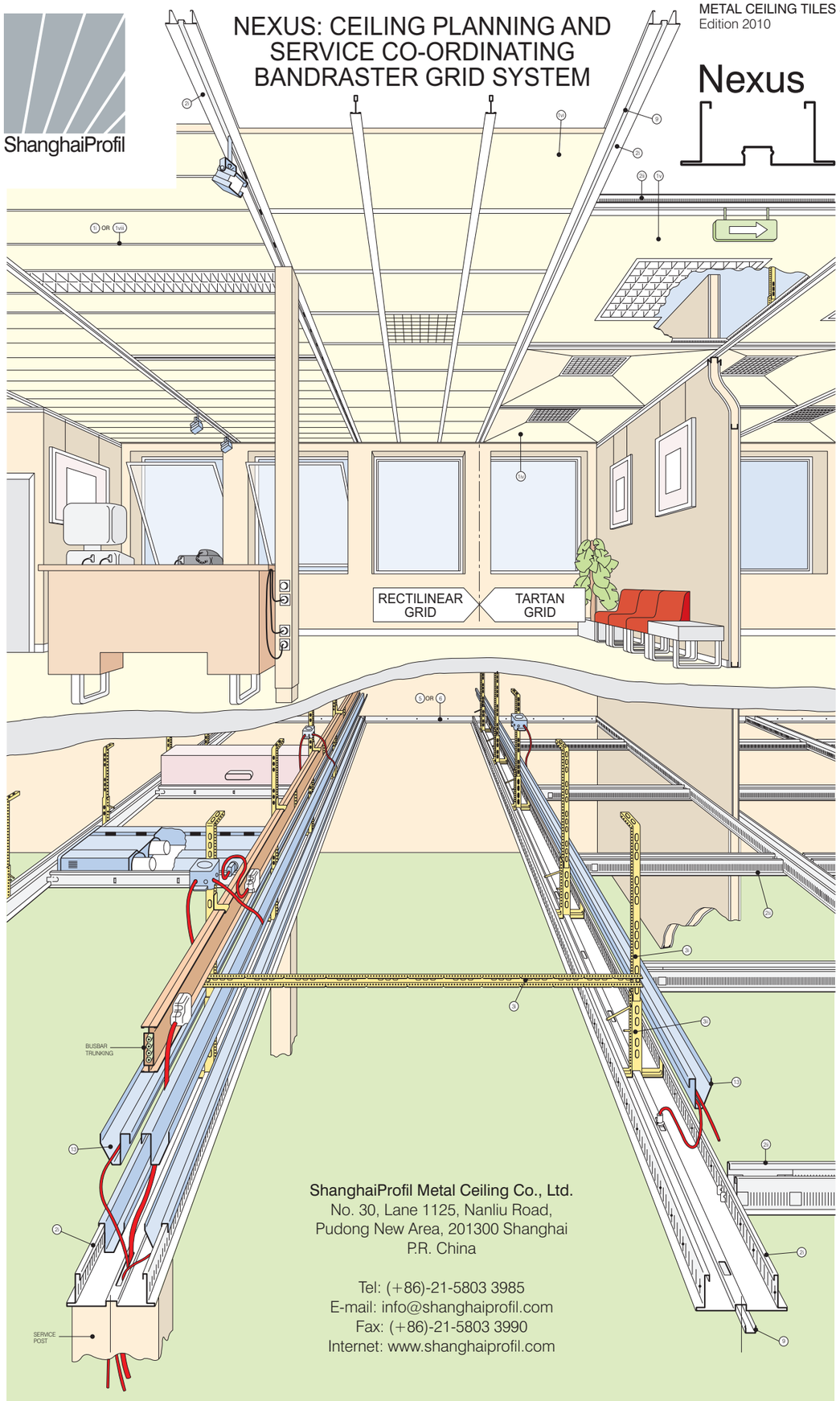
ShanghaiProfil

NEXUS: CEILING PLANNING AND SERVICE CO-ORDINATING BANDRASTER GRID SYSTEM

METAL CEILING TILES 3.05
Edition 2010

Nexus



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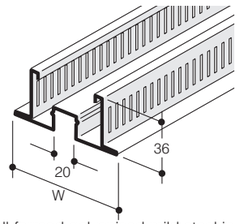
2i

NEXUS SYSTEM COMPONENTS



Cold roll formed galvanised mild steel in the thicknesses shown in Table 1.
Standard finish: stove enamel matt polyester paint.

Colours: standard white (RAL 9010).

Special finishes: Powder coated finishing. Other finishes subject to minimum order quantity.

Standard length: 3600mm or cut to size required up to maximum of 7000mm.

Table 1. NEXUS Bandraster widths and metal thicknesses.

