

Hilti HKD Drop-in Anchor

Submission Folder

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Drop-in (flush) anchor HKD



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 redundant applications in cracked concrete or single-point applications in uncracked concrete

ADVANTAGES

- Features a lip for flush setting, regardless of hole depth
- Shallow drilling depth (25mm), available in M6, M8, M10 and M12 sizes
- Visual check for correct setting when used with Hilti manual setting tool

Technical data	
Material composition	(Galvanized) Steel, zinc-plated (min. 5 µm); (Sherardized) Steel, zinc-plated (min. 45 µm); (Stainless steel) Steel, A4 (SS316)
Head configuration	Inner thread
Type of fastening	Pre-fastening
Approvals / test reports	ETA, Fire, FM (Factory Mutual)
Suitable for cracked concrete with redundant fastenings	Yes

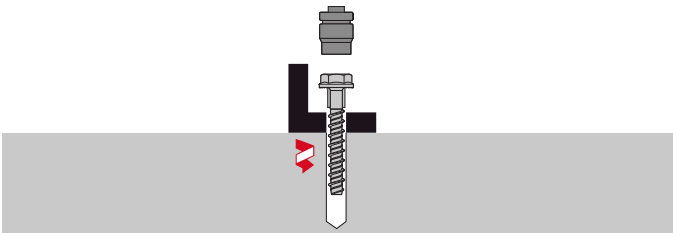
Recommended load (kN), non-cracked concrete at 25N/mm², safety factor(γ)=3							
Model	Size	M6x25/ 1/4"x25	M8x30/ 5/16"x30	M10x40/ 3/8"x40	M12x50/ 1/2"x50	M16x65/ 5/8"x65	M20x80
HKD	Tensile Load, Nrec	2.1	2.8	4.3	5.9	8.8	12.0
	Shear Load, Vrec	1.7	2.9	3.7	6.1	11.3	16.3
HKD-SR/ HKD-ER	Tensile Load, Nrec	2.1	2.8	4.3	5.9	8.8	12.0
	Shear Load, Vrec	2.1	2.8	3.5	6.2	10.7	17.0

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



Approvals	
ETA	ETA 02/0032 for HKD drop-in anchor (ETAG 001-04, Option 7)
ETA, Fire resistance	ETA 06/0047 for HKD drop-in anchor multiple applications (ETAG 001-06, Option -)

Approvals and test reports may apply to selected products only. Please refer to the documents for details.



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

HKD (Galvanized min. 5µm)



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Ordering designation	Anchor size	Drill bit diameter	Drilling depth	Anchor length	Anchorage depth	Base plate clearance hole	Max. tightening torque	Internal thread size	Sales pack quantity	Item number
HKD M6x25	M6	8 mm	27 mm	25 mm	25 mm	7 mm	4 Nm	6/12 mm	100 pc	376894
HKD M8x30	M8	10 mm	33 mm	30 mm	30 mm	9 mm	8 Nm	8/14 mm	100 pc	376959
HKD M10x40	M10	12 mm	43 mm	40 mm	40 mm	12 mm	15 Nm	10/18 mm	50 pc	376967
HKD M12x50	M12	15 mm	54 mm	50 mm	50 mm	14 mm	35 Nm	12/22 mm	50 pc	378544
HKD M16x65	M16	20 mm	70 mm	65 mm	65 mm	18 mm	60 Nm	16/30 mm	25 pc	382941
HKD M20x80	M20	25 mm	85 mm	80 mm	80 mm	22 mm	120 Nm	20/42 mm	25 pc	382955

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

HKD (Imperial, galvanized min. 5µm)



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Ordering designation	Drill bit diameter	Anchor length	Drilling depth	Anchorage depth	Max. tightening torque	Base plate clearance hole	Internal thread size	Sales pack quantity	Item number
HKD 1/4x25	8 mm	25 mm	27 mm	25 mm	3 Nm	8 mm	6/12 mm	100 pc	382980 ¹⁾
HKD 5/16x30	10 mm	30 mm	33 mm	30 mm	7 Nm	10 mm	10/13 mm	100 pc	383679 ¹⁾
HKD 3/8x40	12 mm	40 mm	44 mm	40 mm	15 Nm	11 mm	12/16 mm	100 pc	383960
HKD 1/2x50	16 mm	50 mm	55 mm	50 mm	30 Nm	14 mm	14/22 mm	50 pc	384021
HKD 5/8x65	20 mm	65 mm	70 mm	65 mm	60 Nm	17 mm	18/28 mm	25 pc	384023

