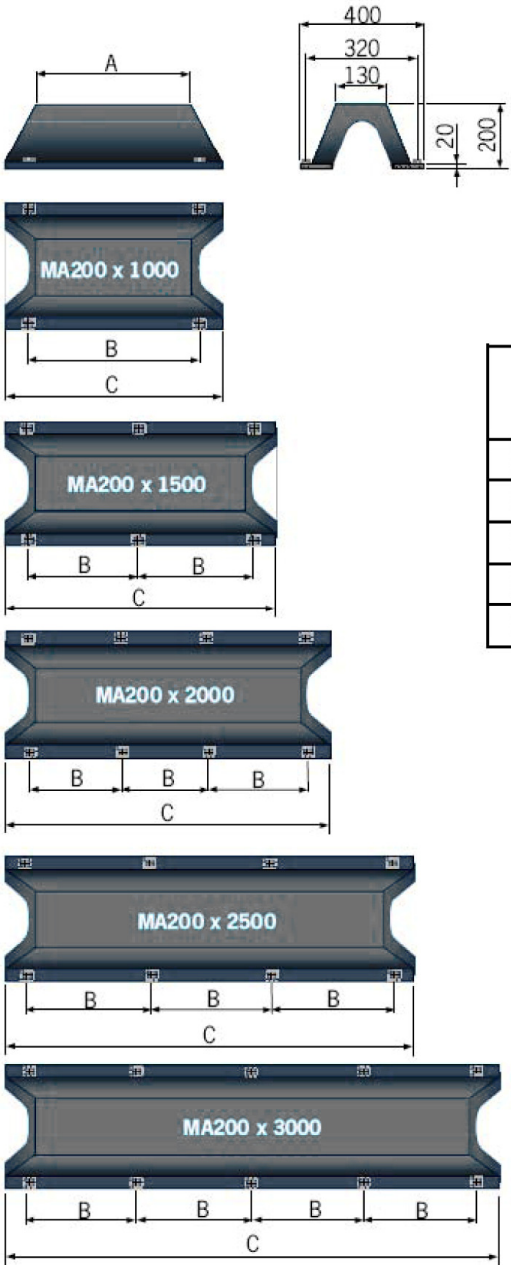


## MORSE ARCH FENDER MA200

### Technical data

#### General description

Arch fenders provide a simple, efficient and robust fender at a low cost. The fenders do not require field assembly and can be supplied either in solid rubber or with an integrally bonded UHMW-PE top. Arch fenders can be mounted directly to the dock face, whether it be new or existing concrete or structural steel. The fender can be mounted in any direction; i.e. vertically, horizontally, or diagonally to provide the best coverage.



Arch fender	Dimensions			Anchor
	A	B	C	
MA200 x 1000	1000	900	1100	4 x M24
MA200 x 1500	1500	700	1600	6 x M24
MA200 x 2000	2000	630	2100	8 x M24
MA200 x 2500	2500	800	2600	8 x M24
MA200 x 3000	3000	725	3100	10 x M24

#### Performance

Arch fender	Deflection %	Energy absorption Tm	Reaction force T
MA200 x 1000B	52	0.8	10.4
MA200 x 1000A	52	1.2	15.4
MA200 x 1500B	52	1.2	16.0
MA200 x 1500A	52	1.7	22.8
MA200 x 2000B	52	1.6	21.1
MA200 x 2000A	52	2.3	30.1
MA200 x 2500B	52	2.0	26.3
MA200 x 2500A	52	2.9	37.6
MA200x 3000B	52	2.5	30.8
MA200 x 3000A	52	3.6	44.0

