PRODUCT BRAND	**ALTAIR**
MANUFACTURER	**ALTAIR UK LTD, 2ND FLOOR, 145-157 ST.JOHN STREET, ECIV 4PY, LONDON.**
APPLICATION	**AL800 STEEL CEMENTITIOUS OA RAISED ACCESS FLOOR FOR COMMERCIAL, OFFICE BUILDING OR EQUIPMENT ROOM**

Specification Details

Panel Type	AL 800
Understructure Type	Cornerlock, Freelay Corner Support, Cornerlock Clip-On Stringered, Cornerlock Bolt-On Stringered & Stringered Freelay (50mm to 2,500mm FFH)

Description of the Access Floor System

The AL 800 Access Floor will provide a stable platform suitable for the general office & equipment room environments. The floor panels will be constructed utilizing raw quality steel for the bottom pan and full hard steel for the top sheet. The panel will be fully spot welded together (minimum 36 welds in each dome and 10 welds along each flange).

The panel will be die cut to size, phosphate coated (or equivalent) and epoxy powder coated to provide adequate corrosion protection. The panels will be corner locked into place providing equipotential bonding or they can be gravity held with or without stringers.

The cross-head or flat-head pedestal head will provide support for the panel under the flange and picture frame. The pedestal head will also capture the access floor panel providing positive location and additional safety after the corner lock screws are removed.

The raised access floor system will be capable of withstanding various duty static/dynamic loads experienced in the general office and equipment environments.

Objectives Summary

Panel: Manufactured from cold rolled steel sheet.

- Top = cold steel (SPCC)
- Bottom = Draw Quality (ST14 or better)
- The base panel will utilize the Manufactures existing panel design and incorporate the Corner Lock feature in conjunction

	with the positive location details. • AL 800 = Steel Gauges: top 0.6-0.8mm and bottom 0.7-0.9mm
Corner lock:	The panel will be manufactured with four (4) Corner lock holes to allow the panel to be fixed to the pedestal head. The Corner lock screws will also provide positive electrical bonding.
Panel Surface Coatings:	Steel substrate is to be finished with a zinc phosphate coating (or equivalent) before Epoxy Powder coat is applied to the external surface of the sized panel.
Surface Colour:	Dark Grey (Epoxy Powder Coat paint)
Core:	Portland cement and water with foam additive to adjust core density. The core material must have recycled content. The panel must be filled with zero voids to eliminate weak spots. The core material must not break down causing internal crackling noise under panel load.
Core Hardness:	Minimum - 13 to 20 Mpa (compression strength) this is dependent on panel grade.
Pedestal Head:	1. Aluminum Die cast head with Corner lock feature and positive location tab details. Zinc plated steel stud and anti-vibration nut assembled and detent feature. 2. Flat steel pedestal head will accommodate stringers. Zinc plated steel stud and anti-vibration nut assembled and detent feature. The steel stud will be sized to accommodate existing pedestal base.
Pedestal Base:	The pedestal base must accommodate the pedestal base steel stud referred to above. FFH = 50mm to 2,500mm
Pedestal Gasket:	A freely Pedestal Head Gasket of suitable rubber construction with permanent attachment to the Corner lock pedestal head is required. This will provide an isolation barrier between panel and pedestal head. The Gasket materials will have an electrical resistance of <104Ω
Stringer Gasket:	Stringer gaskets must be flexible and clip onto the stringer. They must be manufactured utilizing conductive polyethylene materials

	and have an electrical resistance of <104Ω
Stringers:	The surface coating of clip-On and Bolt-On must not promote the formation of zinc whiskers. Need to nominate Stringer size to accommodate panel depth and flange.
Environment:	All materials must be environmentally friendly, non-hazardous, low emission, no CFC and low impact. There shall be no CO_2 emission during or after the production process of any components. No VOC (Volatile Organic Compounds) allowed during the life cycle of the product. Panel and under structure system shall be required to have a minimum recycled content of 40%.
Manufacture:	The access floor panels and substructure must be manufactured and quality controlled utilizing a recognized quality system. Reference samples must be kept for five (5) years.
Panel Shape:	The access floor panels must be die cut to control size, shape and squareness within the tolerance range of "MOB PF2 PS" Platform Floors (Raised Access Floors) Performance specification.
Stability:	The access floor panel and system will remain stable and not alter the performance characteristics when exposed thermal and humidity change.
Effects:	The access floor panel and supporting syatem shall be resistant to the growth of fungi and Micro-organisms and attack by insects. The floor syatem shall be designed to resistant vermin attack or infestation. The floor components shall not give off any odours or toxicity.
Fire:	The access floor Panel and Syatem will be fire resistant. The test and performance requirements will be in accordance with • British standard 476: Part 7:1997(To determine the tendency of the surface of a material or a combination of materials to support the spread of flame across its surface and to classify the surface) • British Standard 476: Part 6:1989 (fire propagation for products)