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

HKD-SAC (Sherardized min. 45µm)



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Ordering designation	Drill bit diameter	Drilling depth	Anchor length	Anchorage depth	Base plate clearance hole	Max. tightening torque	Internal thread size	Sales pack quantity	Item number
HKD-SAC M8X30	10 mm	33 mm	30 mm	30 mm	9 mm	8 Nm	8/14 mm	100 pc	434431 ¹⁾
HKD-SAC M10X40	12 mm	43 mm	40 mm	40 mm	12 mm	15 Nm	10/18 mm	50 pc	434432 ¹⁾
HKD-SAC M12X50	15 mm	54 mm	50 mm	50 mm	14 mm	35 Nm	12/22 mm	50 pc	434433 ¹⁾
HKD-SAC M16X65	20 mm	70 mm	65 mm	65 mm	18 mm	60 Nm	16/30 mm	25 pc	434434 ¹⁾

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

HKD-SR (Stainless steel A4)



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Ordering designation	Anchor size	Drill bit diameter	Drilling depth	Anchor length	Anchor depth	Base plate clearance hole	Max. tightening torque	Internal thread size	Sales pack quantity	Item number
HKD-SR M6x25	M6	8 mm	27 mm	25 mm	25 mm	7 mm	4 Nm	6/12 mm	100 pc	247951
HKD-SR M8x30	M8	10 mm	33 mm	30 mm	30 mm	9 mm	8 Nm	8/14 mm	100 pc	247952
HKD-SR M10x40	M10	12 mm	44 mm	40 mm	40 mm	12 mm	15 Nm	10/18 mm	50 pc	247953
HKD-SR M12x50	M12	15 mm	54 mm	50 mm	50 mm	14 mm	35 Nm	12/22 mm	50 pc	247954
HKD-SR M16x65	M16	20 mm	70 mm	65 mm	65 mm	18 mm	60 Nm	16/30 mm	25 pc	247955
HKD-SR M20x80	M20	25 mm	85 mm	80 mm	80 mm	22 mm	120 Nm	20/42 mm	25 pc	247956

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

HKD-ER (Without lip, stainless steel A4)



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Ordering designation	Anchor size	Drill bit diameter	Drilling depth	Anchor length	Anchorage depth	Base plate clearance hole	Max. tightening torque	Screw Depth	Sales pack quantity	Item number
HKD-ER M8x30	M8	10 mm	33 mm	30 mm	30 mm	9 mm	8 Nm	10/13 mm	100 pc	352293
HKD-ER M10x40	M10	12 mm	44 mm	40 mm	40 mm	12 mm	15 Nm	12/16 mm	50 pc	352294
HKD-ER M16x65	M16	20 mm	70 mm	65 mm	65 mm	18 mm	60 Nm	18/28 mm	25 pc	352295

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

Manual setting tool with hand guard for flush anchors HSD-G



Technical data

Dispenser, setting tool, accessory, tester type Setting tools

Ordering designation	Sales pack quantity	Item number
Setting tool HSD-G M6 1/4"X25	1 pc	243738
Setting tool HSD-G M8 5/16"X30	1 pc	243740
Setting tool HSD-G M10 3/8"X30	1 pc	230935
Setting tool HSD-G M10 3/8"X40	1 pc	243742
Setting tool HSD-G M12 1/2"X50	1 pc	243743
Setting tool HSD-G M16 5/8"X65	1 pc	243744
Setting tool HSD-G M20 3/4"X80	1 pc	243745

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

Machine setting tool for flush anchors HSD-M



ADVANTAGES

- Automatic machine setting tool for more productive installation of Hilti drop-in anchors

Technical data

Dispenser, setting tool, accessory, tester type Setting tools

Ordering designation	Sales pack quantity	Item number
Setting tool HSD-M M6 1/4"X25	1 pc	243746 ¹⁾
Setting tool HSD-M M8 5/16"X30	1 pc	243748 ¹⁾
Setting tool HSD-M M10 3/8"X30	1 pc	243750 ¹⁾
Setting tool HSD-M M10 3/8"X40	1 pc	243751
Setting tool HSD-M M12 1/2"X50	1 pc	243752
Setting tool HSD-M M16 5/8"X65	1 pc	243753 ¹⁾
Setting tool HSD-M M20 3/4"X80	1 pc	243754 ¹⁾

¹⁾ This is a non-stock item. For detailed lead time information please contact your Hilti representative.

