DONN® EXPOSED GRID

Materials:
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and rust-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by Industry-standard salt spray tests conducted by an independent laboratory.

For our extreme environments, we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

Product Information:

DONN® DX24 / Angle section
DONN® DX24 / Suspension wire

Adjustable rod hanger ø 3.5 mm

DONN® DX24 / Angle section

DONN® DX24 LIGHT DUTY

Materials:
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and rust-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by Industry-standard salt spray tests conducted by an independent laboratory.

For our extreme environments, we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

Product Information:

DONN® DX24 / Angle section
DONN® DX24 / Suspension wire

Adjustable rod hanger ø 3.5 mm

DONN® DX24 LIGHT DUTY

Materials:
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and rust-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by Industry-standard salt spray tests conducted by an independent laboratory.

For our extreme environments, we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

Product Information:

DONN® DX24 / Angle section
DONN® DX24 / Suspension wire

Adjustable rod hanger ø 3.5 mm

DONN® DX24 LIGHT DUTY

Materials:
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and rust-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by Industry-standard salt spray tests conducted by an independent laboratory.

For our extreme environments, we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

Product Information:

DONN® DX24 / Angle section
DONN® DX24 / Suspension wire

Adjustable rod hanger ø 3.5 mm

DONN® DX24 LIGHT DUTY

Materials:
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and rust-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by Industry-standard salt spray tests conducted by an independent laboratory.

For our extreme environments, we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

Product Information:

DONN® DX24 / Angle section
DONN® DX24 / Suspension wire

Adjustable rod hanger ø 3.5 mm

DONN® DX24 LIGHT DUTY

Materials:
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and rust-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by Industry-standard salt spray tests conducted by an independent laboratory.

For our extreme environments, we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

Product Information:

DONN® DX24 / Angle section
DONN® DX24 / Suspension wire

Adjustable rod hanger ø 3.5 mm

DONN® DX24 LIGHT DUTY

Materials:
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and rust-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by Industry-standard salt spray tests conducted by an independent laboratory.

For our extreme environments, we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

Product Information:
DONN® DX24
INTERMEDIATE DUTY

Materials
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and rust-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by industry-standard salt spray tests conducted by an independent laboratory. For our extreme environments we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

Quantity
Linear meter required per square meter
For construction layouts use the following formulas to calculate linear meters (LM) per square meter (m²)

- **Main tee**
  - eg. if MT at 1200mm centers — =0.83LM/m²

- **Cross tee**
  - eg. if CT at 600mm centers — =2.33LM/m²

Note: These calculations do not allow for wastage, damage or irregularities but are intended as an informative guideline to assist with the calculation of product required for a given area (in m²)

System characteristics:
- Exposed 24mm system
- The most widely used grid system in the world
- Safe, fast and simple to install & easily accessible
- Maximum economy and design simplicity
- Cross-tees with override-ends resist twisting and give professionally finished look with no exposed steel edges
- Patented QUICK-RELEASE™ clip design: demountable without tools
- Compatible with square edge and SLB edge ceiling tiles
- Audible Click means you know when tees are connected
- Exceed load compliance specifications as per ASTM C 635
- Available in metric and imperial sizes

Product Information

<table>
<thead>
<tr>
<th>Nr</th>
<th>Description</th>
<th>Metric reference</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Main Runner</td>
<td>DX3600IM</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Long Cross Tee</td>
<td>DX1200LM</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Short Cross Tee</td>
<td>DX600LM</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Wall Angle</td>
<td>MT3600/MT3600/MTA3600</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Hanger</td>
<td>SBH00XX</td>
<td></td>
</tr>
</tbody>
</table>

Maximum allowed weight of tiles per m² of ceiling

<table>
<thead>
<tr>
<th>Module</th>
<th>Main runner at 1200mm</th>
<th>Main runner at 600mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>22.2</td>
<td>22.5</td>
</tr>
<tr>
<td>1200</td>
<td>23.2</td>
<td>23.5</td>
</tr>
<tr>
<td>1500</td>
<td>4.5</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Note: The load performance shall be diminished when using pre-painted edge ceiling tiles. For these tiles a cross-section with the maximum load per section is 1200mm. This is provided via a 35RHXXXX hole. Please consult USG for further layouts, head-on-hanger distance.