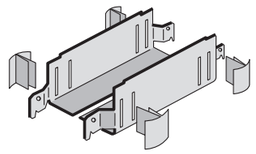
Legend:
W = NEXUS Bandraster width mm
H =NEXUS Bandraster height mm
St = mild steel thickness mm

W	H	St
100	36	0.7
120	36	0.8
150	36	0.8

2ii

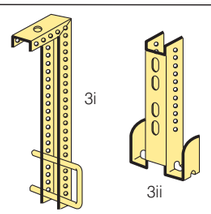
Specification exactly as (2i) except that these NEXUS Bandraster profiles are for cross runner purposes in TARTAN GRID configurations and are supplied in lengths to suit the grid module.

2A



NEXUS Bandraster splice angle. 168mm long overall, manufactured in 1mm thick galvanised mild steel 2 no's required per coupled end of Bandraster profile, 4 no's per cross over junction in TARTAN GRIDS, including 2 no's 0.4mm thick steel fixing clips per splice.

3i



Upper section VERNIER hanger in 1mm thick galvanised mild steel with 2.5mm dia. steel looped security pin. Section edges are vee notched to provide 'easy break' positions at 62mm centres.
Standard length: 2000mm

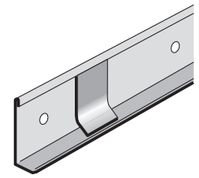
3ii

Suspension bracket manufactured in 2mm thick galvanised mild steel.

4

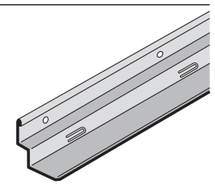
Reference number allocation to a component is based on its function in the ceiling system. No NEXUS component suits item (4) classifcation.

5



Perimeter angle trim in cold roll formed 0.7mm thick galvanised mild steel.
Standard finish: as item (2i)
Standard length: 4000mm.
Overall size: 40mm deep x 20mm wide.

6

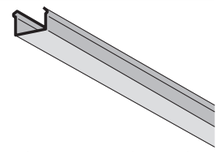


Perimeter shadow line angle trim in metal and length as item (5).
Standard finish: as item (2i)
Overall size: 44mm deep x 36.5mm wide. Shadow gap width = 12.5mm.

7 & 8

Reference number allocation to a component is based on its function in the ceiling system. No NEXUS component suits Item (7) or (8) classifications.

9

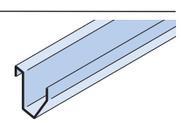


NEXUS Brandraster groove closure piece V20H8 cold roll formed out of 0.4mm thick aluminium.
Colours: standard white (RAL 9010)
Special finishes: subject to minimum order quantity
Standard length: 3600mm or cut to size required.

10 - 12

Reference number allocation to a component is based on its function in the ceiling system. No NEXUS component suits items (10 & 11) classifcations.

13

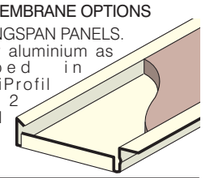


Cable tray cold roll formed out of 0.4mm thick galvanised mild steel.
Standard length: 2000mm

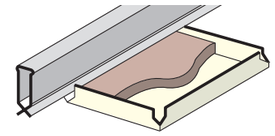
1i

CEILING MEMBRANE OPTIONS

LAY IN LONGSPAN PANELS.
In steel or aluminium as described in ShanghaiProfil RANGE 2 technical literature.

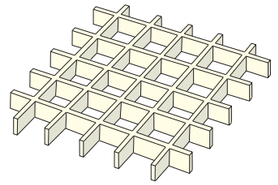


1ii



CLIP IN or LAY IN PAN TILES.
In steel or aluminium as described in ShanghaiProfil RANGE 3 technical literature.

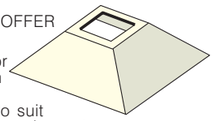
1iii



OPEN CELL (LOUVRE) PANELS.
In steel or aluminium as described in ShanghaiProfil RANGE 4 technical literature.

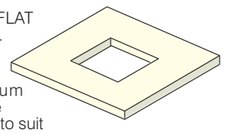
1iv

LAY IN COFFER PANELS.
In steel or aluminium bespoke designs to suit customer requirements.



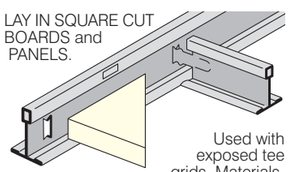
1v

LAY IN FLAT PANELS.
In steel or aluminium bespoke designs to suit customer requirements.



1vi

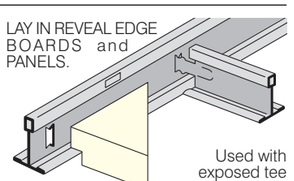
LAY IN SQUARE CUT BOARDS and PANELS.



Used with exposed tee grids. Materials, designs, and systems, various.