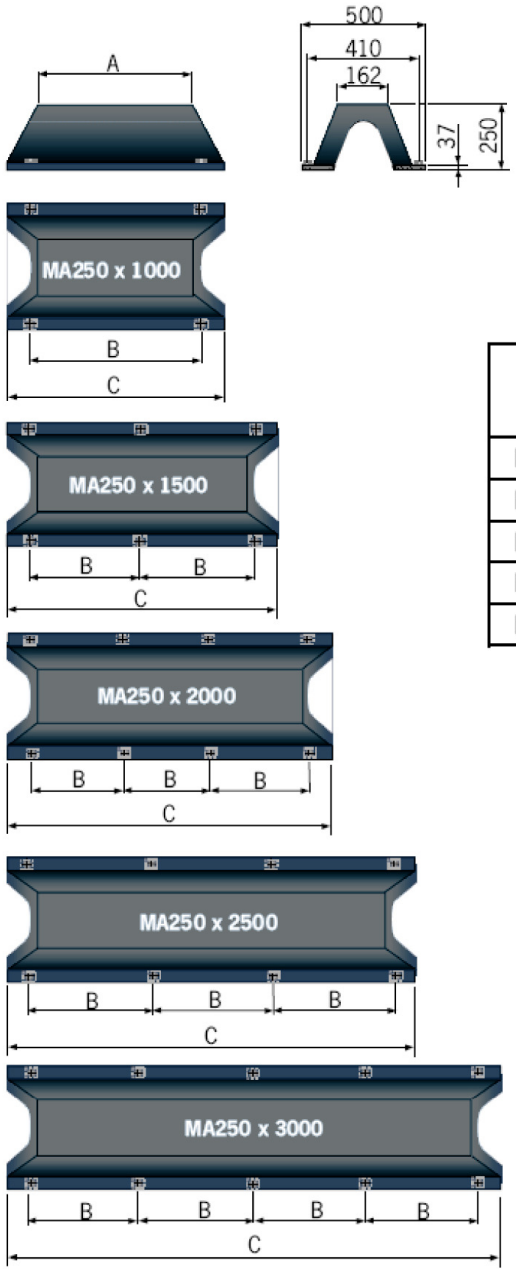
TL16EN211

## ARCH FENDER MA250

### Technical data

#### General description

Arch fenders provide a simple, efficient and robust fender at a low cost. The fenders do not require field assembly and can be supplied either in solid rubber or with an integrally bonded UHMW-PE top. Arch fenders can be mounted directly to the dock face, whether it be new or existing concrete or structural steel. The fender can be mounted in any direction; i.e. vertically, horizontally, or diagonally to provide the best coverage.



Arch fender	Dimensions			Anchor
	A	B	C	
MA250 x 1000	1000	865	1125	4 x M24
MA250 x 1500	1500	680	1625	6 x M24
MA250 x 2000	2000	620	2125	8 x M24
MA250 x 2500	2500	790	2625	8 x M24
MA250 x 3000	3000	715	3125	10 x M24