Specifications DONN®  DX24-IM

Grid shall be DONN® DX24 exposed grid system, hot dip galvanized steel. 1200mm centers with pre-painted capping. Table width 24mm. For suit variable module sizes, most typically 600 x 600mm and 1200 x 600mm. Main runners: 33 x 24mm, ref DX3600IM shall be normally spaced at 1200mm centers and suspended from the structure or soffit using pre-straightened 2mm diameter HDG steel wire hangers, ref 35RHXXXX. Hangers shall be no more than 450mm from the perimeter. Main runners joined end on by means of the integral splice. Splice connections shall be supported within 150mm with a hanger. Such shall be staggered across the ceiling area

Cross tees: 1200mm cross tees, 25 x 24mm ref DX1200LM, shall be installed perpendicular between the main runners at 600mm centers to form a 1200 x 600mm module. If applicable, 600mm cross tees, 25 x 24mm ref DX600LM, shall be installed perpendicular between the 1200mm cross tees to form a 600 x 600mm module. All cross tees feature a ‘joggled’ end detail.

Perimeter trims:
- 2mm x 9.5mm / 19 x 19mm / 39 x 39mm / 20 x 20mm / 25 x 25mm HDG steel angle trim, ref MT380/MT380/MTA380 /MTA380, fixed to perimeter wall using fixings appropriate to the structure or soffit. Corners shall normally be finished with a lapped or butt joint.

Hangers - Seismic Application: Shall be from pre-straightened 2mm diameter galvanized wire hanger, ref SBH00XX. Hangers shall be fixed through holes in stalk or bulb of main runner and wrapped around itself a minimum of 3 times. Alternatively, hangers can be formed from 25 x 25mm HDG steel angle section, on 35mm rod hanger fixed to main runners using appropriate self drilling screws or nut and bolt fixings. Hangers shall be normally spaced at 1200mm centers although alternative spacings are acceptable provided maximum loadings stated above are not exceeded. Hangers to be fixed to structure or soffit using fixings appropriate to the structure or soffit.

Hold down clips: Where applicable, these shall be non removable type clips. These generally will only be required in certain fire protecting assemblies or where there is a risk of tile uplift. Where fitted, these should be applied to all grid members at a rate of 1 clip per 600mm of tile edge.

Tile edge supported

DX24 / SLT
DX24 / SD
DX24 / SLB

Cross section

Clip to Clip Security

Clip to Clip Connection

Held Down Clip

Partition head fixing using revoe clips with DX24.

Spring clip

Spring clip application.
DONN® DX24
HEAVY DUTY - STANDARD

Materials
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and rust-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by industry-standard salt spray tests conducted by an independent laboratory. For our extreme environments we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

System characteristics:
• Exposed 24mm system
• The most widely used grid system in the world
• Safe, fast and simple to install & easily accessible
• Maximum economy and design simplicity
• Cross-tees with override-ends resist twisting and give Professionally finished look with no exposed steel edges
• Patented QUICK-RELEASE™ clip design: demountable without tools
• Clip to Clip Connection
• Spring clip application.

Product Information

<table>
<thead>
<tr>
<th>Nr</th>
<th>Description</th>
<th>Metric</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Main Runner DX3600H</td>
<td>DX3600H</td>
<td>DX3600H</td>
</tr>
<tr>
<td>2</td>
<td>Long Cross Tee DX1200H / DX1200LM</td>
<td>DX1200H / DX1200LM</td>
<td>DX1200H / DX1200LM</td>
</tr>
<tr>
<td>3</td>
<td>Short Cross Tee DX600H / DX600LM</td>
<td>DX600H / DX600LM</td>
<td>DX600H / DX600LM</td>
</tr>
<tr>
<td>4</td>
<td>Wall Angle MT3600-MS3600-MS64L-MTA3600</td>
<td>MT3600-MS3600-MS64L-MTA3600</td>
<td>MT3600-MS3600-MS64L-MTA3600</td>
</tr>
<tr>
<td>5</td>
<td>Hanger</td>
<td>35RXXX</td>
<td>35RXXX</td>
</tr>
</tbody>
</table>

Specification DONN® DX24-H
Grid shall be DONN® DX24 exposed grid system, hot dipped galvanized steel 1” section with pre painted capping. Table width 24mm. To suit variable module sizes, most typically 600 x 600mm and 1200 x 600mm. Main runners: 38 x 24mm, ref DX3600H shall be normally spaced at 1200mm centers and suspended from the structure or soffit using pre-straightened 2mm diameter HDG steel wire hangers, at typically 1200mm centers. First hanger shall be no more than 450mm from the perimeter. Main runners joined end on by means of the integral splice. Splice connections shall be supported within 150mm with a hanger, and shall be staggered across the ceiling area.

