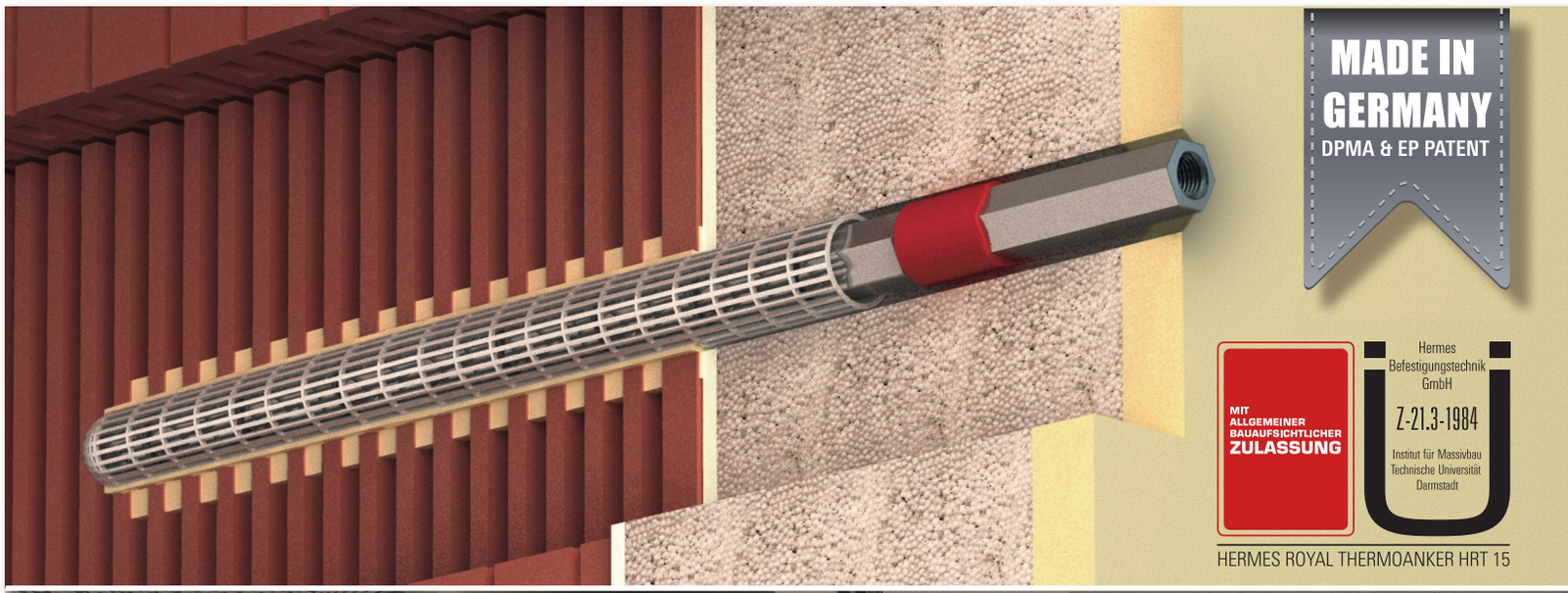
HERMES ROYAL THERMO-ANKER

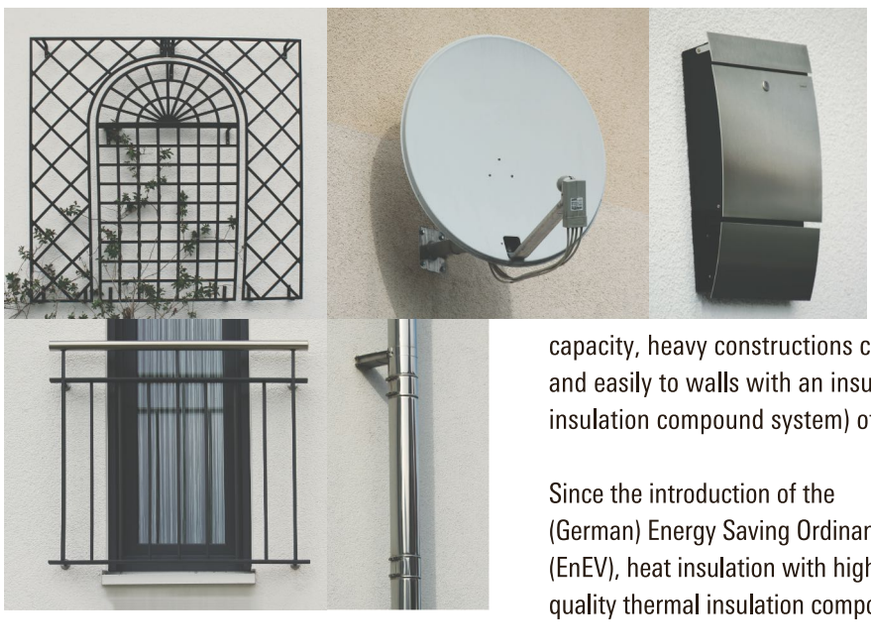
THE NEW INNOVATIVE ANCHORING METHOD FOR THERMALLY INSULATED EXTERIOR WALLS WITH A THERMAL INSULATION COMPOUND SYSTEM OF UP TO 25CM.



