



Hilti HSC Undercut Anchor

Submission Folder

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Safety anchor HSC-A (Externally threaded)



BASE MATERIALS

- Concrete (cracked)
- Concrete (uncracked)

APPLICATIONS

- Safety-relevant, medium-duty fastenings in cracked or uncracked concrete, especially where shallow embedment and/or small edge distance or close spacing is required
- Examples: stair hand rails, sprinkler pipes, air ducts, seating, facade substructures, car park barriers, etc.

ADVANTAGES

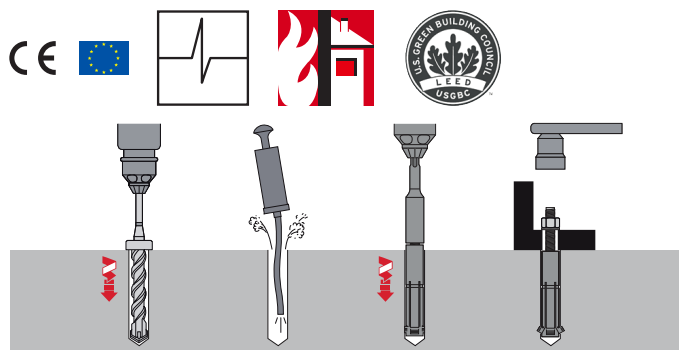
- Shallow embedment depth for thin concrete slabs or where permissible drilling depth is limited
- Combines high working loads with small edge distances and close spacing thanks to very low expansion forces
- Self-undercutting facilitates fast and reliable installation - no separate undercutting tool or handling needed

Approvals

BZS/shock BZS D 06-601 for HSC self-cutting undercut anchor

ETA ETA 02/0027 for HSC self-cutting undercut anchor (ETAG 001-03, Option 1)

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.

Technical data

Material composition	(Galvanized) Bolt: steel, 8.8 grade, zinc-plated (min. 5 µm); (Stainless steel) Steel, A4(SS316)
Head configuration	Externally threaded
Type of fastening	Pre-fastening
Additional product information	Meets approval requirements when installed using the specified stop drill bit, setting tool and rotary hammer
Installation direction	All

Technical data

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

Model	Size	M8x40	M8x50	M10x40	M12x60
HSC-A	Tensile Load, Nrec	4.3	5.9	4.3	7.8
	Shear Load, Vrec	4.8	4.8	7.7	11.2
HSC-AR	Tensile Load, Nrec	4.3	5.9	4.3	7.8
	Shear Load, Vrec	4.3	4.3	6.8	9.8

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

Model	Size	M8x40	M8x50	M10x40	M12x60
HSC-A	Tensile Load, Nrec	3.0	4.2	3.0	5.6
	Shear Load, Vrec	4.9	4.9	6.1	11.2
HSC-AR	Tensile Load, Nrec	3.0	4.2	3.0	5.6
	Shear Load, Vrec	4.3	4.3	6.1	9.8

Remarks:

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

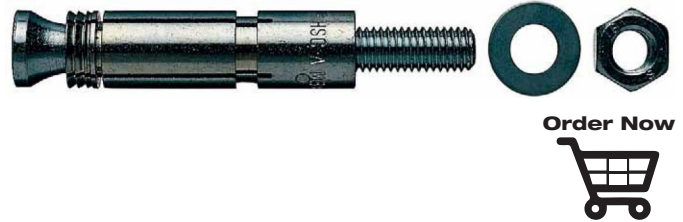
HSC-A (Galvanized min. 5µm)



Ordering designation	Anchor size	Anchor length	Drill bit diameter	Drilling depth	Anchorage depth	Max. fixture thickness at standard embedment depth	Base plate clearance hole	Required tightening torque	Sales pack quantity	Item number
HSC-A M8x40/15	M8	71.5 mm	14 mm	46 mm	40 mm	15 mm	9 mm	10 Nm	25 pc	31139
HSC-A M8x50/15	M8	81.5 mm	14 mm	56 mm	50 mm	15 mm	9 mm	10 Nm	25 pc	31141
HSC-A M10x40/20	M10	79.5 mm	16 mm	47 mm	40 mm	20 mm	12 mm	20 Nm	25 pc	31140
HSC-A M12x60/20	M12	103.5 mm	18 mm	68 mm	60 mm	20 mm	14 mm	30 Nm	20 pc	15507

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

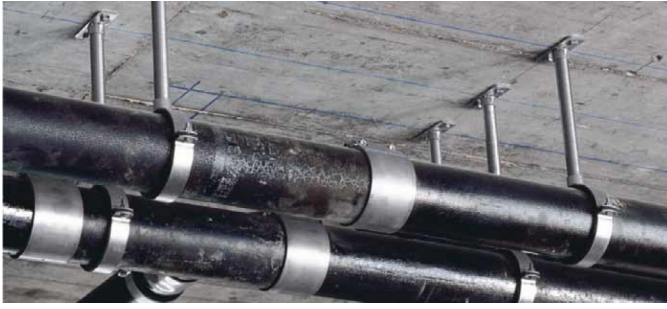
HSC-AR (Stainless steel A4)