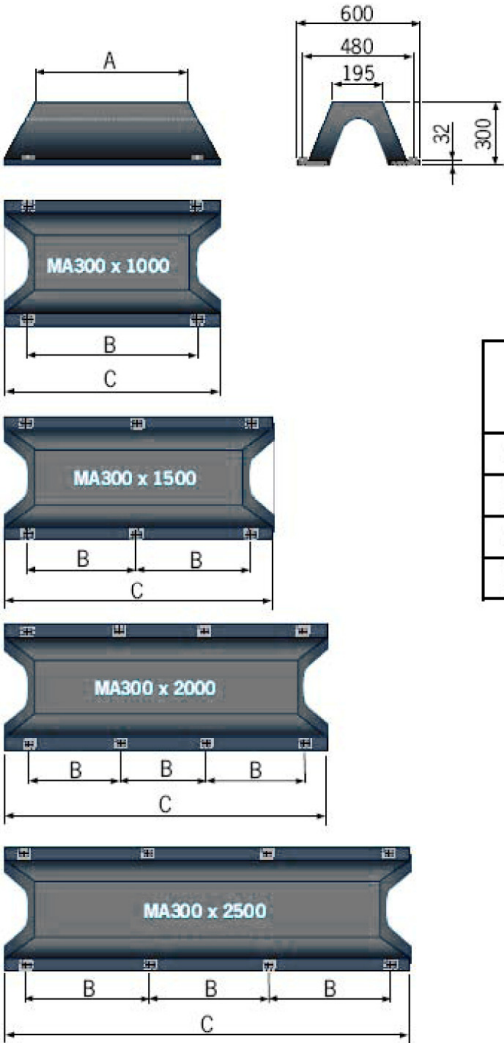
#### Performance

Arch fender	Deflection %	Energy absorption Tm	Reaction force T
MA250 x 1000B	52	1.2	12.0
MA250 x 1000A	52	1.7	17.1
MA250 x 1500B	52	1.8	17.6
MA250 x 1500A	52	2.6	25.2
MA250 x 2000B	52	2.4	23.2
MA250 x 2000A	52	3.4	33.2
MA250 x 2500B	52	2.9	28.9
MA250 x 2500A	52	4.2	41.3
MA250x 3000B	52	3.5	34.5
MA250 x 3000A	52	5.0	49.3

TL16EN212

## ARCH FENDER MA300

### Technical data



### General description

Arch fenders provide a simple, efficient and robust fender at a low cost. The fenders do not require field assembly and can be supplied either in solid rubber or with an integrally bonded UHMW-PE top. Arch fenders can be mounted directly to the dock face, whether it be new or existing concrete or structural steel. The fender can be mounted in any direction; i.e. vertically, horizontally, or diagonally to provide the best coverage.

Arch fender	Dimensions			Anchor
	A	B	C	
MA300 x 1000	1000	900	1150	4 x M30
MA300 x 1500	1500	700	1650	6 x M30
MA300 x 2000	2000	630	2150	8 x M30
MA300 x 2500	2500	800	2650	8 x M30

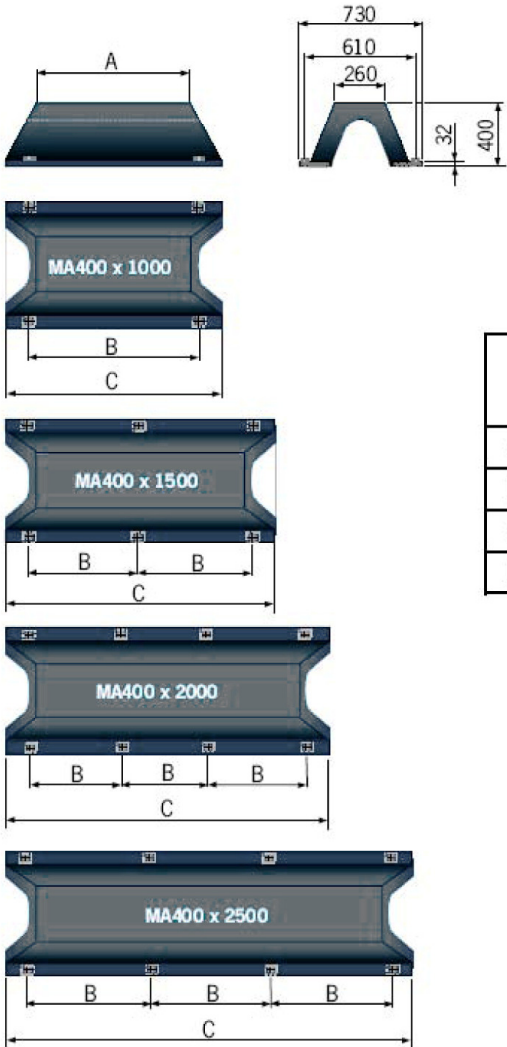
### Performance

Arch fender	Deflection %	Energy absorption Tm	Reaction force T
MA300 x 1000B	52	2.0	16.2
MA300 x 1000A	52	2.8	23.2
MA300 x 1500B	52	2.9	23.9
MA300 x 1500A	52	4.2	34.1
MA300 x 2000B	52	3.9	31.4
MA300 x 2000A	52	5.5	44.9
MA300 x 2500B	52	4.8	39.0
MA300 x 2500A	52	6.8	55.7

TL16EN213

## ARCH FENDER MA400

### Technical data



### General description

Arch fenders provide a simple, efficient and robust fender at a low cost. The fenders do not require field assembly and can be supplied either in solid rubber or with an integrally bonded UHMW-PE top. Arch fenders can be mounted directly to the dock face, whether it be new or existing concrete or structural steel. The fender can be mounted in any direction; i.e. vertically, horizontally, or diagonally to provide the best coverage.