1 vii

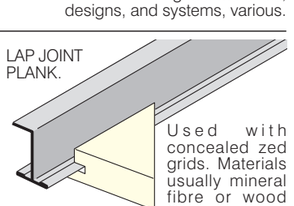
LAY IN REVEAL EDGE BOARDS and PANELS.



Used with exposed tee grids. Materials, designs, and systems, various.

1 viii

LAP JOINT PLANK.

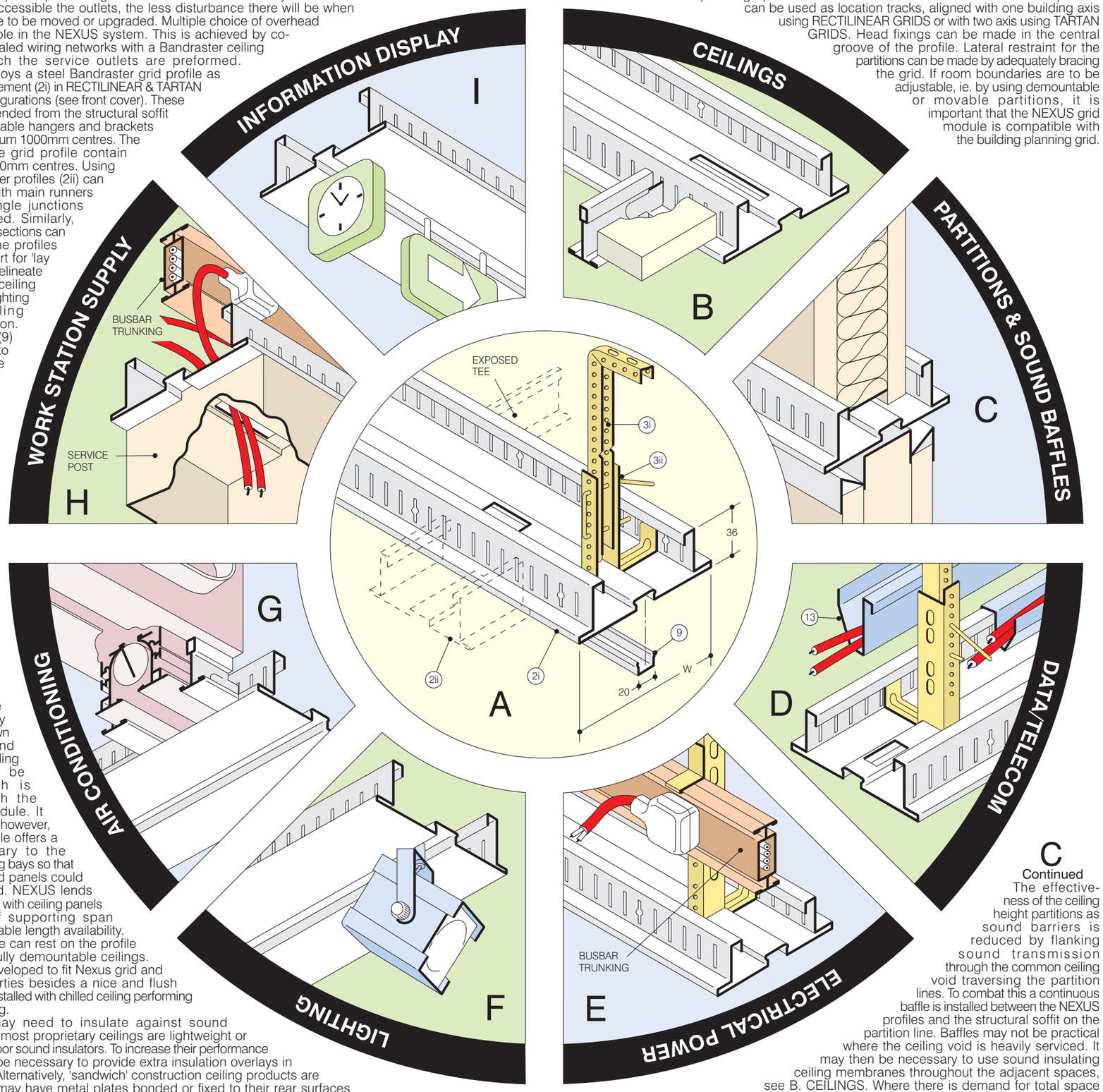


Used with concealed zed grids. Materials usually mineral fibre or wood fibre.

A INTRODUCTION

Conveniently sited power and data/communication supply outlets are needed by users of desktop data processing and modern communication systems. The more numerous and accessible the outlets, the less disturbance there will be when workstations have to be moved or upgraded. Multiple choice of overhead outlet is obtainable in the NEXUS system. This is achieved by co-ordinating concealed wiring networks with a Bandraster ceiling grid within which the service outlets are preformed.

