The following excerpt are pages from the North American Masonry Anchor Strength Design Guide 2024.

Please refer to the publication in its entirety for complete details on this product including data development, product specifications, general suitability, installation, and spacing and edge distance guidelines.
US&CA: Hilti North American Product Technical Guides

To consult directly with a team member regarding our anchor fastening products, contact Hilti's team of technical support specialists between the hours of 7:00am – 5:00pm CST.
US: 877-749-6337 or HNATechnicalServices@hilti.com
CA: 1-800-363-4458 or CATechnicalServices@hilti.com

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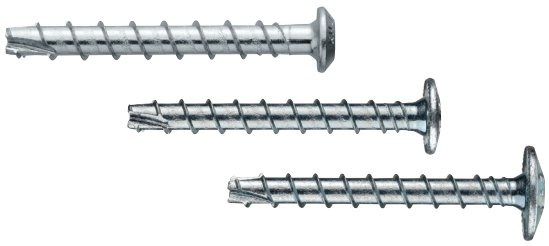
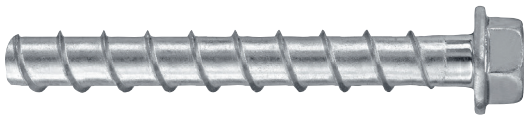
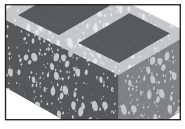
7.5 KWIK HUS-EZ SCREW ANCHOR FOR MASONRY CONSTRUCTION

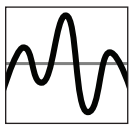
PRODUCT DESCRIPTION

KWIK HUS-EZ Carbon Steel Screw Anchors

Anchor System		Features and Benefits
	KH-EZ C 1/4” & 3/8”	• OSHA Table 1926.1153 Table 1 compliant when installed with Hilti vacuum and DRS system or Hilti SafeSetTM hollow drill bit technology. • Easy installation using impact tool or torque wrench. • Product and length identification marks helps facilitate quality control after installation. • Through fixture installation improves productivity and more accurate installation. • Thread design helps enable quality setting and exceptional load values in wide variety of base material strengths. • Anchor is fully removable. • Anchor diameter is the same as drill bit diameter. No special diameter bit required. • Corrosion resistant coating allows for use in outdoor moderate corrosive environments (KH-EZ CRC only). • Installation process allows for adjustability.
	1/4” KH-EZ P, PM, PL	
	KH EZ 1/4"-3/4"	
	KH-EZ CRC 3/8"-3/4"	



Grout-filled concrete masonry



Seismic Design Categories A-F

Hollow drill bit

Profis Engineering design software

Approvals/Listings	
ICC-ES (International Code Council) • 2021 International Building Code / International Residential Code (IBC/IRC)	ESR-3056 in grout-filled CMU per ICC-ES AC01
City of Los Angeles	2023 LABC Supplement (within ESR-3056)
Florida Building Code	2023 FBC Supplement with HVHZ (within ESR-3056)

MATERIAL SPECIFICATIONS

Heat treated carbon steel with a minimum zinc coating of 0.0003 inch (8 µm) thick in accordance with DIN EN ISO 4042.
KH-EZ CRC has mechanically deposited zinc coating with a minimum thickness of 0.0021 inch (53 µm) in accordance with ASTM B695, Class 55.

Table 1 — Hilti KH-EZ, KH-EZ P, KH-EZ PM, KH-EZ PL, KH-EZ C and KH-EZ CRC installation information