Arch fender	Dimensions			Anchor
	A	B	C	
MA400 x 1000	1000	900	1200	4 x M30
MA400 x 1500	1500	700	1700	6 x M30
MA400 x 2000	2000	630	2200	8 x M30
MA400 x 2500	2500	800	2700	8 x M30

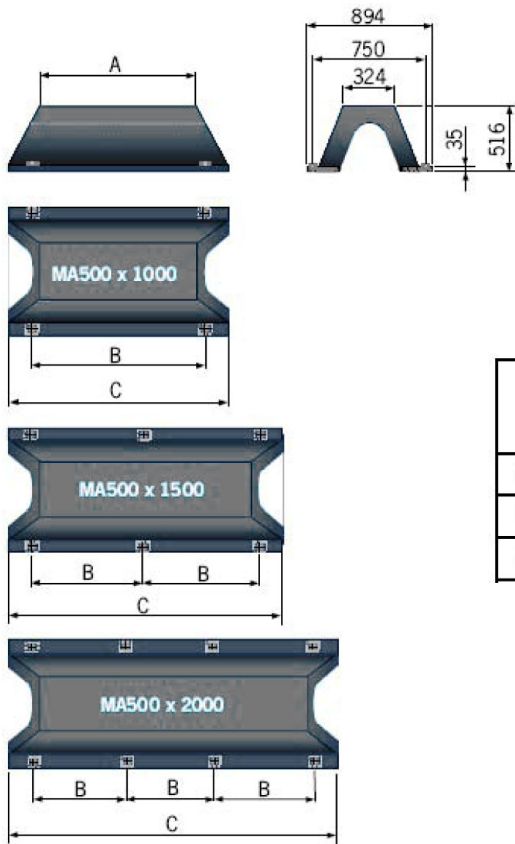
### Performance

Arch fender	Deflection %	Energy absorption Tm	Reaction force T
MA400 x 1000B	52	3.6	22.2
MA400 x 1000A	52	5.2	31.7
MA400 x 1500B	52	5.3	32.3
MA400 x 1500A	52	4.2	34.1
MA400 x 2000B	52	6.9	42.4
MA400 x 2000A	52	9.9	60.5
MA400 x 2500B	52	8.6	52.4
MA400 x 2500A	52	12.3	74.9

TL16EN214

## ARCH FENDER MA500

### Technical data



### General description

Arch fenders provide a simple, efficient and robust fender at a low cost. The fenders do not require field assembly and can be supplied either in solid rubber or with an integrally bonded UHMW-PE top. Arch fenders can be mounted directly to the dock face, whether it be new or existing concrete or structural steel. The fender can be mounted in any direction; i.e. vertically, horizontally, or diagonally to provide the best coverage.

Arch fender	Dimensions			Anchor
	A	B	C	
MA500 x 1000	1000	900	1250	4 x M36
MA500 x 1500	1500	700	1750	6 x M36
MA500 x 2000	2000	630	2250	8 x M36

