



Hilti HKV Drop-In Anchor

Submission Folder

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Drop-in anchor HKV



BASE MATERIALS

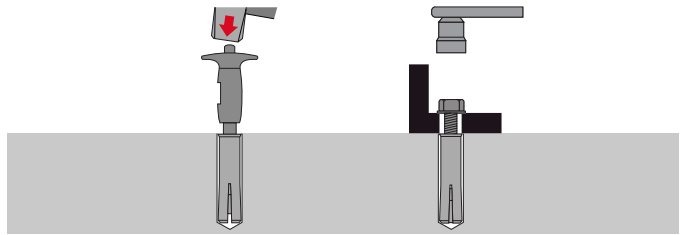
- Concrete (uncracked)

APPLICATIONS

- For medium-duty loads with anchor bolts and threaded rods, e.g. suspension systems for pipes, air ducts, sprinkler systems, etc.
- For fastening diamond core drilling rigs/ base plates, M16 only (DD120 and up)

ADVANTAGES

- No collar - can be set at greater depth
- No damage to the thread when tapping in and expanding
- Visual check for correct setting when used with Hilti manual setting tool



These are abbreviated instructions which may vary according to the application.

Technical data

Material composition	(Galvanized) Steel, zinc-plated (min. 5 µm); (Stainless steel) Steel, A2(SS304)
Head configuration	Inner thread
Type of fastening	Pre-fastening
Approvals / test reports	FM (Factory Mutual)
Accessories	HSD-M, HSD-G

Recommended load (kN), non-cracked concrete at 25N/mm², safety factor(γ)=3

Model	Size	M6x25/ 1/4"x25	M8x30/ 5/16"x30	M10x40/ 3/8"x30	M10x40/ 3/8"x40	M12x50/ 1/2"x50	M16x65
HKV / HKV-R2	Tensile Load, Nrec	1.4	2.0	2.0	3.0	4.2	8.8
	Shear Load, Vrec	1.7	2.9	3.3	3.3	6.1	11.3

Remarks:

- 1) All the data applies to no edge distance, spacing and other influences
- 2) For detail design method, please refer to Fastening Technology Manual

HKV (Galvanized version min. 5µm)



Order Now



Ordering designation	Anchor size	Drill bit diameter	Anchor length	Drilling depth	Anchorage depth	Base plate clearance hole	Max. tightening torque	Screw Depth	Sales pack quantity	Item number
HKV M6x25	M6	8 mm	25 mm	27 mm	25 mm	7 mm	3 Nm	12 mm	100 pc	2127709
HKV M6x25 BULK	M6	8 mm	25 mm	27 mm	25 mm	7 mm	3 Nm	12 mm	3000 pc	2127991
HKV M8x30 bucket	M8	10 mm	30 mm	33 mm	30 mm	9 mm	7 Nm	14 mm	1200 pc	2128001
HKV M10x30	M10	12 mm	30 mm	33 mm	30 mm	12 mm	15 Nm	13 mm	50 pc	2127981
HKV M10x40 bucket	M10	12 mm	40 mm	44 mm	40 mm	12 mm	15 Nm	18 mm	700 pc	2128002
HKV M12x50 bucket	M12	15 mm	50 mm	55 mm	50 mm	14 mm	30 Nm	22 mm	350 pc	2128004
HKV M16x65	M16	20 mm	65 mm	70 mm	65 mm	18 mm	60 Nm	30 mm	25 pc	2127984

Please visit Hilti website for the latest item numbers and related products

HKV (Imperial, galvanized min. 5µm)



Order Now



Ordering designation	Anchor size	Drill bit diameter	Anchor length	Drilling depth	Anchorage depth	Base plate clearance hole	Max. tightening torque	Screw Depth	Sales pack quantity	Item number
HKV 1/4x25 BULK	1/4	8 mm	25 mm	27 mm	25 mm	8 mm	3 Nm	12 mm	3000 pc	2127996 ¹⁾
HKV 5/16x30 BULK	5/16	10 mm	30 mm	33 mm	30 mm	10 mm	7 Nm	14 mm	1200 pc	2127997
HKV 3/8x30 BULK	3/8	12 mm	33 mm	30 mm	30 mm	12 mm	15 Nm	13 mm	700 pc	2127998 ¹⁾
HKV 3/8x40 bucket	3/8	12 mm	40 mm	44 mm	40 mm	12 mm	15 Nm	18 mm	700 pc	2128003
HKV 1/2x50 BULK	1/2	16 mm	50 mm	55 mm	50 mm	14 mm	30 Nm	22 mm	350 pc	2128000

¹⁾ For detailed stock availability and lead time information please contact your Hilti representative.