Design Information		Symbol	Units	Nominal Anchor Diameter (in.)									
				1/4		3/8		1/2		5/8		3/4	
Head Style and Coating		-	-	Hex, P, PM, PL, C Head		Hex, C Head	Hex, C Head (incl. CRC)	Hex Head (incl. CRC)		Hex Head (incl. CRC)		Hex Head (incl. CRC)	
Nominal Bit Diameter		d_o	in.	1/4		3/8		1/2		5/8		3/4	
Effective Minimum Embedment		h_{ef}	in.	1.18	1.92	1.11	2.50	1.52	3.22	2.39	3.88	2.92	4.84
			(mm)	(30)	(49)	(28)	(64)	(39)	(82)	(61)	(99)	(74)	(123)
Nominal Embedment		h_{nom}	in.	1 5/8	2 1/2	1 5/8	3 1/4	2 1/4	4 1/4	3 1/4	5	4	6 1/4
			(mm)	(41)	(64)	(41)	(83)	(57)	(108)	(83)	(127)	(102)	(159)
Minimum Hole Depth		h_o	in.	2	2 7/8	1 7/8	3 1/2	2 5/8	4 5/8	3 5/8	5 3/8	4 3/8	6 5/8
			(mm)	(51)	(73)	(48)	(89)	(67)	(117)	(92)	(137)	(111)	(168)
Maximum Installation Torque[1] KH-EZ (Hex, P, PM, PL, C)		$T_{inst,max}$	ft-lb	7		10		25		38		70	
			(Nm)	(9.5)		(13.6)		(33.9)		(51.5)		(94.9)	
Maximum Installation Torque[1] KH-EZ CRC		$T_{inst,max}$	ft-lb	-		10		25		35		45	
			(Nm)			(13.6)		(33.9)		(47.5)		(61.0)	
Maximum Impact Wrench Torque Rating KH-EZ (Hex, P, PM, PL, C, CRC)[2]		$T_{impact,max}$	ft-lb	66	100	66	332	157	332	332		332	
			(Nm)	(89)	(136)	(89)	(450)	(213)	(450)	(450)		(450)	
Minimum Fixture Diameter		d_h	in.	3/8		1/2		5/8		3/4		7/8	
			(mm)	(9.5)		(12.7)		(15.9)		(19.1)		(22.2)	
Minimum Masonry Thickness		h_{min}	in.	7 5/8									
			(mm)	(194)									
Minimum Distance to Hollow Head Joint[3]		$c_{min,HJ}$	in.	2 1/2		2 1/2		2 1/2		2 1/2		2 1/2	
			(mm)	(64)		(64)		(64)		(64)		(64)	
Face of Wall	Minimum Edge Distance	c_{min}	in.	4		4		4		4		4	
			(mm)	(102)		(102)		(102)		(102)		(102)	
	Minimum Anchor Spacing	s_{min}	in.	4		4		4		4		4	
			(mm)	(102)		(102)		(102)		(102)		(102)	
Top of Wall	Minimum Edge Distance	$c_{min,top}$	in.	-		-		-	1 3/4	-	1 3/4	-	
			(mm)						(44)		(44)		
	Minimum Anchor Spacing	$s_{min,top}$	in.	-		-		-	8	-	10	-	
			(mm)						(203)		(254)		

1 Maximum Installation Torque applies to installations using a calibrated torque wrench.
2 Because of the variability in measurement procedures, the published torque of an impact tool may not correlate properly with the above setting torques. Over-torquing can damage the base material, anchor and/or reduce its holding capacity.
3 The minimum distance to hollow head joint is measured from the center of an anchor to the centerline of a hollow head joint (vertical mortar joint).

Figure 1 — Hilti KH-EZ specifications

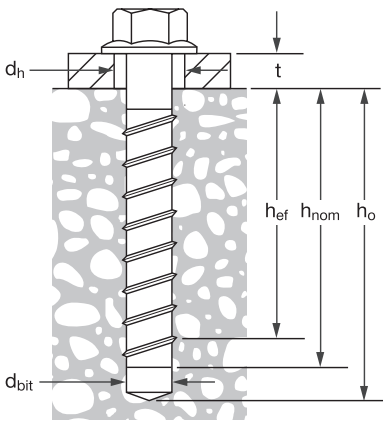


Table 2 — Hilti KH-EZ, KH-EZ P, KH-EZ PM, KH-EZ PL, KH-EZ C and KH-EZ CRC design strength with masonry failure modes in the face of uncracked fully grouted CMU walls [1,2,3,4]

