

Specification sheet: TC1350F-TC102

PROJECT

APPLICATION	Extra Heavy-Duty Office with frequent underfloor access
ACCESS FLOOR	Tascor® Freelay 'Extra Heavy Grade' System

SPECIFICATION DETAILS:

PANEL TYPE:	Tascor TC1350F Freelay Panel &
UNDERSTRUCTURE TYPE:	Tascor TC102 Freelay Understructure atmm finished floor height

DESCRIPTION OF TC1350F-TC102 ACCESS FLOOR SYSTEM

The Freelay 'Extra Heavy Grade' Access Floor System uses gravity-held panels and a stringerless understructure to allow quick and easy access for the completion of frequent tasks within the underfloor plenum. The panels are securely gravity-held at the corners by understructure location lugs to provide a stable and rigid access floor system with easy underfloor access. This access floor system is capable of withstanding severe static and dynamic loads experienced in extra heavy-duty office environments that require frequent underfloor access.

PERFORMANCE SUMMARY

Application	An extra heavy-duty environment requiring frequent underfloor access where high densities of people and/or equipment occupy the space. The space is likely to be subject to severe levels of foot traffic and heavy equipment loads, plus frequent rolling loads in the corridors and aisleways.
Performance	The access floor will be Extra Heavy-Grade, with a safety factor of three times the concentrated (design) load, and is capable of meeting extra heavy static & dynamic loads per AS 4154 -1993 Australian Standard - General Access Floors.
Finished Floor Height	Finished floor height of the access floor, measured from the sub-floor to the top surface of the installed access floor, shall be as shown in the contract drawings.
Surface Finish	The access floor shall have a 'bare' panel surface finish ready to accept on-site floor covering supplied by others.
Installation	The access floor will be rigid, free from vibration and rocking panels within a ± 3.0 mm level over the entire space. Panels will be accurately cut to fit around all permanent features.
Fire Rating	All panels are to provide zero fire hazard indices under Australian Standard AS 1530 for Ignitability, Spread of Flame, Heat Evolved, Smoke Developed.
Maintenance	All whole panels will be interchangeable allowing for any future changes. The access floor will maintain these original conditions when runs of panels have been removed for normal underfloor access.

Performance to Standards Guide per AS 4154 - 1993 Australian Standard - General Access Floors

Tascor® TC1350F-TC102 Access Floor System			Static Performance Loads		Dynamic Performance Loads			Impact Load
Panel Surface Finish	AS 4154 Performance Grade	Tasman Specification Code	Concentrated Load 25mm square	Ultimate Load 25mm square	75mm x 25mm 10 passes	150mm x 50mm 10,000 passes	200mm x 75mm 2.25kN	25mm square
Bare	Extra Heavy Grade	TC1350F-TC102	6.0 kN	18.0 kN	5.5 kN	4.4 kN	500,000 Passes	68 kg

Reference 1kN = 102kg

1. GENERAL

WORK INCLUDED

The access floor contractor shall provide submittals, materials and installation of the access floor system as shown on the contract drawings and as specified in this document.

RELATED WORK NOT INCLUDED

The builder or general contractor shall provide clear access, dry secure storage and a clean sub-floor area which is free of construction and other trades debris during the installation of the access floor system.

The area to receive the access floor shall be enclosed and be maintained at a temperature range of 5°C to 32°C in a relative humidity range of 20% to 70%.

The concrete dust sealer (if any) shall be compatible with the access floor pedestal adhesive.

The electrical contractor shall provide necessary material and labour to electrically connect the access floor to the building earth.

SYSTEM DESCRIPTION

The access floor system shall consist of interchangeable square panels of a nominal 600mm x 600mm dimension. The panels shall be selected to meet specific load requirements as detailed in Part 3 of this specification.

The panels shall be supported by adjustable pedestal assemblies, which will positively locate panels to create a rigid membrane.

The understructure system will be as defined under Part 2 of this specification.

The finished floor height of the system above the sub-floor shall be as shown in the contract drawings.

SHOP DRAWINGS AND PRODUCT DATA

The access floor contractor shall submit drawings showing the complete access floor system including floor panel layout and all accessories that are part of the system.

The access floor contractor shall submit details and descriptive notes for finished components, anchoring, edge details and interfaces with adjoining work.

SAMPLES

The access floor contractor shall submit for approval one full-size floor panel with finished surface and understructure components for each type of access floor system being supplied.

QUALITY ASSURANCE

The access floor contractor shall submit certified laboratory test data for approval. This data will demonstrate that the Product & System Requirements under Part 2, the Performance Requirements under Part 3 and the Test Methods under Part 4 of this specification are met.

The access floor contractor shall provide a Quality Assurance Plan, which demonstrates that the installed product meets the requirements of this specification.

2. PRODUCT & SYSTEM REQUIREMENTS

ACCESS FLOOR PANELS

The panels shall be 600mm x 600mm in size and shall be interchangeable with other panels except where cut for special conditions. The panels shall be easily removed and replaced without disturbing adjacent panels, by one person using a portable lifting device.

The panels shall consist of a full hard steel top sheet and a die formed bottom pan with a corrosion resistant protection, inside and out, filled with a structural concrete composite core.

