DonoBrace®

INSTALLATION GUIDE

HIGHEST CAPACITY BRACING SYSTEM WITH FAST INSTALLATION

Contents

VIEW THE INSTALLATION VIDEO: https://youtu.be/2jFFSL3CKXU

At DonoBrace we pride ourselves on our superior performance and comprehensive testing. To ensure the correct calculated capacities are achieved, it is imperative that DonoBrace is used as a completed supplied system. No material substitutions are to be made without specific written authority.

Products

DB 5

Code	Description	Weights (approx.)
DB5	27’ DonoBar 120ksi micro alloyed HDG bar	26.11lb
DB5ECSET + DB5ECKIT	Includes DonoBrace end connection plates HDG, plus DonoBrace fastener kit	12.13lb
DB5CSET	DonoBrace coupler set (required only if brace is over 27’)	2.25lb

DB 6

Code	Description	Weights (approx.)
DB6	27’ DonoBar 830Mpa micro alloyed HDG bar	35.54lb
DB6ECSET + DB6ECKIT	Includes DonoBrace end connection plates HDG, plus DonoBrace fastener kit	30.47lb
DB6CSET	DonoBrace coupler set (required only if brace is over 27’)	6.16lb

DB 7

Code	Description	Weights
DB7	27’ DonoBar 830Mpa micro alloyed HDG bar	47.25lb
DB7ECSET + DB7ECKIT	Includes DonoBrace end connection plates HDG, plus DonoBrace fastener kit	38.62lb
DB7CSET	DonoBrace coupler set (required only if brace is over 27’)	7.1lb

DB 8

Code	Description	Weights (approx.)
DB8	27’ DonoBar 830Mpa micro alloyed HDG bar	81.25lb
DB8ECSET + DB8ECKIT	Includes DonoBrace end connection plates HDG, plus DonoBrace fastener kit	43.76lb
DB8CSET	DonoBrace coupler set (required only if brace is over 27’)	7.7lb

Nut and bolt sizes

All nut and bolt sizes conform to industry sizes and are fully tested as part of the DonoBrace system.

Description DB 5	Thread Size	Bolt Head Size	Nut Head Size
Half nut	DB 5	0.95	0.95
Full nut	DB 5	0.95	0.95
Flanged serrated bracket bolts	A325 ½”	7/8”	7/8”
Cleat to bracket bolt and nut	A325 ¾”	1 5/8”	1 5/8”

Description DB 6	Thread Size	Bolt Head Size	Nut Head Size
Half nut	DB 6	1.417	1.417
Full nut	DB 6	1.417	1.417
Flanged serrated bracket bolts	A325 ½”	7/8”	7/8”
Cleat to bracket bolt and nut	A325 1”	1 5/8”	1 5/8”

Description DB 7	Thread Size	Bolt Head Size	Nut Head Size
Half nut	DB 7	1.417	1.417
Full nut	DB 7	1.417	1.417
Flanged serrated bracket bolts	A325 ½”	7/8”	7/8”
Cleat to bracket bolt and nut	A325 1”	1 5/8”	1 5/8”

Description DB 8	Thread Size	Bolt Head Size	Nut Head Size
Half nut	DB 8	1.969	1.969
Full nut	DB 8	1.969	1.969
Flanged serrated bracket bolts	A325	7/8”	7/8”
Cleat to bracket bolt and nut	A325 1 1/8”	1 13/16”	1 13/16”

Important

- Flanged serrated bracket bolts are designed to be tightened from one side only, due to gripping the steel surface.
- For nut head sizes, the sizes in brackets above are recommended in case of galvanising build-up.

Accessories

Recommended tooling

Tool	Image
Notched combination spanner 1 5/16	Notch example - DB 5: 5/8” 
Notched combination spanner 2"	Notch example - DB 6: 7/8” DB 7: DB 8: 1 1/8” 
Stillson (pipe wrench) - Option 1	
Chain wrench - Option 2	
Adjustable wrench	
Ring spanner 5/8 or 11/16 (flanged serrated bracket bolts)	

N.B.

