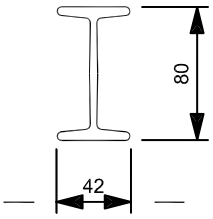
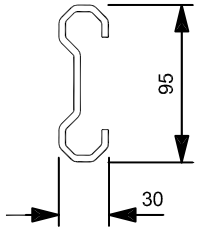
SAFENCE Wire Rope Safety Fence System

In the SAFENCE wire rope safety barrier range we have 4 different designs.
SAFENCE 3RI, 4RI, 3RC and 4RC. The safety fences differ in the number of wire ropes and type of posts.

3-4 = number of ropes R = Rope system I-C = I-post or C-post

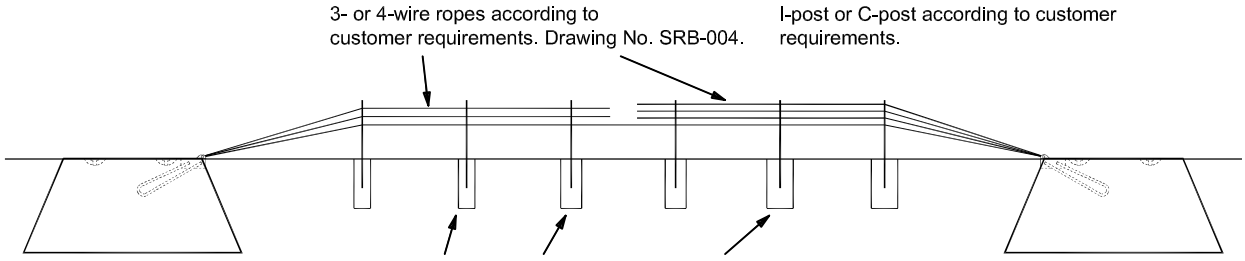


I-post
(INP 80)

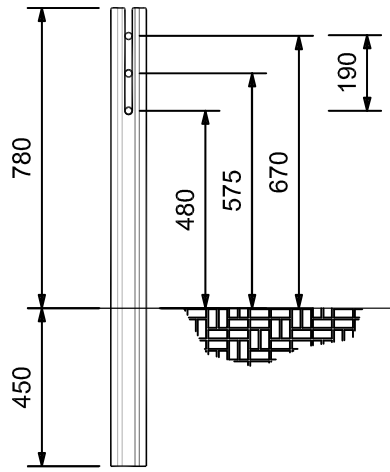


Safence C-post

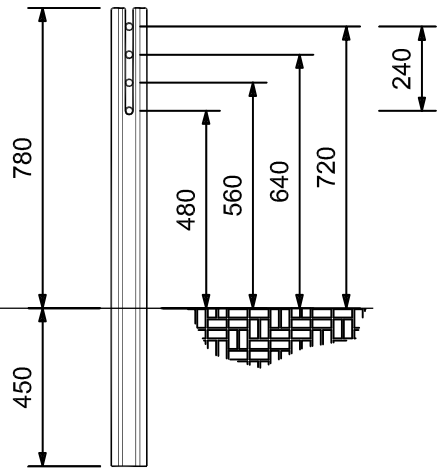
For all designs the distance between the posts can vary from 1 metre up to 3 metres.
In the table on drawing No. SRB-004 it is shown how the distance between posts changes the working width.
The dimensions of the concrete foundations depend on the method of manufacturing and the local ground conditions SRB-005.
On drawings SRB-001 - SRB-009 the SAFENCE wire rope safety fence system is presented.
The drawings apply to all the designs.



3-rope system



4-rope system



Designed	Drawn	Approved - date	Tolerance requirements	Surface roughness	Proj.	Scale
HN	CM	HN 2001-11-12				

