



NAMM Register of Accredited Ground Anchor Fixing Methods for use with General Stones*

*NB: General Stones are classed as all materials as hard or harder than Marble.

It is the responsibility of the mason to assess the ground conditions and decide on the appropriate foundation and fixing method for the situation. (See current edition of NAMM's Code of Working Practice – for guidance). All the systems in the register are classed as rigid failure type systems unless otherwise stated. It is important to read and follow the detailed fixing instructions provided by the manufacturers/suppliers. The stability of a memorial may be compromised unless the mason ensures the correct procedures are strictly followed, particularly in relation to hole sizes and depth stops (height/protrusion of fixing above foundation surface, which is inserted into memorial base). For further information and advice please call NAMM at Rugby, Tel. 01788 542264 or contact any of the suppliers stated in the register.

The methods of fixing memorials have been subjected to specific testing criteria laid down by an Independent Structural Engineer and witnessed by NAMM and an appointed Independent Consulting Structural Engineer. Accreditation has been given for each method on the understanding that no change has been made to the technical specification of the submitted system or deviation from the fixing procedure to that detailed at the time of accreditation testing. The product liability is the responsibility of the manufacturer/supplier.

All fixing systems bars, tubes, dowels, pins, nuts, bolts & washers etc are made of stainless steel of not less than Grade A302. All accredited fixing methods must be followed in accordance with instructions and fixings must not be modified.

Any depth stop shall be recessed into one of the elements that the system joins. These depth stops must not be moved from the manufacturers specified position.

Each fixing method has been classified into a limiting height category as follows: -

- Memorials up to 900mm (3'0") overall height – Category A
- Memorials up to 1200mm (4'0") overall height – Category B
- Memorials up to 1500mm (5'0") overall height – Category C
- Memorials up to 1800mm (6'0") overall height – Category D
- Memorials up to 610-750mm (2'-2'6") overall height – Category E

NAMM Ref. No.	Name & Brief Description of Fixing Method	Category	Date Accredited
Supplier: C.C.A. Fixings. Tel: 0871 871 0511			
NRN 101	1 No. 700mm long solid 24mm dia threaded bar with washer, adjusted to provide a protrusion of <u>70</u> mm minimum above foundation surface. Foundation and memorial base holes of <u>28</u> mm dia. required on the longitudinal centre line.	A	Sept 02
NRN 102	1 No. 700mm long solid 24mm dia. threaded bar with washer, adjusted to provide a protrusion of <u>95</u> mm minimum above foundation surface. Foundation and memorial base holes of <u>28</u> mm dia. required on the longitudinal centre line.	B	Sept 05

NAMM Ref. No.	Name & Brief Description of Fixing Method	Category	Date Accredited
NRN 103	2 No. 700mm long solid 24mm dia. threaded bars with washers, adjusted to provide a protrusion of <u>95</u> mm minimum above foundation surface. Foundation and memorial base holes of <u>28</u> mm dia. required on the longitudinal centre line. Bar positions to be equally spaced.	C	Sept 02
NRN 104	3 No. 700mm long solid 24mm dia. threaded bars with washers, adjusted to provide a protrusion of <u>95</u> mm minimum above foundation surface. Foundation and memorial base holes of <u>28</u> mm dia. required on the longitudinal centre line. Bar positions to be equally spaced.	D	Sept 2002
NRN 105	1 No. 700mm long solid 24mm dia threaded bar with washer, adjusted to provide a protrusion of <u>48</u> mm minimum above foundation surface. Foundation hole of <u>28</u> mm dia. and memorial base hole of <u>25</u> mm dia. required on the longitudinal centre line.	E	Sept 2005
Supplier: Myatt & Leason Ltd. Tel: 01782 848369			
NRN 201	1 No. 600mm long 38mm dia. smooth tube with plastic retention collar. Foundation hole of <u>40</u> mm dia. is required and memorial base hole must be between <u>40-42</u> mm dia. on the longitudinal centre line.	A&B	Nov 2005
NRN 202	2 No. 600mm long 38mm dia. smooth tube with plastic retention collar. Foundation hole of <u>40</u> mm dia. is required and memorial base hole must be between <u>40-42</u> mm dia. on the longitudinal centre line.	B&C	Mar 2002
Supplier: NAMM Fixings. Tel: 01782 745533			
NRN 301	Kit A – Comprising 2 No. threaded 16mm dowels and twin bell-topped tubes 460mm long. Foundation and memorial base holes of <u>30</u> mm dia. required at 350mm (14”) centres.	A	1996
NRN 302	Kit B – Comprising 2 No. threaded 20mm dowels and twin bell-topped tubes 460mm long. Foundation and memorial base holes of <u>30</u> mm dia. required at 350mm (14”) centres.	A&B	1996
Important Note: NAMM Fixings are a progressive failure type and are also suitable for use with soft natural stones in Category A. i.e. Portland Stone up to memorial height of 900mm (3’0”).			
Supplier: A.O.R. Stone Keel (Stephen Hill) Tel: 024 7671 2323			
NRN 401	1 No. 600mm long 25mm dia. smooth bar with 6mm dia. ‘J’ shaped pin positioned into the middle depth setting holes in the bar, to provide a protrusion of <u>71</u> mm above the foundation surface. Foundation and memorial base holes of <u>28</u> mm are required.	A	Sept 2005
NRN 402	1 No. 600mm long 33mm dia. tube and 1 No. 600mm long 25mm dia. smooth bar with 6mm dia. ‘J’ shaped pin positioned into the middle depth setting holes in the bar, to provide a protrusion of <u>71</u> mm above the foundation surface. Foundation hole of <u>35</u> mm (for tube) and memorial base hole of <u>28</u> mm (for bar) are required.	B	Sept 2005
NRN 403	1 No. 450mm long 25mm dia. smooth bar with 6mm dia. ‘J’ shaped pin positioned into the middle depth setting holes in the bar, to provide a protrusion of <u>45</u> mm above the foundation surface. Foundation and memorial base holes of <u>28</u> mm are required.	E	Nov 2005