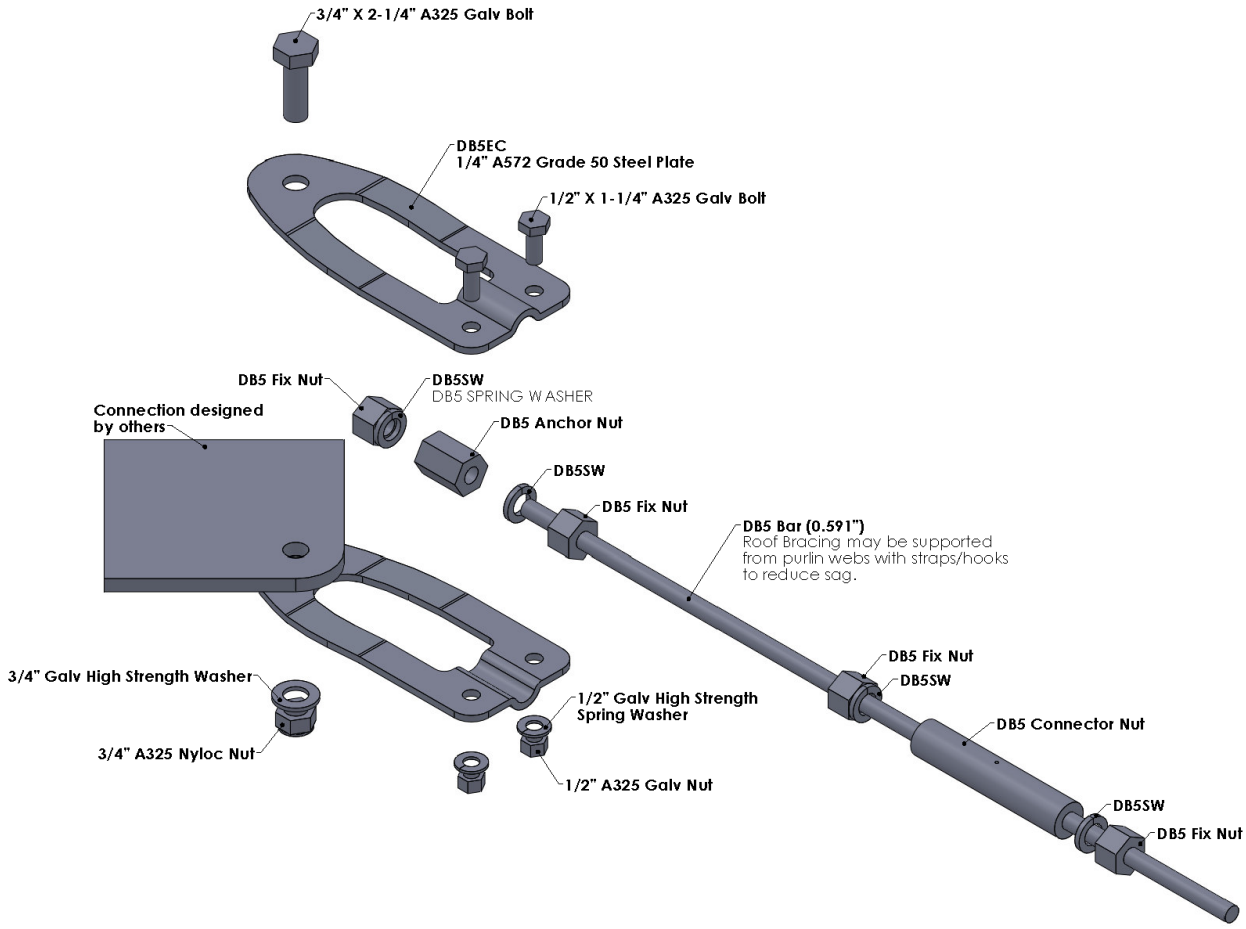
- Flanged serrated bracket bolts are designed to be tightened from one side only, due to gripping the steel surface. Socket and ratchet (or gun) can be used to snug.
- The intention of the installation (Stillson wrench, chain wrench), is to have the bar wind into the nut for tensioning. The tooling is down to personal preference, as explained later in this document.

Checklist for installation:

DB 5

PARTS: Check you have all assembly parts as pictured.

TECHNICAL INFORMATION: Size, length, surface finish.



