

**Fixing Centre Ltd**

Building L86
c/o Dera Chertsey
Chobham Lane
Chertsey
Surrey KT16 0EE
Tel: 01344 635787 Fax: 01344 635788

128	Hh
-----	----

HAPAS**Roads and Bridges
Agrément Certificate****No 00/H037**

Second issue*

SSR 120-VDI-CM25 PARAPET ANCHOR

This Certificate is issued under the Highway Authorities Product Approval Scheme (HAPAS) by the BBA in conjunction with the Highways Agency (acting on behalf of the overseeing organisations of the Department for Transport, Local Government and the Regions; the Scottish Executive Development Department; the National Assembly of Wales; the Department for Regional Development, Government Department in Northern Ireland), the CSS (formerly the County Surveyors' Society), the Local Government Technical Advisers Group, and industry bodies. HAPAS Agrément Certificates are normally each subject to a review every five years.

Product

This Certificate relates to the SSR 120-VDI-CM25 Parapet Anchor, for use as a bridge-parapet anchorage.

HAPAS Requirements**1 Requirements**

1.1 The requirements for bridge-parapet anchorages are agreed by the Secretary of State and are set out in the following documents:

- BS 6779-1 : 1998
- Manual of Contract Documents — Specification for Highway Works, Volume 1.

1.2 Additional site requirements may be included on particular contracts, and, in general, will be given in Appendix 22/1 of the contract documents.

Regulations**2 Construction (Design and Management) Regulations 1994 (as amended)****Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)**

In the opinion of the BBA there is no information in this Certificate which relates to the obligations of the client, planning supervisor, designer and contractors under these Regulations.

Technical Specification**3 Description**

3.1 The product is a drilled-in bonded anchor. The full product specification and installation details are shown on the manufacturer's drawing 231/2, issue B, dated 7 March 2001.

3.2 The components comprise:

Anchor — 225 mm x 30 mm diameter stainless steel, grade 1.4401 or 1.4436 to BS EN 10088-1 : 1995, internally isometric coarse threaded Class 6H medium fit to receive an M20 bolt. The anchor bears the company logo 'SSR' on the rim of the threaded hole.

Bonding agent — pourable polyester resin grout, based on Resin Formulation Certificate, dated 14 August 1995.

3.3 The following ancillary components as specified for the particular parapet system are required (which can be supplied as part of the anchor):

Holding-down bolt — M20 stainless steel, grade A4-80 (minimum engagement 21 mm)

Isolating top-hat washer

Washer for holding-down bolt — to BS 4320 : 1968, stainless steel, grade A4 to BS 1449-2 : 1983 or galvanized to BS EN ISO 1461 : 1999 for use with steel parapets

High-creep-resistant, anti-seize grease.

4 Delivery and site handling

The anchors are dispatched to site in boxes.

Design Data**5 General**

The product is suitable for use with the specific low and normal containment parapet systems, requiring the use of M20 holding-down bolts, in accordance with the assessed value of the design resistance (see Table 1).

Table 1 Anchorage properties⁽¹⁾

Hole type	Hole diameter (mm)	Effective depth h_{ef} (mm)	Characteristic resistance R_k (kN)	Design resistance R_d (kN)
Diamond drilled	35	225	250.5	167

(1) In uncracked, reinforced concrete having a characteristic strength of $f_{ck} = 30 \text{ N mm}^{-2}$.

(2) For cracked concrete, a reduction factor of 1.4 must be applied.

6 Strength

6.1 Details of the design resistance and design requirements are given in the manufacturer's drawing 231/2, issue B, dated 7 March 2001. The reinforced concrete structure supporting the parapet must be designed or assessed to resist, without damage, the forces that may be transmitted to the anchor.

6.2 The designer is responsible for assessing the condition and strength of the concrete supporting beam.

7 Practicability of replacement

The design of the product allows the ready removal and replacement of damaged sections of parapet.

8 Durability

When used in the context of, and in compliance with this Certificate, the product will have adequate durability.

Installation

9 General

9.1 The product must be installed in accordance with the details given on the manufacturer's drawing 231/2, issue B, dated 7 March 2001, COSH Data Sheet QA/3917/1, dated 1 July 1998, and the Specification for Highway Works, Volume 1.

9.2 To facilitate removal of the holding-down bolts, the internal threads of the socket shall be coated with a high-creep-resistant, anti-seize grease.

Technical Investigations

The following is a summary of the technical investigations carried out on the SSR 120-VDI-CM25 Parapet Anchor.

10 Investigations

10.1 Static tests on an assembly were carried out⁽¹⁾ in accordance with the requirements of specific tests given in ETAG No 001 : 1997.

(1) See Taywood Engineering Ltd, Test Certificate, No 5493.

10.2 Checks were made for compliance with the requirements of Specification for Highway Works, Volume 1.

10.3 Consideration of existing data was made relating to:
practicability of installation
practicability of removal
durability.

10.4 The manufacturing process was assessed, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

Additional Information

The management systems of the company have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 1994 and BS EN ISO 9002 : 1994.

Bibliography

BS 1449 *Steel plate, sheet and strip*

BS 1449-2 : 1983 *Specification for stainless and heat-resisting steel plate, sheet and strip*

BS 4320 : 1968 *Specification for metal washers for general engineering purposes*

BS 6779 *Highway parapets for bridges and other structures*
BS 6779-1 : 1998 *Specification for vehicle containment parapets of metal construction*

BS EN 10088 *Stainless steels*

BS EN 10088-1 : 1995 *List of stainless steels*

BS EN ISO 1461 : 1999 *Hot dip galvanized coatings on fabricated iron and steel articles — Specifications and test methods*

BS EN ISO 9001 : 1994 *Quality systems. Model for quality assurance in design, development, production, installation and servicing*

BS EN ISO 9002 : 1994 *Quality systems. Model for quality assurance in production, installation and servicing*

ETAG No 001 : 1997 *Guideline for European Technical Approval of Metal Anchors for Use in Concrete*

Conditions of Certification

11 Conditions

11.1 This Certificate:

- relates only to the product that is described, installed, used and maintained as set out in this Certificate;
- is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;
- is copyright of the BBA.

11.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, shall be construed as references to such publication in the form in which it was current at the date of this Certificate.

11.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabricating process(es) thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;
- continue to be checked by the BBA or its agents;
- are reviewed by the BBA as and when it considers appropriate; and
- remain in accordance with the requirements of the Highway Authorities Product Approval Scheme.

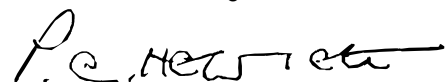
11.4 In granting this Certificate, the BBA makes no representation as to:

- the presence or absence of any patent or similar rights subsisting in the product or any other product;
- the right of the Certificate holder to market, supply, install or maintain the product; and
- the nature of individual installations of the product, including methods and workmanship.

11.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.

**In the opinion of the British Board of Agrément,
SSR 120-VDI-CM25 Parapet Anchor is fit for its intended
use provided it is installed and used as set out in this
Certificate. Certificate No 00/H037 is accordingly awarded
to Fixing Centre Ltd.**

On behalf of the British Board of Agrément



Date of Second issue: 1st August 2001

Chief Executive

**Original Certificate issued on 9th June 2000. This amended version issued to include an altered reference to the manufacturer's drawings.*