

MEGASHOR PLUS

Introduction

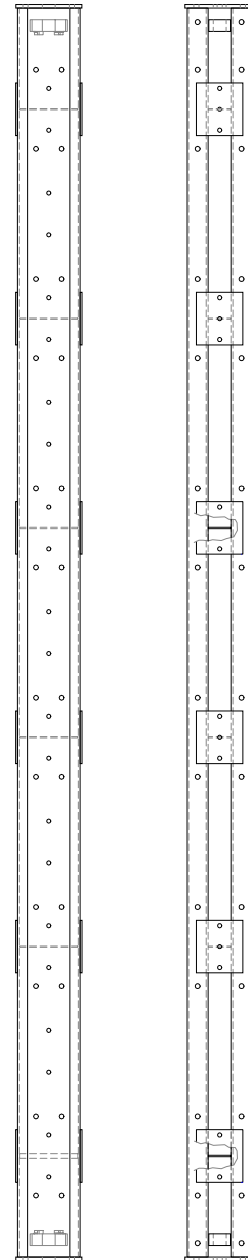
Megashor Plus is a variant of Megashor. There are limited stocks available, which can prove useful in the following applications.

- Isolated substitution for Megashor in bridge propping applications where the properties of Megashor do not suffice or a longer effective length is required for a given load than Megashor can provide.
- Use in Megaprop 6 Plus shafts

Geometry Variations from Megashor

- Manufactured from 8mm thick plate rather than 6mm.
- Batten and end plates are steel grade S355 rather than S275. In order to verify this, batten plates have a central hole and end plates have seven 21mm diameter holes rather than the six for Megashor. The central batten plate hole can not be used for bolting as the Megashor internal stiffener obstructs it.
- 40mm thick end block welded between the webs at the end of the section used in applications with large tensile loads. (Not in sections 450,270,90mm long)
- Hole pattern as right. Sizes and positions as Megashor
- 94mm gap between the webs, hence Megatruss nodes do not mate.

The geometry of the section is such that Megashor Plus is entirely compatible with Megashor in applications where the shafts are laced with Superslim Soldiers and braced with Flat Braces. (I.e. the 110mm dimension across the webs, the 286mm dimension across the batten plates and the centres of all holes are unchanged)

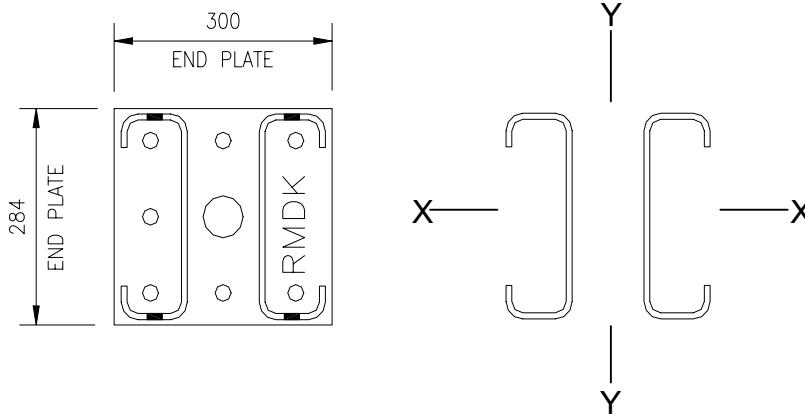


Code	Description	Weight
05425	Megashor Plus 5400mm	403kg
05426	Megashor Plus 2700mm	216kg
05427	Megashor Plus 1800mm	154kg
05428	Megashor Plus 900mm	92kg
05429	Megashor Plus 450mm	53kg
05430	Megashor Plus 270mm	38kg
05431	Megashor Plus 90mm	26kg

MEGASHOR PLUS

Section Properties

All un-noted dimensions as Megashor



Megashor Plus Leg Properties	
Gross Area	76.4cm ²
Second Moment of Area Ixx	7650cm ⁴
Second Moment of Area Iyy	5330cm ⁴
Radius of Gyration rxx	10.1cm
Radius of Gyration ryy	8.35cm
Elastic Modulus Zxx	566cm ³
Elastic Modulus Zyy	380cm ³
Flexural Rigidity EIxx	16100kNm ²
Flexural Rigidity EIyy	6780kNm ²
Mean Yield Stress	370N/mm ²
Maximum Bending Moment Mxx	130kNm
Maximum Bending Moment Myy	91kNm
Maximum Bearing in all 21mm diameter holes	60kN
Maximum Joint Bending Moment Mjx	84kNm*
Maximum Bending Moment Mjy	66kNm*
Maximum Joint Tension	640kN*
Maximum Joint Tension	1400kN**
Axial Shortening	6.11x10 ⁻⁴ mm/m/kN
Self Weight (depends on makeup)	75kg/m

