

Bergo Modrail Plus Pedestrian Guardrail



Bergo Modrail Plus

Bergo Modrail Plus is a new pedestrian guardrail designed to ease the installation, maintenance, replacement and stocking difficulties of specifiers such as County and District Engineers.

The main features of Bergo Modrail Plus are:

It is modular and consists of only three main units, end posts, intermediate posts and horizontal members which are ready assembled for easy fixing.

All dimensions are metric.

Modrail Plus adjusts automatically to gradients of up to 1 in 6 and this adjustment is carried out in a sound engineering manner. The connectors are covered by British patents and are manufactured under licence.

Curves of 4m radius and upwards are dealt with by the use of straight horizontal members of varying lengths according to the radius required; no special units need to be made.

Small radii down to 1m may be dealt with by using stock specials.

Fixing is a very simple matter; the design uses no screws and only four stainless steel 'drive in' pins to assemble one 2m length.

Modrail Plus has an aesthetically pleasing appearance and has the approval of the Design Council.

The vertical rods are very strong and offer much greater resistance to malicious damage than many competitive designs.

By carrying a moderate supply of parts, almost any guardrail requirement can be put into operation quickly — damaged parts can be replaced at once from stock.

Matching gates can be made to order.

Modrail Plus is exceptionally easy to erect and shows quite a saving over most of its competitors due to the extreme simplicity of its design and assembly. The whole principle of Modrail Plus is to mass produce and deliver from stock, almost as soon as an order is received. This cannot be done with any other guardrail having the strength and appearance of Modrail Plus.

Basic elements

1

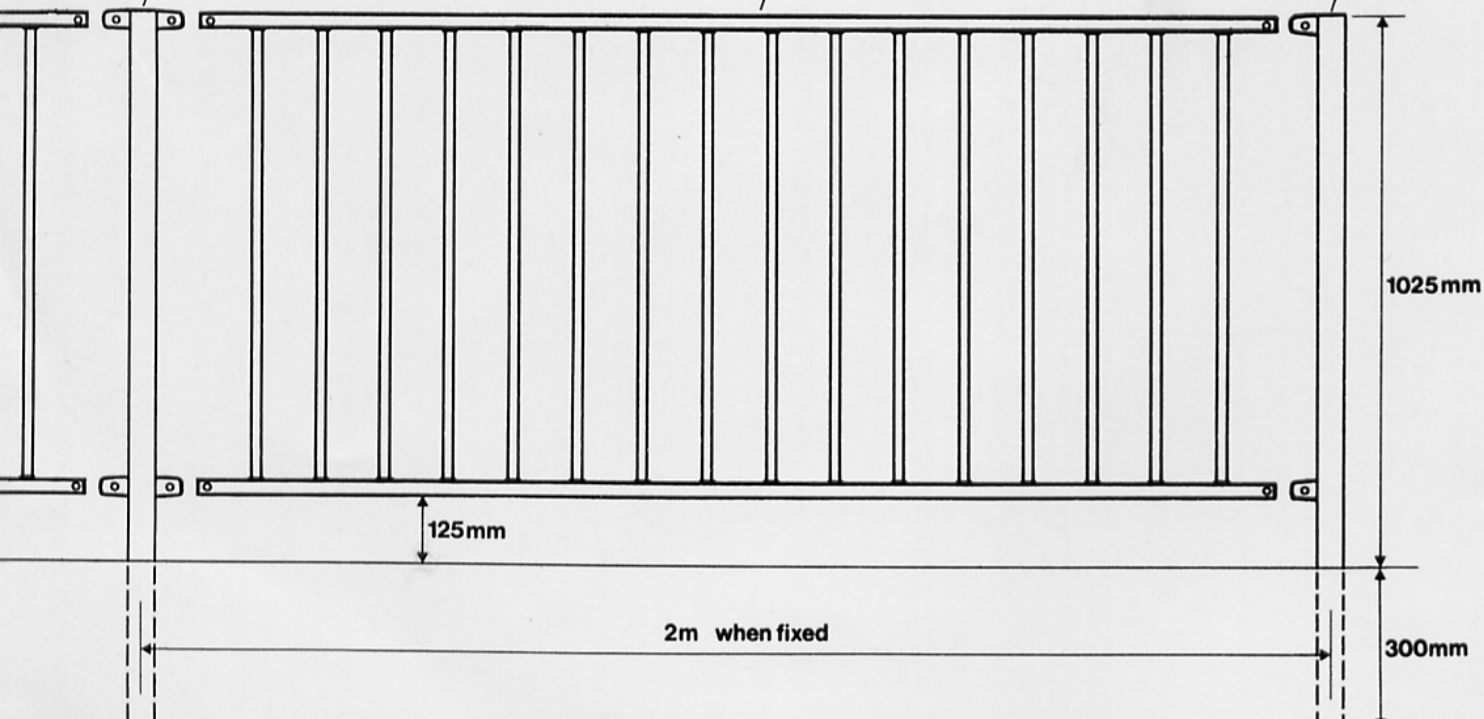
Intermediate posts (P.I.)