Cross tees: 1200mm cross tees, 38 x 24mm ref DX1200H and 25 x 24mm ref DX1200LM, shall be installed perpendicular between the main runners at 600 mm centers to form a 1200 x 600mm module. If applicable, 600mm cross tees, 25 x 24mm ref DX600LM and 38 x24mm ref DX600H50, shall be installed perpendicular between the 1200mm cross tees to form a 600 x 600mm module. All cross tees feature a ‘joggled’ end detail.

Maximum allowed weight of tiles per m² of ceiling

<table>
<thead>
<tr>
<th>Main runner at 1200mm</th>
<th>Main runner at 600mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>23,2</td>
</tr>
<tr>
<td>1000</td>
<td>25,2</td>
</tr>
<tr>
<td>1200</td>
<td>27,3</td>
</tr>
<tr>
<td>1500</td>
<td>29,4</td>
</tr>
<tr>
<td>1800</td>
<td>31,5</td>
</tr>
</tbody>
</table>

Clip to Clip Security
Grid-to-grid connection

DX24 / revol clip
Partition fixed using revol clips with DX24.

Hold down clips: Where applicable, these shall be non removable type clips. These generally will only be required in certain fire protecting assemblies or where there is a risk of tile uplift. Where fitted, these should be applied to all grid members at a rate of 1 clip per 600mm of tile edge.

Clip to Clip Security
Grid-to-grid connection

DX24 / revol clip
Partition fixed using revol clips with DX24.

Hold down clips: Where applicable, these shall be non removable type clips. These generally will only be required in certain fire protecting assemblies or where there is a risk of tile uplift. Where fitted, these should be applied to all grid members at a rate of 1 clip per 600mm of tile edge.
DONN® DXL24
HEAVY DUTY - FIRE RATED

System characteristics:
- Exposed 24mm system
- The most widely used grid system in the world
- Safe, fast and simple to install & easily accessible
- Maximum economy and design simplicity
- Cross-tees with override-ends resist twisting and give professionally finished look with no exposed steel edges
- Patented QUICK-RELEASE TM clip design: demountable without tools
- Compatible with square edge and SLB edge ceiling tiles
- Audible Click means you know when tees are connected
- Exceed load compliance specifications as per ASTM C635
- Available in metric and imperial size

Materials
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and rust-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by industry-standard salt spray tests conducted by an independent laboratory. For our extreme environments we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

Specifications
DONN® DXL24 exposed grid system, hot dipped galvanized steel ‘ T ’ section with pre-painted capping. Table width 24mm. To suit variable module sizes, most typically 600 x 600mm and 1200 x 600mm. Main runners: 38 x 24mm, ref DXL3600 shall be normally spaced at 1200mm centers and suspended from the structure or soffit using pre-straightened 2mm diameter HDG steel wire hangers, at typically 1200mm centers. First hanger shall be no more than 450mm from the perimeter. Main runners joined end on by means of the integral splice. Splice connections shall be supported within 150mm with a hanger, and shall be staggered across the ceiling area.

Cross tees: 1200mm cross tees, 38 x 24mm ref DX1200H30, shall be installed perpendicular between the main runners at 600mm centers to form a 1200 x 600mm module. If applicable, 600mm cross tees, 38 x24mm ref DX600H30 shall be installed perpendicular between the 1200mm cross tees to form a 600 x 600mm module. All cross tees feature a ‘jogged’ end detail.

Quantity
Linear meter required per square meter
For construction layouts use the following formulas to calculate linear meters (LM) per square meter (m²)
- Main tee
  (1’ Main Tee centers)
  eg. if MT at 1200mm centers
  =0.83LM/m²
- Cross tee
  (1’ Cross Tee centers)
  eg. if CT at 600mm center
  =0.60LM/m²

Note: These calculations do not allow for wastage, damage or irregularities but are intended as an informative guideline to assist with the calculation of product required for a given area (in m²)
DONN® DX15 CENTRICITee

 DONN® DX15 CENTRICITee

DONN® DX15 CENTRICITee

Materials
All USG Boral ME suspension systems feature a body and cap made of hot-dip galvanized steel. To ensure that the cap remains attractive and nut-free for long term, manufacturing includes an exclusive four-step coating process that outperforms the competition in paint adhesion and corrosion resistance, as proven by industry-standard salt spray tests conducted by an independent laboratory. For our extreme environments we offer our grid system, with hot-dipped galvanized steel body and painted aluminum cap for additional corrosion and humidity resistance.