Ordering designation	Anchor size	Anchor length	Drill bit diameter	Drilling depth	Anchorage depth	Max. fixture thickness at standard embedment depth	Base plate clearance hole	Required tightening torque	Sales pack quantity	Item number
HSC-AR M8x40/15	M8	71.5 mm	14 mm	46 mm	40 mm	15 mm	9 mm	10 Nm	25 pc	31148
HSC-AR M8x50/15	M8	81.5 mm	14 mm	56 mm	50 mm	15 mm	9 mm	10 Nm	25 pc	31150
HSC-AR M10x40/20	M10	79.5 mm	16 mm	47 mm	40 mm	20 mm	12 mm	20 Nm	25 pc	31149
HSC-AR M12x60/20	M12	103.5 mm	18 mm	68 mm	60 mm	20 mm	14 mm	30 Nm	20 pc	15506

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

Safety anchor HSC-I (Internally threaded)



BASE MATERIALS

- Concrete (cracked)
- Concrete (uncracked)

APPLICATIONS

- Safety-relevant, medium-duty fastenings in cracked or uncracked concrete, especially where shallow embedment and/or small edge distance or close spacing is required
- Examples: stair hand rails, sprinkler pipes, air ducts, seating, facade substructures, car park barriers, etc.

ADVANTAGES

- Shallow embedment depth for thin concrete slabs or where permissible drilling depth is limited
- Combines high working loads with small edge distances and close spacing thanks to very low expansion forces
- Self-undercutting facilitates fast and reliable installation - no separate undercutting tool or handling needed

Technical data

Material composition	(Galvanized) Bolt: steel, 8.8 grade, zinc-plated (min. 5 µm); (Stainless steel) Steel, A4(SS316)
Head configuration	Inner thread
Type of fastening	Pre-fastening
Additional product information	Meets approval requirements when installed using the specified stop drill bit, setting tool and rotary hammer
Installation direction	All

Technical data

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

Model	Size	M6x40	M8x40	M10x50	M10x60	M12x60
HSC-I	Tensile Load, N _{rec}	4.3	4.3	5.9	7.8	7.8
	Shear Load, V _{rec}	2.7	4.1	5.1	5.1	6.1
HSC-IR	Tensile Load, N _{rec}	4.3	4.3	5.9	7.8	7.8
	Shear Load, V _{rec}	2.3	3.6	4.4	4.4	5.3

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

Model	Size	M6x40	M8x40	M10x50	M10x60	M12x60
HSC-I	Tensile Load, N _{rec}	3.0	3.0	4.2	5.6	5.6
	Shear Load, V _{rec}	2.7	4.1	5.1	5.1	6.1
HSC-IR	Tensile Load, N _{rec}	3.0	3.0	4.2	5.6	5.6
	Shear Load, V _{rec}	2.3	3.6	4.4	4.4	5.3

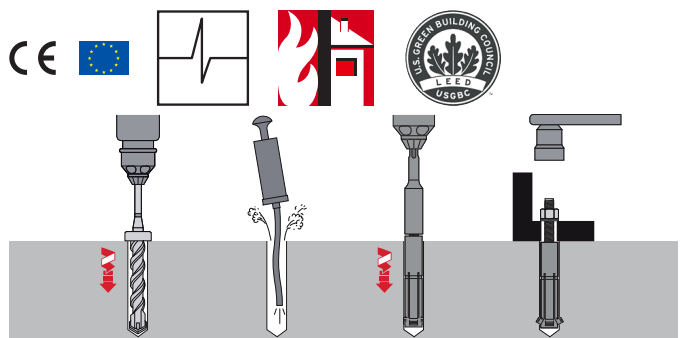
Remarks:

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

Approvals

BZS/shock	BZS D 06-601 for HSC self-cutting undercut anchor
ETA	ETA 02/0027 for HSC self-cutting undercut anchor (ETAG 001-03, Option 1)

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.

HSC-I (Galvanized min. 5µm)



Order Now



Ordering designation	Anchor size	Anchor length	Drill bit diameter	Drilling depth	Anchorage depth	Screw depth Smin/Smax	Base plate clearance hole	Required tightening torque	Sales pack quantity	Item number
HSC-I M6x40	M6	43.0 mm	14 mm	46 mm	40 mm	6/16 mm	7 mm	10 Nm	25 pc	31142
HSC-I M8x40	M8	43.5 mm	16 mm	47 mm	40 mm	8/22 mm	9 mm	10 Nm	25 pc	31143
HSC-I M10x50	M10	54.5 mm	18 mm	56 mm	50 mm	10/28 mm	12 mm	20 Nm	25 pc	31144
HSC-I M10x60	M10	64.5 mm	18 mm	68 mm	60 mm	10/28 mm	12 mm	20 Nm	25 pc	31145¹⁾
HSC-I M12x60	M12	64.5 mm	20 mm	69 mm	60 mm	12/30 mm	14 mm	30 Nm	25 pc	31146

