



HUD-L PLASTIC ANCHOR

Technical Datasheet

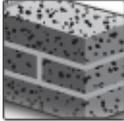
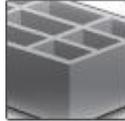
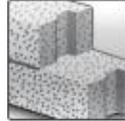
Update: Jan-23



HUD-L Plastic anchors

Economical universal long plastic anchor

Anchor version		Benefits
	HUD-L (d6-d8)	<ul style="list-style-type: none"> - Universal plastic anchor for weak base materials and renovation - For many base materials - Daily application - Excellent setting behaviour
	HUD-L (d10)	

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

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 \geq 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 \geq 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.

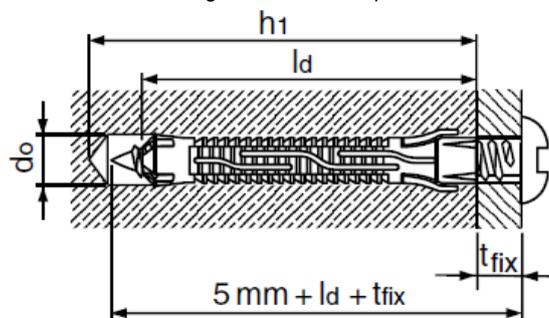
Max long term base material temperature

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

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