



Designated according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020

UK Technical Assessment	UKTA-0836-22/6289 of 17/10/2022
Technical Assessment Body issuing the UK Technical Assessment:	British Board of Agrément
Trade name of the construction product:	Anchor GS
Product family to which the construction product belongs:	Area Code 33, Deformation-controlled expansion anchor made of galvanized steel for multiple use for non-structural applications in concrete
Manufacturer:	RAWLPLUG S.A. ul. Kwidzyńska 6 51-416 Wrocław Poland
Manufacturing plant(s):	Manufacturing Plant No. 13
This UK Technical Assessment contains:	10 pages including 3 annexes which form an integral part of this assessment
This UK Technical Assessment is issued in accordance with The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 on the basis of:	UKAD 330747-00-0601 <i>Fasteners for use in concrete for redundant non-structural systems</i>

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1 Technical description of the product

Anchor GS of size Ø6 is deformation-controlled expansion anchor. Anchor GS is manufactured from galvanized steel. The anchor is installed in a drilled hole and anchored by deformation-controlled expansion.

An illustration of the product is given in Annex A.

2 Specification of the intended use(s) in accordance with the applicable UK Assessment Document (hereinafter UKAD)

The performances given in Section 3 are only valid if the anchors are used in compliance with the specifications and conditions given in Annex B.

The performances given in this UK Technical Assessment are based on an assumed working life of the anchor of 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

3.1 Mechanical resistance and stability (BWR 1)

Essential characteristic	Performance
Characteristic resistance for all load directions	See Annex C1
Edge distances and spacing	See Annex C1

3.2 Safety in case of fire (BWR 2)

Essential characteristics	Performances
Reaction to fire	Anchor satisfies requirements for Class A1
Resistance to fire	See Annex C2

3.3 Health, hygiene and the environment (BWR 3)

Regarding dangerous substances there may be requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

3.4 Safety and accessibility in use (BWR 4)

For Basic Requirement Safety in use the same criteria are valid as for Basic Requirement Mechanical resistance and stability (BWR 1).

3.5 Protection against noise (BWR 5)

No performance assessed.

3.6 Energy economy and heat retention (BWR 6)

No performance assessed.

3.7 Sustainable use of natural resources (BWR 7)

No performance assessed.

3.8 Methods used for assessment

The assessment of the product for the declared intended use has been made in accordance with the UKAD 330747-00-0601 *Fasteners for use in concrete for redundant non-structural systems*.

The assessment of the anchor for the intended use in relation to the requirements for resistance to fire has been made in accordance with the EOTA Technical Report TR 020 *Evaluation of anchorages in concrete concerning resistance to fire*.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied

4.1 System of assessment and verification of constancy of performance

According to UKAD No. 330747-00-0601 and Annex V of the Construction Products Regulation (Regulation (EU) 305/2011 as brought into UK law and amended, the system of assessment and verification of constancy of performance (AVCP) 2+ applies.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable UKAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the British Board of Agrément and made available to the UK Approved Bodies involved in the conformity attestation process.

5.1 UKCA marking for the product/ system must contain the following information:

- Identification number of the Approved Body
- Name/address of the manufacturer of the product/ system
- Marking with intention of clarification of intended use
- Date of marking
- Number of certificate of constancy of performance
- UKTA number.

On behalf of the British Board of Agrément



Date of Issue: 17 October 2022

Hardy Giesler
Chief Executive Officer



British Board of Agrément,
1st Floor Building 3
Hatters Lane
Croxley Park
Watford
WD18 8YG

ANNEXES

This annex applies to the product described in the main body of the UK Technical Assessment.

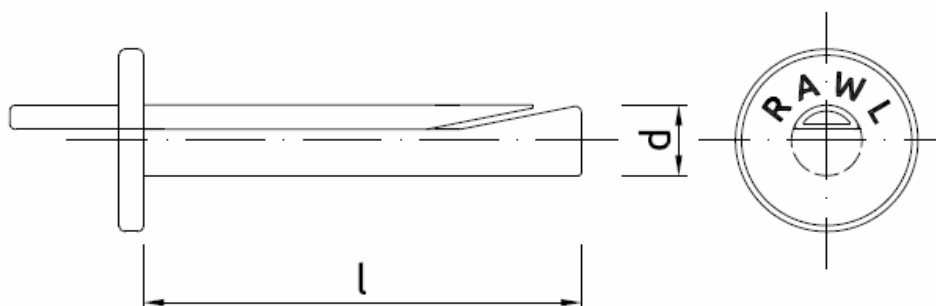


Table A1. Anchor GS – dimensions and material

Anchor GS		GS-06040	GS-06065
Anchor nominal size		6	
Length of anchor l	mm	36.0 \pm 1.5	65.0 \pm 1.5
Diameter d	mm	5.8 \pm 0.15	
Material		Steel acc. to EN 10263-2 Galvanized steel ($\geq 5 \mu\text{m}$)	

Anchor GS

Product description
Characteristic of the product

Annex A 1

SPECIFICATION OF INTENDED USE

Anchorage subject to:

- Multiple use for non-structural applications.
- Static and quasi-static loads.
- Anchorages with requirements related to resistance to fire.

Base material:

- Reinforced or unreinforced normal weight concrete of strength class C20/25 at minimum to C50/60 at maximum according to EN 206.
- Cracked and non-cracked concrete.

Use conditions (environmental conditions):

- Dry internal conditions.