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

HSC-IR (Stainless steel A4)



Order Now



Ordering designation	Anchor size	Anchor length	Drill bit diameter	Drilling depth	Anchorage depth	Screw depth Smin/Smax	Base plate clearance hole	Required tightening torque	Sales pack quantity	Item number
HSC-IR M6x40	M6	43.0 mm	14 mm	46 mm	40 mm	6/16 mm	7 mm	10 Nm	25 pc	31151¹⁾
HSC-IR M8x40	M8	43.5 mm	16 mm	47 mm	40 mm	8/22 mm	9 mm	10 Nm	25 pc	31152
HSC-IR M10x50	M10	54.5 mm	18 mm	56 mm	50 mm	10/28 mm	12 mm	20 Nm	25 pc	31153
HSC-IR M10x60	M10	64.5 mm	18 mm	68 mm	60 mm	10/28 mm	12 mm	20 Nm	25 pc	31154¹⁾
HSC-IR M12x60	M12	64.5 mm	20 mm	69 mm	60 mm	12/30 mm	14 mm	30 Nm	25 pc	31155

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

Stop drill bit TE-C-HSC-B



SDS plus



APPLICATIONS

- Special drill bit required for drilling HSC anchor holes with defined drilling depth

Technical data

Dispenser, setting tool, accessory, tester type	Stop drill bits
Insert connection end	TE-C (SDS-plus)

Ordering designation	Drill bit diameter	Sales pack quantity	Item number
TE-C-HSC-B 14x40	14 mm	1 pc	31157
TE-C-HSC-B 14x50	14 mm	1 pc	31158
TE-C-HSC-B 16x40	16 mm	1 pc	28568
TE-C-HSC-B 18x50	18 mm	1 pc	30708
TE-C-HSC-B 18x60	18 mm	1 pc	30709
TE-C-HSC-B 20x60	20 mm	1 pc	30710

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

Setting tool TE-C-HSC-MW



SDS plus



APPLICATIONS

- Setting tool required for the HSC safety anchor automatic self-undercutting operation

Technical data

Dispenser, setting tool, accessory, tester type	Setting tools
Insert connection end	TE-C (SDS-plus)

Ordering designation	Connection end	Sales pack quantity	Item number
TE-C-HSC-MW14	TE-C	1 pc	31169
TE-C-HSC-MW16	TE-C	1 pc	11267
TE-C HSC-MW18	TE-C	1 pc	71352
TE-C-HSC-MW20	TE-C	1 pc	71353

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

HSC Undercut anchors



Ultimate-performance undercut anchor for shallow embedment depth











Anchor technology & design

Heavy / medium duty metal anchors

Plastic / light duty / other metal anchors

Chemical anchors

Anchor version	Benefits
 <p>HSC-A HSC-AR (M8-M12)</p>	<ul style="list-style-type: none"> - The perfect solution for small edge distances and spacing - Suitable for thin concrete blocks due to low embedment depth - Suitable for cracked concrete - Self-cutting undercut anchor - Available as bolt version for through applications - Available in stainless steel for external applications
 <p>HSC-I HSC-IR (M6-M12)</p>	

Base material	Load conditions
 <p>Non-cracked concrete</p>  <p>Cracked concrete (Tension zone)</p>	 <p>Static/ quasi-static</p>  <p>Shock</p>  <p>Fire resistance</p>
Installation conditions	Other information
 <p>Hammer drilled holes</p>	 <p>European Technical Assessment</p>  <p>CE conformity</p>  <p>PROFIS Anchor design software</p>  <p>Corrosion resistance</p>

Approvals / certificates

Description	Authority / Laboratory	No. / date of issue
European Technical Assessment ^{a)}	CSTB, Marne-la-Vallée	ETA-02/0027 / 2012-09-20
Shockproof fastenings in civil defence installations	Federal Office for Civil Protection, Bern	BZS D 06-601 / 2006-07-10
Fire test report	IBMB, Braunschweig	UB 3177/1722-1 / 2006-06-28
Fire performance	Exova Warringtonfire	WF 327804/A / 2013-07-10

a) All data given in this section according to ETA-02/0027 issue 2012-09-20.

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.

- Self-cutting undercut anchor available in externally threaded and/or internally threaded head for use in cracked and un-cracked concrete
- The anchor shall have European Technical Assessment (ETA); evaluating performance in cracked and un-cracked concrete
- Anchor shall conform to shock proof fastening according to Swiss Federal Office for Civil Protection (FOCP) or equivalent authority
- Anchor shall have corrosion resistance of min. 5µm galvanization
- Anchor shall have corrosion resistance of A4 stainless steel
- Anchor shall be installed as per the manufacturer's approved procedure and equipment
- 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

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
- *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.

