



Maxilite Steel Fire Protection Technical Manual



The Trafalgar fire stopping range includes:

Sealant | Pillows | Mortar | FR Batts
FR Collars | FR Access Panels | Pipe Wraps
FyreWrap Duct Wrap | FR Downlight Covers
Intumescent Dampers | Fire Door Hardware
Fire Rated Board and Systems | Cable Coating
FYREBOX for multiple and mixed services

MAXILITE

Steel Protection

Product Overview

Maxilite is a lightweight, high performance fire rated board. It is a calcium silicate based product, bonded together with non-organic binders, that meets all requirements for asbestos, volatile organic compounds (VOC's) and ozone depleting potential (ODP) Compounds. Maxilite boards are available in a number of discrete thicknesses for use in the fire protection of structural steel. Maxilite has been tested to various local and international test standards and is suitable for a large range of steel sizes and types.

How does it work?

Maxilite is an extremely effective insulating refractory board. The Maxilite board is stable under high temperature stress and remains strong and crack free, even when exposed to fully developed fires. The Maxilite board provides a thermal insulation as well as a heat sinking capacity for steel.



Key Features

- Lightweight
- Low thermal conductivity
- Up to 4 hours fire-rated protection
- Fully Tested and Approved for the Australian market
- Various methods of installation
- No mess

To maintain market leadership, Trafalgar stay up to date with the latest technologies and trends in passive fire protection and contemporary construction techniques. **We are 70 years strong and still innovating!**

MAXILITE

Steel Protection

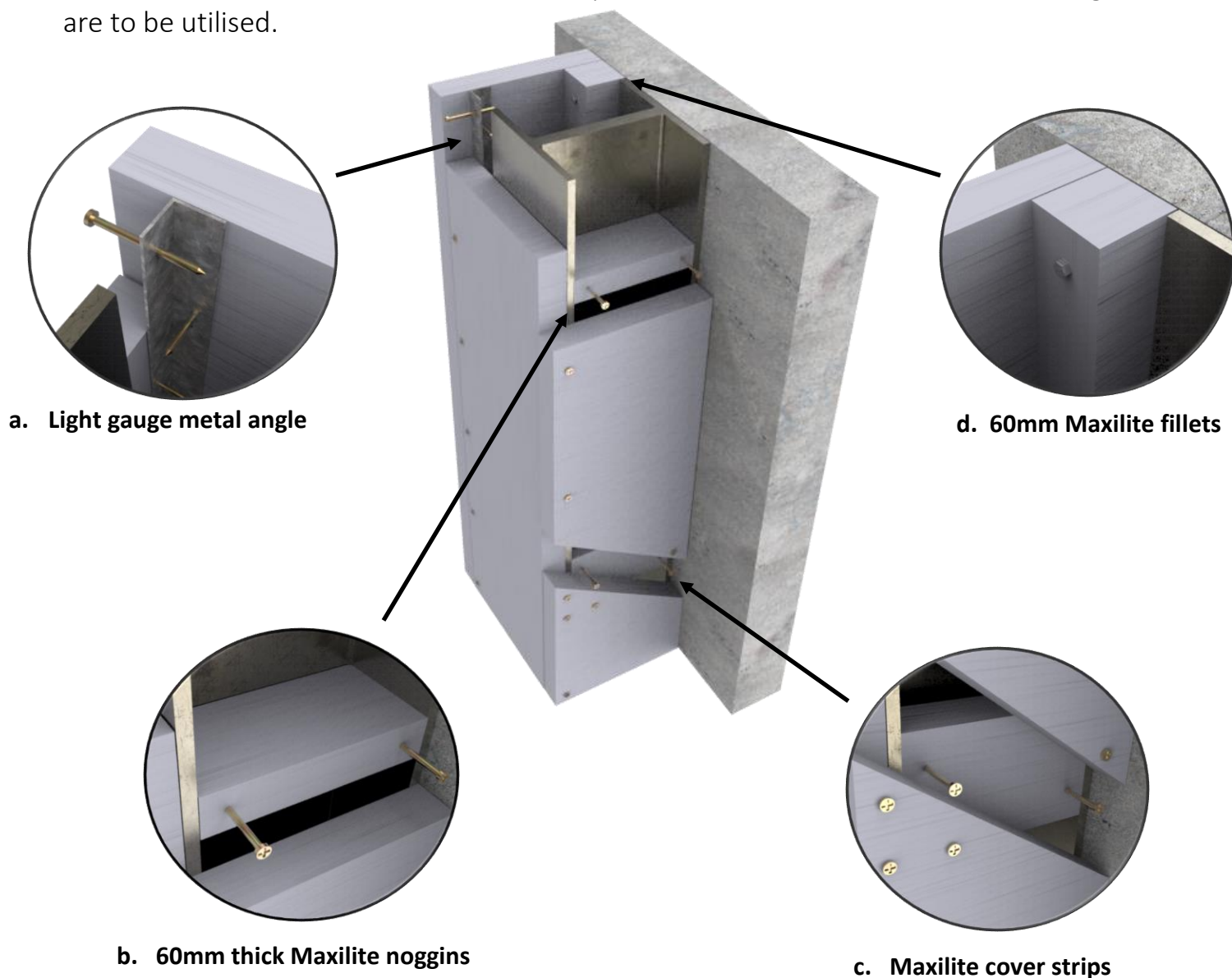
Installation Guidelines

Section A – Columns

A.1 Encasement Construction

The following section compiles the approved design details for Maxilite steel column encasements. For steel column encasement solutions not found within this section, or technical questions relating to these details please contact Trafalgar.

Please refer to section A.2 “Encasement Layouts” to see where each of the following details are to be utilised.

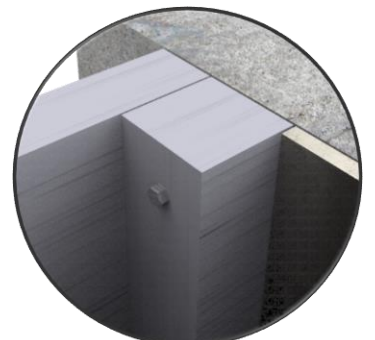
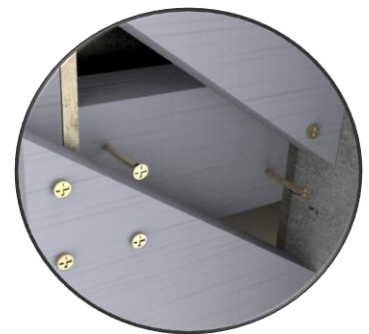
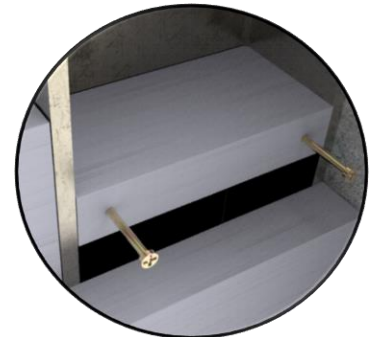
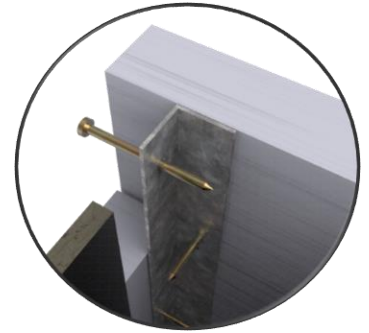


Section A – Columns

A.1 Encasement Construction

Key:

