UltraTech

The UltraTech systems from Kingspan offer the ultimate in cleanroom solutions, satisfying the most demanding project requirements. Their highly modular design allows truly bespoke cleanroom construction, ensuring the highest levels of hygiene and contamination safety.

UltraTech systems are composed of high performance insulated panels featuring a flat non-porous surface to both sides which aids cleaning and offers high levels of resistance to mould, moisture ingress and bacterial growth, ensuring a controlled, sterile environment that minimises airborne particles and micro-organisms.

The UltraTech systems are the ideal solution for a range of cleanroom applications including: pharmaceutical and bio-technology laboratories; healthcare; medical research and advanced technology facilities.

A range of co-ordinating single and double doors, windows, light fixtures and accessories is available for a fully integrated, bespoke cleanroom solution.

Features and Benefits

- Compliant with cGMP and ISO 14644 Cleanrooms & Associated Controlled Environments standards;
- Fully complies with the appropriate National Building Regulations;
- LPCB certified to LPS 1208: FR30 & FR60 - Walls and Ceilings (depending on the panel choice);
- FM approved to FM 4880 Class 1 Fire Classification (no height restriction) and FM 4882 Class 1 Interior Wall and Ceiling Materials or Systems for Smoke Sensitive Occupancies (depending on the panel choice);
- Compliant with ISO 9001 (Quality), ISO 14001 (Environmental) and OHSAS 18001 (Health & Safety);
- Coating, thermal and structural performance of Insulated Panels comprising the system is covered under the Kingspan Ultimate Panel Guarantee;
- May be Green Guide A+ rating as per the BRE Global Green Guide to Specification. Subject to project specific assessment;
- Suitable for a range of clean room applications including pharmaceutical, bio-technology, healthcare, medical research and advanced technology;
- Cleanroom wall panels are typically laid vertically but can also be installed horizontally;
- Features unique integrated, joint systems, which achieve excellent performance, provide space for services and can be silicone sealed for regulatory compliance;
- Compatible with a range of co-ordinating accessories for a fully integrated solution;
- Service conduits 25mm diameter can be incorporated in the panel depth at 260mm from the panel ends;
- Fully recyclable at end of life.
- Unique fully flush hybrid system, patent pending.
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</table>
UltraTech Versatile IPN-QuadCore Wall & Ceiling Panel

Applications
UltraTech Versatile IPN-QuadCore panels are designed for all internal cleanroom applications including new build and refurbishment projects.

Dimensions, Weight & Performance

<table>
<thead>
<tr>
<th>Overall Thickness</th>
<th>80mm*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lengths</td>
<td>1.2m - 19.5m</td>
</tr>
<tr>
<td>Cover Width**</td>
<td>1100mm</td>
</tr>
<tr>
<td>Weight (0.63 / 0.63 steel)</td>
<td>14.06kg/m²</td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>0.018 W/mK</td>
</tr>
</tbody>
</table>

*Fully flush finish only available with 80mm thick panel.
**Other specific widths available on request.

Sound Reduction Index (SRI)

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>SRI (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>63</td>
<td>20</td>
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<tr>
<td>125</td>
<td>15</td>
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<td>250</td>
<td>17</td>
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<td>500</td>
<td>23</td>
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<td>1000</td>
<td>18</td>
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<td>2000</td>
<td>25</td>
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<tr>
<td>4000</td>
<td>40</td>
</tr>
<tr>
<td>8000</td>
<td>46</td>
</tr>
</tbody>
</table>

Product Tolerances

<table>
<thead>
<tr>
<th>Length Tolerances</th>
<th>+ 4.0mm - 4.0mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width Tolerances</td>
<td>+ 2.0mm - 2.0mm</td>
</tr>
<tr>
<td>Flatness (per metre)</td>
<td>+ 1.0mm - 1.0mm</td>
</tr>
<tr>
<td>End Squareness</td>
<td>+ 2.0mm</td>
</tr>
</tbody>
</table>

Fire Performance

The external and internal faces of the panel to be Class 0 in accordance with the Building Regulations when tested to BS 476: Part 6: 2009 and Part 7: 1997.

