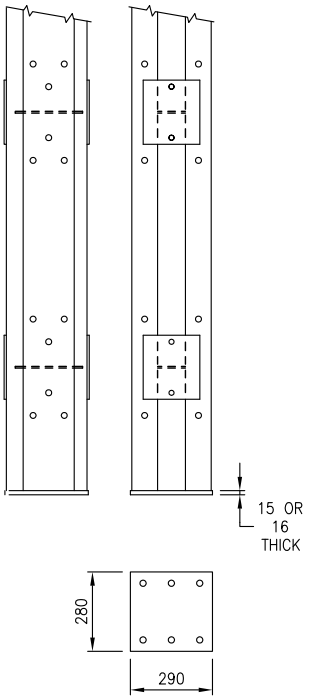
TECHNICAL DATA

MEGASHOR LEGS

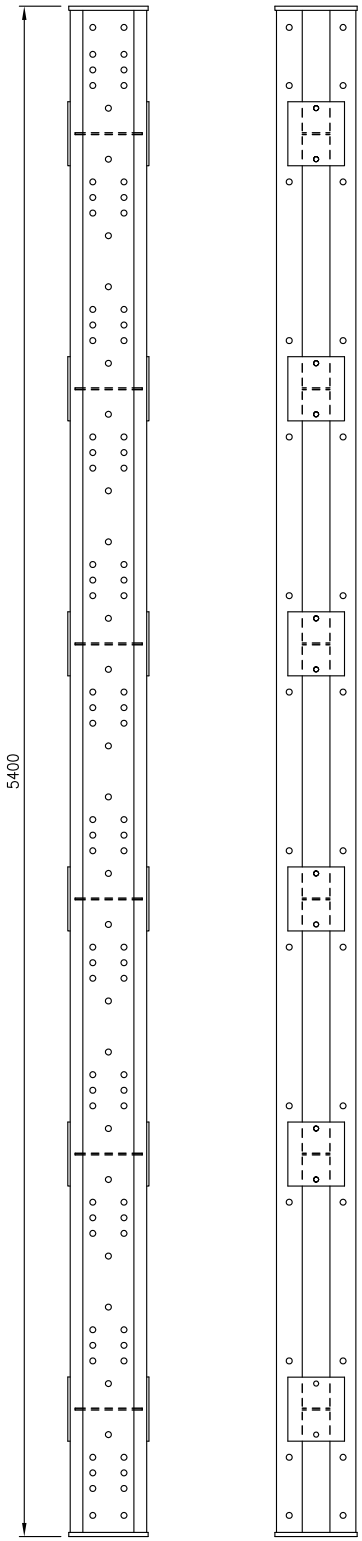
Lengths	&	Codes	
5400mm		MSX15400	316kg
2700mm		MSX12700	160kg
1800mm		MSX11800	112kg

NOTE:
UNITS MANUFACTURED PRIOR TO 2000 HAVE THE HOLE PATTERN & PLATE DETAILS SHOWN BELOW.

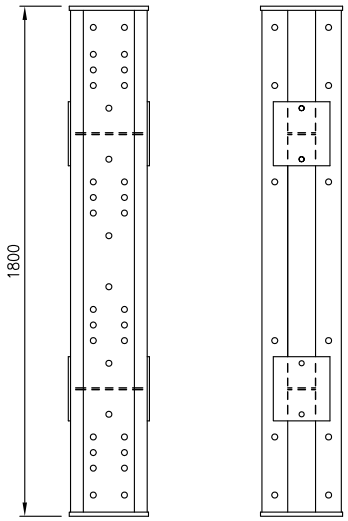


MEGASHOR LEGS - GALV.

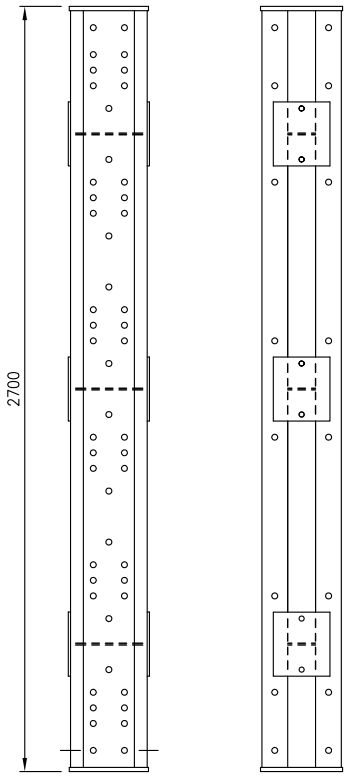
Lengths	&	Codes	
5400mm		MSX95400	316kg
2700mm		MSX92700	160kg
1800mm		MSX91800	112kg



5400mm LEG



1800mm LEG



2700mm LEG

This information conforms to AS3610

RMD reserves the right to change this information.

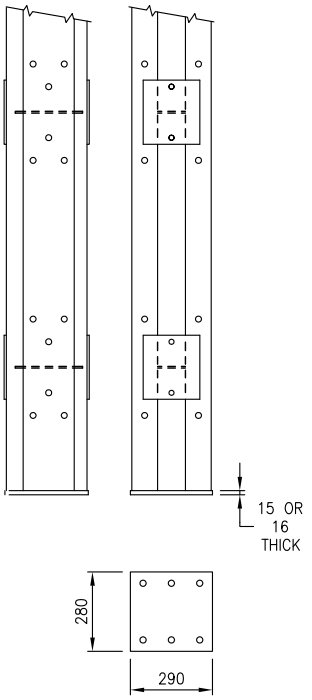
DATE: 01 Sep 2009	ISSUE No: 6	PREPARED BY: D.H.	APPROVED:

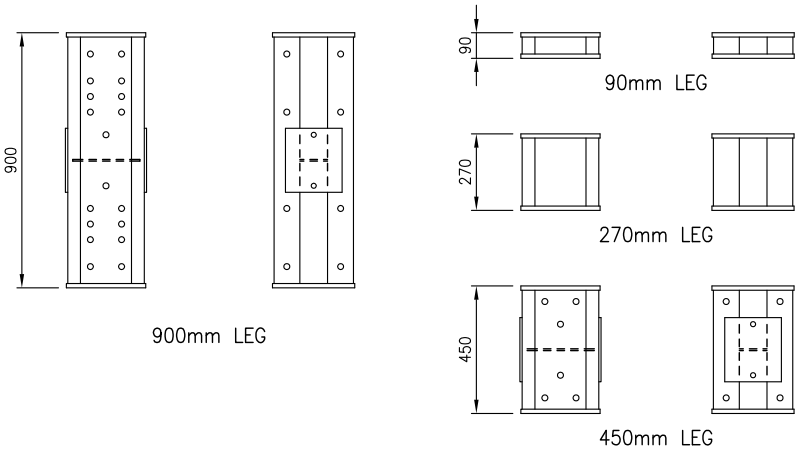
TECHNICAL DATA

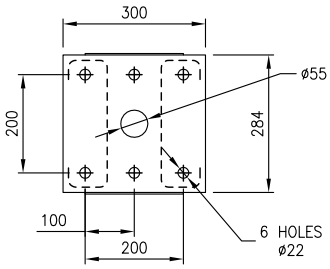
MEGASHOR LEGS

Lengths	& Codes	
900mm	MSX10900	65kg
450mm	MSX10450	45kg
270mm	MSX10270	35kg
90mm	MSX10090	25kg

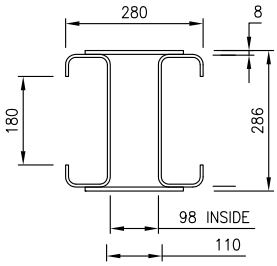
NOTE:
UNITS MANUFACTURED PRIOR TO 2000 HAVE THE HOLE PATTERN & PLATE DETAILS SHOWN BELOW.



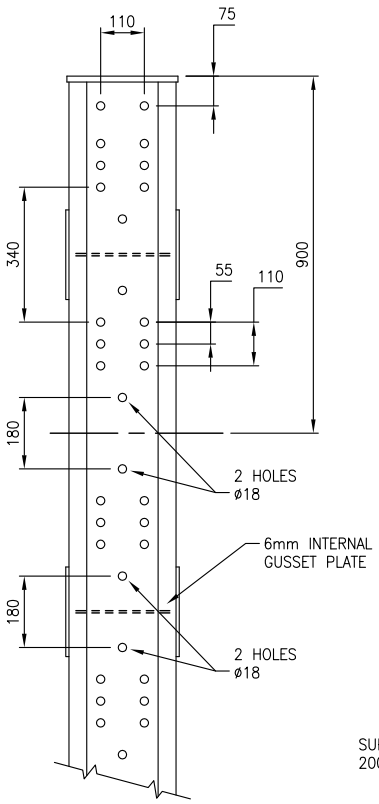


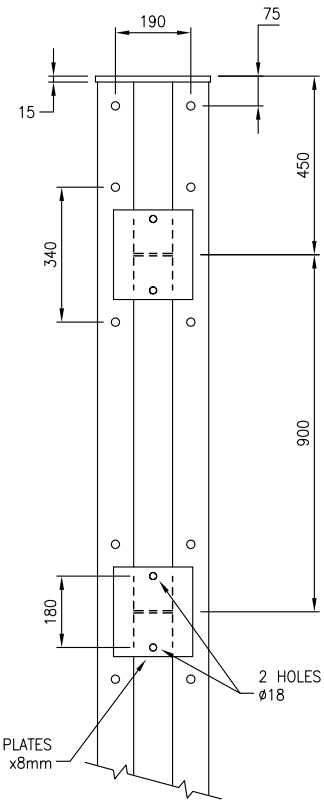


END PLATE DETAIL



TYPICAL CROSS SECTION





TYPICAL DETAILS

HOLES ø21
UNLESS OTHERWISE SPECIFIED

MEGASHOR LEGS - GALV.

Lengths	& Codes	
900mm	MSX90900	65kg
450mm	MSX90450	45kg
270mm	MSX90270	35kg
90mm	MSX90020	25kg

This information conforms to AS3610

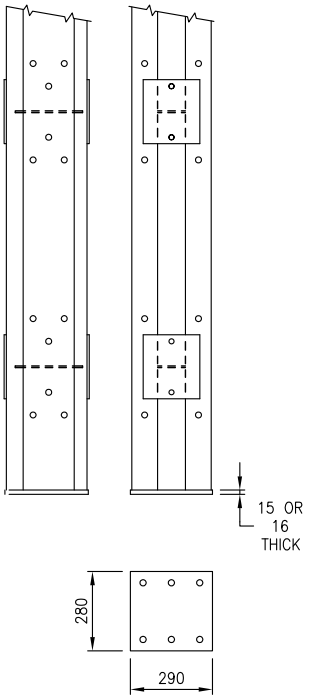
RMD reserves the right to change this information.

DATE: 01 Sep 2009	ISSUE No: 6	PREPARED BY: D.H.	APPROVED:

4500mm MEGASHOR LEG

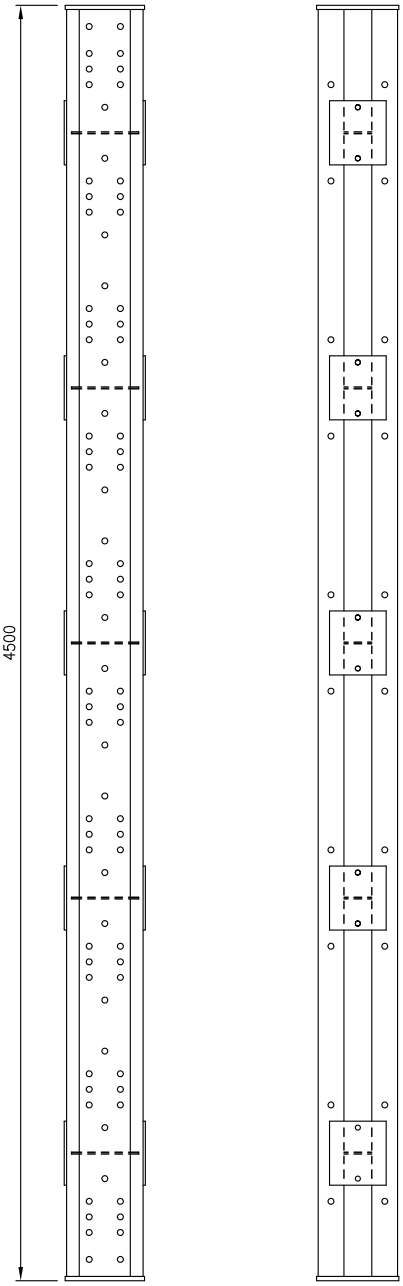
Code: MSX14500 266kg

NOTE:
UNITS MANUFACTURED PRIOR TO 2000 HAVE THE HOLE PATTERN & PLATE DETAILS SHOWN BELOW.



4500mm MEGASHOR LEG - GALV.

Code: MSX94500 266kg



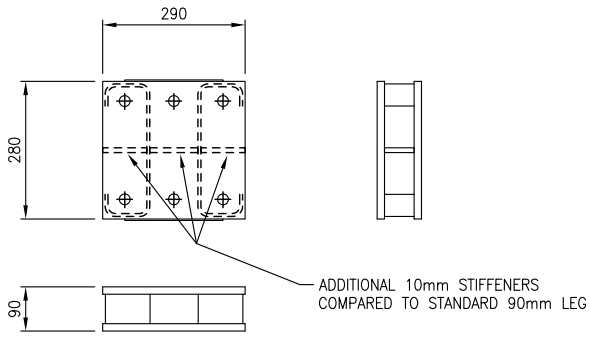
4500mm LEG

RELEVANT DIMENSIONS CAN BE TAKEN FROM THE PRECEDING PAGES.

90mm MEGASHOR LEG, H/DUTY

Code: MSA10030 26kg

NOTE:
FOR ALL OTHER DIMENSIONS REFER TO STANDARD DETAILS



TECHNICAL DATA

This information conforms to AS3610

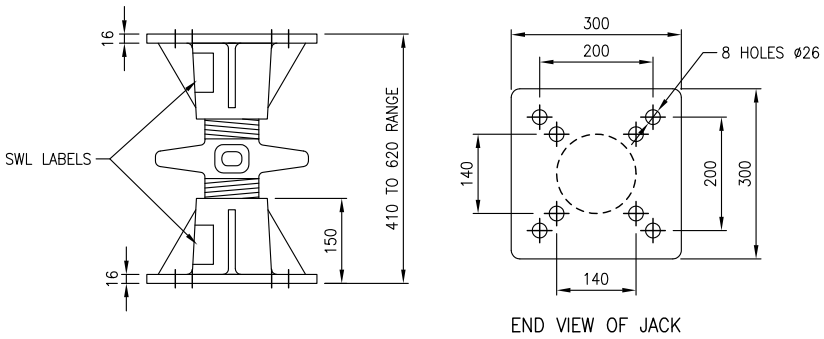
RMD reserves the right to change this information.

DATE: 01 Sep 2009	ISSUE No: 6	PREPARED BY: D.H.	APPROVED:

TECHNICAL DATA

MEGASHOR JACK 1000kN

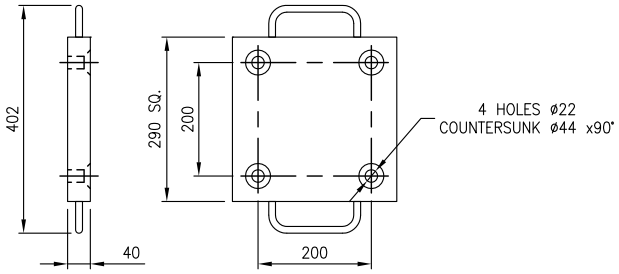
Code: MSX10011 53.8kg



JACK PLATE

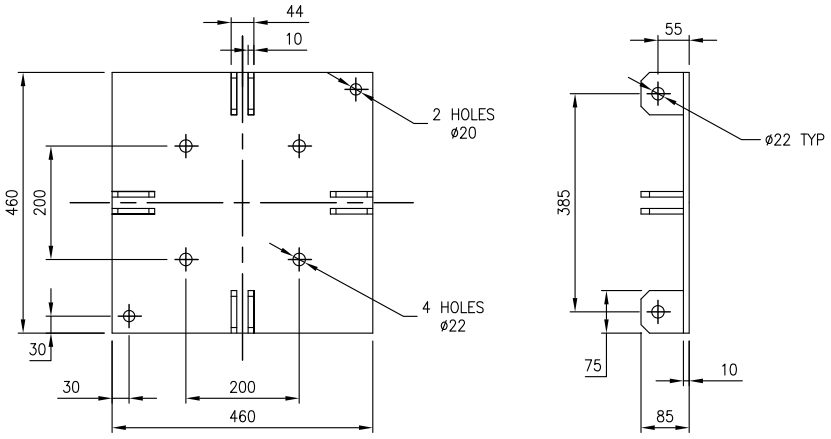
Code: MSX10021 26.4kg

NOTE:
FOR AVAILABILITY REFER TO ENGINEERING DEPARTMENT.