- a. Light gauge metal angle
 - 50x50x0.9mm Steel angle located within the encasement construction, as per the encasement layouts in section A.2
- b. 60mm thick Maxilite noggins
 - Noggins are cut to fit tightly within the web cavity and friction fit into position. They are to be fixed 100mm from each end of the board and at maximum 650mm centres along the length of the board
- c. Maxilite cover strips
 - 100mm wide Maxilite cover strips are to be applied to all joints between adjacent Maxilite boards, located either outside or within the column encasement
 - Alternatively, a backing strip noggin can be utilised, eliminating the need for both noggins and cover strips within the web cavity. Simply construct Noggins from 100mm wide by 60mm thick Maxilite and friction fit between the flanges of the steel column. Position noggins to sit centrally behind adjacent board joints and at maximum 760mm centres along the length of the board.
- d. 60mm Maxilite fillets
 - 60mm wide Maxilite fillets located within the encasement construction, as per the encasement layouts in section A.2



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Section A – Columns

A.2 Encasement Layouts

Installation Guidelines

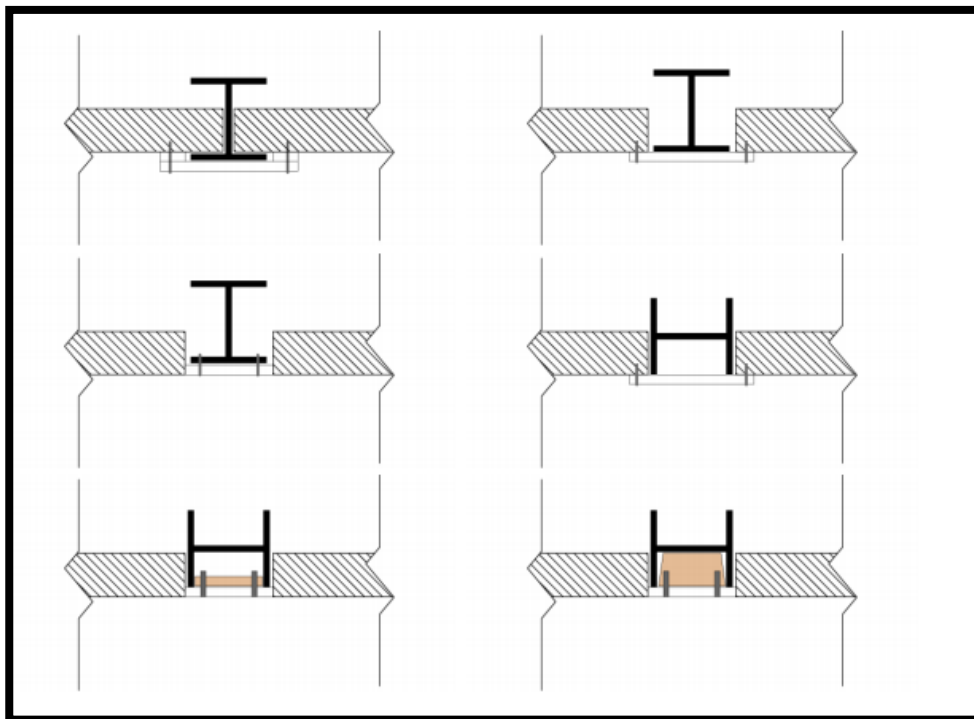


Figure 1 - One Sided Column Encasements

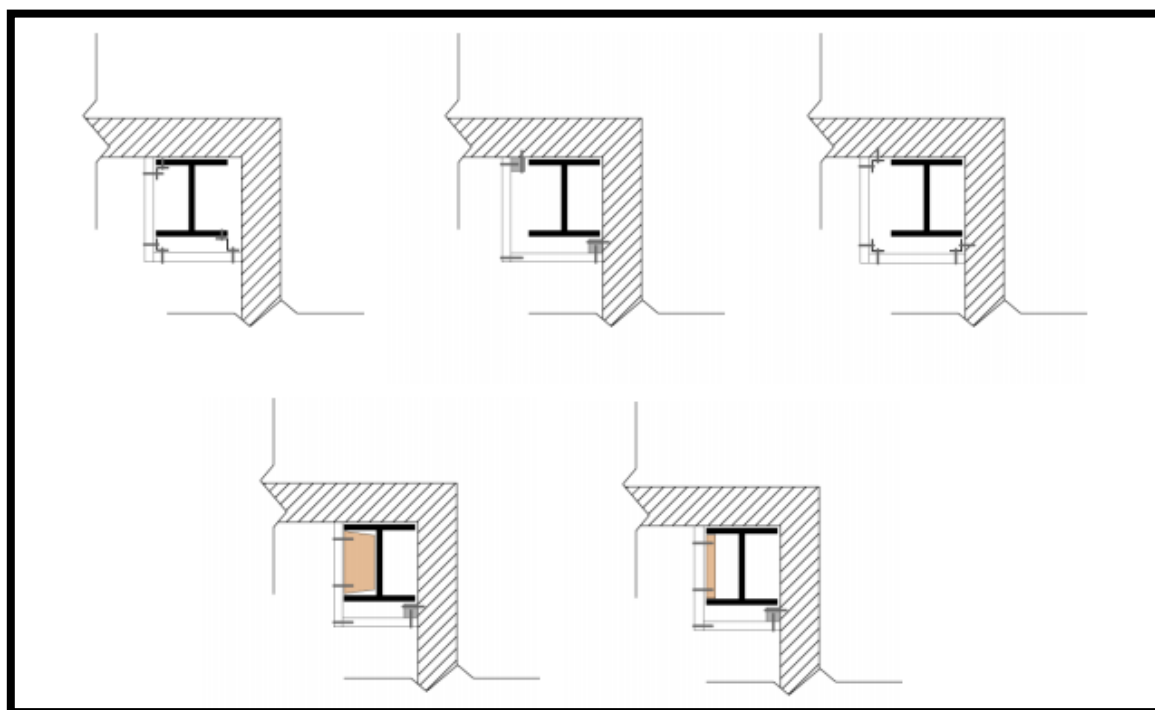


Figure 2 - Two Sided Column Encasements

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Section A – Columns

A.2 Encasement Layouts

Installation Guidelines



Figure 3 - Three Sided Column Encasements

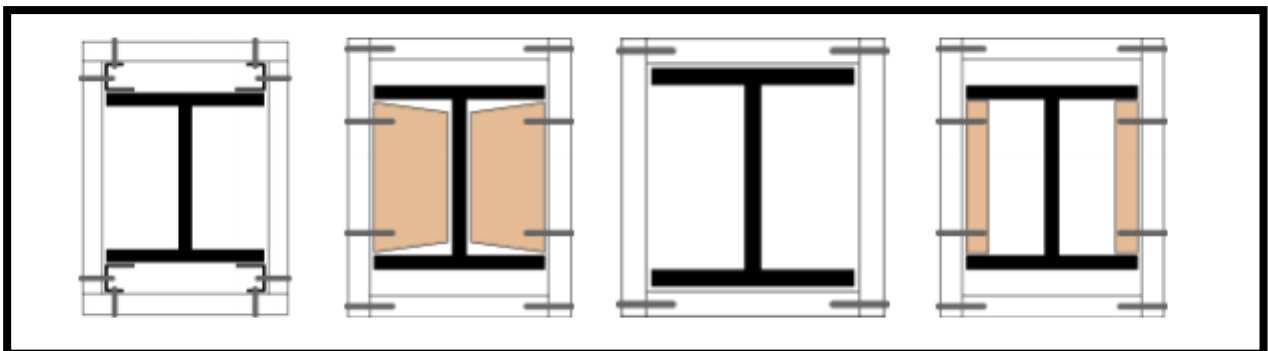


Figure 4 - Four Sided Column Encasements

Section A – Columns

A.3 Installation Procedure

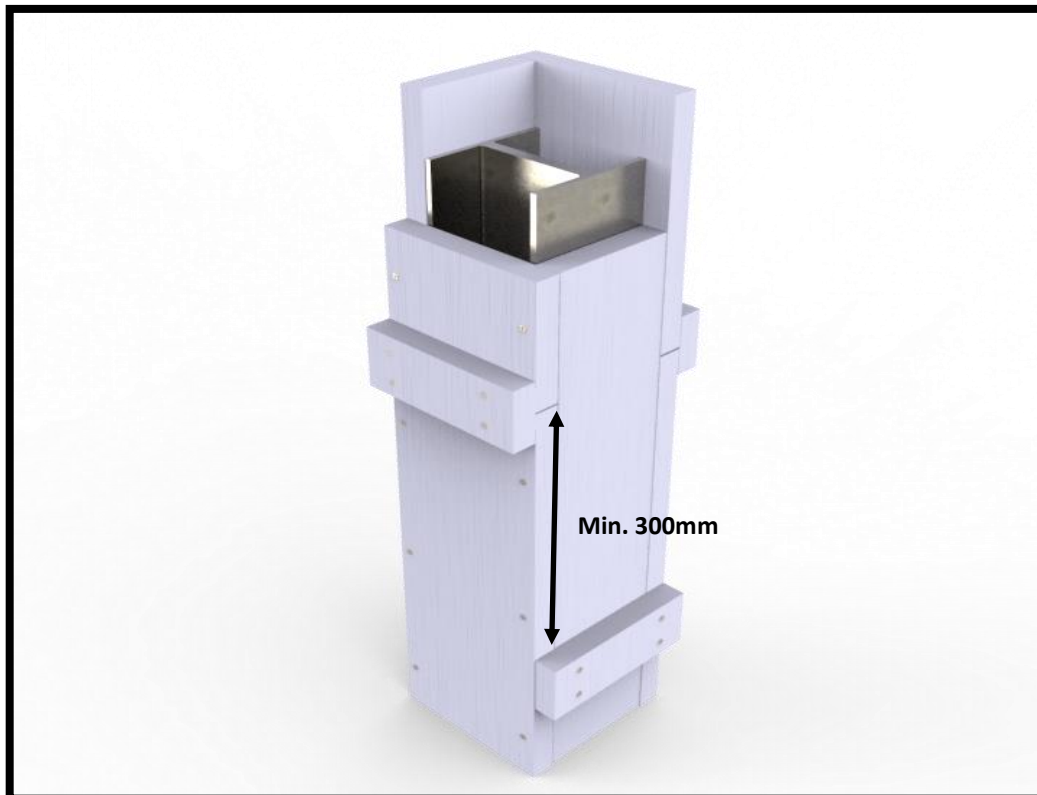


Figure 5 – Column Encasement Showing Cover strips and Board Joint Stagger

Maxilite Board	1. Calculate the appropriate Maxilite board thickness needed to achieve the desired FRL. This can be found using the 'Required Maxilite Thickness' tables at the back of this technical manual.
Encasement Layout	2. Columns are to be encased on 1,2,3 or all 4 sides depending on the position of surrounding wall constructions. 3. Construct column encasement using all necessary structural supports, fillets and noggins as outlined in section A.2.
