HIT-HY 170
INJECTION MORTAR

Technical Datasheet

Update: Jan-23

HIT-HY 170 injection mortar

Anchor design (EOTA TR 054) / Rods and Sleeves / Masonry

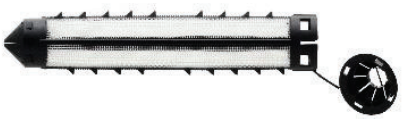
Injection mortar system

Hilti HIT-HY 170

500 ml foil pack (also available as 330 ml foil pack)

Anchor rod:
HAS-U
HAS-U HDG
HAS-U A4
HAS-U HCR
(M8-M12)

Internally threaded sleeve:
HIT-IC
(M8-M12)

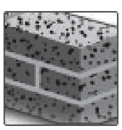


HIT-SC
sieve sleeve
(16-22)

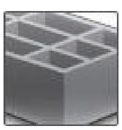
Benefits

- Chemical injection fastening for the most common types of base materials:
- Hollow and solid clay bricks, calcium silicate bricks, normal and light weight concrete blocks
- Two-component hybrid mortar
- Versatile and convenient handling with HDE dispenser
- Mortar filing control wit HIT-SC sleeves

Base material

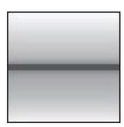


Solid brick



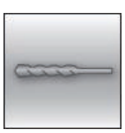
Hollow brick

Load conditions

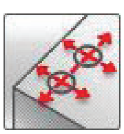


Static/
quasi-static

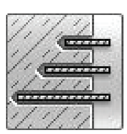
Installation conditions



Hammer drilled holes



Small edge embedment depth



Variable embedment depth

Other information

European Technical Assessment

CE conformity

Corrosion resistance

High corrosion resistance

PROFIS Engineering design Software

Approvals / certificates

Description	Authority / Laboratory	No. / date of issue
European technical Approval [a)]	DIBt, Berlin, Germany	ETA-15/0197 / 2015-12-09
European technical Approval [a)]	DIBt, Berlin, Germany	ETA-19/0161 / 2019-08-28

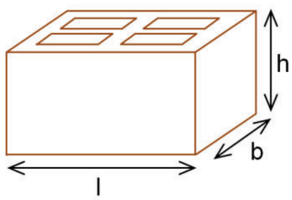
c) All data given in this section according to ETA-15/0197, issue 2015-12-09 and ETA-19/0161, issue 2019-08-28

Brick types and properties

Instruction to this technical data

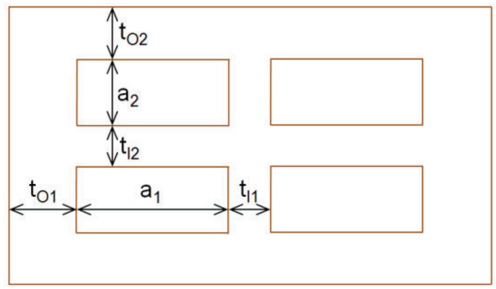
- Identify/choose your brick (or brick type) and its geometrical/physical properties on the following tables.Information about edge and spacing criteria for every brick is available on page 4.
- The pages reffered on the last column of the table below contain the design resistance loads for pull-out failure of the anchor, brick breakout failure and local brick failure for each respective brick. Notice that the data displayed on these tables is only valid for single anchors with distance to edge equal to or greater than c_{cr} – for other cases not covered, use PROFIS Engineering software, consult ETA-15/0197 or contact Hilti Engineering Team.
- The resistance loads provided by this technical data manual are valid only for exact same masonry unit (hollow bricks) or for units made of the same base material with equal or higher size and compressive strength (solid bricks). For other cases, on-site tests must be performed-please consult page 8.