Nominal anchor diameter in.	Effective embedment in. (mm)	Tension (lesser of breakout / pullout) - ΦN_n				Shear (lesser of pryout or crushing) - ΦV_n			
		f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)	f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)
1/4	1.18 (30)	455 (2.0)	455 (2.0)	455 (2.0)	455 (2.0)	590 (2.6)	680 (3.0)	765 (3.4)	835 (3.7)
	1.92 (49)	885 (3.9)	885 (3.9)	885 (3.9)	885 (3.9)	1,225 (5.4)	1,415 (6.3)	1,585 (7.1)	1,735 (7.7)
3/8	1.11 (28)	480 (2.1)	480 (2.1)	480 (2.1)	480 (2.1)	540 (2.4)	620 (2.8)	695 (3.1)	760 (3.4)
	2.50 (64)	1,690 (7.5)	1,910 (8.5)	1,910 (8.5)	1,910 (8.5)	2,950 (13.1)	3,170 (14.1)	3,350 (14.9)	3,505 (15.6)
1/2	1.52 (39)	800 (3.6)	925 (4.1)	1,015 (4.5)	1,015 (4.5)	865 (3.8)	995 (4.4)	1,115 (5.0)	1,220 (5.4)
	3.22 (82)	2,475 (11.0)	2,855 (12.7)	3,190 (14.2)	3,190 (14.2)	3,450 (15.3)	3,705 (16.5)	3,920 (17.4)	4,100 (18.2)
5/8	2.39 (61)	1,465 (6.5)	1,465 (6.5)	1,465 (6.5)	1,465 (6.5)	1,705 (7.6)	1,965 (8.7)	2,200 (9.8)	2,410 (10.7)
	3.88 (99)	2,485 (11.1)	2,485 (11.1)	2,485 (11.1)	2,485 (11.1)	3,920 (17.4)	4,210 (18.7)	4,450 (19.8)	4,660 (20.7)
3/4	2.92 (74)	1,805 (8.0)	2,085 (9.3)	2,335 (10.4)	2,380 (10.6)	4,310 (19.2)	4,630 (20.6)	4,895 (21.8)	5,125 (22.8)
	4.84 (123)	3,515 (15.6)	3,515 (15.6)	3,515 (15.6)	3,515 (15.6)	4,310 (19.2)	4,630 (20.6)	4,895 (21.8)	5,125 (22.8)

1 Linear interpolation between embedment depths and masonry compressive strengths is not permitted.
2 Tabular values are for a single anchor with no influence from nearby edges, hollow head joints, or additional anchors. For designs with the influence of nearby edges, hollow head joints, or additional anchors, use Hilti PROFIS Engineering Design software or perform anchor calculation using design equations from AC01.
3 Compare masonry tabular values to the steel values in Table 8. The lesser of the values is to be used for the design.
4 Tabular values are for static loads only. Seismic design is not permitted for uncracked masonry.

Table 3 — Hilti KH-EZ, KH-EZ P, KH-EZ PM, KH-EZ PL, KH-EZ C and KH-EZ CRC design strength with masonry failure modes in the face of cracked fully grouted CMU walls [1,2,3,4]