DPMA & EP PATENT

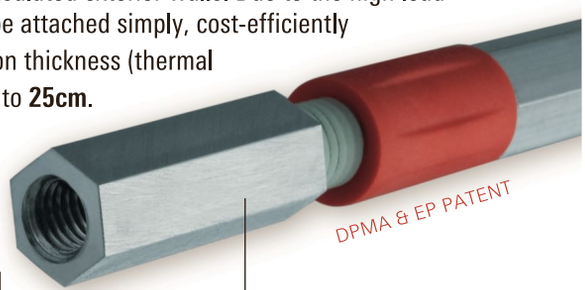
- NO HEAT LOSS DUE TO THERMAL BARRIER
- NO THERMAL BRIDGES ON THE BUILDING
- THERE IS NO NEED FOR CONSTRUCTIONAL PRELIMINARY WORK: E.G. THERMAL / ISO BLOCK, WOODEN SUBSTRUCTURES, BASE PLATES, ETC.
- HIGH LOAD-BEARING CAPACITY – SUITABLE FOR UNIVERSAL USE
- SIMPLE ASSEMBLY WITHOUT SPECIAL TOOLS
- CAN BE USED ON THERMAL INSULATION COMPOUND SYSTEMS UP TO 25CM THICK
- SAFETY GUARANTEED WITH BUILDING INSPECTORATE APPROVAL

Even in highly thermally insulated exterior walls the HERMES ROYAL THERMO-ANKER render thermal bridge effects negligible!

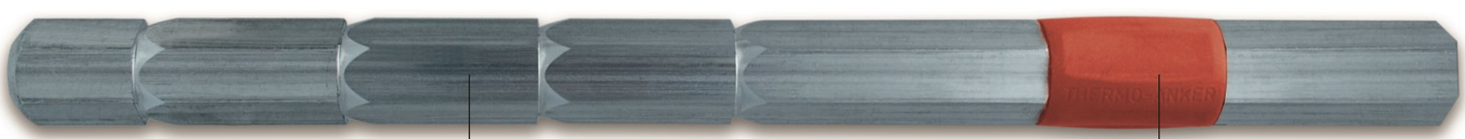


The HERMES ROYAL THERMO-ANKER is an anchoring system with a thermal barrier that allows heavy components weighing up to **40 kg (V_{zul})** per anchor to be mounted on thermally insulated exterior walls.
The THERMO-ANKER is an innovative and secure solution that prevents thermal bridging when mounting exterior components on thermally insulated exterior walls. Due to the high load capacity, heavy constructions can be attached simply, cost-efficiently and easily to walls with an insulation thickness (thermal insulation compound system) of up to **25cm**.

Since the introduction of the (German) Energy Saving Ordinance (EnEV), heat insulation with high quality thermal insulation compound systems has been paramount in new buildings and in renovations. Planners and tradesmen are increasingly being faced with the task of mounting their constructions on these heat-insulated exterior facades. With a heat transition coefficient **(U value) of ~0.2W/(m2.K)**, the Hermes Royal Thermo-Anker is the ideal system solution for thermally insulated walls.