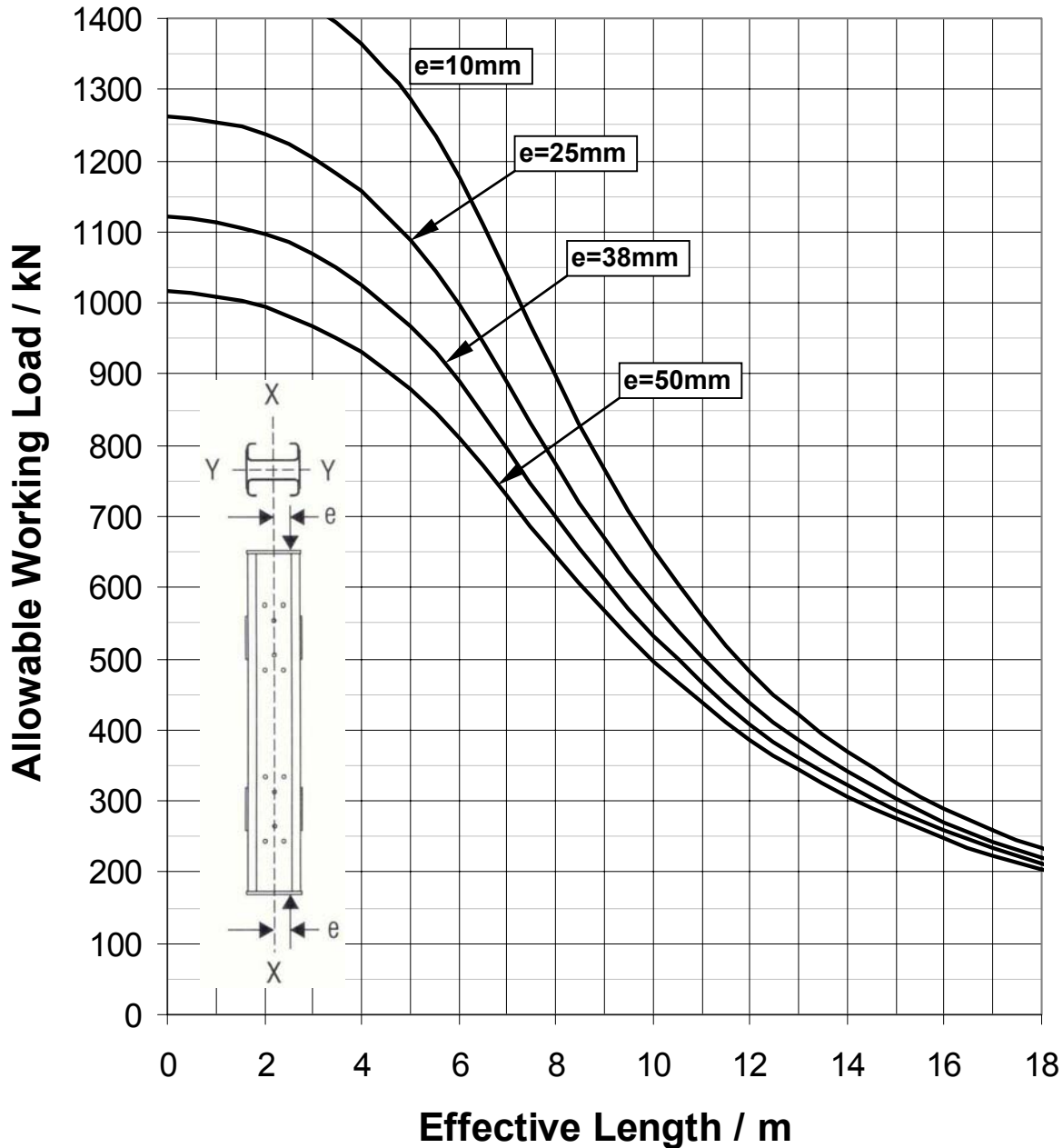
* End plates connected with 6 M20x60 grade 12.9 bolts and grade 12 nuts