Please visit Hilti website for the latest item numbers and related products

HKV-R2 (Stainless steel A2)



Order Now



Ordering designation	Anchor size	Drill bit diameter	Anchor length	Drilling depth	Anchorage depth	Base plate clearance hole	Max. tightening torque	Screw Depth	Sales pack quantity	Item number
HKV-R2 M8X30	M8	10 mm	30 mm	33 mm	25 mm	9 mm	7 Nm	12 mm	100 pc	423665
HKV-R2 M10X40	M10	12 mm	40 mm	43 mm	30 mm	12 mm	15 Nm	14 mm	50 pc	423666
HKV-R2 M12X50	M12	14 mm	50 mm	54 mm	50 mm	14 mm	30 Nm	22 mm	50 pc	423668
HKV-R2 3/8"X40	3/8"	12 mm	40 mm	43 mm	40 mm	11 mm	15 Nm	18 mm	50 pc	2168253
HKV-R2 1/2"X50	1/2"	16 mm	50 mm	54 mm	50 mm	14 mm	30 Nm	22 mm	50 pc	2168252

Please visit Hilti website for the latest item numbers and related products

HKV Flush anchors

Economical flush anchor

Anchor version



HKV
(M6-M16)



HKV-R2
(M8-M12)

Benefits

- Simple and well proven
- Reliable setting thanks to simple visual check
- Versatile
- For medium-duty fastening with bolts or threaded rods

Base material



Uncracked
concrete

Basic loading data (for a single anchor)

All data in this section applies to:

- Correct setting (See setting instruction)
- No edge distance and spacing influence
- Concrete as specified in the table
- Minimum base material thickness
- Concrete C 20/25, $f_{ck, cube} = 25 \text{ N/mm}^2$. Concrete strength influence factor can be applied when concrete grade > C20/25, when steel failure does not govern.
- Screw or rod with steel grade 5.8 (carbon steel) and / or A4-70 (stainless steel)

Characteristic resistance

Anchor size		M6x25 (1/4" x 25)	M8x30 (5/16" x 30)	M10x30 (3/8" x 30)	M10x40 (3/8" x 40)	M12x50 (1/2" x 50)	M16x65 (5/8" x 65)
Tension N_{Rk}	[kN]	4,2	5,9	5,9	9,1	12,7	26,5
Shear N_{Rk}	[kN]	5,0	8,6	10,0	10,0	18,3	33,8

Design resistance

Anchor size		M6x25 (1/4" x 25)	M8x30 (5/16" x 30)	M10x30 (3/8" x 30)	M10x40 (3/8" x 40)	M12x50 (1/2" x 50)	M16x65 (5/8" x 65)
Tension N_{Rd}	[kN]	2,8	3,9	3,9	6,1	8,5	17,6
Shear N_{Rd}	[kN]	4,0	6,9	8,0	8,0	14,6	27,0

Recommended loads ^{a)}

Anchor size		M6x25 (1/4" x 25)	M8x30 (5/16" x 30)	M10x30 (3/8" x 30)	M10x40 (3/8" x 40)	M12x50 (1/2" x 50)	M16x65 (5/8" x 65)
Tension N_{Rec}	[kN]	1,4	2,0	2,0	3,0	4,2	8,8
Shear N_{Rec}	[kN]	1,7	2,9	3,3	3,3	6,1	11,3

a) Includes global safety factor of 3.0

Materials

Mechanical properties

Anchor size			M6x25	M8x30	M10x30	M10x40 (3/8" x 40)	M12x50 (1/2" x 50)	M16x65 (5/8" x 65)
Nominal tensile strength	f_{uk}	[N/mm ²]	570	570	570	570	570	640
Yield strength	f_{yk}	[N/mm ²]	460	460	460	460	460	510
Stressed cross-section	A_s	[mm ²]	20,7	26,7	32,7	32,7	60,1	105
			17,3	27,46	39,9	39,9	70,6	-
Moment of resistance	W	[mm ³]	32,3	54,6	82,9	82,9	184	431
			28,2	55,8	97,4	97,4	229,8	-
Char. bending resistance for rod or bolt with 5.8 steel grade	$M^0_{Rk,s}$	[Nm]	7,6	18,7	37,4	37,4	65,5	167
			10,4	16,5	23,9	24,5	42,4	-

