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RE: New Hilti HIT-RE 500 V3 Safe Set Adhesive Anchoring System replaces HIT-RE 500-SD Adhesive Anchoring Systems

To Whom It May Concern:

The new Hilti HIT-RE 500 V3 Adhesive Anchoring System is now available as a direct replacement for HIT-RE 500-SD Adhesive Anchoring systems in concrete applications. The Hilti HIT-RE 500 and HIT-RE 500-SD have been set to phase-out status.

The Hilti HIT-RE 500 V3 Adhesive Anchoring System is a slow cure adhesive with superior load performance, flexible working times and offers contractors improved installation reliability. The Hilti SafeSet™ Technology eliminates the most load-affecting and time-consuming step in the installation process: cleaning the hole before injection of the adhesive.

In the majority of concrete anchoring applications, the HIT-RE 500 V3 adhesive has equivalent or higher published load values compared to the HIT-RE 500-SD product. For your reference, the attached published load capacity tables provide a comparison of the two adhesive anchoring systems in three different uses: uncracked concrete, cracked concrete and seismic.

For additional technical information, please refer to the HIT-RE 500 V3 Technical Supplement or download a free copy of the Hilti PROFIS Anchor or PROFIS Rebar software.

Additional HIT-RE 500 V3 technical information:	<a href="https://www.us.hilti.com/re500 V3">https://www.us.hilti.com/re500 V3</a>
Hilti PROFIS Anchor software:	<a href="http://www.us.hilti.com/profis-anchor">www.us.hilti.com/profis-anchor</a>
Hilti PROFIS Rebar software:	<a href="https://profisrebar.hilti.com/HiltiRebar/">https://profisrebar.hilti.com/HiltiRebar/</a>

Our engineering support is available to answer any additional questions you may have at (800) 879-8000.

Regards,

Business Unit Anchors  
Hilti North America

Attachment: Comparison Tables

Reference Load Capacity Tables for Hilti HIT-RE 500 V3 vs. Hilti HIT-RE 500 SD

Diameter	Embedment (in) <sup>Note 3</sup>	Uncracked Concrete		Cracked Concrete		Seismic/Cracked Concrete	
		HIT-RE 500 V3	HIT-RE 500 SD	HIT-RE 500 V3	HIT-RE 500 SD	HIT-RE 500 V3	HIT-RE 500 SD
		Load (lb)	Load (lb)	Load (lb)	Load (lb)	Load (lb)	Load (lb)
3/8	2-3/8	3,610	3,030	2,500	1,470	1,725	1,103
	3-3/8	3,655	3,655	3,550	2,085	2,450	1,564
	4-1/2	3,655	3,655	3,655	2,780	3,267	2,085
	7-1/2	3,655	3,655	3,655	3,655	3,655	3,476
1/2	2-3/4	4,500	4,500	3,185	2,180	2,230	1,635
	4-1/2	6,690	6,690	6,260	3,565	4,382	2,674
	6	6,690	6,690	6,690	4,750	5,845	3,563
	10	6,690	6,690	6,690	6,690	6,690	5,940
5/8	3-1/8	5,450	5,450	3,860	3,095	2,741	2,321
	5-5/8	10,650	10,650	9,325	5,570	6,621	4,178
	7-1/2	10,650	10,650	10,650	7,425	9,187	5,569
	12-1/2	10,650	10,650	10,650	10,650	10,650	9,281
3/4	3-1/2	6,460	6,460	4,575	3,935	3,431	2,951
	6-3/4	15,765	15,765	12,255	7,585	9,191	5,689
	9	15,765	15,765	15,765	10,115	13,868	7,586
	15	15,765	15,765	15,765	15,765	15,765	12,641
7/8	3-1/2	6,460	6,460	4,575	3,575	3,431	2,681
	7-7/8	21,755	17,533	15,445	8,050	11,584	6,038
	10-1/2	21,755	17,535	21,755	10,730	17,835	8,048
	17-1/2	21,755	21,755	21,755	17,885	21,755	13,414
1	4	7,895	7,895	5,590	4,345	4,193	3,259
	9	26,640	22,250	18,870	9,780	14,153	7,335
	12	28,540	28,540	28,540	13,040	21,788	9,780
	20	28,540	28,540	28,540	21,730	28,540	16,298
1-1/4	5	11,030	11,030	7,815	5,775	5,861	4,331
	11-1/4	37,230	33,360	26,370	12,990	19,778	9,743
	15	45,670	44,485	40,600	17,320	30,450	12,990
	25	45,670	45,670	45,670	28,865	45,670	21,649