** End plates connected as above but with additional special M52x285 grade 12.9 socket cap screw and nut.

Torque all end connections to 300Nm in tension applications

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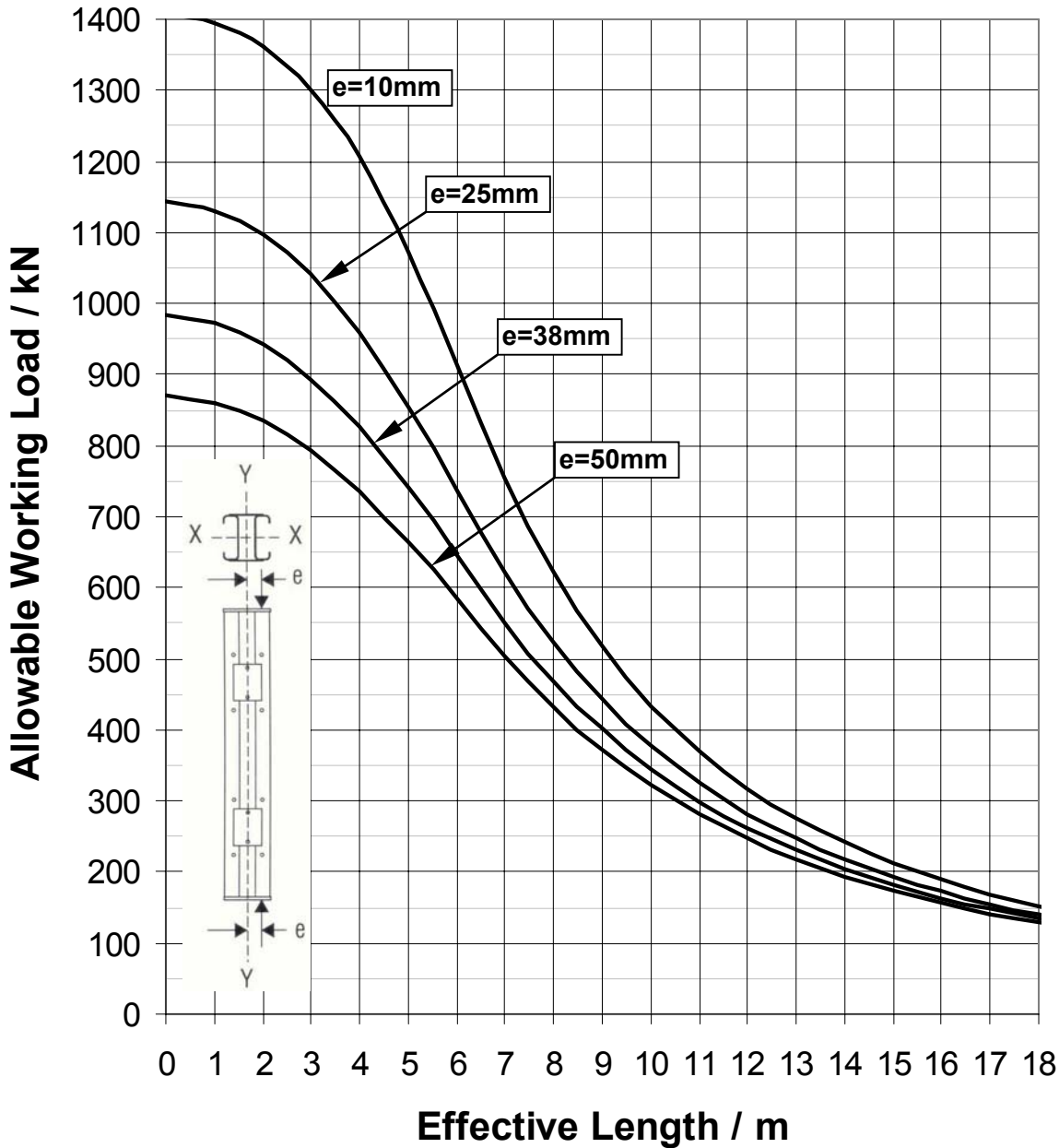
Allowable Axial Loads in Vertical Megashor Plus Shafts with Eccentric Loads Both Ends - XX Axis