Stainless steel **holder** for fittings and mounting elements with metric threads



DPMA & EP PATENT

Base frame made of stainless steel or alvanised steel. Six-edged material with indents for a secure hold

Thermal barrier made of glass-fibre-reinforced plastic

The HERMES ROYAL THERMO-ANKER comes in two versions (heavy duty & light load) for an insulation thickness (thermal insulation compound system) of up to 25cm:

HEAVY DUTY ANCHOR (HRT 15)

Examples of use: awnings, canopies, shutters, sliding shutters, balustrades, hand rails, blinds, French balconies, protection barriers, pergolas, conservatories, curtain walls, protruding shutter boxes, satellite dishes, etc.

HERMES ROYAL HEAVY DUTY ANCHOR (HRT 15)

The HRT 15 stainless steel A4 is an approved component of the Hilti HIT MM PLUS (heed approval)

ART. NO.	ARTICLE DESCRIPTION
1123141*	Thermo-Anker 330 mm, SW15, anchor stainless steel A4, holder stainless steel A4, thread M10
1123161*	Thermo-Anker 370 mm, SW15, anchor stainless steel A4, holder stainless steel A4, thread M10
1124141*	Thermo-Anker 330 mm, SW15, anchor stainless steel A4, holder stainless steel A4, thread M12
1124161*	Thermo-Anker 370 mm, SW15, anchor stainless steel A4, holder stainless steel A4, thread M12

*apporved component

LIGHT LOAD ANCHOR (HRT 13)

Examples of use: outdoor lighting, post boxes, signs, house numbers, gutter pipes, external chimneys, alarm systems, window boxes, trellises, etc.

HERMES ROYAL LIGHT LOAD ANCHOR (HRT 13)

The HRT 13 is not an approved component

ART. NO.	ARTICLE DESCRIPTION
1113130	Thermo-Anker 330mm, SW13, anchor in galvanised steel,holder stainless steel A2, thread M10
1113150	Thermo-Anker 370mm, SW13, anchor in galvanised steel,holder stainless steel A2, thread M10

maximum approved tensile and shear loads and component dimensions for the HRT 15*

	sustainability of thermal barrier	solid brick				perforated brick			
		Mz	KS	PB 2	PB 4	Hlz	KSL	Hbn	Bims
perforated-/solid brick geometry						see approval (attachment 5)			
c_{min} [mm]		50	50	150	150	35	35	35	70
s_{min} [mm]		100	100	300	300	70	70	70	140
tensile loads per dowel									
N_{Rk} [kN]	1,80	2,26	2,50	0,81	2,35	0,35	0,35	0,35	0,60
N_{Rd} [kN]	0,72	0,90	1,00	0,41	1,18	0,14	0,14	0,14	0,24
N_{zul} [kN][1)]	0,51	0,64	0,71	0,29	0,84	0,10	0,10	0,10	0,17
shear loads per dowel (load to free border)									
V_{Rk} [kN]	1,40	7,85	7,67	1,14	3,30	0,30	1,00	1,00	0,40
V_{Rd} [kN]	0,56	3,14	3,06	0,57	1,65	0,12	0,40	0,40	0,12
V_{zul} [kN][1)]	0,40	2,24	2,19	0,41	1,18	0,09	0,29	0,29	0,09
shear loads per dowel (load parallel or off to free border or c > 250 mm)									
V_{Rk} [kN]	1,40	7,85	7,67	1,14	3,30	0,60	2,00	2,00	0,80
V_{Rd} [kN]	0,56	3,14	3,06	0,57	1,65	0,24	0,80	0,80	0,32
V_{zul} [kN][1)]	0,40	2,24	2,19	0,41	1,18	0,17	0,57	0,57	0,23

