K40 DEMOUNTABLE SUSPENDED CEILINGS

To be read with Preliminaries/General conditions.

TYPE (S) OF SUSPENDED CEILING

105 SUSPENDED CEILINGS

'Gypsum MF' fully demontable plastered ceiling system to BS 2989 and BS 2994 or approved equivalent; suspended from hollowcore units paneling; 12.5mm thick 'Gyproc' plasterboard fixed to suspension system; tape joints with scrim cloth and apply 3mm thick 'Gypsum' hardwall skim coat smooth finish; MF6A perimeter channel; MF5 ceiling section; MF7 primary support channel ; MF8 strip hangers; MF9 connecting clips.

GENERALLY/PREPARATION

205 SUSPENDED CEILINGS GENERALLY: Unless specified otherwise, comply with the relevant recommendations and performance requirements of BS 8290 for the selection and assembly of components and materials.

220 ENVIRONMENTAL CONDITIONS:

–Areas for storage and installation must be clean, dry, well ventilated and free from excessive and/or rapid variations of temperature and humidity.

–Do not install membrane material until the building is weather tight and wet trades have finished their work. Before, during and after installing, ensure that temperature and humidity are maintained at levels similar to those which will prevail after building is occupied.

–Notwithstanding the above, delivery of materials and installation of the suspended ceiling will be taken as joint acceptance by the Main Contractor and Ceiling Contractor of the suitability of the environmental conditions.

230 CONDITIONING: Before fixing store panels on site for at least 48 hours in conditions similar to those which will prevail after the building is occupied. Ensure free circulation of air to all surfaces.

240 COORDINATION WITH OTHERS: The Ceiling Contractor must liaise with the Main Contractor and other contractors to ensure:

–Related work within the void (services, partitions, fire barriers, fire stopping, painting, etc.) is at a suitable stage of completion to enable ceiling installation to proceed without damage or disfigurement to the ceiling system.

–Fixtures around which the ceiling is to be installed are completed and that services, fire barriers, etc. are in the correct position relative to the ceiling grid.

–Hangers do not press against services, etc. and are installed vertically. Where obstructions prevent vertical installation, brace hangers against lateral movement or provide rigid bridging structures across obstructions.

–Services integrated within the ceiling membrane are positioned accurately, supported adequately and aligned and levelled in relation to the membrane and suspension system.

INSTALLATION

305 WORKMANSHIP GENERALLY:

–Handle, store and fix suspended ceiling materials and accessories in accordance with manufacturers' recommendations, BS 8290:Part 3 and design/performance requirements

–Set out accurately to give level soffits free from undulations, lipping and distortions in grid members.

–Fix securely with additional bracing and stiffening as necessary at upstands, access hatches, partition heads, etc. to give a stable system resistant to wind induced uplift and other specified design loads and pressures.

–Do not use cartridge or powder activated methods for top fixings or rivets for bottom fixings of hangers.

315 PROTECTION:

–No part of the suspension system must be subjected to loads for which it is not designed, including lateral loads from ladders, tower scaffolds, etc.

–Membrane materials must be handled carefully, kept clean and removed and replaced correctly using special tools and clean gloves, etc. as appropriate.

325 SETTING OUT: Unless shown otherwise, set out ceilings so that:

–Edges of tiles/panels are never less than half in width or length. Position grid to suit tile/panel size(s), allowing for permitted deviations from nominal size(s).

–All lines and joints are straight and parallel to walls unless specified otherwise. Where surrounding walls or other building elements and features to which the suspended ceilings relate are not square, straight or level, obtain instructions on setting out.

355 FIXING BOARDS TO CONCEALED GRIDS:

–Fix and join boards using methods, materials and accessories recommended by the board manufacturer.

–Cut boards neatly and accurately. Do not use damaged boards.

–Screw boards securely and firmly to grid members at recommended centres and edge distances, to give a flat surface free from bowing and lipping. Set heads of screws below surface of boards and fill flush with surface.

–Where not shown otherwise, provide movement joints as appropriate for the area of ceiling and/or to coincide with movement joints in surrounding structure.

–Stagger joints of boards applied in two or more layers. Ensure that edges and ends of each board are fully supported and screwed to grid members.

360 WIRE HANGERS:

–Straighten before use and install vertically without bends or kinks. Do not allow hangers to press against any fittings within the void.

–Tie securely at top and bottom with tight bends to loops to prevent any vertical movement.