External threaded version HSC-A/-AR

Effective anchorage depth

Anchor size	M8	M8	M10	M12
Eff. Anchorage depth range h _{ef} [mm]	40	50	40	60

Characteristic resistance

Anchor size		M8 x 40	M8 x 50	M10 x 40	M12 x 60
Non-cracked concrete					
Tension N _{Rk}	HSC-A, HSC-AR [kN]	12,8	17,8	12,8	23,4
Shear V _{Rk}	HSC-A [kN]	14,6	14,6	23,2	33,7
	HSC-AR [kN]	12,8	12,8	20,3	29,5
Cracked concrete					
Tension N _{Rk}	HSC-A, HSC-AR [kN]	9,1	12,7	9,1	16,7
Shear V _{Rk}	HSC-A [kN]	14,6	14,6	18,2	33,5
	HSC-AR [kN]	12,8	12,8	18,2	29,5

Design resistance ^{a)}

Anchor size		M8 x 40	M8 x 50	M10 x 40	M12 x 60
Non-cracked concrete					
Tension N _{Rk}	HSC-A, HSC-AR [kN]	8,5	11,9	8,5	15,6
Shear V _{Rk}	HSC-A [kN]	11,7	11,7	17,0	27,0
	HSC-AR [kN]	8,2	8,2	13,0	18,9
Cracked concrete					
Tension N _{Rk}	HSC-A, HSC-AR [kN]	6,1	8,5	6,1	11,2
Shear V _{Rk}	HSC-A [kN]	11,7	11,7	12,1	22,3
	HSC-AR [kN]	8,2	8,2	12,1	18,9

a) Includes material partial factor according to ETA-02/0027 issue 2012-09-20

Recommended loads ^{a)}

Anchor size		M8 x 40	M8 x 50	M10 x 40	M12 x 60
Non-cracked concrete					
Tension N _{Rk}	HSC-A, HSC-AR [kN]	4,3	5,9	4,3	7,8
Shear V _{Rk}	HSC-A [kN]	4,9	4,9	7,7	11,2
	HSC-AR [kN]	4,3	4,3	6,8	9,8
Cracked concrete					
Tension N _{Rk}	HSC-A, HSC-AR [kN]	3,0	4,2	3,0	5,6
Shear V _{Rk}	HSC-A [kN]	4,9	4,9	6,1	11,2
	HSC-AR [kN]	4,3	4,3	6,1	9,8

a) Includes global safety factor of 3

Internal threaded version HSC-I/-IR
Effective anchorage depth

Anchor size	M6	M8	M10	M10	M12
Eff. Anchorage depth range h _{ef} [mm]	40	40	50	60	60

Characteristic resistance

Anchor size		M6 x 40	M8 x 40	M10 x 50	M10 x 60	M12 x 60
Non-cracked concrete						
Tension N _{Rk}	HSC-I, HSC-IR [kN]	12,8	12,8	17,8	23,4	23,4
Shear V _{Rk}	HSC-I [kN]	8,0	12,2	15,2	15,2	18,2
	HSC-IR [kN]	7,0	10,7	13,3	13,3	16,0
Cracked concrete						
Tension N _{Rk}	HSC-I, HSC-IR [kN]	9,1	9,1	12,7	12,7	16,7
Shear V _{Rk}	HSC-I [kN]	8,0	12,2	15,2	15,2	18,2
	HSC-IR [kN]	7,0	10,7	13,3	13,3	16,0

Design resistance ^{a)}

Anchor size		M6 x 40	M8 x 40	M10 x 50	M10 x 60	M12 x 60
Non-cracked concrete						
Tension N _{Rk}	HSC-I [kN]	8,5	8,5	11,9	15,6	15,6
	HSC-IR [kN]	7,5	8,5	11,9	14,2	15,6
Shear V _{Rk}	HSC-I [kN]	4,6	11,7	17,0	11,7	27,0
	HSC-IR [kN]	4,5	8,2	13,0	8,2	18,9
Cracked concrete						
Tension N _{Rk}	HSC-I, HSC-IR [kN]	4,3	4,3	6,1	8,0	8,0
Shear V _{Rk}	HSC-I [kN]	4,6	7,0	8,7	8,7	10,4
	HSC-IR [kN]	3,2	4,9	6,1	6,1	7,3

a) Includes material partial factor according to ETA-02/0027 issue 2012-09-20

Recommended loads ^{a)}

Anchor size			M6 x 40	M8 x 40	M10 x 50	M10 x 60	M12 x 60
Non-cracked concrete							
Tension N _{Rk}	HSC-I, HSC-IR	[kN]	4,3	4,3	5,9	7,8	7,8
Shear V _{Rk}	HSC-I	[kN]	2,7	4,1	5,1	5,1	6,1
	HSC-IR		2,3	3,6	4,4	4,4	5,3
Cracked concrete							
Tension N _{Rk}	HSC-I, HSC-IR	[kN]	3,0	3,0	4,2	4,2	5,6
Shear V _{Rk}	HSC-I	[kN]	2,7	4,1	5,1	5,1	6,1
	HSC-IR		2,3	3,6	4,4	4,4	5,3

