## 9. CEILINGS, PARTITIONS AND ACCESS FLOORS

## TIMBER CEILING BRANDERING

### Timber

Ceiling brandering must be sawn softwood brandering to comply with *SABS* 1783, or saligna.

### Size and spacing

Sizes of brandering for 6,4 mm gypsum board must be:

1. 38 x 38 mm softwood or 32 x 32 saligna for roof truss spacing up to 1000 mm
2. 38 x 50 mm softwood for truss spacing up to 1200 mm
3. 50 x 50 mm softwood for truss spacing up to 1400 mm.

Sizes of brandering for 4 or 6 mm fibre-cement board must be:

1. 38 x 38 mm softwood or 32 x 32 saligna for roof truss spacing up to 1050 mm
2. 38 x 50 mm softwood up to 1500 mm.

Sizes of brandering for other board thicknesses must be as *specified*.

If trusses are spaced at 1400 to 1800 mm, support battens by means of 38 x 114 mm sawn softwood joists between trusses secured with 38 x 38 mm hangers from 38 x 76 mm runners at 1500 mm centres across the tie-beams of the trusses.

### Fixing

Nail brandering with staggered end joints at right angles with roof trusses and at centres recommended by the manufacturer of the ceiling boards, and at 38 mm centres away from walls for the fixing of cornices, with 75 - 100 mm wire nails.

Skew nail brandering additional to the normal nail at every intersection with roof timber.

Fix brandering, joists or runners with the larger dimension in the vertical position.

Install supporting brandering where light fittings are to be suspended.

Level out brandering, starting from the lowest point, using timber wedges where necessary.

## FIBRE-CEMENT AND GYPSUM CEILINGS

### Boards

Flat, plain fibre-cement ceiling boards must comply with *SABS* 803, made from organic fibres, 4 or 6 mm thick as *specified*.

Flat gypsum ceiling boards must comply with *SABS* 266, and be 6,4 mm thick, or as *specified*.

Store boards on an even surface under cover and keep dry.

### Fixing

Install ceiling boards strictly *according to the manufacturer's instructions*. Upon request of the architect/principal agent, furnish written proof that the manufacturer has been consulted.

Use longest lengths possible to suit room. Arrange boards symmetrically about room, at right angles to timber brandering, with cut boards along walls, and to approved pattern or as *specified*.

Lay fibre-cement boards ripple face down to hide nail heads.

Nail boards to timber brandering with 38 mm galvanised clout nails or 32 x 2,5 mm diameter galvanised serrated ceiling nails at 150 mm centres.

Insert prepainted H-profile metal cover strips between boards.

In the case of plastered gypsum ceiling boards:

1. Ensure building is enclosed before ceiling boards are fixed
2. Fix wire scrim or self-adhesive brown paper tape over all joints
3. Plaster the entire ceiling with 3 - 6 mm lightweight hemi-hydrate gypsum plaster the same day as the board has been erected. Finish plaster to a smooth polished surface.

## CORNICES

### Material and fixing

Cornices must be 75 mm wide coved gypsum cornice to comply with *SABS* 622, or 6 mm thick coved fibre cement cornice with inside and outside corner pieces, or foam moulded, hardwood or softwood cornices, to profile as *specified*.

Nail cornices to brandering with 38 mm galvanised clout nails at 300 mm maximum centres.

Nail cornices to walls with 38 mm hardened steel nails, or glue gypsum or fibre-cement cornices to walls with approved contact adhesive or 3-4 mm gypsum plaster.

Mitre corner joints, splay all heading joints. Join fibre-cement cornices with shaped metal H-profile jointing strips.

## PATENT SUSPENDED CEILINGS

### Boards

Boards for patent suspended ceilings must be fibre cement to comply with SABS *803*, gypsum to comply with *SABS* 266, mineral fibre, or cement-bonded woodwool ceiling panels to comply with *SABS* 637, of size, colour and finish as *specified*.

Store boards on an even surface under cover and keep dry.

