



Hilti HUD Wall Plug

Submission Folder

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Universal plastic anchor HUD



BASE MATERIALS

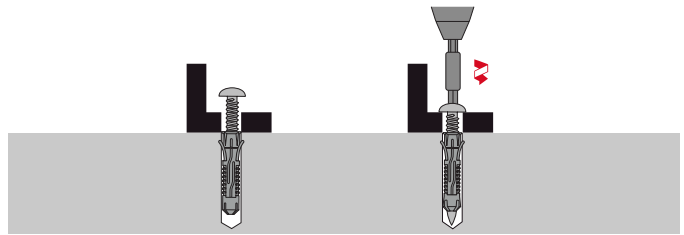
- Concrete (aerated)
- Concrete (uncracked)
- Drywall
- Masonry (hollow)
- Masonry (solid)

APPLICATIONS

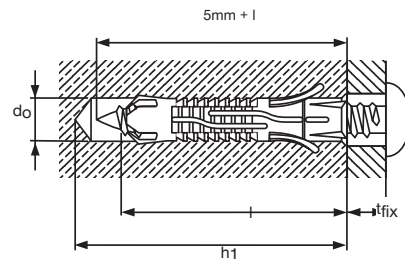
- Many kinds of light-duty fastenings, especially electrical installations, sanitary fixtures, etc.

ADVANTAGES

- Base materials: concrete, solid brick, hollow brick, gas (aerated) concrete, gypsum panel
- High holding power
- Suitable for through-fastening with screw
- Resistance to turning in hole and premature expansion
- Reliable : precise screw guidance, 360° expansion
- Meets safety specifications: contains no heavy metals, halogenes or silicones



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



Technical data

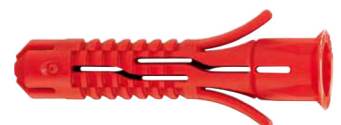
Anchor type	Plastic anchor
Head configuration	N/A
Material composition	Polyamide PA 6
Material, corrosion	Plastic
In-service temperature - range	-40 - 80 °C
Installation direction	All

Universal plastic anchor HUD-2



Ordering designation	Anchor size	Anchor length	Woodscrew diameter	Drill bit diameter	Drilling depth	Screw length	Sales pack quantity	Item number
HUD-2 5x25	5 mm	25 mm	3.5 - 4 mm	5 mm	35 mm	l + tfix+5mm	500 pc	2287818
HUD-2 6x30	6 mm	30 mm	4.5 - 5 mm	6 mm	40 mm	l + tfix +5mm	500 pc	2287820
HUD-2 8x40	8 mm	40 mm	5 - 6 mm	8 mm	55 mm	l + tfix +5mm	400 pc	2287816

Universal plastic anchor HUD-1



Ordering designation	Anchor size	Anchor length	Woodscrew diameter	Drill bit diameter	Drilling depth	Screw length	Sales pack quantity	Item number
HUD-1 10x50	10 mm	50 mm	7 - 8 mm	10 mm	65 mm	l + tfix +5mm	200 pc	331618
HUD-1 12x60	12 mm	60 mm	8 - 10 mm	12 mm	80 mm	l + tfix +5mm	100 pc	331619
HUD-1 14x70	14 mm	70 mm	10 - 12 mm	14 mm	90 mm	l + tfix +5mm	50 pc	331620

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

Universal plastic anchor HUD-L (Long version)



Order Now



Ordering designation	Anchor size	Anchor length	Woodscrew diameter	Drill bit diameter	Drilling depth	Screw length	Sales pack quantity	Item number
HUD-L 6x50	6 mm	50 mm	4.5 - 5 mm	6 mm	70 mm	l + tfix +5mm	400 pc	315938
HUD-L 8x60	8 mm	60 mm	5 - 6 mm	8 mm	80 mm	l + tfix +5mm	200 pc	315939
HUD-L 10x70	10 mm	70 mm	7 - 8 mm	10 mm	90 mm	l + tfix +5mm	100 pc	315940

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

HUD-2 Plastic anchor

Economical universal plastic anchor

Anchor version



HUD-2
(5, 6, 8)

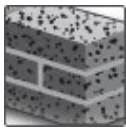
Benefits

- Flat setting
- Flexibility of screw length
- An anchor for every base material

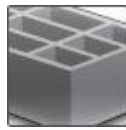
Base material



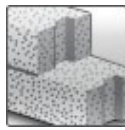
Concrete
(non-cracked)



Solid brick



Hollow brick



Autoclaved
aerated
concrete



Drywall

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

- Plastic anchor with ribbed surface for toggling in hollow material and fins (to prevent the anchor turning in the hole), made of polyamide PA6, for use in concrete, solid brick, hollow brick, aerated concrete and drywall.
- Plastic anchor shall have manufacturer information on volatile organic compounds (VOC) content.
- Anchor shall be installed as per the manufacturer's approved procedure and equipment

Basic loading data

All data in this section applies to:

- Correct setting (see setting instruction)
- Load data are only valid for the specified chipboard screw type
- No edge distance and spacing influence
- Base material as specified in the table
- Minimum base material thickness
- Load data given in the tables is independent of load direction