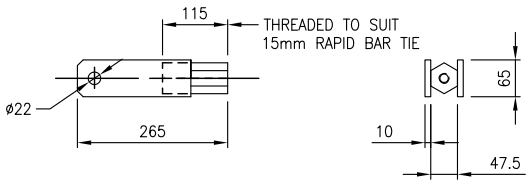
BRACE BASE PLATE

Code: MSA10025 20.0kg



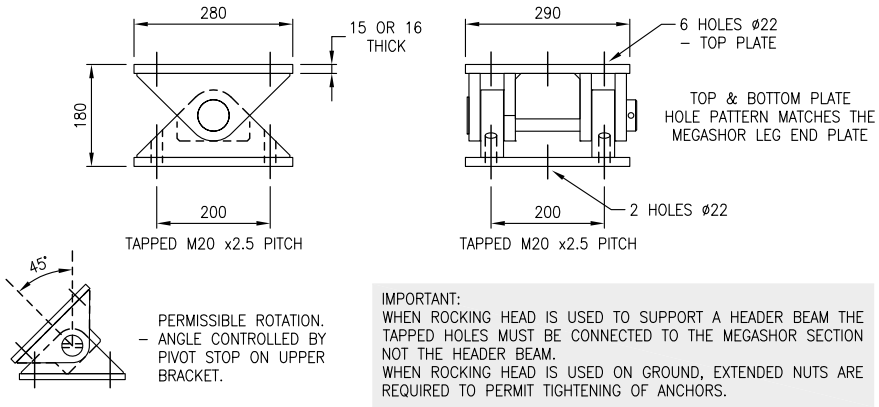
BRACE COUPLER

Code: MSX10044 3.8kg



ROCKING HEAD

Code: MSX10026 47.3kg



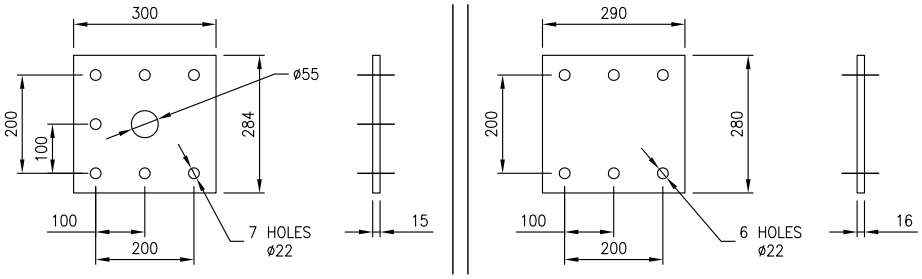
IMPORTANT:
WHEN ROCKING HEAD IS USED TO SUPPORT A HEADER BEAM THE TAPPED HOLES MUST BE CONNECTED TO THE MEGASHOR SECTION NOT THE HEADER BEAM.
WHEN ROCKING HEAD IS USED ON GROUND, EXTENDED NUTS ARE REQUIRED TO PERMIT TIGHTENING OF ANCHORS.

TECHNICAL DATA

END PLATE (Packing Plate)

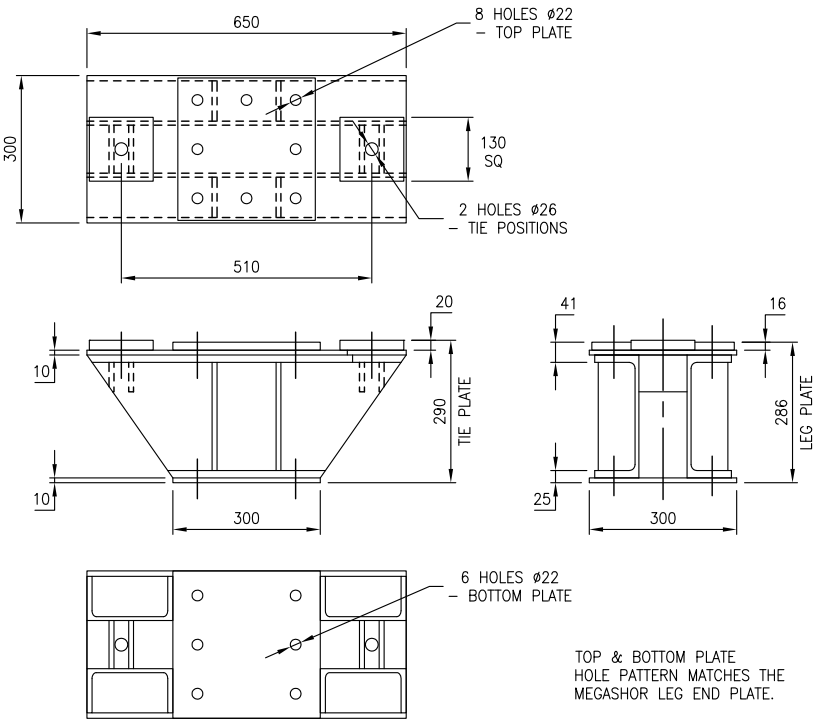
Code: MSX10012 9.9kg

NOTE:
2 VERSIONS OF THE END PLATE ARE IN USE CONCURRENTLY, AS SHOWN.



250kN TIE DOWN BRACKET

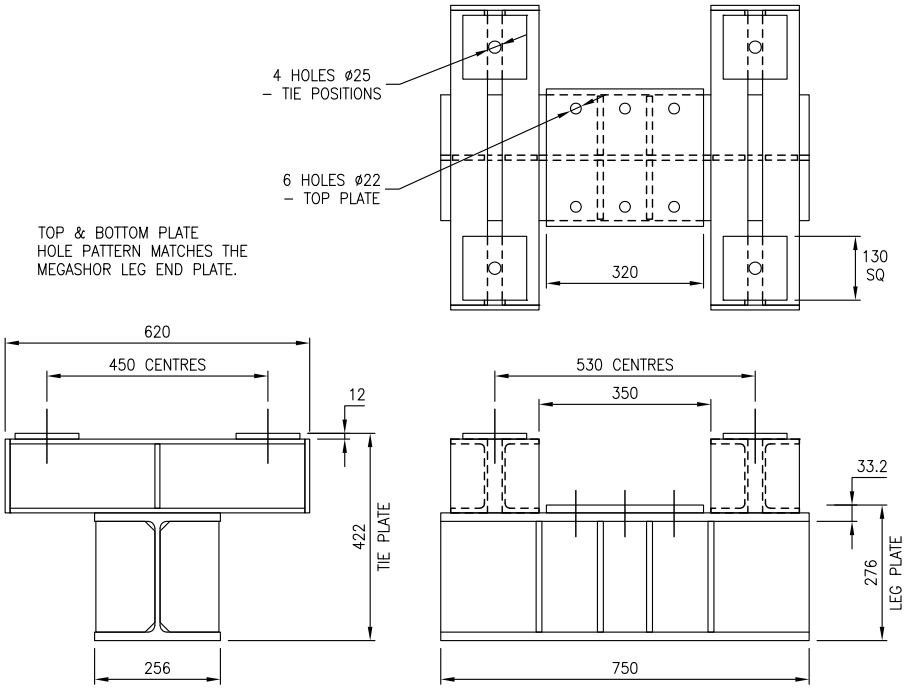
Code: MSX10046 76.2kg



500kN TIE DOWN BRACKET

Code: * * * * 160kg

NOTE:
FOR AVAILABILITY REFER TO ENGINEERING DEPARTMENT



This information conforms to AS3610

RMD reserves the right to change this information.

DATE: 01 Sep 2009	ISSUE No: 6	PREPARED BY: D.H.	APPROVED:

TECHNICAL DATA

SUPERSLIM SOLDIER

Lengths & Codes		
End Plate		
10mm	SSX10040	3.0kg
90mm	SSX10090	7.3kg
180mm	SSX10180	8.8kg
360mm	SSX10360	12.4kg
540mm	SSX10540	16.0kg
720mm	SSX10720	17.0kg
900mm	SSX10900	22.1kg
1800mm	SSX11800	40.0kg
2700mm	SSX12700	55.0kg
3600mm	SSX13600	73.0kg

NOTE:
SUPERSLIM SOLDIERS MANUFACTURED PRIOR TO MID 1994 HAVE FIVE HOLES IN THE END PLATES AND STIFFENERS (WITH CENTRE HOLES) IN MARGINALLY DIFFERENT LOCATIONS. THESE MAY BE IDENTIFIED BY GREEN END PLATES.

SUPERSLIM SOLDIERS MANUFACTURED AFTER MID 1994 HAVE SEVEN HOLES IN THE END PLATES (2 at 180mm CENTRES) AND HAVE JOGGLED STIFFENERS WITHOUT A CENTRE HOLE.
THE ADDITION OF TWO PINNING HOLES 60mm IN FROM THE END PLATES WAS ALSO INCORPORATED. THESE MAY BE IDENTIFIED BY ORANGE END PLATES.

THE DETAILS SHOWN ARE FOR POST MID 1994 MANUFACTURE. THE SUPERSLIM SOLDIERS ARE OTHERWISE IDENTICAL.

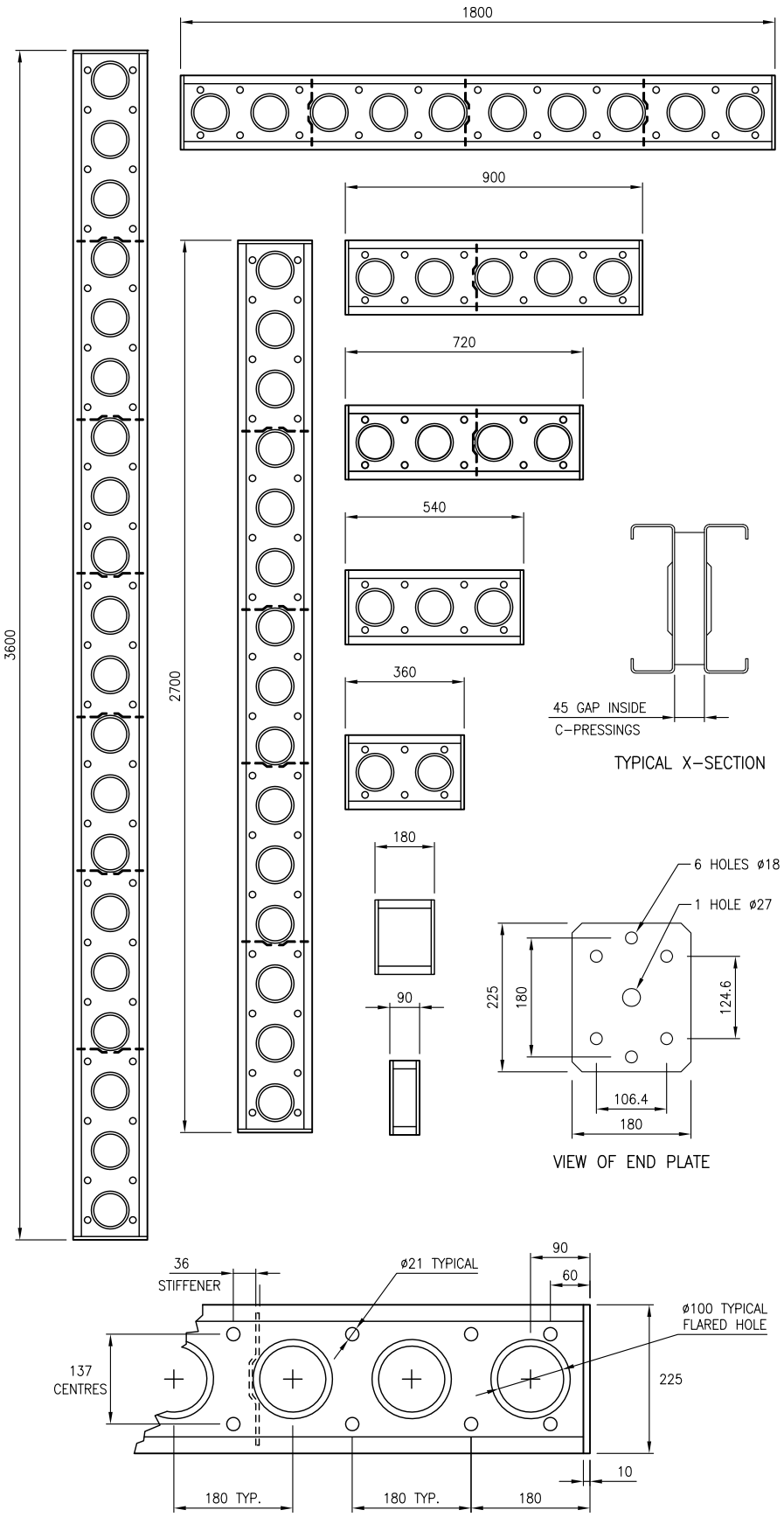
THE FIVE OR SEVEN HOLE END PLATE DETAIL APPLIES ALSO TO SOME ACCESSORIES.

- - - - - - - - - - - - - - - - -

DUE TO CONTINUED PRACTICE TO CUT DOWN DAMAGED SUPERSLIM SOLDIERS AND REPAIR TO SHORTER LENGTHS, SOME SOLDIERS MAY NOT HAVE THE CONFIGURATION OF STIFFENERS SHOWN.

SUPERSLIM SOLDIER - GALV.

