

## Standard Transline Plus Unit Specification

### Design Concept

Units are manufactured in a factory environment to ensure quality of finishes and accuracy of construction. Units are designed to stand alone or to be linked end-to-end, side-to-side or any combination of ways. Standard units can be stacked up to five units high and can be installed at any level within a complex.

Units are constructed from steel frame elements which are sub-assembled and then bolted together to form a skeleton unit. External walls panels are then installed to provide a rain screen.

### Floor Construction

Floor deck is 16mm cement particle board T & G mechanically fixed to the chassis using self-drilling screws. Floor chassis assembly is constructed from longitudinal hot rolled main support members 305 x 102 x 33 UB (S355). Joists are then welded between at circa 400mm Ctrs, joists are 125 x 38 x 3mm, cold rolled channels galvanised G275. The ends are hot rolled 125 x 65 x 15Kg PFC (S355). All heat effected areas of the chassis and elements of mild steel are painted with zinc rich primer.

The whole of floor is under drawn with 0.6mm galvanised steel sheet which is tack welded and mechanically fixed in place. The void between the under drawing and floor deck is insulated with a glass quilt material. The 'U' value of the floor complies with the building regulations in place at time of manufacture. The above construction dependant on adequate foundations being installed is capable of withstanding loads up to 3kN/m<sup>2</sup>.

### External Columns

Four corner columns from hot rolled 100 x 100 x 8mm SHS (S355) square hollow section with a 15mm flat bar packer welded top and bottom to allow welding of the floor and roof assemblies. A hot rolled 150 x 75 x 18Kg PFC (S355) is welded between the posts at the top

to form a goal post arrangement. All heat effected areas of the chassis and elements of mild steel are painted with zinc rich primer.

A top plate is fully welded into the top of the columns with a 30mm nut welded to the underside to allow a lifting eye to be fixed during loading and offloading, and on lower units once sited for a locating cone to be fixed.

### **External Walls**

External walls are proprietary manufactured 100mm thick composite panels consisting of a PIR core sandwiched between an inner and outer 0.6mm galvanised steel sheet facings finished with an enamel polyester paint - Colour RAL 9002. The panels have a rolled interlocking locking edge c/w an intumescent seal.

### **Roof**

The roof frame chassis assembly is constructed from longitudinal hot rolled main support members 305 x 102 x 33 UB (S355). Joists are then welded between at circa 615mm Ctrs. Joists are 102 x 38 x 25 x 2mm cold formed channels galvanised G275 with galvanised steel angle upstands welded to the web of every third joist to form a fall to one end of the unit. Joists provide support for the external roof system and internal ceiling lining.

The roof panel is a proprietary manufactured insulated composite panel consisting of a PU core with an outer profiled weather sheet of 0.5mm plastisol steel and an inner 0.5mm sheet steel with a paint finish.

The ceiling is constructed from 9mm magnesium oxide board, pre-finished with a 0.5mm Polyrey (Formica) sheet pre-bonded to the board at the suppliers to form a decorated finish Colour White. The boards are fixed to the underside face of the steel frame via a steel 'U' section, finished with a plastic decorative insert.

Rainwater is discharged from the roof into a black PVC mini guttering system with 2 No. Ø50mm fall pipes per unit.

## **Floor Finishes**

Generally, 2mm solid sheet non slip vinyl fully bonded to the floor deck. Floor joints are finished with a chamfered 3mm thick aluminium floor strip.

## **Windows**

PVCu multicell extruded sections manufactured to BS E. All corners mitred and fully heat welded. Opening sash hung on tilt and turn mechanism (opening internal) in a fully weather-stripped frame and held closed with non-locking Cockspur handles. The windows are double-glazed, Sealed units comprise of 4mm clear float – 20mm air gap – 4mm low “E” glass which achieves a “U” value of 1.6w/m<sup>2</sup>K

## **External Doors**

All external doors are robust pre- finished proprietary manufactured external doors with door furniture to suit the application.

## **Internal Partitions**

Internal partitions are proprietary manufactured 100mm thick composite panels consisting of a PIR core sandwiched between an inner and outer 0.6mm galvanised steel sheet facings finished with an enamel polyester paint - Colour RAL 9002. The panels have a rolled interlocking locking edge c/w an intumescent seal.

## **Internal Doors**

All internal doors are robust pre-finished proprietary manufactured external doors with door furniture to suit the application.

## **Plumbing**

- Hot and cold-water services are run in copper pipe work with either capillary soldered joints or compression joints. Service valves are incorporated into the pipe work before every outlet to enable local isolation for maintenance or replacement. All pipework is surface mounted painted grey.

- Sanitary ware is white vitreous china to BS 3402.
- Wash hand basins supported on towel rail bracket. Taps are chrome plated brass non concussive.
- Toilet pans are low level with white plastic cisterns with a black plastic seat and lid.
- Urinals are either waterless (ceramic) or flushing stainless steel troughs.
- Shower are proprietary manufactured pods c/w bi-folding doors.
- Shower heaters are 7Kw c/w handset and riser rail.
- Hot water is provided by either point of use water storage unvented heaters or unvented cylinders, with the capacity of heater to suit the application.
- All wastes are run in white push fit plastic pipe work internally and grey or white push fit plastic external.

## Electrical

- All electrical installations are to be carried out in accordance with the latest IEE regulations.
- All electrical fittings supplied to be surface mounted.
- Each modular unit will be fitted with an individual Mains Distribution Unit prewired to an external IP rated plug (for connection by others).
- Internal and external lighting from LED light fittings.
- Light switching generally by PIR sensors.
- Heating 2kW wall mounted convector heaters with integral timers and thermostats.
- All sockets and switches to comply with BS3676.
- All lighting to be wired in a minimum of 1.5mm<sup>2</sup> cable, a loop-in principle will be used linking all live feeds at the light fitting.
- All ring circuits will be wired in a minimum of 2.5mm<sup>2</sup> cable.
- All radial circuits will be wired in a minimum of 2.5mm<sup>2</sup> cable.
- All cables to be LSF concealed within surface fixed trunking.
- All copper earthing conductors, bonding conductors, and circuit protective conductors (CPC), will be in accordance with current IEE Regulations.
- All incoming services (Water, Gas etc) will be earthed at point of entry.