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Material

Name
SAFENCE WIRE ROPE SAFETY FENCE SYSTEM. CONSTRUCTION DRAWING

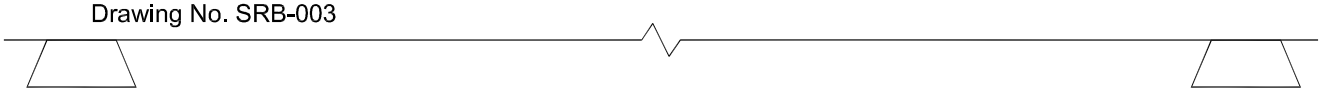
Issue	Sheet	File
B		SRB-001AE

Drawing No. SRB-001

Installation guide

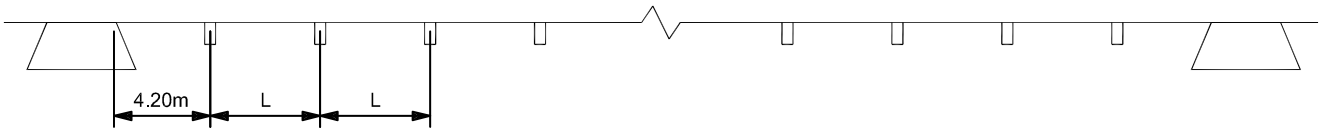
1. End anchors

Install the pre-fabricated or cast-on-site anchors at the beginning and end of each stretch.
Drawing No. SRB-003



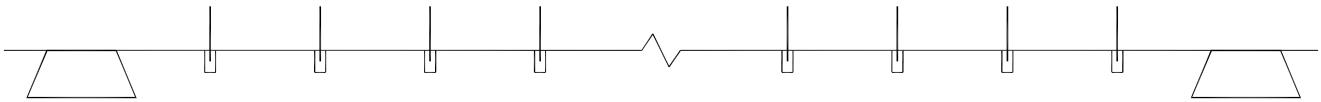
2. Post footings

Install the pre-fabricated or cast-on-site footings. Drawing No. SRB-004 + SRB-005



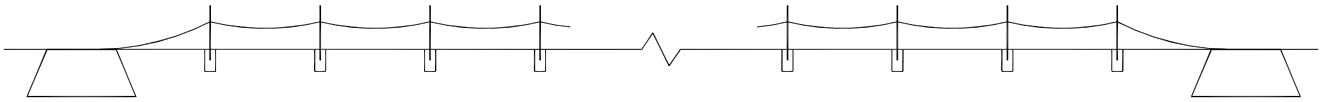
3. Posts, plastic dust covers

Assemble all posts with plastic joint and stand in footing. Drawing No. SRB-006



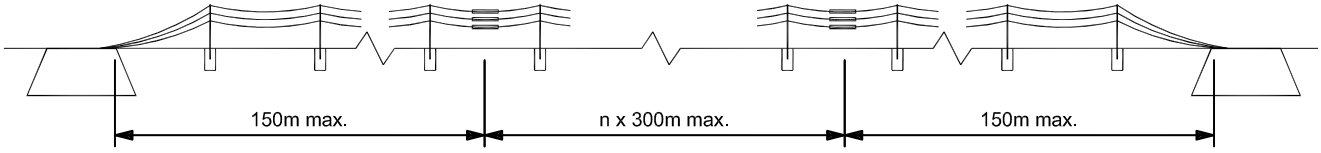
4. Installation of wire rope.

Run out the wire rope. Drawing No. SRB-006



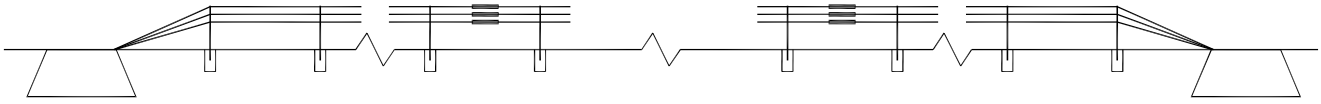
5. End fitting, swage fitting, rigging screw

Mount end fitting, swage fitting and rigging screw. Drawing No. SRB-007



6. Tensioning

Tension the ropes to the right force. Drawing No. SRB-007



Alternative to post footing. Radii. Drawing No. SRB-008.