a) Includes global factor of 3.0

Materials
Mechanical properties of HSC-A/ HSC-AR

Anchor size		HSC	M8 x 40	M8 x 50	M10 x 40	M8 x 50
Nominal tensile strength	f _{uk} [N/mm ²]	-A	800	800	800	800
		-AR	700	700	700	700
Yield strength	f _{yk} [N/mm ²]	-A	640	640	640	640
		-AR	450	450	450	450
Stressed cross-section for bolt version	A _{s,A} [mm ²]	-A, -AR	36,6	36,6	58,0	84,3
Moment of resistance	W [mm ³]	-A, -AR	31,2	31,2	62,3	109,2
Design bending resistance Without sleeve	M _{Rd,s} [Nm]	-A	24	24	48	84
		-AR	16,7	16,7	33,3	59,0

Mechanical properties of HSC-I/ HSC-IR

Anchor size		HSC	M6	M8	M10	M10	M12
Nominal tensile strength	f _{uk} [N/mm ²]	-I	800	800	800	800	800
		-IR	700	700	700	700	700
Yield strength	f _{yk} [N/mm ²]	-I	640	640	640	640	640
		-IR	355	355	350	350	340
Stressed cross-section for bolt version	A _{s,A} [mm ²]	-I, -IR	22,0	28,3	34,6	34,6	40,8
Stressed cross-section for bolt version	A _{s,A} [mm ²]	-I, -IR	20,1	36,6	58,0	58,0	84,3
Moment of resistance	W [mm ³]	-I, -IR	12,7	31,2	62,3	62,3	109,2
Design bending resistance without sleeve	M _{Rd,s} [Nm]	-I, -IR	9,6	24	48	48	84
			7,1	16,7	33,3	33,3	59,0

Material quality

Part	Material
HSC-A / HSC-I Carbon steel	
Cone bolt with internal thread	Carbon steel strength 8.8, galvanized to min. 5 µm
Cone bolt with external thread	
Expansion sleeve and washer	Galvanized to min. 5 µm
Hexagon nut	Grade 8
HSC-AR / HSC-IR Stainless steel	
Cone bolt with internal thread	Steel grade 1.4401, 1.4571 A4-70
Cone bolt with external thread	
Expansion sleeve and washer	Steel grade 1.4401, 1.4571
Hexagon nut	Steel grade 1.4401, 1.4571 A4-70

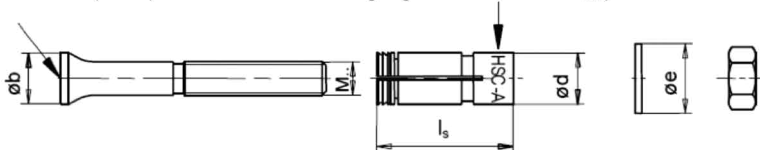
Anchor dimension of HSC-A/ HSC-AR ^{a)}

Anchor size		M8 x 40	M8 x 50	M10 x 40	M12 x 60
Diameter of cone bolt	b [mm]	13,5	13,5	15,5	17,5
Length of expansion sleeve	l_s [mm]	40,8	50,8	40,8	60,8
Diameter of expansion sleeve	d [mm]	13,5	13,5	15,5	17,5
Diameter of washer	e [mm]	16	16	20	24

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

marking HILTI 8.8 (or A4)

marking e.g. HSC-A M8 x 40 / t_{fix} (or HSC-AR M8 x 40 / t_{fix} A4)



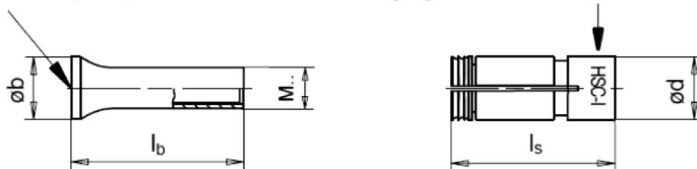
Anchor dimension of HSC-I/ HSC-IR ^{a)}

Anchor size		M6	M8	M10	M10	M12
Length of cone bolt	l_b [mm]	43,8	43,8	54,8	64,8	64,8
Diameter of cone bolt	b [mm]	43,8	13,5	15,5	13,5	17,5
Length of expansion sleeve	l_s [mm]	40,8	40,8	50,8	50,8	60,8
Diameter of expansion sleeve	d [mm]	13,5	15,5	17,5	17,5	19,5

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

marking HILTI 8.8 (or A4)

marking e.g. HSC-I M6 x 40 (or HSC-IR M6 x 40 A4)