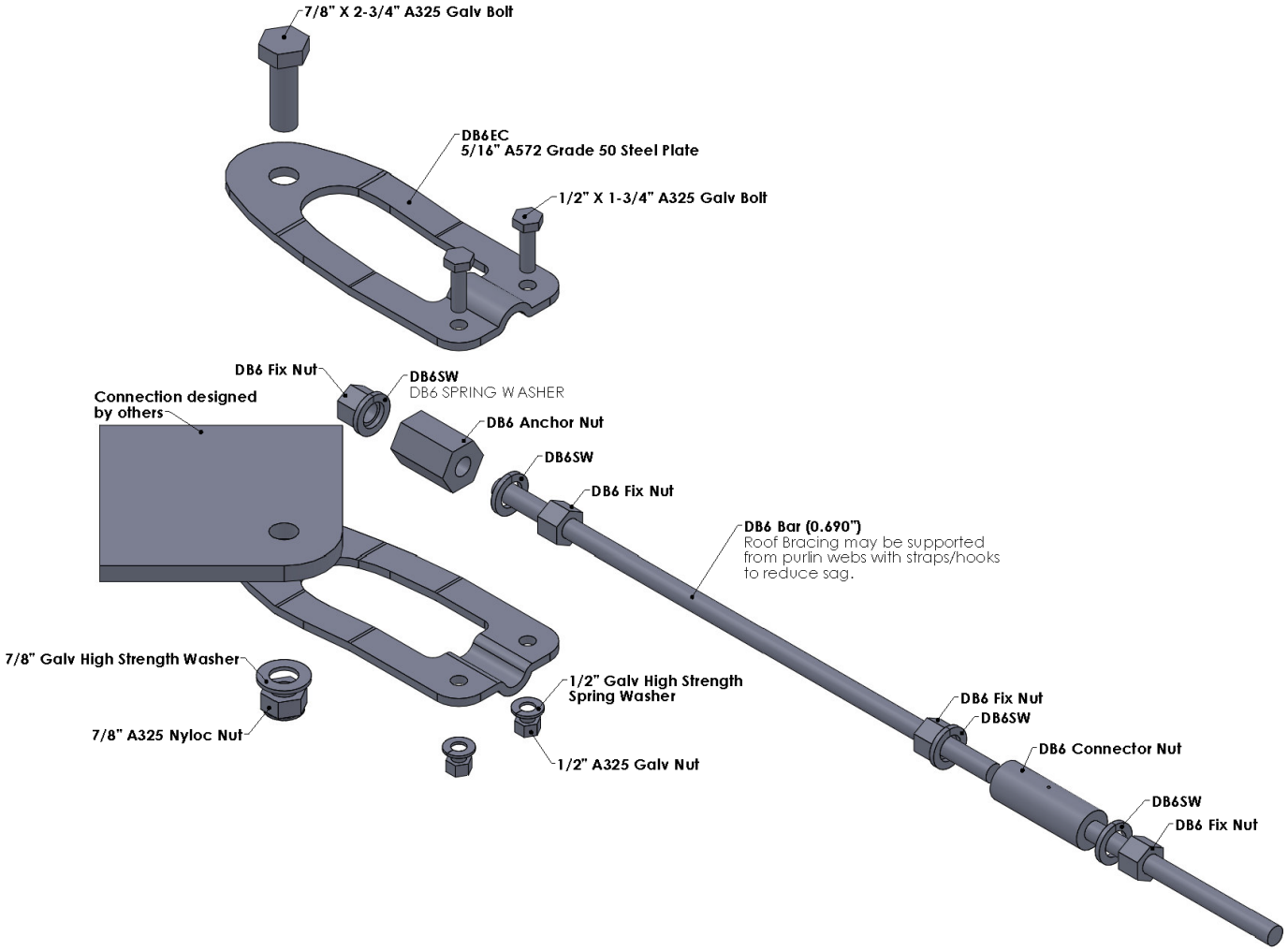
N.B: Coupler (Connector Nut) typically only required for brace lengths over 27".

Checklist for installation:

DB 6

PARTS: Check you have all assembly parts as pictured.

TECHNICAL INFORMATION: Size, length, surface finish.