Anchorage depth

Anchor size		5x25	6x30	8x40
Nominal embedment depth	h_{nom} [mm]	25	30	40

Characteristic resistance

Anchor size		HUD-2 5x25	HUD-2 6x30	HUD-2 8x40
Screw type		Chipboard screw 4x40 ^{a)}	Chipboard screw 5x50 ^{b)}	Chipboard screw 6x50 ^{c)}
Base material	Drilling mode			
Concrete, uncracked Strength \geq C16/20	hammer F_{Rk} [kN]	0,60	1,2	2,5
Solid clay brick Name: Mauerziegel MZ Manuf.: Ziegelwerk Klosterbeuren Size : NF Strength: \geq 20	hammer F_{Rk} [kN]	0,60	0,90	2,50
Hollow clay brick Name: ThermoPlan Planziegel-TS ² 1,2 Manuf.: Ziegelwerk Klosterbeuren Size : 373x175x249 mm Strength class: \geq 12	rotary F_{Rk} [kN]	0,60	0,80	1,20
Autoclaved aerated concrete Name: AAC 4 Manuf.: Ytong Size : 625x250x250 mm Strength: \geq 6	rotary F_{Rk} [kN]	0,30	0,60	0,90
Drywall, single layer 12,5 Name: Bauplatte Manuf.: Knauff Size : 2000x1250x12,5 mm	rotary F_{Rk} [kN]	0,15	0,15	0,15
Drywall, double layer 2x12,5 Name: Bauplatte Manuf.: Knauff Size : 2000x1250x12,5 mm	rotary F_{Rk} [kN]	0,20	0,25	0,40
Fibre reinf. drywall, single layer 12,5 Name: Vidiwall Manuf.: Knauff Size : 1250x1000x12,5 mm	rotary F_{Rk} [kN]	0,50	0,60	0,60

a) chipboard screw 4x40: outer diameter 3,9 mm, core diameter 2,4 mm

b) chipboard screw 5x50: outer diameter 4,8 mm, core diameter 2,9 mm

c) chipboard screw 6x50: outer diameter 5,8 mm, core diameter 3,8 mm

Design resistance ^{d)}

Anchor size		HUD-2 5x25	HUD-2 6x30	HUD-2 8x40
Screw type		Chipboard screw 4x40 ^{a)}	Chipboard screw 5x50 ^{b)}	Chipboard screw 6x50 ^{c)}
Base material	Drilling mode			
Concrete, uncracked Strength \geq C16/20	hammer F_{Rd} [KN]	0,33	0,67	1,4
Solid clay brick Name: Mauerziegel MZ Manuf.: Ziegelwerk Klosterbeuren Size : NF Strength: \geq 20	hammer F_{Rd} [KN]	0,24	0,36	1,00
Hollow clay brick Name: ThermoPlan Planziegel-TS ² 1,2 Manuf.: Ziegelwerk Klosterbeuren Size : 373x175x249 mm Strength class: \geq 12	rotary F_{Rd} [KN]	0,24	0,32	0,48
Autoclaved aerated concrete Name: AAC 4 Manuf.: Ytong Size : 625x250x250 mm Strength: \geq 6	rotary F_{Rd} [KN]	0,15	0,30	0,45
Drywall, single layer 12,5 Name: Bauplatte Manuf.: Knauff Size : 2000x1250x12,5 mm	rotary F_{Rd} [KN]	0,06	0,06	0,06
Drywall, double layer 2x12,5 Name: Bauplatte Manuf.: Knauff Size : 2000x1250x12,5 mm	rotary F_{Rd} [KN]	0,08	0,10	0,16
Fibre reinf. drywall, single layer 12,5 Name: Vidiwall Manuf.: Knauff Size : 1250x1000x12,5 mm	rotary F_{Rd} [KN]	0,20	0,24	0,24

a) chipboard screw 4x40: outer diameter 3,9 mm, core diameter 2,4 mm

b) chipboard screw 5x50: outer diameter 4,8 mm, core diameter 2,9 mm

c) chipboard screw 6x50: outer diameter 5,8 mm, core diameter 3,8 mm

d) with global safety factor factors $\gamma_M = 1,8$ for concrete; $\gamma_M = 2,0$ for AAC, $\gamma_M = 2,5$ for masonry, $\gamma_M = 2,5$ for drywall

Recommended loads ^{d)}

Anchor size		HUD-2 5x25	HUD-2 6x30	HUD-2 8x40
Screw type		Chipboard screw 4x40 ^{a)}	Chipboard screw 5x50 ^{b)}	Chipboard screw 6x50 ^{c)}
Base material	Drilling mode			
Concrete, uncracked Strength \geq C16/20	hammer F_{rec} [KN]	0.12	0.24	0.5
Solid clay brick Name: Mauerziegel MZ Manuf.: Ziegelwerk Klosterbeuren Size : NF Strength: \geq 20	hammer F_{rec} [KN]	0.12	0.18	0.5
Hollow clay brick Name: ThermoPlan Planziegel-TS ² 1,2 Manuf.: Ziegelwerk Klosterbeuren Size : 373x175x249 mm Strength class: \geq 12	rotary F_{rec} [KN]	0.12	0.16	0.24
Autoclaved aerated concrete Name: AAC 4 Manuf.: Ytong Size : 625x250x250 mm Strength: \geq 6	rotary F_{rec} [KN]	0.06	0.12	0.18
Drywall, single layer 12,5 Name: Bauplatte Manuf.: Knauff Size : 2000x1250x12,5 mm	rotary F_{rec} [KN]	0.03	0.03	0.03
Drywall, double layer 2x12,5 Name: Bauplatte Manuf.: Knauff Size : 2000x1250x12,5 mm	rotary F_{rec} [KN]	0.04	0.05	0.08
Fibre reinf. drywall, single layer 12,5 Name: Vidiwall Manuf.: Knauff Size : 1250x1000x12,5 mm	rotary F_{rec} [KN]	0.1	0.12	0.12

a) chipboard screw 4x40: outer diameter 3,9 mm, core diameter 2,4 mm

b) chipboard screw 5x50: outer diameter 4,8 mm, core diameter 2,9 mm

c) chipboard screw 6x50: outer diameter 5,8 mm, core diameter 3,8 mm

d) With overall global safety factor $\gamma = 5$ to the characteristic loads and a partial safety factor of $\gamma = 1,4$ to the design values.

Materials

Material quality

Part	Material
Plastic sleeve	Polyamide 6

Setting information

Installation temperature

-10°C to +40°C

Service temperature range

Hilti HUD-2 universal anchor may be applied in the temperature range given below.

