

# Hilti HUD Wall Plug

## Submission Folder

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## Universal plastic anchor HUD



### BASE MATERIALS

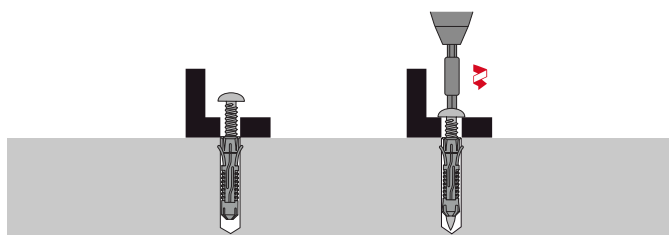
- Concrete (aerated)
- Concrete (uncracked)
- Drywall
- Masonry (hollow)
- Masonry (solid)

### APPLICATIONS

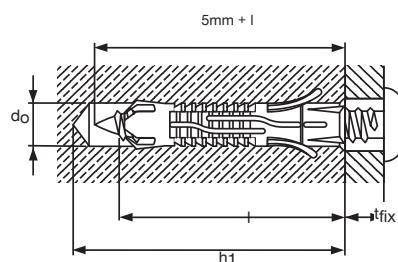
- Many kinds of light-duty fastenings, especially electrical installations, sanitary fixtures, etc.

### 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)



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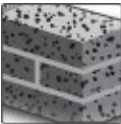
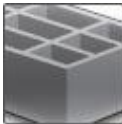
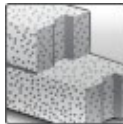

Ordering designation	Anchor size	Anchor length	Woodscrew diameter	Drill bit diameter	Drilling depth	Screw length	Sales pack quantity	Item number
HUD-L 6x50	6 mm	50 mm	4.5 - 5 mm	6 mm	70 mm	l + tfix +5mm	400 pc	315938
HUD-L 8x60	8 mm	60 mm	5 - 6 mm	8 mm	80 mm	l + tfix +5mm	200 pc	315939
HUD-L 10x70	10 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	Benefits
	HUD-2 (5, 6, 8) <ul style="list-style-type: none"> <li>- Flat setting</li> <li>- Flexibility of screw length</li> <li>- An anchor for every base material</li> </ul>

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 <sup>a)</sup>	Chipboard screw 5x50 <sup>b)</sup>	Chipboard screw 6x50 <sup>c)</sup>
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 <sup>2</sup> 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 <sup>d)</sup>**

Anchor size			HUD-2 5x25	HUD-2 6x30	HUD-2 8x40
Screw type			Chipboard screw 4x40 <sup>a)</sup>	Chipboard screw 5x50 <sup>b)</sup>	Chipboard screw 6x50 <sup>c)</sup>
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 <sup>2</sup> 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 <sup>d)</sup>

Anchor size			HUD-2 5x25	HUD-2 6x30	HUD-2 8x40
Screw type			Chipboard screw 4x40 <sup>a)</sup>	Chipboard screw 5x50 <sup>b)</sup>	Chipboard screw 6x50 <sup>c)</sup>
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 <sup>2</sup> 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

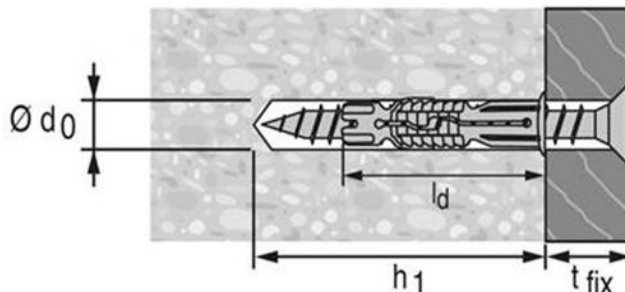
Short-term elevated base material temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling.

### 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]	$\geq 30$	$\geq 35$	$\geq 45$
Drill hole depth	$h_0$	[mm]	$\geq 30$	$\geq 35$	$\geq 45$
Minimum spacing	$s_{min}$	[mm]	Not determined		
Minimum edge distance	$c_{min}$	[mm]	Not determined		

