

All signs, circles, triangles and rectangles (on reverse) meet the following Criteria where applicable

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Point Loads Class PL3
Dynamic Snow Loads Class DSL0

Temporary Deflection

Bending Class TDB4
Torsion Class N/A

Support - Not Passively Safe

Bending Class TDB4
Torsion Class TDT4

Support - Passively Safe

Bending Class TDB5
Torsion Class TDT4

Piercing of Signface Class P3

Edging of Signplates Class E2

Corrosion Protection Class SP4

Circular & Triangular Signs

Size	3mm and 2.5mm Thick Aluminum	3mm Thick Aluminium Composite (Dibond Traffic, BCP Traffic and Cgate Traffic)	1.25mm Thick Colorcoat Steel
Circular	Minimum Channel size & spacing		
300mm Diameter	2 No Small (646) @ 217mm centres	2 No Small (646) @ 217mm centres	2 No Small (646) @ 217mm centres
450mm Diameter	2 No Small (646) @ 341mm centres	2 No Small (646) @ 341mm centres	2 No Small (646) @ 341mm centres
600mm Diameter	2 No Small (646) @ 500mm centres	2 No Small (646) @ 500mm centres	2 No Small (646) @ 500mm centres
750mm Diameter	2 No Small (646) @ 498mm centres	2 No Small (646) @ 498mm centres	2 No Small (646) @ 498mm centres
900mm Diameter	3 No Medium (645) @ 265mm centres	3 No Medium (645) @ 265mm centres	3 No Medium (645) @ 265mm centres
1200mm Diameter	3 No Medium (645) @ 405mm centres	3 No Medium (645) @ 405mm centres	3 No Medium (645) @ 405mm centres
Triangular	Minimum Channel size & spacing		
600mm High	2 No Small (646) @ 437mm centres	2 No Small (646) @ 437mm centres	2 No Small (646) @ 437mm centres
750mm High	2 No Medium (645) @ 450mm centres	2 No Medium (645) @ 450mm centres	2 No Medium (645) @ 450mm centres
900mm High	3 No Medium (645) @ 415mm centres	3 No Medium (645) @ 415mm centres	3 No Medium (645) @ 415mm centres
1200mm high	3 No Medium (645) @ 445mm centres	3 No Medium (645) @ 445mm centres	3 No Medium (645) @ 445mm centres
	All the above Aluminium signs pass windloading at a Minimum WL6 loading . (All signs pass at WL9 EXCEPT 1200mm high Triangle which only meets WL6)	All the above Composite Aluminium signs pass windloading at a Minimum WL6 loading . (All signs pass at WL9 EXCEPT 1200mm high Triangles which only meet WL6)	All the above 1.25mm Colorcoat Steel signs pass windloading at a Minimum WL6 loading . (All signs pass at WL9 EXCEPT 600mm diameter Circles & 600mm high Triangles meet WL 8 & 1200mm high Triangles which only meet WL6)

NOTES: All the above signs are to have the various channel sections Bolhoff rivetted in position.
All the Wind Loading calculations assume a mounting height of 2100mm.
All calculations carried out using Buchanan Computing SignLoad Professional (BS EN12899-1:2007)
All channel sections are to be as supplied by Kloeckner Metals see enclosed documentation for full details.

Sign Assembly: Signs supplied with channel stiffening fitted to the reverse should be affixed to the required structural supports, where possible using industry wide Stainless Steel or Aluminium clips /clamps using the necessary nuts, bolts and washers. If the use of standard clips isn't possible, the uses of Stainless Steel band or individual screwbands may be used, but it is the responsibility of the purchaser to determine the best fixing method to suit the purpose required.

Cleaning: Signs that require cleaning should be flushed with water, then washed with a dilute solution of mild, non-abrasive detergent and soft bristle brush or sponge. Avoid pressure that may damage the sign face. Flush with water following washing.