Sealant	4. Apply Fyreflex Sealant to all board joints.
Board Joints	5. Ensure adjacent sides of encasement have a minimum of 300mm stagger between board joints, as seen above in Figure 5. 6. Minimum 100mm wide cover strips are to be fixed centrally to all board joints. Strips can be mounted inside or outside the column encasement, however for internal mounting ensure there is adequate documentation of the procedure.
Fixings	7. Secure encasement using approved fixings as outlined in section A.4 8. Apply cover strip fixings on each side of board joint.

Section A – Columns

A.4 Fixings

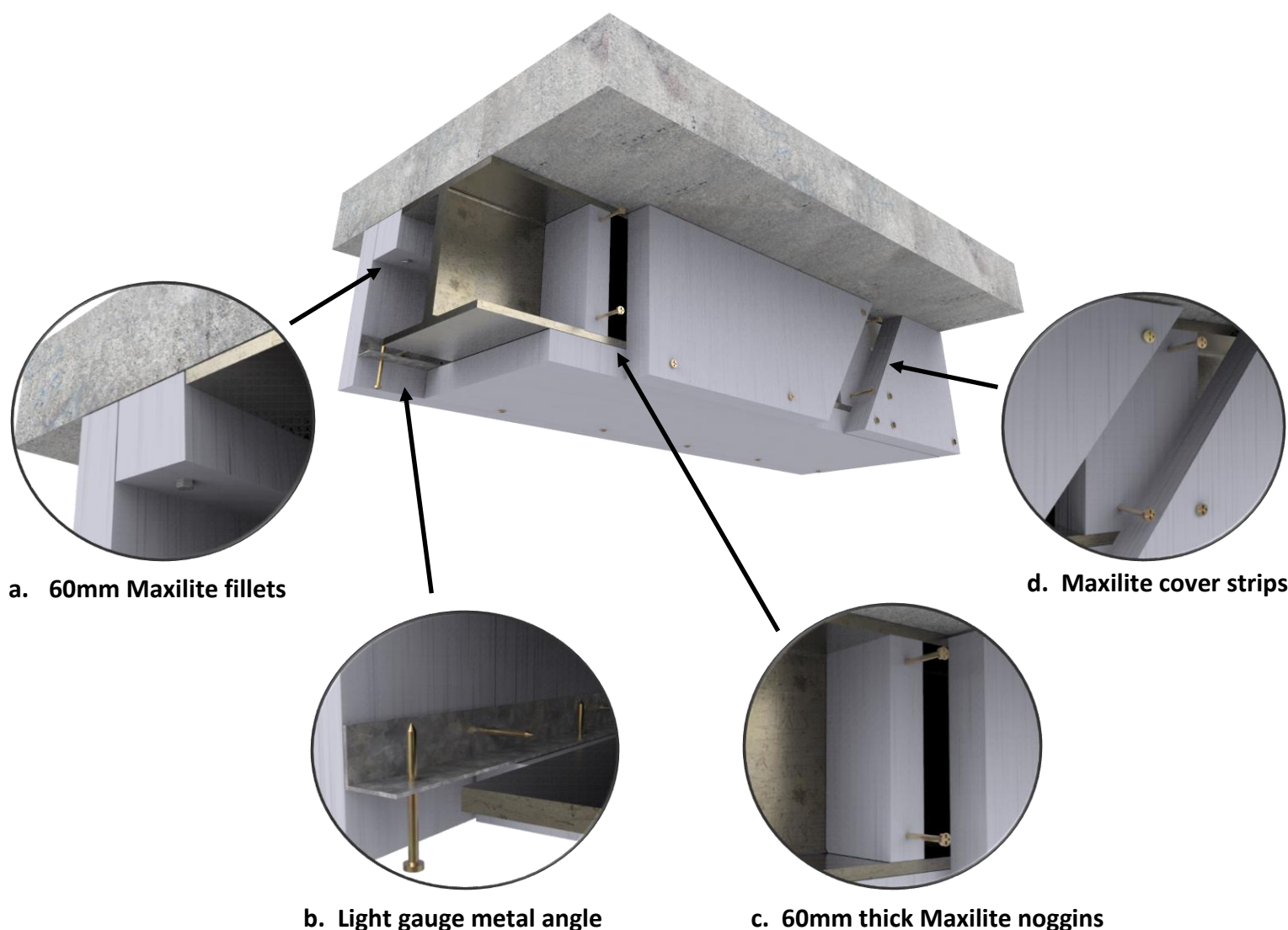
Table 1: Approved Fixings			
Fixing Through:	Fixing Into:		
	Maxilite Board	Light Gauge Angle	Concrete / Masonry
30mm Maxilite	Min. 60mm chipboard screws or equivalent @ 300mm centres	Min. 45mm gyprock screws or equivalent @ 300mm centres	Min 70mm dynabolts or equivalent @ 300mm centres
	Min. 60mm nails or equivalent @ 150mm centres		
	Min. 60mm staples or equivalent @ 150mm centres		
40mm Maxilite	Min. 70mm chipboard screws or equivalent @ 300mm centres	Min. 60mm gyprock screws or equivalent @ 300mm centres	Min 80mm dynabolts or equivalent @ 300mm centres
	Min. 70mm nails or equivalent @ 150mm centres		
	Min. 70mm staples or equivalent @ 150mm centres		
60mm Maxilite	Min. 90mm chipboard screws or equivalent @ 300mm centres	Min. 80mm gyprock screws or equivalent @ 300mm centres	Min. 100mm dynabolts or equivalent @ 300mm centres
	Min. 90mm nails or equivalent @150mm centres		
	Min. 90mm staples or equivalent @ 150mm centres		
	Gyprock	Concrete / Masonry	
Maxilite Fillets	Gyprock screws to provide min. 20mm penetration of stud or equivalent @ 600mm centres	Min. 100mm dynabolts or equivalent @ 600mm centres	
Light Gauge Angle	Gyprock screws to provide min. 20mm penetration of stud or equivalent @ 600mm centres	Min. 100mm dynabolts or equivalent @ 600mm centres	

Section B – Beams

B.1 Encasement Construction

The following section compiles the approved design details for Maxilite steel beam encasements. For steel beam encasement solutions not found within this section, or technical questions relating to these details please contact Trafalgar.