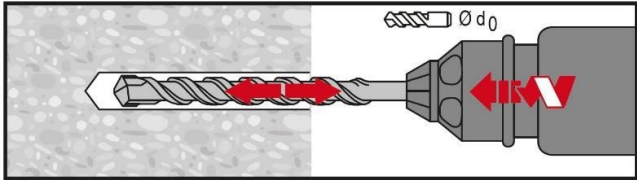
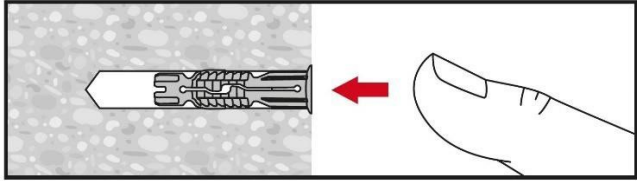
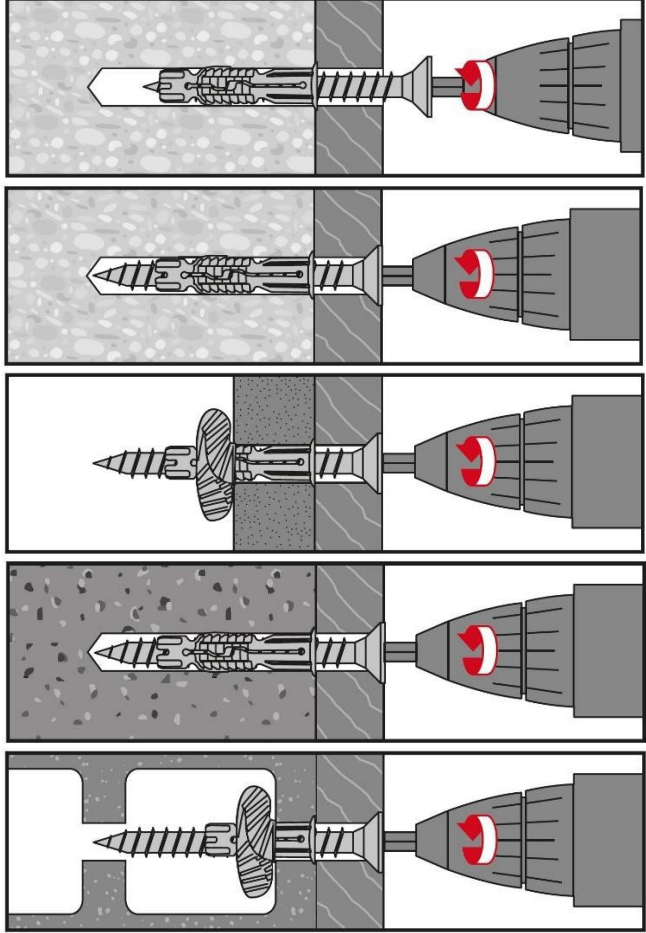


## Installation equipment

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

## Setting instruction<sup>a)</sup>

\*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

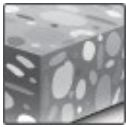


HUD-1  
(M10, M12, M14)

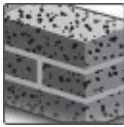
### Benefits

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

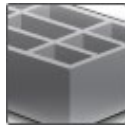
### Base material



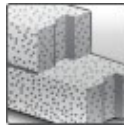
Concrete  
(non-cracked)



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 <sup>d)</sup>		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 <sup>c)</sup>
	$V_{Rk}$ [kN]	-	-	-
Solid sand-lime Brick KS 12	$N_{Rk}$ [kN]	5	7,5	7,5 <sup>c)</sup>
	$V_{Rk}$ [kN]	6,6	-	-
Hollow clay brick HlzB 12	$N_{Rk}$ [kN]	1,25	1,4	1,6
	$V_{Rk}$ [kN]	-	-	-
Hollow clay brick HlzB 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 <sup>a)</sup>	1,5 <sup>b)</sup>	-
	$V_{Rk}$ [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 <sup>d)</sup>		W	W	W
Size		8	10	12
DIN		96	571	571
Concrete ≥ C16/20	N <sub>Rd</sub> [kN]	1,96	2,80	4,20
	V <sub>Rd</sub> [kN]	3,08	4,20	7,84
Solid clay brick Mz 20	N <sub>Rd</sub> [kN]	1,12	1,40	1,40 <sup>c)</sup>
	V <sub>Rd</sub> [kN]	-	-	-
Solid sand-lime brick KS 12	N <sub>Rd</sub> [kN]	1,40	2,10	2,10 <sup>c)</sup>
	V <sub>Rd</sub> [kN]	1,85	-	-
Hollow clay brick HlzB 12	N <sub>Rd</sub> [kN]	0,35	0,39	0,45
	V <sub>Rd</sub> [kN]	-	-	-
Hollow clay brick HlzB 12 – 15mm plastered	N <sub>Rd</sub> [kN]	0,42	0,49	0,56
	V <sub>Rd</sub> [kN]	-	-	-
Autoclaved aerated concrete AAC 2	N <sub>Rd</sub> [kN]	0,28	0,35	0,42
	V <sub>Rd</sub> [kN]	-	-	-
Autoclaved aerated concrete AAC 4	N <sub>Rd</sub> [kN]	0,56	0,70	0,84
	V <sub>Rd</sub> [kN]	-	-	-
Gypsum board Thickness 12,5mm	N <sub>Rd</sub> [kN]	-	-	-
	V <sub>Rd</sub> [kN]	-	-	-
Gypsum board Thickness 2x12,5mm	N <sub>Rd</sub> [kN]	0,21 <sup>a)</sup>	0,42 <sup>b)</sup>	-
	V <sub>Rd</sub> [kN]	-	-	-
Fibre reinforced gypsum board Thickness 12,5mm	N <sub>Rd</sub> [kN]	-	-	-
	V <sub>Rd</sub> [kN]	-	-	-
Fibre reinforced gypsum board Thickness 2x12,5mm	N <sub>Rd</sub> [kN]	0,59	-	-
	V <sub>Rd</sub> [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<sup>e)</sup>