Exterior brick dimensions



Generic bricks

Interior dimensions of the majority of the holes

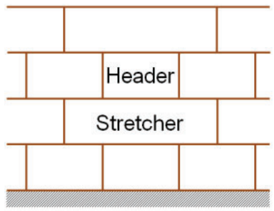


Brick types and properties

Brick code	Data	Brick name	Image	Size [mm]	t_O [mm]	t_I [mm]	a [mm]	fb [N/mm2]	ρ [kg/dm3]	Page
Solid Clay										
SC	ETA	Solid clay brick Mz, 2DF		l: ≥ 240 b: ≥ 115 h: ≥ 113	-	-	-	12	2,0	17
Hollow Clay										
HC	ETA	Hollow clay brick Hlz, 10DF		l: 300 b: 240 h: 238	t_{O1}:12 t_{O2}:15	t_{I1}:11 t_{I2}:15	a_1: 10 a_2: 25	12/20	1,4	17
Solid Calcium Silicate										
SCS	ETA	Solid silica brick KS, 2DF		l: ≥ 240 b: ≥ 115 h: ≥ 113	-	-	-	12/28	2,0	17
Hollow Calcium Silicate										
HCS	ETA	Hollow silica brick KSL, 8DF		l: 248 b: 240 h: 238	t_{O1}:34 t_{O2}:21	t_{I1}:12 t_{I2}:30	a_1: 50 a_2: 50	12/20	1,4	17
Hollow lightweight concrete										
HLWC	ETA	Hollow lightweight concrete brick		l: 495 b: 240 h: 238	t_{O1}:45 t_{O2}:51	t_{I1}:35 t_{I2}:36	a_1:196 a_2: 52	2/6	0,8	18
Hollow normal weight concrete										
HNWC	ETA	Hollow normal weight concrete brick		l: 500 b: 200 h: 200	t_{O1}:30 t_{O2}:15	t_{I1}:15 t_{I2}:15	a_1:133 a_2: 75	4/10	1,0	18

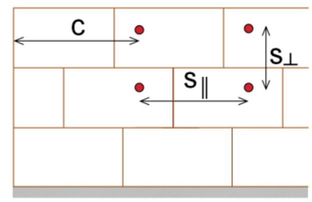
Anchor installation parameters

Brick position:



- **Header (H):** The longest dimension of the brick represents the width of the wall
- **Stretcher (S):** The longest dimension of the brick represents the length of the wall

Spacing and edge distance:



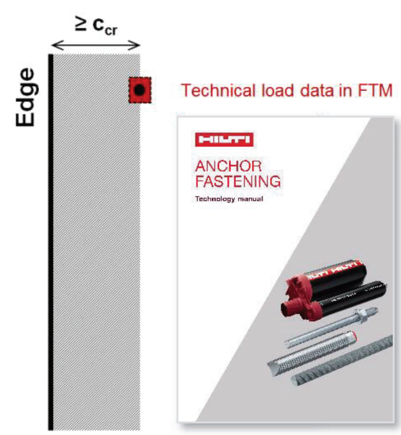
- c - Distance to the edge
- $s_\parallel$ - Spacing parallel to the horizontal joint
- $s_\perp$ - Spacing perpendicular to the horizontal joint

Minimum and characteristic spacing and edge distance parameters

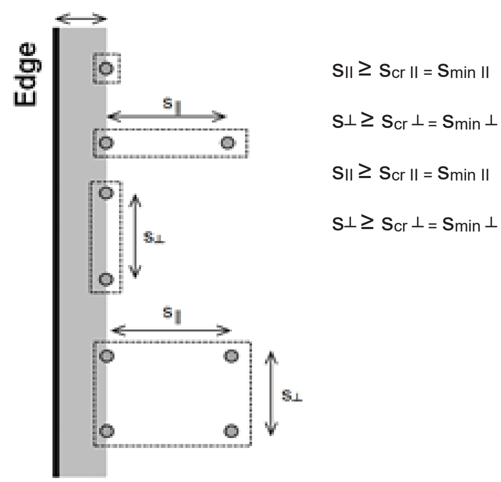
- c_{min} – Minimum edge distance
- c_{cr} – Characteristic edge distance
- $s_{min \parallel}$ - Min. spacing distance parallel to the bed joint
- $s_{cr \parallel}$ - Characteristic spacing distance parallel to the bed joint
- $s_{min \perp}$ - Min. spacing distance perpendicular to the bed joint
- $s_{cr \perp}$ - Characteristic spacing distance perpendicular to the bed joint

Allowed anchor positions:

$c \geq c_{cr} = c_{min}$



$c \geq c_{cr} = c_{min}$



- This FTM includes the load data for single anchors in masonry with a distance to edge equal to or greater than the characteristic edge distance.

Edge and spacing distances per brick

Brick code	$c_{min} = c_{cr}$ [mm]	$s_{min II} = s_{cr II}$ [mm]	$s_{min \perp} = s_{cr \perp}$ [mm]
SC	115	240	115
HC	150	300	240
SCS	115	240	115
HCS	125	248	240
HLC	250	240	240
HNC	200	200	200

Static and quasi-static loading (for a single anchor)

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and masonry work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the anchor is indicated on the design drawings (e.g. position of the anchor relative to supports, etc.).
- Anchorages under static or quasi-static loading are designed in accordance with: EOTA TR 054

Basic loading data (for a single anchor)

The load tables provide the design resistance load for a single loaded anchor.