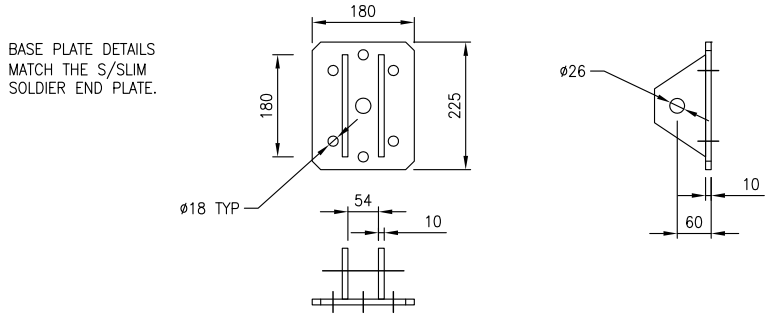
Lengths & Codes		
90mm	SSX90090	7.3kg
180mm	SSX90180	8.8kg
360mm	SSX90360	12.4kg
540mm	SSX90540	16.0kg
720mm	SSX90720	17.0kg
900mm	SSX90900	22.1kg
1800mm	SSX91800	40.0kg
2700mm	SSX92700	55.0kg
3600mm	SSX93600	73.0kg



TECHNICAL DATA

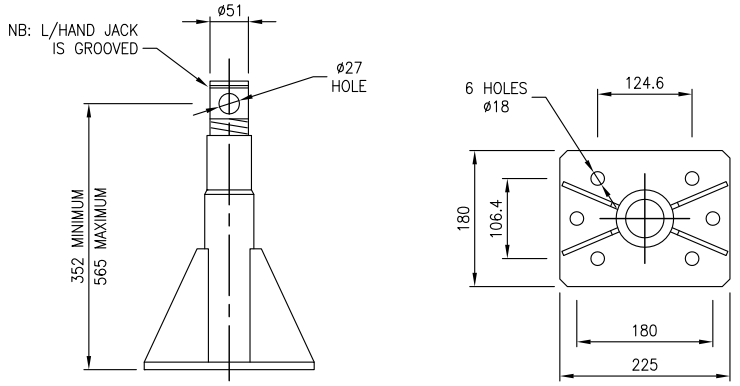
MEGASHOR STRUT ADAPTOR

Code: MSA10015 4.6kg



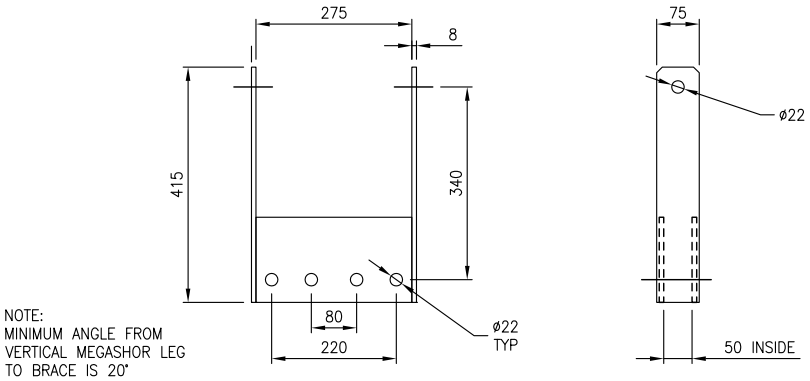
SLIMSHOR JACKS

R/Hand (Red)
Code: SSA20011 12.8kg
L/Hand (Blue)
Code: SSA20010 12.8kg



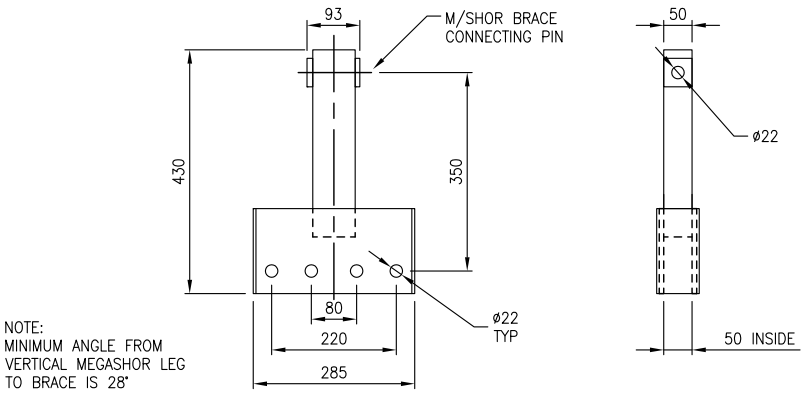
BRACE FLANGE CONNECTOR

Code: MSX10041 9.2kg



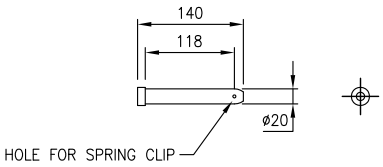
BRACE WEB CONNECTOR

Code: MSX10040 9.2kg



MEGASHOR BRACE CONNECTING PIN

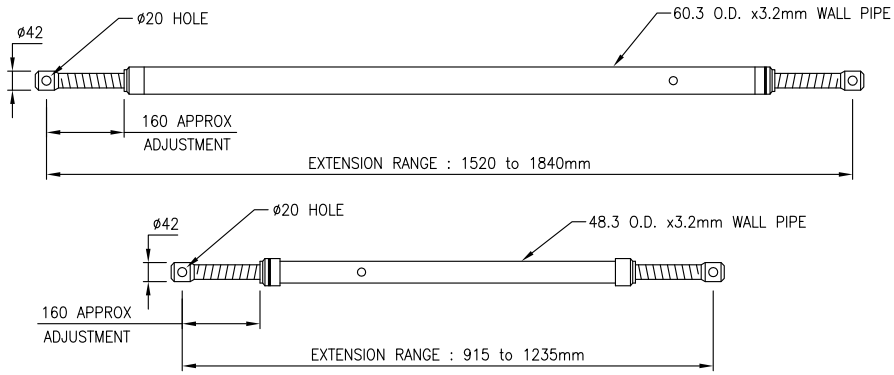
Code: MSA10001 0.34kg



TECHNICAL DATA

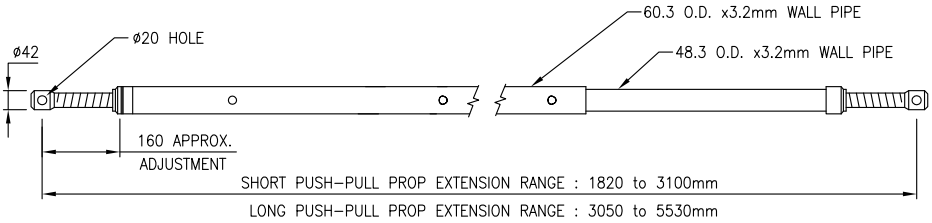
TURNBUCKLES

Long :
Code: SSA10275 10.1kg
Short :
Code: SSA10265 7.0kg



PUSH-PULL PROP

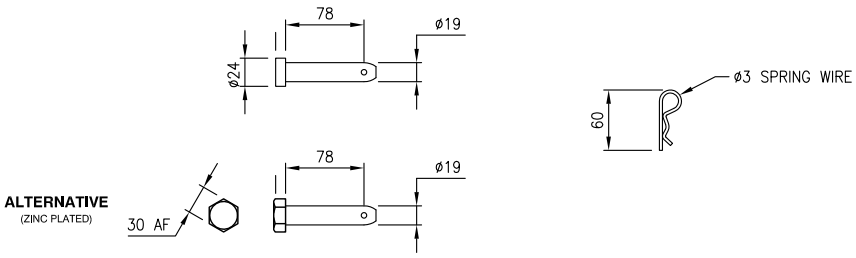
Long :
Code: PRA70001 25.0kg
Short :
Code: PRA70015 16.5kg



PUSH–PULL PROPS ALSO REQUIRE THE FOLLOWING:
PROP PIN, CHAIN & RING: MNA30220 – 1 OFF
SPRING CLIP: SSA10095 – 1 OFF

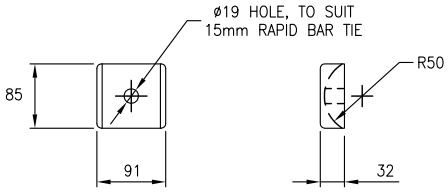
CONNECTING PIN & SPRING CLIP

Pin
Code: SSX10044 0.23kg
Clip
Code: SSA10095 0.01kg



BAR TIE CONNECTOR

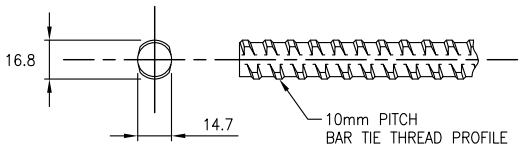
Code: SSA10305 1.0kg



RAPID 15mm BAR TIE

Length	&	Code:
0.3m		BTA20300
to		to
6.0m		BTA26000

AVAILABLE IN INCREMENTS OF
0.3m UP TO 6.0m.
MASS = 1.43kg/m



This information conforms to AS3610

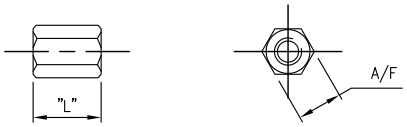
RMD reserves the right to change this information.

DATE: 01 Sep 2009	ISSUE No: 6	PREPARED BY: D.H.	APPROVED:

TECHNICAL DATA

15mm BAR TIE NUTS

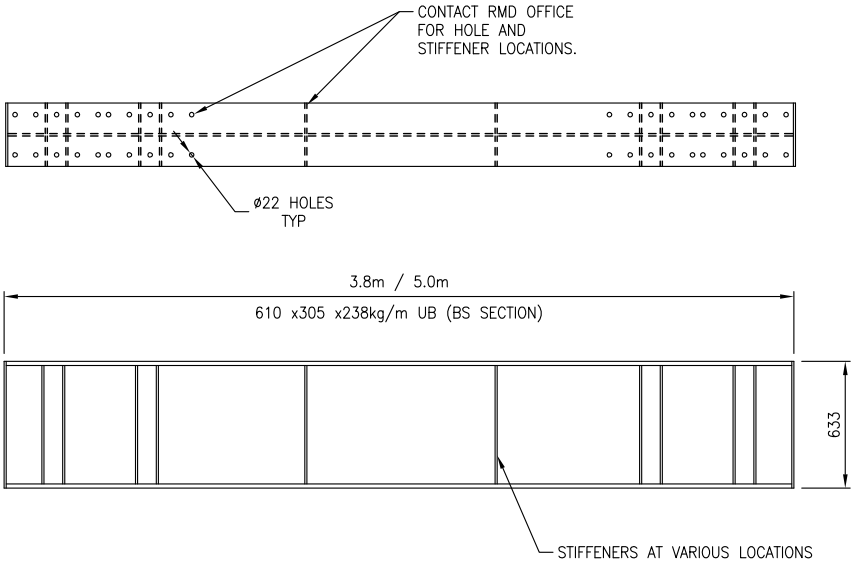
Half Nut, M/c:
Code: BTA10003 0.09kg
Full Nut, M/c:
Code: BTA10004 0.21kg



TYPE	LENGTH "L"
HALF NUT, M/c	20mm x28.6mm A/F – USE AS LOCK NUT ONLY. (LOAD CAPACITY OF ZERO)
FULL NUT M/c	45mm x28.6mm A/F

HEADER BEAMS

Lengths & Codes		
3.8m	MSX10014	1000kg
5.0m	MSX10015	1250kg

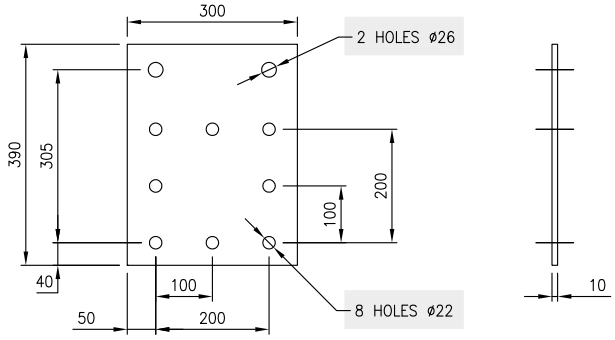


TYPICAL SECTION

END VIEW

PLAN BRACE CONNECTING PLATE

Code: MSA10010 8.9kg



This information conforms to AS3610

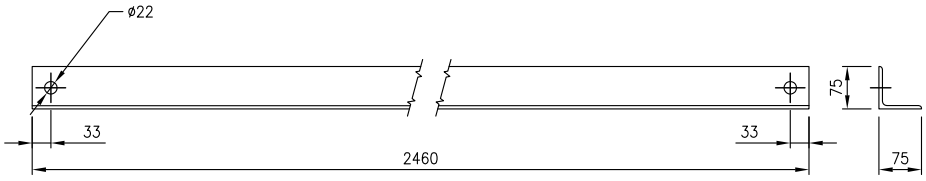
RMD reserves the right to change this information.

DATE: 01 Sep 2009	ISSUE No: 6	PREPARED BY: D.H.	APPROVED:

PLAN BRACE

Code: MSA10005 16.7kg

NOTE:
THIS IS A NON-STANDARD ITEM.
FOR AVAILABILITY REFER TO ENGINEERING DEPARTMENT.



PROP PIN, CHAIN AND RING

Code: MNA30220 0.23kg

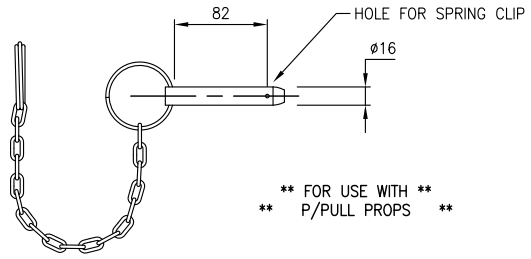
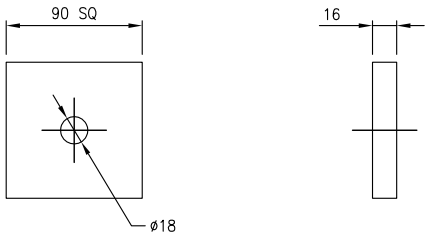


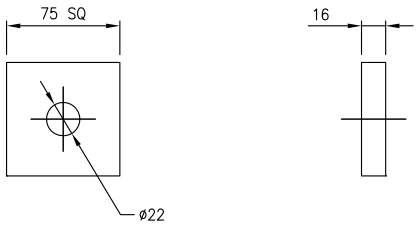
PLATE WASHER

Code: BNX20023 0.98kg



SPACER PLATE

Code: MSA10020 0.66kg



FASTENERS

M16 x 40mm Hex Bolt G8.8
Code: BNA11635 0.09kg

M16 x 50mm Hex Bolt G8.8
Code: BNA11650 0.10kg

ø16mm Flat Washer G5
Code: BNA21600 0.02kg

M16 Hex Nut G8
Code: BNA11600 0.03kg

M20 x40mm Hex Hd Bolt G8.8
Code: BNA12035 0.18kg

M20 x60 Hex Hd G8.8 Bolt
Code: BNA12054 0.20kg

M20 x70 Hex Hd G8.8 Bolt
Code: BNA12058 0.20kg

M20 x90 Hex Hd G8.8 Bolt
Code: BNA12065 0.28kg

M20 x100 Hex Hd G8.8 Bolt
Code: BNA12070 0.31kg

ø20mm Flat Washer G5
Code: BNA22000 0.11kg

M20 Hex Nut G8
Code: BNA12000 0.06kg

TECHNICAL DATA

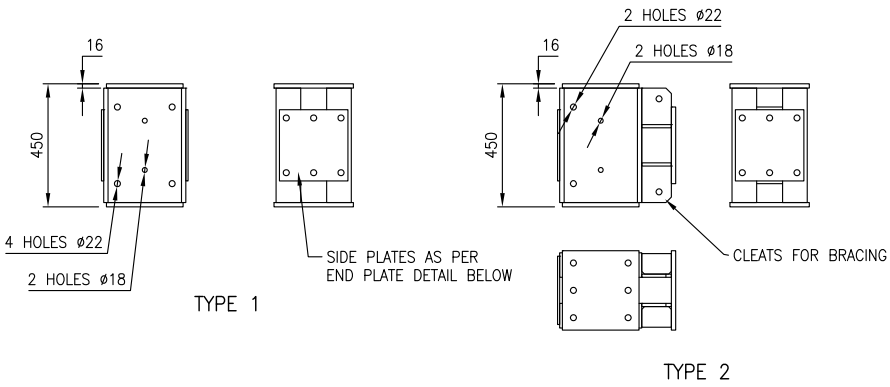
This information conforms to AS3610

RMD reserves the right to change this information.