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

Auto setting tool for HKD anchors



Technical data




Dispenser, setting tool, accessory, tester type Setting tools



Ordering designation	Sales pack quantity	Item number
Setting tool HKD-TE-CX M8 5/16"x30	1 pc	2112619
Setting tool HKD-TE-CX M10 3/8"x40	1 pc	2112752
Setting tool HKD-TE-CX M12 x50 15Φ	1 pc	2112753
Setting tool HKD-TE-CX M12 x50 16Φ	1 pc	2112754






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

HKD Flush anchor

Everyday standard set flush anchor

Anchor version		Benefits
	HKD (M6-M20)	<ul style="list-style-type: none"> - Simple and well proven - Approved and tested - Reliable setting with simple visual check - Versatile - For medium-duty fastening with bolts or threaded rods - Available in various materials and sizes for maximized coverage of possible applications
	HKD-SR (M6-M20)	
	HKD-ER (M6-M20)	

Base material	Load conditions
 Uncracked concrete	 Static/ quasi-static

Installation conditions	Other information
 Hammer drilled holes	 European Technical Assessment  CE conformity  PROFIS Anchor design software  A4 316 Corrosion resistance

Approvals / certificates

Description	Authority / Laboratory	No. / date of issue
European Technical Assessment ^{a)}	CSTB, Marne-la-Vallée	ETA-02/0032 / 2015-01-07

a) Data in this section is from ETA-02/0032 issue 2015-01-07 unless otherwise indicated

Recommended general notes

* The below clauses based on Hilti product qualifications are for references only. Selection of clauses by the engineer shall be based on the specific application needs. Please contact Hilti's technical team for further details.

- Push-in anchor which is placed into a drill hole and anchored by deformation controlled expansion, approved for use in un-cracked concrete.
- The anchor shall have European Technical Assessment (ETA); evaluating performance in un-cracked concrete
- Anchor shall be installed as per the manufacturer's approved procedure and equipment
- Anchor shall have corrosion resistance of min. 5µm galvanization
- Anchor shall be approved for installation using machine setting tools recommended by the manufacturer
- The recommended tension load of the anchor should not be not less than ___kN in cracked concrete with concrete strength at 25N/mm² (including overall global safety factor=3)
- Effective anchorage depth of the anchor should not exceed ___mm
- Anchor shall be approved for proper setting verification through visual inspection ("4 marks") when set with a manual tool or machine tool followed by manual tool recommended by the manufacturer

Basic loading data (for a single anchor)

All data in this section applies to:

- Static and quasi-static loading
- Correct setting (See setting instruction)
- No edge distance and spacing influence
- Concrete as specified in the table
- *Steel* failure
- Minimum base material thickness
- Concrete C 20/25, $f_{ck, cube}=25$ N/mm². 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 ^{a)}

Anchor size		M6x25 (1/4"x25)	M8x30 (5/16"x30)	M10x40 (3/8"x40)	M12x50 (1/2"x50)	M16x65 (5/8"x65)	M20x80
Tension N_{Rk}	HKD	6,3	8,3	12,8	17,8	26,4	36,1
	HKD-SR, HKD-ER	6,3	8,3	12,8	17,8	26,4	36,1
Shear N_{Rk}	HKD	5,0	8,6	11,0	18,3	33,8	49,0
	HKD-SR, HKD-ER	6,2	8,4	10,5	18,7	32,1	51,0

a) Hilti Technical Data for M6 and fractional sizes

Design resistance ^{a) b)}

Anchor size		M6x25 (1/4"x25)	M8x30 (5/16"x30)	M10x40 (3/8"x40)	M12x50 (1/2"x50)	M16x65 (5/8"x65)	M20x80
Tension N_{Rd}	HKD	4,2	5,5	8,5	11,9	17,6	24,0
	HKD-SR, HKD-ER	3,0	4,6	7,1	9,9	17,6	24,0
Shear N_{Rd}	HKD	4,0	6,9	8,8	14,6	27,0	39,4
	HKD-SR, HKD-ER	4,1	5,5	6,9	12,3	21,1	33,6

a) Includes material partial factor according to ETA-02/0032 issue 2015-01-07

b) Hilti Technical Data for M6 and fractional sizes

Recommended loads ^{a) b)}

Anchor size		M6x25 (1/4"x25)	M8x30 (5/16"x30)	M10x40 (3/8"x40)	M12x50 (1/2"x50)	M16x65 (5/8"x65)	M20x80
Tension N_{Rec}	HKD	2,1	2,8	4,3	5,9	8,8	12,0
	HKD-SR, HKD-ER	2,1	2,8	4,3	5,9	8,8	12,0
Shear N_{Rec}	HKD	1,7	2,9	3,7	6,1	11,3	16,3
	HKD-SR, HKD-ER	2,1	2,8	3,5	6,2	10,7	17,0

