



HVU with HIS-(R)N adhesive anchor

Mortar System	Benefits
 <p>Hilti HVU foil capsule</p>  <p>Internal threaded sleeve HIS-N HIS-RN (A4-70)</p>	<ul style="list-style-type: none"> ■ suitable for non-cracked concrete C 20/25 to C 50/60 ■ high loading capacity ■ suitable for dry and water saturated concrete



Concrete



Small edge distance & spacing



Fire resistance



Corrosion resistance



European Technical Approval



CE conformity



Hilti anchor design software

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
- Steel failure
- Base material thickness, as specified in the table
- One typical embedment depth, as specified in the table
- One anchor material, as specified in the tables
- Non cracked concrete $f_{c,cyl} = 32$ MPa
- Temperature range I
 (min. base material temperature -40°C , max. long term/short term base material temperature: $+24^{\circ}\text{C}/40^{\circ}\text{C}$)
- Installation temperature range -5°C to $+40^{\circ}\text{C}$

Embedment depth and base material thickness for the basic loading data

Recommended loads

Anchor size	M8	M10	M12	M16	M20
Embedment depth [mm]	90	110	125	170	205
Base material thickness [mm]	120	150	170	230	270

Recommended loads

Anchor HIS-N with Grade 8.8 bolt

		Data according ETA-05/0255, issue 2011-06-23				
Anchor size		M8	M10	M12	M16	M20
Tensile N_{rec}	[kN]	12.5	21.7	31.9	51.6	53.0
Shear V_{rec}	[kN]	7.4	13.1	18.6	28.1	26.2

Note: Contact your Hilti Field engineer or technical adviser for further details.

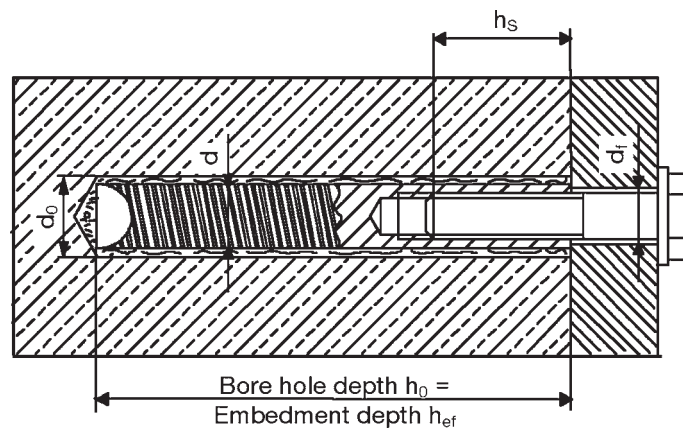
Approvals / certificates

Description	Authority / Laboratory	No. / date of issue
European technical approval ^{a)}	DIBt, Berlin	ETA-05/0255 / 2011-06-23
Fire test report	IBMB, Braunschweig	UB-3333/0891-1 / 2004-03-26
Assessment report (fire)	warringtonfire	WF 166402 / 2007-10-26

a) All data given in this section according ETA-05/0255, issue 2011-06-23

Curing time for general conditions

Data according ETA-05/0255, issue 2011-06-23	
Temperature of the base material	Curing time before anchor can be fully loaded t_{cure}
20 °C to 40 °C	20 min
10 °C to 19 °C	30 min
0 °C to 9 °C	1 h
-5 °C to - 1 °C	5 h



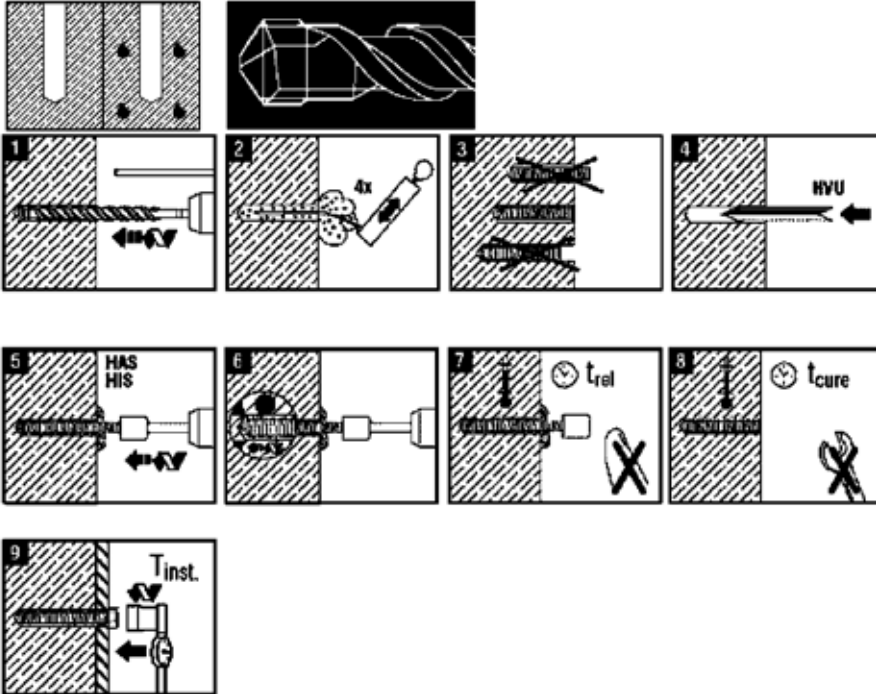
Setting details

		Data according ETA-05/0255, issue 2011-06-23				
Anchor size	Sleeve HIS-(R)N foil capsule	M8x90 M10x90	M10x110 M12x110	M12x125 M16x125	M16x170 M20x170	M20x205 M24x210
Nominal diameter of drill bit	d_0 [mm]	14	18	22	28	32
Diameter of element	d [mm]	12.5	16.5	20.5	25.4	27.6
Effective anchorage and drill hole depth	$h_{ef,min}$ [mm]	90	110	125	170	205
Diameter of clearance hole in the fixture	d_f [mm]	9	12	14	18	22
Thread engagement length; min - max	h_s [mm]	8-20	10-25	12-30	16-40	20-50
Minimum spacing	s_{min} [mm]	40	45	60	80	125
Minimum edge distance	c_{min} [mm]	40	45	60	80	125
Torque moment ^{a)}	t_{max} [Nm]	10	20	40	80	150

a) This is the maximum recommended torque moment to avoid splitting failure during installation for anchors with minimum spacing and/or edge distance.

Setting instructions

Dry and water-saturated concrete, hammer drilling



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

For technical data for anchors in diamond drilled holes please contact the Hilti Technical advisory service.