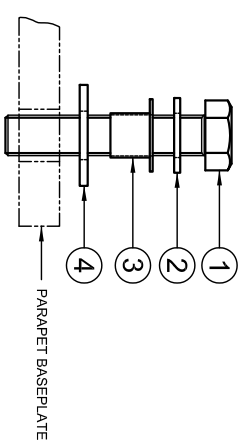
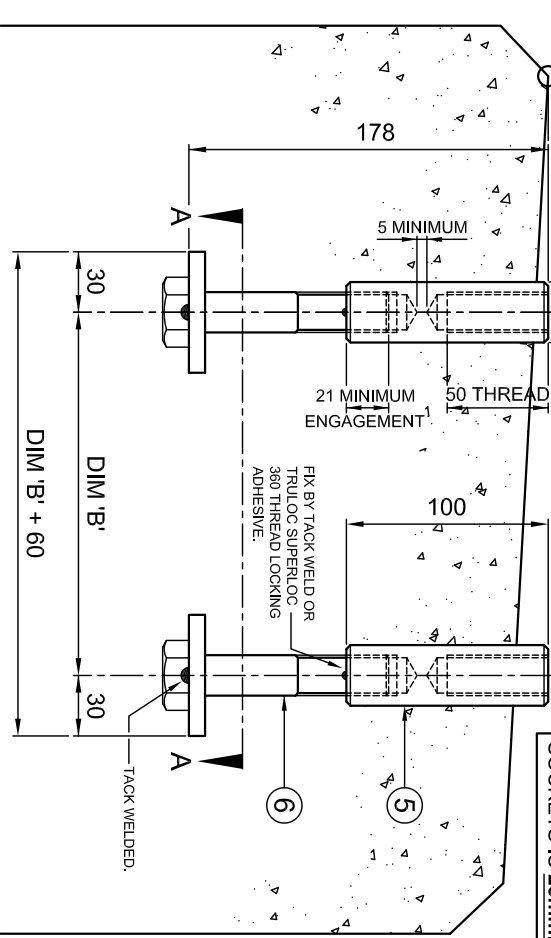


THE CONCRETE PLINTH IS TO BE DESIGNED BY OTHERS TO RESIST WITHOUT DAMAGE THE FORCES TRANSMITTED BY THE PARAPET CONTAINMENT LEVEL UNDER IMPACT.

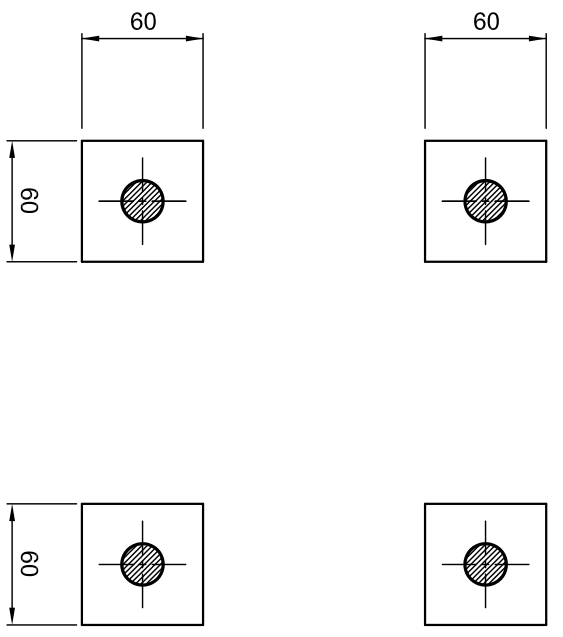
**NOTE:**  
THE TOP OF THE ANCHORAGE SOCKETS ARE TO BE SET LEVEL WITH THE HIGH POINT OF THE CONCRETE UPSTAND.  
TOLERANCE: +0mm / -5mm.



THE MINIMUM ENGAGEMENT OF THE TOP HOLDING DOWN BOLTS INTO THE ANCHORAGE SOCKETS IS 25mm.