Designed	Drawn	Approved - date	Tolerance requirements	Surface roughness	Proj.	Scale
HN	CM	HN 2001-11-12				

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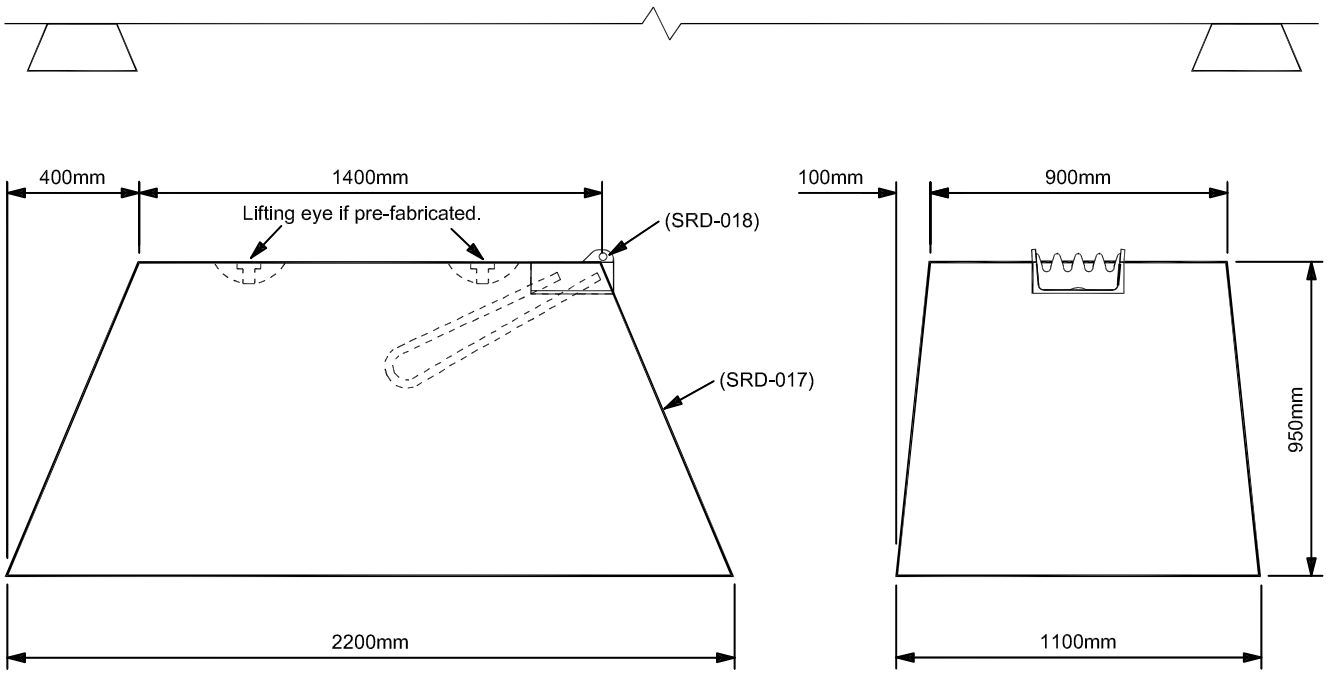
Name
SAFENCE WIRE ROPE SAFETY FENCE
INSTALLATION GUIDE. CONSTRUCTION DRAWING

Issue	Sheet	File
B		SRB-002AE

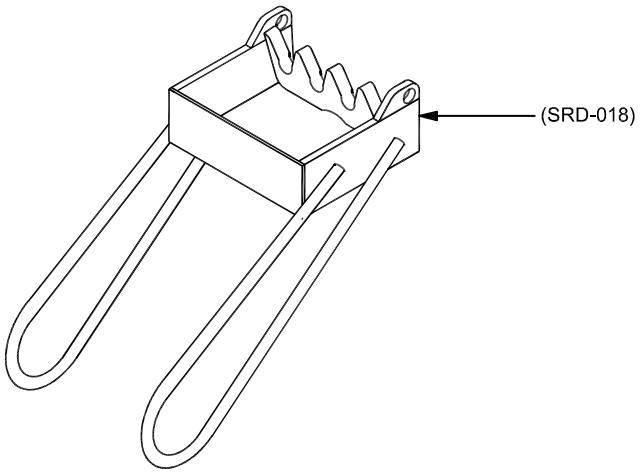
Drawing No. SRB-002

End anchors



-The concrete anchors can be cast or pre-fabricated.
-Ensure that the anchor is in line with the wire rope safety fence.
-The embedded wire anchor fitting is to be at ground level and follow the slope of the ground.
-Afterwards the hollow space around the anchor is filled with friction facing that is to be vibrated.

Embedded wire anchor fitting 3- or 4- ropes.



