



GD 14 + GRS 12 PLASTIC ANCHOR

Technical Datasheet

Update: Jan-23



GD 14 + GRS 12 Plastic anchors

Economical plastic scaffolding anchor

Anchor version

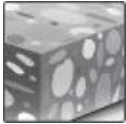


GD 14 (anchor body)
GRS 12 (screw)
(d14)

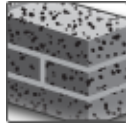
Benefits

- Available in carbon steel and hot-dipped galvanized
- Integrated plastic and steel washer

Base material



Concrete
(non-cracked)



Solid brick

Basic loading data

All data in this section applies to:

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

Anchorage depth

Anchor size		GD 14
Nominal embedment depth	$h_{nom} \geq$ [mm]	70

Design resistance ^{a) b)}

Anchor size		GD 14					
Screw type		GDS 12x90	GDS 12x120	GDS 12x160	GDS 12x190	GDS 12x230	GDS 12x350
Concrete C16/20 – C50/60	N_{Rd} [kN]	4,2					
	V_{Rd} [kN]	2,8	2,5	1,0	0,6	0,35	0,13
Solid clay brick Mz 12-2.0	N_{Rd} [kN]	1,9					
	V_{Rd} [kN]	1,0	1,0	1,0	0,6	0,35	0,13
Solid sand-lime brick KS 12-2.0	N_{Rd} [kN]	1,3					
	V_{Rd} [kN]	0,7	0,7	0,7	0,6	0,35	0,35

a) With partial safety factor $\gamma = 1,8$ for concrete and $\gamma = 2,5$ for masonry (acc. EAD 330284).

b) Shear load data are determined from the lower value of anchor load capacity in the base material and the serviceability load that ensures a maximum bending of the screw of 1/50 of its lever arm.

Recommended load ^{a) b)}

Anchor size		GD 14					
Screw type		GDS 12x90	GDS 12x120	GDS 12x160	GDS 12x190	GDS 12x230	GDS 12x350
Concrete C16/20 – C50/60	N_{Rd} [kN]	2,8					
	V_{Rd} [kN]	1,8	1,7	0,65	0,4	0,23	0,09
Solid clay brick Mz 12-2.0	N_{Rd} [kN]	1,3					
	V_{Rd} [kN]	0,65	0,65	0,65	0,4	0,23	0,09
Solid sand-lime brick KS 12-2.0	N_{Rd} [kN]	0,85					
	V_{Rd} [kN]	0,5	0,5	0,5	0,4	0,23	0,09

a) With partial safety factor $\gamma = 1,8$ for concrete and $\gamma = 2,5$ for masonry (acc. EAD 330284).

b) Shear load data are determined from the lower value of anchor load capacity in the base material and the serviceability load that ensures a maximum bending of the screw of 1/50 of its lever arm.

Materials

Material quality

Part	Material
Plastic sleeve	Polyamide

Setting information

Installation temperature

-10°C to +40°C

Service temperature range

Hilti GD frame anchors 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

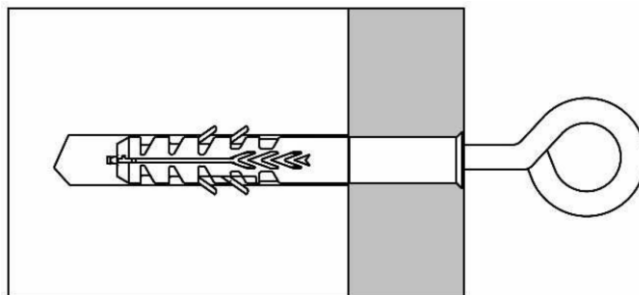
Short-term elevated base material temperatures are those that occur over brief intervals, e.g. as a result of diurnal cycling.

Max long term base material temperature

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

Setting details

Anchor size	GD 14		
Drill hole diameter	d_o	[mm]	14
Cutting diameter of drill bit	$d_{cut} \leq$	[mm]	14,5
Depth of drilled hole to deepest point	$h_1 \geq$	[mm]	90
Overall plastic anchor embedment depth in base material	$h_{nom} \geq$	[mm]	70
Recommended length of screw in base material	l_d	[mm]	75



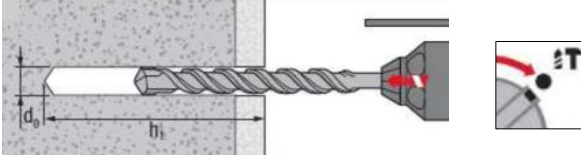

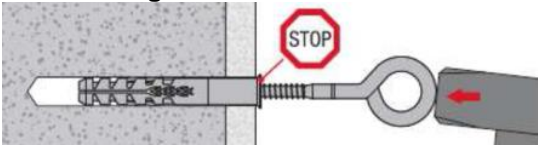
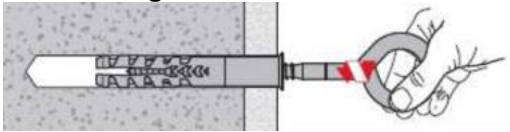
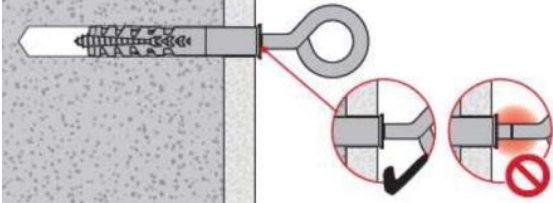
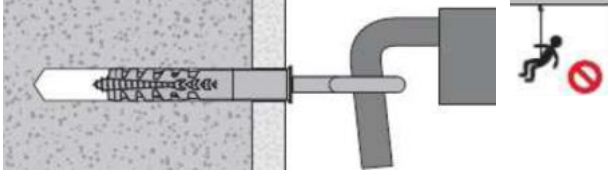
Installation equipment

Anchor size	GD 14
Rotary hammer	TE 2- TE16
Other tools	blow out pump



Setting instruction

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

Setting instruction for GD 14 + GRS 12	
1. Drilling 	2. Cleaning 
3. Inserting the anchor with hammer 	4. Inserting the anchor with hand 
5. Checking 	6. Loading the anchor 

Use only for fixing scaffolds wall and floor applications. Not applicable for ceiling and façade applications.