a) Includes global safety factor of 3.0

b) Hilti Technical Data for M6 and fractional sizes

Materials

Mechanical properties

Anchor size		M6	M8	M10	M10	M12	M16
Nominal tensile strength	f_{uk} HKD	570	570	570	570	640	590
	HKD-SR, HKD-ER	540	540	540	540	-	540
Yield strength	f_{yk} HKD	460	460	460	480	510	470
	HKD-SR, HKD-ER	355	355	355	355	-	355
Stressed cross-section	A_s HKD	20,7	26,7	32,7	60,1	105	167
	HKD-SR, HKD-ER	20,9	26,1	28,8	58,7	-	163
Moment of resistance	W HKD	32,3	54,6	82,9	184	431	850
	HKD-SR, HKD-ER	50	79	110	264	602	1191
Char. bending resistance for rod or bolt	$M^0_{Rk,s}$ With 5.8 Gr. Steel	7,6	18,7	37,4	65,5	167	325
	HKD-SR HKD-ER with A4-70	11	26	52	92	187	454

Material quality

Part		Material
Anchor body	HKD	Cold formed steel / galvanized to min. 5 μ m
	HKD-SR, HKD-ER	Stainless steel, 1.4401, 1.4404, 1.4571
Expansion plug	HKD	Cold formed steel
	HKD-SR, HKD-ER	Stainless steel, 1.4401, 1.4404, 1.4571

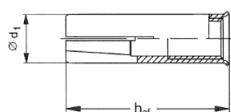
Anchor dimensions of HKD, HKD-SR, HKD-ER ^{a)}

Anchor size			M6x25 (1/4"x25)	M8x30 (5/16"x30)	M10x40 (3/8"x40)	M12x50 (1/2"x50)	M16x65 (5/8"x65)	M20x80
Eff. anchorage depth	h_{ef}	[mm]	25	30	40	50	65	80
Anchor diameter	d_1	[mm]	7,9	9,95	11,95	14,9	19,75	24,75
Plug diameter	d_2	[mm]	5,1	6,5	8,2	10,3	13,8	16,4
Plug length	l_1	[mm]	10	12	16	20	29	30

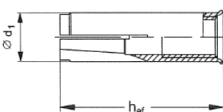
a) Please refer to the product catalogue on the Hilti Hong Kong website for standard portfolio

Anchor body

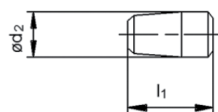
HKD



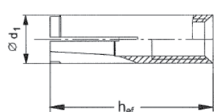
HKD-SR



Expansion plugs



HKD-ER

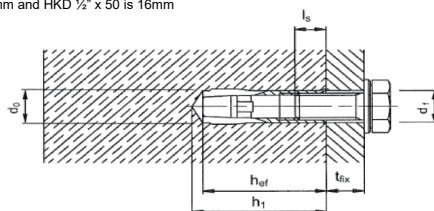


Setting information

Setting details

Anchor size			M6x25 (1/4"x25)	M8x30 (5/16"x30)	M10x40 (3/8"x40)	M12x50 (1/2"x50)	M16x65 (5/8"x65)	M20x80
Effective embedment depth	h_{ef}	[mm]	25	30	40	50	65	80
Nominal diameter of drill bit	d_o	[mm]	8	10	12	15/16*	20	25
Cutting diameter of drill bit	$d_{cut} \leq$	[mm]	8,45	10,5	12,5	15,5/16,5*	20,5	25,5
Depth of drill hole	$h_1 \geq$	[mm]	27	33	43	54	70	85
Screwing depth	$l_{s,min}$		6	8	10	12	16	20
Thread engagement depth	$l_{s,max}$		12	14,5	18	23,5	30,5	42
Diameter of clearance hole in the fixture	$d_f \leq$		7	9	12	14	18	22
Max. torque moment	T_{ins}		4	8	15	35	60	100

*Drill bit diameter for HKD M12x50 is 15mm and HKD 1/2" x 50 is 16mm



Material quality

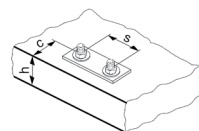
Part		M6	M8	M10	M12	M16	M20
Rotary hammer for setting		TE 2 – TE 16				TE 16 – TE 50	
Machine setting tool	HSD-M HSD-TE CX	6x25/30	8x25/30	10x40	12x50	16x65	20x80
Expansion plug	HSD-G	6x25/30	8x25/30	10x40	12x50	16x65	20x80
Other tools		hammer, torque wrench, blow up pump					