All data in this section applies to:
- Edge distance $c \geq c_{cr} = c_{min}$.
- Correct anchor setting (see instruction for use, setting details)

<table>
<tr><th colspan="2">Anchorages subject to:</th><th colspan="2">Hilti HIT-HY 170 with HIT-V, HAS-U or HIT-IC</th></tr>
<tr><td colspan="2">Masonry</td><td>in solid bricks</td><td>in hollow bricks</td></tr>
<tr><td colspan="2">Hole drilling</td><td>hammer mode</td><td>rotary mode</td></tr>
<tr><td colspan="2">Use category: dry or wet structure</td><td colspan="2">Category d/d - Installation and use in structures subject to dry internal conditions.
Category w/d - Installation in dry or wet substrate and use in structures subject to dry, internal conditions.
Category w/w - Installation and use in structures subject to dry or wet environmental conditions.</td></tr>
<tr><td colspan="2">Installation direction</td><td colspan="2">horizontal</td></tr>
<tr><td colspan="2">Use category</td><td>b (solid masonry)</td><td>c (hollow or perforated masonry)</td></tr>
<tr><td colspan="2">Temperature in the base material at installation</td><td>+5° C to +40° C</td><td>-5° C to +40° C (HIT-V, HIT-IC)
0° C to +40° C (HAS-U)</td></tr>
<tr><td rowspan="2">In-service temperature</td><td>Temperature range Ta:</td><td>-40 °C to +40°C</td><td>(max. long term temperature +24°C and max. short term temperature +40 °C)</td></tr>
<tr><td>Temperature range Tb:</td><td>-40 °C to +80°C</td><td>(max. long term temperature +50°C and max. short term temperature +80 °C)</td></tr>
</table>

Tension loading

The design tensile resistance is the lower value of

- Steel resistance: $\mathbf{N_{Rd,s}}$
- Pull-out of the anchor: $\mathbf{N_{Rd,p}}$
- Brick breakout failure: $\mathbf{N_{Rd,b}}$
- Pull out of one brick $\mathbf{N_{Rd,pb}}$

Shear loading

The design shear resistance is the lower value of

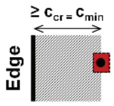
- Steel resistance: $\mathbf{V_{Rd,s}}$
- Local brick failure: $\mathbf{V_{Rd,b}}$
- Pushing out of one brick: $\mathbf{V_{Rd,pb}}$

Design tension and shear resistances – Steel failure for HIT-V and HAS-U

Anchor size				M8	M10	M12
Tension	HIT-V 5.8(F) HAS-U 5.8 (HDG)	$N_{Rd,s}$	[kN]	12,2	19,3	28,1
	HIT-V 8.8(F) HAS-U 8.8 (HDG)			19,5	30,9	44,9
	HIT-V-R HAS-U A4			13,7	21,7	31,6
	HIT-V-HCR HAS-U HCR			19,5	30,9	44,9
Shear	HIT-V 5.8(F) HAS-U 5.8 (HDG)	$V_{Rd,s}$	[kN]	7,4	11,6	16,9
	HIT-V 8.8(F) HAS-U 8.8 (HDG)			11,7	18,6	27,0
	HIT-V-R HAS-U A4			8,2	13,0	18,9
	HIT-V-HCR HAS-U HCR			11,7	18,6	27,0
Bending resistance	HIT-V 5.8(F) HAS-U 5.8 (HDG)	$M^0_{Rd,s}$	[Nm]	15,2	29,6	52,8
	HIT-V 8.8(F) HAS-U 8.8 (HDG)			24,0	48,0	84,0
	HIT-V-R HAS-U A4			16,7	33,4	59,1
	HIT-V-HCR HAS-U HCR			24,0	48,0	84,0

Design tension and shear resistances – Steel failure for internally threaded sleeves HIT-IC

Anchor size				M8	M10	M12
Tension	HIT-IC	$N_{Rd,s}$	[kN]	3,9	4,8	9,1
Shear	HIT-IC	$V_{Rd,s}$	[kN]	7,4	11,6	16,9
	Screw 8.8			11,7	18,6	27,0
Bending resistance	HIT-IC	$M^0_{Rd,s}$	[Nm]	15,0	29,9	52,4
	Screw 8.8			24,0	47,8	83,8



Design tension and shear resistances – Pull-out failure of the anchor, brick breakout failure and local brick failure at characteristic edge distance ($c \geq c_{cr} = c_{min}$) for single anchor applications