UltraTech Versatile panels with IPN Quadcore have passed all the requirements of:
- FM 4882 for smoke sensitive occupancies: Class 1 for interior walls and ceiling. (With no height restriction).
- LPS 1181: 2014: Part 1: Issue 1.2, series of fire growth tests for LPCB approval and is certified to LPS 1181 Grade EXT-B.*
- LPS 1208: 2014: Issue 2.2, LPCB fire resistance requirements for elements of construction used to provide compartmentation providing: FR30 & FR60 – Wall & Ceiling, specifications are available on request.
- FM approval to FMRC 4880, 4881 Class 1 fire classification, unlimited height.**
- Reaction to fire classification according to BS EN 13501-1: 2007 + A1: 2009: B-s1,d0.

Acoustic Performance

UltraTech Versatile IPN-QuadCore panels have a predicted single figure weighted sound reduction $R_w = 24$dB.

Sound Reduction Index (SRI)

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<tr>
<th>Frequency (Hz)</th>
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<td>2000</td>
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<tr>
<td>4000</td>
<td>40</td>
</tr>
<tr>
<td>8000</td>
<td>46</td>
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</tbody>
</table>

Notes:
Certificates and specifications are available upon request. Please contact the Kingspan Technical Services Department for more information.
* LPCB certification pending.
** FM approval pending.
Insulation Core
IPN-QuadCore is a revolutionary insulation material developed by Kingspan, a quantum leap in insulated panel technology that delivers industry-leading thermal performance, superior fire protection and enhanced environmental credentials.

Biological
UltraTech Versatile IPN-Quadcore panels are normally resistant to attack from mould, fungi, mildew and vermin. No urea formaldehyde is used in the manufacture of the panels. UltraTech Versatile IPN-QuadCore panels can incorporate project-specific HYGIENESafe, wash and clean down facings.

Panel Joint
The panel side joint is a unique engineered joint which achieves excellent air leakage, thermal and structural performance. The panel side joint can accommodate vapour, hygiene and fire rated seals and can be silicone sealed for regulatory compliance.

Airtightness
UltraTech Versatile IPN-QuadCore panels achieve airtightness of 0.02m³/hr/m² at 50Pa in accordance with EN 14509.

Watertightness
UltraTech Versatile IPN-QuadCore panels are watertight to 1050Pa (Class B) according to EN 14509.
Substrate

Standard
- Hot dipped S220GD + Za zinc / aluminium coated metal to EN 10326 (continuously hot-dip coated strip and sheet of structural steels, technical delivery conditions).
- Metallic protected steel to BS EN 10346:2009.
- Nominal thickness: Interior / exterior 0.5mm or 0.63mm.

Coating

Kingspan CLEANsafe 15
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

Kingspan CLEANsafe 25
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 55
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan HYGIENEsafe
Kingspan HYGIENEsafe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 304 (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

Colour Range

RAL 9010* and RAL 9002*
*Nearest match, samples available on request. Other colours available on request.

Sustainability

- GWP: Low GWP with Zero ODP.
- Cradle to Grave: May be Green Guide A+ rating as per the BRE Global Green Guide to Specification. Subject to project specific assessment;
- End of Life: Fully recyclable through conventional shredder plants.
- Responsible Sourcing: Kingspan manufacturing plants are ISO 14001 (Environmental) accredited.

Quality and Durability

UltraTech Versatile IPN-QuadCore panels are manufactured from the highest quality materials using state-of-the-art production equipment to rigorous quality control standards; ensuring long-term reliability and service life. All UltraTech Cleanroom Systems are fully compliant with ISO 9001 (Quality), ISO 14001 (Environmental) and ISO 18001 (Health & Safety).

Packing

Standard Packing
UltraTech Versatile IPN-QuadCore panels are stacked horizontally with facing sheets upward. The entire pack is wrapped in polythene. The number of panels in each pack depends on panel length. Typical pack height is 1200mm, maximum pack weight is 1500kg.