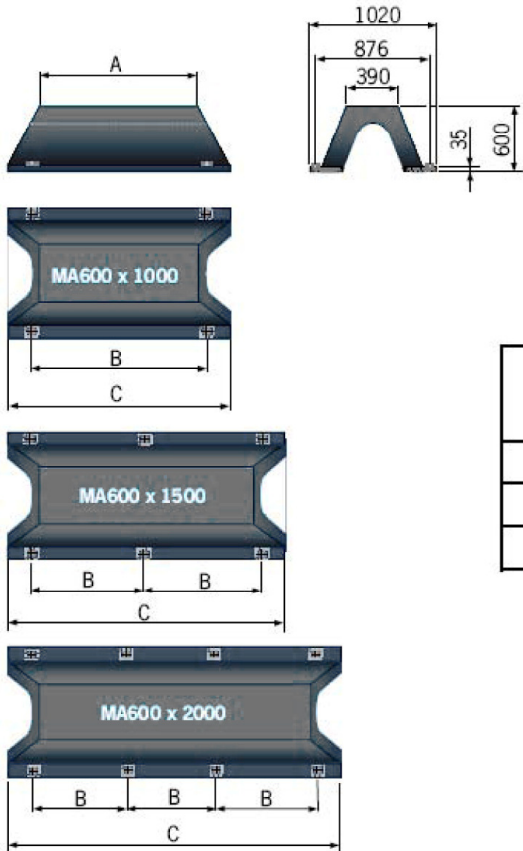
### Performance

Arch fender	Deflection %	Energy absorption Tm	Reaction force T
MA500 x 1000B	52	5.8	28.4
MA500 x 1000A	52	8.3	40.5
MA500 x 1500B	52	8.4	41.0
MA500 x 1500A	52	12.0	58.6
MA500 x 2000B	52	11.0	53.6
MA500 x 2000A	52	15.7	76.5

TL16EN215

## ARCH FENDER MA600

### Technical data



### General description

Arch fenders provide a simple, efficient and robust fender at a low cost. The fenders do not require field assembly and can be supplied either in solid rubber or with an integrally bonded UHMW-PE top. Arch fenders can be mounted directly to the dock face, whether it be new or existing concrete or structural steel. The fender can be mounted in any direction; i.e. vertically, horizontally, or diagonally to provide the best coverage.

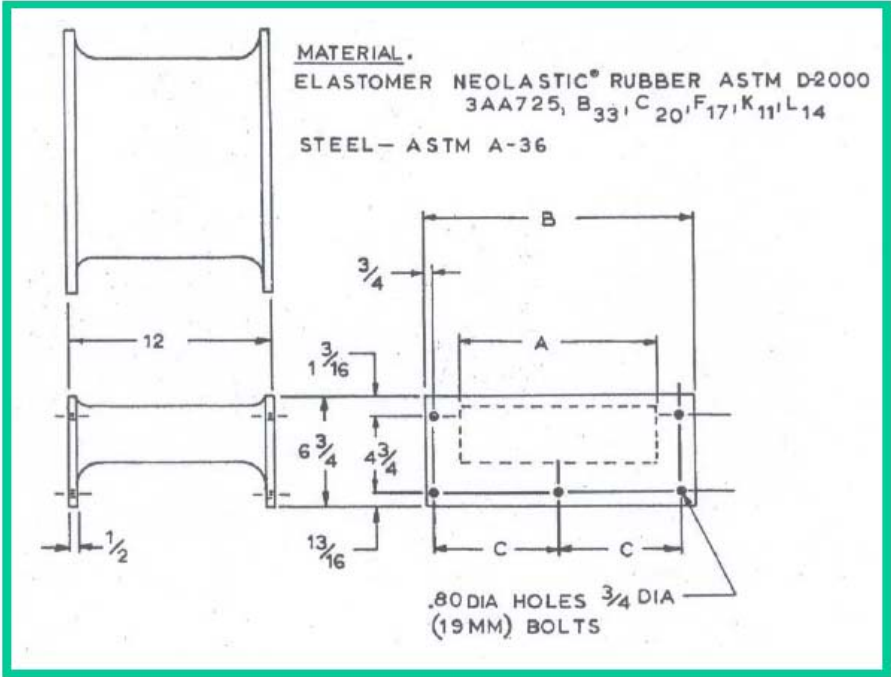
Arch fender	Dimensions			Anchor
	A	B	C	
MA600 x 1000	1000	900	1300	4 x M36
MA600 x 1500	1500	700	1800	6 x M36
MA600 x 2000	2000	630	2300	8 x M36

### Performance

Arch fender	Deflection %	Energy absorption Tm	Reaction force T
MA600 x 1000B	52	8.5	34.8
MA600 x 1000A	52	12.2	49.7
MA600 x 1500B	52	12.3	50.0
MA600 x 1500A	52	17.5	71.3
MA600 x 2000B	52	16.0	65.0
MA600 x 2000A	52	22.8	92.9