2

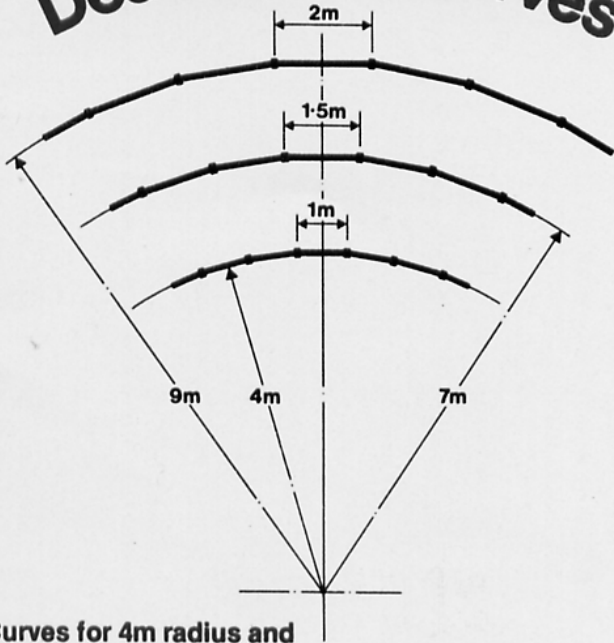
Horizontal member supplied assembled ready to fix H.P. 1-16.

3

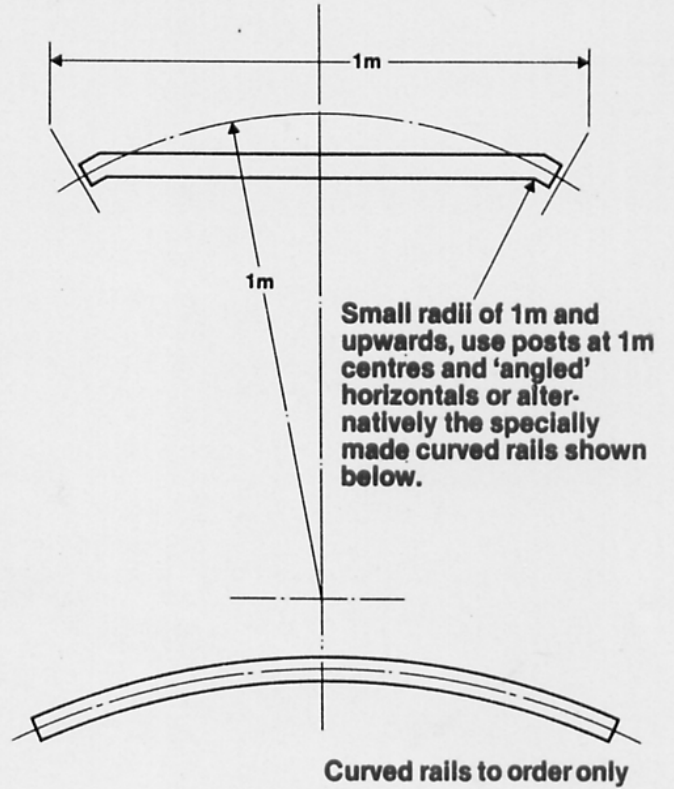
End posts, (P.E.)



