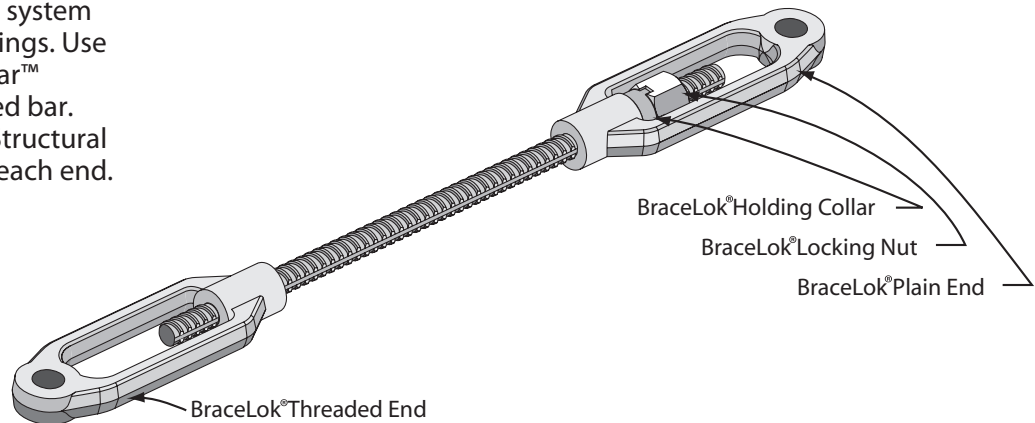


The SpeediBolt™ BraceLok® Bracing System provides a cost effective method of threaded rod bracing for commercial and industrial buildings.

The system provides a high degree of technical credibility for specifiers.

BraceLok® Bracing System

The complete bracing system for steel-framed buildings. Use with 500 PLUS® ReidBar™ high-strength threaded bar. Use with single 8.8 S Structural Bolt, Nut and Washer each end.



Advantages

- Prefabricated standard components
- Available 'off-the-shelf'
- Convenient kit packaging
- Minimal fabrication
- No threading
- No turn buckles
- Technically credible
- Variety of sizes and capacities
- Adjustable on site
- Simple to extend or shorten
- Lighter and stronger
- Fast installation
- Available assembled on ReidBar™ to your measurements subject to quotation
- Cost saving in both labour and material

Components of Kit



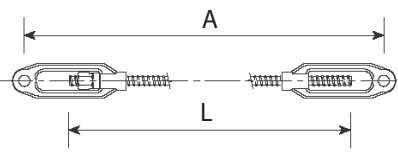
Assembly



Technical Details

The BraceLok® Bracing System has been designed, tested and certified to provide reliable and cost-effective bracing for steel framed buildings.

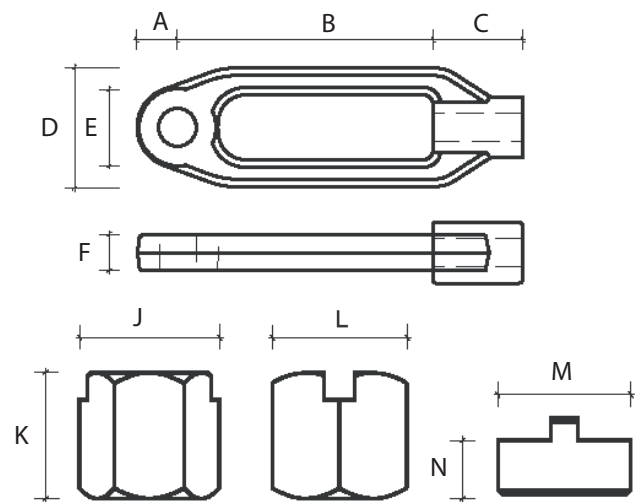
BraceLok® end connections are designed to exceed the tensile yield capacity and ultimate capacity of the 500PLUS® ReidBar™. Manufactured to ISO 9002.

Technical Details						
Size	Nominal Sectional Area A_s mm ²	Cleat Plate Bolt Details	Axial Design Capacity ¹		Cut Length Calculations $L = A - B$ eg: $L = 8105 - 130 = 7975$	
			ΦN kN		B	
			Single	Double		
RB12	113	1-M20 8.8/S	50.5	50.5	130	
RBA16	201	1-M20 8.8/S	88.7	88.7	142.5	
RBA20	314	1-M24 8.8/S	133	147	175	
RB25	491	1-M30 8.8/S	214	228	200	

- Note.
1. Axial Design Capacity was determined by prototype testing in accordance with AS 1170.0:2002 and AS/NZS 4600:1996. The values have a capacity factor of typical 0.9 and as such, are suitable for sizing the BraceLok® system in seismic and non-seismic regions of Australia and New Zealand.
 2. Connecting plates must be at least 10mm thick. Bolts can be fitted with threads in the shear planes.
 3. 500PLUS® REIDBAR® is manufactured to AS/NZS 4671:2001 and has a yield stress (f_y) of 500MPa and a tensile strength (f_u) of 540MPa.