1) mit $\gamma_F = 1,4$

lever arm		solid brick				perforated brick			
shear loads with lever arm per dowel (Belastung parallel oder weg vom freien Rand oder c ≥ 250 mm)									
δ_{v0} = 5,0 mm		Mz	KS	PB 2	PB 4	Hlz	KSL	Hbn	Bims
$V_{max,zul}$ [kN] für δ_{v0}	30 mm	0,40	0,40	0,40	0,40	0,17	0,40	0,40	0,23
$V_{max,zul}$ [kN] für δ_{v0}	bis	0,40	0,40	0,40	0,40	0,17	0,40	0,40	0,23
$V_{max,zul}$ [kN] für δ_{v0}	100mm	0,40	0,40	0,40	0,40	0,17	0,40	0,40	0,23
$V_{max,zul}$ [kN] für δ_{v0}	120 mm	0,40	0,40	0,40	0,40	0,17	0,40	0,40	0,23
$V_{max,zul}$ [kN] für δ_{v0}	140 mm	0,40	0,40	0,40	0,40	0,17	0,40	0,40	0,23
$V_{max,zul}$ [kN] für δ_{v0}	160 mm	0,40	0,40	0,40	0,40	0,17	0,40	0,40	0,23
$V_{max,zul}$ [kN] für δ_{v0}	180 mm	0,28	0,28	0,28	0,28	0,17	0,28	0,28	0,23
$V_{max,zul}$ [kN] für δ_{v0}	200 mm	0,20	0,20	0,20	0,20	0,17	0,20	0,20	0,20
$V_{max,zul}$ [kN] für δ_{v0}	250 mm	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10

* meanderings attend in approval

HILTI ACCESSORIES AND SUPPLIES FOR WORKING WITH HERMES ROYAL THERMO-ANKER HRT 15 AND HRT 13:

SET – HRT 15 OR HRT 13

incl. grout injection mortar Hilti HIT-MM PLUS 330/2

SET – HRT 13

Incl. grout injection mortar Hilti HFX 275/2

BASIC SET – HRT 15 OR HRT 13

Thermo-Anker HRT 15 or HRT 13, incl. grout injection mortar Hilti HIT-MM PLUS 330/2 and dispenser Hilti HDM 330 CR/CB in the box

BASIC SET – HRT 13

Thermo-Anker HRT 13 incl. grout injection mortar Hilti HFX 275/2 and dispenser Hilti MD 1000 in the box

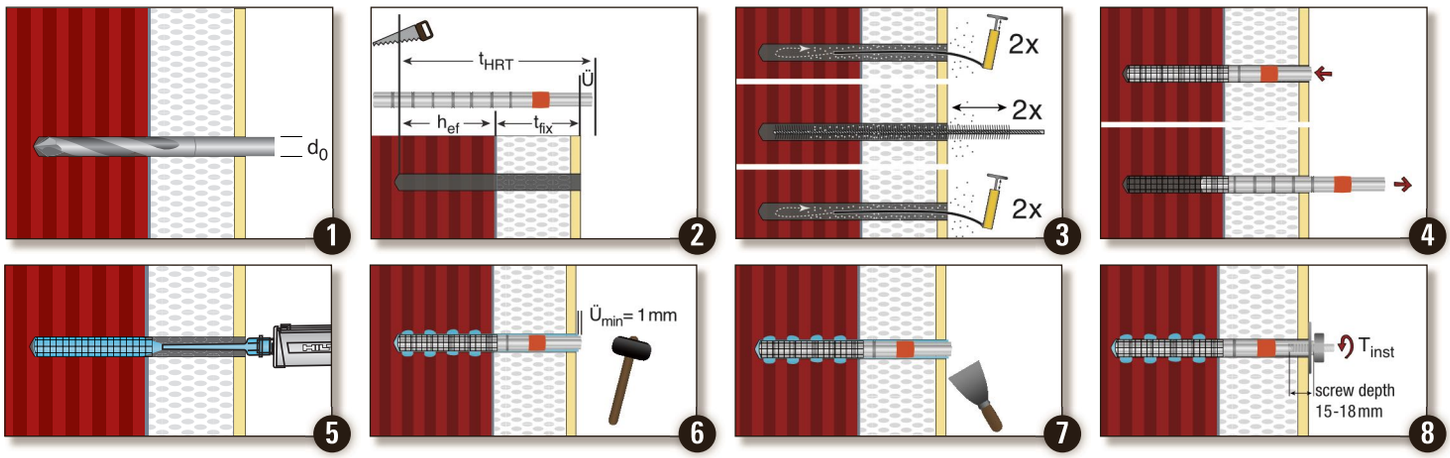
PREMIUM SET – HRT 15 OR HRT 13

Incl. grout injection mortar Hilti HIT-MM PLUS 330/2, dispenser Hilti HDM 330 CR/CB in the case + drill, steel brush and blow-out pump