Designed	Drawn	Approved - date	Tolerance requirements	Surface roughness	Proj.	Scale
HN	CM	HN 2001-11-12				

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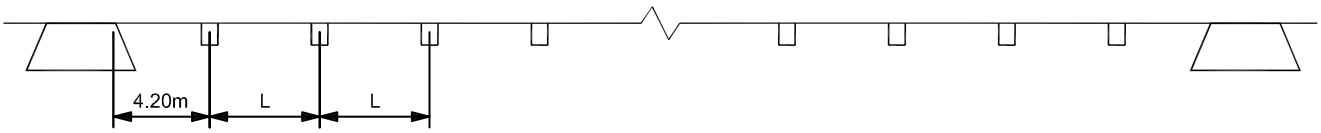
Name
SAFENCE WIRE ROPE SAFETY FENCE
END ANCHORS. CONSTRUCTION DRAWING

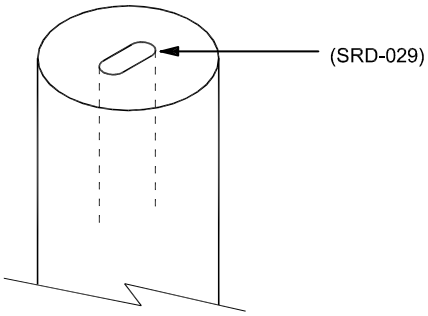
Issue	Sheet	File
B		SRB-003AE

Drawing No. SRB-003

Post footings



-The post footings are to be installed in a compacted material.
-The upper edges of the post footings are to be at ground level
or max. 4 cm. belov ground level.
-If the post footings are cast-on-site a plastic mould can be used.



-The wire rope safety barrier is to follow the contours and line of the road
without any visible horizontal or vertical deviations.

Distance between the posts (post footings)

Containment level N2 SAFENCE 3RI, 3RC, 4RI, 4RC		
Post distance	Working width	CEN class
1,0m	0,8m	W2
1,5m	0,9m	W3
2,0m	1,0m	W3
2,5m	1,3m	W4
3,0m	1,7m	W5

Containment level H1 SAFENCE 4RI, 4RC		
Post distance	Working width	CEN class
1,0m	1,0m	W3
1,5m	1,1m	W4
2,0m	1,3m	W4
2,5m	1,5m	W5
3,0m	1,8m	W6

Post distances 1,0 and 1,5 metres should only be used when passing
bridges or other obstacles.
Radius etc. Drawing No. SRB-008

Designed	Drawn	Approved - date	Tolerance requirements	Surface roughness	Proj.	Scale
HN	CM	HN 2001-11-12				

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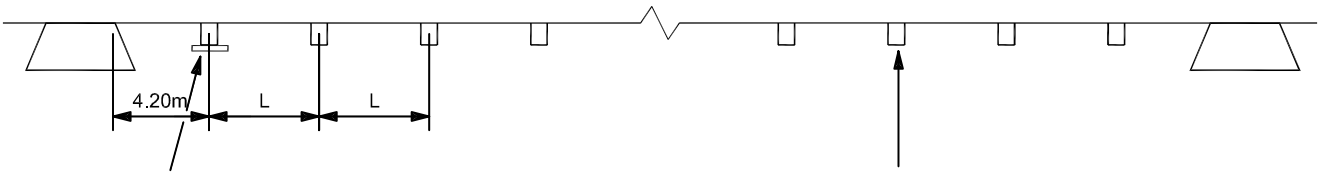
Material

Name
SAFENCE WIRE ROPE SAFETY FENCE
POST FOOTINGS. CONSTRUCTION DRAWING

Issue	Sheet	File
B		SRB-004AE

Drawing No. SRB-004

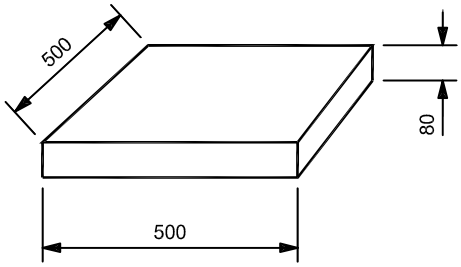
Post footings



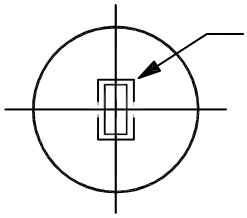
Concrete plate

Post footing

Only together with the first post and only if the ground conditions are bad (clay, sand etc.)