The panels shall be rigid structural assemblies, fabricated to size with a size and squareness tolerance of $\pm 0.25\text{mm}$ and a flatness tolerance of $\pm 0.5\text{mm}$ measured on a diagonal across the top of the panel.

UNDERSTRUCTURE SYSTEM

The understructure system shall consist of steel pedestal base and aluminium head assemblies fabricated with the manufacturers standard corrosive resistant finishes. All components are to be factory assembled. Pedestal bases shall be no less than 10,000 mm² in foot print area.

The assembly shall be fabricated with sufficient height to provide the required underfloor clearances shown on the contract drawings.

For finished floor heights of 150mm and over, vertical adjustment shall be accomplished over a range of not less than $\pm 25\text{mm}$ without requiring the rotation of the pedestal head.

For finished floor heights less than 150mm a minimum of $\pm 10\text{mm}$ adjustment is required.

The pedestals will be provided with a means of levelling and locking the assembly at a selected height, which requires a deliberate action to change the height setting, and which prevents vibration displacement.

Each pedestal field head shall be designed to receive a sound absorption gasket.

ACCESSORIES

Air Grilles are to be provided in locations and sizes as detailed on the contract drawings.

Service Outlets are to be provided in locations as detailed on the contract drawings. The outlets will accommodate power, communications, and data signals.

The access floor contractor shall provide the standard steps, ramps, and fascias in locations and as detailed on the contract drawings.

The access floor contractor shall provide spare floors panels and square metres of understructure system for each type used in the project for maintenance stock. These spares shall be delivered to the project in manufacturers standard packages clearly marked with the contents.

The access floor contractor shall provide number of panel lifting devices.

Other accessories to be provided by the access floor contractor should be listed and defined here.

3. PERFORMANCE REQUIREMENTS

The access floor system shall meet or exceed all of the Specific Performance Requirements set out below:

GENERAL

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

AUSTRALIAN STANDARD

The entire access floor system under this specification shall meet or exceed all of the requirements for Extra Heavy Grade under AS 4154 - 1993 Australian Standard - General Access Floors.

IMPACT LOAD

An impact load imposed on the access floor system by dropping a 68kg mass from a 900mm height onto a 25mm x 25mm square indenter shall not create structural failure.

FIRE HAZARD

The panels, without floor coverings, shall provide zero indices for ignitability, spread of flame, heat evolved and smoke developed. These indices shall not change when the panel is cut.

OCCUPATIONAL HEALTH & SAFETY

The access floor system shall not include any toxic substances, which could prove harmful to building occupants, nor shall it create dust or contaminants, which are harmful to personnel or equipment.

PANEL WEIGHT

The panels shall not exceed 16.0 kg in weight.

4. QUALITY ASSURANCE & TEST METHODS

The access floor manufacturer shall demonstrate the existence of a fully documented quality assurance program specifically established to ensure product performance required in Part 3 of this specification.

In addition, the access floor contractor shall provide certification of the Performance Requirements set out herein, on randomly selected, standard product using Test Methods summarised below.

AUSTRALIAN STANDARD TESTS

The tests for Extra Heavy Grade Access Floor Systems shall be carried out and certified under Test Methods AS 4155.1 to AS 4155.14 inclusive.

IMPACT LOAD

A canvas bag of nominal diameter 300mm shall be dropped from a clear height of 900mm onto a 19mm thick timber spreader on 25 x 25mm indenter placed on the panel under the spreader. Tests shall be conducted at the centre of the panel and the centre of edge of panel. Panels shall be mounted in specified understructure for the test. Failure is defined as the point at which the system collapsed.

FIRE HAZARD

The panels produce early fire hazard results under Australian Standard AS 1530 Part 3, which include Ignitability 0, Spread of Flame 0, Heat Evolved 0, and Smoke Developed 0.

5. SITE & INSTALLATION

QUALIFICATION

The access floor system and accessories to be installed by the manufacturer's authorised representative to maintain the integrity of the products and acceptable performance of the completed installation.

INSPECTION

Examine the sub-floor for unevenness, irregularities and dampness that could effect the quality and execution of the work.

Do not proceed with installation until the sub-floor surface is clean, dry, clear of the other trades and ready to receive access flooring.

PREPARATION & INSTALLATION

The access floor is to be prepared and installed in accordance with the access floor manufacturer's instructions, covering preparation, layout, alignment, and installation.

LEVEL & FIT

The installed access floor shall be level within $\pm 1.5\text{mm}$ in 3 metres or $\pm 3.0\text{mm}$ over the entire floor and shall be rigid and free of rocking panels.

The perimeter fit of cut panels around perimeters, columns and other such structures shall have a maximum gap of 2mm but the system shall not rely for its lateral stability on such structures.

EDGE TREATMENT

Cut edges of panels shall be sealed in accordance with the access floor manufacturer's instructions.

ADJUST AND CLEAN

The access floor contractor shall remove access floor installation debris as work progresses, maintaining the area under finished panels in a clean condition.

The general contractor/builder will provide protection to the finished access floor to prevent damage from misuse.

MAINTENANCE AND HAND-OVER

On completion the access floor contractor shall provide a 'Care and Maintenance Manual' which shall provide clear instruction for maintenance personnel in the safe use, cleaning and application of the access floor.