Temperature range	Base material temperature	Max. long term base material temperature	Max. short term base material temperature
Temperature range I	-40 °C to +80 °C	+50 °C	+80 °C

Max short term base material temperature

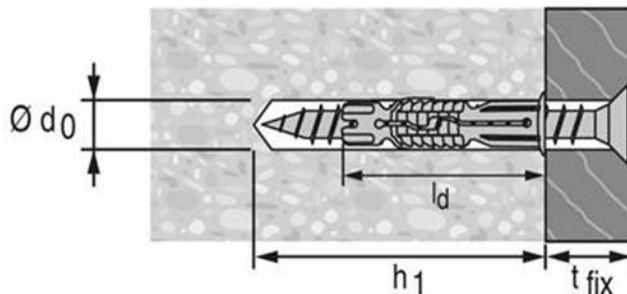
Short-term elevated base material temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling.

Max long term base material temperature

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

Installation parameters

Anchor size		5x25	6x30	8x40
Nominal diameter of drill bit	d_0 [mm]	5	6	8
Cutting diameter of the drill bit	$d_{cut} \leq$ [mm]	5,4	6,4	8,45
Nominal embedment depth	l_d [mm]	25	30	40
Recommended length of screw in base material	[mm]	≥ 30	≥ 35	≥ 45
Drill hole depth	h_0 [mm]	≥ 30	≥ 35	≥ 45
Minimum spacing	s_{min} [mm]	Not determined		
Minimum edge distance	c_{min} [mm]	Not determined		

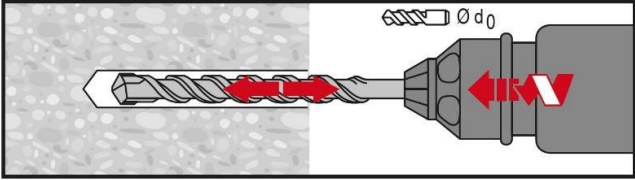
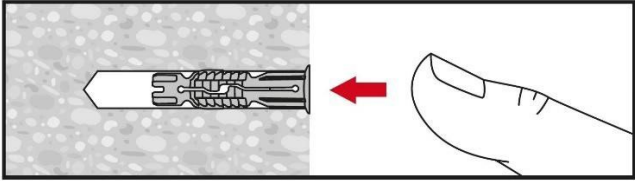
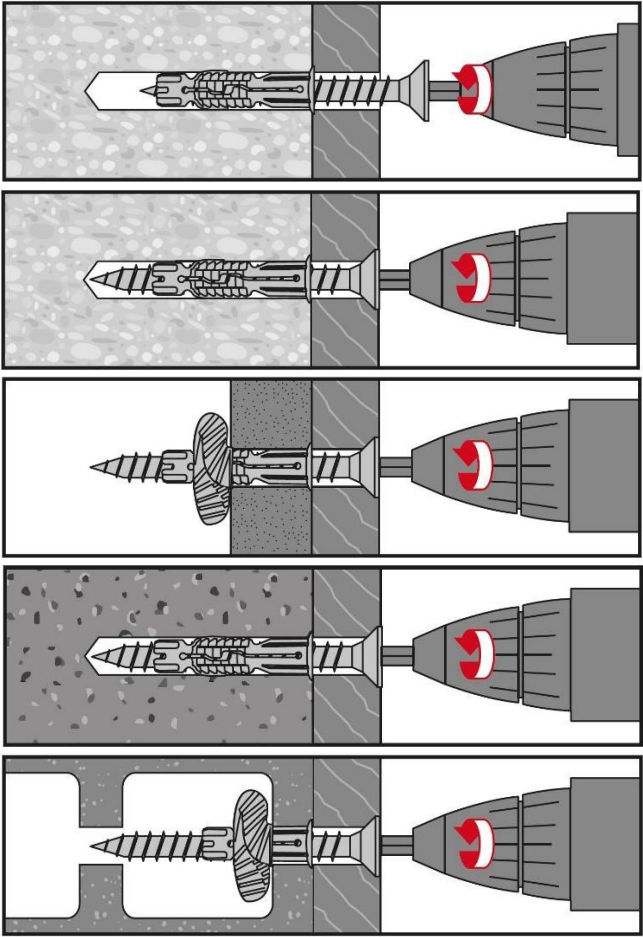


Installation equipment

Anchor size	5x25	6x30	8x40
Rotary hammer	TE 2 - TE16		
Other tools	Screwdriver		

Setting instruction^{a)}

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

Setting instruction	
	1. Drill hole with drill bit
	2. Install anchor
	3. Drive screw into anchor

a) Use only for wall and floor applications. Not applicable for ceiling and façade applications.

HUD-1 Plastic anchor

Economical universal plastic anchor

Anchor version



HUD-1
(M10, M12, M14)

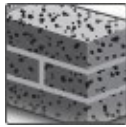
Benefits

- Flat setting
- Flexibility of screw length
- An anchor for every base material

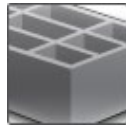
Base material



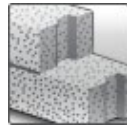
Concrete
(non-cracked)



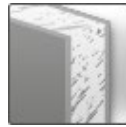
Solid brick



Hollow brick



Autoclaved
aerated
concrete



Drywall

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.