Please refer to section B.2 “Encasement Layouts” to see where each of the following details are to be utilised.

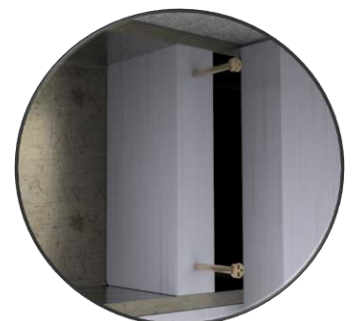


Section B – Beams

B.1 Encasement Construction

Key:

- a. 60mm Maxilite fillets
 - 60mm wide Maxilite fillets located within the encasement construction, as per the encasement layouts in section B.2
- b. Light gauge metal angle
 - 50x50x0.9mm Steel angle located within the encasement construction, as per the encasement layouts in section B.2
- c. 60mm thick Maxilite noggins
 - Noggins are cut to fit tightly within the web cavity and friction fit into position. They are to be fixed 100mm from each end of the board and at maximum 650mm centres along the length of the board.
- d. Maxilite cover strips
 - 100mm wide cover strips are to be applied to all joints between adjacent Maxilite boards, located either outside or within the beam encasement.
 - Alternatively, a backing strip noggin can be utilised, eliminating the need for both noggins and cover strips within the web cavity. Simply construct Noggins from 100mm wide by 60mm thick Maxilite and friction fit between the flanges of the steel column. Position noggins to sit centrally behind adjacent board joints and at maximum 760mm centres along the length of the board.