TL16EN216

## Morse 12" BUCKLING COLUMN FENDER



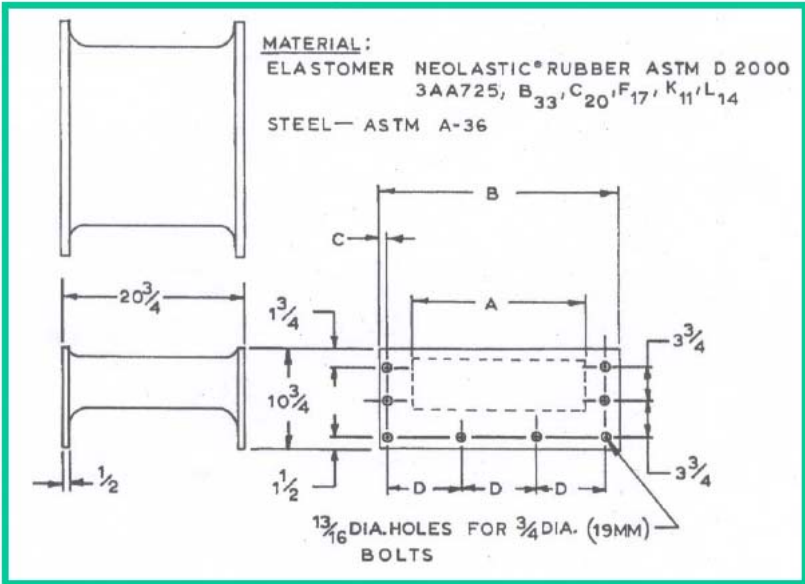
PART NO.	WT.	A	B	C
	25 LBS.	6	10	4 1/4
E46001	11,3 Kg.	(152.4)	(254.0)	(108.0)
	35 LBS.	9	13	5 3/4
E46002	15,9 Kg.	(228.6)	(330.2)	(146.1)
	45 LBS.	12	16	7 1/4
E46003	20,4 Kg.	(304.8)	(406.4)	(184.2)
	35 LBS.	9	13	5 3/4
E46004	15,9 Kg.	(228.6)	(330.2)	(146.1)
	50 LBS.	12	16	7 1/4
E46005	22,7 Kg.	(304.8)	(406.4)	(184.2)

INCH	Cm.
1/2	1.27
3/4	1.91
.80	2.03
13/16	2.06
1 13/16	3.02
4 3/4	12.07
6 3/4	17.15

NOTE: ALL DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS

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## Morse 20" BUCKLING COLUMN FENDER



PART NO.	WT.	A	B	C	D
	90 LBS.	10	16 5/16	1 3/5	4 3/8
E46006	40,8 Kg.	(254.0)	(414.3)	(40.5)	(111.1)
	115 LBS.	14	20 5/16	1 5/8	5 11/16
E46007	52,3 Kg.	(355.6)	(515.9)	(41.3)	(144.5)
	145 LBS.	18	24 5/16	1 2/3	7
E46008	65,9 Kg.	(457.2)	(617.5)	(42.1)	(177.8)
	175 LBS.	22	28 5/16	1 19/32	8 3/8
E46009	79,5 Kg.	(558.8)	(719.1)	(40.5)	(212.7)
	205 LBS.	26	32 5/16	1 5/8	9 11/16
E46010	93,2 Kg.	(660.4)	(820.7)	(41.3)	(246.0)

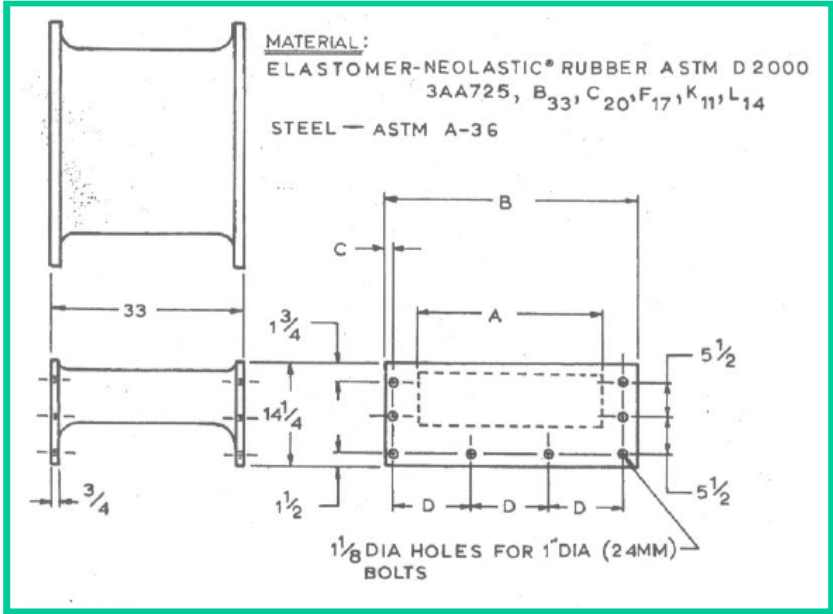
INCH	Cm.
1/2	1.27
13/16	2.06
1 1/2	3.81
1 3/4	4.45
3 3/4	9.53
10 3/4	27.31
20 3/4	52.71