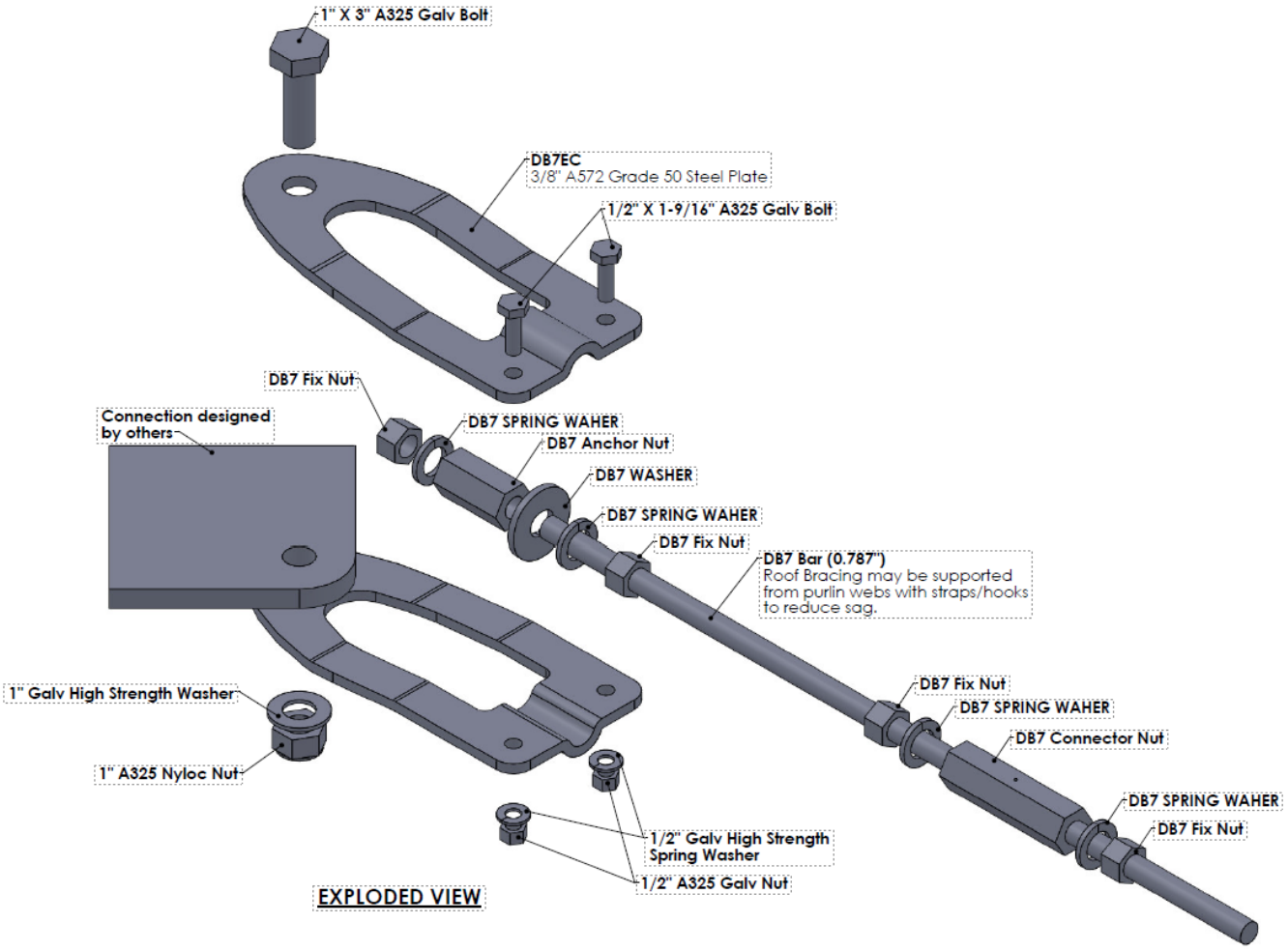
N.B: Coupler (Connector Nut) typically only required for brace lengths over 27".

Checklist for installation:

DB 7

PARTS: Check you have all assembly parts as pictured.

TECHNICAL INFORMATION: Size, length, surface finish.



