

1 Input data

Anchor type and diameter:	HIT-HY 200 V3 + HAS-V-36 (ASTM F1554 Gr.36) 3/4
Item number:	2198032 HAS-V-36 3/4"x16" (element) / 2334276 HIT-HY 200-R V3 (adhesive)
Effective embedment depth:	$h_{ef,act} = 12.000$ in. ($h_{ef,limit} = -$ in.)
Material:	ASTM F1554 Grade 36
Evaluation Service Report:	ESR-4868
Issued / Valid:	11/1/2022 11/1/2024
Proof:	Design Method ACI 318-11 / Chem
Stand-off installation:	$e_b = 0.000$ in. (no stand-off); $t = 0.500$ in.
Anchor plate ^R :	$l_x \times l_y \times t = 30.000$ in. x 24.000 in. x 0.500 in.; (Recommended plate thickness: not calculated)
Profile:	W shape (AISC), W18X50; (L x W x T x FT) = 18.000 in. x 7.500 in. x 0.355 in. x 0.570 in.
Base material:	cracked concrete, 2500 , $f'_c = 2,500$ psi; $h = 20.000$ in., Temp. short/long: 32/32 °F
Installation:	hammer drilled hole, Installation condition: Dry
Reinforcement:	tension: condition B, shear: condition B; no supplemental splitting reinforcement present edge reinforcement: none or < No. 4 bar
Seismic loads (cat. C, D, E, or F)	Tension load: yes (D.3.3.4.3 (a)) Shear load: yes (D.3.3.5.3 (a))



3.1 Steel Strength

N_{sa} = ESR value refer to ICC-ES ESR-4868
 $\phi N_{sa} \geq N_{ua}$ ACI 318-11 Table D.4.1.1

Variables

$A_{se,N}$ [in. ²]	f_{uta} [psi]
0.33	58,000

Calculations

N_{sa} [lb]
19,400

Results

N_{sa} [lb]	ϕ_{steel}	ϕN_{sa} [lb]	N_{ua} [lb]
19,400	1.200	23,280	12,250

3/4" ANCHOR WITH 12" EMBED

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$A_{se,N}$ [in. ²]	f_{uta} [psi]
0.33	58,000

Calculations

N_{sa} [lb]
19,400

Results

N_{sa} [lb]	ϕ_{steel}	ϕN_{sa} [lb]	N_{ua} [lb]
19,400	0.750	14,550	12,250

3/4" ANCHOR WITH 12 1/2" EMBED