NAMM Ref. No.	Name & Brief Description of Fixing Method	Category	Date Accredited
	Supplier: The Memorial Stone Centre. Tel: 01243 867005		
NRN 501	Stone Safe System – comprising of a stepped concrete foundation reinforced with polypropylene fibres, anchored with 2 No. 450mm long 20mm dia. threaded bar, nuts and washers. Also 2 No. 20mm dia. threaded dowel bars of sufficient length with nuts & washers to bolt headstone inscription plate to memorial base and foundation.	A, B & C	Sept 2005
	Supplier: Nettlebank Fixings. Tel: 01782 827313		
NRN 601	1 No. 600mm long x 25mm dia. smooth bar with 55mm outside diameter washer fixed to a set a depth protrusion to the thickness of the memorial base (75mm min). Foundation hole of <u>28</u> mm dia. and memorial base hole of <u>28</u> mm dia. required.	A	Feb 2005
NRN 602	2 No. 600mm long x 25mm dia. smooth bar each with 55mm outside diameter washer fixed to provide a set depth protrusion into the memorial base. Foundation holes of <u>28</u> mm dia. and memorial base holes of <u>28</u> mm dia. required @ 560mm (22") centres.	B	Feb 2002
NRN 603	1 No. 600mm long x 25mm dia. smooth bar with 55mm outside diameter washer fixed to a set a depth protrusion to the thickness of the memorial base (45mm min). Foundation hole of <u>28</u> mm dia. and memorial base hole of <u>28</u> mm dia. required.	E (610) 50mm granite	Oct 2004
NRN 604	1 No. 750mm long x 25mm dia. smooth bar with 55mm outside diameter washer fixed to a set a depth protrusion to the thickness of the memorial base (88mm min). Foundation hole of <u>28</u> mm dia. and memorial base hole of <u>28</u> mm dia. required. NB. This method has been classed as a progressive failure type.	B	Aug 2002
	Supplier: The Blast Shop. Tel: 0161 736 1794		
NRN 701	1 No. 600mm long 38mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. 1 No. 200mm long Peg 32/38mm dia. inserted tube to provide 70mm protrusion into memorial base. Foundation and memorial base holes of <u>40</u> mm dia. maximum are recommended.	A & B	Mar 2003
NRN 702	2 No. 600mm long 38mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. 2 No. 200mm long Pegs 32/38mm dia. inserted tube to provide two 70mm protrusions into memorial base. Foundation and memorial base holes of <u>40</u> mm dia. maximum are recommended.	C	Mar 2003
NRN 703	1 No. 600mm long 38mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. A 90mm dia. x 70mm deep M10 bolted lockdown device. Foundation hole of <u>40</u> mm dia. maximum is recommended.	A	Mar 2003
NRN 704	1 No. 600mm long 38mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. A 90mm dia. x 95mm deep M10 bolted lockdown device. Foundation hole of <u>40</u> mm dia. maximum is recommended.	B	Mar 2003
NRN 705	1 No. 600mm long 28mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. 1 No.180mm long Peg 22.8/28.2mm dia. inserted in tube to provide 70mm protrusion for memorial base. Foundation and memorial base holes of <u>30</u> mm dia. maximum are recommended	A	Feb 2005
NRN 706	1 No. 580mm long 26.9mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. 1 No.180mm long Peg 21.5/27mm dia. inserted in tube to provide 70mm protrusion for memorial base. Foundation and memorial base holes of <u>28</u> mm dia. maximum are recommended	A	Feb 2005
NRN 707	1 No. 580mm long 26.9mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. A 90mm dia. x 65mm deep M12 bolted lockdown device. Foundation hole of <u>28</u> mm dia. maximum is recommended.	A	Feb 2005