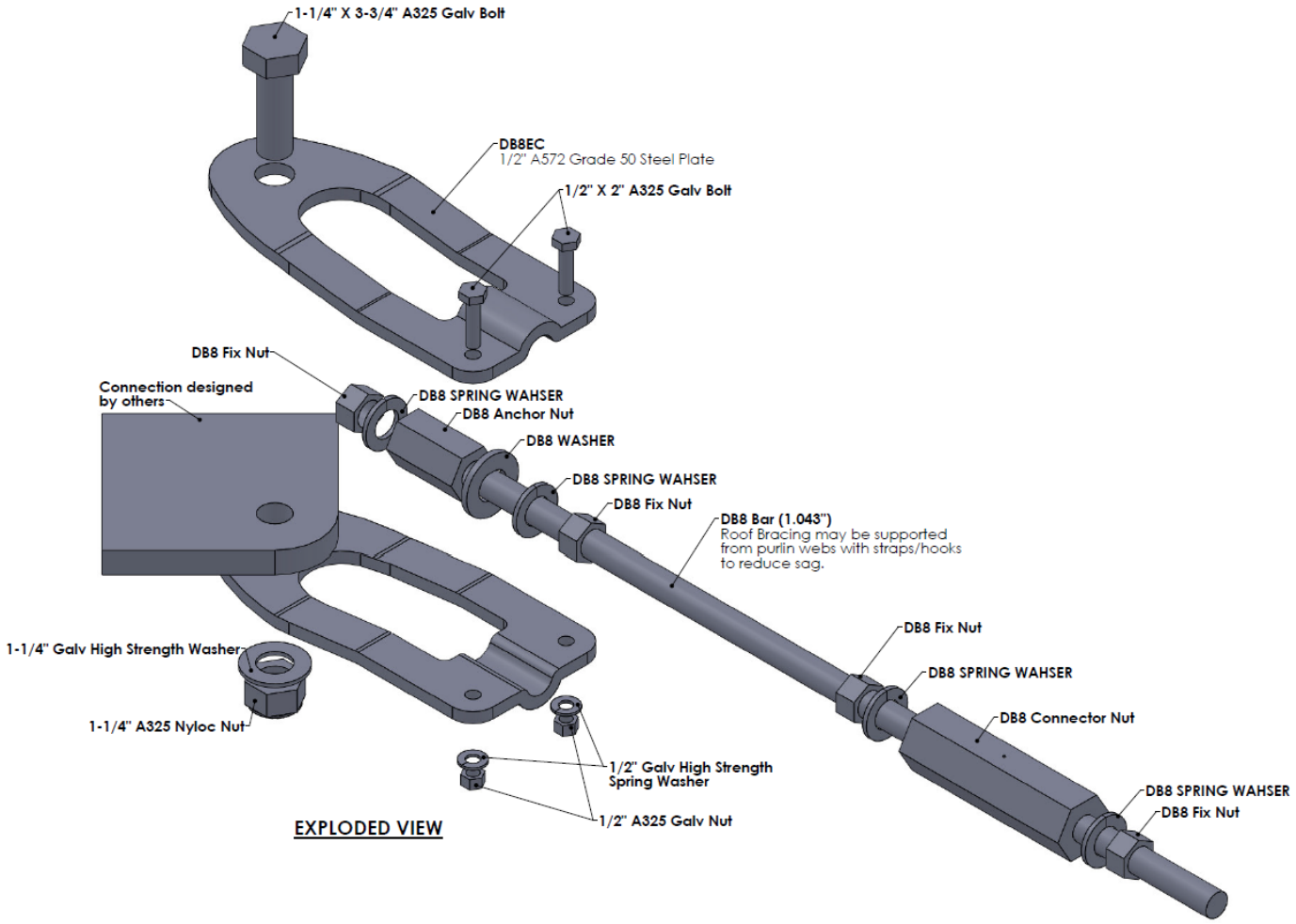
N.B: Coupler (Connector Nut) typically only required for brace lengths over 27".

Checklist for installation:

DB 8

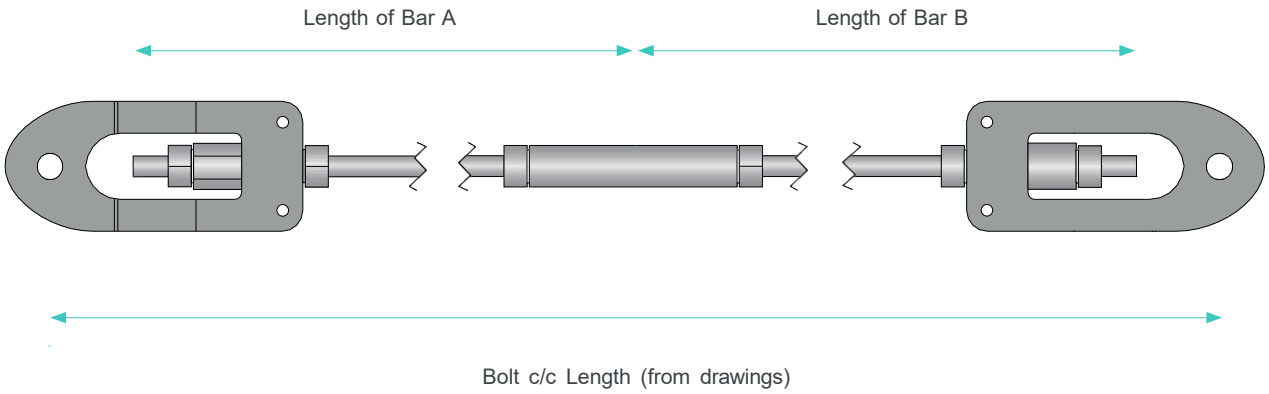
PARTS: Check you have all assembly parts as pictured.