Nominal anchor diameter in.	Effective embedment in. (mm)	Tension (lesser of breakout / pullout) - ΦN_n				Shear (lesser of pryout or crushing) - ΦV_n			
		f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)	f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)
1/4	1.18 (30)	155 (0.7)	155 (0.7)	155 (0.7)	155 (0.7)	415 (1.8)	480 (2.1)	540 (2.4)	590 (2.6)
	1.92 (49)	300 (1.3)	300 (1.3)	300 (1.3)	300 (1.3)	865 (3.8)	1,000 (4.4)	1,115 (5.0)	1,225 (5.4)
3/8	1.11 28)	355 (1.6)	355 (1.6)	355 (1.6)	355 (1.6)	380 (1.7)	440 (2.0)	490 (2.2)	540 (2.4)
	2.50 (64)	1,195 (5.3)	1,380 (6.1)	1,415 (6.3)	1,415 (6.3)	2,570 (11.4)	2,970 (13.2)	3,320 (14.8)	3,505 (15.6)
1/2	1.52 (39)	565 (2.5)	655 (2.9)	730 (3.2)	800 (3.6)	610 (2.7)	705 (3.1)	785 (3.5)	860 (3.8)
	3.22 (82)	1,745 (7.8)	2,015 (9.0)	2,255 (10.0)	2,470 (11.0)	3,450 (15.3)	3,705 (16.5)	3,920 (17.4)	4,100 (18.2)
5/8	2.39 (61)	1,115 (5.0)	1,290 (5.7)	1,440 (6.4)	1,465 (6.5)	1,200 (5.3)	1,390 (6.2)	1,550 (6.9)	1,700 (7.6)
	3.88 (99)	2,310 (10.3)	2,485 (11.1)	2,485 (11.1)	2,485 (11.1)	3,920 (17.4)	4,210 (18.7)	4,450 (19.8)	4,660 (20.7)
3/4	2.92 (74)	1,275 (5.7)	1,475 (6.6)	1,645 (7.3)	1,645 (7.3)	3,245 (14.4)	3,750 (16.7)	4,190 (18.6)	4,590 (20.4)
	4.84 (123)	2,425 (10.8)	2,425 (10.8)	2,425 (10.8)	2,425 (10.8)	4,310 (19.2)	4,630 (20.6)	4,895 (21.8)	5,125 2 81

1 Linear interpolation between embedment depths and masonry compressive strengths is not permitted.
2 Tabular values are for a single anchor with no influence from nearby edges, hollow head joints, or additional anchors. For designs with the influence of nearby edges, hollow head joints, or additional anchors, use Hilti PROFIS Engineering Design software or perform anchor calculation using design equations from AC01.
3 Compare masonry tabular values to the steel values in Table 8. The lesser of the values is to be used for the design.
4 Tabular values are for static loads only. For seismic loads, multiply design strength values in tension and shear by the following reduction factors:
1/4-in diameter = 0.75
3/8-in diameter = 0.73
1/2-in, 5/8-in and 3/4-in diameters = 0.71

Table 4 — Hilti KH-EZ, KH-EZ P, KH-EZ PM, KH-EZ PL, KH-EZ C and KH-EZ CRC design strength with masonry failure modes in the face of uncracked fully grouted CMU walls and installed at minimum distance from centerline of hollow head joint [1,2,3,4]

Nominal anchor diameter in.	Effective embedment in. (mm)	Tension ((lesser of breakout or pullout) - ΦN_n				Shear (lesser of breakout, pryout, or crushing) - ΦV_n			
		f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)	f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)
1/4	1.18 (30)	455 (2.0)	455 (2.0)	455 (2.0)	455 (2.0)	590 (2.6)	680 (3.0)	765 (3.4)	835 (3.7)
	1.92 (49)	885 (3.9)	885 (3.9)	885 (3.9)	885 (3.9)	1,040 (4.6)	1,200 (5.3)	1,345 (6.0)	1,470 (6.5)
3/8	1.11 (28)	480 (2.1)	480 (2.1)	480 (2.1)	480 (2.1)	540 (2.4)	620 (2.8)	695 (3.1)	760 (3.4)
	2.50 (64)	1,210 (5.4)	1,395 (6.2)	1,560 (6.9)	1,710 (7.6)	1,670 (7.4)	1,930 (8.6)	2,160 (9.6)	2,365 (10.5)
1/2	1.52 (39)	800 (3.6)	925 (4.1)	1,015 (4.5)	1,015 (4.5)	865 (3.8)	995 (4.4)	1,115 (5.0)	1,220 (5.4)
	3.22 (82)	1,540 (6.9)	1,780 (7.9)	1,990 (8.9)	2,180 (9.7)	1,920 (8.5)	2,215 (9.9)	2,475 (11.0)	2,710 (12.1)
5/8	2.39 (61)	1,160 (5.2)	1,340 (6.0)	1,465 (6.5)	1,465 (6.5)	1,250 (5.6)	1,445 (6.4)	1,615 (7.2)	1,770 (7.9)
	3.88 (99)	1,870 (8.3)	2,160 (9.6)	2,415 (10.7)	2,485 (11.1)	2,130 (9.5)	2,460 (10.9)	2,750 (12.2)	3,010 (13.4)
3/4	2.92 (74)	1,185 (5.3)	1,370 (6.1)	1,530 (6.8)	1,675 (7.5)	2,125 (9.5)	2,450 (10.9)	2,740 (12.2)	3,005 (13.4)
	4.84 (123)	2,020 (9.0)	2,335 (10.4)	2,610 (11.6)	2,860 (12.7)	2,350 (10.5)	2,715 (12.1)	3,035 (13.5)	3,325 (14.8)