PREMIUM SET – HRT 13

Incl. grout injection mortar Hilti HFX 275/2 and dispenser Hilti MD 1000 in the box + drill, steel brush and blow-out pump

ASSEMBLY/SET INSTRUCTIONS



1. Drill hole: HRT 15 » d_0 = 20mm / HRT 13 » d_0 = 18mm
2. Thermo-Anker/Cut sleeve to appropriate length as necessary
3. Clean drill hole: 2x blowing, 2x brushing, 2x blowing
4. Insert sleeve into the wall using the Thermo-Anker – pull the Thermo-Anker out again – the sleeve remains in the wall
5. Inject **Hilti HIT-MM PLUS** into the sleeve completely until it comes out of the mouth of bore (Observe Hilti instruction manual!)
6. Hammer/screw in the Thermo-Anker until it protrudes at least 1mm over the final layer of plaster
7. Level any surplus Hilti HIT on the outer wall out with a trowel for sealing purposes, remove surplus and leave to set
8. Secure attachment while observing torque T_{inst}

Because installing a HERMES ROYAL THERMO-ANKER requires no additional components or preliminary installations, assembly is more cost-efficient and just as effective as systems to date. The HERMES ROYAL THERMO-ANKER should ideally be positioned once the insulation (thermal insulation compound system) and the mesh filter have been installed and before the final layer of plaster has been applied. It can, however, also be installed at a later stage.

ASSEMBLY DATA

Type	Thickness of Anchor	Material**	Min. anchor depth h_{ef}	Min. drill hole depth h_d	Drill hole diameter d_0	length of Thermo-Anker t_{HRT}	length of sleeves	Req. min. quantity of mortal (approx. Info.)		Screw depth of threaded holder		$T_{inst.}$ max
										Min	Max	
HRT 15	SW 15	Concrete/Solid Brick	100mm	$h_d=h_{ef}+10mm$	20mm	$t_{HRT}=t_{fix}+h_{ef}+Ü$	t_{HRT} - 80mm	8 Hub	40ml	15mm	18mm	5Nm
		Perforated brick	150mm		20mm			18 Hub	90ml			2Nm
HRT 13*	SW 13	Concrete/Solid Brick	100mm	$h_d=h_{ef}+10mm$	18mm	$t_{HRT}=t_{fix}+h_{ef}+Ü$	t_{HRT} - 75mm	7 Hub	35ml	15mm	18mm	5Nm
		Perforated brick	150mm		18mm			17 Hub	85ml			2Nm

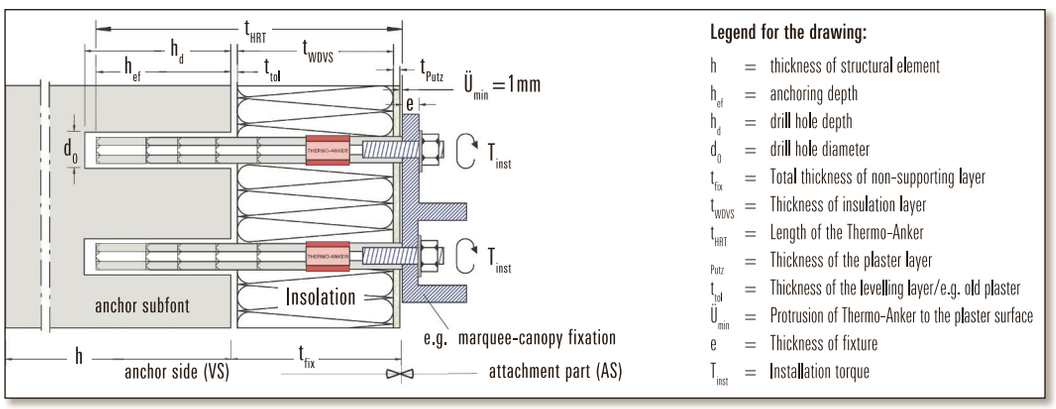
* no element in approval ** concrete is no element in approval. Attend approval.

Diagram

Cross-section of wall with full heat insulation

Installation point for surface/straight assembly of Thermo-Anker.

The innovative construction of the THERMO-ANKER allows for trouble-free straight or inclined installation/corner installation close to the intrados edge.



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