**SIDE ELEVATION.**



**SECTION A-A.**



**INSTALLATION PROCEDURE:**

1. THE ANCHOR EMBEDMENT DEPTH IN THE CONCRETE MUST BE NOT LESS THAN 150mm.
2. IF THE PARAPET CROSSFALL AND / OR LONGFALL EXCEEDS A TOTAL OF 20mm BETWEEN SOCKET CENTRES, THE ANCHORAGE MUST BE SET TO ENSURE THAT THE STAINLESS STEEL SOCKET HAS A MINIMUM EMBEDMENT OF 80mm.
3. ANCHORAGES ARE SUPPLIED WITH A PLYWOOD TEMPLATE AND CARBON STEEL BOLTS FOR FIXING TO FORMWORK. THE PLYWOOD IS TO BE NAILED TO THE SHUTTERING BEFORE POURING. IF IT IS NECESSARY TO REMOVE THE PLYWOOD THIS SHOULD NOT BE DONE UNTIL THE CONCRETE IS SET SUFFICIENTLY TO PREVENT ANY DISTURBANCE OF THE ANCHORAGE.
4. WHEN ANCHORAGES ARE SENT TO CONCRETE PRECASTERS ANCHORAGE CENTRES ARE SET AND THE TOP SOCKET THREADS FITTED WITH PLASTIC CAPS OR PLUGS.
5. THE CARBON STEEL BOLTS MUST BE REPLACED IN THE SOCKETS, TO ENSURE THAT THE SOCKET THREADS ARE KEPT CLEAN.
6. APPLY HIGH CREEP RESISTANT GREASE TO SOCKET THREADS AFTER CLEANING BUT PRIOR TO INSERTING THE STAINLESS STEEL HOLDING DOWN BOLT. (ROCOL J166 OR SIMILAR).
7. FOR PARAPET ERECTION SEQUENCE REFER TO PRODUCT SPECIFICATION MANUALS.
8. THE LENGTH OF TOP BOLT TO BE DETERMINED BY THE PARAPET INSTALLER, TO SUIT SITE CONDITIONS, TO ENSURE A **MINIMUM THREAD ENGAGEMENT OF 25mm.**
9. FOR ALUMINIUM PARAPETS THE NYLON TOP HAT WASHERS IS TO BE PLACED BETWEEN THE STAINLESS STEEL WASHER AND THE ALUMINIUM BASEPLATE.
10. FOR STEEL PARAPETS THE NYLON WASHERS IS TO BE PLACED BETWEEN THE UNDERSIDE OF THE BOLT HEAD AND THE GALVANISED STEEL WASHER.

**M20 CAST-IN ANCHORAGE SPECIFICATION.**

- A. THIS ANCHORAGE IS DESIGNED AND SPECIFIED IN COMPLIANCE WITH:
  - A.1 THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS, VOLUME 1, SERIES 400.
  - A.2 BS.6779-1:1998 HIGHWAY PARAPETS FOR BRIDGES AND OTHER STRUCTURES.
- B. ANCHORAGE IS ONLY FOR USE WITH THE APPROPRIATE V&G VEHICLE RESTRAINT SYSTEMS.
- C. ANCHOR SOCKET INTERNAL - CLASS 6H MEDIUM FIT TO THREAD TOLERANCES:
  - BS.3643-2: 2007.
- D. THE HOLDING DOWN SETSCREWS - CLASS 6g MEDIUM FIT TO BS.3643-2: 2007.
- E. ALL WELDS TO BE IN ACCORDANCE WITH BS.EN.1011-3:2000. THE ANCHORAGE FINISH IS SELF COLOUR.

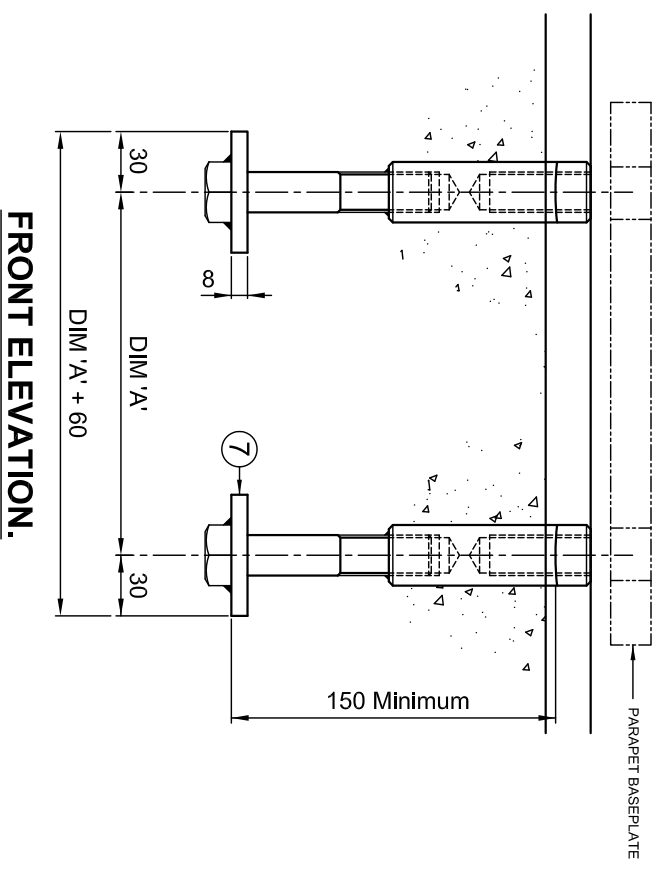
Item No.	Description.	Material.
1.	Parapet Holding Down Fixing: M20 x Suitable length Hexagonal Head Setscrew.	To BS.3692: 2001 and Stainless Steel Class A4/80 to BS.EN.ISO 3506-1: 2009
2.	M20 Flat Washer Form 'A'.	To BS.4320: 1968 and Stainless Steel Grade A4 to BS.EN.ISO 3506-1: 2009
3.	M20 Nylon Top Hat Washer.	Nylon 66.
4.	M20 x 23 l/d x 50 o/d x 4mm Galvanised Washer. (For use with Steel Parapets only.)	To BS.4320: 1968 and Galvanised to BS.EN.ISO 1461.
5.	Anchorage Coupler.	30mm Diameter Bar - SSR550 Stainless Steel grades 1.4401, 1.4436 OR 1.4362 (Duplex) to BS.10088-1:2005.
6.	M20x100 Hexagonal Head Bolt.	To BS.3692: 2001 and Stainless Steel Class A4/80 to BS.EN.ISO 3506-1: 2009
7.	60x60x8 Anchorage Base plate.	8mm Stainless Steel Plate grade 1.4401 to BS.10088-2:2005.
8.	1.5mm thick steel setting template.	Carbon Steel to BS.EN.10025-1 and 2: 2004 grade S275JR.
9.	Plywood Template.	FSC Softwood plywood board or similar.