SPECIAL MEGASHOR LEGS

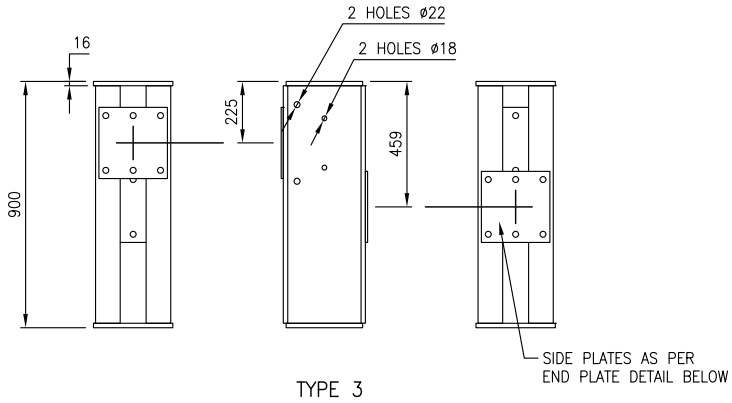
Lengths	& Codes	
TYPE 1	MSA10061	63.5kg
TYPE 2	MSA10062	80.0kg
TYPE 3	MSA10063	99.6kg
TYPE 4	----	99.6kg

NOTE:
LIMITED QUANTITIES ONLY.
CHECK AVAILABILITY PRIOR TO INCORPORATING INTO SCHEME

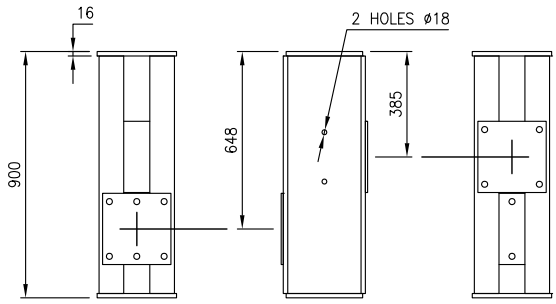


TYPE 1

TYPE 2



TYPE 3



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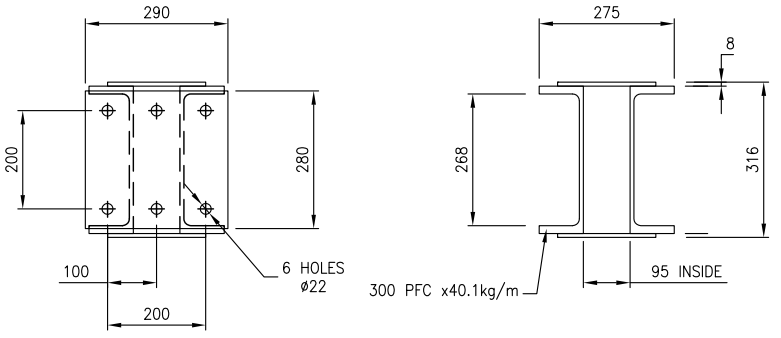

END PLATE DETAIL

TYPICAL CROSS SECTION

TECHNICAL DATA

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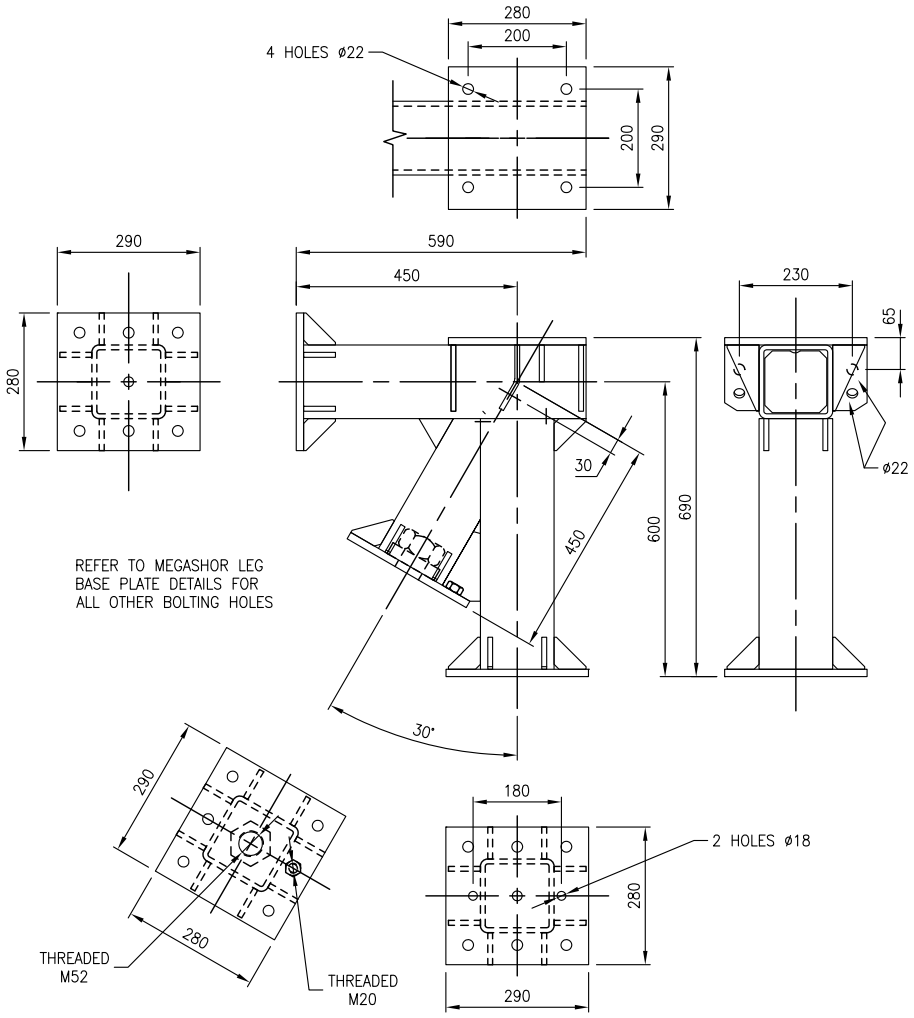
TECHNICAL DATA

For availability of MegaTruss components refer to the Engineering Department.

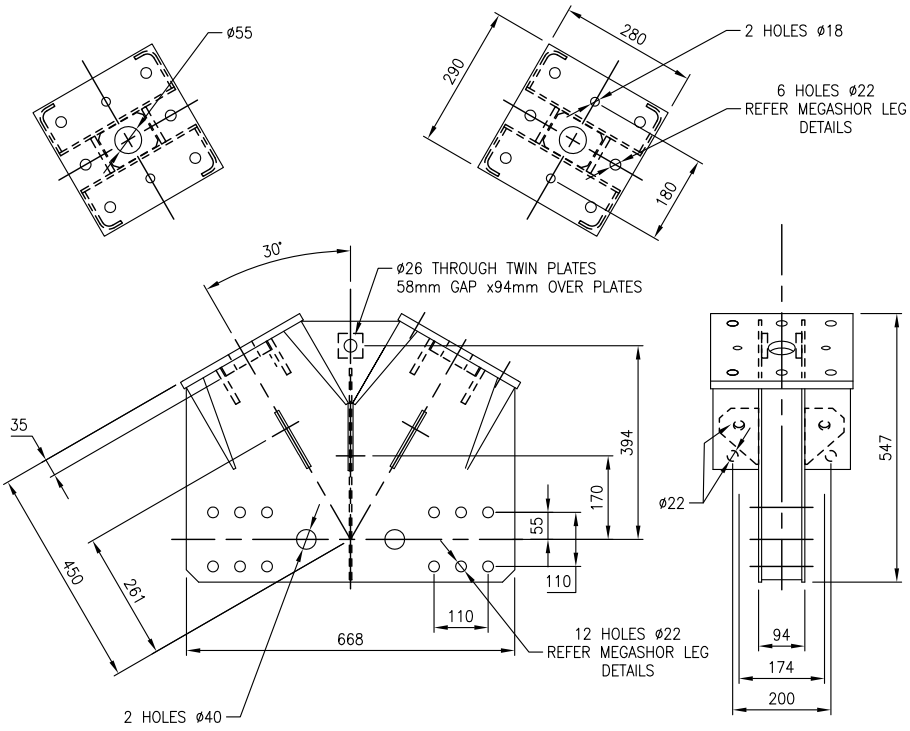
MEGATRUSS END BEARER

Code: MSX10028 113kg



MEGATRUSS NODE

Code: MSX10030 68kg



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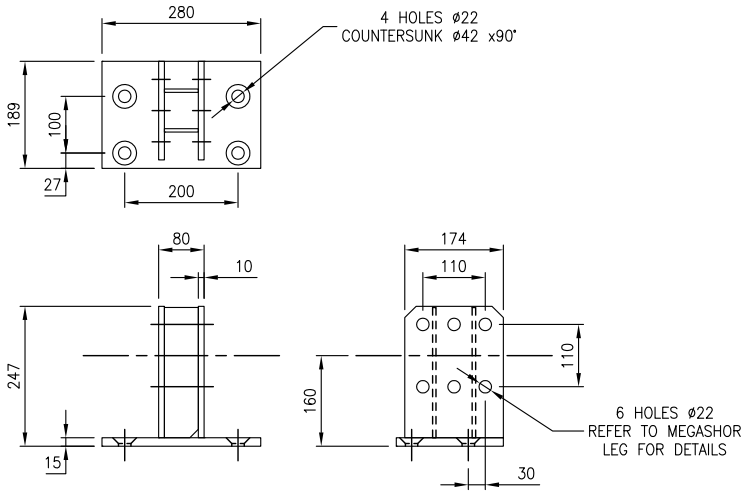
For availability of MegaTruss components refer to the Engineering Department.

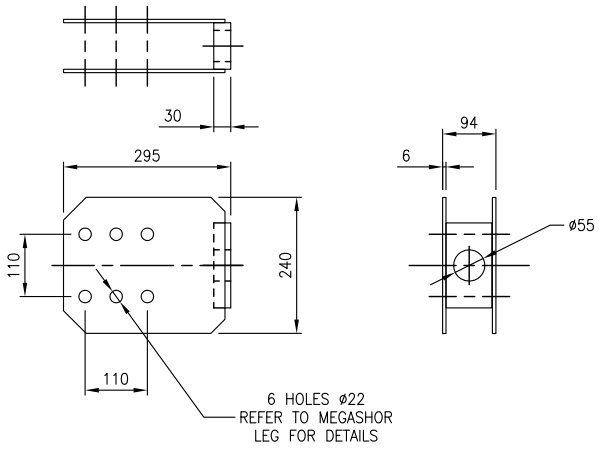
MEGATRUSS INTERMEDIATE BEARER

Code: MSX10019 12.5kg



MEGATRUSS JOINT STIFFENER

Code: MSX10024 9.0kg



FASTENERS

M20 x130mm Hex Head Bolt G8.8
Code: BNA12080 0.36kg

M52 x160 Socket Head Cap Screw G8.8
Code: BNX52002 --kg

M52 Hex Nut G8
Code: BNX52001 --kg

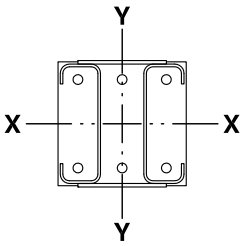
NOTE:
FOR ALL OTHER FASTENERS REFER TO MEGASHOR COMPONENT DETAILS.

TECHNICAL DATA

MEGASHOR LEG PROPERTIES

The Megashor Leg has different sectional properties about its two main axis because of its cross sectional shape. A combination of mathematical analysis and load testing have yielded the section properties listed below.

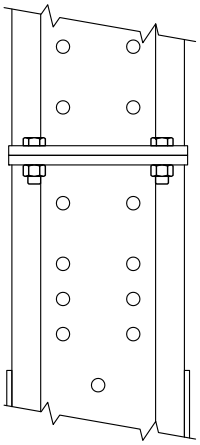
-	Cross sectional area	(A)	=	5845 mm^2
-	Moment of inertia	(I_{xx})	=	59.8 $x10^6$ mm^4
-	Radii of gyration	(r_{xx})	=	101.4 mm
-	Radii of gyration	(r_{yy})	=	85.6mm
-	Section modulus	(Z_{xx})	=	443 $x10^3$ mm^3
-		(EI_{xx})	=	12 560 kNm^2
-		(EI_{yy})	=	5 085 kNm^2
-	WLL in bending	X axis	=	102 kNm
-	WLL in bending	Y axis	=	68 kNm
-	WLL in joint bending	X axis	=	66 kNm
-	WLL in joint bending	Y axis	=	52 kNm
-	Self weight		=	0.542 kN/m run
-	Axial shortening		=	8.14 $x10^{-4}$ mm/m/kN
-	Mean compressive yield stress		=	370 N/mm^2



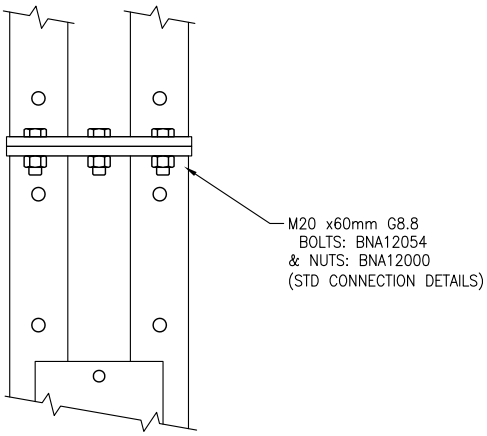
TECHNICAL DATA

TECHNICAL DATA

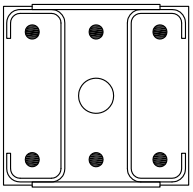
MEGASHOR LEG CONNECTION DETAILS
MEGASHOR JOINTS, WORKING LOAD LIMITS IN TENSION



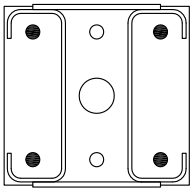
SIDE ELEVATION



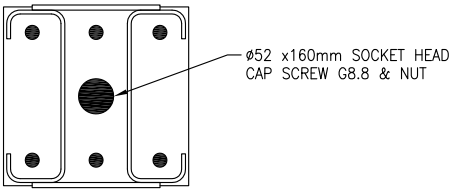
FRONT ELEVATION



6 bolt arrangement
WLL in tension = 500kN

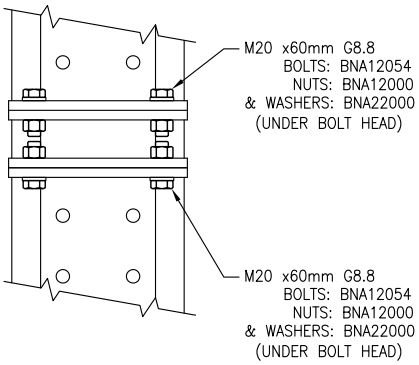


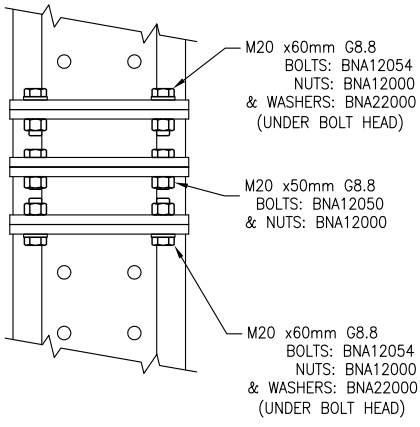
4 bolt arrangement
WLL in tension = 330kN



6 bolt & joint stiffener arrangement
WLL In tenslon = 1000kN

90mm MEGASHOR LEGS BOLTING DETAILS

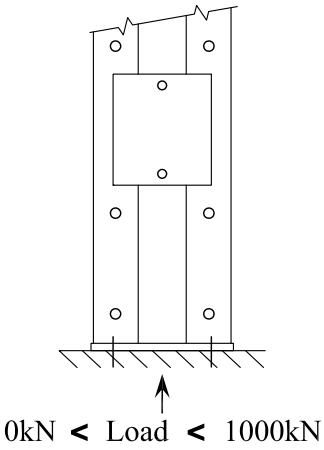


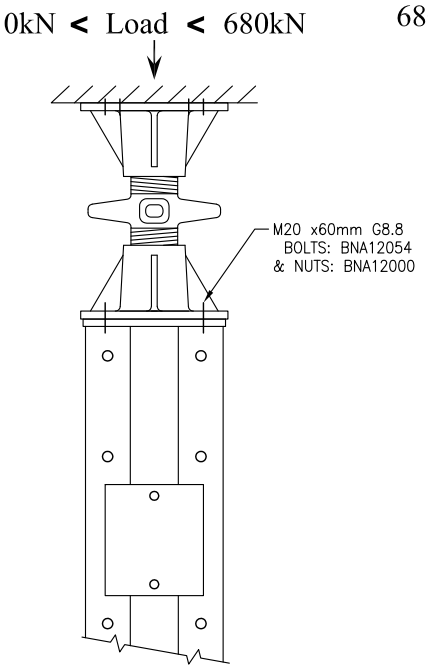


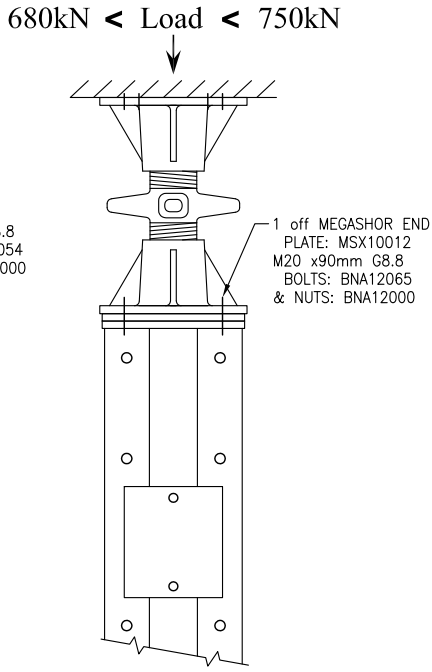
MEGASHOR LEG CONNECTION DETAILS (cont.)