### Suspension fittings

Suspension fittings must be patent approved roll-formed galvanised steel Tees, hold down clips, suspension rods and hooks, suspension clips, T suspension plates, lipped wall angles, shadowline wall angles and wall channel trim, with finish and colour, all as *specified*.

### Fixing

Use only *approved* specialist installers, if so *specified*.

Fix suspended ceiling system strictly a*ccording to the manufacturer’s instructions*.

Do not start this work before the building is enclosed, plasterwork has dried out, and the services are in position and tested.

Arrange boards symmetrically about rooms, with cut boards along walls, with straight joints in both directions or to pattern as *specified*.

Suspend main tees from structure at centres *according to the manufacturer's instructions* with galvanised mild steel strapping or 2 mm diameter galvanised wire or by patent suspension rods or hooks combined with spring clips and suspension plates. Clip cross tees into main tees at the end of each board.

Level out the suspended ceiling.

Hold down ceiling boards or tiles with patent hold-down tags or wedges.

Provide extra hangers for light fittings, sound systems, air conditioning vents etc. as may be necessary.

Provide *approved* access to ceiling space where concealed Tee system is used.

## CEILING INSULATION

### Mineral fibre insulation

Insulation must be mineral fibre blanket or batts insulation to comply with *SABS* 1381 part 1, or cellulose loose fill thermal insulation to comply with *SABS* 1381 part 6, as *specified*.

Lay insulation over ceiling to thickness or depth as *specified*.

Fit blankets or batts snugly between roof trusses. Nail batts where necessary.

### Reflective foil laminates insulation

Reflective foil laminates must comply with *SABS* 1381 part 4, class A (reinforced, with one side or both sides reflective as *specified*).

Lay foil on galvanised or PVC-coated span wires at recommended centres, and with 140 mm laps so that span wires support each lap. Draw foil tight and fix to bottom and top purlin by gluing, double-sided tape, or sheet steel straps pop-riveted to the purlin, all *according to manufacturer’s instructions*.

## WOODEN CEILING AND PANELLING BOARDS

### Boards

Tongued and grooved timber boards of specie, grade, profile and size as *specified*, with matching ends, to comply with *SABS* 1039.

Secret nail boards with lost head oval wire nails. Stagger all end joints.

Finish edges of ceiling with cornice of size and profile as *specified*.

## CEILING HATCH

### Timber hatch

Trim 650 x 650 mm minimum clear opening in ceiling with 38 x 100 sawn softwood trimmers spiked to beams or trusses.

Form hatch frame of brandering as for ceiling.

Form trap door of brandering and ceiling board as for ceiling.

Hang trap door with one pair 75 mm steel hinges screwed to frame, so that trap door can open 180 degrees on to top of ceiling brandering.

Provide 50 x 19 mm hardwood fillets nailed or screwed to ceiling around hatch opening, to carry trap door in closed position. Mitre corners of fillets.

### Steel hatch

Approved 0,6 mm pressed steel ceiling trap door, hinged to open 180 degrees onto ceiling, in 25 x 25 x 3 mm T-profile steel frame. Clear opening must be at least 650 x 650 mm.Drill frame twelve times and screw onto ceiling brandering.

## DRYWALL PARTITIONS

### Plasterboard

Plasterboard must be standard grade plasterboard to comply with *SABS* 266. If *specified*, board must be covered with paper backed vinyl of *specified* weight in grams per m2.

### Studs and tracks

Studs and tracks must be 51 or 63,5 x 0,5 mm thick galvanised steel.

### Aluminium extrusions

Extruded aluminium sections must be alloy 6063 or 6261 in temper T5 or T6. If *specified*, anodising must be in strict accordance with *SABS* 1247, and powder coating must be by applicators approved by the specified powder manufacturers, and in accordance with *SABS* 1247.

### Glass

Glass must be as *specified.* Provide a warranty from the manufacturer against delamination and colour degradation for a period of at least five (5) years.

### Installation

Install drywall partitions strictly *according to the material manufacturer's instructions.*

Partitions must conform to the *specified* fire ratings.

Partitions must conform to the appropriate deflection requirements as laid down by the South African Building Interior Systems Association (SABISA).