Load type	Anchor size		h_{ef} [mm]	f_b [N/mm²]	w/w and w/d Ta	w/w and w/d Tb	d/d Ta	d/d Tb
					Loads [kN]			
	**SC - Solid clay brick Mz, 2DF**							
$N_{Rd,p} = N_{Rd,b}$ ($c_{cr} = c_{min}$ = 115mm)	HIT-V, HAS-U	M8, M10, M12	80	12	1,2	1,0	1,2	1,0
	HIT-IC	M8			1,2	1,0	1,2	1,0
	HIT-IC	M10, M12			1,6	1,4	1,6	1,4
	HIT-V + HIT-SC HAS-U + HIT-SC	M8, M10, M12 M8, M10, M12			1,6	1,4	1,6	1,4
	HIT-IC + HIT-SC	M8, M10, M12			1,6	1,4	1,6	1,4
$V_{Rd,b}$ ($c_{cr} = c_{min}$ = 115mm)	HIT-V, HAS-U HIT-V + HIT-SC HAS-U + HIT-SC HIT-IC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12 M8, M10, M12 M8, M10, M12	80	12	1,4			
	**HC - Hollow clay brick Hlz, 10DF**							
$N_{Rd,p} = N_{Rd,b}$ ($c_{cr} = c_{min}$ = 150 mm)	HIT-V + HIT-SC HAS-U + HIT-SC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12	80	12	1,2	1,0	1,2	1,0
				20	1,4	1,2	1,4	1,2
$V_{Rd,b}$ ($c_{cr} = c_{min}$ = 150 mm)	HIT-V + HIT-SC HAS-U + HIT-SC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12	80	12	0,8			
				20	1,2			
	**SCS - Solid silica brick KS, 2DF**							
$N_{Rd,p} = N_{Rd,b}$ ($c_{cr} = c_{min}$ = 115 mm)	HIT-V, HAS-U HIT-IC	M8, M10, M12 M8, M10, M12	80	12	2,2	2,0	2,4	2,0
				28	3,4	3,0	3,4	3,0
	HIT-V + HIT-SC HAS-U + HIT-SC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12		12	1,6	1,4	2,2	2,0
				28	2,4	2,2	3,2	3,0
$V_{Rd,b}$ ($c_{cr} = c_{min}$ = 115 mm)	HIT-V, HAS-U HAS-U + HIT-SC HIT-V + HIT-SC HIT-IC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12 M8, M10, M12 M8, M10, M12	80	12	1,6			
				28	2,4			
	**HCS - Hollow silica brick KSL, 8DF**							
$N_{Rd,p} = N_{Rd,b}$ ($c_{cr} = c_{min}$ = 125 mm)	HIT-V + HIT-SC HAS-U + HIT-SC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12	80	12	1,2	1,0	1,4	1,2
				20	1,6	1,4	2,0	1,8
$V_{Rd,b}$ ($c_{cr} = c_{min}$ = 125 mm)	HIT-V + HIT-SC HAS-U + HIT-SC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12	80	12	3,4			
				20	4,8			

Load type	Anchor size		h_{ef} [mm]	f_b [N/mm²]	w/w and w/d Ta	w/w and w/d Tb	d/d Ta	d/d Tb
					Loads [kN]			
	**HLWC – Hollow lightweight concrete brick HBL, 16DF**							
$N_{Rd,p} = N_{Rd,b}$ ($c_{cr} = c_{min}$ = 250 mm)	HIT-V + HIT-SC HAS-U + HIT-SC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12	80	2	0,5	0,4	0,6	0,5
				6	0,8	0,6	1,0	0,8
$V_{Rd,b}$ ($c_{cr} = c_{min}$ = 250 mm)	HIT-V + HIT-SC HAS-U + HIT-SC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12	80	2	1,0			
				6	1,6			
	**HNWC – Hollow normal weight concrete brick Parpaing creux**							
$N_{Rd,p} = N_{Rd,b}$ ($c_{cr} = c_{min}$ = 200 mm)	HIT-V + HIT-SC HAS-U + HIT-SC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12	80	4	0,4			
				10	0,5		0,6	
$V_{Rd,b}$ ($c_{cr} = c_{min}$ = 200 mm)	HIT-V + HIT-SC HAS-U + HIT-SC HIT-IC + HIT-SC	M8, M10, M12 M8, M10, M12 M8, M10, M12	80	4	1,0			
				10	1,6			

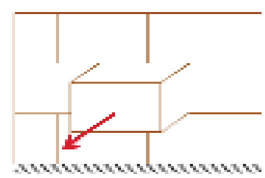
Design tension and shear resistances – Pull out and pushing out of one brick failures

Pull out of one brick (tension):

$N_{Rd,pb} = 2 \cdot l \cdot b \cdot (0{,}5 \cdot f_{vko} + 0{,}4 \cdot \sigma_d) / (2{,}5 \cdot 1000)$ [kN]

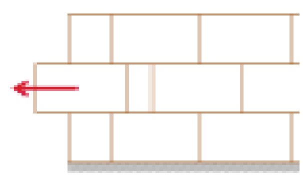
$N_{Rd,pb}{}^* = (2 \cdot l \cdot b \cdot (0{,}5 \cdot f_{vko} + 0{,}4 \cdot \sigma_d) + b \cdot h \cdot f_{vko}) / (2{,}5 \cdot 1000)$ [kN]

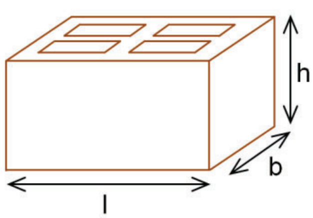
* this equation is applicable if the vertical joints are filled