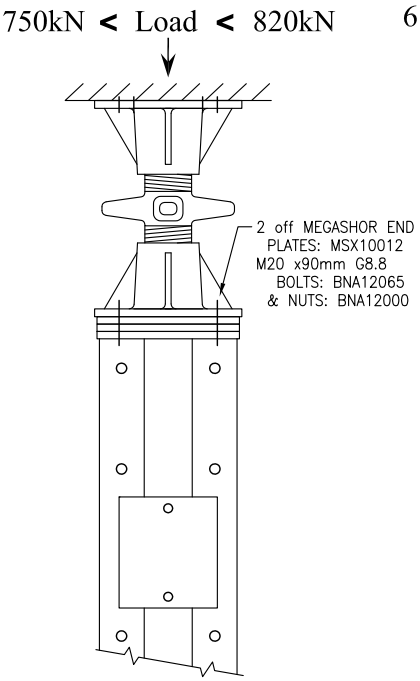
MEGASHOR END CONNECTIONS

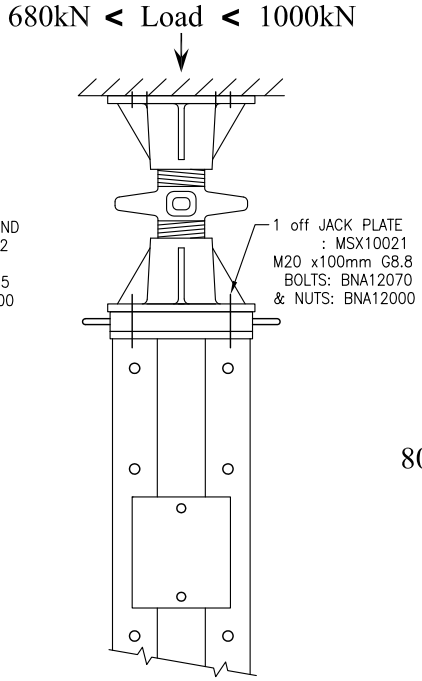
Refer also to charts for effects of Jack extension and Rocking Head angle.

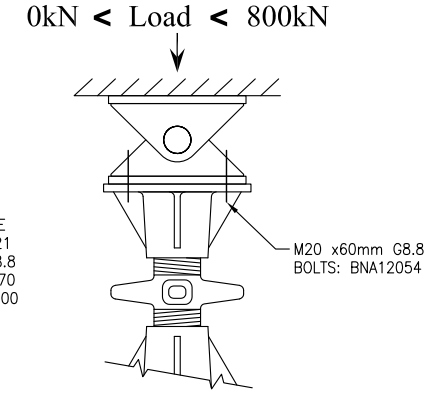


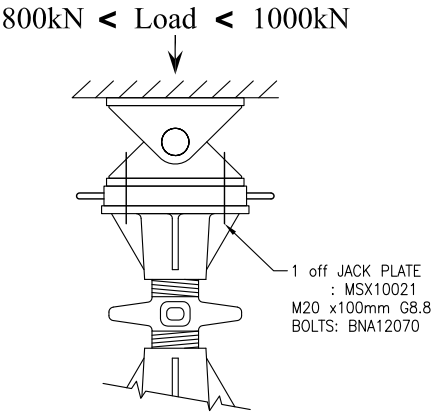












Note:

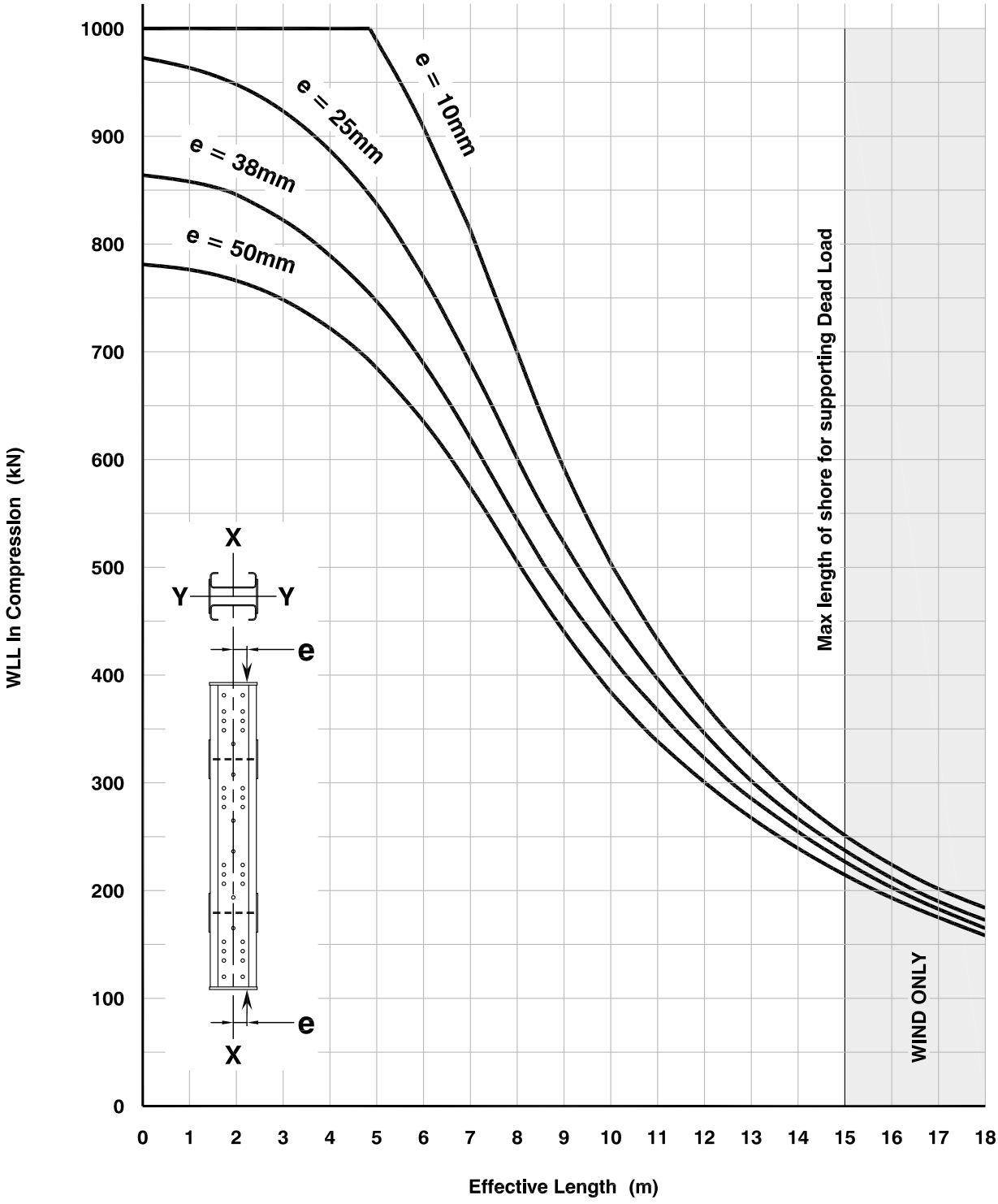
WLL in Tension for all Jack connection = 200kN

TECHNICAL DATA

TECHNICAL DATA

MEGASHOR LEGS

WLL in Compression for Vertical Megashor - XX Axis



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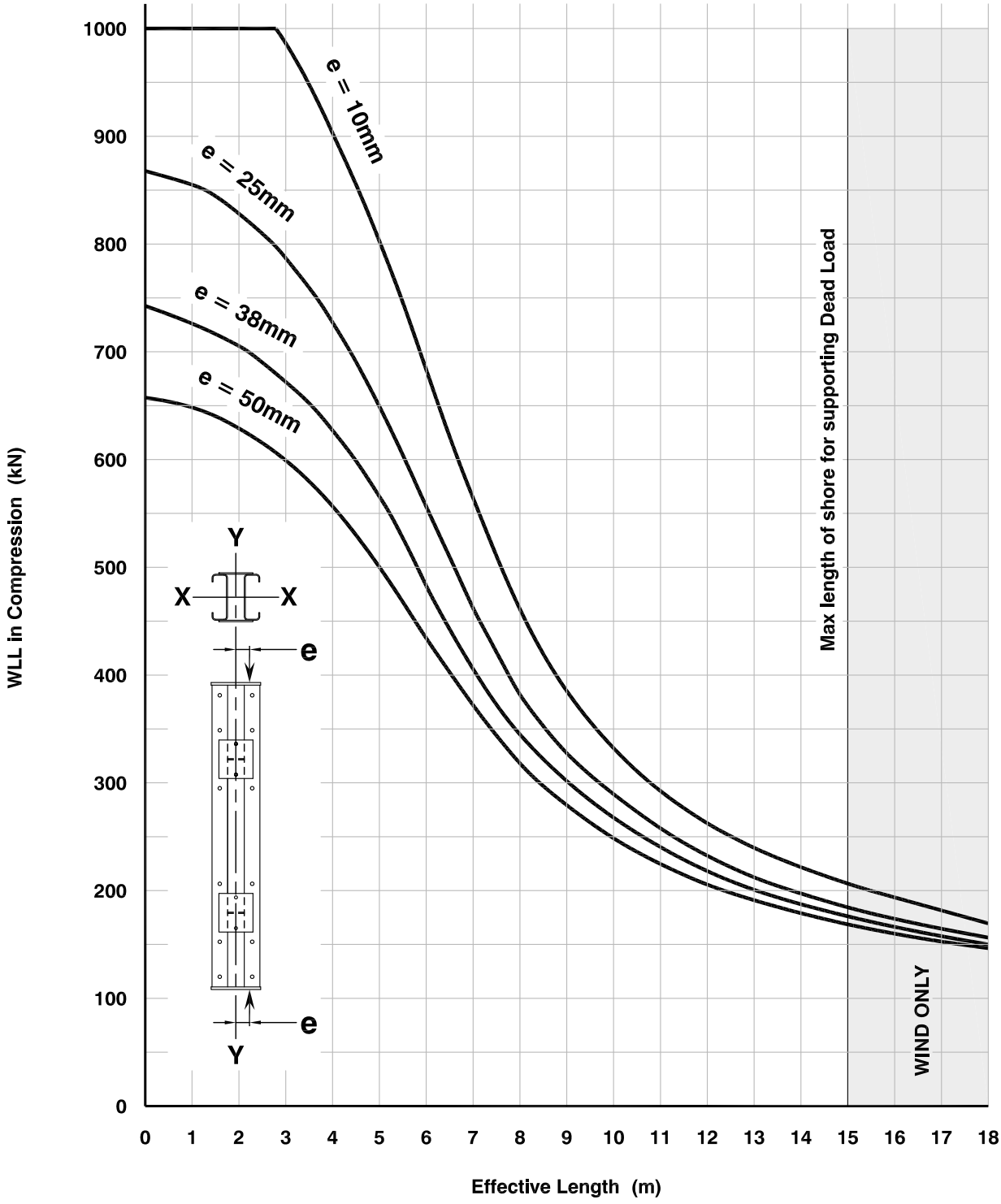
TECHNICAL DATA

MEGASHOR LEGS

WLL in Compression for Vertical Megashor - YY Axis



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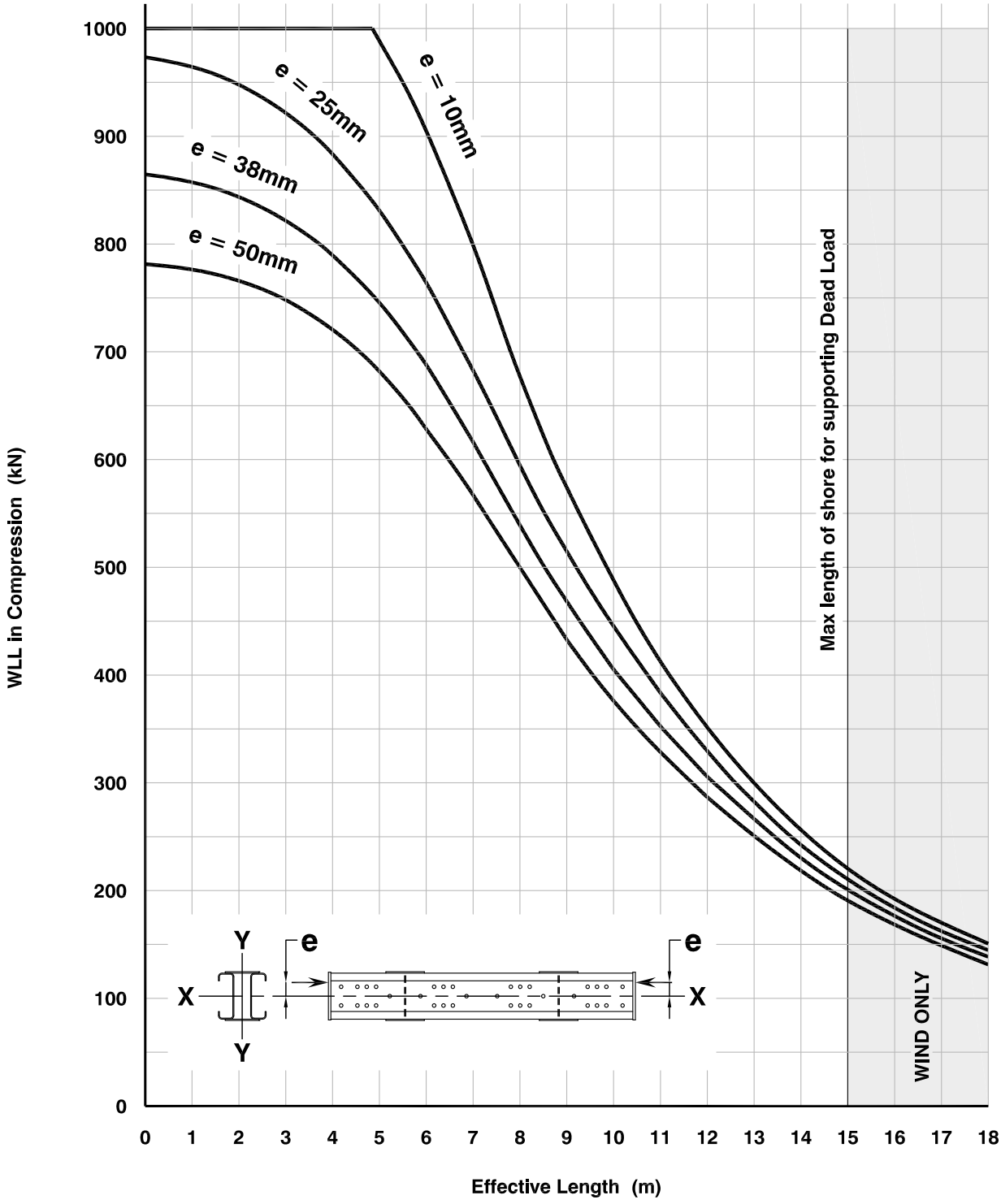
TECHNICAL DATA

MEGASHOR LEGS

WLL in Compression for Horizontal Megashor - XX Axis (Web vertical plane)