- Plastic anchor with ribbed surface for toggling in hollow material and fins (to prevent the anchor turning in the hole), made of polyamide PA6, for use in concrete, solid brick, hollow brick, aerated concrete and drywall.
- Plastic anchor shall have manufacturer information on volatile organic compounds (VOC) content.
- Anchor shall be installed as per the manufacturer's approved procedure and equipment

Basic loading data

All data in this section applies to:

- Correct setting (See setting instruction)
- Load data are only valid for the specified wood screw type
- No edge distance and spacing influence
- Base material as specified in the table
- Minimum base material thickness

Anchorage depth

Anchor size		10x50	12x60	14x70
Nominal anchorage depth	h_{nom} [mm]	50	60	70

Characteristic resistance

Anchor size		10x50	12x60	14x70
Screw type ^{d)}		W	W	W
Size		8	10	12
DIN		96	571	571
Concrete \geq C16/20	N_{Rk} [kN]	7	10	15
	V_{Rk} [kN]	11	15	28
Solid clay brick Mz 20	N_{Rk} [kN]	4	5	5 ^{c)}
	V_{Rk} [kN]	-	-	-
Solid sand-lime Brick KS 12	N_{Rk} [kN]	5	7,5	7,5 ^{c)}
	V_{Rk} [kN]	6,6	-	-
Hollow clay brick HzB 12	N_{Rk} [kN]	1,25	1,4	1,6
	V_{Rk} [kN]	-	-	-
Hollow clay brick HzB 12 – 15mm plastered	N_{Rk} [kN]	1,5	1,75	2
	V_{Rk} [kN]	-	-	-
Autoclaved aerated concrete AAC 2	N_{Rk} [kN]	1	1,25	1,5
	V_{Rk} [kN]	-	-	-
Autoclaved aerated concrete AAC 4	N_{Rk} [kN]	2	2,5	3
	V_{Rk} [kN]	-	-	-
Gypsum board Thickness 12,5mm	N_{Rk} [kN]	-	-	-
	V_{Rk} [kN]	-	-	-
Gypsum board Thickness 2x12,5mm	N_{Rk} [kN]	0,75 ^{a)}	1,5 ^{b)}	-
	V_{Rk} [kN]	-	-	-
Fibre reinforced gypsum board Thickness 12,5mm	N_{Rk} [kN]	-	-	-
	V_{Rk} [kN]	-	-	-
Fibre reinforced gypsum board Thickness 2x12,5mm	N_{Rk} [kN]	2,1	-	-
	V_{Rk} [kN]	3,36	-	-

a) only with screw diameter 6mm

b) only with screw diameter 8mm

c) only with screw diameter 10mm

d) Screw type: W: Wood-screw C: Chipboard screw

Load data are valid for the mentioned woodscrew type, if other types or different screws are used the load capacity may decrease.

Design resistance

Anchor size		10x50	12x60	14x70
Screw type ^{d)}		W	W	W
Size		8	10	12
DIN		96	571	571
Concrete ≥ C16/20	N _{Rd} [kN]	1,96	2,80	4,20
	V _{Rd} [kN]	3,08	4,20	7,84
Solid clay brick Mz 20	N _{Rd} [kN]	1,12	1,40	1,40 ^{c)}
	V _{Rd} [kN]	-	-	-
Solid sand-lime brick KS 12	N _{Rd} [kN]	1,40	2,10	2,10 ^{c)}
	V _{Rd} [kN]	1,85	-	-
Hollow clay brick HlzB 12	N _{Rd} [kN]	0,35	0,39	0,45
	V _{Rd} [kN]	-	-	-
Hollow clay brick HlzB 12 – 15mm plastered	N _{Rd} [kN]	0,42	0,49	0,56
	V _{Rd} [kN]	-	-	-
Autoclaved aerated concrete AAC 2	N _{Rd} [kN]	0,28	0,35	0,42
	V _{Rd} [kN]	-	-	-
Autoclaved aerated concrete AAC 4	N _{Rd} [kN]	0,56	0,70	0,84
	V _{Rd} [kN]	-	-	-
Gypsum board Thickness 12,5mm	N _{Rd} [kN]	-	-	-
	V _{Rd} [kN]	-	-	-
Gypsum board Thickness 2x12,5mm	N _{Rd} [kN]	0,21 ^{a)}	0,42 ^{b)}	-
	V _{Rd} [kN]	-	-	-
Fibre reinforced gypsum board Thickness 12,5mm	N _{Rd} [kN]	-	-	-
	V _{Rd} [kN]	-	-	-
Fibre reinforced gypsum board Thickness 2x12,5mm	N _{Rd} [kN]	0,59	-	-
	V _{Rd} [kN]	0,94	-	-

a) only with screw diameter 6mm

b) only with screw diameter 8mm

c) only with screw diameter 10mm

d) Screw type: W: Wood-screw C: Chipboard screw

Load data are valid for the mentioned woodscrew type, if other types or different screws are used the load capacity may decrease.

Recommended loads^{e)}

Anchor size		10x50	12x60	14x70
Screw type ^{d)}		W	W	W
Size		8	10	12
DIN		96	571	571
Concrete ≥ C16/20	N _{Rec} [kN]	1,4	2	3
	V _{Rec} [kN]	2,2	3	5,6
Solid clay brick Mz 20	N _{Rec} [kN]	0,8	1	1 ^{c)}
	V _{Rec} [kN]	-	-	-
Solid sand-lime brick KS 12	N _{Rec} [kN]	1	1,5	1,5 ^{c)}
	V _{Rec} [kN]	1,32		
Hollow clay brick HlzB 12	N _{Rec} [kN]	0,25	0,28	0,32
	V _{Rec} [kN]	-	-	-
Hollow clay brick HlzB 12 – 15mm plastered	N _{Rec} [kN]	0,3	0,35	0,4
	V _{Rec} [kN]	-	-	-
Autoclaved aerated concrete AAC 2	N _{Rec} [kN]	0,2	0,25	0,3
	V _{Rec} [kN]			
Autoclaved aerated concrete AAC 4	N _{Rec} [kN]	0,4	0,5	0,6
	V _{Rec} [kN]	-	-	-
Gypsum board Thickness 12,5mm	N _{Rec} [kN]	-	-	-
	V _{Rec} [kN]	-	-	-
Gypsum board Thickness 2x12,5mm	N _{Rec} [kN]	0,15 ^{a)}	0,3 ^{b)}	-
	V _{Rec} [kN]	-	-	-
Fibre reinforced gypsum board Thickness 12,5mm	N _{Rec} [kN]	-	-	-
	V _{Rec} [kN]	-	-	-
Fibre reinforced gypsum board Thickness 2x12,5mm	N _{Rec} [kN]	0,42	-	-
	V _{Rec} [kN]	0,67	-	-

a) only with screw diameter 6mm

b) only with screw diameter 8mm

c) only with screw diameter 10mm

d) Screw type: W: Wood-screw C: Chipboard screw

Load data are valid for the mentioned woodscrew type, if other types or different screws are used the load capacity may decrease.

e) With overall global safety factor $\gamma = 5$ to the characteristic loads and a partial safety factor of $\gamma = 1,4$ to the design values.