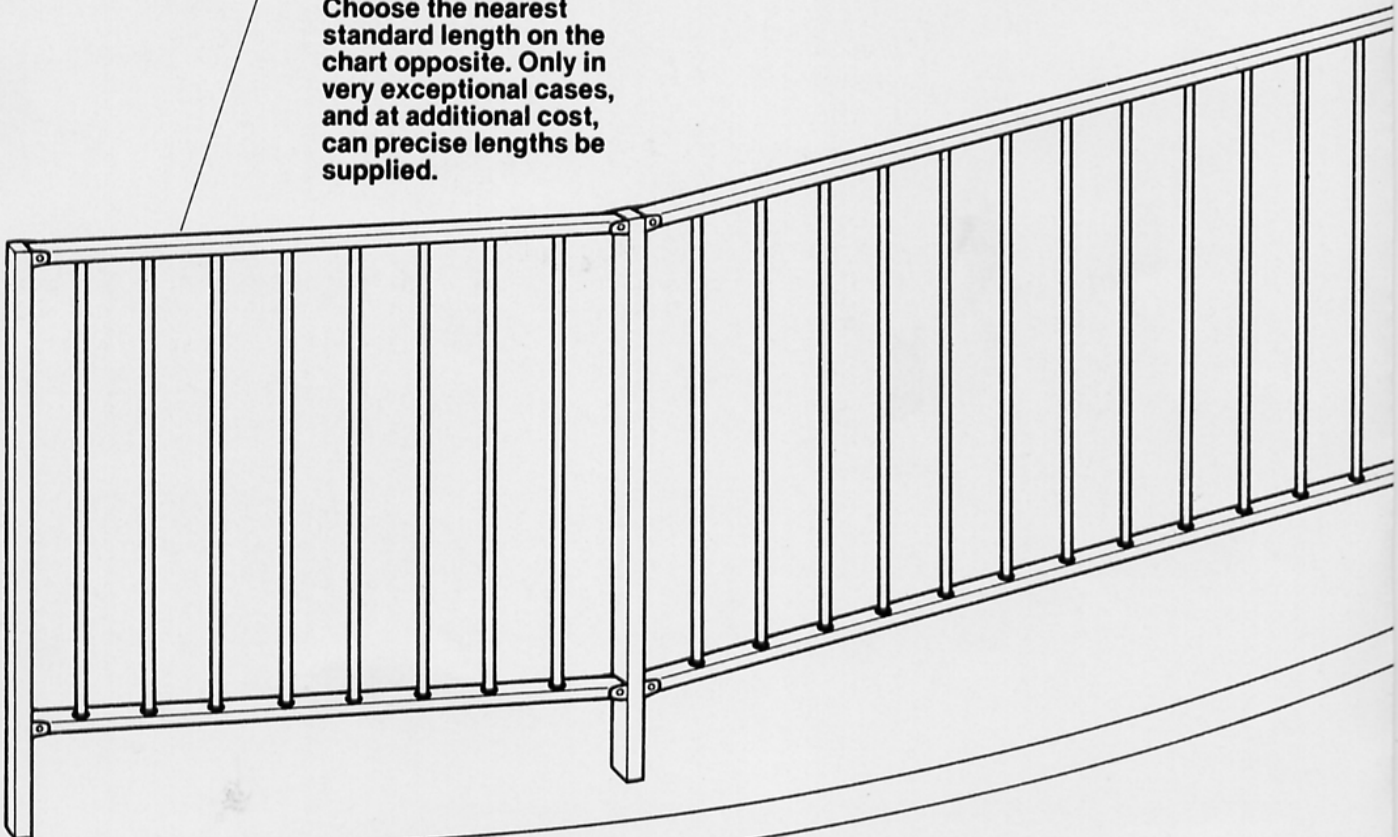
Dealing with curves



Curves for 4m radius and upwards are dealt with by placing posts at closer centres and using straight rails.



