

PROMATECT®-L Encasements to Steelwork

1. Only general information can be provided in this document. It is recommended that Promat Technical Department is contacted to confirm details that are not covered.
2. The fixing methods are suitable for steel sections up to 686mm deep and 325mm wide. For larger sections and when protecting more than one section in a single encasement, please consult Promat Technical Department.
3. Where a column box encasement abuts a beam protected with a profiled fire protection system e.g. spray, the column webs should be sealed using PROMATECT®-L.

**Table 1: PROMATECT®-L for Up to 4 Hours Fire Rating
in Accordance With the Requirements of BS 476: Part 21 and AS 1530: Part 4**

Fire resistance (hours)	Board thickness (mm)									
	20	25	30	35	40	45	50	55	60	65
1/2	260	260	260	260	260	260	260	260	260	260
1	260	260	260	260	260	260	260	260	260	260
1½	157	260	260	260	260	260	260	260	260	260
2	–	127	216	260	260	260	260	260	260	260
3	–	–	76	104	143	205	260	260	260	260
4	–	–	–	59	74	94	119	153	199	260

Maximum Hp/A section factor (m⁻¹)

**Table 2: PROMATECT®-L for Up to 3 Hours Fire Rating
in Accordance With the Requirements of ASTM E119**

Fire resistance (hours)	Board thickness (mm)				
	20	25	30	35	40
1/2	300	300	300	300	300
1	300	300	300	300	300
1½	219	300	300	300	300
2	139	159	239	270	300
3	79	99	109	119	300

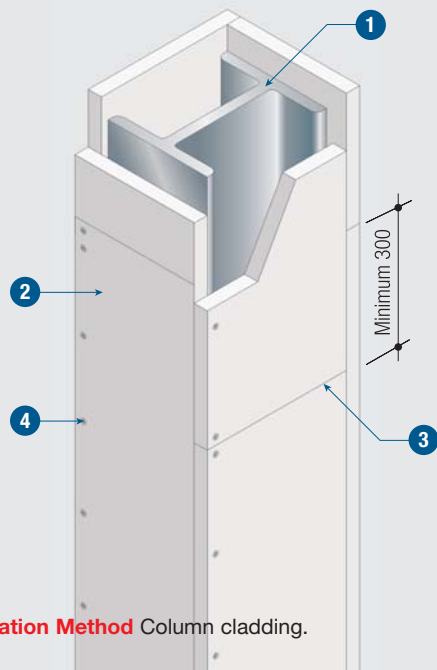
Maximum Hp/A section factor (m⁻¹)

NOTE:

1. The above thickness have been determined assuming a steel failure temperature of 550°C. For other temperatures please consult the Promat Technical Department.
2. The thicknesses in the tables above can be made up from the given sizes respectively, using no more than 2 layers of board. For double skin applications secure the thicker layer first, and stagger joints by at least 300mm. For beam encasements screw the second layer to the first. For 4-sided column encasements, the second layer is installed separately from the first. No air gap is required between layers.

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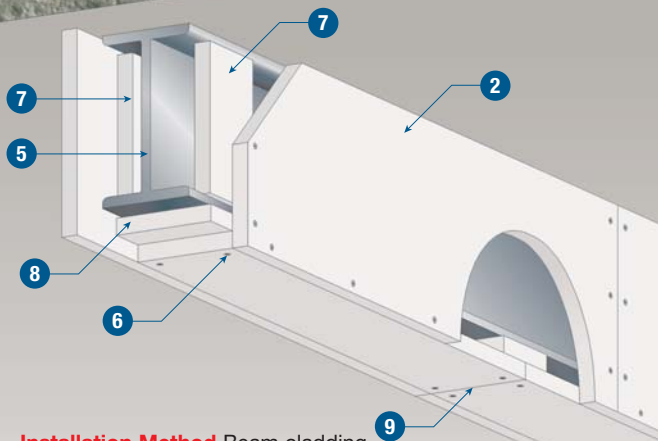
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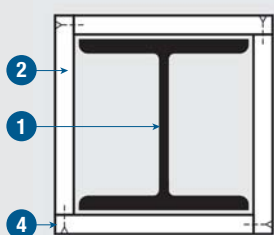
Installation Method Column cladding.

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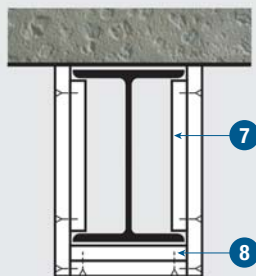
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Installation Method Beam cladding.



Detail 1 Cross section through column cladding



Detail 2 Cross section through beam cladding

TECHNICAL DATA

- 1 Steel column
- 2 PROMATECT®-L board, thickness in accordance with Hp/A-ratio (See Table 1 or 2, first page)
- 3 Horizontal joints are simply butt jointed without cover strips or filler. Joints in adjacent sides to be staggered minimum 300mm. For wide columns, it may be desirable to include a cover strip behind the horizontal joints in the web of the section to provide additional impact resistance
- 4 For up to 4 hours boards can be screw fixed. Care should be taken not to overtighten screws. When screw fixing it is advisable to drill pilot holes, particularly with boards less than 25mm thick. For up to 2 hours boards can be staple fixed. See table below:

Board thickness (mm)	Deep threaded screws, preferably with ribbed heads at 200mm centres	Staples at 100mm centres
20	38mm x No.6	50/11/1.5mm
25	50mm x No.6	63/11/1.5mm
30	63mm x No.8	63/11/1.5mm
35	63mm x No.8	70/12/2mm
40	75mm x No.8	
50	100mm x No.10	
60	100mm x No.10	

- 5 Steel beam
- 6 Secure side boards to soffit board using fixings in accordance with the table above, care should be taken not to overtighten screws. When screw fixing it is advisable to drill pilot holes, particularly with boards less than 25mm thick. For up to 2 hours, boards can be staple fixed
- 7 PROMATECT®-L soldiers, 100mm wide x board thickness, wedged tightly between flanges at maximum 1200mm centres. Secure casing to soldiers using screws at 100mm centres or staples at 50mm centres
- 8 PROMATECT®-L cover strips, 100mm wide x board thickness, laid over joints. Screw fix casing to cover strips at 100mm centres or staple fix at 50mm centres. If necessary, the lengths of the fixings can be shorter than given in the table above
- 9 Stagger joints in adjacent sides by minimum 300mm. Maximum joint centres for beams 1200mm