

KWIK Bolt 3 Expansion Anchor 3.3.8

Table 40 - Carbon steel Hilti KWIK Bolt 3 allowable loads for anchors installed in top of grout-filled concrete masonry wall^{1,6}

Nominal anchor diameter in.	Nominal embedment in. (mm)	Tension lb (kN)	Shear	
			V ₁ lb (kN)	V ₂ lb (kN)
1/2	3 (76)	645 (2.9)	310 (1.4)	615 (2.7)
5/8	3-1/2 (89)	850 (3.8)	310 (1.4)	615 (2.7)

- All values are for anchors installed in fully grouted concrete masonry with minimum masonry prism strength of 1,500 psi. Concrete masonry units may be lightweight, medium-weight or normal-weight conforming to ASTM C90. Allowable loads are calculated using safety factor of 4.
- Anchors must be installed a minimum of 1-3/8 inch from any vertical mortar joint (see figure below).
- Anchor locations are limited to one per masonry cell.
- Embedment depth is measured from the outside face of the concrete masonry unit.
- Linear interpolation to determine load values at intermediate edge distances is permitted.
- All allowable loads based on safety factor of 4.

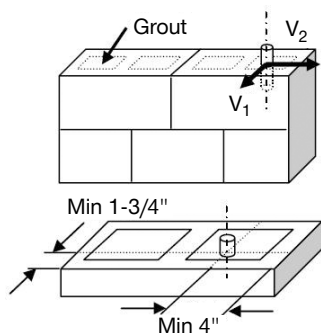


Figure 7 - Hilti KWIK Bolt 3 installed in the top of masonry walls

3.3.8

Table 41 - Countersunk Hilti KWIK Bolt Allowable Loads in Normal-Weight Concrete¹

Anchor Material	Nominal anchor diameter in.	Embedment depth in. (mm)		$f'_c = 3000 \text{ psi (20.7 MPa)}$			
				Tension lb (kN)		Shear ² lb (kN)	
Carbon Steel	1/4	1-1/8	(29)	365	(1.6)	350	(1.6)
	3/8	1-5/8	(41)	810	(3.6)	750	(3.3)
Stainless Steel	1/4	1-1/8	(29)	320	(1.4)	500	(2.2)
	3/8	1-5/8	(41)	670	(3.0)	1330	(5.9)

- Allowable loads based on using a safety factor of 4.0.
- Shear values acting thru threads of anchor bolt. If acting through the empty shell, reduce loads by 70%.

3.3.8.4 Installation instructions

Installation Instructions For Use (IFU) are included with each product package. They can also be viewed or downloaded online at www.hilti.com. Because of the possibility of changes, always verify that downloaded IFU are current when used. Proper installation is critical to achieve full performance. Training is available on request. Contact Hilti Technical Services for applications and conditions not addressed in the IFU.