Sea Freight
Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional cost. Alternatively, steel containers can be used. Special loading charges apply.

Delivery
All deliveries (unless indicated otherwise) are by road transport, to project site. Off-loading is the responsibility of the client. Panel lengths of 13.5m-19.5m are subject to additional transport charge.
Applications

UltraTech Versatile ECOsafe PIR panels are designed for all internal cleanroom applications including new build and refurbishment projects.

Dimensions, Weight & Performance

<table>
<thead>
<tr>
<th>Overall Thickness</th>
<th>80mm*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lengths</td>
<td>1.2m - 19.5m</td>
</tr>
<tr>
<td>Cover Width**</td>
<td>1100mm</td>
</tr>
<tr>
<td>Weight (0.63 / 0.63 steel)</td>
<td>14.06kg/m²</td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>0.0195 W/mK</td>
</tr>
</tbody>
</table>

*Fully flush finish only available with 80mm thick panel. **Other specific widths available on request.

Core Thickness (mm)

<table>
<thead>
<tr>
<th>50</th>
<th>60</th>
<th>80</th>
<th>100</th>
<th>125</th>
<th>150</th>
<th>175</th>
<th>200</th>
<th>220</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.63 / 0.63) (kg/m²)</td>
<td>12.86</td>
<td>13.26</td>
<td>14.06</td>
<td>14.86</td>
<td>15.68</td>
<td>16.86</td>
<td>17.86</td>
<td>18.86</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.40</td>
<td>0.30</td>
<td>0.25</td>
<td>0.20</td>
<td>0.16</td>
<td>0.13</td>
<td>0.11</td>
<td>0.10</td>
</tr>
</tbody>
</table>

Notes: These values are in accordance with BS EN 14509, using Finite Element Analysis, and take into account any thermal bridging through the longitudinal joint. The U-values have been calculated using an aged thermal conductivity value of 0.0195 W/mK.

Fire Performance

Certification

- LPCB certified to LPS 1208: FR30 & FR60 - Wall and Ceilings.
- FM approved to FMRC 4880 Class 1 Fire Classification (No height restriction, i.e., Unlimited height).

Certification

- Reaction to Fire: B-S1d0 according to EN13501.
- Surface Spread of Flame: The steel outer and inner facings have Class 1 surface spread of flame to BS 476-7: 1997 (Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products) and are Class 0, as defined by Building Regulations.

Acoustic Performance

UltraTech Versatile ECOsafe PIR panels have a predicted single figure weighted sound reduction $R_w = 24$dB.

Sound Reduction Index (SRI)

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<td>4000</td>
<td>40</td>
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<tr>
<td>8000</td>
<td>48</td>
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Product Tolerances

<table>
<thead>
<tr>
<th>Length</th>
<th>+ 4.0mm</th>
<th>- 4.0mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>+ 2.0mm</td>
<td>- 2.0mm</td>
</tr>
<tr>
<td>Thickness</td>
<td>+ 2.0mm</td>
<td>- 2.0mm</td>
</tr>
<tr>
<td>Flatness (per metre)</td>
<td>+ 1.0mm</td>
<td></td>
</tr>
<tr>
<td>End Squareness</td>
<td>- 1.0mm</td>
<td></td>
</tr>
</tbody>
</table>
Insulation Core
UltraTech Versatile ECOsafe PIR panels feature an environmentally sustainable closed-cell PIR insulation core which is non-deleterious with Zero Ozone Depletion Potential (Zero ODP).

Biological
UltraTech Versatile ECOsafe PIR panels are resistant to attack from mould, fungi, mildew and vermin. No urea formaldehyde is used in the manufacture of the panels. UltraTech Versatile ECOsafe PIR panels can incorporate project-specific HYGIEEnSafe, wash and clean down facings.

Panel Joint
The panel side joint is a unique engineered joint which achieves excellent air leakage, thermal and structural performance. The panel side joint can accommodate vapour, hygiene and fire rated seals and can be silicone sealed for regulatory compliance.