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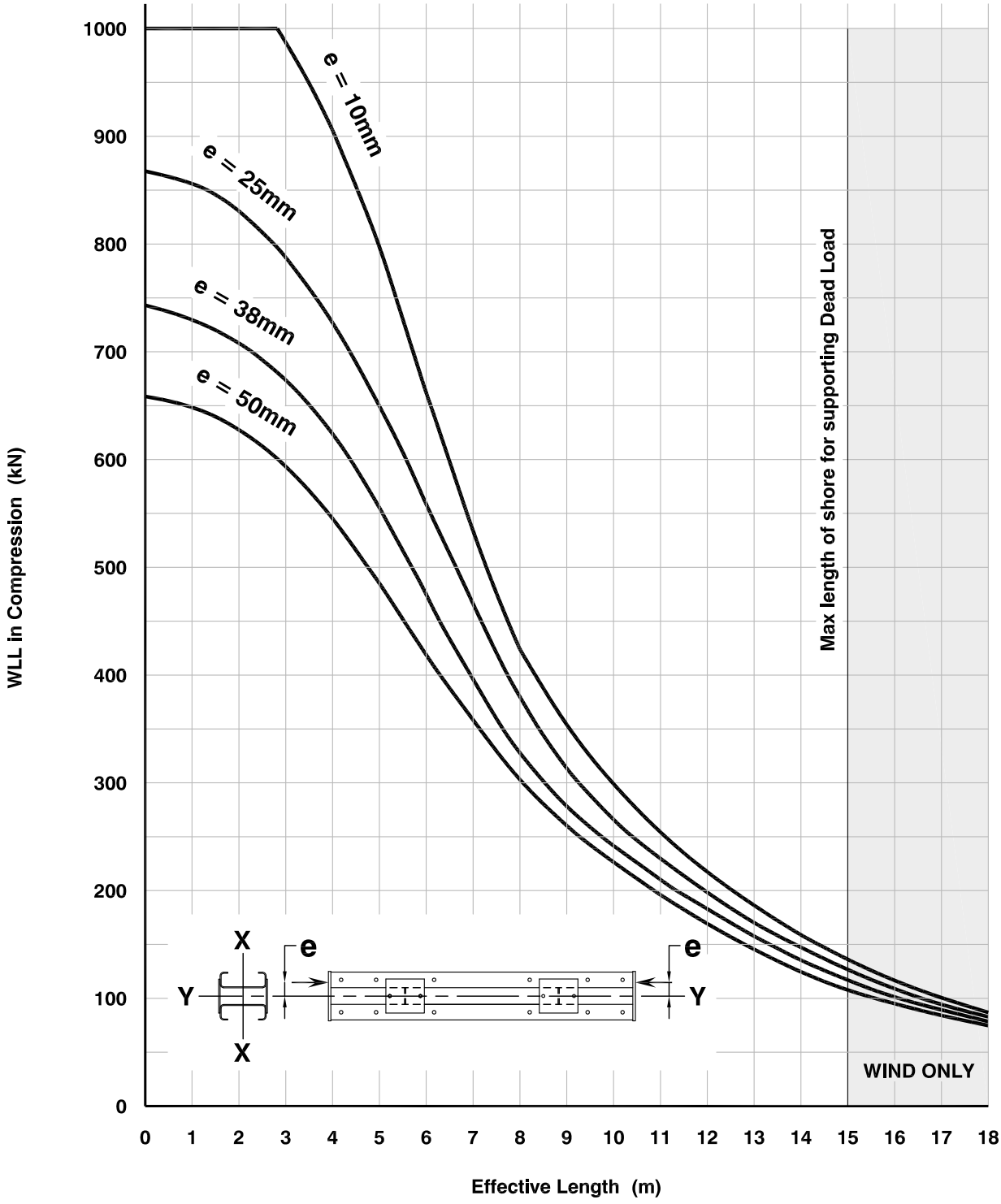
TECHNICAL DATA

MEGASHOR LEGS

WLL in Compression for Horizontal Megashor - YY Axis (Web horizontal plane)



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TECHNICAL DATA

SUPER SLIM SOLDIER to MEGASHOR CONNECTION DETAILS

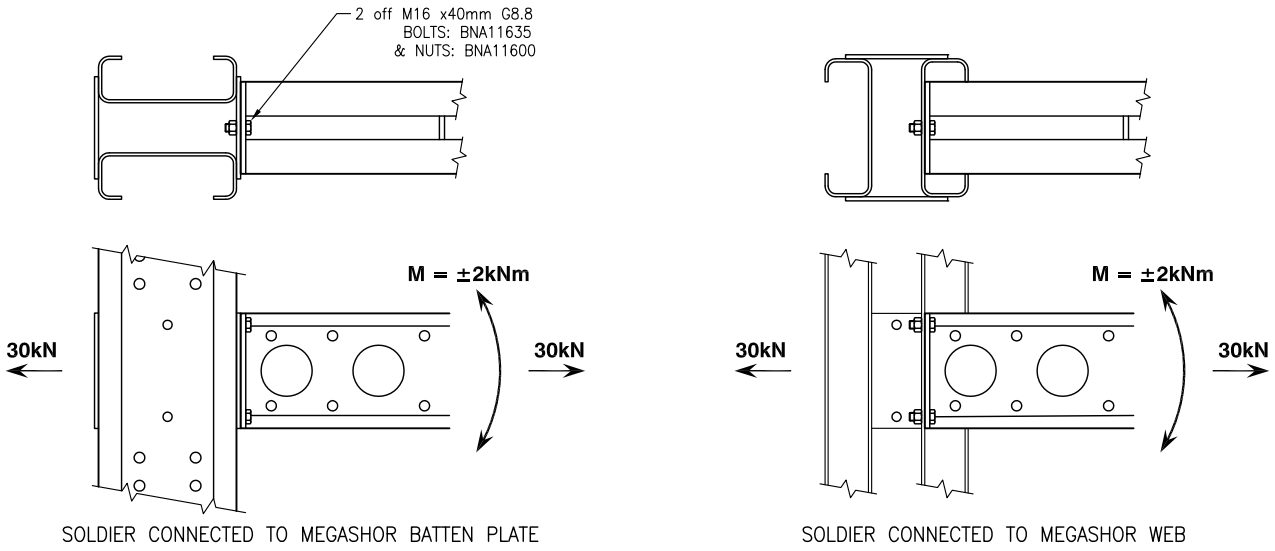
BENDING CAPACITY

Superslim Soldiers are attached at node points using 2 no. M16 x40mm Hex Hd Bolts, Grade 8.8. This standard connection resists an applied moment of 2kNm. By using 2 no. 90 x90 x16mm Plate Washers and 2 no. M16 x50mm Hex Hd Bolts, Grade 8.8, a standard connection is uprated to a stiffened connection with a capacity of 6.5kNm.

TENSILE and COMPRESSIVE CAPACITY at NODE POINTS

In towers with tension bracing, the horizontal members are in compression. The maximum load that can be transferred to the Megashor at the node point = 150kN, however this may be reduced by the strut capacity of the horizontal member.
Where Superslim Soldiers are used as horizontal members, refer to the graph on page 22.

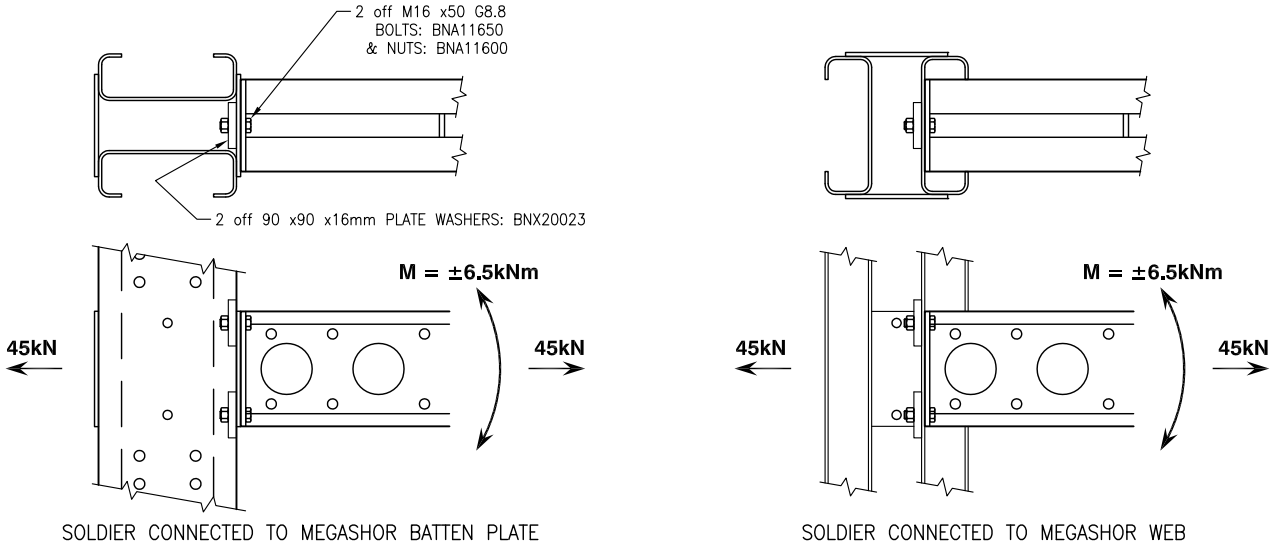
PLAIN CONNECTION



SOLDIER CONNECTED TO MEGASHOR BATTEN PLATE

SOLDIER CONNECTED TO MEGASHOR WEB

STIFFENED CONNECTION



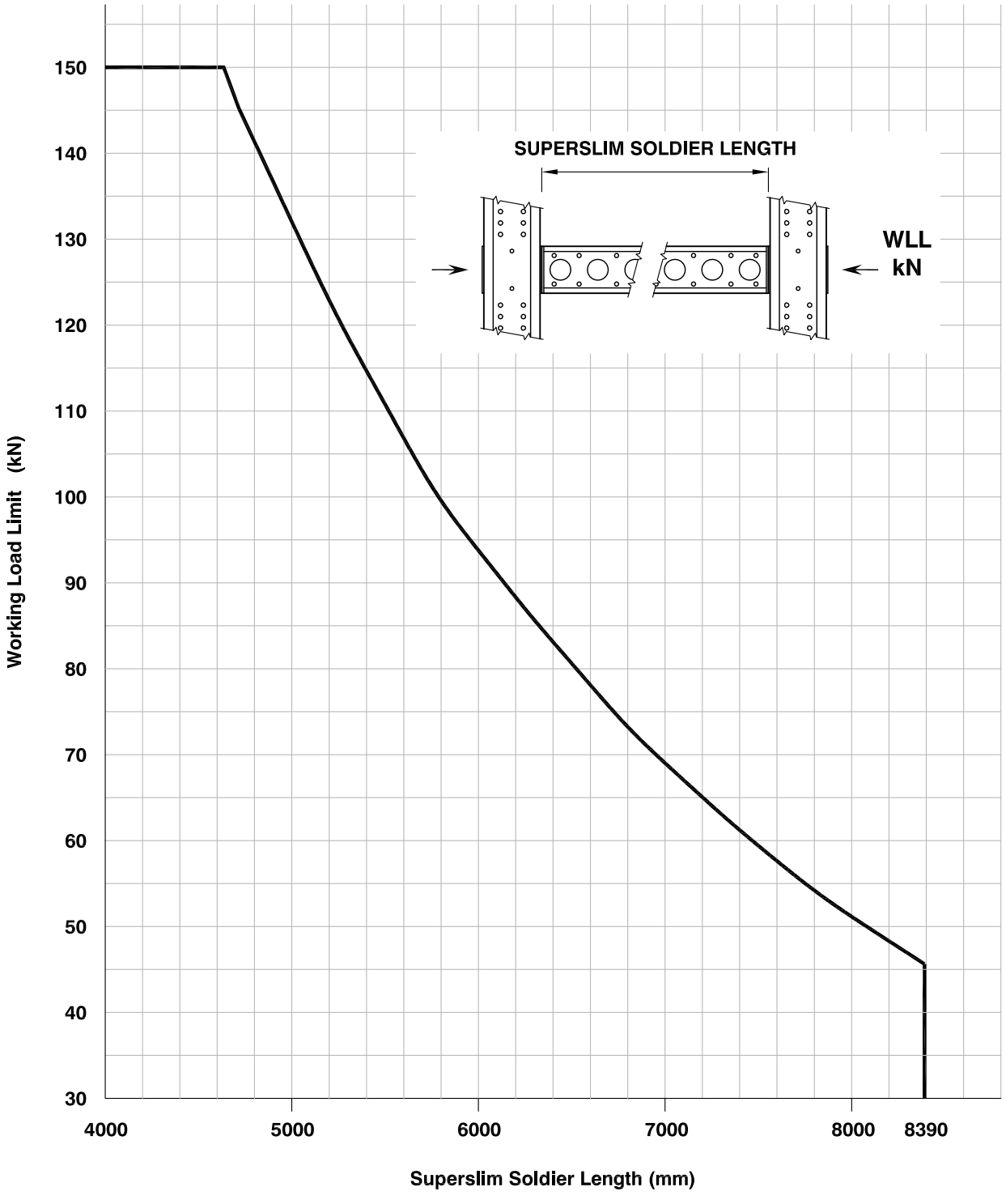
SOLDIER CONNECTED TO MEGASHOR BATTEN PLATE

SOLDIER CONNECTED TO MEGASHOR WEB

SUPERSLIM SOLDIER to MEGASHOR CONNECTION DETAILS (cont.)

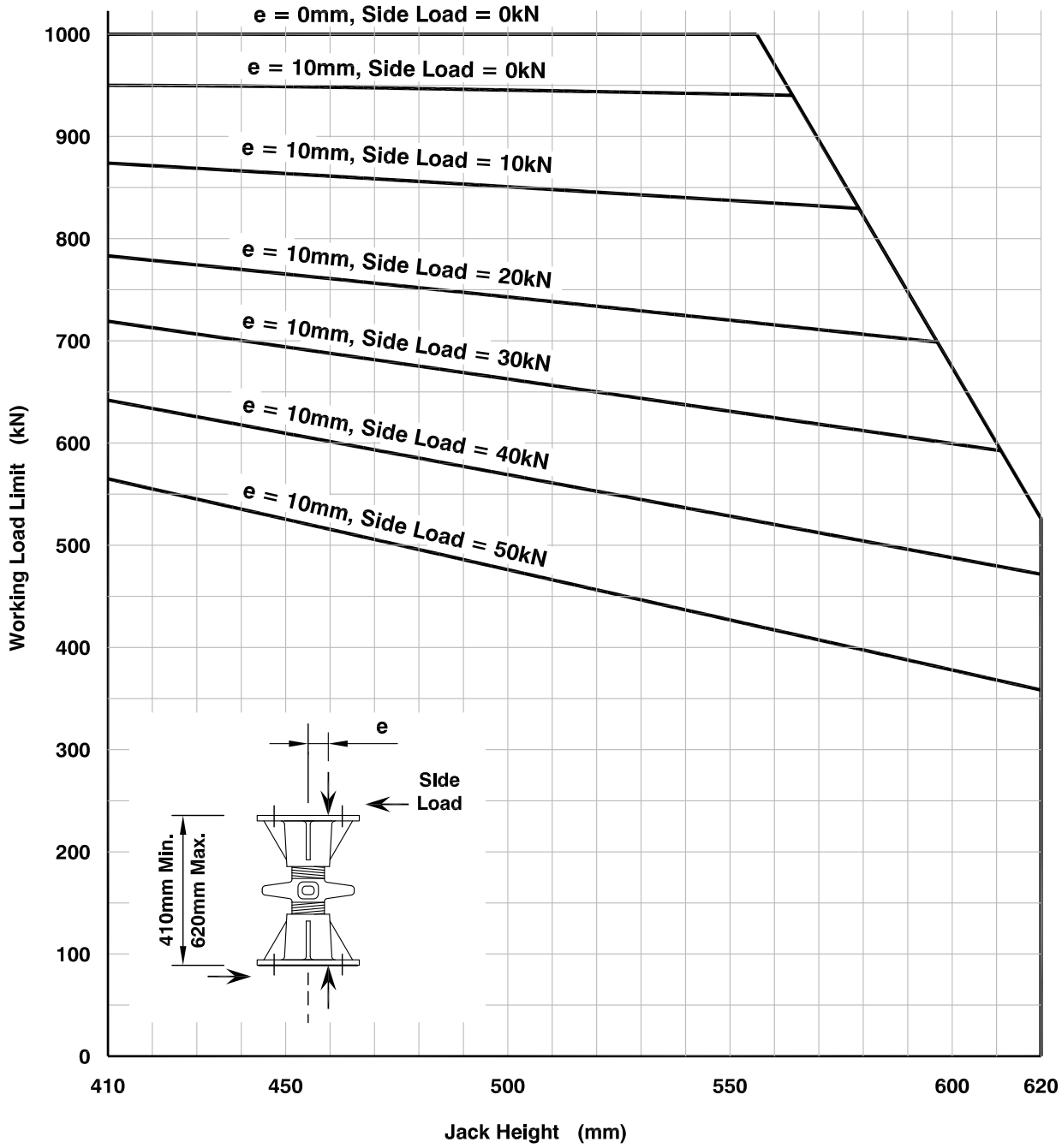
WLL In Compression

WLL has been determined with the Superslim Soldier orientated with the webs horizontal and eccentrically loaded 10mm off the weak axis.