TECHNICAL INFORMATION: Size, length, surface finish.



N.B: Coupler (Connector Nut) typically only required for brace lengths over 27".

Specify bolt C/C length



Use table below to calculate cut lengths of bar:

	Bolt c/c Length (write in box below)	**Subtract**	**Total length of bar required**	**Length of Bar A**	**Length of Bar B** (suggest 40)
DB5		**7 ¾”** **(3 7/8 ’e/e)**			
DB6		**7”** **(3 ½” e/e)**			
DB7		**9 3/8”** **(4 11/16” e/e)**			
DB8		**8”** **(4” e/e)**			
Example DB5	**400”**	**7 ¾”** **(3 7/8” e/e)**	**392 1/4”** **(400” – 7 3/4” = 392 1/4”)**	**300”**	**92 1/4”**

e/e = Each end
c/c = centre to centre (of the cleat holes)

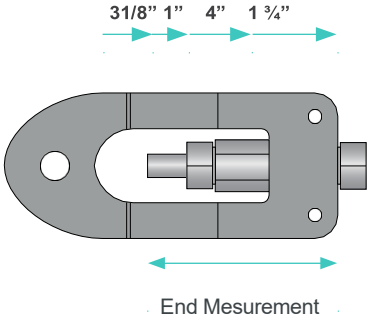
N.B: Coupler (Connector Nut) typically only required for brace lengths over 27’. Minimum length of bar 4”.

STEP 1

- Measure Bar A and cut to length
  (minimum length of bar – 40")
- Check ends are rounded off, to avoid threading issues.
- Repeat for Bar B length. Note: this example works with 2 lengths of bar and a coupler.

N.B. If the brace length is less than 9m, no coupler is required.

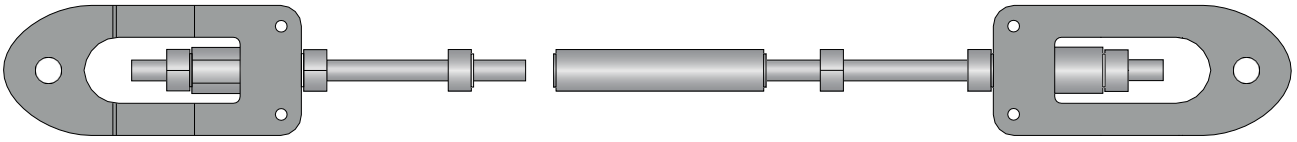
eg. for DB7



STEP 2

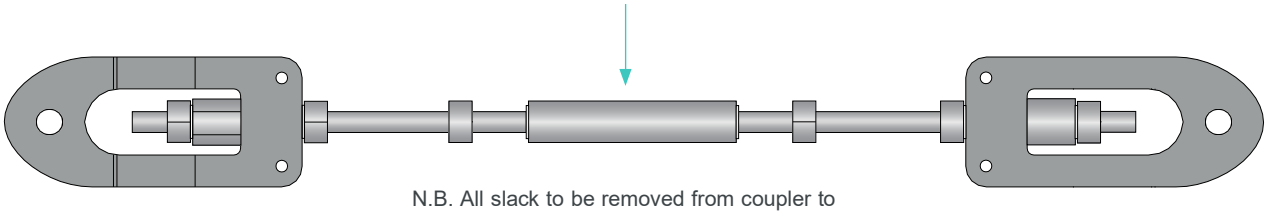
- Wind locking nut and spring washer onto bar.
- Wind coupler on to bar until it hits the centre stop pin.
- Check inspection holes with a pin to confirm correct installation.
- Tighten to snug.
- Repeat for other side of the coupler..

N.B: Coupler typically only required for brace lengths over 27'.



Repeat for other side of the coupler.

Additional Slack for easy installation if required



N.B. All slack to be removed from coupler to engage with central pin prior to tensioning.

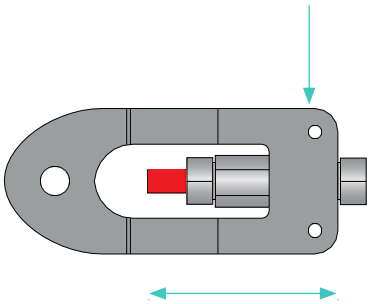
Install coupler loosely so it is only wound on three full turns. This will create slack in the bar to assist with installation.