1 Linear interpolation between embedment depths and masonry compressive strengths is not permitted.
2 Tabular values are for a single anchor located 2.5-in from centerline of a hollow head joint with no additional influence from nearby edges or additional anchors. For designs with the influence of nearby edges, different distances to a hollow head joint, or additional anchors, use Hilti PROFIS Engineering Design software or perform anchor calculation using design equations from AC01.
3 Compare masonry tabular values to the steel values in Table 8. The lesser of the values is to be used for the design.
4 Tabular values are for static loads only. Seismic design is not permitted for uncracked masonry.

Table 5 — Hilti KH-EZ, KH-EZ P, KH-EZ PM, KH-EZ PL, KH-EZ C and KH-EZ CRC design strength with masonry failure modes in the face of cracked fully grouted CMU walls and installed minimum distance from centerline of hollow head joint [1,2,3,4]

Nominal anchor diameter in.	Effective embedment in. (mm)	Tension ((lesser of breakout or pullout) - ΦN_n				Shear (lesser of breakout, pryout, or crushing) - ΦV_n			
		f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)	f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)
1/4	1.18 (30)	155 (0.7)	155 (0.7)	155 (0.7)	155 (0.7)	415 (1.8)	480 (2.1)	540 (2.4)	590 (2.6)
	1.92 (49)	300 (1.3)	300 (1.3)	300 (1.3)	300 (1.3)	735 (3.3)	850 (3.8)	950 (4.2)	1,040 (4.6)
3/8	1.11 (28)	355 (1.6)	355 (1.6)	355 (1.6)	355 (1.6)	380 (1.7)	440 (2.0)	490 (2.2)	540 (2.4)
	2.50 (64)	855 (3.8)	985 (4.4)	1,105 (4.9)	1,210 (5.4)	1,195 (5.3)	1,380 (6.1)	1,540 (6.9)	1,690 (7.5)
1/2	1.52 (39)	565 (2.5)	655 (2.9)	730 (3.2)	800 (3.6)	610 (2.7)	705 (3.1)	785 (3.5)	860 (3.8)
	3.22 (82)	1,090 (4.8)	1,255 (5.6)	1,405 (6.2)	1,540 (6.9)	1,370 (6.1)	1,580 (7.0)	1,770 (7.9)	1,935 (8.6)
5/8	2.39 (61)	820 (3.6)	945 (4.2)	1,060 (4.7)	1,160 (5.2)	885 (3.9)	1,020 (4.5)	1,140 (5.1)	1,250 (5.6)
	3.88 (99)	1,320 (5.9)	1,525 (6.8)	1,705 (7.6)	1,870 (8.3)	1,520 (6.8)	1,755 (7.8)	1,965 (8.7)	2,150 (9.6)
3/4	2.92 (74)	835 (3.7)	965 (4.3)	1,080 (4.8)	1,185 (5.3)	1,515 (6.7)	1,750 (7.8)	1,960 (8.7)	2,145 (9.5)
	4.84 (123)	1,430 (6.4)	1,650 (7.3)	1,845 (8.2)	2,020 (9.0)	1,680 (7.5)	1,940 (8.6)	2,165 (9.6)	2,375 (10.6)