Section B – Beams

B.2 Encasement Layouts

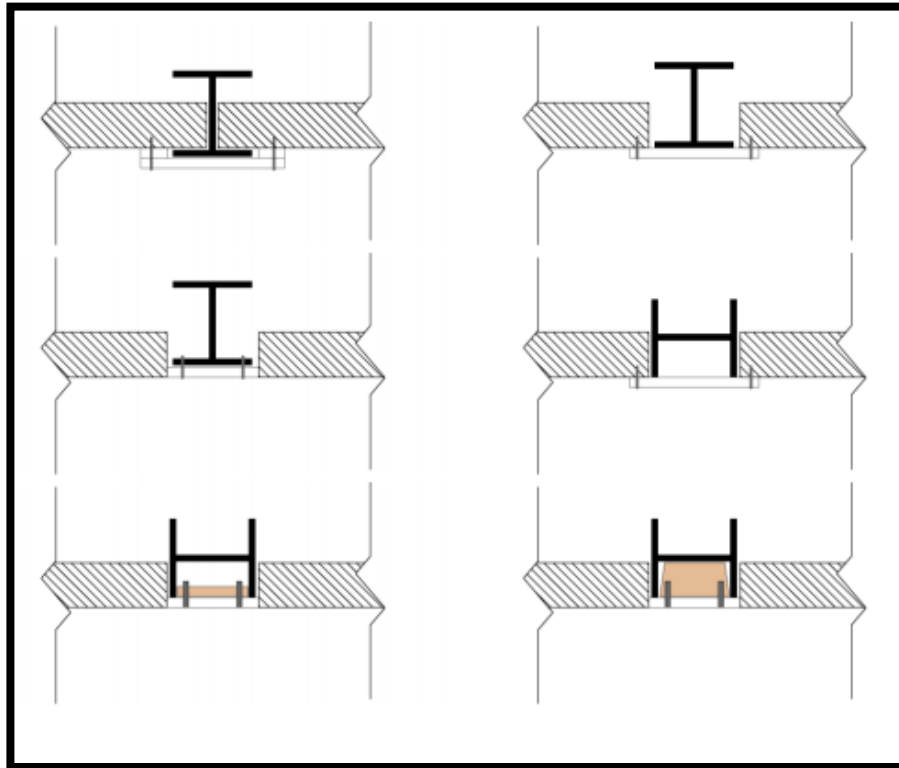


Figure 6 - One Sided Beam Encasements

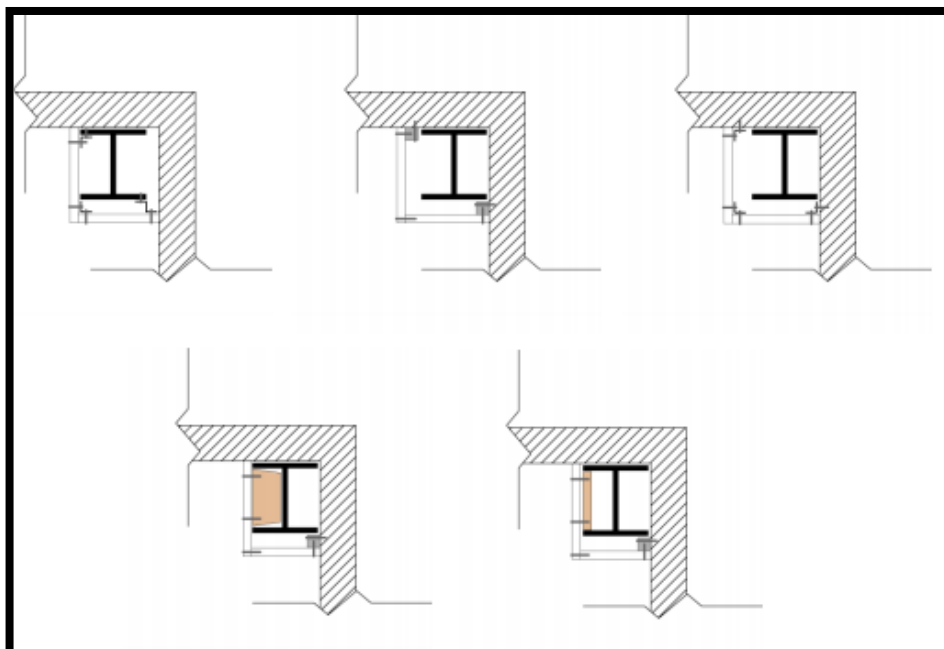


Figure 7 - Two Sided Beam Encasements

Section B – Beams

B.2 Encasement Layouts



Figure 8 - Three Sided Beam Encasements

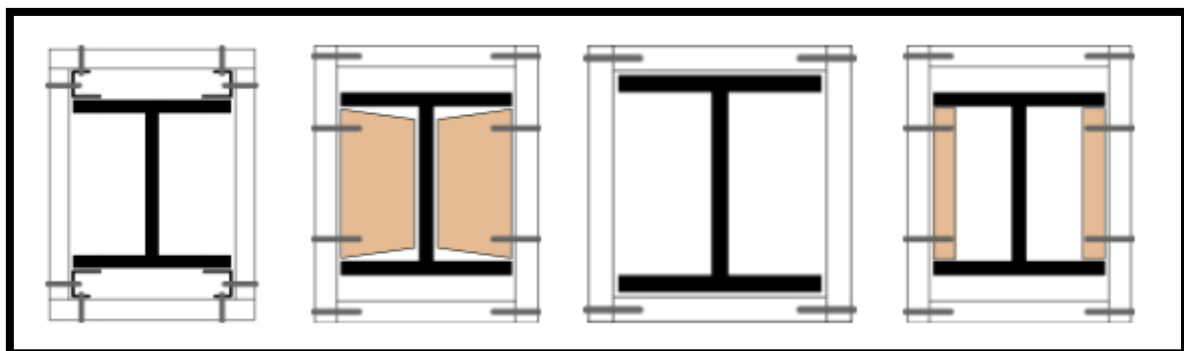


Figure 9 - Four Sided Beam Encasements

Section B – Beams

B.3 Installation Procedure

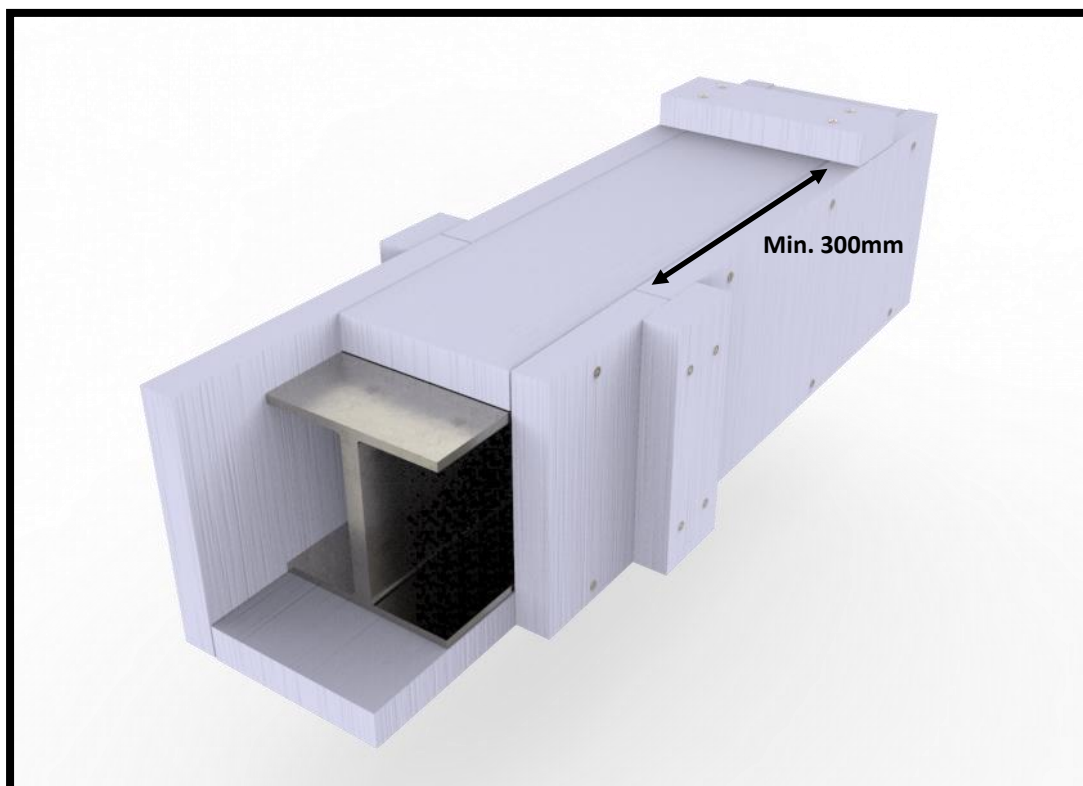


Figure 10 – Beam Encasement Showing Cover strips and Board Joint Stagger

Maxilite Board	1. Calculate the appropriate Maxilite board thickness needed to achieve the desired FRL. This can be found using the 'Required Maxilite Thickness' tables at the back of this technical manual.
Encasement Layout	2. Beams are to be encased on 1,2,3 or all 4 sides depending on the position of surrounding wall constructions. 3. Construct beam encasement using all necessary structural supports, fillets and noggins as outlined in section B.2.
Sealant	4. Apply Fyreflex Sealant to all board joints.
Board Joints	5. Ensure adjacent sides of encasement have a minimum of 300mm stagger between board joints, as seen above in Figure 10. 6. Minimum 100mm wide Maxilite cover strips are to be fixed centrally to all board joints. Strips can be mounted inside or outside the beam encasement, however for internal mounting ensure there is adequate documentation of the procedure.
Fixings	7. Secure encasement using approved fixings as outlined in section B.4 8. Apply cover strip fixings on each side of board joint.

Section B – Beams

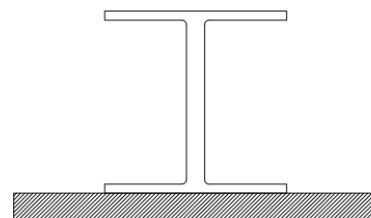
B.4 Fixings

Table 2: Approved Fixings			
Fixing Through:	Fixing Into:		
	Maxilite Board	Light Gauge Angle	Concrete / Masonry
30mm Maxilite	Min. 60mm chipboard screws or equivalent @ 300mm centres	Min. 50mm gyprock screws or equivalent @ 300mm centres	Min 70mm dynabolts or equivalent @ 300mm centres
	Min. 60mm nails or equivalent @ 150mm centres		
40mm Maxilite	Min. 75mm chipboard screws or equivalent @ 300mm centres	Min. 60mm gyprock screws or equivalent @ 300mm centres	Min 80mm dynabolts or equivalent @ 300mm centres
	Min. 75mm nails or equivalent @ 150mm centres		
60mm Maxilite	Min. 100mm chipboard screws or equivalent @ 300mm centres	Min. 75mm gyprock screws or equivalent @ 300mm centres	Min. 100mm dynabolts or equivalent @ 300mm centres
	Min. 100mm nails or equivalent @150mm centres		
	Gyprock		Concrete / Masonry
Maxilite Fillets	Min. 120mm Gyprock screws or equivalent		Min. 100mm Dynabolts or equivalent
Light Gauge Angle	Min. 50mm Gyprock screws or equivalent		Min. 50mm dynabolts or equivalent

Required Maxilite Thickness

The Maxilite thickness required to achieve a desired Fire Resistance Level can be found by using the following “Board Thickness Calculator” tables. Simply look up your beam/column section factor (Hp/A) then read across to the required Maxilite thickness. For any specifications not found in these tables, please contact Trafalgar. **Maxilite thickness suitable for 550 deg C critical temperature limit – for other critical temperature requirements contact Trafalgar.**

Please note, Maxilite board is available in thicknesses of 30, 40 or 60mm so you will need to round up to the closest available thickness. I.e. for a required thickness of 20mm, please select



Required Maxilite Thickness

Universal Columns

Required Maxilite Thickness in Millimetres															
Steel Size		3 Sided Encasement							4 Sided Encasement						
		Hp/A 1/m	Fire Resistance Level						Hp/A 1/m	Fire Resistance Level					
			30	60	90	120	180	240		30	60	90	120	180	240
310UC	283	30	20	20	20	20	20	20	40	20	20	20	20	20	20
	240	35	20	20	20	20	20	20	45	20	20	20	20	20	20
	198	40	20	20	20	20	20	20	50	20	20	20	20	20	20
	158	50	20	20	20	20	20	20	65	20	20	20	20	20	30
	137	55	20	20	20	20	20	25	70	20	20	20	20	20	30
	118	60	20	20	20	20	20	25	85	20	20	20	20	25	35
	97	75	20	20	20	20	20	30	100	20	20	20	20	30	40
250UC	90	70	20	20	20	20	20	30	90	20	20	20	20	25	35
	73	80	20	20	20	20	25	35	110	20	20	20	20	30	45
200UC	60	80	20	20	20	20	25	35	110	20	20	20	20	30	45
	52	95	20	20	20	20	30	40	125	20	20	20	25	35	45
	46	105	20	20	20	20	30	40	140	20	20	20	25	35	50
150UC	37	100	20	20	20	20	30	40	135	20	20	20	25	35	50
	30	120	20	20	20	25	35	45	160	20	20	20	30	40	55
	23	155	20	20	20	25	40	50	205	20	20	25	30	45	60
100UC	15	160	20	20	20	30	40	55	210	20	20	25	30	45	60

NOTE: These section factors (Hp/A) are only a guide for the listed steel dimensions and will change depending on encasement orientation. Please ensure section factor has been correctly calculated before selecting the required Maxilite thickness.