STEP 3

- Wind locking nut onto bar with spring washer. This will be tightened later.
- End 1: Wind full nut, spring washer, and locking nut onto bar, ensuring the correct left tail length and tighten full nut and half nut ‘snug’ together.
- Fix 2 x flanged serrated bracket bolts to the plate (these can be snugged up as long as the bar spins in the bracket - if not, do not snug up at this point).
- Note minimum tail lengths in table (right).
- Note tail marked in red on diagram (right).

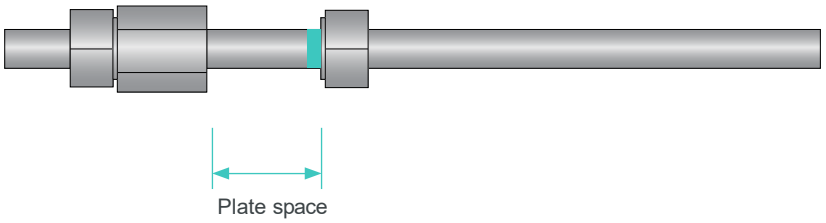
Minimum tail lengths	
DB5	7/8”
DB6	1”
DB7	1”
DB8	1 1/8”

Fasten 2 x flanged lock bolts finger tight to allow bar to move



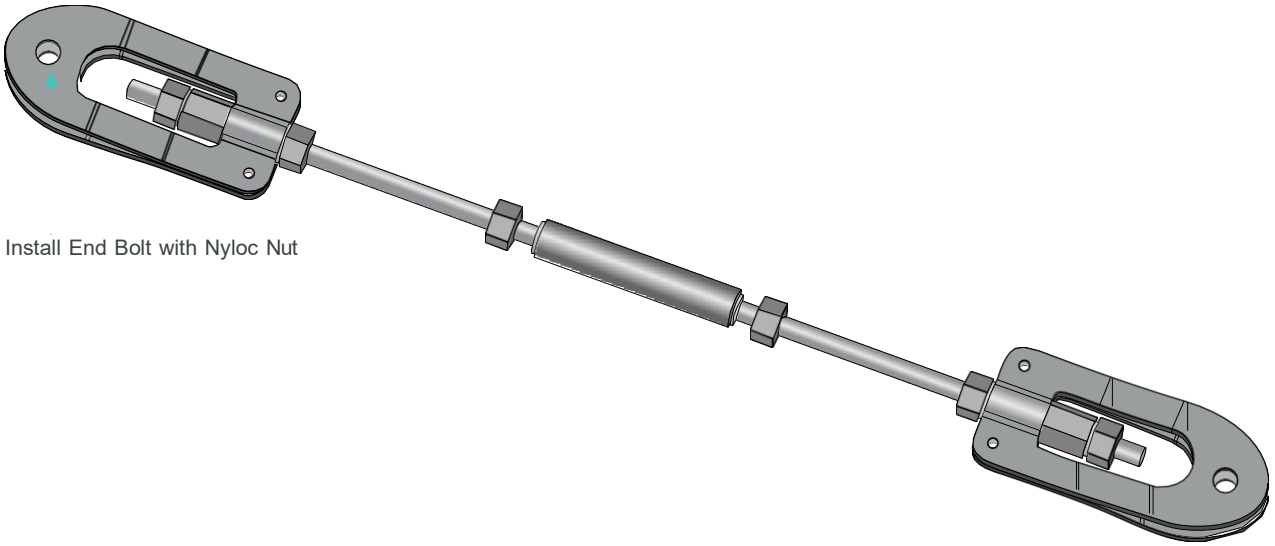
STEP 4

- End 2 - Wind locking nut and spring washer onto bar end. This will be tightened later.
- Wind full nut, spring washer, and lock nuts. Leave full nut and half lock nut loose at the end of the bar, not snugged to the full nut.
- Assemble ends on level surface (try doing it on the ground).
- Fix 2 x flanged serrated bracket bolts to the plate (these can be snugged up as long as the bar spins in the bracket - if not, do not snug up at this point).



STEP 5

Lift DonoBrace system into position and fasten bolt & nyloc nut to structural cleat. We suggest you start with the highest end of the brace.