1 Linear interpolation between embedment depths and masonry compressive strengths is not permitted.
2 Tabular values are for a single anchor located 2.5-in from centerline of a hollow head joint with no additional influence from nearby edges or additio anchors. For designs with the influence of nearby edges, different distances to a hollow head joint, or additional anchors, use Hilt PROFIS Engineering Design software or perform anchor calculation using design equations from ACO1.
3 Compare masonry tabular values to the steel values in Table 8. The lesser of the values is to be used for the design.
4 Tabular values are for static loads only. For seismic loads, multiply design strength values in tension and shear by the following reduction factors:
1/4-in diameter = 0.75
3/8-in diameter = 0.73
1/2-in, 5/8-in and 3/4-in diameters = 0.71

Table 6 — Hilti KH-EZ and KH-EZ CRC design strength with masonry failure modes in the top of uncracked fully grouted CMU walls and installed at minimum edge distance parallel with masonry course [1,2,3,4,5]

Nominal anchor diameter in.	Effective embedment in. (mm)	Tension ((lesser of breakout or pullout) - ΦN_n				Shear (lesser of breakout, pryout, or crushing) - ΦV_n			
		f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)	f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)
1/2	3.22 (82)	1,360 (6.0)	1,575 (7.0)	1,760 (7.8)	1,925 (8.6)	1,260 (5.6)	1,460 (6.5)	1,630 (7.3)	1,785 (7.9)
5/8	3.88 (99)	1,680 (7.5)	1,940 (8.6)	2,170 (9.7)	2,375 (10.6)	1,400 (6.2)	1,620 (7.2)	1,810 (8.1)	1,980 (8.8)

1 Linear interpolation between embedment depths and masonry compressive strengths is not permitted.
2 Tabular values are for a single anchor located at minimum edge of 1-3/4-in from edge parallel with masonry course with no additional influence from nearby edges or additional anchors. For designs with the additional influence of nearby edges, a different edge distance, or additional anchors, use Hilti PROFIS Engineering Design software or perform anchor calculation using design equations from AC01.
3 Compare masonry tabular values to the steel values in Table 8. The lesser of the values is to be used for the design.
4 Tabular values are for static loads only. Seismic design is not permitted for uncracked masonry.
5 Tabular shear values are for shear force parallel to the edge parallel with the masonry course. For shear force perpendicular to the edge parallel with the masonry course, multiply design strength values in shear by the following reduction factor: 0.50.

Table 7 — Hilti KH-EZ and KH-EZ CRC design strength with masonry failure modes in the top of cracked fully grouted CMU walls and installed at minimum edge distance parallel with masonry course [1,2,3,4,5]

Nominal anchor diameter in.	Effective embedment in. (mm)	Tension ((lesser of breakout or pullout) - ΦN_n				Shear (lesser of breakout, pryout, or crushing) - ΦV_n			
		f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)	f'_m = 1500 psi (10.3 MPa) lb (kN)	f'_m = 2000 psi (13.8 MPa) lb (kN)	f'_m = 2500 psi (17.2 MPa) lb (kN)	f'_m = 3000 psi (20.7 MPa) lb (kN)
1/2	3.22 (82)	960 (4.3)	1,110 (4.9)	1,240 (5.5)	1,360 (6.0)	900 (4.0)	1,040 (4.6)	1,165 (5.2)	1,275 (5.7)
5/8	3.88 (99)	1,185 (5.3)	1,370 (6.1)	1,530 (6.8)	1,680 (7.5)	1,000 (4.4)	1,155 (5.1)	1,290 (5.7)	1,415 (6.3)