Pushing out of one brick (shear):

$V_{Rd,pb} = 2 \cdot l \cdot b \cdot (0{,}5 \cdot f_{vko} + 0{,}4 \cdot \sigma_d) / (2{,}5 \cdot 1000)$ [kN]





σ_d = design compressive stress perpendicular to the shear (N/mm²)
f_{vko} = initial shear strength according to EN 1996-1-1, Table 3.4

Brick type	Mortar strength	f_{vko} [N/mm²]
Clay brick	M2,5 to M9	0,20
	M10 to M20	0,30
All other types	M2,5 to M9	0,15
	M10 to M20	0,20

On-site test

For other bricks in solid or hollow masonry, not covered by the Hilti HIT-HY 170 ETA or this technical data manual, the characteristic resistance may be determined by on-site tension tests (pull-out tests or proof-load tests), according to EOTA TR 053.

For the evaluation of test results, the characteristic resistance shall be obtained taking into account the β factor, which considers the different influences of the product.

The β factor for the brick types covered by the Hilti HIT-HY 170 ETA is provided in the following table:

Use categories		**w/w and w/d**		**d/d**	
Temperature range		**Ta***	**Tb***	**Ta***	**Tb***
Base material	**Elements**				
Solid clay brick	HIT-V, HAS-U or HIT-IC	0,97	0,83	0,97	0,83
	HIT-V + HIT-SC HAS-U + HIT-SC				
	HIT-IC + HIT-SC				
Solid calcium silicate brick	HIT-V, HAS-U or HIT-IC	0,96	0,84	0,97	0,84
	HIT-V + HIT-SC HAS-U + HIT-SC	0,69	0,62	0,91	0,82
	HIT-IC + HIT-SC				
Hollow clay brick	HIT-V + HIT-SC HAS-U + HIT-SC	0,97	0,83	0,97	0,83
	HIT-IC + HIT-SC				
Hollow calcium silicate brick	HIT-V + HIT-SC HAS-U + HIT-SC	0,69	0,62	0,91	0,82
	HIT-IC + HIT-SC				
Hollow lightweight concrete brick	HIT-V + HIT-SC HAS-U + HIT-SC	0,89	0,81	0,97	0,86
	HIT-IC + HIT-SC				
Hollow normal weight concrete brick	HIT-V + HIT-SC HAS-U + HIT-SC	0,97	0,80	0,97	0,80
	HIT-IC + HIT-SC				

*Ta / Tb, w/w and d/d anchorage parameters, as defined on Tables pages 8-9

Applying the β factor from the table above, the characteristic tension resistance N_{Rk} can be obtained. Characteristic shear resistance V_{Rk} can also be directly derived from N_{Rk}. For detailed procedure consult EOTA TR 053.

Materials

Material quality

Part	Material
Zinc coated steel	
Threaded rod, HIT-V 5.8 (F) HAS-U 5.8 (HDG)	Strength class 5.8; Elongation at fracture A5 > 8% ductile Electroplated zinc coated ≥ 5µm; (HDG), (F) hot dip galvanized ≥ 45 µm
Threaded rod, HIT-V 8.8 (F) HAS-U 8.8 (HDG)	Strength class 8.8; Elongation at fracture A5 > 12% ductile Electroplated zinc coated ≥ 5µm; (HDG), (F) hot dip galvanized ≥ 45 µm
Washer	Electroplated zinc coated ≥ 5 µm, hot dip galvanized ≥ 45 µm
Nut	Strength class of nut adapted to strength class of threaded rod. Electroplated zinc coated ≥ 5µm, hot dip galvanized ≥ 45 µm
Internally threaded sleeve HIT-IC	A5 > 8% ductile Electroplated zinc coated ≥ 5 µm
Stainless Steel	
Threaded rod, HIT-V-R HAS-U A4	Strength class 70 for M8-M12 Elongation at fracture A5 > 8% ductile Stainless steel 1.4401; 1.4404; 1.4578; 1.4571; 1.4439; 1.4362
Washer	Stainless steel 1.4401, 1.4404, 1.4578, 1.4571, 1.4439, 1.4362 EN 10088-1:2014
Nut	Stainless steel 1.4401, 1.4404, 1.4578, 1.4571, 1.4439, 1.4362 EN 10088-1:2014
High corrosion resistant steel	
Threaded rod, HIT-V-HCR HAS-U HCR	Strength class 80 for M8-M12 Elongation at fracture A5 > 8% ductile High corrosion resistance steel 1.4529; 1.4565;
Washer	High corrosion resistant steel 1.4529, 1.4565 EN 10088-1:2014
Nut	High corrosion resistant steel 1.4529, 1.4565 EN 10088-1:2014
Sieve sleeve	
Sieve sleeve HIT-SC	Frame: Polyfort FPP 20T Sieve: PA6.6 N500/200

Base materials:

- Solid brick masonry. The characteristic resistances are also valid for larger brick sizes and larger compressive strengths of the masonry unit.
- Hollow brick masonry
- Mortar strength class of the masonry: M2,5 at minimum according to EN 998-2: 2010.
- For other bricks in solid masonry and in hollow or perforated masonry, the characteristic resistance of the anchor may be determined by on-site tests according to EOTA TR 053 under consideration of the β-factor according to Table page 9.