Do not use solvents to clean signs



Rectangular Sign Manufacturing Criteria - 3mm and 2.5mm Aluminium Signs	All signs manufactured from Aluminium complete with aluminium channel stiffening (as supplied by Kloeckner Metals) Bolhoff rivetted to the reverse All the following signs are to have the various channel sections Bolhoff rivetted in position. All the Wind Loading calculations assume a mounting height of 2100mm. All calculations carried out using Buchanan Computing SignLoad Professional (BS EN12899:2007) All channel sections are to be as supplied by Kloeckner Metals .
Small Channel (Kloeckner ref 646) (Signs manufactured as below pass a Minimum WL 7)	Used for all signs upto 900mm wide with a MAXIMUM channel spacing of 680mm Maximum edge distance for TOP & BTM channels to be inset = 35mm (Any plates over 750mm upto 1200mm in height would need 3 channels minimum) Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign
Medium Channel (Kloeckner ref 645 & 104) (Signs manufactured as below pass a Minimum WL 8)	Used on all signs between 901mm wide upto a Maximum width of 3000mm Signs manufactured from a Single piece of Plate (Max. 1500mm high) For signs between 901 & 3000mm wide a minimum of 2 No Channels to be used with a maximum of 680mm between centres Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign, signs upto 2500mm wide mounted on a minimum of 2 No posts and signs from 2501 to 3000mm mounted on 3 No posts
Medium Channel (Kloeckner ref 645 & 104) (Signs manufactured as below pass a Minimum WL 8)	Signs manufactured as below pass a Minimum WL 8) Signs manufactured in Modules (multiple horizontal sections) For signs between 901 & 3000mm wide manufactured in horizontal modules with a minimum of 2 No channels to be used with a maximum spacing of 565mm and max edge of dist of 35mm (Edge dist applicable to top / btm modules all central modules to have interlock channel fitted flush to the edges) 600mm High Modules - 2 No Channels 750mm High Modules - 3 No Channels 900mm High modules - 3 No Channels 1200mm High modules - 3 No Channels Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign, signs upto 2500mm wide mounted on a minimum of 2 No posts and signs from 2501 to 3000mm mounted on 3 No posts
Large Channel (Kloeckner ref 105) (Signs manufactured as below pass a Minimum WL 9)	Used on all signs over 3001mm wide and manufactured in modules with a minimum of 2 No channels used with a maximum spacing of 565mm and a maximum edge distance of 35mm (Edge dist applicable to top / btm modules all central modules to have interlock channel fitted flush to the edges) 600mm High Modules - 2 No Channels 750mm High Modules - 3 No Channels 900mm High modules - 3 No Channels Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign, signs upto 5000mm wide mounted on a minimum of 3 No posts and signs from 5001 to 7000mm mounted on a minimum of 4 No posts

Rectangular Sign Manufacturing Criteria - 3mm Composite Aluminium Signs (Dibond Traffic, BCP Traffic and Coate Traffic)	All signs manufactured from 3mm thick Composite Aluminium complete with aluminium channel stiffening (as supplied by Kloeckner Metals) Bolhoff rivetted to the reverse All the following signs are to have the various channel sections Bolhoff rivetted in position. All the Wind Loading calculations assume a mounting height of 2100mm. All calculations carried out using Buchanan Computing SignLoad Professional (BS EN12899:2007) All channel sections are to be as supplied by Kloeckner Metals
Small Channel (Kloeckner ref 646) (Signs manufactured as below pass a Minimum WL 7)	Used for all signs upto 900mm wide with a MAXIMUM channel spacing of 680mm Maximum edge distance for TOP & BTM channels to be inset = 35mm (Any plates over 750mm upto 1200mm in height would need 3 channels minimum) Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign
Medium Channel (Kloeckner ref 645 & 104) (Signs manufactured as below pass a Minimum WL 8)	Used on all signs between 901mm wide upto a Maximum width of 3000mm Signs manufactured from a Single piece of Plate (Max. 1500mm high) For signs between 901 & 3000mm wide a minimum of 2 No Channels to be used with a maximum of 680mm between centres Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign, signs upto 2500mm wide mounted on a minimum of 2 No posts and signs from 2501 to 3000mm mounted on 3 No posts
Medium Channel (Kloeckner ref 645 & 104) (Signs manufactured as below pass a Minimum WL 8)	Signs manufactured in Modules (multiple horizontal sections) For signs between 901 & 3000mm wide manufactured in horizontal modules with a minimum of 2 No channels to be used with a maximum spacing of 565mm and max edge of dist of 35mm (Edge dist applicable to top / btm modules all central modules to have interlock channel fitted flush to the edges) 600mm High Modules - 2 No Channels 750mm High Modules - 3 No Channels 900mm High modules - 3 No Channels 1200mm High modules - 3 No Channels Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign, signs upto 2500mm wide mounted on a minimum of 2 No posts and signs from 2501 to 3000mm mounted on 3 No posts
Large Channel (Kloeckner ref 105) (Signs manufactured as below pass a Minimum WL 8)	Used on all signs over 3001mm wide and manufactured in modules with a minimum of 2 No channels used with a maximum spacing of 565mm and a maximum edge distance of 35mm (Edge dist applicable to top / btm modules all central modules to have interlock channel fitted flush to the edges) 600mm High Modules - 2 No Channels 750mm High Modules - 3 No Channels 900mm High modules - 3 No Channels Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign, signs upto 5000mm wide mounted on a minimum of 3 No posts and signs from 5001 to 7000mm mounted on a minimum of 4 No posts