MAXILITE

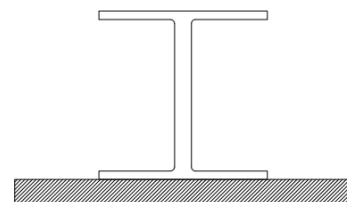
Steel Protection

Technical Specifications

Required Maxilite Thickness

Universal Beams

Maxilite thickness suitable for 550 deg C critical temperature limit – for other critical temperature requirements contact Trafalgar.



Required Maxilite Thickness in Millimetres

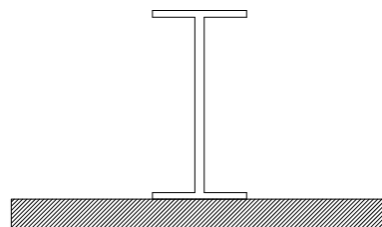
Steel Size		3 Sided Encasement							4 Sided Encasement						
		Hp/A 1/m	Fire Resistance Level						Hp/A 1/m	Fire Resistance Level					
			30	60	90	120	180	240		30	60	90	120	180	240
760UB	244	60	20	20	20	20	20	25	70	20	20	20	20	20	30
	220	65	20	20	20	20	20	30	75	20	20	20	20	20	30
	197	70	20	20	20	20	20	30	85	20	20	20	20	25	35
	173	80	20	20	20	20	25	35	95	20	20	20	20	30	40
	148	95	20	20	20	20	30	40	110	20	20	20	20	30	45
690UB	140	90	20	20	20	20	25	35	105	20	20	20	20	30	40
	125	100	20	20	20	20	30	40	115	20	20	20	20	30	45
610UB	125	90	20	20	20	20	25	35	105	20	20	20	20	30	40
	113	100	20	20	20	20	30	40	115	20	20	20	20	30	45
	101	110	20	20	20	20	30	45	130	20	20	20	25	35	45
530UB	92	110	20	20	20	20	30	45	125	20	20	20	25	35	45
	82	120	20	20	20	25	35	45	140	20	20	20	25	35	50
460UB	82	105	20	20	20	20	30	40	125	20	20	20	25	35	45
	74	115	20	20	20	20	30	45	135	20	20	20	25	35	50
	67	130	20	20	20	25	35	45	150	20	20	20	25	40	50
410UB	60	130	20	20	20	25	35	45	155	20	20	20	25	40	50
	54	145	20	20	20	25	40	50	170	20	20	20	30	40	55
360UB	57	125	20	20	20	25	35	45	145	20	20	20	25	40	50
	51	135	20	20	20	25	35	50	165	20	20	20	30	40	55
	45	155	20	20	20	25	40	50	185	20	20	25	30	45	55
310UB	46	130	20	20	20	25	35	45	160	20	20	20	30	40	55
	40	150	20	20	20	25	40	50	180	20	20	25	30	40	55
250UB	37	140	20	20	20	25	35	50	170	20	20	20	30	40	55
	31	160	20	20	20	30	40	55	200	20	20	25	30	45	60
200UB	30	145	20	20	20	25	40	50	180	20	20	25	30	40	55
	25	165	20	20	20	30	40	55	210	20	20	25	30	45	60
180UB	22	160	20	20	20	30	40	55	195	20	20	25	30	45	55
	18	190	20	20	25	30	45	55	230	20	20	25	35	50	60
150UB	18	170	20	20	20	30	40	55	200	20	20	25	30	45	60
	14	210	20	20	25	30	45	60	250	20	20	30	35	50	-

NOTE: These section factors (Hp/A) are only a guide for the listed steel dimensions and will change depending on encasement orientation. Please ensure section factor has been correctly calculated before selecting the required Maxilite thickness.

Required Maxilite Thickness

Welded Beams

Maxilite thickness suitable for 550 deg C critical temperature limit – for other critical temperature requirements contact Trafalgar.



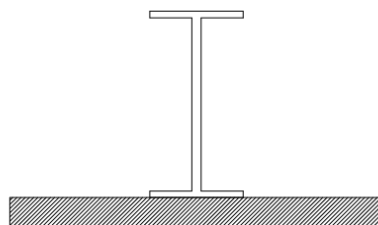
Required Maxilite Thickness in Millimetres															
Steel Size		3 Sided Encasement							4 Sided Encasement						
		Hp/A 1/m	Fire Resistance Level						Hp/A 1/m	Fire Resistance Level					
			30	60	90	120	180	240		30	60	90	120	180	240
1200WB	455	50	20	20	20	20	20	20	60	20	20	20	20	20	25
	423	55	20	20	20	20	20	25	65	20	20	20	20	20	30
	392	60	20	20	20	20	20	25	70	20	20	20	20	20	30
	342	65	20	20	20	20	20	30	75	20	20	20	20	25	40
	317	70	20	20	20	20	20	30	80	20	20	20	20	25	40
	278	80	20	20	20	20	25	35	90	20	20	20	20	30	40
	249	85	20	20	20	20	25	35	95	20	20	20	20	30	40
1000WB	322	60	20	20	20	20	20	25	70	20	20	20	20	20	30
	296	65	20	20	20	20	20	30	75	20	20	20	20	25	40
	258	75	20	20	20	20	20	30	85	20	20	20	20	30	40
	215	85	20	20	20	20	25	35	95	20	20	20	20	30	40
900WB	282	65	20	20	20	20	20	30	75	20	20	20	20	25	40
	257	70	20	20	20	20	20	30	85	20	20	20	20	30	40
	218	80	20	20	20	20	25	35	95	20	20	20	20	30	40
	175	95	20	20	20	20	30	40	110	20	20	20	20	30	40
800WB	192	80	20	20	20	20	25	35	95	20	20	20	20	30	40
	168	90	20	20	20	20	25	35	105	20	20	20	20	30	40
	146	100	20	20	20	20	30	40	120	20	20	20	25	35	40
	122	115	20	20	20	20	30	45	135	20	20	20	25	40	50
700WB	173	80	20	20	20	20	25	35	100	20	20	20	20	30	40
	150	90	20	20	20	20	25	35	105	20	20	20	20	30	40
	130	100	20	20	20	20	30	40	115	20	20	20	25	35	40
	115	115	20	20	20	20	30	45	130	20	20	20	25	35	50

NOTE: These section factors (Hp/A) are only a guide for the listed steel dimensions and will change depending on encasement orientation. Please ensure section factor has been correctly calculated before selecting the required Maxilite thickness.