Setting information

Setting details of HSC-A/ HSC-AR

Anchor size		M8 x 40	M8 x 50	M10 x 40	M12 x 60
Effective anchorage depth	h_{ef} [mm]	40	50	40	60
Nominal Diameter of drill bit	d_0 [mm]	14	14	16	18
Cutting diameter of drill bit ¹⁾	$d_{cut} \leq$ [mm]	14,5	14,5	16,5	18,5
Maximum fastening thickness	t_{fk} [mm]	15	15	20	20
Depth of drill hole	h_1 [mm]	46	56	46,5	68
Diameter of clearance hole in the fixture	$d_f \leq$ [mm]	9	9	12	14
Torque moment	T_{inst} [Nm]	10	10	20	30
Width across nut flats	SW [mm]	13	13	17	19

Setting details of HSC-I/ HSC-IR

Anchor size		M6	M8	M10	M10	M12
Effective anchorage depth	h_{ef} [mm]	40	40	50	60	60
Nominal Diameter of drill bit	d_0 [mm]	14	16	18	18	20
Cutting diameter of drill bit ¹⁾	$d_{cut} \leq$ [mm]	14,5	16,5	18,5	18,5	20,5
Depth of drill hole	$h_1 =$ [mm]	46	46,5	56	68	68,5
Diameter of clearance hole in the fixture	$d_f \leq$ [mm]	7	9	12	12	14
Torque moment	T_{inst} [Nm]	10	10	20	30	30
Width across nut flats	SW [mm]	10	13	17	17	19
Screwing depth	min s [mm]	6	8	10	10	12
	max s [mm]	16	22	28	28	30

Installation equipment for HSC-A/ HSC-AR

Anchor size		M8 x 40	M8 x 50	M10 x 40	M12 x 60
Rotary hammer for setting		TE 7-C; TE 7-A; TE 16; TE 16-C; TE 16-M; TE 25; TE 30; TE 35		TE 7-C; TE 7-A; TE 25; TE 35	TE 16; TE 16-C; TE 16-M; TE 25; TE 30; TE 35; TE 40; TE 40-AVR
Stepped drill bit	TE-C-HSC-B	14x40	14x50	16x40	18x60
Setting tool	TE-C-HSC-MW	14	14	16	18

Installation equipment for HSC-I/ HSC-IR

Anchor size		M6 x 40	M8 x 40	M10 x 50	M10 x 60	M12 x 60
Rotary hammer for setting		TE 7-C; TE 7-A; TE 16; TE 16-C; TE 16-M; TE 25; TE 30; TE 35				TE 16; TE 16-C; TE 16-M; TE 25; TE 30; TE 35; TE 40; TE 40-AVR
Stepped drill bit	TE-C-HSC-B	14x40	16x40	18x50	18x60	20x60
Setting tool	TE-C-HSC-MW	14	16	18	18	20
Insert tool	TE-C-HSC-EW	14	16	18	18	20

Setting parameters for HSC-A/ HSC-AR

Anchor size			M8 x 40	M10 x 40	M8 x 50	M12 x 60
Effective anchorage depth	h_{ef}	[mm]	40	40	50	60
Minimum base material thickness	$h_{min} \geq$	[mm]	100	100	100	130
Minimum spacing	$s_{min} \geq$	[mm]	40	40	50	60
Minimum edge distance	$c_{min} \geq$	[mm]	40	40	50	60
Critical spacing for splitting failure	$s_{cr,sp}$	[mm]	130	120	170	180
Critical edge distance for splitting failure	$c_{cr,sp}$	[mm]	65	60	85	90
Critical spacing for concrete cone failure	$s_{cr,N}$	[mm]	120	120	150	180
Critical edge distance for concrete cone failure	$c_{cr,N}$	[mm]	60	60	75	90

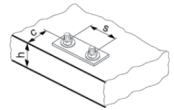
Setting details of HSC-I/ HSC-IR

Anchor size			M6 x 40	M8 x 40	M10 x 50	M10 x 60	M12 x 60
Effective anchorage depth	h_{ef}	[mm]	40	40	50	60	60
Minimum base material thickness	$h_{min} \geq$	[mm]	100	100	100	100	130
Minimum spacing	$s_{min} \geq$	[mm]	40	40	40	50	60
Minimum edge distance	$c_{min} \geq$	[mm]	40	40	50	60	60
Critical spacing for splitting failure	$s_{cr,sp}$	[mm]	130	120	170	180	180
Critical edge distance for splitting failure	$c_{cr,sp}$	[mm]	65	60	85	90	90
Critical spacing for concrete cone failure	$s_{cr,N}$	[mm]	120	120	150	180	180
Critical edge distance for concrete cone failure	$c_{cr,N}$	[mm]	60	60	75	90	90

In case of smaller edge distance and spacing than $c_{cr,sp}$, $s_{cr,sp}$, $c_{cr,N}$ and $s_{cr,N}$ the load values shall be reduced according ETAG 001, Annex C

Critical spacing and critical edge distance for splitting failure apply only for non-cracked concrete.

For cracked concrete only the critical spacing and critical edge distance for concrete cone failure are decisive.