NOTE: ALL DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS

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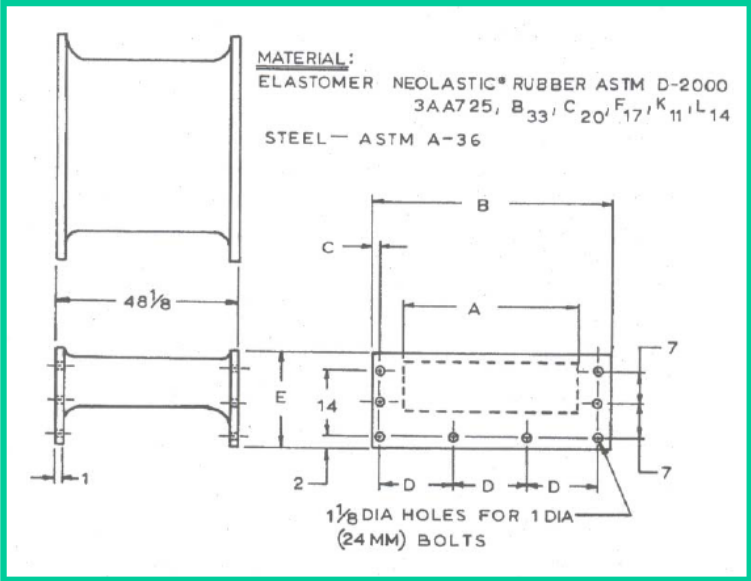
## Morse 33" BUCKLING COLUMN FENDER



PART NO.	WT.	A	B	C	D
	235 LBS.	12	18 5/16	1 21/32	5
E46011	107 Kg.	(304.8)	(465.1)	(42.1)	(127)
	345 LBS.	18	24 5/16	1 21/32	7
E46012	157 Kg.	(457.2)	(617.5)	(42.1)	(177.8)
	400 LBS.	22	28 5/16	1 19/32	8 3/8
E46013	181 Kg.	(558.8)	(719.1)	(40.5)	(212.7)
	480 LBS.	26	32 5/16	1 5/8	9 2/3
E46014	218 Kg.	(660.4)	(820.7)	(41.3)	(246.1)
	550 LBS.	30	36 5/16	1 21/32	11
E46015	250 Kg.	(762.0)	(922.3)	(42.1)	(279.4)
	710 LBS.	34	40 5/16	1 19/32	12 3/8
E46016	322 kG.	(865)	(1023)	(40.5)	(314.3)
	790 LBS.	38	44 5/16	1 23/32	13 5/8
E46017	359 kG.	(965.2)	(1126)	(44.0)	(346.1)