Setting information

Installation temperature range

For solid masonry:
-5°C to +40°C (HIT-V, HIT-IC)
0°C to +40°C (HAS-U)

For hollow masonry:
+5°C to +40°C (HIT-V, HAS-U, HIT-IC with HIT-SC)

In service temperature range

Hilti HIT-HY 170 injection mortar may be applied in the temperature ranges given below. An elevated base material temperature may lead to a reduction of the design bond resistance.

Temperature range	Base material temperature	Maximum long term base material temperature	Maximum short term base material temperature
Temperature range I	-40 °C to + 40 °C	+ 24 °C	+ 40 °C
Temperature range II	-40 °C to + 80 °C	+ 50 °C	+ 80 °C

Maximum short term base material temperature

Short term elevated base material temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling.

Maximum long term base material temperature

Long term elevated base material temperatures are roughly constant over significant periods of time.

Working time and curing time [a)]

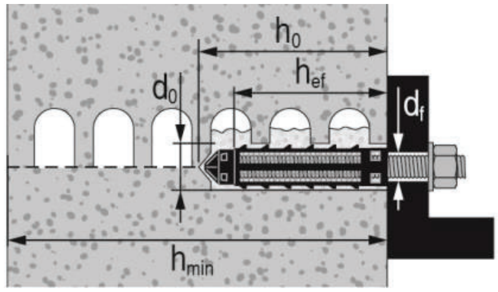
Temperature of the base material	Maximum working time	Minimum curing time
T_{BM}	t_{work}	t_{cure} [a)]
-5 °C ≤ T_{BM} ≤ 0 °C [a)]	10 min	12 h
0 °C ≤ T_{BM} ≤ 5 °C [a)]	10 min	5 h
5 °C ≤ T_{BM} ≤ 10 °C	8 min	2,5 h
10°C ≤ T_{BM} ≤ 20 °C	5 min	1,5 h
20 °C ≤ T_{BM} ≤ 30 °C	3 min	45 min
30 °C ≤ T_{BM} ≤ 40 °C	2 min	30 min

The curing time data are valid for dry base material only. In wet base material the curing times must be doubled.

a) Data valid for hollow bricks only

Insallation Paramenters

Single sieve sleeve, 50mm > h_{ef} > 80mm



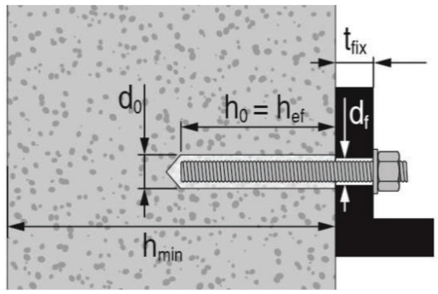
Installation parameters of HIT-V, HAS-U with sieve sleeve HIT-SC in hollow and solid brick

Threaded rods and HIT-V, HAS-U			M8	M10	M12
with HIT-SC			**16x85**		**18x85**
Nominal diameter of drill bit	d_0	[mm]	16	16	18
Drill hole depth	h_0	[mm]	95	95	95
Effective embedment depth	h_{ef}	[mm]	80	80	80
Maximum diameter of clearance hole in the fixture	d_f	[mm]	9	12	14
Minimum wall thickness	h_{min}	[mm]	115	115	115
Brush HIT-RB			16	16	18
Number of strokes HDM			6	6	8
Number of strokes HDE 500-A			5	5	6
Maximum torque moment for all brick types except “parpaing creux”	T_{max}	[Nm]	3	4	6
Maximum torque moment for “parpaing creux”	T_{max}	[Nm]	2	2	3

Installation parameters of HIT-IC with HIT-SC in hollow and solid brick

HIT-IC			M8	M10	M12
with HIT-SC			**16x85**	**18x85**	**22x85**
Nominal diameter of drill bit	d_0	[mm]	16	18	22
Drill hole depth	h_0	[mm]	95	95	95
Effective embedment depth	h_{ef}	[mm]	80	80	80
Thread engagement length	h_s	[mm]	8…75	10…75	12…75
Maximum diameter of clearance hole in the fixture	d_f	[mm]	9	12	14
Minimum wall thickness	h_{min}	[mm]	115	115	115
Brush HIT-RB			16	18	22
Number of strokes HDM			6	8	10
Number of strokes HDE-500			5	6	8
Maximum torque moment	T_{max}	[Nm]	3	4	6