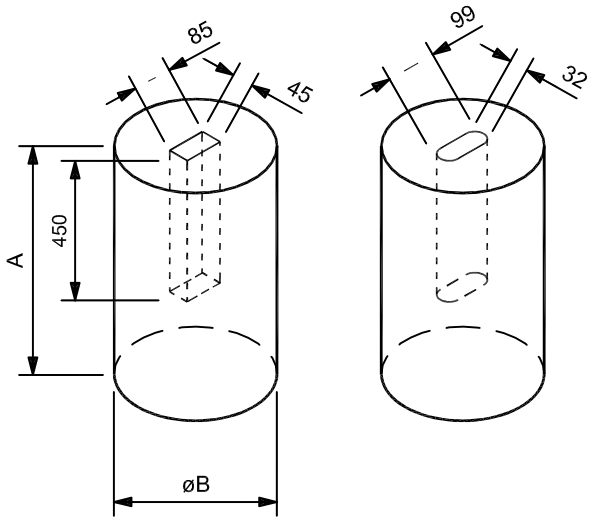


The hole tolerance for post footings cast on site.



I-post

C-post

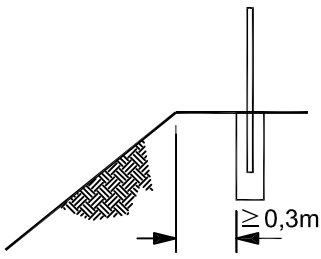


The external dimensions of the post footing are the same no matter which post is used.

Post footing sizes.

Type	A	øB	Manufacturing method		Concrete quality	Ground conditions	
			Pre-fab.	Cast-on-site		Angle	Weight of material
1	600	200	X		k40	≥ 42°	1,8 ton/m³
2	600	260	X	X	k40	≥ 38°	1,8 ton/m³
3	600	300	X	X	k40	≥ 32°	1,8 ton/m³

Slope steeper than 1:6



Footings as above.

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Material

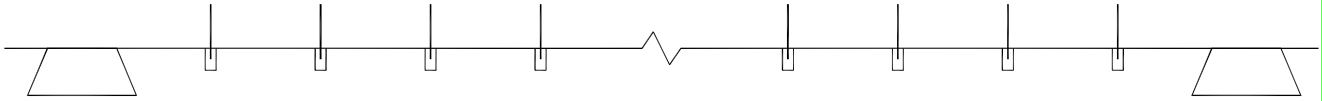
Name

SAFENCE WIRE ROPE SAFETY FENCE
POST FOOTINGS. CONSTRUCTION DRAWING

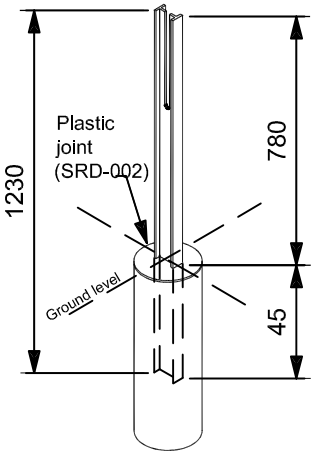
Issue	Sheet	File
B		SRB-005AE

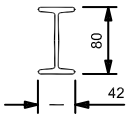
Drawing No. SRB-005

Post - plastic joint



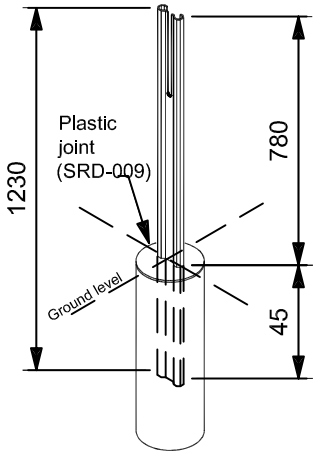
I-post (SRD-001)

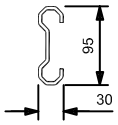




I-post

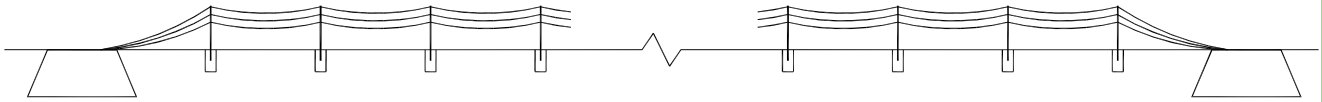
C-post (SRD-008)