Materials

Material quality

Part	Material
Plastic sleeve	Polyamide 6

Setting information

Installation temperature

-10°C to +40°C

Service temperature range

Hilti HUD-1 universal anchor may be applied in the temperature range given below.

Temperature range	Base material temperature	Max. long term base material temperature	Max. short term base material temperature
Temperature range I	-40 °C to +80 °C	+50 °C	+80 °C

Max 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.

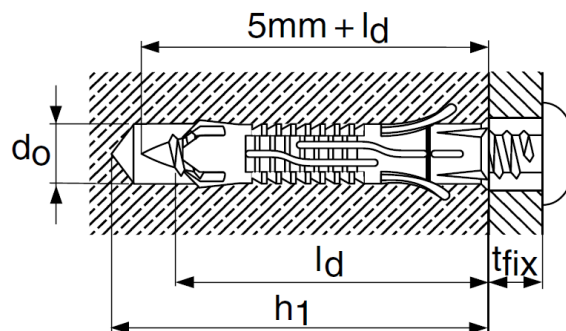
Max long term base material temperature

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

Setting details

Anchor size		10x50	12x60	14x70
Nominal diameter of drill bit	d_o [mm]	10	12	14
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	10,45	12,5	14,5
Depth of drill hole	$h_1 \geq$ [mm]	65	80	90
Nominal anchorage depth	h_{nom} [mm]	50	60	70
Anchor length	l [mm]	50	60	70
Max fixture thickness	t_{fix} [mm]	Depending on screw length		
Woodscrew diameter ^{a)}	d [mm]	7 - 8	8 - 10	10 - 12

a) The basic loading data are depending on the woodscrew diameters, if other types or different screws are used the load capacity may decrease. **Highlighted diameters** refer to basic loading data table, except footnotes ^{a), b), c)} of basic loading data tables.



Installation equipment

Anchor size	10x50	12x60	14x70	5x25
Rotary hammer	TE 2 - TE16			
Other tools	Screwdriver			

Setting instruction^{a)}

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

Setting instruction		
1. Drill hole with drill bit 	2. Install anchor 	3. Drive screw into anchor
4. Drill hole with drill bit 	5. Install anchor 	6. Drive screw into anchor

a) Use only for wall and floor applications. Not applicable for ceiling and façade applications.

HUD-L Plastic anchors

Economical universal long plastic anchor

Anchor version



HUD-L
(M6-M8)

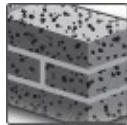
Benefits

- Universal plastic anchor for weak base materials and renovation
- For many base materials
- Daily application
- Excellent setting behaviour

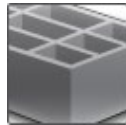
Base material



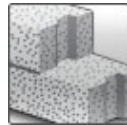
Concrete
(Non-cracked)



Solid brick



Hollow brick



Autoclaved
aerated
concrete



Drywall

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.

- Plastic anchor with ribbed surface for toggling in hollow material, made of polyamide PA6, for use in concrete, solid brick, hollow brick, aerated concrete and drywall.
- Plastic anchor shall have manufacturer information on volatile organic compounds (VOC) content.
- 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 (including overall global safety factor $\gamma= 5$)

Basic loading data

All data in this section applies to:

- Correct setting (See setting instruction)
- Load data are only valid for the specified woodscrew type
- Load data given in the tables is independent of load direction
- No edge distance and spacing influence
- Base material as specified in the table
- Minimum base material thickness

Anchorage depth

Anchor size		6x50	8x60	10x70
Nominal embedment depth	h_{nom} [mm]	47	57	70

Characteristic resistance

Anchor size		6x50	8x60	10x70
Screw type ^{c) d)}		W	W	W
Size		4,5x80	5x90	8
DIN		96	96	571
Concrete ≥ C16/20	F _{Rk} [kN]	1,15	1,4	9,0
Solid clay brick Mz 12	F _{Rk} [kN]	0,85	1,0	-
Solid clay brick Mz 20	F _{Rk} [kN]	-	-	7,0
Solid sand-lime brick KS 12	F _{Rk} [kN]	0,85	1,0	2
Hollow clay brick Hlz 12 ^{a)}	F _{Rk} [kN]	0,5	0,75	1,5
Hollow sand-lime brick KSL 12	F _{Rk} [kN]	0,7	0,8	-
Autoclaved aerated concrete AAC 2 ^{a)}	F _{Rk} [kN]	0,25	0,55	2,0
Gypsum board Thickness 2x12,5mm ^{a)}	F _{Rk} [kN]	0,3	0,7	0,6 ^{b)}

a) Drilling without hammering

b) Suitable for fitting hexagonal screws by hand

c) Load data are valid for the mentioned woodscrew type, if other types or different screws are used the load capacity may decrease.

