

**HILTI TECHNICAL BULLETIN**

December 4, 2014

**Subject: Hilti KWIK HUS-EZ calculated yield stress and minor diameter**

The following table 1 shows the calculated yield stress and minor diameter of the Hilti KWIK HUS-EZ (KH-EZ) screw anchor.

**Table 1 – Hilti KWIK HUS-EZ yield stress and minor diameter**

<b>KH-EZ nominal diameter</b>	<b>Length in.</b>	<b>Minimum yield stress<sup>1</sup> psi (MPa)</b>	<b>Minimum minor diameter in. (mm)</b>
1/4	all	95,700 (660)	0.240 (6.1)
3/8	1-7/8 to 2-1/8	56,550 (390)	0.327 (8.3)
3/8	3 to 5	95,700 (660)	0.327 (8.3)
1/2	all	88,450 (610)	0.449 (11.4)
5/8	all	63,075 (435)	0.581 (14.75)
3/4	all	50,025 (345)	0.703 (17.85)

<sup>1</sup> Minimum yield stress calculated in accordance with ISO 898-1 using the lesser of the tensile strength of the steel prior to manufacturing process or core hardness after production.

When calculating the bending moment of the KH-EZ for stand-off conditions (i.e. when steel fixture is not directly bearing on concrete or grout-filled CMU surface) it is suggested to refer to section 3.1.6.9 of the 2014 Hilti North America Product Technical Guide, Volume 2: Anchor Fastening Technology Guide. Section 3.1.6.9 describes a suggested calculation for bolt bending based on tests for post-installed fasteners embedded in concrete and takes into account factors such as localized crushing of the base material and rotational restraints. Other methods, such as using the above yield stress and minor diameter, could be un-conservative since it does not take into account these factors.

Please feel free to contact our Engineering Technical Services department for more information or any questions.

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