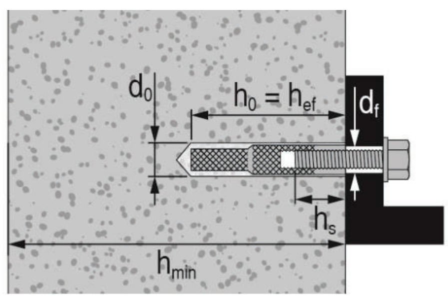
Solid bricks without sieve sleeves [a)]



Installation parameters of HIT-V, HAS-U in solid bricks

Threaded rods and HIT-V, HAS-U			M8	M10	M12
Nominal diameter of drill bit	d_0	[mm]	10	12	14
Drill hole depth = Effective embedment depth	$h_0 = h_{ef}$	[mm]	50…300	50…300	50…300
Maximum diameter of clearance hole in the fixture	d_f	[mm]	9	12	14
Minimum wall thickness	h_{min}	[mm]	h_0+30	h_0+30	h_0+30
Brush HIT-RB			10	12	14
Maximum torque moment	T_{max}	[Nm]	5	8	10

a) Hilti recommends the anchoring in masonry always with sieve sleeve. Anchors can only be installed without sieve sleeves in solid bricks when it is guaranteed that it has not any hole or void.



Installation parameters of HIT-IC in solid bricks

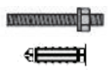
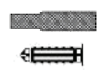
HIT-IC			M8x80	M10x80	M12x80
Nominal diameter of drill bit	d_0	[mm]	14	16	18
Drill hole depth = Effective embedment depth	$h_0 = h_{ef}$	[mm]	80	80	80
Thread engagement length	h_s	[mm]	8…75	10…75	12…75
Maximum diameter of clearance hole in the fixture	d_f	[mm]	9	12	14
Minimum wall thickness	h_{min}	[mm]	115	115	115
Brush HIT-RB			14	16	18
Maximum torque moment	T_{max}	[Nm]	5	8	10

a) Hilti recommends the anchoring in masonry always with sieve sleeve. Anchors can only be installed without sieve sleeves in solid bricks when it is guaranteed that it has not any hole or void.

Installation equipment

Anchor size	M8	M10	M12
Rotary hammer	TE2(A) – TE30(A)		
Other tools	compressed air gun or blow out pump, set of cleaning brushes, dispenser		

Drilling and cleaning parameters

HAS-U, HIT-V [a)]	HAS-U, HIT-V + sieve sleeve	HIT-IC [a)]	HIT-IC + sieve sleeve	Drilling and cleaning	
				Hammer drill	Brush HIT-RB
				d_0 [mm]	size [mm]
					
M8	-	-	-	10	10
M10	-	-	-	12	12
M12	-	**M8**	-	14	14
-	**M8**	-	-	16	16
-	**M10**	**M10**	**M8**	16	16
-	**M12**	**M12**	**M10**	18	18
-	-	-	**M12**	22	22

a) Installation without the sieve sleeve HIT-SC can be used only in case of solid bricks.

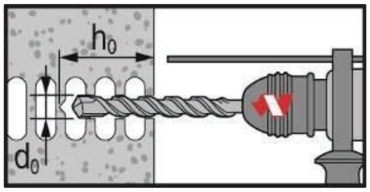
Setting instructions

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

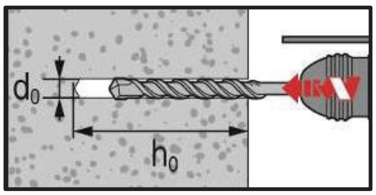
Safety regulations.

Review the Material Safety Data Sheet (MSDS) before use for proper and safe handling! Wear well-fitting protective goggles and protective gloves when working with Hilti HIT-HY 170.