1 Linear interpolation between embedment depths and masonry compressive strengths is not permitted.
2 Tabular values are for a single anchor located at minimum edge of 1-3/4-in from edge parallel with masonry course with no additional influence from nearby edges or additional anchors. For designs with the additional influence of nearby edges, a different edge distance, or additional anchors, use Hilti PROFIS Engineering Design software or perform anchor calculation using design equations from AC01.
3 Compare masonry tabular values to the steel values in Table 8. The lesser of the values is to be used for the design.
4 Tabular values are for static loads only. For seismic loads, multiply design strength values in tension and shear by the following reduction factors.
1/2-in. diameter = 0.75
5/8-in. diameter = 0.71
5 Tabular shear values are for shear force parallel to the edge parallel with the masonry course. For shear force perpendicular to the edge parallel with the masonry course, multiply design strength values in shear by the following reduction factor: 0.50.

Table 8 — Hilti KH-EZ, KH-EZ P, KH-EZ PM, KH-EZ PL, KH-EZ C and KH-EZ CRC design strength based on steel failure per ACI 318 Ch. 17

Nominal anchor diameter in.	Effective embedment in. (mm)	Carbon Steel[1]		
		Tensile[2] ϕN_{sa} lb (kN)	Shear[3] ϕV_{sa} lb (kN)	Seismic Shear[4] $\phi V_{sa,eq}$ lb (kN)
1/4	1.18 (30)	3,680 (16.4)	865 (3.8)	865 (3.8)
	1.92 (49)	3,680 (16.4)	1,050 (4.7)	865 (3.8)
3/8	1.11 (28)	5,980 (26.6)	1,085 (4.8)	980 (4.4)
	2.50 (64)	6,720 (29.9)	3,050 (13.6)	980 (4.4)
1/2	1.52 (39)	11,780 (52.4)	1,885 (8.4)	1,700 (7.6)
	3.22 (82)	11,780 (52.4)	3,925 (17.5)	1,700 (7.6)
5/8	2.39 (61)	15,735 (70.0)	5,070 (22.6)	4,055 (18.0)
	3.88 (99)	15,735 (70.0)	5,070 (22.6)	4,055 (18.0)
3/4	2.92 (74)	20,810 (92.6)	6,180 (27.5)	5,855 (26.0)
	4.84 (123)	20,810 (92.6)	6,180 (27.5)	5,855 (26.0)

1 Hilti KH-EZ carbon steel anchors are to be considered brittle steel elements.
2 Tensile = $\phi A_{se,N} f_{uta}$ as noted in ACI 318-19 17.6.1.2.
3 Shear values determined by static shear tests with $\phi V_{sa} \le \phi\ 0.60\ A_{se,V} f_{uta}$ as noted in ACI 318-19 17.7.1.2b.
4 Seismic shear values determined by seismic shear tests with $\phi V_{sa,eq} \le \phi V_{sa} \le \phi\ 0.60\ A_{se,V} f_{uta}$ as noted in ACI 318-19 17.7.1.2b.

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 FU are current when used. Proper installation is critical to achieve full performance. Training is available on request. Contact Hili Technical Services for applications and conditions not addressed in the IFU.