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

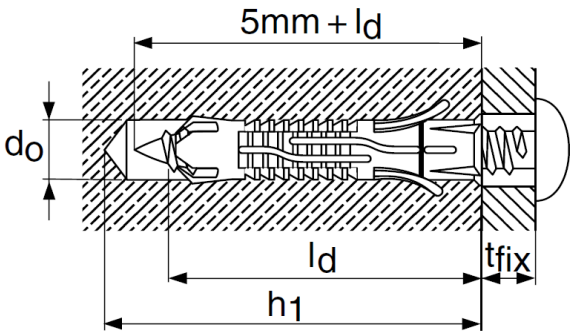
### Max long term base material temperature

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 <sup>a)</sup>	$d$ [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 <sup>a)</sup>, <sup>b)</sup>, <sup>c)</sup> of basic loading data tables.

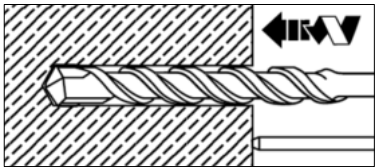
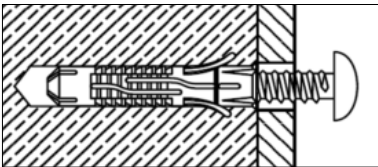
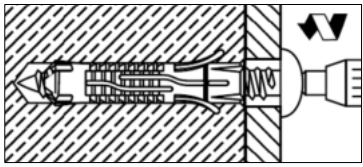
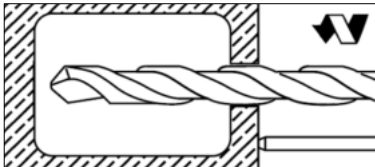
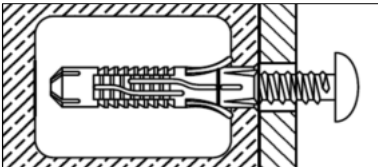
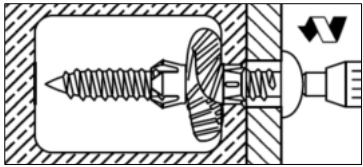


**Installation equipment**

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

**Setting instruction<sup>a)</sup>**


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


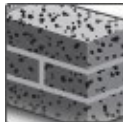
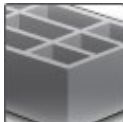
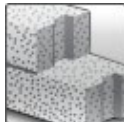

Setting instruction					
<b>1. Drill hole with drill bit</b>	<b>2. Install anchor</b>	<b>3. Drive screw into anchor</b>			
					
<b>4. Drill hole with drill bit</b>	<b>5. Install anchor</b>	<b>6. Drive screw into anchor</b>			
					

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	Benefits
 <p>HUD-L (M6-M8)</p>	<ul style="list-style-type: none"> <li>- Universal plastic anchor for weak base materials and renovation</li> <li>- For many base materials</li> <li>- Daily application</li> <li>- Excellent setting behaviour</li> </ul>

Base material				
				
Concrete (Non-cracked)	Solid brick	Hollow brick	Autoclaved aerated concrete	Drywall