Drilling

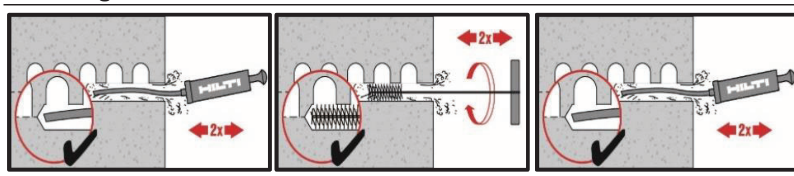


In hollow bricks: rotary mode

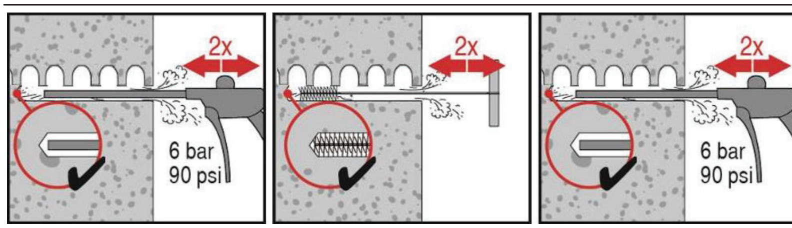


In solid bricks: hammer mode

Cleaning



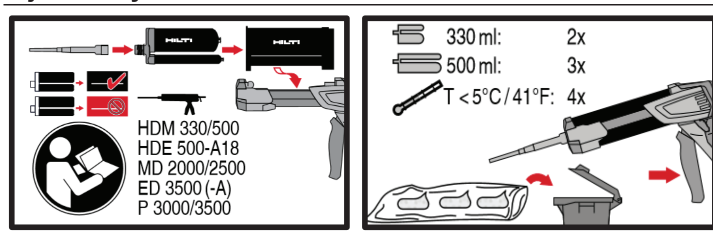
Manual cleaning (MC)



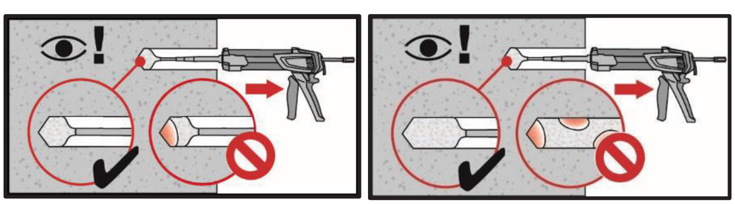
Compressed air cleaning (CAC)

Instructions for solid bricks without sieve sleeve

Injection system

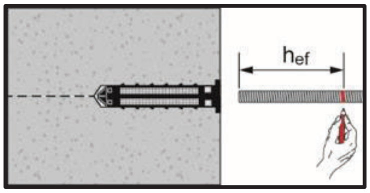


Injection system preparation.

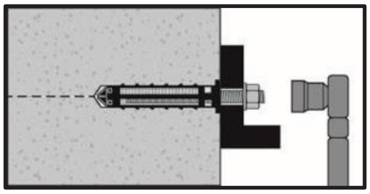


Injection method for drill hole

Setting the element



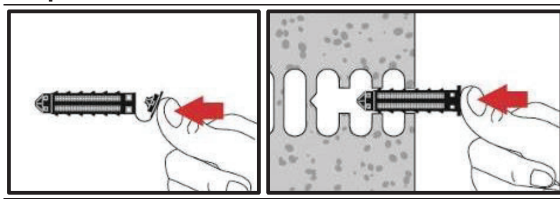
Presetting element, observe working time “t_{work}”,



Loading the anchor: After required curing time t_{cure} the anchor can be loaded.

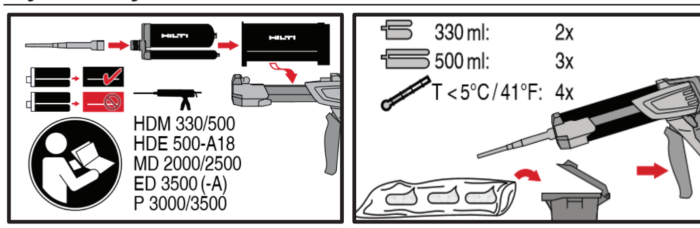
Instructions for hollow and solid bricks with sieve sleeve

Praparation of the sieve sleeve



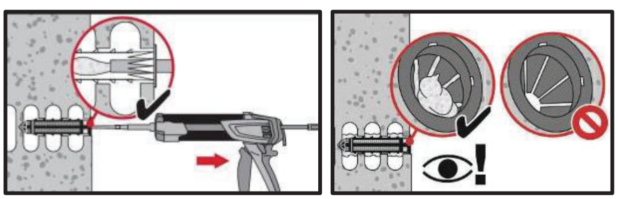
Close lid and insert sieve sleeve manually

Injection system



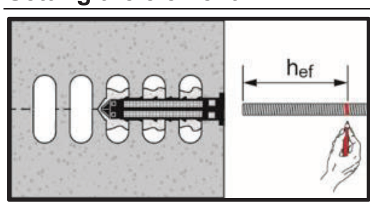
Injection system preparation.

Injection system: hollow bricks

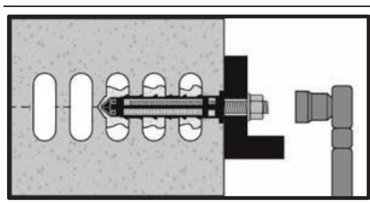


Installation with sieve sleeve HIT-SC

Setting the element



Presetting element, observe working time “t_{work}”,



Loading the anchor: After required curing time t_{cure} the anchor can be loaded.