Quantity
Linear meter required per square meter
For construction layouts use the following formulas to calculate linear meters (LM) per square meter (m²):
• Main tee (1/ Main Tee centers)
eg. if MT at 1200mm centers — =0.83LM/m²
• Cross tee (1/ Cross Tee centers)
eg. if CT at 600mm centers — =1.67LM/m²
Note:
These calculations do not allow for wastage, damage or irregularities but are intended as an informative guideline to assist with the calculation of product required for a given area (x m²)

System characteristics:
• Exposed 15mm system
• Narrow table grid for subtle visual effect
• Cross tees with override-ends resist twisting and give professionally finished look with no exposed steel edges
• Patented QUICK-RELEASE™ clip design: easy to remove without tools
• Safe, fast and simple to install and easily accessible
• Standard joggled (overriding) cross tee system
• Suitable for FLB and most “face cut design” ceiling tiles
• Designed for fire rated ceilings
• Lay-on Cross Tees resist twist and gapping • Audible Click means you know when tees are connected
• Exceed load compliance specifications as per ASTM C635
• Available in metric and imperial size

Product Information

<table>
<thead>
<tr>
<th>Nr</th>
<th>Description</th>
<th>Metric Reference</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Main Runner DXT15-3600M</td>
<td>DXT15-3600M</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Long Cross Tee DXT15-1200M</td>
<td>DXT15-1200M</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Short Cross Tee DXT15-600M</td>
<td>DXT15-600M</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Wall Angle</td>
<td>38 RH 0000-38 RH 0000</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Hanger</td>
<td>38 RH 0000-38 RH 0000</td>
<td></td>
</tr>
</tbody>
</table>

Specification DONN® DX15 Grid shall be DONN® DX15 exposed grid system, hot dipped galvanized steel ‘ T ’ section with pre-painted capping. Table width 15mm. To suit variable module sizes, most typically 600 x 600mm and 1200 x 600mm. Main runners: 38 x 15mm, ref DXT15-3600M shall be normally spaced at 1200mm centers and suspended from the structure or soffit using pre-straightened 2mm diameter HDG steel wire hangers, at typically 1200mm centers. First hanger shall be no more than 450mm from the perimeter. Main runners joined end on by means of the integral splice. Splice connections shall be supported within 150mm with a hanger, and shall be staggered across the ceiling area.

Cross tees:
1200mm cross tees, 38 x15mm ref DXT15-1200M, shall be installed perpendicular between the main runners at 600mm centers to form a 1200 x 600mm module. If applicable, 600mm cross tees, 38 x15mm ref DXT15-600M shall be installed perpendicular between the 1200mm cross tees to form a 600 x 600mm module. All cross tees feature a ‘joggled’ end detail.

Maximum allowed weight of tiles per m² of ceiling

<table>
<thead>
<tr>
<th>Module</th>
<th>Main runner at 1200mm</th>
<th>Main runner at 600mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>600</td>
<td>24,0</td>
<td>24,2</td>
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<tr>
<td>1000</td>
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<td>24,2</td>
</tr>
<tr>
<td>1100</td>
<td>17,1</td>
<td>17,1</td>
</tr>
<tr>
<td>1200</td>
<td>12,4</td>
<td>12,7</td>
</tr>
</tbody>
</table>

Note: Hangers must be pre-straightened. For reference, the table below shows the maximum load for a 600 mm tile supported by a hanger, at maximum 1200mm centers. For other applications, hanger positions must be as detailed in the grid.

Material Information

Perimeter trims:
15mm x 24 mm/19x9x9x19mm painted HDG steel angle trim, ref M93600/MS3600, fixed to perimeter wall using fixings appropriate to the structure at maximum 450mm centers.

Hangers - Seismic Application:
Shall be from pre-straightened 2mm diameter HDG steel wire, ref 35RHXXXX. Hangers shall be fixed through holes in stalk or bulb of main runner and wrapped around itself a minimum of 3 times. Alternatively, hangers can be formed from 25 x 25mm HDG steel angle section, on ø 3.5mm rod hanger fixed to main runners using appropriate self drilling screws or nut and bolt fixings. Hangers shall be normally spaced at 1200mm centers although alternative spacings are acceptable provided maximum loadings stated above are not exceeded. Hangers to be fixed to structure or soffit using fixings appropriate to the structure or soffit.