TECHNICAL DATA

MEGASHOR PLUS

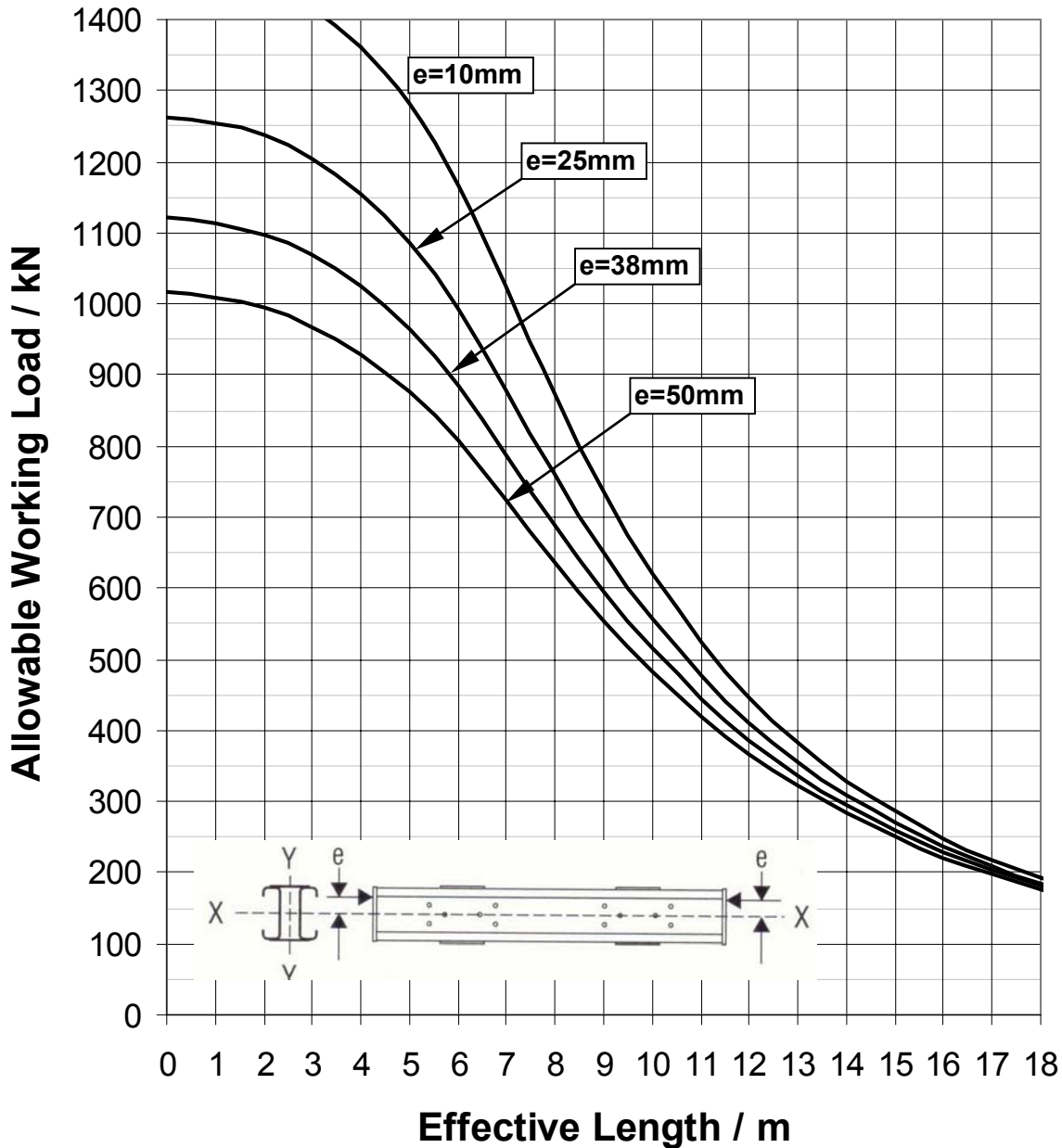
Allowable Axial Loads in Vertical Megashor Plus Shafts with Eccentric Loads Both Ends - YY Axis



