	4,047	6,069	9,036	9,036
Cracked concrete											
Tension	2,500 psi	ϕN_n	[lb]	468	1,141	743	1,535	2,857	2,031	2,423	4,032
	8,000 psi	ϕN_n	[lb]	837	2,041	1,328	2,745	5,111	3,235	4,334	7,212
Shear	≥ 2,500 psi	ϕV_n	[lb]	792	1,658	1,273	2,075	4,047	4,817	9,036	9,036

Design strength of single anchors with large spacing and large edge distance											
Design values ¹⁰²⁾											
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	ϕN_n	[lb]	746	1,881						
	8,000 psi	ϕN_n	[lb]	1,334	2,980						
Shear	≥ 2,500 psi	ϕV_n	[lb]	810	810						
Cracked concrete											
Tension	2,500 psi	ϕN_n	[lb]	272	594						
	8,000 psi	ϕN_n	[lb]	434	946						
Shear	≥ 2,500 psi	ϕV_n	[lb]	810	810						

¹⁾ Above values base on ESR-5456 and ACI 318-19 and apply for following requirements.

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.