TECHNICAL DATA

MEGASHOR JACK (MSX10011)
WLL OF JACKS WITH SOLID SPINDLES



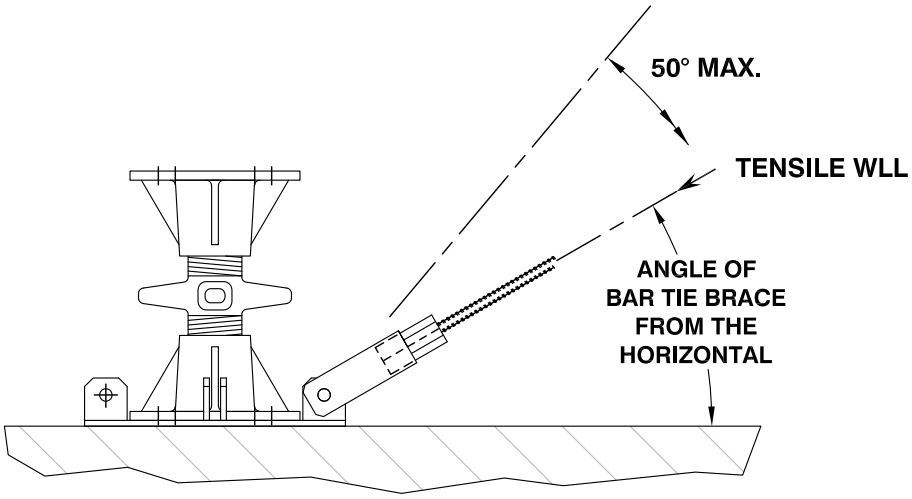
TECHNICAL DATA

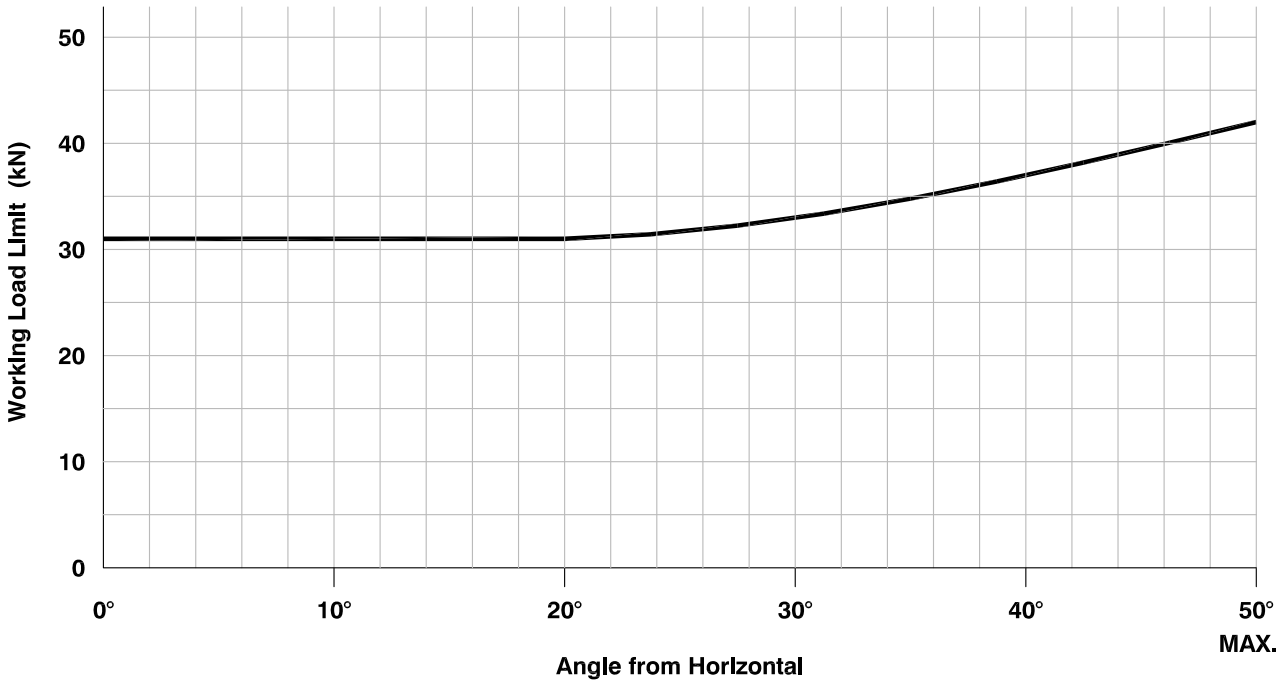
Instructions for use of Megashor Jacks

Ensure equal length of thread above and below collar as follows:

1- Fully close Jack.
2- Turn collar to extend Jack, making sure that the top of Jack does not rotate relative to bottom.

MEGASHOR BRACE BASE PLATE (MSA10025)
LOAD CAPACITIES





TECHNICAL DATA

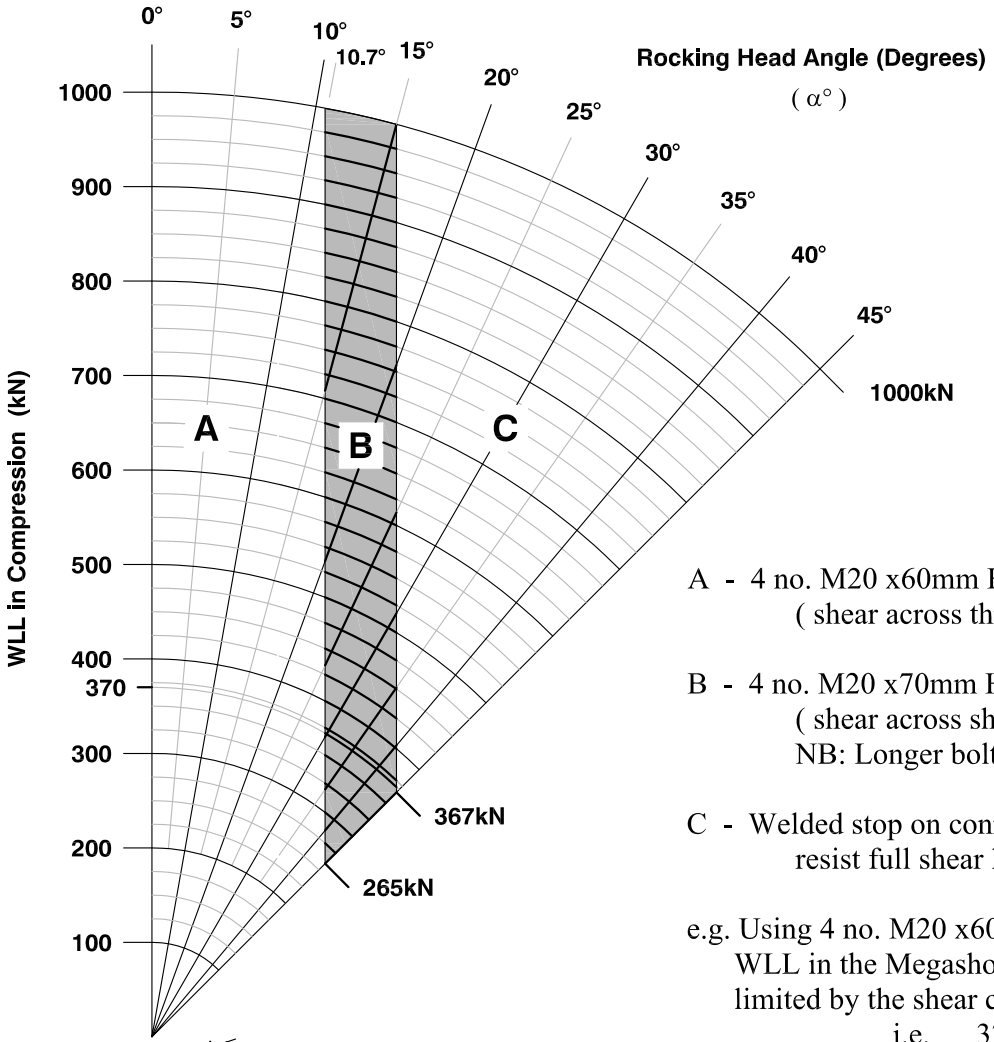
TECHNICAL DATA

MEGASHOR ROCKING HEAD (MSX10026) CONNECTION DETAILS

The Megashor Rocking Head is used for connecting components at an angle to Megashor or to eliminate moment transfer at a support or joint.

Note: When the Rocking Head is used to support a header beam the tapped holes shall be connected to the Megashor section, not the header beam.

Megashor loads are limited to areas within the envelopes below. Orientation of the Megashor (I_{XX}, I_{YY}) to the Rocking Head does not affect the values from the chart. Max WLL of Rocking Head in tension is 250kN. Note: this may not be the limiting capacity of the Megashor.



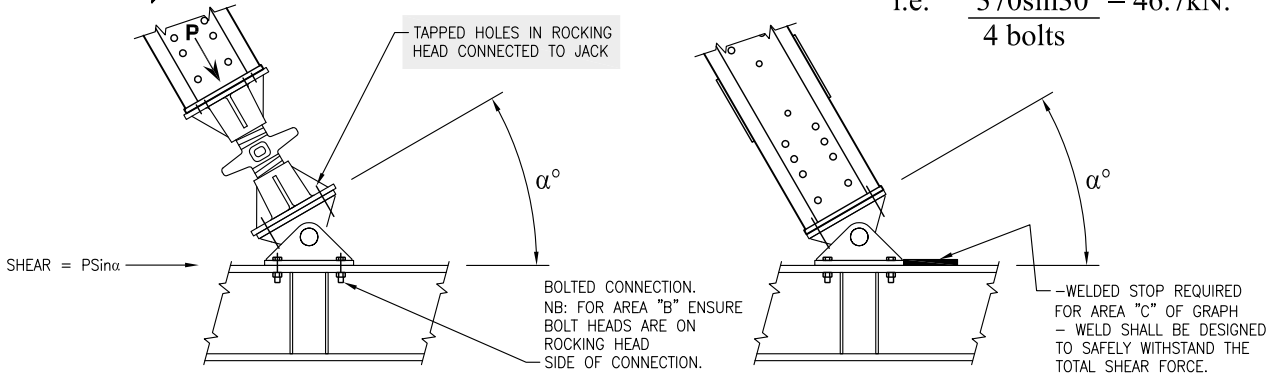
A - 4 no. M20 x60mm Hex Hd Bolt G8.8
(shear across thread root)

B - 4 no. M20 x70mm Hex Hd Bolt G8.8
(shear across shank)
NB: Longer bolts may be used.

C - Welded stop on connected member to resist full shear load (see diagram).

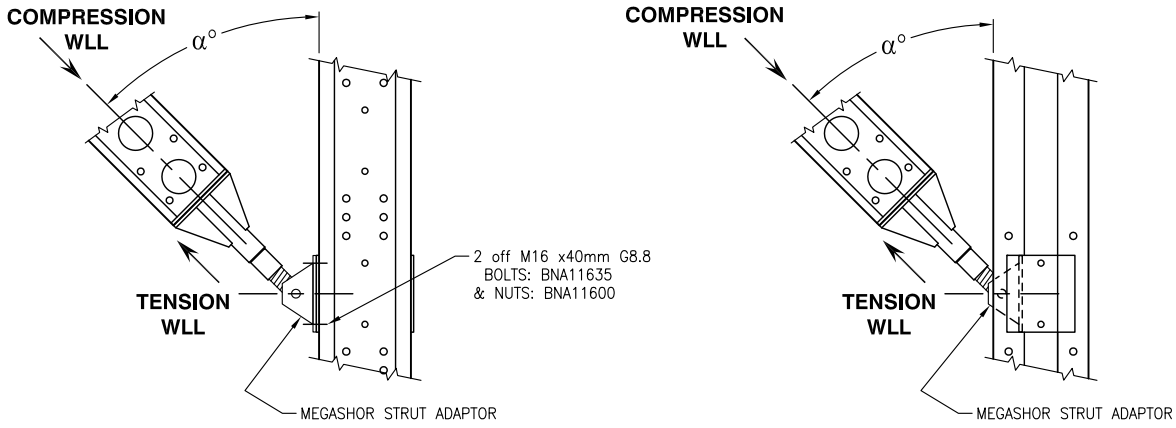
e.g. Using 4 no. M20 x60 Bolts G8.8, the max. WLL in the Megashor is 370kN. This is limited by the shear capacity of the bolts.

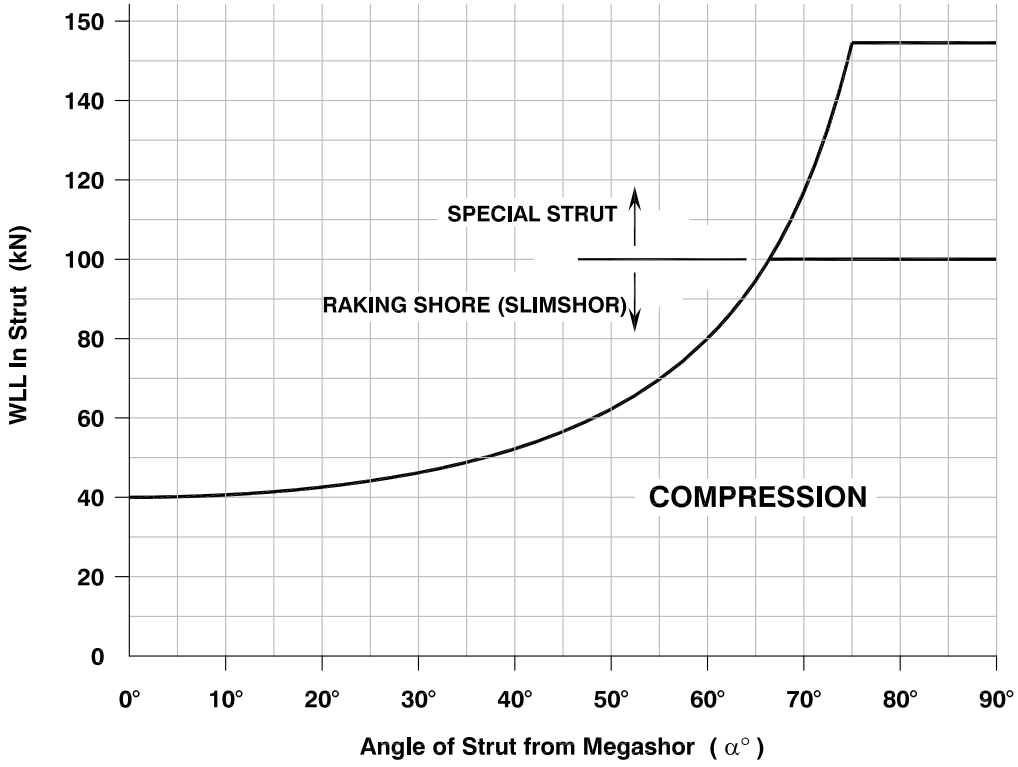
i.e. $\frac{370\sin 30°}{4 \text{ bolts}} = 46.7\text{kN}$.