Setting parameters ^{a)}

Anchor size		M6x25 (1/4"x25)	M8x30 (5/16"x30)	M10x40 (3/8"x40)	M12x50 (1/2"x50)	M16x65 (5/8"x65)	M20x80
Minimum base material thickness	h_{min} [mm]	100	100	100	100	130	160
Minimum spacing and minimum edge distance HKD-SR/ HKD-ER	s_{min} [mm]	60	60	80	125	130	160
	c_{min} [mm]	88	105	140	175	230	280
Minimum spacing HKD	s_{min} [mm]	80	60	80	125	130	160
	$c \geq$ [mm]	140	105	140	175	230	280
Minimum edge distance HKD	c_{min} [mm]	100	80	140	175	230	280
	$s \geq$ [mm]	150	120	80	125	130	160
Critical spacing and edge distance for splitting failure HKD	$s_{cr,sp}$ [mm]	200	210	280	350	455	560
	$c_{cr,N}$ [mm]	100	105	140	175	227	280
Critical spacing and edge distance for splitting failure HKD-SR / HKD-ER	$s_{cr,sp}$ [mm]	176	210	280	350	455	560
	$c_{cr,N}$ [mm]	88	105	140	175	227	280
Critical spacing and edge distance for concrete cone failure HKD / HKD-SR / HKD-ER	$s_{cr,N}$ [mm]	80	90	120	150	195	240
	$c_{cr,N}$ [mm]	40	45	60	75	97	120

a) Hilti Technical Data for M6 and fractional sizes

For spacing (edge distance) smaller than critical spacing (critical edge distance) the design loads have to be reduced.

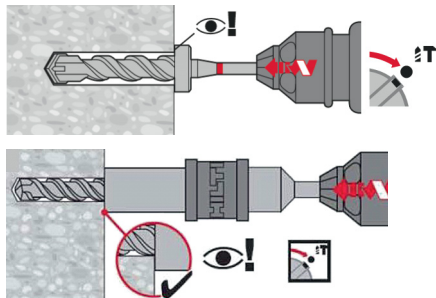


Setting instructions

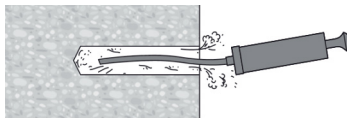
* For detailed information on installation see instruction for use given with the package of the product.

Setting instruction

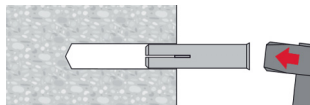
1. Drilling



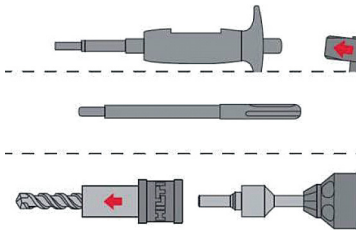
2. Cleaning



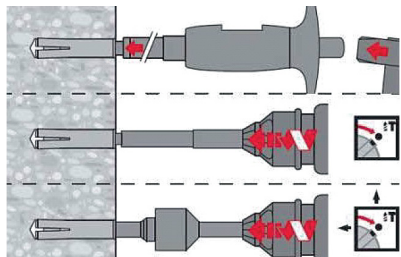
3. Inserting the anchor



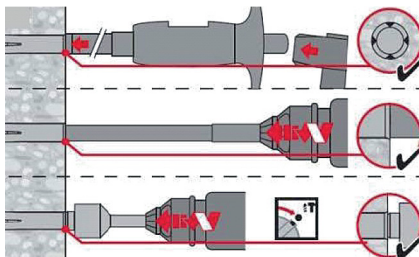
4. Setting tools



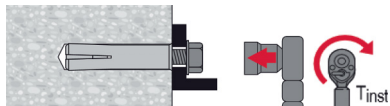
5. Inserting the tools



6. Inserting the tools



7. Attaching the belonging washer



Attn. : To whom it may concern

Date : 1 April 2025
Ref. : 062/AM/SC/25

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

Dear Sir / Madam,

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

Brand Name : Hilti

Model Name : Hilti HKD Drop-in Anchor

Manufacturer : Hilti Corporation

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

Manufacturer Contact Person : Spencer Cheung

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 : Spencer Cheung (+852 9732 1231)

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,

Spencer C. 

Spencer Cheung
Head of Product Leadership Strategy





HKD Drop-in Anchor