Making-up pieces in order to preserve the aesthetic appearance of the guardrail, 'making-up' pieces are made only in multiples of the standard rod spacing centres. Choose the nearest standard length on the chart opposite. Only in very exceptional cases, and at additional cost, can precise lengths be supplied.



Schedule giving overall lengths of horizontal members for varying numbers of vertical rods
Centres of uprights

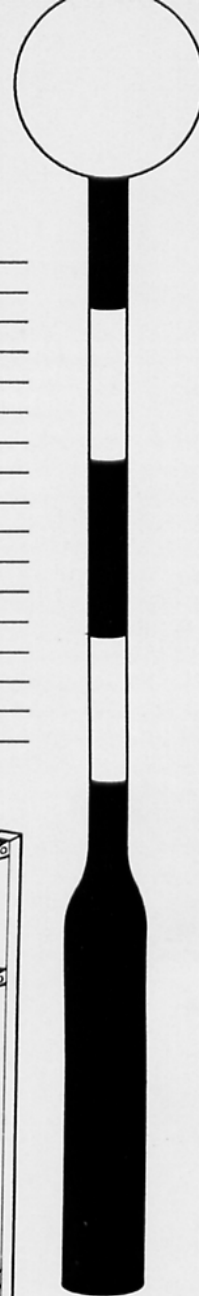
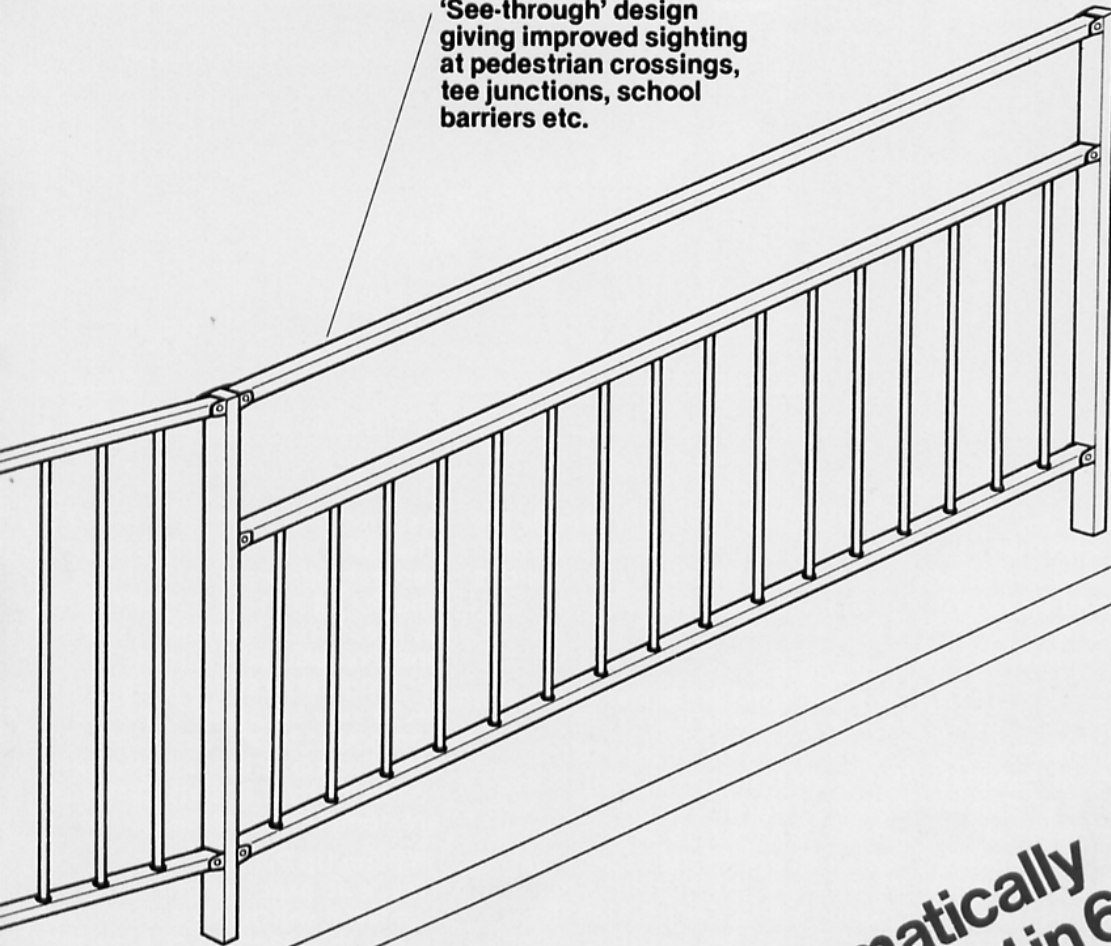
Metric Imperial