Required Maxilite Thickness

Welded Columns

Maxilite thickness suitable for 550 deg C critical temperature limit – for other critical temperature requirements contact Trafalgar



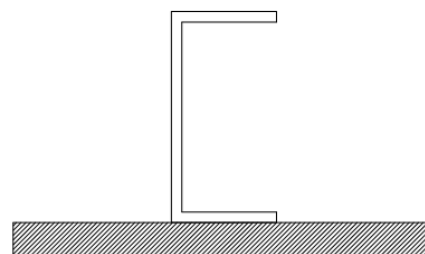
Required Maxilite Thickness in Millimetres															
Steel Size		3 Sided Encasement							4 Sided Encasement						
		Hp/A 1/m	Fire Resistance Level						Hp/A 1/m	Fire Resistance Level					
			30	60	90	120	180	240		30	60	90	120	180	240
500WC	440	30	20	20	20	20	20	20	35	20	20	20	20	20	20
	414	30	20	20	20	20	20	20	40	20	20	20	20	20	20
	383	30	20	20	20	20	20	20	40	20	20	20	20	20	20
	340	35	20	20	20	20	20	20	50	20	20	20	20	20	20
	290	45	20	20	20	20	20	20	55	20	20	20	20	20	25
	267	45	20	20	20	20	20	20	60	20	20	20	20	20	25
	228	55	20	20	20	20	20	25	70	20	20	20	20	20	30
400WC	361	30	20	20	20	20	20	20	40	20	20	20	20	20	20
	328	30	20	20	20	20	20	20	40	20	20	20	20	20	20
	303	35	20	20	20	20	20	20	45	20	20	20	20	20	20
	270	35	20	20	20	20	20	20	50	20	20	20	20	20	20
	212	45	20	20	20	20	20	20	60	20	20	20	20	20	25
	181	55	20	20	20	20	20	25	70	20	20	20	20	20	30
	144	65	20	20	20	20	20	30	85	20	20	20	20	25	35
350WC	280	30	20	20	20	20	20	20	40	20	20	20	20	20	20
	258	35	20	20	20	20	20	20	45	20	20	20	20	20	20
	230	35	20	20	20	20	20	20	50	20	20	20	20	20	20
	197	40	20	20	20	20	20	20	55	20	20	20	20	20	25

NOTE: These section factors (Hp/A) are only a guide for the listed steel dimensions and will change depending on encasement orientation. Please ensure section factor has been correctly calculated before selecting the required Maxilite thickness.

Required Maxilite Thickness

Parallel Flange Beams

Maxilite thickness suitable for 550 deg C critical temperature limit – for other critical temperature requirements contact Trafalgar.



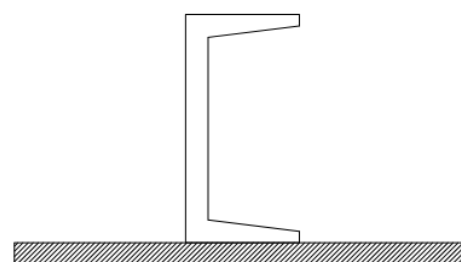
Required Maxilite Thickness in Millimetres														
Steel Size	3 Sided Encasement							4 Sided Encasement						
	Hp/A 1/m	Fire Resistance						Hp/A 1/m	Fire Resistance					
		30	60	90	120	180	240		30	60	90	120	180	240
380PFC	125	20	20	20	25	35	45	140	20	20	20	25	35	50
300PFC	135	20	20	20	25	35	50	155	20	20	20	25	40	50
250PFC	130	20	20	20	25	35	45	150	20	20	20	25	40	50
230PFC	170	20	20	20	30	40	55	190	20	20	25	30	45	55
200PFC	165	20	20	20	30	40	55	190	20	20	25	30	45	55
180PFC	165	20	20	20	30	40	55	195	20	20	25	30	45	55
150PFC	170	20	20	20	30	40	55	200	20	20	25	30	45	60

NOTE: These section factors (Hp/A) are only a guide for the listed steel dimensions and will change depending on encasement orientation. Please ensure section factor has been correctly calculated before selecting the required Maxilite thickness.

Required Maxilite Thickness

Taper Flange Channels

Maxilite thickness suitable for 550 deg C critical temperature limit – for other critical temperature requirements contact Trafalgar.



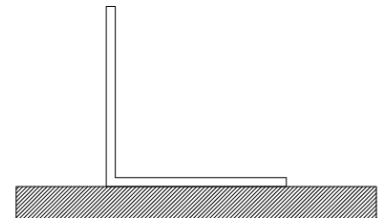
Required Maxilite Thickness in Millimetres														
Steel Size	3 Sided Encasement							4 Sided Encasement						
	Hp/A 1/m	Fire Resistance Level						Hp/A 1/m	Fire Resistance Level					
		30	60	90	120	180	240		30	60	90	120	180	240
125TFC	185	20	20	25	30	45	55	225	20	20	25	35	45	60
100TFC	210	20	20	25	30	45	60	255	20	20	30	35	50	-

NOTE: These section factors (Hp/A) are only a guide for the listed steel dimensions and will change depending on encasement orientation. Please ensure section factor has been correctly calculated before selecting the required Maxilite thickness.

Required Maxilite Thickness

Equal Angles

Maxilite thickness suitable for 550 deg C critical temperature limit – for other critical temperature requirements contact Trafalgar.



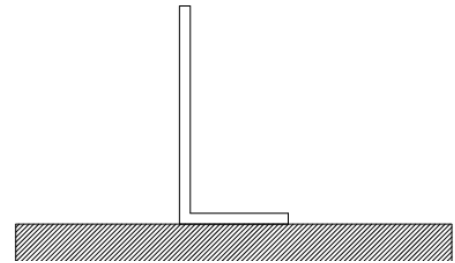
Required Maxilite Thickness in Millimetres															
Steel Size		3 Sided Encasement							4 Sided Encasement						
		Hp/A 1/m	Fire Resistance Level						Hp/A 1/m	Fire Resistance Level					
			30	60	90	120	180	240		30	60	90	120	180	240
200x200	26EA	65	20	20	20	20	20	30	85	20	20	20	20	25	35
	20Ea	80	20	20	20	20	25	35	105	20	20	20	20	30	40
	18EA	90	20	20	20	20	25	35	115	20	20	20	20	30	45
	16EA	100	20	20	20	20	30	40	130	20	20	20	25	35	45
	13EA	120	20	20	20	25	35	45	160	20	20	20	30	40	55
150x150	19EA	85	20	20	20	20	25	35	115	20	20	20	20	30	45
	16EA	100	20	20	20	20	30	40	135	20	20	20	25	35	50
	12EA	130	20	20	20	25	35	45	175	20	20	25	30	40	55
	10EA	165	20	20	20	30	40	55	215	20	20	25	35	45	60
125x125	16EA	105	20	20	20	20	30	40	135	20	20	20	25	35	50
	12EA	130	20	20	20	25	35	45	175	20	20	25	30	40	55
	10EA	165	20	20	20	30	40	55	220	20	20	25	35	45	60
	8EA	200	20	20	25	30	45	60	265	20	20	30	35	50	
100x100	12EA	135	20	20	20	25	35	50	180	20	20	25	30	40	55
	10EA	170	20	20	20	30	40	55	220	20	20	25	35	45	60
	8EA	200	20	20	25	30	45	60	270	20	20	30	35	50	
	6EA	260	20	20	30	35	50		345						
90x90	10EA	170	20	20	20	30	40	55	225	20	20	25	35	45	60
	8EA	200	20	20	25	30	45	60	270	20	20	30	35	50	
	6EA	260	20	20	30	35	50		345						
75x75	10EA	170	20	20	20	30	40	55	225	20	20	25	35	45	60
	8EA	205	20	20	25	30	45	60	270	20	20	30	35	50	
	6EA	260	20	20	30	35	50		350						
	5EA	335							450						
65x65	10EA	170	20	20	20	30	40	55	230	20	20	25	35	50	60
	8EA	205	20	20	25	30	45	60	275	20	20	30	35	50	
	6EA	260	20	20	30	35	50		350						
	5EA	335							450						

NOTE: These section factors (Hp/A) are only a guide for the listed steel dimensions and will change depending on encasement orientation. Please ensure section factor has been correctly calculated before selecting the required Maxilite thickness.

Required Maxilite Thickness

Unequal Angles

Maxilite thickness suitable for 550 deg C critical temperature limit – for other critical temperature requirements contact Trafalgar.