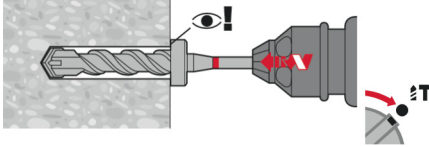


Setting instructions

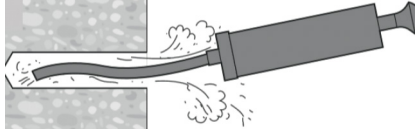
* For detailed information on installation see instruction for use given with the package of the product.

Setting instruction for HSC-A (R)

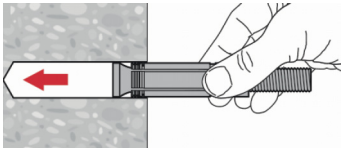
1. Drilling



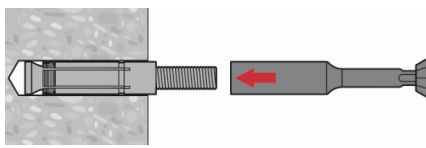
2. Cleaning



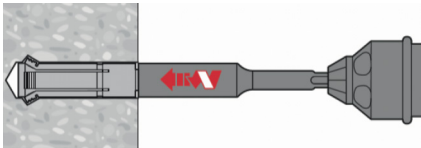
3. Inserting the anchor by hand



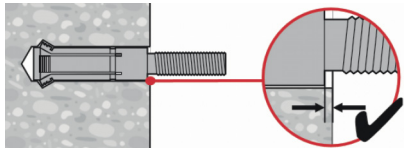
4. Applying hammer drill



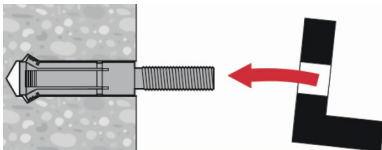
5. Applying hammer drill



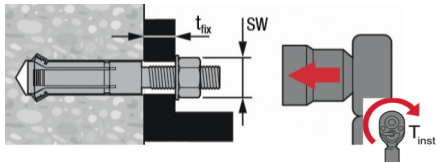
6. Checking



7. Attaching the fixture

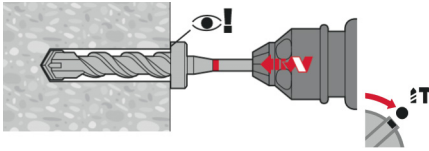


8. Attaching the belonging washer

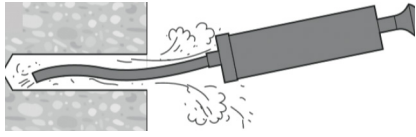


Setting instruction for HSC-A (R)

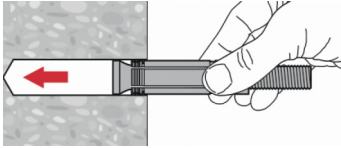
1. Drilling



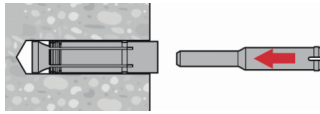
2. Cleaning



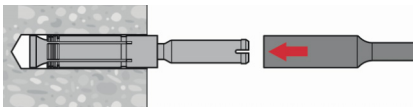
3. Inserting the anchor by hand



4. Inserting the tool HSC-EW14



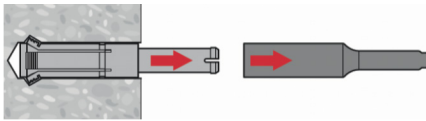
5. Applying hammer drill



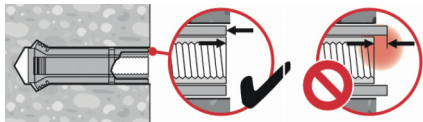
6. Applying hammer drill



7. Applying hammer drill



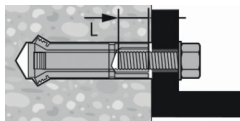
8. Checking



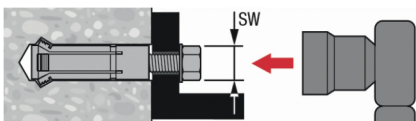
9. Attaching the fixture



10. Attaching the belonging washer



11.



Attn. : To whom it may concern

Date : 26 September 2023
Ref. : 128/AM/DY/23

Subject : Country of Origin- Hilti HSC Undercut Anchor

Dear Sir / Madam,

Enclosed please find the information of Hilti HSC Undercut Anchor.

