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RE: New Hilti HIT-RE 500 V3 SafeSet 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 injecting 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.hilti.ca/re500_V3">https://www.hilti.ca/re500_V3</a>
Hilti PROFIS Anchor software:	<a href="http://www.hilti.ca/profis-anchor">www.hilti.ca/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) 363-4458.

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 (mm) <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
10M	115	32.2	30.8	27.1	11.5	18.4	5.6
	180	32.2	32.2	32.2	18.0	28.8	8.8
	226	32.2	32.2	32.2	22.6	32.2	11.1
15M	145	62.2	52.0	43.5	20.6	29.6	10.1
	250	64.6	64.6	64.6	35.4	58.3	17.3
	320	64.6	64.6	64.6	45.4	64.6	22.2
20M	200	95.9	83.9	70.5	34.5	47.9	16.9
	355	95.9	95.9	95.9	61.3	95.9	30.0
	390	95.9	95.9	95.9	67.4	95.6	33.0
25M	230	124.2	100.9	86.9	41.4	59.1	20.3
	405	160.2	160.2	160.2	73.0	138.1	35.8
	504	160.2	160.2	160.2	90.8	160.2	44.5
30M	260	149.3	129.9	104.5	51.2	71.1	25.1
	455	225.6	225.6	225.6	89.5	164.5	43.9
	598	225.6	225.6	225.6	117.7	225.6	57.7

Notes:

1. Load capacity for a single CAN/CSA-G30.18 Gr. 400 reinforcing bar with no edge restrictions and no limit on concrete thickness in accordance with CSA A23.3-14 Annex D
2. Seismic load values include a reduction of  $0.75 * \alpha_{n,seis}$  per CSA A23.3-14 D.4.3.5.4
3. Embedment depths correspond to:  $9d_a$ ,  $12d_a$ ,  $20d_a$
4. Concrete compressive strength = 30 Mpa
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 (mm) <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
3/8	60	14.9	13.6	11.3	6.6	7.8	3.2
	86	14.9	14.9	14.9	9.4	11.0	4.6
	114	14.9	14.9	14.9	12.5	14.7	6.1
	191	14.9	14.9	14.9	14.9	14.9	10.2
1/2	70	20.8	20.7	14.5	9.8	10.2	4.8
	114	27.2	27.2	27.2	16.0	19.7	7.8
	152	27.2	27.2	27.2	21.3	26.3	10.4
	254	27.2	27.2	27.2	27.2	27.2	17.4
5/8	79	25.2	25.2	17.6	13.9	12.5	6.8
	143	43.4	43.4	42.6	25.0	30.2	12.3
	191	43.4	43.4	43.4	33.3	43.4	16.3
	318	43.4	43.4	43.4	43.4	43.4	27.2
3/4	89	29.8	29.8	20.9	17.7	15.7	8.7
	171	64.2	64.2	55.9	34.0	41.9	16.7
	229	64.2	64.2	64.2	45.4	62.5	22.2
	381	64.2	64.2	64.2	64.2	64.2	37.0
7/8	89	29.8	29.8	20.9	16.1	15.7	7.9
	200	88.6	79.0	70.5	36.3	52.9	17.8
	267	88.6	88.6	88.6	48.4	81.4	23.7
	445	88.6	88.6	88.6	80.6	88.6	39.5
1	102	36.5	36.5	25.5	19.6	19.1	9.6
	229	116.2	100.3	86.1	44.1	64.6	21.6
	305	116.2	116.2	116.2	58.8	99.5	28.8
	508	116.2	116.2	116.2	98.0	116.2	48.0
1-1/4	127	51.0	51.0	35.7	26.0	26.8	12.7
	286	172.0	150.4	120.4	58.6	90.3	28.7
	381	186.0	186.0	185.3	78.1	139.0	38.3
	635	186.0	186.0	186.0	130.1	186.0	63.7

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 CSA A23.3-14 Annex D
2. Seismic load values include a reduction of  $0.75 * \alpha_{n,seis}$  per CSA A23.3-14 D.4.3.5.4
3. Embedment depths correspond to:  $h_{ef,min}$ ,  $9d_a$ ,  $12d_a$ ,  $20d_a$
4. Concrete compressive strength = 30 Mpa
5. Tension failure modes are color coded as follows:

s	steel failure
c	concrete breakout
b	bond failure