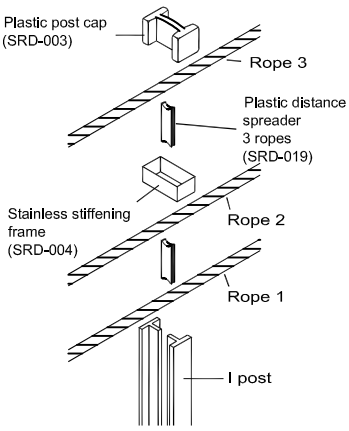


Safence C-post

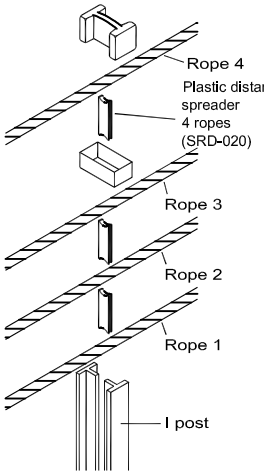
Wire ropes - installation



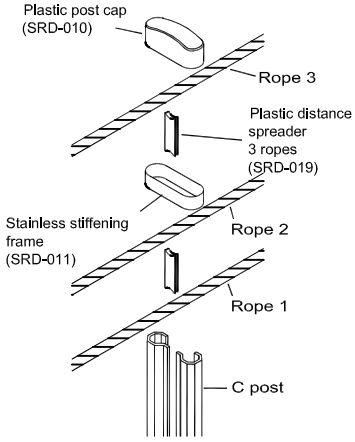
SAFENCE 3RI



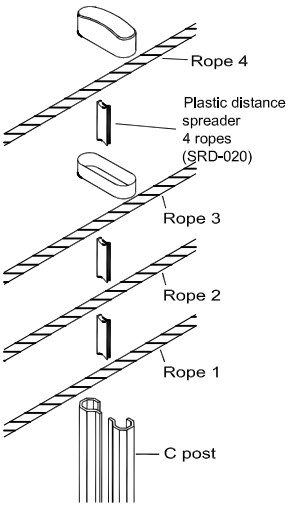
SAFENCE 4RI



SAFENCE 3RC



SAFENCE 4RC



For end posts steel spreaders are used. (SRD-022) and (SRD-021).

Designed	Drawn	Approved - date	Tolerance requirements	Surface roughness	Proj.	Scale
HN	CM	HN 2001-11-12				

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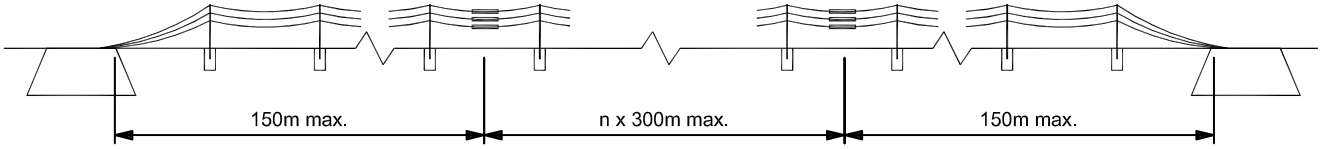
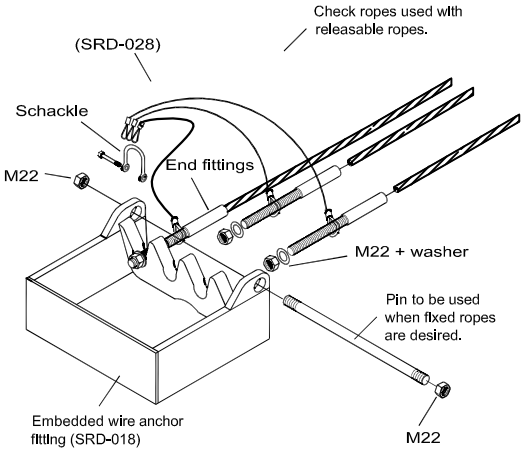
Name
SAFENCE WIRE ROPE SAFETY FENCE
POSTS, PLASTIC JOINT. CONSTRUCTION DRAWING