INCH	Cm.
3/4	1.91
1 1/8	2.86
1 1/2	3.81
1 3/4	4.45
5 1/2	13.97
14 1/4	36.20
33	83.82

## Morse 48" BUCKLING COLUMN FENDER



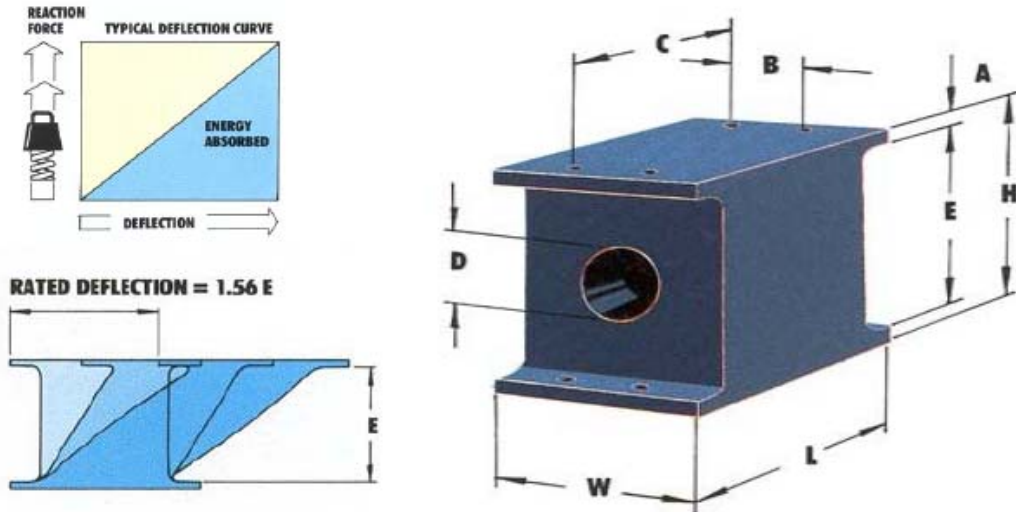
PART NO.	WT.	A	B	C	D	E
E46018	525 LBS.	14	20 5/16	1 29/32	5 1/2	19 1/2
	238 Kg.	(355.6)	(515.9)	(48.4)	(133.7)	(495.3)
E46019	635 LBS.	17 1/2	23 13/16	1 13/32	7	20 1/2
	288 Kg.	(444.5)	(604.8)	(35.7)	(177.8)	(520.7)
E46020	750 LBS.	21	27 5/16	1 21/32	8	20 1/2
	340 Kg.	(533.4)	(693.7)	(42.1)	(203.2)	(520.7)
E46021	870 LBS.	24 1/2	30 13/16	1 29/32	9	20 1/2
	394 Kg.	(622.3)	(782.6)	(48.4)	(228.6)	(520.7)
E46022	990 LBS.	28	34 5/16	1 13/32	10 1/2	20 1/2
	448 Kg.	(711.2)	(871.5)	(35.7)	(266.7)	(520.7)

INCH	Cm.
1	2.54
1 1/8	2.86
2	5.08
3 1/2	8.89
48 1/8	122.24

NOTE: ALL DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS

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# MORSE SHEAR FENDER



Dimensions (Inches)							
Part No.	W	H	L	A	B	C	D
E46496	10	11 5/8	15 3/4	5/8	4	14 1/8	4
E46498	12	13 7/8	18 7/8	11/16	5	16 15/16	5
E46500	14	16	22	3/4	5 1/2	19 3/4	6
E46502	16	18 9/16	25 1/8	15/16	7	22 5/8	7
E46504	18	20 15/16	28 1/4	1 1/16	8	25 3/8	8
E46506	20	22 15/16	31 3/8	1 1/16	9	28 1/4	9
E46508	22	25 3/8	34 1/2	1 1/4	10	31	10
E46510	24	27 3/4	37 3/4	1 3/8	11	33 7/8	11

Part No.	Shear				Compression			
	Energy Absorbed		Reaction		Energy Absorbed		Reaction	
	Ton-M	Ft.-Kips	Tonnes	Kips	Ton-M	Ft.-Kips	Tonnes	Kips
E46496	0.87	6.3	4.3	9.5	0.21	1.5	4.5	10
E46498	1.47	10.6	5.9	13	0.35	2.5	6.3	14
E46500	2.27	16.4	7.8	17.1	0.57	4.1	9.1	20
E46502	3.3	23.9	10.1	22.3	0.86	6.2	11.8	26
E46504	4.67	33.7	12.3	27.4	1.19	8.6	14.5	32
E46506	6.08	44	14.6	32.1	1.59	11.5	17.7	39
E46508	7.91	57.2	17.2	37.9	2.12	15.3	21.3	47
E46510	10.06	72.8	20.3	44.8	2.74	19.8	25.4	56

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