Number of rods

Overall length of horizontal members with rods at 4'-625" ctrs
Metric Imperial

	Metric	Imperial	Number of rods	Metric	Imperial
Standard Full Length	2m	6' 6 3/4"	16	1.970m	6' 5 1/2"
Special	1.8825m	6' 2 1/4"	15	1.8525m	6' 0 7/8"
Special	1.765m	5' 9 1/2"	14	1.735m	5' 8 1/4"
Special	1.6475m	5' 4 7/8"	13	1.6175m	5' 3 5/8"
Standard 3/4 length	1.530m	5' 0 1/4"	12	1.500m	4' 11"
Special	1.4125m	4' 7 3/8"	11	1.3825m	4' 6 3/8"
Special	1.295m	4' 3"	10	1.265m	4' 1 3/4"
Special	1.1775m	3' 10 3/8"	9	1.1475m	3' 9 1/8"
Standard 1/2 length	1.060m	3' 5 3/4"	8	1.030m	3' 4 1/2"
Special	.9425m	3' 1 1/8"	7	.9125m	2' 11 1/8"
Special	.825m	2' 8 1/2"	6	.795m	2' 7 1/4"
Special	.7075m	2' 3 3/8"	5	.6775m	2' 2 5/8"
Special	.590m	1' 11 1/4"	4	.560m	1' 10"
Special	.4725m	1' 6 3/8"	3	.4425m	1' 5 3/8"
Special	.355m	1' 2"	2	.325m	1' 0 3/4"
Special	.2375m	9' 0 3/8"	1	.2075m	8' 0 1/8"

'See-through' design giving improved sighting at pedestrian crossings, tee junctions, school barriers etc.