Surface Finish:	The access floor shall be capable of having carpet tile, High Pressure Laminate (HPL), Vinyl Linoleum and hard surfaces such as stone and ceramic finishes applied. Surface flatness to within 0.25mm
Tolerance:	Panel Size=599.75x599.75+/-0.25mm (Main Panel Size) Panel Size=609.35x609.35+/-0.25mm (Main Panel Size) Panel Thickness = 32mmfor MEDIUM GRADE
Cutting:	The Access Floor Panel must be able to be cut on site with standard cutting tools. Dust extraction may be needed in isolated areas. Dust from cutting must not be hazardous to the operator or those in close proximity to the operation.
Installation:	The access floor will be rigid, free from vibration and rocking panels within a 0.3mm level over the entire floor area. The access floor pedestals must have a minimum of +/-25mm of adjustment. Panels will be accurately cut to fit around all permanent features.
Antistatic:	The access floor panel and supporting under –structure will provide a dissipative path to earth for the control of static build up. The general range is 1x106 to 1x1011 Ohms is acceptable.
The Design Life:	The access floor system must be capable of withstanding the day to day operating load and conditions of the general office and equipment room environments. The acceptable design life of 25 years is preferred. The core material must not deteriorate or breakdown over time.
Equipotential bonding:	The corner lock access floor system should be capable of being electrically bonded so all panels and pedastels have an electrical contact of less than <1Ω
Air Leakage	Air leakage on corner lock access floor system should be minimal and restricted were possible Air Leakage on Clip-on stringered or Bolt –On stringer under structure should be restricted to <0.5I/s per m2according to MOB PF2 PS January 1990 for Air Leakage Rate Test .
Sound	In accordance with BS EN ISO 14012, Airborne sound

Transmission:	insulation: 31dB and Impact sound insulation: 72dB
Recycle:	The access floor panels and substructure must be able to be recycled
Performance:	The raised access floor will have a safety factor of 3 times the concentrated (design) load and be capable of meeting 3.0KN static and dynamic loads per CISCA recommended test procedures for access floors or MOB PF2 PS/SPU: Platform floors (raised access floors). The raised access floor will be subjected to general office and equipment room environments. Work station, Partitions, racking and filling syatem will generate static loads. Dynamic loads will be aligned with frequent foot traffic at lift lobbies, corridors, walkways and infrequent rolling loads.

PERFORMANCE REQUIREMENTS

The Raised access floor syatem shall meet or exceed all of the specific Performance Requirements set out below:

General

All components shall be protected against corrosion with the manufactures standard factory applied protective finishes.

Concentrated Load

The Access Floor system shall be capable of accepting a point load, over 25mm x25mm area of 3.6KN respectively with a maximum deflection of 2.50mm by CISCA 2003-2004.

Rolling Loads

The access floor system shall sustain the following rolling loads with a maximum total permanent deformation of 1.0mm in the top surface based on the following dynamic load tests by CISCA2003-2004.

- 668lb for 10 passes - Ø3'' x113/16'' wheel
- 500lb for 10,000 passes - Ø6'' x2'' wheel

Uniform Load

Panel supported on actual under structure (the system) shall be capable of supporting a uniform load of 13.59KN/sq m placed on the entire area of AL 800 panel with a maximum deflection of 2.50mm and generating a permanent set of no more than 0.25mm once the load is removed.
Note: The Uniform load of a raised access floor panel as specified herein should not be confused

with the “Uniform live load” as specified in seismic area application. The test accords to CISCA.

Ultimate Load

The access floor system shall accept minimum AL 800 2400 lb point load over 25mm x 25mm area without collapse according to CISCA 2003-2004.

Impact Load

An Impact load imposed on the access floor system by dropping a 40Kg sand bag from1000mm height to 500mm dia. Area shall not cause structural failure according to MOB PF2 PS testing methods.

Pedestal Load

The support pedestals shall individually be capable of sustaining a 22.5kN axial load for five minutes without loss of function or structural failure by CISCA 1986-87.

Stringer Concentrated Load

Stringer shall be capable of withstanding a concentrated load of 450 lbs. placed its mid span on a one square inch area using a round or square indent or without exceeding a permanent set of 0.010” after the load is removed by CISCA2003-2004

Electrical Resistance

The antistatic requirement for the access floor will be measured in accordance with MOB PF2PS clause –T43.00. Both surface and bulk electrostatic resistance shall fall in the range of 1x106 and 1x1011 Ohms.

Dimensional Tolerances

Panel squareness shall be within ±0.25mm. Panel dimensions shall within ±0.25mm of nominal size. Concavity or convexity of panels shall not exceed 0.75mm. The test is according to MOB PF2 PS.