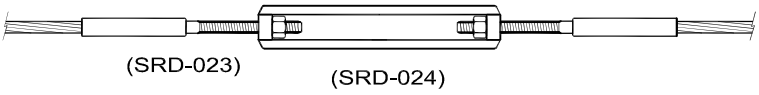
Issue	Sheet	File
B		SRB-006AE

Drawing No. SRB-006

End fittings - Rigging screws

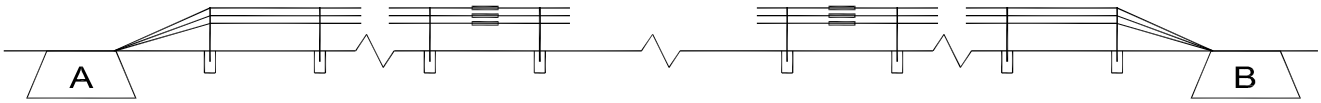






1. Swage end fittings onto all wire ropes with the swaging machine. Mount end fitting in end anchor A.
2. Tension the wire ropes by hand to the first rigging screw, max. 150m (tension panel)
3. Swage the fittings in the swaging machine and mount the rigging screw between the 2 posts.
4. Tension the wire ropes by hand to the next tension panel, max. 300 m. Mount the rigging screw between the 2 posts and so forth.
5. Finish by mounting the end fitting in anchor B.

Tensioning



1. Tension the wire ropes with the nuts at anchor A and B.
2. Tension the wire to the right tensioning force at each rigging screw (see table). Start on the middle of the stretch and work by turns towards anchor A and B.

Note: Should the length of the rigging screw not be sufficient to obtain the right tensioning force, tension to half of the length of the rigging screw. Then adjust the rigging screws so they all have the right tensioning force.

Tensioning force

Temperature C°	Kp
-40	3.200
-30	2.900
-20	2.600
-10	2.300
0	2.000
+10	1.700
+20	1.400
+30	1.100
+40	800

Designed	Drawn	Approved - date	Tolerance requirements	Surface roughness	Proj.	Scale
HN	CM	HN 2001-11-12				