Hold down clips:
Where applicable, these shall be non removable type clips. These generally will only be required in certain fire protecting assemblies or where there is a risk of tile uplift. Where fitted, these should be applied to all grid members at a rate of 1 clip per 600mm of tile edge.

Fire protection
All main tees are designed to expand at the fire lance in the event of a fire (shown here). This maintains the structural integrity of the ceiling and holds tiles in place.
### DONN® EXPOSED GRID

#### DONN® CENTRICITEE 15mm EXPOSED GRID

<table>
<thead>
<tr>
<th>PROFILE</th>
<th>PRODUCT</th>
<th>PROFILE HEIGHT</th>
<th>COMPONENT LENGTH</th>
<th>THICKNESS</th>
<th>PANEL EDGE OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAIN TEE</td>
<td>Deep</td>
<td>Main Tee-Centricitee heavy Duty - Fire Rated</td>
<td>38mm</td>
<td>3600/3660mm</td>
<td>0.38mm</td>
</tr>
</tbody>
</table>

| CROSS TEE | Deep | Cross Tee (heavy) | 38mm | 2200mm | 0.35mm | A,B,C,D |

#### DONN® DX 24mm EXPOSED GRID

<table>
<thead>
<tr>
<th>PROFILE</th>
<th>PRODUCT</th>
<th>PROFILE HEIGHT</th>
<th>COMPONENT LENGTH</th>
<th>THICKNESS</th>
<th>PANEL EDGE OPTIONS</th>
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</thead>
<tbody>
<tr>
<td>MAIN TEE</td>
<td>Deep</td>
<td>Heavy-Standard</td>
<td>38mm</td>
<td>3600/3660mm</td>
<td>0.38mm</td>
</tr>
<tr>
<td>Medium</td>
<td>Fire Rated</td>
<td>15mm</td>
<td>3600/3660mm</td>
<td>0.30mm</td>
<td>A,B,C,D</td>
</tr>
<tr>
<td>Shallow</td>
<td>Light Duty</td>
<td>10.mm</td>
<td>3600/3660mm</td>
<td>0.30mm</td>
<td>A,B,C,D</td>
</tr>
</tbody>
</table>

| CROSS TEE | Deep | Fire Rated | 38mm | 1200/1220mm | 0.30mm | A,B,C,D |
| Medium | Fire Rated | 38mm | 600/610mm | 0.38mm | A,B,C,D |
| Intermediate Duty | Intermediate Duty | 15.5mm | 1200/1220mm | 0.30mm | A,B,C,D |
| Shallow | Light Duty | 15.5mm | 400/510mm | 0.30mm | A,B,C,D |

#### USG Boral ME Panel Edge Detail

- **A** Square Edge (SQ)
- **B** Shadowline Bevel Edge (SLB)
- **C** Shadowline Tapered (SLT)
- **D** Interline Tapered (ILT)

#### 24mm Tee System

- Heavy Duty
- Fire Rated
- Light Duty

- 38mm
- 38mm
- 38mm
- 38mm

- 0.38mm
- 0.38mm
- 0.38mm
- 0.38mm

- 1200/1220mm
- 1200/1220mm
- 1200/1220mm
- 1200/1220mm

- A,B,C,D
- A,B,C,D
- A,B,C,D
- A,B,C,D

#### Fire Rated Option

- DONN® DX is available as a Fire Rated option providing protection up to 2 hours, subject to assembly design

Main Tee (Fire Rated)

---

**Notation:**

- Fire Rated Option
- DONN® DX is available only as a Fire Rated option providing protection up to 2 hours, subject to assembly design

Main Tee (Fire Rated)
USG BORAL ME LIMITED

Loadings - DONN® DX 24mm Exposed Grid

Ceiling Mass - Kg/m²

Use of Maximum Allowable Gross Ceiling Weight Charts:

- Determine the maximum allowable ceiling weight for the chosen Main Tee and hanger spacings from Graph.
- Determine the maximum allowable ceiling weight for the chosen Cross Tee spacing from table.
- The maximum allowable gross weight is the lower of the values from step 1 and 2.
- Note that any heavy lighting, or other mechanical fixtures should be independently supported.
- Seismic considerations for in-plane loads may take precedence in determining the required section (refer USG Boral ME Representative for details).