Material quality

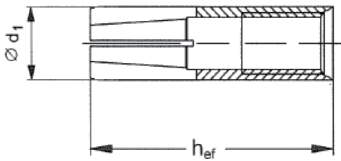
Part		Material
Anchor body	HKV	Steel Fe/Zn5 galvanized to min. 5 μ m
	HKV-R2	Stainless steel, A2
Expansion plug	HKV	Steel material
	HKV-R2	Stainless steel, A2

Anchor dimension ^{a)}

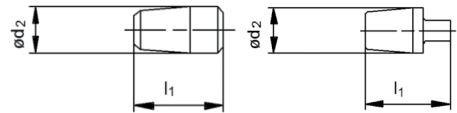
Anchor size			M6x25 (1/4" x 25)	M8x30 (5/16" x 30)	M10x30 (3/8" x 30)	M10x40 (3/8" x 40)	M12x50 (1/2" x 50)	M16x65 (5/8" x 65)
Effective anchorage depth	h_{ef}	[mm]	25	30	30	40	50	65
Anchor diameter	d_1	[mm]	7,9	9,95	11,8	11,95	14,9	19,75
				9,9	11,9		15,85	-
Diameter of cone bolt	d_2	[mm]	5,1	6,5	8,2	8,2	10,3	13,8
				6,35		7,86	10,2	-
Length of expansion sleeve	l_1	[mm]	10	12	12	16	20	29
						16,2		-

a) Please refer to the product catalogue on the Hilti Hong Kong website for standard portfolio

Anchor body



Expansion plugs

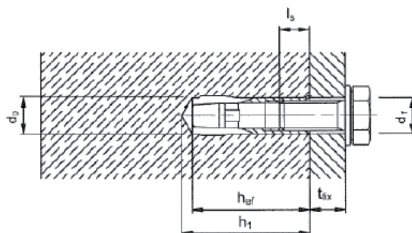


Setting information

Setting details

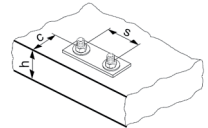
Anchor size			M6x25 (1/4" x 25)	M8x30 (5/16" x 30)	M10x30 (3/8" x 30)	M10x40 (3/8" x 40)	M12x50 (1/2" x 50)	M16x65 (5/8" x 65)
Effective anchorage depth	h_{ef}	[mm]	25	30	30	40	50	65
Nominal diameter of drill bit	d_0	[mm]	8	10	12	12	15/16 ^{a)}	20
Cutting diameter of drill bit	$d_{cut} \leq$	[mm]	8,45	10,5	13/12.5 ^{a)}	12,5	15,5/16.5 ^{a)}	20,5
Depth of drill hole	$h_1 \geq$	[mm]	27	33	33	43	54	70
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]	7	9	12	12	14	18
Torque moment	T_{inst}	[Nm]	4	8	15	15	35	60
Screwing depth	$l_{s,min}$	[mm]	6	8	10	10	12	16
	$l_{s,max}$ ^{a)}	[mm]	10	12	10,5	15,5	20,0	25,5

a) Drill bit diameter for metric/fractional



Setting parameters

Anchor size		M6x25 (1/4"x25)	M8x30 (5/16"x30)	M10x30 (3/8"x30)	M10x40 (3/8"x40)	M12x50 (1/2"x50)	M16x65 (5/8"x65)
Minimum base material thickness	$h_{min} \geq$ [mm]	100	100	100	100	100	130
Minimum spacing	$s_{min} \geq$ [mm]	200	200	200	200	200	260
Minimum edge distance	$c_{min} \geq$	150	150	150	150	150	195



Installation equipment

Anchor size		M6x25 (1/4"x25)	M8x30 (5/16"x30)	M10x30 (3/8"x30)	M10x40 (3/8"x40)	M12x50 (1/2"x50)	M16x65 (5/8"x65)
Rotary hammer for setting		TE 2 – TE 30				TE 16 – TE 50	
		TE 1 – TE 30					-
Machine setting tool	HSD-M	6x25/30	8x25/30	10x25/30	10x40	12x50	16x65
Hand setting tool	HSD-G						
Other tools		hammer, torque wrench, blow up pump					

Setting instructions

* For detailed information on installation see instruction for use given with the package of the product.

Setting instruction	
1. Drilling 	2. Cleaning
3. Inserting the anchor 	4. Setting tools
5. Inserting the tools 	6. Inserting the tools
7. Attaching the belonging washer 	8.