380 JOINTING OF PERIMETER TRIMS to be carried out neatly and accurately without lipping or twisting using:

–Mitred joints at all external and internal corners.

–The longest lengths of trim available from manufacturer to keep intermediate butt joints to a minimum.

390 OPENINGS IN MEMBRANE MATERIALS to be formed accurately and neatly to suit sizes and edge details of fittings, using methods recommended by the manufacturer and without causing damage or distortion.

395 SUPPORT OF SMALL FITTINGS VIA MEMBRANE MATERIALS:

–Fittings must be adequately supported without causing damage or distortion to the membrane, by the use of rigid backing boards or other suitable means.

–Surface spread of flame rating of additional supporting material must match that of the ceiling membrane material.

400 INSULATION:

–Fit accurately and firmly with no gaps so that specified performance levels are achieved.

–Insulation within individual tiles, trays, etc. must be fitted closely and secured to prevent displacement when tiles are installed or subsequently lifted. Reseal any cut dustproof sleeving.

–Lay out insulation over the membrane in the widest practical widths to suit spacings of grid members, with closely butted joints.

–Do not cover electrical cables (unless they have been sized accordingly). Cut insulation carefully around electrical fittings, etc.

–On sloping and vertical areas of ceiling, fastenings must be used to prevent displacement.

405 FIRE STOPPING TO FIRE RESISTING SUSPENDED CEILINGS: Seal any gaps at junctions of ceiling with perimeter abutments, service penetrations, etc. using tightly packed mineral wool or approved intumescent sealant to prevent penetration of smoke and flame.

410 CAVITY FIRE BARRIERS:

–Fire resistance to BS 476:Part 20: Integrity/insulation (minutes): 60.
Material: Rockwool.

–Fix securely at perimeters and joints, ensuring permanent stability and continuity with no gaps, to provide a complete barrier to smoke and flame.

–Fixing to the ceiling must not impair free expansion of grid system or otherwise affect fire resisting performance.

420 SOUND BARRIERS:

–Material: EPDM profiled to suit the structural deck.

–Align accurately with partition heads. Fit tightly and fix securely at perimeters and joints, using methods recommended by the barrier manufacturer, including steel support sections as appropriate. Ensure permanent stability and continuity with no gaps.

–Seal any gaps at junctions of sound barriers with partition heads, suspended ceiling, structural soffit, walls, ducts, pipes, etc. using mineral wool or suitable sealants.

500 ELECTRICAL CONTINUITY AND EARTH BONDING:

–All substantial conductive parts of the suspended ceiling system including integrated electrical equipment and fittings, are to be electrically continuous and fully earth bonded in accordance with BS 7671 (The IEE Wiring Regulations).

–Ensure that earth bonding is completed as soon as possible after completion of each independent area of suspension system.

–After completion of the ceiling installation, associated services and fittings, arrange for tests to demonstrate that the ceiling is electrically continuous and fully earth bonded in accordance with BS 8290:Part 3.

–Notify the CA to enable the testing to be witnessed. Submit a test report to the CA.

505 ELECTRICAL WIRING:

–Ensure that electrical wiring is installed above the insulation unless it is sized accordingly.

510 INSTRUCTIONS AND TOOLS: Provide the Main Contractor with duplicate sets of user instructions and access tools recommended by the suspended ceiling/access panel manufacturer. One for the use of contractors requiring access to the void and the other for handing over to the CA at Practical Completion.

520 USER INSTRUCTIONS: Provide the Main Contractor with two copies; one for the use of contractors requiring access to the void and the other for handing over to the CA at Practical Completion. The contents of the instructions to include:

–Correct methods for lifting and replacing tiles, panels, etc.

–Cleaning methods and materials.

–Decoration of tiles and touching up where appropriate.

–Limitations placed on subsequent alterations and maintenance procedures to fire resisting suspended ceilings to ensure that their performance is not impaired.

530 SPARES: Provide the following and hand over to the Employer at Practical Completion:

Ceiling tiles: 24 no.
Grid sections: 3m length of each type.
Perimeter trim: 3m length.

540 POST INSTALLATION VISIT: After completion of services and associated work by others:

–Thoroughly inspect the ceiling installation for defects. Prepare a schedule of outstanding defects and submit a copy to the CA.

–Check that tiles, integrated luminaires, diffusers, etc. are correctly fitted, aligned and clean.