d) Screw type: W: Wood-screw

Design resistance

Anchor size		6x50	8x60	10x70
Screw type ^{c) d)}		W	W	W
Size		4,5x80	5x90	8
DIN		96	96	571
Concrete ≥ C16/20	F _{Rd} [kN]	0,32	0,39	2,52
Solid clay brick Mz 12	F _{Rd} [kN]	0,24	0,28	-
Solid clay brick Mz 20	F _{Rd} [kN]	-	-	1,96
Solid sand-lime brick KS 12	F _{Rd} [kN]	0,24	0,28	0,56
Hollow clay brick Hlz 12 ^{a)}	F _{Rd} [kN]	0,14	0,21	0,42
Hollow sand-lime brick KSL 12	F _{Rd} [kN]	0,20	0,22	-
Autoclaved aerated concrete AAC 2 ^{a)}	F _{Rd} [kN]	0,07	0,15	0,56
Gypsum board Thickness 2x12,5mm ^{a)}	F _{Rd} [kN]	0,08	0,20	0,17 ^{b)}

a) Drilling without hammering

b) Suitable for fitting hexagonal screws by hand

c) Load data are valid for the mentioned woodscrew type, if other types or different screws are used the load capacity may decrease.

d) Screw type: W: Wood-screw

Recommended loads ^{e)}

Anchor size		6x50	8x60	10x70
Screw type ^{c) d)}		W	W	W
Size		4,5x80	5x90	8
DIN		96	96	571
Concrete \geq C16/20	F _{Rec} [kN]	0,23	0,28	1,8
Solid clay brick Mz 12	F _{Rec} [kN]	0,17	0,2	-
Solid clay brick Mz 20	F _{Rec} [kN]	-	-	1,4
Solid sand-lime brick KS 12	F _{Rec} [kN]	0,17	0,2	0,4
Hollow clay brick Hlz 12 ^{a)}	F _{Rec} [kN]	0,1	0,15	0,3
Hollow sand-lime brick KSL 12	F _{Rec} [kN]	0,14	0,16	-
Autoclaved aerated concrete AAC 2 ^{a)}	F _{Rec} [kN]	0,05	0,11	0,4
Gypsum board Thickness 2x12,5mm ^{a)}	F _{Rec} [kN]	0,06	0,14	0,12 ^{b)}

a) Drilling without hammering

b) Suitable for fitting hexagonal screws by hand

c) Load data are valid for the mentioned woodscrew type, if other types or different screws are used the load capacity may decrease.

d) Screw type: W: Wood-screw

e) With overall global safety factor $\gamma = 5$ to the characteristic loads and a partial safety factor of $\gamma = 1,4$ to the design values.

Materials

Material quality

Part	Material
Plastic sleeve	Polyamide 6

Setting information

Installation temperature

-10°C to +40°C

Service temperature range

Hilti HUD-L universal anchor may be applied in the temperature range given below.

Temperature range	Base material temperature	Max. long term base material temperature	Max. short term base material temperature
Temperature range	-40 °C to +80 °C	+50 °C	+80 °C

Max 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.

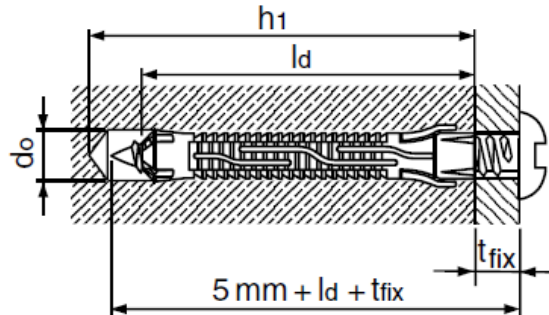
Max long term base material temperature

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

Setting parameters

Anchor size		6x50	8x60	10x70
Nominal diameter of drill bit	d_o [mm]	6	8	10
Cutting diameter of drill bit	$d_{cut} \leq$ [mm]	6,4	8,45	10,45
Depth of drill hole	$h_1 \geq$ [mm]	70	80	90
Nominal embedment depth	h_{nom} [mm]	47	57	70
Anchor length	l [mm]	47	57	70
Max fixture thickness	t_{fix} [mm]	Depending on screw length		
Recommended length of screw in base material	l_d [mm]	55	65	75
Woodscrew diameter ^{a)}	d [mm]	4,5 - 5	5 - 6	7 - 8

a) The basic loading data are depending on the woodscrew diameters, if other types or different screws are used the load capacity may decrease. Highlighted diameters refer to basic loading data table, except footnotes ^{a), b), c)} of basic loading data tables.



Installation equipment

Anchor size	6x50	8x60	10x70
Rotary hammer		TE 2- TE16	
Other tools		Screwdriver	

Setting instruction ^{a)}

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

Setting instruction		
1. Drill hole with drill bit 	2. Install anchor 	3. Put part being fastened in place and drive screw into anchor.
4. Drill hole with drill bit 	5. Put part being fastened in place and install anchor 	6. Drive screw into anchor

a) Use only for wall and floor applications. Not applicable for ceiling and façade applications.

Attn. : To whom it may concern

Date : 26 September 2023
Ref. : 132/AM/DY/23

Subject : Country of Origin- Hilti HUD Universal Plastic Anchor

Dear Sir / Madam,

Enclosed please find the information of Hilti HUD Universal Plastic Anchor.

Brand Name : Hilti

Model Name : Hilti HUD Universal Plastic 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 : Germany

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

Attn. :To whom it may concern

Date : 16th Apr. 2021

Ref : 018/AN/BL/21

Subject : Declaration of conformity in accordance with EU-Directive 2015/863 (RoHS) and 1907/2006/EC (REACH) for Hilti impact plastic anchor HUD (all sizes)

Dear Sir / Madam,

Hilti, acting as an environmentally responsible company, can confirm that all above mentioned products comply with the restrictions mentioned in the EU-Directive 2015/863 (RoHS), specifically:

Cr VI	Cd	Hg	Pb	PBDE	PBB	DEHP	BBP	DBP	DIBP
< 0.1 %	< 0.01 %	< 0.1 %	< 0.1 %	< 0.1 %	< 0.1 %	< 0.1 %	< 0.1 %	< 0.1 %	< 0.1 %

All values are weight %

Above that, we declare that the product does not contain any substances listed in REACH directive 1907/2006/EC, Annex XVII (RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES) and Annex XIV (LIST OF SUBSTANCES SUBJECT TO AUTHORISATION).