Attn. : To whom it may concern

Date : 29 September 2022
Ref. : 112/AM/RV/22

Subject : Country of Origin- Hilti HKV Drop-in Anchor

Dear Sir / Madam,

Enclosed please find the information of Hilti HKV Drop-in Anchor.

Brand Name : Hilti

Model Name : Hilti HKV Drop-in Anchor

Manufacturer : Hilti Corporation

Address of Manufacturer : FL-9494, Principality of Liechtenstein.

Manufacturer Contact Person : Ricky Yau

Supplier : Hilti (Hong Kong) Ltd

Address of Supplier : 701-704, 7/F, Tower A, Manulife Financial Centre,
223 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong

Supplier Contact Person : Ricky Yau (+852 9317 6203)

Country of Origin : China

Should you have further questions, please do not hesitate to contact our Technical Representatives, Customer Service Hotline at 8228-8118, or email us at hksales@hilti.com.

Yours faithfully,



Ricky Yau
Head of Product Leadership Strategy
Hilti (Hong Kong) Ltd.



Hilti HKV Drop-in Anchor Job Reference

Year	Project Name	Customer Name	Project type
2020	YUEN LONG STATION YLTL 510	LONG SING PLUMBING LIMITED	Residential
2020	HKIA SKYCITY COMPLEX BLDG A2&A3	SAN WO COMPANY	Retail
2020	KAI TAK AREA 1K2 (6566)	EVER RICH ENGINEERING LIMITED	Residential
2020	CASTLE PEAK RD, AREA 48 (547)	YUEN CHEONG ENGINEERING CO LTD	Residential
2020	68 LEE NAM RD	CHIT TAT ELECTRICAL ENGINEERING LTD	Residential
2020	LO FAI RD (EAST) TPTL 223 & 229	WONG PO KEE LIMITED	Residential
2020	TAI WAI STATION NW RES	PYROFOE ENGINEERS LTD	Residential
2020	KAI TAK INLAND REVENUE TOWER	SAN WO COMPANY	Office
2020	98 HOW MING ST	RIDGID PLUMBING LIMITED	Office
2020	KAI TAK AREA 1F SITE 2, NKIL 6556	JUNEF AIR ENGINEERING CO. LIMITED	Office
2021	MA SIK RD, SHEUNG SHUI LOT 262	RAFT (E&M) ENGINEERING LIMITED	Residential
2021	CASTLE PEAK RD, AREA 48 (547)	YUEN CHEONG ENGINEERING CO LTD	Residential
2021	YUEN LONG STATION YLTL 510	HO PAK KEE ENGINEERING LIMITED	Residential
2021	KAI TAK INLAND REVENUE TOWER	SAN WO COMPANY	Office
2021	HKIA SKYCITY COMPLEX BLDG A2&A3	SAN WO COMPANY	Retail
2021	LO FAI RD (EAST) TPTL 223 & 229	WONG PO KEE LIMITED	Residential
2021	98 HOW MING ST	KAI CHUEN ENGINEERING (H.K.) CO LTD	Office
2021	KAI TAK AREA 1F SITE 2, NKIL 6556	JUNEF AIR ENGINEERING CO. LIMITED	Office
2021	KAI TAK SPORTS PARK	HUNG LEE AIR-CONDITIONING	Sport & Recreation
2021	TAIKOO PLACE PH 2B	ATAL BUILDING SERVICES ENGINEERING	Office
2022	IMMIGRATION HEADQUARTERS, TKO	SAN WO COMPANY	Office
2022	KAI TAK SPORTS PARK	UNION MANOR LIMITED	Sport & Recreation
2022	YIN PING RD, TAI WO PING (6542)	WONG PO KEE LIMITED	Residential
2022	SIU HONG, AREA 54 DD 132 TMTL 483	KAI CHUEN ENGINEERING (H.K.) CO LTD	Residential
2022	CINGLEOT LOGISTICS CENTRE, AIRPORT - ALIBABA	WELLDEN ENGINEERING LIMITED	Industrial
2022	KAI TAK AREA 4B, SITE 3, NKIL 6574	CHIT TAT ELECTRICAL ENGINEERING LTD	Residential
2022	KAI TAK AREA 4B, SITE 1, NKIL 6576	CHIT TAT ELECTRICAL ENGINEERING LTD	Residential
2022	98 HOW MING ST	KAI CHUEN ENGINEERING (H.K.) CO LTD	Office
2022	KAI TAK 1E SITE 2A&B (6557)	ATAL BUILDING SERVICES ENGINEERING	Office
2022	WAN CHAI HOPEWELL CENTRE 2	UNION MANOR LIMITED	Hospitality