NAMM Ref. No.	Name & Brief Description of Fixing Method	Category	Date Accredited
NRN 708	1 No. 585mm long 38mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. 1 No.190mm long Peg 34/38mm dia. inserted in tube to provide 70mm protrusion for memorial base. Foundation and memorial base holes of <u>40mm</u> dia. maximum are recommended.	A	Sept 2005
NRN 709	1 No. 600mm long 28mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. 1 No.162mm long Peg 23/28mm dia. inserted in tube to provide 50mm protrusion for memorial base and a 90mm dia. x 120mm deep M12 bolted lockdown device. Foundation and memorial base holes of <u>30mm</u> dia. maximum are recommended.	E (610) 50mm marble	Sept 2005
NRN 710	1 No. 600mm long 28mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. A 90mm dia. x 120mm deep M12 bolted lockdown device. Foundation hole of <u>30mm</u> dia. maximum is recommended	E (610) 50mm marble	Sept 2005
NRN 711	1 No. 600mm long 28.6mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. 1 No.160mm long Peg 22.5/28.5mm dia. inserted in tube to provide 50mm protrusion for memorial base. Foundation and memorial base holes of <u>30mm</u> dia. maximum are recommended.	E (610) 50mm granite	Sept 2005
NRN 712	1 No. 448mm long 28mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. 1 No.160mm long Peg 22.5/28.5mm dia. inserted in tube to provide 50mm protrusion for memorial base. Foundation and memorial base holes of <u>30mm</u> dia. maximum are recommended.	E (610) 50mm marble	Sept 2005
NRN 713	1 No. 448mm long 28mm dia. Tube with 2 No. 10 x 10mm wings to locate on foundation base. A 90mm dia. x 90.5mm deep M12 bolted lockdown device. Foundation hole of <u>30mm</u> dia. maximum is recommended.	E (610) 50mm marble	Sept 2005
NRN 714	Firmalite Foundation System – comprising glass reinforced moulded high-density polypropylene foundation anchored with 1 No. 585mm long x 28.6mm dia. tube. 1 No. 182mm long 22.5/28.5mm dia. Peg to provide 70mm protrusion for memorial base. Foundation and memorial base holes of <u>30mm</u> dia. maximum are recommended. A 90mm dia. x 120mm deep M12 bolted lockdown device.	A	Sept 2005
NRN 715	Firmalite Foundation System – comprising glass reinforced moulded high-density polypropylene foundation anchored with 1 No. 585mm long x 28.6mm dia. tube and 1No. 600mm long x 38mm dia. tube. 1 No. 182mm long 22.5/28.5mm dia. Peg to provide 70mm protrusion for memorial base. Foundation holes of <u>30</u> & <u>40mm</u> dia. and memorial base hole of <u>30mm</u> dia. max. are recommended. A 90mm dia. x 120mm deep M12 bolted lockdown device.	B	Sept 2005
NRN 716	Concrete Foundation System – comprising concrete foundation reinforced with polypropylene fibres anchored with 1 No. 585mm long x 38mm dia. tube. 1 No. 190mm long 34/38mm dia. Peg to provide 70mm protrusion for memorial base. Foundation and memorial base holes of <u>40mm</u> dia. maximum are recommended. A 90mm dia. x 120mm deep M12 bolted lockdown device.	B	Sept 2005