Should you have any further questions, please do not hesitate to contact our Technical Representatives or Customer Service Hotline at 8228-8118.

Yours sincerely,

Bill Lee
Product Portfolio Manager



Hilti HUD-1 Wall Plug Job Reference

Year	Project Name	Customer Name	Project type
2022	ONE SOHO - 331 RECLAMATION ST & 32 SHANTUNG	CHOW CHUEN ENG CO	Residential
2022	6-8 LAI YING ST, NKIL 6549	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2022	QUEEN MARY HOSPITAL PH1 (SS F501)	CORNWALL ELECTRICAL ENGINEERING	Health
2022	IMMIGRATION HEADQUARTERS, TKO	BRIGHT E&M ENGINEERING LIMITED	Office
2022	IMMIGRATION HEADQUARTERS, TKO	MANULIFE ENGINEERING COMPANY	Office
2022	98 HOW MING ST	SIMBEL HOLDING LIMITED	Office
2022	WONG CHUK HANG STATION PH3 (SITE C)	YUEN CHEONG ENGINEERING CO LTD	Residential
2022	KAI TAK SPORTS PARK	POWER ENGINEERING COMPANY	Sport & Recreation
2022	KAI TAK AREA 4E, SITE 1, NKIL 6603	HOP FAT STRUCTURAL STEEL	Residential
2022	R6 TKO BRIDGE & P2 ROAD NE/2015/02	GREEN VALLEY LANDFILL, LIMITED	Infrastructure
2022	TKO DESALINATION PLANT PH1 13/WSD/17	THE JARDINE ENGINEERING	Utilities
2023	ONE SOHO - 331 RECLAMATION ST & 32 SHANTUNG	CHOW CHUEN ENG CO	Residential
2023	KWAI CHUNG HOSPITAL PH2 & 3	CHITSON CONSTRUCTION ENGINEERING	Health
2023	QUEEN MARY HOSPITAL PH1 (SS F501)	SUN ADVANCE ENGINEERING LIMITED	Health
2023	KAI TAK NEW ACUTE HOSPITAL (SITE A)	BRIGHT E&M ENGINEERING LIMITED	Health
2023	KAI TAK SPORTS PARK	POWER ENGINEERING COMPANY	Sport & Recreation
2023	HKIA 3303 3RW & ASSOCIATED WORK	KEI CHEONG ENGINEERING CO LIMITED	Infrastructure
2023	IMMIGRATION HEADQUARTERS, TKO	BRIGHT E&M ENGINEERING LIMITED	Office
2023	CHINESE MEDICINE HOSPITAL TKO	CHITSON CONSTRUCTION ENGINEERING	Health
2023	SAI SHA SHK SHAP SZE HEUNG, TPTL 157 DD165, 20	KAM KEE STEEL'S WORKS LIMITED	Residential
2023	LAI CHO RD HOUSING	AGGRESSIVE CONSTRUCTION COMPANY	Residential
2024	CHINESE MEDICINE HOSPITAL TKO	CHITSON CONSTRUCTION ENGINEERING	Health
2024	KWAI CHUNG HOSPITAL PH2 & 3	CHITSON CONSTRUCTION ENGINEERING	Health
2024	KAM SHEUNG RD STATION PH1, LOT 1040 DD 103	PYROFOE ENGINEERS LTD	Residential
2024	R6 TKO BRIDGE & P2 ROAD NE/2015/02	GREEN VALLEY LANDFILL, LIMITED	Infrastructure
2024	QUEEN MARY HOSPITAL PH1 (SS F501)	SUN ADVANCE ENGINEERING LIMITED	Health
2024	FORMER EXCELSIOR REDEVELOP - PROJECT BLUE	CHONG SHI ENGINEERING CO	Office
2024	HONG KONG-SHENZHEN INNOVATION & TECHNOLO	CHEUNG HO ELECTRIC CO., LIMITED	Office
2024	HONG KONG-SHENZHEN INNOVATION & TECHNOLO	CHITSON CONSTRUCTION ENGINEERING	Office
2024	UNITED CHRISTIAN HOSPITAL	HIN TAT ENGINEERING LIMITED	Health
2024	HKIA 3508 TERMINAL 2	KEE SEE ENGINEERING CO LTD	Transport
2024	13 HOK YUEN ST	POWER ENGINEERING COMPANY	Office
2024	KAI TAK SPORTS PARK	KEE SEE ENGINEERING CO LTD	Sport & Recreation