Design:

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be transmitted. The position of the anchor is indicated on the design drawings (e.g. position of the anchor relative to reinforcement or to supports, etc.).
- Anchorages under static and quasi-static loads are designed in accordance with UKAD 330232-00-0601 and EN 1992-4
- The design of anchorages under fire exposure has to consider the conditions given in the EOTA Technical Report TR 020.
- Fasteners are only to be used for multiple use for non-structural applications acc. to UKAD 330232-00-0601 and EN 1992-4

Installation:

- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Use of the anchor only as supplied by the manufacturer.
- Anchor installation in accordance with the manufacturer's specifications and drawings and using the appropriate tools.
- Check before placing the anchor to ensure that the strength class of the concrete, in which the anchor is to be placed, is identical with the values which the characteristic loads apply.
- Check of concrete being well compacted, e.g. without significant voids.
- Edge distances and spacings not less than the specified values without minus tolerances.
- Positioning of the drill holes without damaging the reinforcement.
- In case of aborted hole: new drilling at a minimum distance away of twice the depth of the aborted hole or smaller distance if the aborted drill hole is filled with high strength mortar and if under shear or oblique tension load it is not the direction of load application.
- Hole shall be clear.
- Anchor installation such that the effective anchorage depth is complied with; the compliance is ensured if the thickness of the fixture is not larger than the maximum values given in Annex B2.
- Anchor expansion by impact on the wedge of the anchor; the anchor is properly set if the wedge is fully dropped in.

Anchor GS

Intended use
Specification

Annex B 1

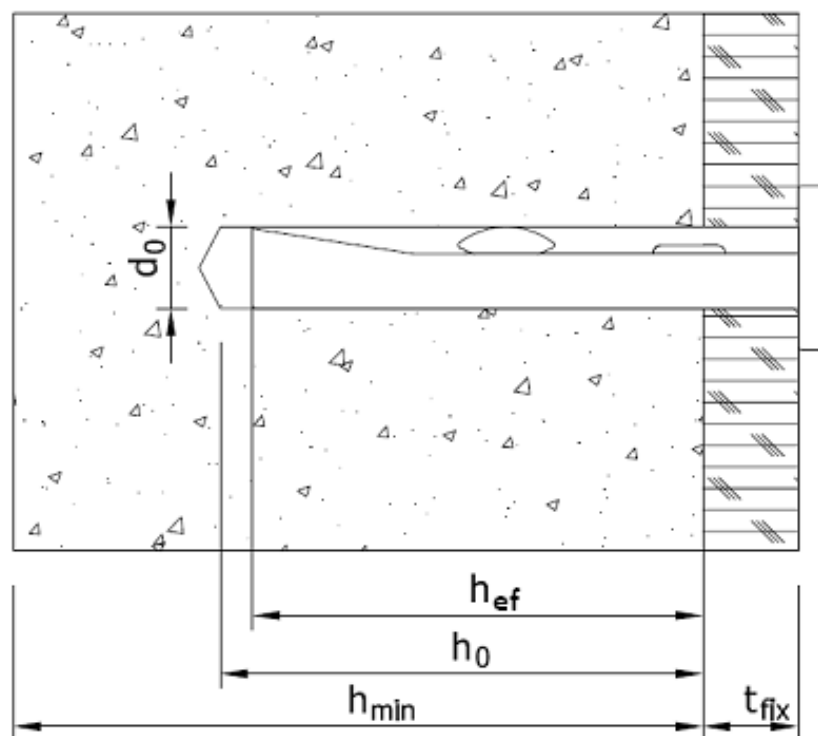


Table B1: Installation parameters

Anchor GS			GS-06040	GS-06065
Diameter of drill hole	d_0	mm	6	
Depth of drill hole	$h_0 \geq$	mm	40	
Effective anchorage depth	h_{ef}	mm	32	
Minimum thickness of concrete member	h_{min}	mm	100	
Maximum thickness of the fixture	t_{fix}	mm	4.5	35

Anchor GS

Intended use
Installation parameters

Annex B 2

Table C1: Characteristic resistance (design acc. to UKAD 330232-00-0601 and EN 1992-4)

Anchor GS			GS-06040 GS-06065
All load directions			
Characteristic resistance in cracked or non-cracked concrete C20/25 to C50/60	F_{Rk}	kN	3.0
Partial safety factor ¹	γ_M ²	-	1.5
Spacing	s_{cr}	mm	200
Edge distance	c_{cr}	mm	150

(1) installation safety factor $\gamma = 1.0$ included

(2) in the absence of other national regulations

Anchor GS

Performances
Characteristic resistance

Annex C 1

Table C2: Characteristic resistance under fire exposure in concrete C20/25 to C50/60 – anchor GS (design acc. to UKAD 330232-00-0601 and EN 1992-4)

Anchor GS			GS-06040 GS-06065			
All load directions						
Fire resistance class			R30	R60	R90	R120
Characteristic resistance	$F_{Rk,fi}$	[kN]	0.6	0.5	0.3	0.3
Partial safety factor	γ_M^1	-	1.0			
Spacing	$s_{cr,fi}$	[mm]	4 x h_{ef}			
Edge distance	$c_{cr,fi}$	[mm]	2 x h_{ef}			
The design method covers anchors with a fire attack from one side only. In case of fire attack from more than one side, the edge distance shall be ≥ 300 mm.						

(1) in the absence of other national regulations

Anchor GS

Performances

Characteristic resistance under fire exposure

Annex C 2



British Board of Agrément,
1st Floor Building 3
Hatters Lane
Croxley Park
Watford
WD18 8YG