Cross Tees

<table>
<thead>
<tr>
<th>DONN DX</th>
<th>Cross Tee Spacing (m)</th>
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<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>0.6</td>
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<tr>
<td>DX500L M</td>
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<td>DX1200H M</td>
<td>9.8</td>
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<table>
<thead>
<tr>
<th>DONN® DX Component</th>
<th>Uniform Load kg/m</th>
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</thead>
<tbody>
<tr>
<td>Main Tee DX5600H+</td>
<td>16.8</td>
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<tr>
<td>Main Tee DX6000H+</td>
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<tr>
<td>Cross Tee DX5600H+</td>
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<td>DX1200H M</td>
<td>16.7</td>
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<tr>
<td>DX1200L M</td>
<td>5.9</td>
</tr>
</tbody>
</table>

* Hanger spacing @ 1.2m centres

Lighting Installation DONN® DX 24mm Exposed Grid

DONN® DX

As worldwide leaders in acoustical ceiling systems, USG Boral ME Interior works with the major lighting manufacturers to ensure system compatibility is maintained. The following guidelines are designed to assist in the correct specification and installation of light fittings in USG Boral ME’s DONN® Exposed Grid and acoustical ceiling systems.

Luminaire Positioning

Typical recessed pan fitting arrangements are shown below. Main Tees at 1200mm centers are shown horizontal, with suspension at 1200mm centers.

- Refer to Loadings (page 108) for maximum allowable point loads, uniform loads and gross ceiling loads depending on type of luminaire and DONN® grid selected. Where luminaire weight exceeds point or uniform load maximums consider:
  A. A higher specifications DONN® grid option if applicable (refer to Loadings page 108 this brochure to ensure compliance).
  B. Independent support from structure.
  C. Additional suspension points as shown below, or similar.

Ceiling Mass - Kg/m²

Use of Maximum Allowable Gross Ceiling Weight Charts:

- Determine the maximum allowable ceiling weight for the chosen Main Tee and hanger spacings from Graph.
- Determine the maximum allowable ceiling weight for the chosen Cross Tee spacing from table.
- The maximum allowable gross weight is the lower of the values from step 1 and 2.
- Note that any heavy lighting, or other mechanical fixtures should be independently supported.
- Seismic considerations for in-plane loads may take precedence in determining the required section (refer USG Boral ME Representative for details).

DONN® Grid Profiles

When recessed pan fitting uses the top of the DONN® tee bulb for support, use the same height tee profiles for even support.

Ceiling panel Mounted Fittings light fittings mounted through USG Boral ME acoustical ceiling panels shall not rely on the ceiling panel for support. Their weight shall be transferred back to the grid by:

- A. Simple supports across the back of the ceiling panel.
- B. Simple supports onto the top of the tee bulb.
- C. An additional rigid panel across the back of the ceiling panel.

NOTES:

- Values are based on simple span tests in accordance with recognized International Standard ASTM C635. Higher values can often be attained by allowing for the effect of continuous spans, the actual increase being subject to span arrangements. Please contact USG Boral ME Interiors for guidance.
- For cross-nogged configurations e.g., where a 1200x600 mm panel runs parallel with the main tee, the spacing values should be used as for 1200x1200mm modules.
- Where main tees are at 1200mm centers, creating a 600x600mm configuration does not significantly increase load carrying limits.

Ceiling Mass - Kg/m²

Uniform Loads - kg/m² (linear metre)

Uniform loads are loads that are transferred evenly along a given tee. The maximum load is the combined load on both sides of the tee.

Example:

A 1200 x 600 light fitting weighing 12.6 kg applies a load of 3.5 kg/m² (12.6 / 3.6 m²) 3.6 kg/m² A 1200 x 600 ceiling panel weighing 3.6 kg applies a load of 1 kg/m² The combined load of light and ceiling panel 4.5 kg/m². The maximum allowable uniform load is the lesser of either main or cross tee values.

DONN® DX Component | Uniform Load kg/m²
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Tee DX5600H+</td>
<td>16.8</td>
</tr>
<tr>
<td>Main Tee DX6000H+</td>
<td>11.6</td>
</tr>
<tr>
<td>Cross Tee DX5600H+</td>
<td>30.4</td>
</tr>
<tr>
<td>DX1200H M</td>
<td>16.7</td>
</tr>
<tr>
<td>DX1200L M</td>
<td>5.9</td>
</tr>
</tbody>
</table>

* Hanger spacing @ 1.2m centres

Point Loads - kg

Point loads are loads that transfer to a tee at a single point (or several points) over a very small area. The weakest point is assumed to be mid span. Main tees are based on a 1200mm span.

The maximum allowable point load is the lesser of either main or cross tee values.