Hilti HUD-2 Wall Plug Job Reference

Year	Project Name	Customer Name	Project type
2022	KAI TAK SPORTS PARK	POWER ENGINEERING COMPANY	Sport & Recreation
2022	ONE SOHO - 331 RECLAMATION ST & 32 SHANTUNG	CHOW CHUEN ENG CO	Residential
2022	YUEN LONG STATION YLTL 510	SHUN TUNG ENGINEERING CO LTD	Residential
2022	KAI TAK AREA 4B, SITE 1, NKIL 6576	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2022	4A-4P SEYMOUR RD	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2022	14 Wang Tai Road Office	CHEVALIER (ALUMINIUM ENGINEERING)	Office
2022	TUEN MUN AREA 55 (463) RES	FORERUNNER SPECIALIST LIMITED	Residential
2022	SIU HONG, AREA 54 DD 132 TMTL 483	HANG FAI INTERNATIONAL ENGINEERING	Residential
2022	VICTORIA GARDEN - RENOVATION WORKS	HIN TAT ENGINEERING LIMITED	Residential
2022	IMMIGRATION HEADQUARTERS, TKO	BRIGHT E&M ENGINEERING LIMITED	Office
2023	ONE SOHO - 331 RECLAMATION ST & 32 SHANTUNG	CHOW CHUEN ENG CO	Residential
2023	KAI TAK SPORTS PARK	POWER ENGINEERING COMPANY	Sport & Recreation
2023	QUEEN MARY HOSPITAL PH1 (SS F501)	SUN ADVANCE ENGINEERING LIMITED	Health
2023	KAI TAK AREA 4A, SITE 1, NKIL 6577	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2023	2 MURRAY RD	FAR EAST FACADE (HONG KONG) LIMITED	Office
2023	WONG CHUK HANG STATION PH4 (SITE D)	PYROFOE ENGINEERS LTD	Residential
2023	KAI TAK AREA 4A, SITE 2, NKIL 6554	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2023	IMMIGRATION HEADQUARTERS, TKO	BRIGHT E&M ENGINEERING LIMITED	Office
2023	KAI TAK AREA 4C, SITE 2, NKIL 6552	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2023	HKIA 3508 TERMINAL 2	TRUSTY (HONG KONG) ENGINEERING	Transport
2024	WONG CHUK HANG STATION PH3 (SITE C)	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2024	13 HOK YUEN ST	POWER ENGINEERING COMPANY	Office
2024	KAI TAK AREA 4A, SITE 1, NKIL 6577	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2024	QUEEN MARY HOSPITAL PH1 (SS F501)	CORNWALL ELECTRICAL ENGINEERING	Health
2024	HKIA 3508 TERMINAL 2	FOREVER STRONG ENGINEERING LIMITED	Transport
2024	KAM SHEUNG RD STATION PH1, LOT 1040 DD 103	FORERUNNER SPECIALIST LIMITED	Residential
2024	KAI TAK SPORTS PARK	POWER ENGINEERING COMPANY	Sport & Recreation
2024	WONG CHUK HANG STATION PH4 (SITE D)	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2024	KAI TAK AREA 4C, SITE 3, NKIL 6551	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2024	HO MAN TIN STATION RES PACKAGE 1	FAR EAST FACADE (HONG KONG) LIMITED	Residential



Hilti HUD-L Wall Plug Job Reference

Year	Project Name	Customer Name	Project type
2022	SIU HONG, AREA 54 DD 132 TMTL 483	HANG FAI INTERNATIONAL ENGINEERING	Residential
2022	SIN FAT RD, KWUN TONG NKIL 6584	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2022	KAI TAK AREA 1K2 (6566)	KM INTERNATIONAL INDUSTRIES	Residential
2022	CASTLE PEAK RD - TAM MI, AU TAU, YUEN LONG DD	KWONG YIN WING KOO TIMBER CO LTD	Education
2022	TUEN MUN AREA 55 (463) RES	KM INTERNATIONAL INDUSTRIES	Residential
2022	HANG TAI RD, MA ON SHAN AREA 86B PH 1&2 - HOU	LAP KEI LEADER ENGINEERING CO LTD	Residential
2022	SCL 1164B BS FOR HK SECTION	LAP KEI LEADER ENGINEERING CO LTD	Transport
2022	New - Infrastructure - Lai Ying Street, Sham Shui Po	SUNDART TIMBER PRODUCTS CO LTD	Infrastructure
2022	71-75 BEDFORD RD	FOREVER HARVEST METAL	Industrial
2022	YUEN LONG STATION YLTL 510	SINFARR TRADING COMPANY LIMITED	Residential
2023	TPTL 244, YAU KING LANE & POK YIN RD	HANG FAI INTERNATIONAL ENGINEERING	Residential
2023	SIU HONG, AREA 54 DD 132 TMTL 483	HANG FAI INTERNATIONAL ENGINEERING	Residential
2023	SIN FAT RD, KWUN TONG NKIL 6584	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2023	IMMIGRATION HEADQUARTERS, TKO	SLD CONTRACTING LIMITED	Office
2023	WAN CHAI HOPEWELL CENTRE 2	SUNDART TIMBER PRODUCTS CO LTD	Hospitality
2023	TUEN MUN AREA 55 (463) RES	KM INTERNATIONAL INDUSTRIES	Residential
2023	KAI TAK AREA 1F1 (6568) ELDERLY	GRAND TEAM CONSTRUCTION CO LTD	Residential
2023	CHING HONG RD N HOUSING PH1,2	LAP KEI LEADER ENGINEERING CO LTD	Residential
2023	TKO GOVERNMENT OFFICES	NGAI TO CONSTRUCTION LIMITED	Office
2023	KAI TAK SPORTS PARK	CHUN FUNG CONSTRUCTION LTD	Sport & Recreation
2024	HKIA 3508 TERMINAL 2	LI LING DECORATION ENGINEERING	Transport
2024	KAI TAK AREA 1F1 (6568) ELDERLY	GRAND TEAM CONSTRUCTION CO LTD	Residential
2024	TAI WAI STATION NW RES	SHUN TUNG ENGINEERING CO LTD	Residential
2024	UNITED CHRISTIAN HOSPITAL	HIN TAT ENGINEERING LIMITED	Health
2024	121-131 SHAU KEI WAN MAIN ST	SI-O ENGINEERING COMPANY LIMITED	Residential
2024	WAN CHAI HOPEWELL CENTRE 2	SUNDART TIMBER PRODUCTS CO LTD	Hospitality
2024	XRL WEST KLN TERMINUS PROPERTY DEVELOPEMEI	CHEVALIER (ALUMINIUM ENGINEERING)	Office
2024	SAI SHA SHK SHAP SZE HEUNG, TPTL 157 DD165, 20	KAM KEE STEEL'S WORKS LIMITED	Residential
2024	KAI TAK AREA 4A, SITE 2, NKIL 6554	FAR EAST FACADE (HONG KONG) LIMITED	Residential
2024	YUEN LONG STATION YLTL 510	JUMBO ORIENT CONTRACTING LIMITED	Residential
2024	SCL 1164B BS FOR HK SECTION	LAP KEI LEADER ENGINEERING CO LTD	Transport
2024	HKIA SKYCITY COMPLEX BLDG A2&A3	PROGRAM CONTRACTORS LIMITED	Retail