ORDERING INFORMATION

Description	Hole Diameter	Total Length without Anchor Head	Screw Anchor Head Height (in)	Screw Anchor Head Width (in)	Minimum Embedment Depth	Qty (pcs) / Box
KH-EZ P 1/4" x1 7/8"	1/4"	17/8	0.13	0.52	1 5/8	100
KH-EZ P 1/4"x2 5/8"	1/4"	2 5/8	0.13	0.52	1 5/8	100
KH-EZ PM 1/4"x2 5/8"	1/4"	2 5/8	0.13	0.69	1 5/8	100
KH-EZ PM 1/4"x1 7/8"	1/4"	1 7/8	0.13	0.69	1 5/8	100
KH-EZ PL 1/4"X2 5/8"	1/4"	2 5/8	0.18	0.86	1 5/8	100
KH-EZ C 1/4" x2"	1/4"	2	0.16	0.45	1 5/8	100
KH-EZ C 1/4"x2 1/2"	1/4"	2 1/2	0.16	0.45	1 5/8	100
KH-EZ C 1/4" x3"	1/4"	3	0.16	0.45	1 5/8	100
KH-EZ C 1/4" x4"	1/4"	4	0.16	0.45	1 5/8	100
KH-EZ 1/4" x1 7/8"	1/4"	1 7/8	0.24	0.44	1 5/8	100
KH-EZ 1/4" x2 5/8"	1/4"	2 5/8	0.24	0.44	1 5/8	100
KH-EZ 1/4" x3"	1/4"	3	0.24	0.44	1 5/8	100
KH-EZ 1/4" x3 1/2"	1/4"	3 1/2	0.24	0.44	1 5/8	100
KH-EZ 1/4" x4"	1/4"	4	0.24	0.44	1 5/8	100
KH-EZ 3/8" x1 7/8	3/8"	1 7/8	0.35	0.56	1 5/8	50
KH-EZ 3/8" x2 1/8"	3/8"	2 1/8	0.35	0.56	1 5/8	50
KH-EZ (CRC) 3/8" x3"	3/8"	3	0.35	0.56	2 1/2	50
KH-EZ 3/8" x3 1/2"	3/8"	3 1/2	0.35	0.56	2 1/2	50
KH-EZ (CRC) 3/8" x4"	3/8"	4	0.35	0.56	3 1/4	50
KH-EZ (CRC) 3/8"" x5"	3/8"	5	0.35	0.56	3 1/4	50
KH-EZ C 3/8" x2 1/2"	3/8"	2 1/2	0.25	0.71	1 5/8	50
KH-EZ C 3/8" x3"	3/8"	3	0.25	0.71	2 1/2	50
KH-EZ C 3/8" x4"	3/8"	4	0.25	0.71	2 1/2	50
KH-EZ 1/2" x2 1/2"	1/2"	2 1/2	0.48	0.75	2 1/4	25
KH-EZ (CRC) 1/2" x3"	1/2"	3	0.48	0.75	2 1/4	25
KH-EZ 1/2" x3 1/2"	1/2"	3 1/2	0.48	0.75	2 1/4	25
KH-EZ (CRC) 1/2"x4"	1/2"	4	0.48	0.75	2 1/4	25
KH-EZ 1/2" x4 1/2"	1/2"	4 1/2	0.48	0.75	3	25
KH-EZ (CRC) 1/2"x5"	1/2"	5	0.48	0.75	3	25
KH-EZ (CRC) 1/2" x6"	1/2"	6	0.48	0.75	3	25
KH-EZ 5/8" x3 1/2"	5/8"	3 1/2	0.57	0.94	3 1/4	15
KH-EZ 5/8" x4"	5/8"	4	0.57	0.94	3 1/4	15
KH-EZ (CRC) 5/8" x5 1/2"	5/8"	5 1/2	0.57	0.94	3 1/4	15
KH-EZ (CRC) 5/8" x6 1/2"	5/8"	6 1/2	0.57	0.94	3 1/4	15
KH-EZ (CRC) 5/8" x8"	5/8"	8	0.57	0.94	3 1/4	15
KH-EZ 3/4 x4 1/2"	3/4"	4 1/2	0.70	1.13	4	10
KH-EZ (CRC) 3/4" x5 1/2"	3/4"	5 1/2	0.70	1.13	4	10
KH-EZ (CRC) 3/4" x7	3/4"	7	0.70	1.13	4	10
KH-EZ 3/4" x8"	3/4"	8	0.70	1.13	4	10
KH-EZ (CRC) 3/4" x9"	3/4"	9	0.70	1.13	4	10

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