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Material

Name
SAFENCE WIRE ROPE SAFETY FENCE
END FITTINGS, RIGGING SCREWS,
TENSIONING. CONSTRUCTION DRAWING

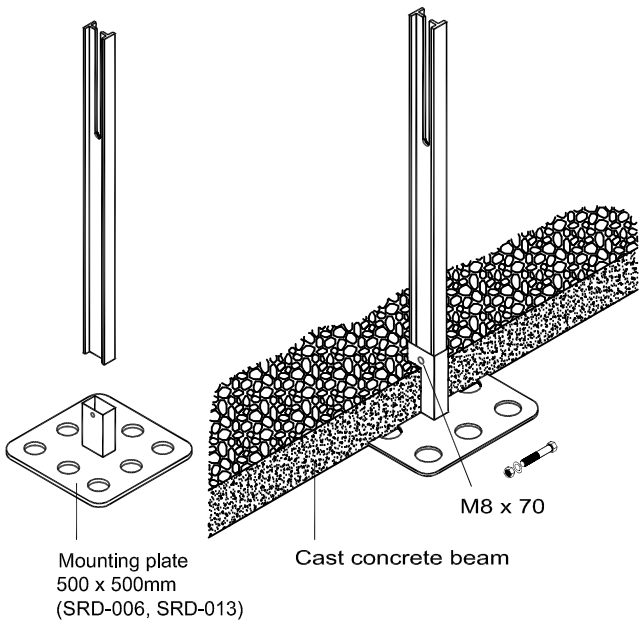
Issue	Sheet	File
B		SRB-007AE

Drawing No. SRB-007

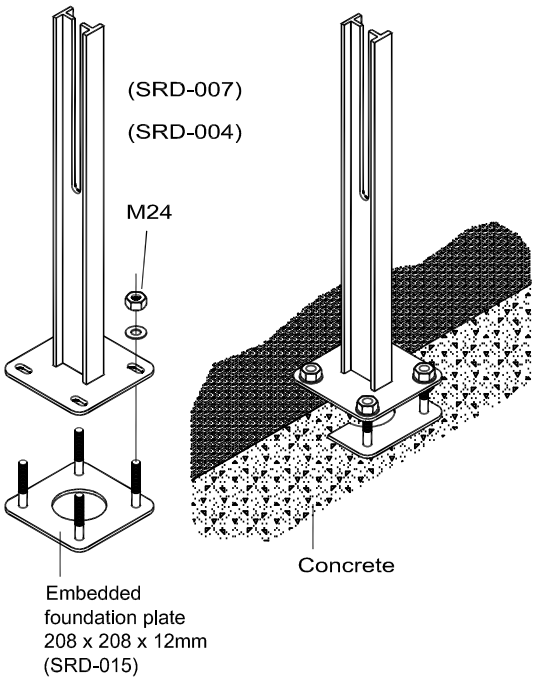
Alternatives to post footing

If there should be a problem in mounting the concrete post footing, two alternatives can be used.

C-post or I-post



C-post or I-post



Radii

Mounting in horizontal curves	
Radii	Post distance
≥105m	max. 1.5m
≥200m	max. 2.0m
≥250m	max. 2.5m
≥300m	max. 3.0m

Mounting in vertical curves

Mounting should not be done in a depression with a radius <1200m.

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HN	CM	HN 2001-11-12				

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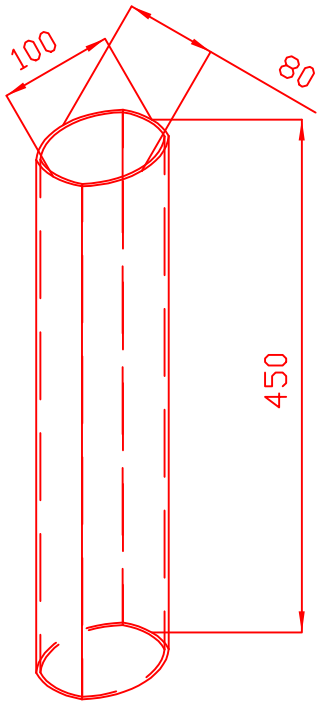
Name
SAFENCE WIRE ROPE SAFETY FENCE
ALTERNATIVES TO POST FOOTING, RADII

Issue	Sheet	File
B		SRB-008AE

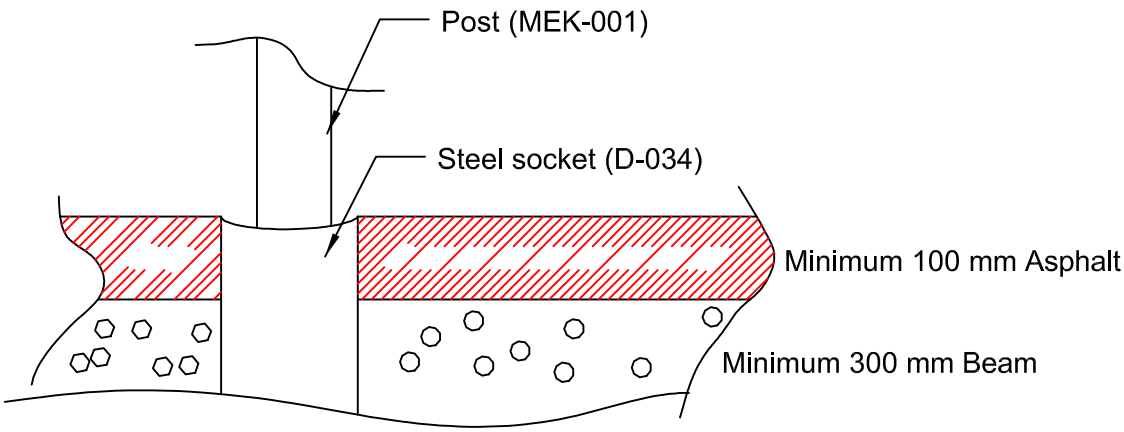
Drawing No. SRB-008

Alternative to post footing

When mounting in asphalt
an alternative can be used



Ground condition where steel socket can be used



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HN	CM	HN 2001-11-12				

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Material

Name
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ALTERNATIVE TO CONCRETE POST FOOTING

Issue	Sheet	File
B		SRB-009AE

Drawing No. SRB-009