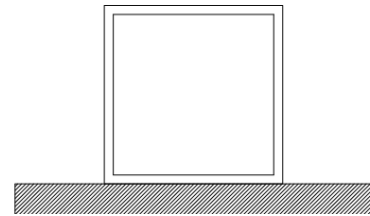
Required Maxilite Thickness in Millimetres															
Steel Size		3 Sided Encasement							4 Sided Encasement						
		Hp/A 1/m	Fire Resistance Level						Hp/A 1/m	Fire Resistance Level					
			30	60	90	120	180	240		30	60	90	120	180	240
150x100	12UA	140	20	20	20	25	35	50	175	20	20	25	30	40	55
	10UA	175	20	20	25	30	40	55	220	20	20	25	35	45	60
150x90	16UA	110	20	20	20	20	30	45	140	20	20	20	25	35	50
	12UA	145	20	20	20	25	40	50	175	20	20	25	30	40	55
	10UA	180	20	20	25	30	40	55	220	20	20	25	35	45	60
	8UA	215	20	20	25	35	45	60	265	20	20	30	35	50	
125x75	12UA	145	20	20	20	25	40	50	180	20	20	25	30	40	55
	10UA	180	20	20	25	30	40	55	220	20	20	25	35	45	60
	8UA	220	20	20	25	35	45	60	270	20	20	30	35	50	
	6UA	280	20	20	30	35	50		345						
100x75	10UA	175	20	20	25	30	40	55	225	20	20	25	35	45	60
	8UA	210	20	20	25	30	45	60	270	20	20	30	35	50	
	6UA	270	20	20	30	35	50		345						
75x50	8UA	220	20	20	25	35	45	60	275	20	20	30	35	50	
	6UA	280	20	20	30	35	50		350						
	5UA	360							450						
65x50	8UA	215	20	20	25	35	45	60	275	20	20	30	35	50	
	6UA	275	20	20	30	35	50		350						
	5UA	355							450						

NOTE: These section factors (Hp/A) are only a guide for the listed steel dimensions and will change depending on encasement orientation. Please ensure section factor has been correctly calculated before selecting the required Maxilite thickness.

Required Maxilite Thickness

Square Hollow Sections

Maxilite thickness suitable for 550 deg C critical temperature limit – for other critical temperature requirements contact Trafalgar.



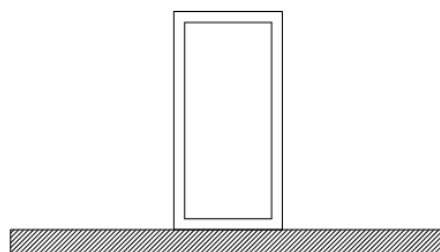
Required Maxilite Thickness in Millimetres															
Steel Size SHS		3 Sided Encasement							4 Sided Encasement						
		Hp/A 1/m	Fire Resistance Level						Hp/A 1/m	Fire Resistance Level					
			30	60	90	120	180	240		30	60	90	120	180	240
250x250	9	90	20	20	20	20	25	35	120	20	20	20	25	35	45
	6	130	20	20	20	25	35	45	175	20	20	25	30	40	55
200x200	9	90	20	20	20	20	25	35	125	20	20	20	25	35	45
	6	135	20	20	20	25	35	50	180	20	20	25	30	40	55
	5	160	20	20	20	30	40	55	210	20	20	25	30	45	60
150x150	9	95	20	20	20	20	30	40	125	20	20	20	25	35	45
	6	135	20	20	20	25	35	50	185	20	20	25	30	45	55
	5	160	20	20	20	30	40	55	215	20	20	25	35	45	60
125x125	9	100	20	20	20	20	30	40	130	20	20	20	25	35	45
	6	140	20	20	20	25	35	50	185	20	20	25	30	45	55
	5	165	20	20	20	30	40	55	220	20	20	25	35	45	60
	4	200	20	20	25	30	45	60	265	20	20	30	35	50	
100x100	9	100	20	20	20	20	30	40	135	20	20	20	25	35	50
	6	140	20	20	20	25	35	50	190	20	20	25	30	45	55
	5	165	20	20	20	30	40	55	225	20	20	25	35	45	60
	4	205	20	20	25	30	45	60	270	20	20	30	35	50	
	3	265	20	20	30	35	50		355						
89x89	6	145	20	20	20	25	40	50	190	20	20	25	30	45	55
	5	170	20	20	20	30	40	55	225	20	20	25	35	45	60
	3.5	235	20	20	25	35	50	60	310	20	25	30	40	55	
75x75	6	150	20	20	20	25	40	50	200	20	20	25	30	45	60
	5	175	20	20	25	30	40	55	230	20	20	25	35	50	60
	4	210	20	20	25	30	45	60	280	20	20	30	35	50	
	3.5	240	20	20	30	35	50	60	315	20	25	30	40	55	
	3	270	20	20	30	35	50		360						
65x65	6	150	20	20	20	25	40	50	205	20	20	25	30	45	60
	5	175	20	20	25	30	40	55	235	20	20	25	35	50	60
	4	215	20	20	25	35	45	60	285	20	20	30	35	50	
	3	270	20	20	30	35	50		365						
50x50	5	185	20	20	25	30	45	55	250	20	20	30	35	50	
	4	220	20	20	25	35	45	60	295	20	25	30	35	50	
	3	280	20	20	30	35	50		370						

NOTE: These section factors (Hp/A) are only a guide for the listed steel dimensions and will change depending on encasement orientation. Please ensure section factor has been correctly calculated before selecting the required Maxilite thickness.

Required Maxilite Thickness

Rectangular Hollow Sections

Maxilite thickness suitable for 550 deg C critical temperature limit – for other critical temperature requirements contact Trafalgar.



Required Maxilite Thickness in Millimetres															
Steel Size RHS		3 Sided Encasement							4 Sided Encasement						
		Hp/A 1/m	Fire Resistance Level						Hp/A 1/m	Fire Resistance Level					
			30	60	90	120	180	240		30	60	90	120	180	240
250x150	9	100	20	20	20	20	30	40	125	20	20	20	25	35	45
	6	145	20	20	20	25	40	50	180	20	20	25	30	40	55
	5	170	20	20	20	30	40	55	210	20	20	25	30	45	60
200x100	9	105	20	20	20	20	30	40	125	20	20	20	25	35	45
	6	155	20	20	20	25	40	50	185	20	20	25	30	45	55
	5	180	20	20	25	30	40	55	215	20	20	25	35	45	60
	4	220	20	20	25	35	45	60	265	20	20	30	35	50	
150x100	6	150	20	20	20	25	40	50	185	20	20	25	30	45	55
	5	175	20	20	25	30	40	55	220	20	20	25	35	45	60
	4	215	20	20	25	35	45	60	270	20	20	30	35	50	
150x50	5	195	20	20	25	30	45	55	225	20	20	25	35	45	60
	4	240	20	20	30	35	50	60	275	20	20	30	35	50	
	3	307	20	25	30	40	55		355						
125x75	5	180	20	20	25	30	40	55	220	20	20	25	35	45	60
	4	220	20	20	25	35	45	60	270	20	20	30	35	50	
	3	285	20	20	30	35	50		355						
100x50	6	165	20	20	20	30	40	55	200	20	20	25	30	45	60
	5	195	20	20	25	30	45	55	230	20	20	25	35	50	60
	4	235	20	20	25	35	50	60	280	20	20	30	35	50	
	3.5	265	20	20	30	35	50		315	20	25	30	40	55	
	3	300	20	25	30	40	50		360						
75x50	6	165	20	20	20	30	40	55	205	20	20	25	30	45	60
	5	190	20	20	25	30	45	55	235	20	20	25	35	50	60
	4	230	20	20	25	35	50	60	285	20	20	30	35	50	
	3	290	20	20	30	35	50		365						

NOTE: These section factors (Hp/A) are only a guide for the listed steel dimensions and will change depending on encasement orientation. Please ensure section factor has been correctly calculated before selecting the required Maxilite thickness.



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