NEXUS employs a steel Bandraster grid profile as the main runner element (2i) in RECTILINEAR & TARTAN GRID ceiling configurations (see front cover). These are directly suspended from the structural soffit using rigid adjustable hangers and brackets (3i & 3ii) at maximum 1000mm centres. The two stems of the grid profile contain pierced slots at 10mm centres. Using these, cross runner profiles (2ii) can be interlocked with main runners to form right angle junctions wherever required. Similarly, exposed tee grid sections can be locked into the profiles to provide support for 'lay in' ceilings or to delineate apertures in the ceiling membranes for lighting and air handling terminal integration. A closure piece (9) can be clipped into the 20mm wide groove formed centrally in the face of the Bandraster profile.



B CEILINGS

There are no limits to the ceiling systems and material which can be used. Those commonly specified are shown on front cover and rear pages. A ceiling module should be selected which is compatible with the NEXUS grid module. It should be noted, however, that the grid profile offers a ledging boundary to the demarcated ceiling bays so that 'lay in' boards and panels could be cut if required. NEXUS lends itself ideally to use with ceiling panels which offer self supporting span capacity and variable length availability. The ends of these can rest on the profile ledges to form fully demountable ceilings. Nexus-Tilux is developed to fit Nexus grid and has these properties besides a nice and flush layout. It can be installed with chilled ceiling performing an air conditioning.

Ceilings may need to insulate against sound transmission. As most proprietary ceilings are lightweight or porous they are poor sound insulators. To increase their performance it may therefore be necessary to provide extra insulation overlays in the ceiling void. Alternatively, 'sandwich' construction ceiling products are available; these may have metal plates bonded or fixed to their rear surfaces and are less likely therefore to lose performance through site disturbance.

C PARTITIONS & SOUND BAFFLES

Ceiling height partitions may be employed to provide flexible space planning options. In these instances the NEXUS Bandraster profiles can be used as location tracks, aligned with one building axis using RECTILINEAR GRIDS or with two axis using TARTAN GRIDS. Head fixings can be made in the central groove of the profile. Lateral restraint for the partitions can be made by adequately bracing the grid. If room boundaries are to be adjustable, ie. by using demountable or movable partitions, it is important that the NEXUS grid module is compatible with the building planning grid.

C Continued

The effectiveness of the ceiling height partitions as sound barriers is reduced by flanking sound transmission through the common ceiling void traversing the partition lines. To combat this a continuous baffle is installed between the NEXUS profiles and the structural soffit on the partition line. Baffles may not be practical where the ceiling void is heavily serviced. It may then be necessary to use sound insulating ceiling membranes throughout the adjacent spaces, see B. CEILINGS. Where there is demand for total space planning flexibility, specifiers should consider the advantages of the latter principle over baffles installed on every grid line and the other option of installing baffles when the building is in use.

D DATA/TELECOM

'Add on' steel trays (13) house screened cables which carry voice, text, data and image communications to the workstation service posts, see H. WORKSTATION SUPPLY. The trays are designed to be accommodated within the NEXUS Bandraster profiles by clipping them (2 no's) over the profile stems. Two trays can also be incorporated in the grid space by spanning between hangers and supporting them on the hanger brackets (3ii). Cable entry to the rooms is via cutouts preformed in the base of the Bandraster profile's central groove. Standard cutouts 30mm x 12mm are made at 300mm centres although other arrangements can be made.

E ELECTRIC POWER

Electric power distribution is via a Busbar trunking which is aligned with the NEXUS grid, spanning between its hangers (3i) and supported from them using specially designed plates and clips. A single chamber trunking is generally used: this contains 4 no's 3mm^2 copper conductors. Double chamber versions can also be accommodated. The trunking housing serves as the earth conductor throughout the network. Power supplies for lighting fittings and desktop equipment can be drawn from the trunking by plugging into the four pole contact outlets located in the face of the trunking at 500mm centres. The service posts link supplies to desktop equipment.

F LIGHTING

Most forms of artificial lighting sources can be accommodated in the NEXUS system. Spotlights can be located on the Bandraster profiles whilst recessed lighting fittings are located in tee delineated apertures formed in the ceiling membranes.

G AIR CONDITIONING

Linear air diffusers are located within tee delineated apertures in the ceiling membranes although provision can be made for any commercially available air handling terminal to be integrated.

H WORKSTATION SUPPLY

Hollow vertical service posts act as cable ducts through which socket outlets in the posts are connected via cutouts in the ceiling grid to the overhead power and data/communication co-ordinated networks. Held firm between floor and the Bandraster grid, the posts are located alongside the workstations so that supply connections for desktop equipment can be made to the post socket outlets.

I INFORMATION DISPLAY

Any form of information display or notice giving directions, times etc. can be located on the NEXUS Bandraster grid. Permanent fixtures will of course restrict partition layout flexibility.

Nexus