DONN® DX Component | Point Load kg
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Tee DX5600H+</td>
<td>7.9</td>
</tr>
<tr>
<td>Main Tee DX6000H+</td>
<td>7.0</td>
</tr>
<tr>
<td>Cross Tee DX5600H+</td>
<td>13.2</td>
</tr>
<tr>
<td>DX1200H M</td>
<td>7.9</td>
</tr>
<tr>
<td>DX1200L M</td>
<td>4.1</td>
</tr>
</tbody>
</table>

* Hanger spacing @ 1.2m centres

NOTES:

- Values are based on simple span tests in accordance with recognized International Standard ASTM C635. Higher values can often be attained by allowing for the effect of continuous spans, the actual increase being subject to span arrangements. Please contact USG Boral ME Interiors for guidance.
- For cross-nogged configurations e.g., where a 1200x600 mm panel runs parallel with the main tee, the spacing values should be used as for 1200x1200mm modules.
- Where main tees are at 1200mm centers, creating a 600x600mm configuration does not significantly increase load carrying limits.
GRID EDGE DETAILS

DON™ DX is the most widely specified grid in Middle East. It includes a wide range of profiles and colors and is fully compatible with all USG Boral ME ceiling tiles as well as most third party brands. Precision design and quality manufacturing ensure both structural and aesthetic integrity in all ceiling designs. USG Boral ME offers the following suspension system and edge details options. Select a suspension system and match it with a corresponding panel edge details, or vice versa, to assure proper system fit and assembly.

### System performance
USG Boral ME ceiling systems should be installed in accordance with recommendations described within this catalogue and the DON™ grid application guide. System performance following any substitution of materials or compromises in assembly cannot be guaranteed and may result in failure under critical conditions. Reference should be made to BS 8290 1991 Suspended Ceilings parts 1, 2 and 3, and the European Standard for Suspended Ceilings BS EN 13964:2004.

### Site storage and handling
Storage on site should be as short as possible with environmental conditions as near as possible to those specified for occupancy (see below). Any storage area should be secure and fully protected from the weather with cartons stored on a clean, dry base. Cartons of material should never be rolled, dropped or slid, and under no circumstances used as a workbase or substitute for ladders, scaffolding, etc.

### Pattern direction
With directional face patterns, such as Glacier™ and Sandrift™, the orientation of pattern relative to light sources should be carefully considered for desired visual effect, and specified and installed accordingly. Variations in colour and fissure size in Glacier™ and Sandrift™ ceiling tiles will be of little consequence within a single production batch. However, minor variations can occur from time to time, and projects should be planned so that all material for continuous ceiling space is ordered and delivered from the same production batch. Some USG Boral ME tiles are marked with a directional arrow on the back and should always be installed with this in alignment to ensure total consistency of pattern and paint shade in a Production batch.

### Overlaid material
Wherever possible, overlaid material such as insulation, should not be laid directly on the back of the ceiling membrane, as this will compromise the fire resistant properties of the ceiling. In normal conditions (BS 8290), overlaid material should not exceed 3.6kg/m² weight. For high humidity environments, overlaid installation shall be limited to 1.2 kg/m².

### Installation/environmental conditions
For applications with normal controlled environmental conditions, products with 70% RH/20°C or better are suitable. Installation should only take place under ambient conditions after residual moisture from concrete and plaster has dissipated. The recommended relative humidity should not exceed 70% RH within a temperature range 65-85°F, 18-29°C for installation and occupancy.

Once ceiling installation has commenced, it is essential that RH% and temperature be maintained at acceptable levels by heating the building if necessary. Dry heating should be employed and paraffin or gas heaters avoided. These recommendations should still be applied between completion of contract and the occupation of the building. Unoccupied buildings with uncontrolled atmospheres may have a wide temperature range during a 24 hour period which could lead to an unacceptable change in dimension stability of the ceiling panels, causing excessive sag.

For applications with intermittent heating and cooling systems, products with 90%RH/32°C or better are recommended. (See Humidity selector, page 15.) For applications with uncontrolled environmental conditions, natural ventilation systems or in humid areas such as washrooms, kitchens or wet process areas, products with 95-99%RH/40°C or better are recommended. (See Humidity selector, page 15.) For applications with uncontrolled environmental conditions, natural ventilation systems or in humid areas such as swimming pools, where the ceiling may be subject to unusually high levels of humidity up to 100% RH and chemical attack. They should be installed with USG Boral ME DON™ Corrosion Resistant ceiling grid and appropriate hangers to resist corrosion.