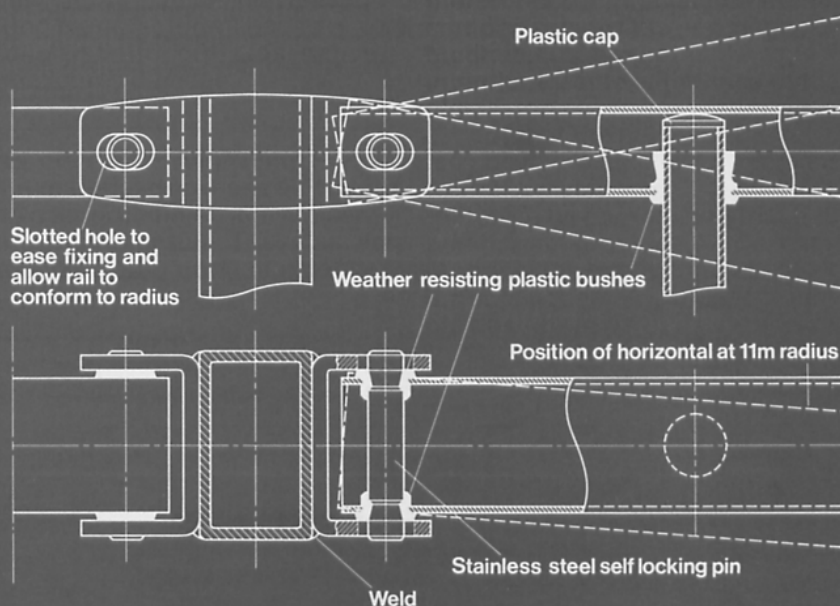


Adjusts automatically to gradients up to 1 in 6

25mm

Construction

These diagrams show the construction of the rail, and in particular, the junction between horizontal and vertical members, indicating the limits of rise and fall to deal with gradients. The 'drive in' stainless steel fixing pin is retained firmly in position by the specially shaped weatherproof plastic bushes, secured at each end of every horizontal member. The flange of these bushes also acts as a buffer between the horizontal member and the jaws of the upright member, particularly when the rail is used on a radius. Each rod or secondary upright is made of high quality steel and is fitted at each end with a closure cap having a curved top, allowing the rod to adjust itself automatically on inclines. The cap also effectively seals the tube from weather and prevents rusting from the inside.



Specification

The specification of Modrail is now modified to comply with the requirements of BS3049 and offers a guard rail of improved strength and appearance. This new rail is now available at no increase in cost over the old design.

Posts

Made from 63.5mm x 38mm (approx. $2\frac{1}{2}$ " x $1\frac{1}{2}$ ") x 4mm material thickness r.h.s. instead of 50mm x 25mm (2 " x 1 ") x 3mm material thickness as previously supplied, thus providing an upright member offering considerably greater resistance to impact. Welded cap at the top.

Connecting System

Two connector pieces are welded to end posts and four to intermediate posts. These are flush with the post. Made from 4.76mm ($\frac{3}{8}$ ") section and punched to receive the stainless steel fixing pins.

End Posts

End posts have connectors welded on at the top and at 125mm (5") from ground level, to receive the rails of the horizontal members on one side only.

Intermediate posts are exactly the same except that connectors are used to receive rails on both sides of the post. Galvanised after fabrication.

Horizontals

Top and bottom rails are made from 45mm x 30mm (approx. $1\frac{3}{4}$ " x $1\frac{1}{4}$ ") x 2.5mm material thickness r.h.s. instead of 48mm x 24mm ($1\frac{7}{8}$ " x $1\frac{5}{8}$ ") x 2mm on the old design. This is a much stronger rail. Pierced with holes on one of the broad faces to receive weather resisting black plastic bushes into which the vertical rods are inserted under pressure. Four small holes are drilled in the sides to take stainless steel pins. Galvanised after punching. The members are supplied already assembled ready for fixing.

Rods

Rods are made from 19mm ($\frac{3}{4}$ ") x 2mm material thickness e.r.w. tube with a smooth finish, galvanised during manufacture. These are very strong and offer great resistance to malicious damage.

Assembly of Horizontal Members

The rails, plastic bushes and vertical rods are assembled on a special jig and are joined together by pressure. This results in a neat and exceptionally strong rectangular assembly, which is in fact a very strong but flexible compound beam, capable of standing up to the rigorous tests called for by B.S. 3049. All joints are completely weatherproof.

'Making Up Pieces'

Where an exact length of rail is needed it will be necessary to use one of the standard making up pieces detailed overleaf.

Finish

Hot dip galvanising — other finishes may be supplied to special order. Generally the overall dimensions remain unchanged except that the height of the top rail above ground level is increased to 1025mm, (approx. $3' 4\frac{3}{8}$ "). It will therefore be appreciated that the components for the new design, Modrail Plus, are not interchangeable with those of the old design.



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**Bergo Modrail Plus installed for City
& District of St Albans.**