

# Gravity Bar

## INSTALLATION INSTRUCTIONS AND TECHNICAL INFORMATION GRAVITY BAR™ EXTRACTABLE ROAD ANCHOR

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### SECTION 1.0 ASSEMBLY

When assembled, a nickel based anti-seize product should be applied to the right-hand thread in order to prevent galling with stainless steel nuts. Assembly with plated carbon steel nuts may result in galvanic corrosion.

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### SECTION 2.0 APPROVED ADHESIVES

1. HILTI HIT-HY200-R hybrid methacrylate mortar.
2. FISCHER FIS SB 390 S vinyl ester superbond mortar.
3. HILTI HIT-RE500-V3 epoxy mortar.

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### SECTION 3.0 SAFETY PRECAUTIONS

- Read and understand this installation instruction for the anchor, and any safe work method or risk assessment associated with its installation.
- Read and understand the OEM's safety and technical data, first aid instructions, exposure notices, and installation instructions for the approved adhesive and anti-seize products used with this product.
- Avoid breathing vapours and use personal protective equipment as required and in conjunction with any applicable personal safety procedure.

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### SECTION 4.0 INSTRUCTIONS FOR INSTALLATION

For installation in road pavements and concrete foundations:

1. Drill or core specified diameter hole to anchor embedment depth plus 10.0% over-drill.
2. If diamond cored, a roughening tool will be required to condition the inside of the hole.
3. Check depth of hole before applying resin.
  - Holes in road pavements finishing in road or sub-base do not require flushing.
  - Holes (finishing in) concrete do require flushing.
4. Pre-assemble GRAVITY BAR™ anchors with 2 x stainless steel A2 (304) HEX nuts, wound hand-tight to shoulder and 1 x stainless steel A2 (304) flat washer;
  - A nickel based anti-seize product should be applied to the right-hand thread prior to assembly of nuts.
  - A bond breaker is not required for left-hand thread.
5. Fill hole to approximately ½ full, applying resin as per OEM installation instructions and product safety data sheet;
  - A 22.0mm diameter hole (for M20 anchor) will require approximately 70ml of adhesive.
  - A 28.0mm diameter hole (for M24 anchor) will require approximately 125ml of adhesive.
6. Insert GRAVITY BAR™ by pushing to full depth while applying moderate clockwise rotation to eliminate potential air pockets.
7. Watch for over-fill and make incremental adjustments to resin volumes to reduce wastage.
8. Be aware of under-fill or high rates of absorption in road and sub-bases; this will be apparent as a result of unusually low resistance when inserting anchors:
  - Remove anchor and check for under-fill; top up with resin as required.
9. Clean up any over-fill as required.

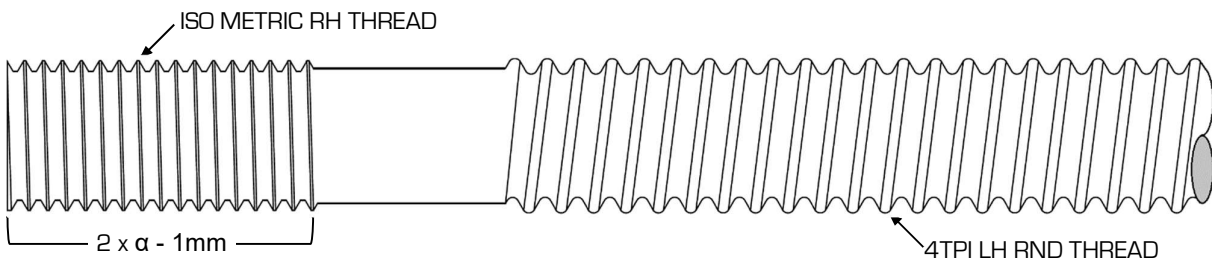
## SECTION 5.0 INSTRUCTIONS FOR EXTRACTION

GRAVITY BAR™ Road Anchors can be reinserted after extraction; take care to protect holes from damage or debris while open and plug holes to prevent debris from infiltrating if intending to reuse at a later time.

For extraction, utilising a high capacity impact wrench with deep impact socket:

1. Set impact wrench for CLOCKWISE rotation only.
2. Anchors should break their bond from the adhesive relatively easily and spin free.
  - In the event that an anchor fails to break away, use a slogging spanner to break with impact.
  - The left-hand thread and shank will leave a perfect mould in the adhesive which may be used at a later time to manually reset the anchor [does not require re-adhesion].

## SECTION 6.0 TECHNICAL INFORMATION AND ANCHOR DIMENSIONS



### M20 GRAVITY BAR™ EXTRACTABLE ROAD ANCHOR

Embedment Depth	200mm	330mm	400mm
Overall Anchor Length	250mm	396mm	450mm
Right Hand Thread Length	31.0mm		
Shank	19.0mm x 18.2mm		
Nut Dimensions	AF30.0mm x H16.0mm (α)		
Required Drill Size	22.0mm		

### M24 GRAVITY BARTM EXTRACTABLE ROAD ANCHOR

Embedment Depth	200mm	330mm	400mm
Overall Anchor Length	250mm	396mm	450mm
Right Hand Thread Length	37.0mm		
Shank	13.0mm x 21.9mm		
Nut Dimensions	AF36.0mm x H19.0mm (α)		
Drill Size	28.0mm		

### M30 GRAVITY BARTM EXTRACTABLE ROAD ANCHOR

Embedment Depth	200mm	330mm	400mm
Overall Anchor Length	250mm	396mm	465mm
Right Hand Thread Length	47.0mm		
Shank	17.0mm x 27.5mm		
Nut Dimensions	AF46.0mm x H24.0mm (α)		
Drill Size	35.0mm		



NOT TESTED  
ON ANIMALS