Brand Name : Hilti

Model Name : Hilti HSC Undercut Anchor

Manufacturer : Hilti Corporation

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

Manufacturer Contact Person : Dennis Yeung

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 : Dennis Yeung (+852 9723 4621)

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,



Dennis Yeung
Head of Product Leadership Strategy, F&P



Hilti HSC Undercut Anchor Job Reference

Year	Project Name	Customer Name	Project type
2022	R6 CTL KLN ROUTE-CENTRAL TUNNEL HY/2018/08	BOUYGUES TRAVAUX PUBLICS	Infrastructure
2022	WONG CHUK HANG STATION PH2 (SITE B)	FORERUNNER SPECIALIST LIMITED	Residential
2022	TUEN MUN AREA 29 WEST - PUBLIC HOUSING	AGGRESSIVE CONSTRUCTION COMPANY	Residential
2022	HKIA 3508 TERMINAL 2	GAMMON CONSTRUCTION LIMITED	Transport
2023	HKIA 3408 3RW CONCOURSE	GOLDENWALL ENGINEERING LIMITED	Transport
2023	KAI TAK AREA 4E, SITE 1, NKIL 6603	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2023	24-38 TONKIN ST & 240-244 FUK WING ST, NKIL 6627	GAMMON ENGINEERING & CONSTRUCTION	Residential
2023	YING TUNG RD, AREA 99 - PUBLIC HOUSING	YAU LEE CONSTRUCTION MATERIALS LTD	Residential
2023	HKBU HOSTEL/ACADEMIC BLDG (HABC)	CHINA OVERSEAS BUILDING	Residential
2023	R6 CTL KLN ROUTE-CENTRAL TUNNEL HY/2018/08	BOUYGUES TRAVAUX PUBLICS	Infrastructure
2023	R6 CTL KLN ROUTE-KAI TAK WEST HY/2014/07	GAMMON CONSTRUCTION LIMITED	Infrastructure
2023	HKIA 3508 TERMINAL 2	GAMMON CONSTRUCTION LIMITED	Transport
2024	YING TUNG RD, AREA 99 - PUBLIC HOUSING	YAU LEE CONSTRUCTION MATERIALS LTD	Residential
2024	KAI TAK AREA 4E, SITE 1, NKIL 6603	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2024	KAI TAK AREA 4A, SITE 1, NKIL 6577	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2024	WEST KOWLOON - LYRIC THEATRE - (IPS)	LUEN HOP METAL AND ALUMINIUM	Community & Cultural



Hilti HSC-R Undercut Anchor Job Reference

Year	Project Name	Customer Name	Project type
2022	R6 TKO-LAM TIN TUNNEL NE/2015/01	WAI MING M&E LIMITED	Infrastructure
2022	R6 CROSS BAY LINK, TKO (NE/2017/07)	M & V ENGINEERING (E & M) LIMITED	Infrastructure
2022	WONG CHUK HANG STATION PH2 (SITE B)	FORERUNNER SPECIALIST LIMITED	Residential
2022	HKIA 3508 TERMINAL 2	GAMMON ENGINEERING & CONSTRUCTION	Transport
2022	SIN FAT RD, KWUN TONG NKIL 6584	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2022	62-68 CHUN YEUNG ST	KOBUNSHI GLOBAL COMPANY LIMITED	Hospitality
2022	KAI TAK SPORTS PARK	FAR EAST FACADE (HONG KONG) LIMITED	Sport & Recreation
2022	14 Wang Tai Road Office	CHEVALIER (ALUMINIUM ENGINEERING)	Office
2022	HK POST HEADQUARTERS	FORERUNNER SPECIALIST LIMITED	Office
2022	TKO LOHAS PARK PH11 (SITE C2)	FORERUNNER SPECIALIST LIMITED	Residential
2023	R6 CTL KLN ROUTE-KAI TAK WEST HY/2014/07	GAMMON CONSTRUCTION LIMITED	Infrastructure
2023	53-55A KWUN TONG RD	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2023	KAI TAK AREA 4C, SITE 3, NKIL 6551	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2023	KAI TAK AREA 4A, SITE 2, NKIL 6554	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2023	TKO LOHAS PARK PH11 (SITE C2)	FORERUNNER SPECIALIST LIMITED	Residential
2023	HKIA 3508 TERMINAL 2	GAMMON ENGINEERING & CONSTRUCTION	Transport
2023	WONG CHUK HANG STATION PH3 (SITE C)	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2023	HK POST HEADQUARTERS	FORERUNNER SPECIALIST LIMITED	Office
2023	294-296A PRINCE EDWARD RD W	CHEVALIER (ALUMINIUM ENGINEERING)	Residential
2023	14 Wang Tai Road Office	CHEVALIER (ALUMINIUM ENGINEERING)	Office
2024	R6 CTL KLN ROUTE-BUILDING AND E&M HY/2019/13	AUTOTOLL LTD	Infrastructure
2024	R6 CTL KLN ROUTE-KAI TAK WEST HY/2014/07	GAMMON CONSTRUCTION LIMITED	Infrastructure
2024	53-55A KWUN TONG RD	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2024	HKIA 3508 TERMINAL 2	WELL PARK CONSTRUCTION LIMITED	Transport
2024	NKIL 6593 (OPPOSITE TO KO CHIU RD /KO CHEUNG	FORERUNNER SPECIALIST LIMITED	Residential
2024	KAI TAK SPORTS PARK	ZENITH (PMS) LTD	Sport & Recreation