Recommended general notes
<p>* 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.</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Plastic anchor shall have manufacturer information on volatile organic compounds (VOC) content.</li> <li>- Anchor shall be installed as per the manufacturer's approved procedure and equipment</li> <li>- The recommended tension load of the anchor should not be not less than __kN (including overall global safety factor <math>\gamma = 5</math>)</li> </ul>

Basic loading data
<p><b>All data in this section applies to:</b></p> <ul style="list-style-type: none"> <li>- Correct setting (See setting instruction)</li> <li>- Load data are only valid for the specified woodscrew type</li> <li>- Load data given in the tables is independent of load direction</li> <li>- No edge distance and spacing influence</li> <li>- Base material as specified in the table</li> <li>- Minimum base material thickness</li> </ul>

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

### Characteristic resistance

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

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 <sup>c) d)</sup>			W	W	W
Size			4,5x80	5x90	8
DIN			96	96	571
Concrete ≥ C16/20	F <sub>Rd</sub>	[kN]	0,32	0,39	2,52
Solid clay brick Mz 12	F <sub>Rd</sub>	[kN]	0,24	0,28	-
Solid clay brick Mz 20	F <sub>Rd</sub>	[kN]	-	-	1,96
Solid sand-lime brick KS 12	F <sub>Rd</sub>	[kN]	0,24	0,28	0,56
Hollow clay brick Hlz 12 <sup>a)</sup>	F <sub>Rd</sub>	[kN]	0,14	0,21	0,42
Hollow sand-lime brick KSL 12	F <sub>Rd</sub>	[kN]	0,20	0,22	-
Autoclaved aerated concrete AAC 2 <sup>a)</sup>	F <sub>Rd</sub>	[kN]	0,07	0,15	0,56
Gypsum board Thickness 2x12,5mm <sup>a)</sup>	F <sub>Rd</sub>	[kN]	0,08	0,20	0,17 <sup>b)</sup>

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 <sup>e)</sup>

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

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.

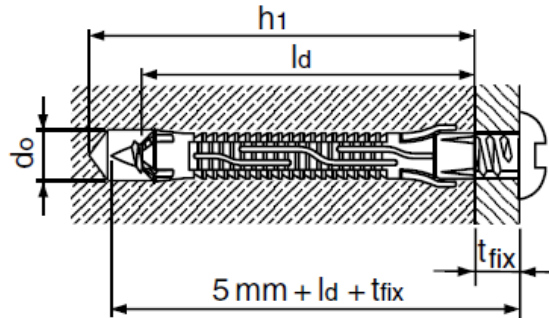
### Max long term base material temperature

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 <sup>a)</sup>	$d$ [mm]	<b>4,5 - 5</b>	<b>5 - 6</b>	<b>7 - 8</b>

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 <sup>a)</sup>, <sup>b)</sup>, <sup>c)</sup> of basic loading data tables.

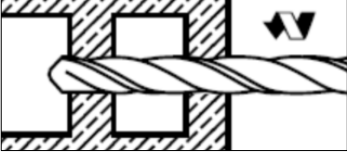
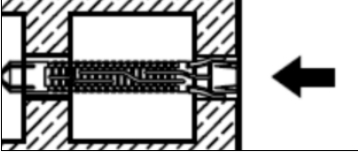
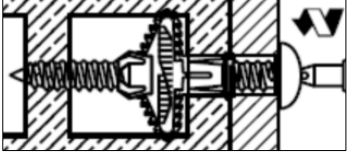
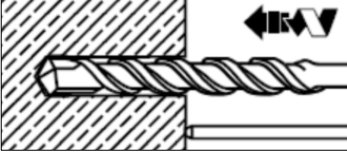
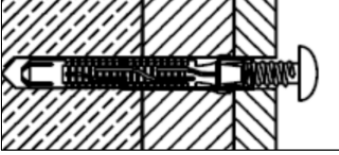
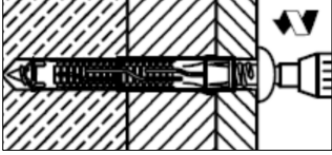


## Installation equipment

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

## Setting instruction <sup>a)</sup>

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

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

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

Attn. : To whom it may concern

Date : 1 April 2025  
Ref. : 078/AM/SC/25

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 : Spencer Cheung

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 : Spencer Cheung (+852 9732 1231)

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](mailto:hksales@hilti.com).

Yours faithfully,

*Spencer C.* 

Spencer Cheung  
Head of Product Leadership Strategy

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



[illegible]

[illegible]