BraceLok® Fittings						
Size	A	B	C	D	E	F
RB12	20	130	50	60	36	16
RBA16	22.5	142.5	50	68	36	20
RBA20	30	180	65	82	42	24
RB25	45	180	70	113	65	30

Locking Nut			Holding Collar		
Size	J	K	L	M	N
RB12	28.9	40	25	30	17
RBA16	34.6	50	30	30	17
RBA20	41.6	55	36	35	20
RB25	52	70	45	43	25



Substitution Tables		
BraceLok®	Equivalent Bracing Rods with cut threads	
	Grade	
	4.6S	300
RB12	M16	M12
RBA16	M20	M20
RBA20	M25	M25
RB25	M30	M30

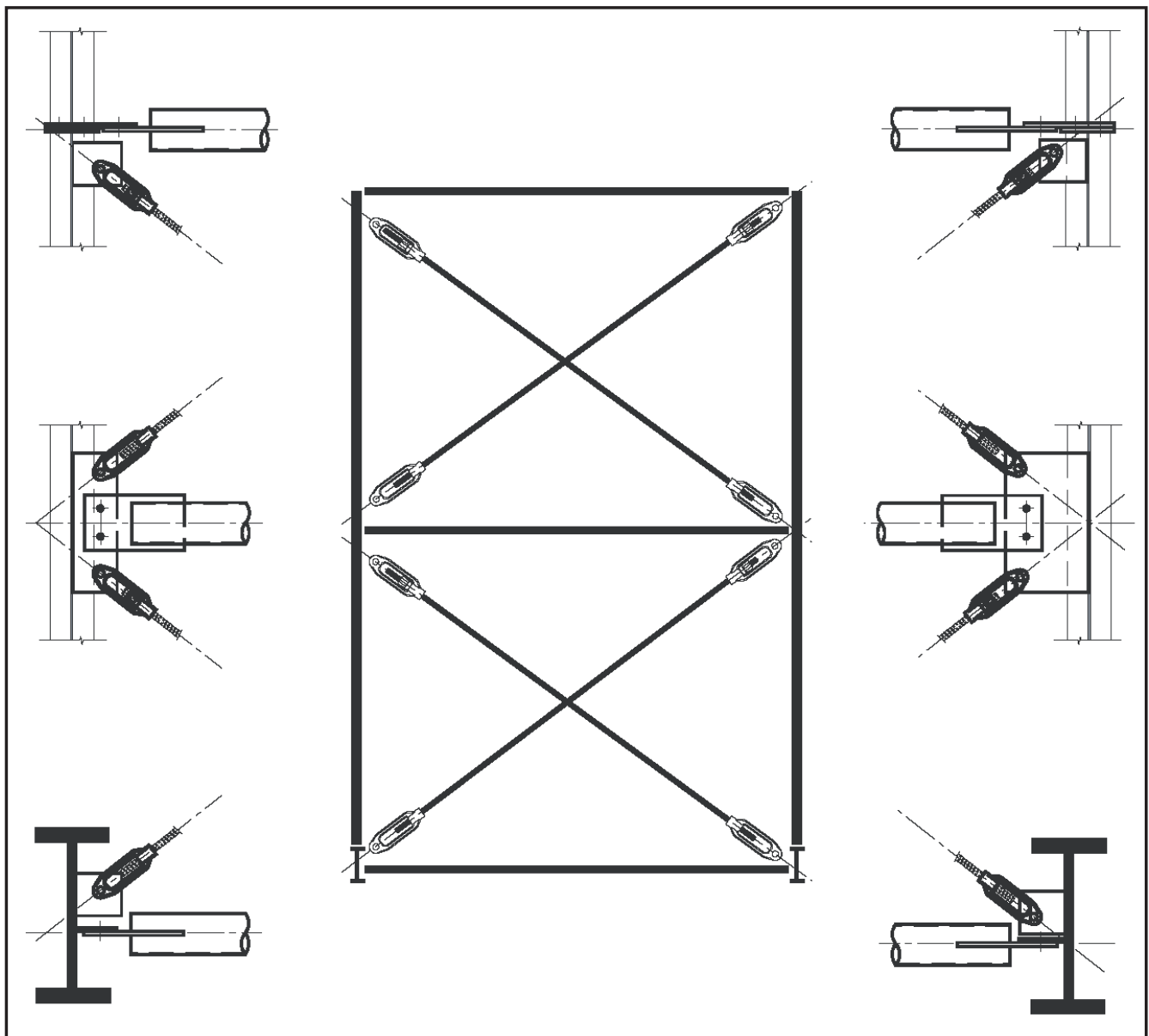
Part Number	
Kit Part N°	Bar Size
RB12KIT	RB12
RBA16KIT	RBA16
RBA20KIT	RBA20
RB25KIT	RB25

- Note.
1. The above substitution table has been prepared by ensuring that the Design capacity of the BraceLok® system is greater than or equal to, the Design Capacity of the Bracing Rods with cut threads. The Design Capacity of Bracing Rods with cut threads has been determined in accordance with AS 4100:1998 as follows: $NT = \min(0.9Agf_y, 0.9 \times 0.85Anf_u, 0.8Asf_u)$
Where $Ag = An =$ nominal sectional area of unthreaded bracing rod
 $As =$ tensile stress area of a bolt as defined in AS 1275
 $f_y =$ yield stress being 240 MPa for grade 4.6S and 300 MPa for grade 300
 $f_u =$ tensile strength being 400 MPa for grade 4.6S and 440 MPa for grade 300
 2. The above substitution table applies to application where the strength limit state governs. The advice of a structural engineer should be sort on the use of this table.
 3. All dimensions are nominal & subject to change without prior notice by the manufacturer.