### Maintenance and cleaning
General cleaning of dust and loose dirt may be easily achieved using a soft brush or vacuum cleaner. Soiled panels can be cleaned with an art gum eraser or dampened cloth or sponge containing as little water as possible.

Clean Room™ tiles can be wet wiped on a regular basis without damage. Panels should never be soaked or immersed in water. Cleaning can also be carried out by specialist contractors using proprietary methods and chemicals. It is strongly recommended that a trial area be cleaned to ensure that there is no detrimental effect on the ceiling panel or grid.

### Re-decoration
It should be noted that a new paint finish may compromise the Surface Spread of Flame classification and acoustic absorption for that panel. Please consult the USG Boral ME Technical Services Department for expert advice and recommendations.

### Custom products
In addition to a wide standard range, USG Boral ME can satisfy specifiers’ needs for non-standard, specialized ceilings. Please talk to your local USG Boral ME representative to arrange production of your specific ideas.
WALL ANGLES / GUIDE SPECIFICATION

WALL ANGLES
System Components Construction Details

STANDARD
Pre-Painted Steel (MT3600)

SHADOWLINE
Pre-Painted Steel (MS3600)

CENTRICITEE
Pre-Painted Steel (M9-3600)

GUIDE SPECIFICATION
09120

Part 2 - Products | 2.01 System Description

Acoustical ceiling suspension system(s) conforming to ASTM C635 supplied by USG Boral ME Products, 2nd industrial city of Dammam, Saudi Arabia.

2.02 Materials

1. Web (Body) material: Hot Dipped Galvanized (HDG) steel to ASTM A635/A635M.
2. Cap material: Pre-painted Galvanized Steel or Aluminum
3. Finish on exposed cap surface:
   a. Standard Painted finishes: DONN® Weiss white 10 - White- Blanc 137. Gloss level to be 15% +/- 5%.

4. Suspension system(s):
   a. Non-rated 15/16” (24mm) exposed two directional suspension system,
      i. USG Boral ME DONN® DX24 Intermediate duty system
      ii. USG Boral ME DONN® DX24 Heavy duty System
   b. Fire-rated 15/16” (24mm) exposed two directional suspension system certified and tested according to UL 263,
      i. USG Boral ME DONN® DXL24, Heavy Duty-fire Rated System
      ii. Module size to be 600x 600mm; 610 x 610mm; 600 x 1,200mm; 610 x 1,220mm; 750 x 1500mm; 762.5 x 1,525mm
   c. Fire-rated 9/16” (15mm) exposed two directional suspension system certified and tested according to UL 263,
      i. USG Boral ME DONN® DXLT15 Centricitiee, Heavy Duty fire rated systems.
      ii. USG Boral ME DONN® DXLF Fineline, Heavy Duty fire rated systems
      iii. Module size to be 600x 600mm; 610 x 610mm; 600 x 1,200mm; 610 x 1,220mm; 750 x 1500mm; 762.5 x 1,525mm
   d. 15/16” (24mm) DONN® DX/DXL Concealed suspension system.

5. Main runner: 1.5” (38mm) high inverted tee section of double web and cap design. Integral and reversible splice detail located at each end. Convenience holes located in the rectangular top bulb on 2.25” centers and include fire expansion notch for fire-rated main runners. Main runner length to be:
   a. 3600mm with cross tee and hanger holes 75mm from each end and 150mm on center.
   b. 3660mm with cross tee and hanger holes 76.25mm from each end and 152.5mm on center.

6. Cross Tee:
   a. 1.5” (38mm) high inverted tee section of double web and cap design.
   b. 1.3” (33mm) intermediate inverted tee section of double web and cap design.
   c. 1.0” (25mm) Shallow inverted tee section of double web and cap design.
   d. End detail to be stepped override design to resist twisting and provide an aesthetic hairline joint. End detail to include integral locking device for straight-in insertion and removal. Cross tee length to be:
      i. 1200mm with cross tee and hanger holes at mid point
      ii. 1200mm with cross tee and hanger holes at mid point and 600 and 610mm short cross Tees

7. Angle Moldings:
   a. Wall Angle size 22 x 19 x 3600mm long with finish on exposed surface
   b. Wall Angle size 24 x 14 x 3600mm long with finish on exposed surface
   c. Shadowline size 19 x 9 x 19 x 3600mm long with finish on exposed surface

8. Accessories:
   a. Hanger wire: No. 12 gauge (2.7mm) galvanized, soft annealed, mild steel wire with a yield load not less than 3 times the specified (unfactored or working) design load.