Rectangular Sign Manufacturing Criteria - 1.25mm Colorcoat Steel Signs (Corus Colorcoat)	All signs manufactured from 1.25mm thick Colorcoat Steel complete with aluminium channel stiffening (as supplied by Kloeckner Metals) Bolhoff rivetted to the reverse All the following signs are to have the various channel sections Bolhoff rivetted in position. All the Wind Loading calculations assume a mounting height of 2100mm. All calculations carried out using Buchanan Computing SignLoad Professional (BS EN12899:2007) All channel sections are to be as supplied by Kloeckner Metals
Small Channel (Kloeckner ref 646) (Signs manufactured as below pass a Minimum WL 5)	Used for all signs upto 900mm wide with a MAXIMUM channel spacing of 565mm Maximum edge distance for TOP & BTM channels to be inset = 35mm (Any plates over 750mm upto 1200mm in height would need 3 channels minimum) Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign
Medium Channel (Kloeckner ref 645 & 104) (Signs manufactured as below pass a Minimum WL 6)	Used on all signs between 901mm wide upto a Maximum width of 3000mm Signs manufactured from a Single piece of Plate (Max. 1200mm high) For signs between 901 & 3000mm wide a minimum of 2 No Channels to be used with a maximum of 565mm between centres Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign, signs upto 2500mm wide mounted on a minimum of 2 No posts and signs from 2501 to 3000mm mounted on 3 No posts
Medium Channel (Kloeckner ref 645 & 104) (Signs manufactured as below pass a Minimum WL 5)	Signs manufactured in Modules (multiple horizontal sections) For signs between 901 & 3000mm wide manufactured in horizontal modules with a minimum of 2 No channels to be used with a maximum spacing of 565mm and max edge of dist of 35mm (Edge dist applicable to top / btm modules all central modules to have interlock channel fitted flush to the edges) 600mm High Modules - 2 No Channels 750mm High Modules - 3 No Channels 900mm High modules - 3 No Channels 1200mm High modules - 3 No Channels Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign, signs upto 2500mm wide mounted on a minimum of 2 No posts and signs from 2501 to 3000mm mounted on 3 No posts
Large Channel (Kloeckner ref 105) (Signs manufactured as below pass a Minimum WL 5)	Used on all signs over 3001mm wide and manufactured in modules with a minimum of 2 No channels used with a maximum spacing of 565mm and a maximum edge distance of 35mm (Edge dist applicable to top / btm modules all central modules to have interlock channel fitted flush to the edges) 600mm High Modules - 2 No Channels 750mm High Modules - 3 No Channels 900mm High modules - 3 No Channels Assumptions: All calculations based upon signs being mounted at 2100mm to the underside of the sign, signs upto 5000mm wide mounted on a minimum of 3 No posts and signs from 5001 to 7000mm mounted on a minimum of 4 No posts