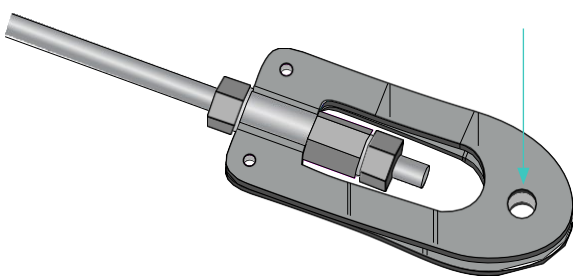


Install End Bolt with Nyloc Nut

STEP 6

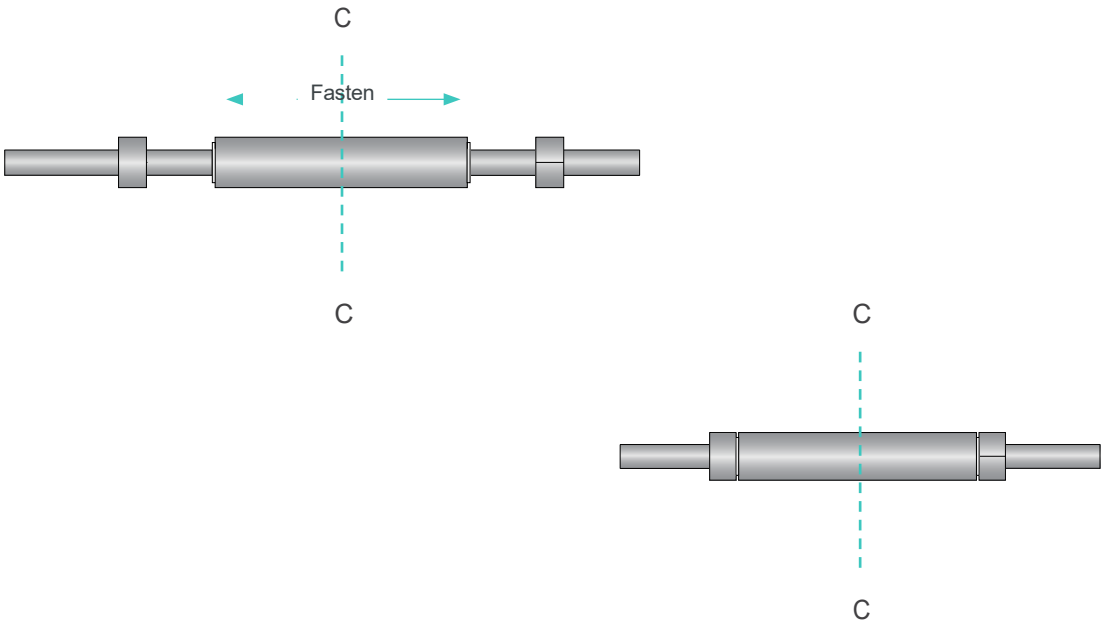
Lift second end of DonoBrace to structural cleat. Install bolt and nyloc nut. Fasten.

Install End Bolt with Nyloc Nut



Option: If slack provided through coupler

Tighten reinforcing bar into coupler until the bar stops at the central pin. This indicates full engagement. Ensure both ends are fully engaged. Ensure the locknut in each end of the coupler is snugged tight.



STEP 7

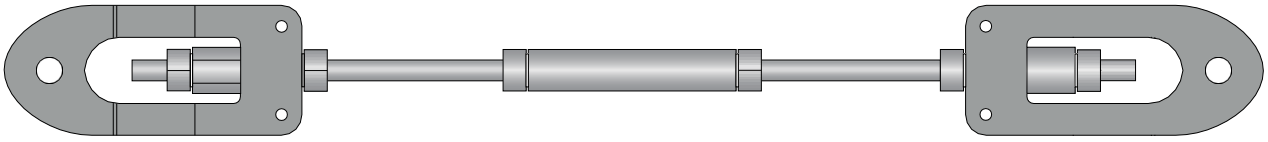
- Place notched spanner over the full nut at the loose end (End 2). If working alone, leave the spanner hanging.
- **A.** If using a coupler, attach your Stillson/chain wrench to the furthest nut on the coupler.

  N.B. This is to ensure that the coupler stays snugged up.

  B. If no coupler is required, your Stillson/chain wrench may be attached to any part of the bar.
- Rotate the bar via your Stillson/chain wrench to wind the bar into the full nut (with the spanner attached), until slack is removed.

STEP 8

Snug the system on each end of the DonoBrace.



STEP 9

BEFORE FINISHING:

Check all assembly parts are installed as per the picture above.

Check all locknuts are tightened.

Check all bolts are fully tightened.

Visually check the DonoBrace is tight (it should look straight, not bowe

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