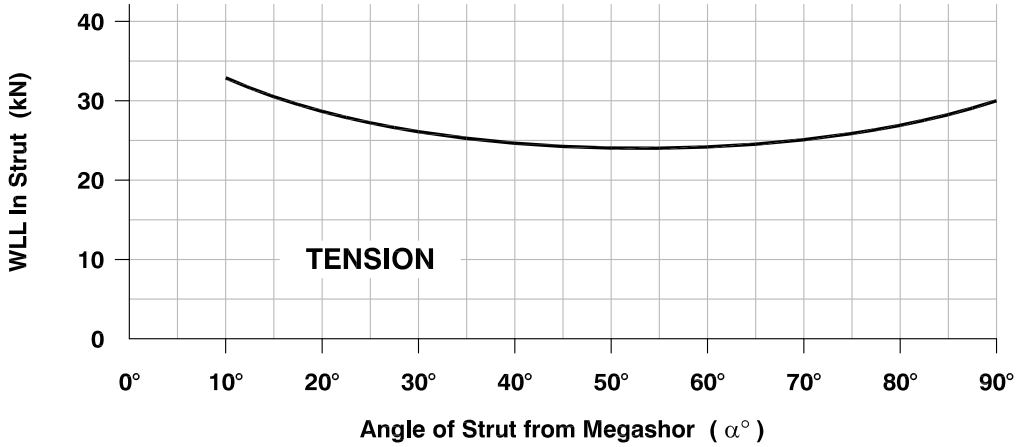


TECHNICAL DATA

MEGASHOR STRUT ADAPTOR (MSA10015) LOAD CAPACITIES







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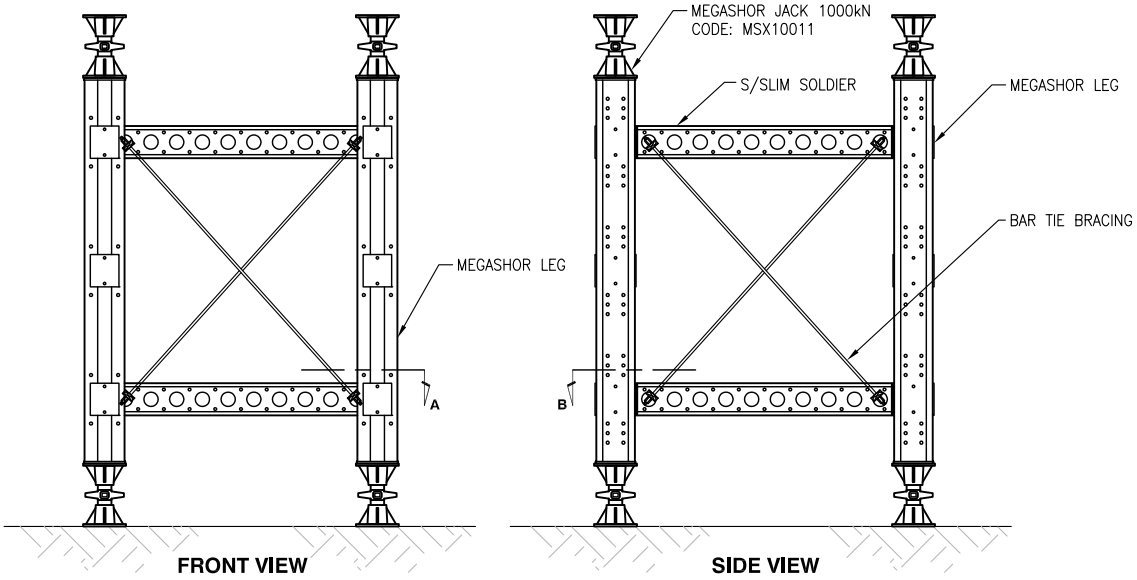
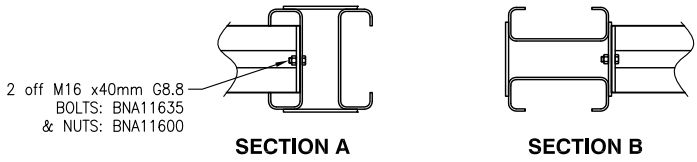
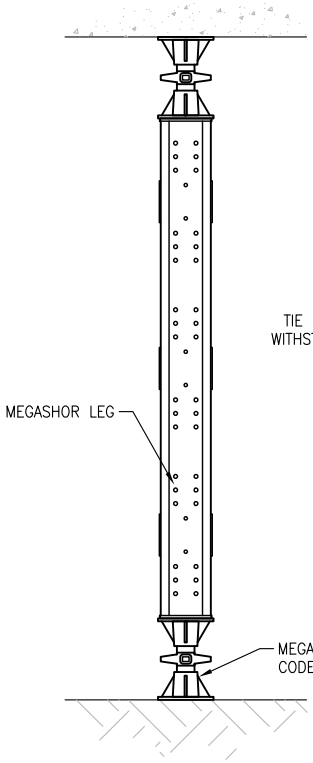
TECHNICAL DATA

MEGASHOR TOWER ARRANGEMENT

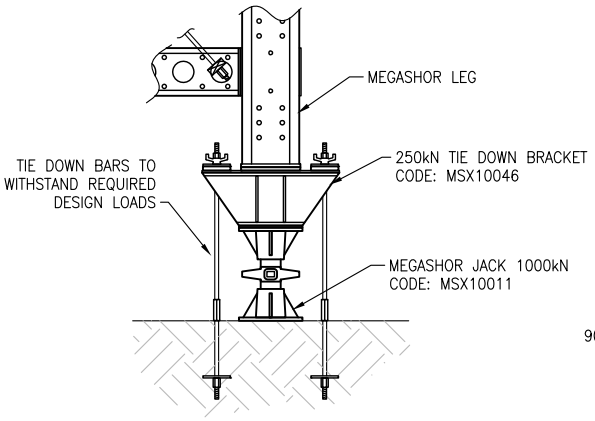




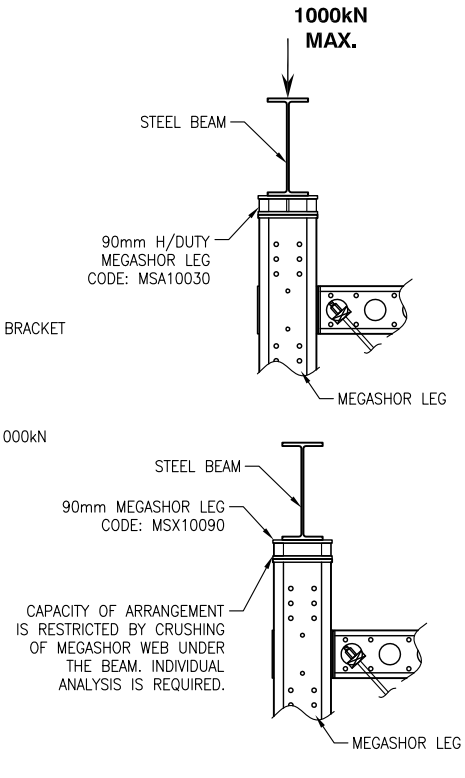
MEGASHOR SINGLE PROP



MEGASHOR 250kN TIE DOWN BRACKET

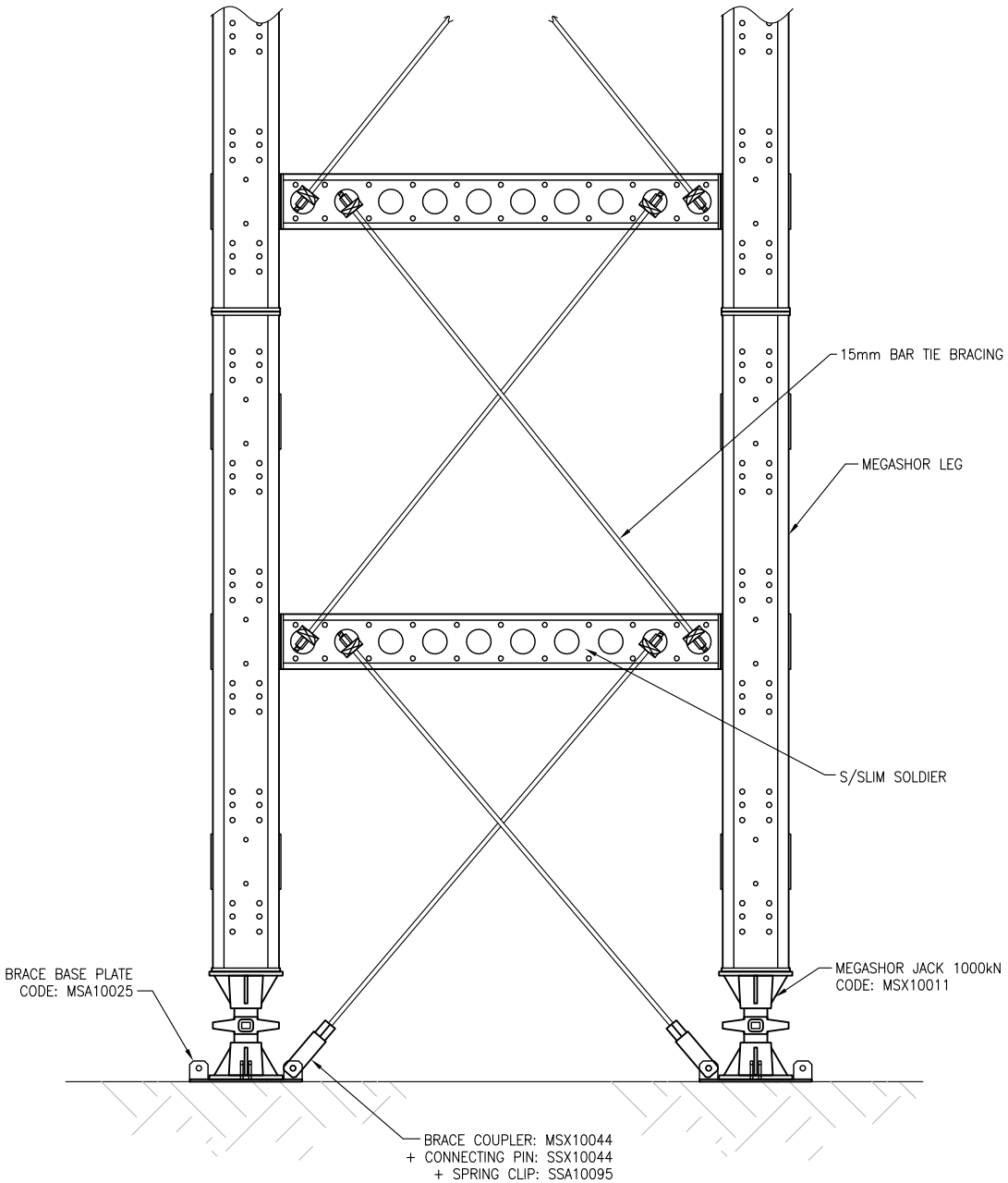


MEGASHOR SUPPORTING HEADER BEAM



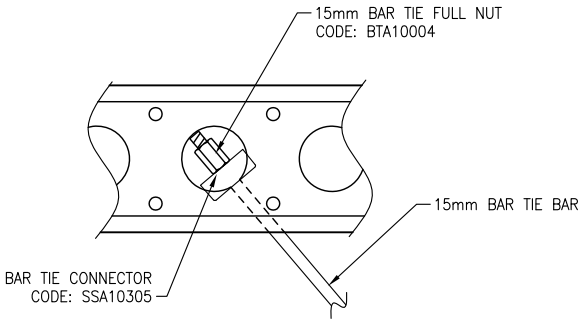
TECHNICAL DATA

MEGASHOR TOWER ARRANGEMENT
BRACED BASE

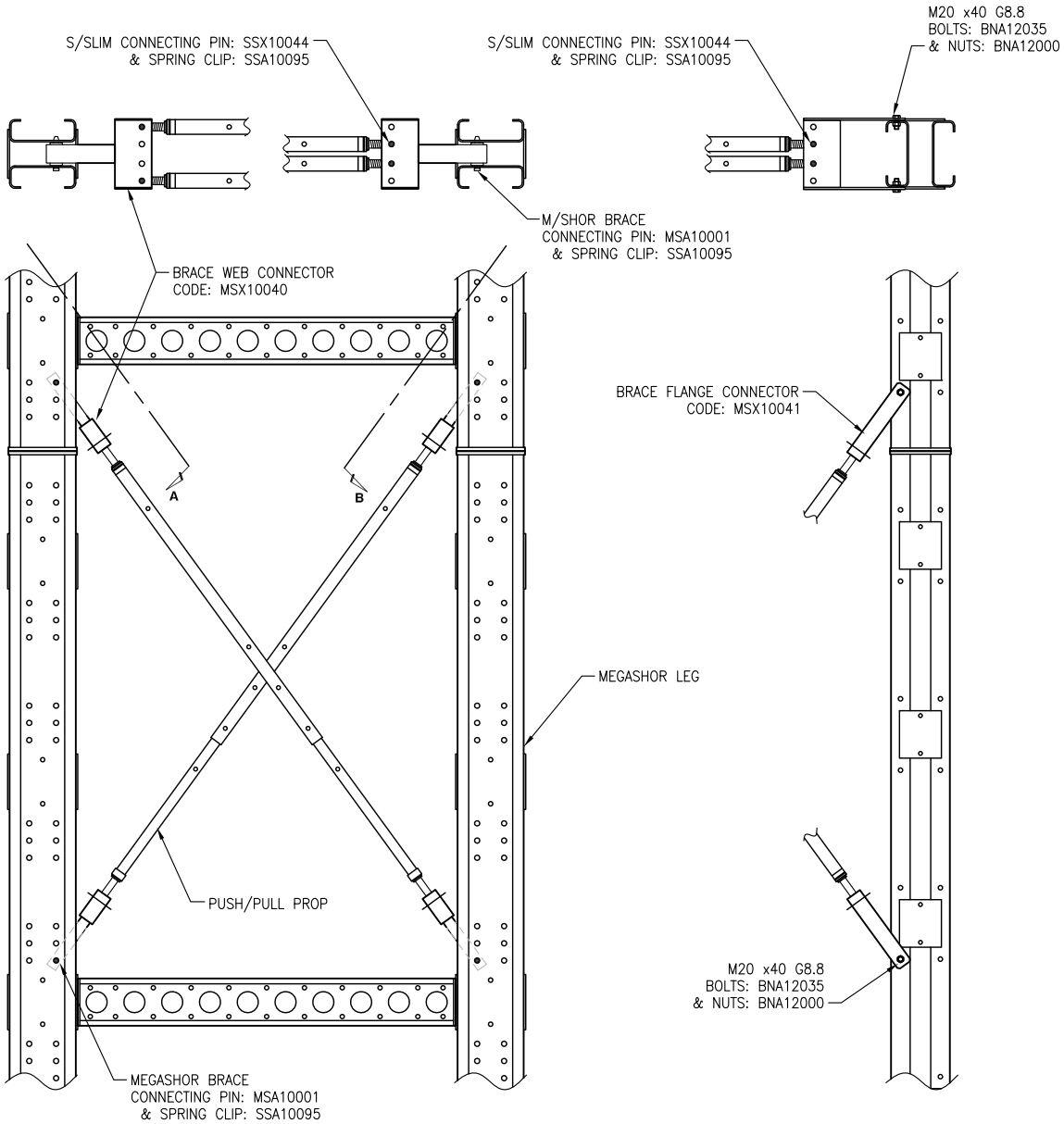


TECHNICAL DATA

MEGASHOR BAR TIE BRACING ARRANGEMENT



MEGASHOR PROP BRACE ARRANGEMENT



TECHNICAL DATA

MEGATRUSS