**MATERIAL SPECIFICATION.**

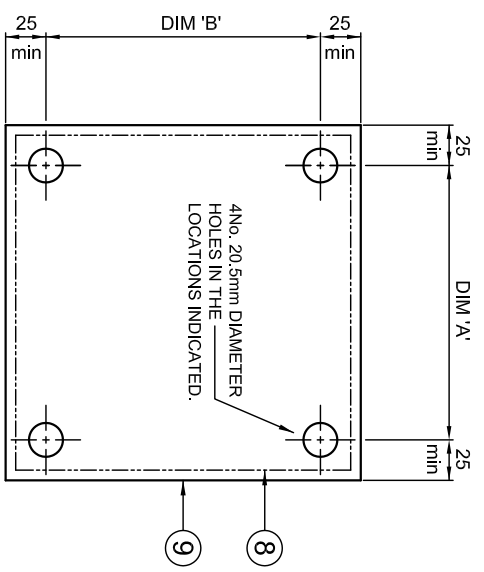
**SSR-500 STAINLESS STEEL CONNECTOR.**  
MINIMUM 0.2% PROOF STRESS = 550 N/mm<sup>2</sup>.  
MINIMUM ULTIMATE TENSILE STRENGTH = 650 N/mm<sup>2</sup>.

**GRADE 8.8 HIGH TENSILE STEEL BOLTS TO BS.3692:2001**  
MINIMUM YIELD STRENGTH = 640 N/mm<sup>2</sup>.  
MINIMUM TENSILE STRENGTH = 800 N/mm<sup>2</sup>.

**CARBON STEEL TO BS.EN.10025-1 & 2:2004 GRADE S275JR.**  
MINIMUM YIELD STRENGTH = 275 N/mm<sup>2</sup>.  
MINIMUM ULTIMATE TENSILE STRENGTH = 410 N/mm<sup>2</sup>.



**FRONT ELEVATION.**



**PLYWOOD TEMPLATE.**

1.5mm THICK STEEL SETTING TEMPLATE TO BE PLACED BETWEEN THE TOP OF THE ANCHORAGE SOCKET AND THE PLYWOOD TEMPLATE.

ALL DIMENSIONS IN MM.

SCALE	DATE	06/04/2011
DRN P.G.H.	CHK	D.V.C.
TITLE		
STANDARD ARRANGEMENT DRAWINGS OF M20 ANCHORAGE UNIT TYPE 2. (ALL STAINLESS STEEL.)		

Rev	Date	By	Description
B	Apr '11	dvc	Redrawn with minor amendments.
<b>MANUFACTURING TOLERANCES.</b>			
TOLERANCES AS SHOWN UNLESS STATED OTHERWISE.			
DIMENSIONS: TOLERANCES:			
GREATER THAN ± 2mm			
LESS THAN ± 1mm			
ANGULAR DIMENSIONS: ± 0°15'			
NOTE: ALL ACCUMULATIVE TOLERANCES ARE TO BE CONTAINED WITHIN THE OVERALL TOLERANCE.			
<b>SITE ERECTION TOLERANCES.</b>			
WILL VARY TO SUIT SITE CONDITIONS.			
ALL STANDARDS QUOTED ARE DEEMED CURRENT AT THE DATE THE DRAWING IS ISSUED FOR APPROVAL, UNLESS OTHERWISE STATED.			
THIS DRAWING TO BE USED ONLY WITH			
W/O.No.			
DRAWING TO BE RETURNED TO DRAWING OFFICE ON COMPLETION OF WORK			
<p><b>Varley and Gulliver Ltd.</b> Alfred Street, Sparkbrook, Birmingham B12 8UR Tel. 44 (0) 121 773 2441 Fax. 44 (0) 121 766 6875 Website. www.v-and-g.co.uk</p>			
DRAWING NUMBER			VGAS - 2.B.