Application Details

Versatile and easy to use, BraceLok® Bracing Rods offer a range of standard end connection details to suit most applications. The patented BraceLok® system, developed by SpeediBolt®, is a practical and cost-effective alternative to fabricated bracing rods and angles.

With BraceLok® Bracing Rods the only fabrication required to produce a completed bracing member is to cut the bar to length. The product is then simply assembled on site, using the BraceLok® end components, as part of the normal steel erection process.



Installation Details

STEP 1 Select a clear area to suit the full length of the bracing being assembled. Screw on the BraceLok® Fitting (with thread) at one end of the bar.

Position the end of the bar in the middle of the fitting's adjustment window to allow adjustment of overall bracing length in both directions.

STEP 2 Slide the BraceLok® Fitting without thread onto the other end of the bar. Position the end of the bar in the middle of the window of the fitting.

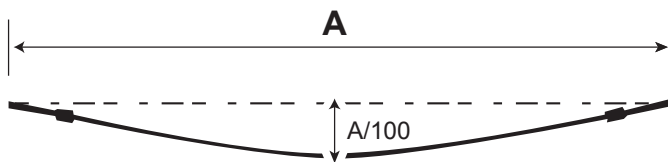
STEP 3 Place the BraceLok® Holding Collar inside the window of the BraceLok® Fitting, align the two flange surfaces inside the collar with the flange sides on the bar, and slide the collar onto the bar.

STEP 4 Place the BraceLok® Locking Nut inside the window of the BraceLok® Fitting without thread and screw it onto the bar.

STEP 5 Align the tabs on the BraceLok® Holding Collar with the slots in the BraceLok® Locking Nut and engage the two components.

STEP 6 Lift the assembled bracing unit, and bolt into place.

STEP 7 Adjust the assembly by turning the bar with a shifting spanner gripping the flange surfaces of the bar to reduce the sag in the overall bracing to less than $A/100$ as shown below.

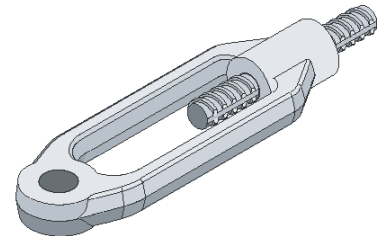


Notes

1. Ensure any burrs are removed when the bar is cut to allow the bar to run freely through the threaded components.
2. If a coupler is used to join the bar, ensure the bar is always turned clockwise into the coupler during both assembly and adjustment of the bracing unit to length.
3. The overall length of the bracing unit can be adjusted by altering the position of the holding collar and locking nut on the bar. Always ensure however that the bar protrudes beyond the locking nut and threaded end of the BraceLok® Fitting.
4. BraceLok® should not be over tensioned. One person with a 200mm to 300mm shifting spanner (depending on the size of 500PLUS® REIDBAR® used) should achieve tensioning to the correct amount of sag.

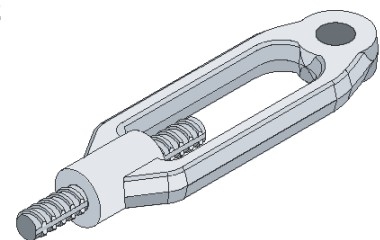
Site assembly procedures

Step 1



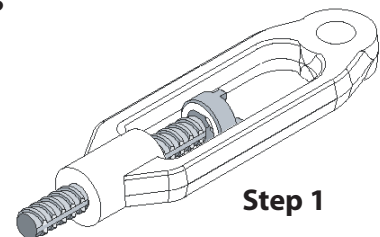
Threaded End **BraceLok® Fitting** (with thread)

Step 2



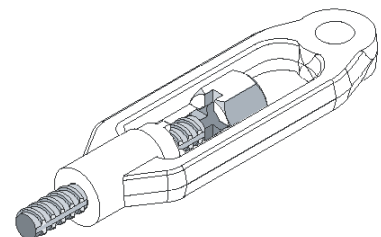
Plain End **BraceLok® Fitting** (with out thread)

Step 3



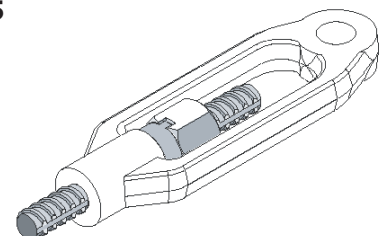
Step 1
BraceLok® Holding Collar

Step 4



BraceLok® Locking Nut

Step 5



Assembled bracing unit