TECHNICAL DATA

MEGASHOR PLUS

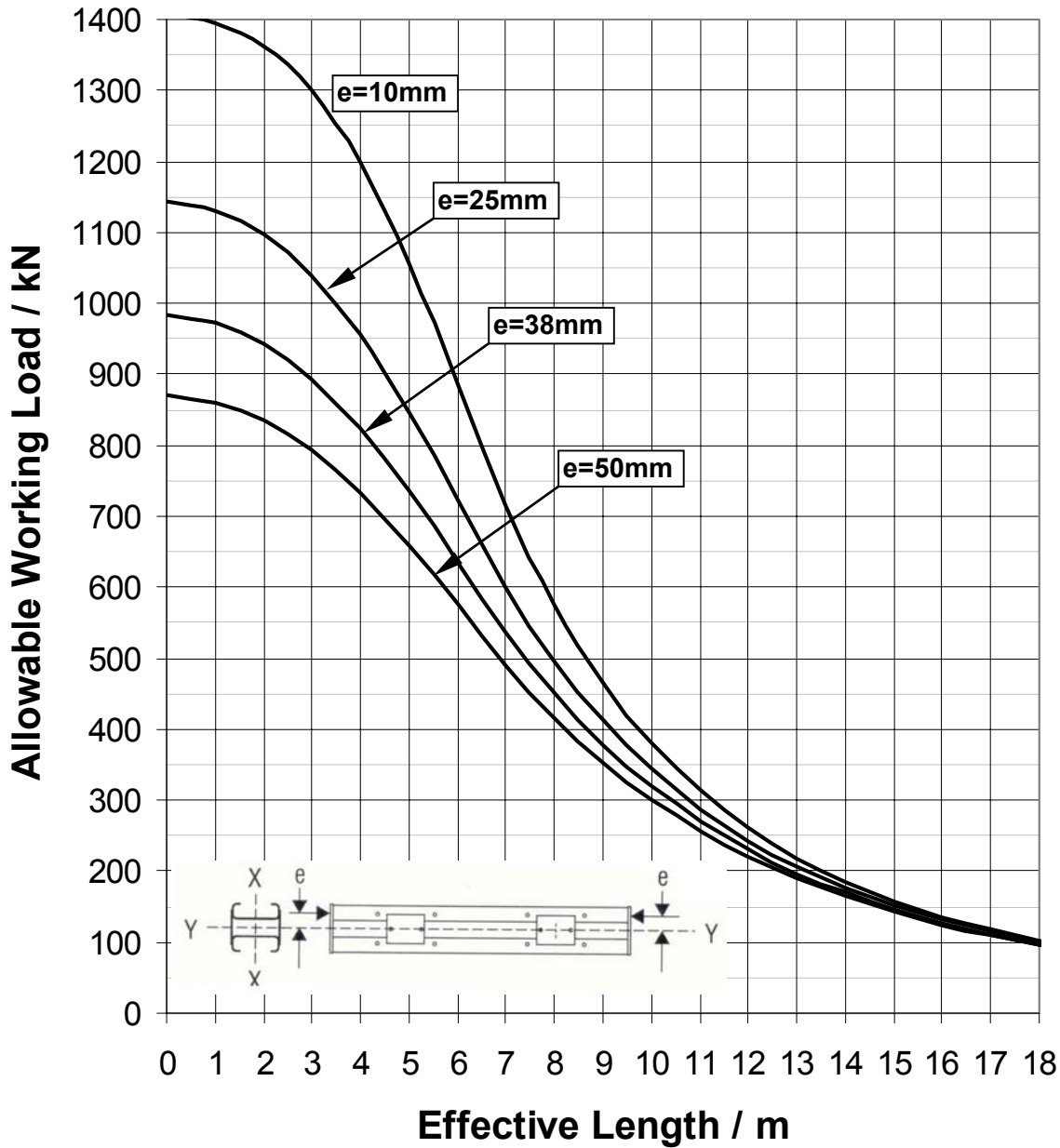
Allowable Axial Loads in Horizontal Megashor Plus Shafts with Eccentric Loads Both Ends - XX Axis



TECHNICAL DATA

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Allowable Axial Loads in Horizontal Megashor Plus Shafts with Eccentric Loads Both Ends - YY Axis



TECHNICAL DATA