Notes:

1. Load capacity for a single carbon steel HAS threaded rod with no edge restrictions and no limit on concrete thickness in accordance with ACI 318-14
2. Seismic load values include a reduction of  $0.75 * \alpha_{n,seis}$  per ACI 318-14 Part 17.2.3
3. Embedment depths correspond to:  $h_{ef,min}$ ,  $9d_a$ ,  $12d_a$ ,  $20d_a$
4. Concrete compressive strength = 4000 psi.
5. Tension failure modes are color coded as follows:

s	steel failure
c	concrete breakout
b	bond failure

Reference Load Capacity Tables for Hilti HIT-RE 500 V3 vs. Hilti HIT-RE 500 SD

Diameter	Embedment (in) <sup>Note 3</sup>	Uncracked Concrete		Cracked Concrete		Seismic/Cracked Concrete	
		HIT-RE 500 V3	HIT-RE 500 SD	HIT-RE 500 V3	HIT-RE 500 SD	HIT-RE 500 V3	HIT-RE 500 SD
#3	3-3/8	5,145	4,305	3,745	1,610	2,547	789
	4-1/2	6,435	5,745	4,990	2,150	3,393	1,054
	7-1/2	6,435	6,435	6,435	3,580	5,658	1,754
#4	4-1/2	8,990	7,560	6,670	2,865	4,536	1,404
	6	11,700	10,080	8,940	3,820	6,079	1,872
	10	11,700	11,700	11,700	6,365	10,132	3,119
#5	5-5/8	13,165	11,325	9,325	4,475	6,341	2,193
	7-1/2	18,135	15,100	14,275	5,970	9,707	2,925
	12-1/2	18,135	18,135	18,135	9,950	16,181	4,876
#6	6-3/4	17,305	15,765	12,255	6,445	8,333	3,158
	9	25,740	21,020	18,870	8,595	12,832	4,212
	15	25,740	25,740	25,740	14,325	23,637	7,019
#7	7-7/8	21,805	17,535	15,445	7,425	10,503	3,638
	10-1/2	33,570	23,380	23,780	9,900	16,170	4,851
	17-1/2	35,100	35,100	35,100	16,500	32,171	8,085
#8	9	26,640	22,250	18,870	9,210	12,832	4,513
	12	41,015	29,665	29,050	12,280	19,754	6,017
	20	46,215	46,215	46,215	20,465	46,215	10,028
#9	10-1/8	31,785	27,540	22,515	11,035	15,310	5,407
	13-1/2	48,940	36,720	34,665	14,715	23,572	7,210
	22-1/2	58,500	58,500	58,500	24,525	50,718	12,017
#10	11-1/4	37,230	33,360	26,370	12,990	17,932	6,365
	15	57,320	44,485	40,600	17,320	27,608	8,487
	25	74,295	74,140	74,295	28,865	59,405	14,144

Notes:

1. Load capacity for a single ASTM A 615, Gr. 60 reinforcing bar with no edge restrictions and no limit on concrete thickness in accordance with ACI 318-08.
2. Seismic load values include a reduction of  $0.75 \cdot \alpha_{n,seis}$  per ACI 318-14 Part 17.2.3
3. Embedment depths correspond to:  $9d_b$ ,  $12d_b$ ,  $20d_b$
4. Concrete compressive strength = 4000 psi.
5. Tension failure modes are color coded as follows:

s	steel failure
c	concrete breakout
b	bond failure