Airtightness
UltraTech Versatile ECOsafe PIR panels achieve an airtightness of 0.02m³/hr/m² at 50Pa in accordance with EN 14509.

21.5 20.5 2-4 nominal gap for silicone seal

6.5 5.5 7 9

Watertightness
UltraTech Versatile ECOsafe PIR panels are watertight to 1050Pa (Class B) according to EN 14509.
UltraTech Versatile

Wall & Ceiling Panel
ECOsafe PIR

Substrate
Standard
- Hot dipped S220GD + Zn zinc / aluminium coated metal to EN 10326 (continuously hot-dip coated strip and sheet of structural steels, technical delivery conditions).
- Metallic protected steel to BS EN 10346:2009.
- Nominal thickness: Interior / exterior 0.5mm or 0.63mm.

Coating
Kingspan CLEANsafe 15
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

Kingspan CLEANsafe 25
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 55
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
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- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 304 (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

Colour Range
RAL 9010* and RAL 9002*
*Nearest match, samples available on request. Other colours available on request.

Sustainability
- GWP: Low GWP with Zero ODP.
- Cradle to Grave: May be Green Guide A+ rating as per the BRE Global Green Guide to Specification. Subject to project specific assessment;
- End of Life: Fully recyclable through conventional shredder plants.
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Quality and Durability
UltraTech Versatile panels are manufactured from the highest quality materials using state-of-the-art production equipment to rigorous quality control standards; ensuring long-term reliability and service life. All UltraTech Cleanroom Systems products are fully compliant with ISO 9001 (Quality), ISO 14001 (Environmental) and ISO 18001 (Health & Safety).

Packing
Standard Packing
UltraTech Versatile panels are stacked horizontally with facing sheets upward. The entire pack is wrapped in polythene. The number of panels in each pack depends on panel length, weight and thickness. Typical pack height is 1200mm, maximum pack weight is 1500kg.

Sea Freight
Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional cost. Alternatively, steel containers can be used. Special loading charges apply.

Delivery
All deliveries (unless indicated otherwise) are by road transport, to project site. Off-loading is the responsibility of the client. Panel lengths of 13.5m-19.5m are subject to additional transport charge.
UltraTech Versatile

Applications
UltraTech Versatile ECOsafe PIR panels are designed for all internal cleanroom applications including new build and refurbishment projects.

Dimensions, Weight & Performance

<table>
<thead>
<tr>
<th>Overall Thickness (mm)</th>
<th>40, 60, 80, 100, 120, 140, 170, 200, 220</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lengths</td>
<td>+ 1.5mm - 1.5mm</td>
</tr>
<tr>
<td>Cover Width</td>
<td>+ 2.0mm - 2.0mm</td>
</tr>
<tr>
<td>Weight (0.6 / 0.8 steel)</td>
<td>11.52kg/m²</td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>0.020 W/mK</td>
</tr>
</tbody>
</table>

Flatness (per metre) + 0.5mm - 0.5mm
End Squareness + 2.0mm - 2.0mm

Product Tolerances

<table>
<thead>
<tr>
<th>Length</th>
<th>+ 1.5mm - 1.5mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
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<td>Thickness</td>
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</tr>
<tr>
<td>Flatness (per metre)</td>
<td>+ 0.5mm - 0.5mm</td>
</tr>
<tr>
<td>End Squareness</td>
<td>+ 2.0mm - 2.0mm</td>
</tr>
</tbody>
</table>

*Panel lengths 13.5m to 19.2m are subject to additional transport surcharges.
**1120mm panel width can be supplied for container transport.

Core Thickness (mm) 40 60 80 100 120 140 170 200 220
Weight (0.6 / 0.6) (kg/m²) 9.92 10.72 11.52 12.32 13.12 13.92 15.10 16.32 17.12
U-value (W/m²K) 0.45 0.31 0.24 0.19 0.16 0.14 0.12 0.10 0.10

Notes: These values are in accordance with BS EN 14509, using Finite Element Analysis, and take into account any thermal bridging through the longitudinal joint. The U-values have been calculated using an aged thermal conductivity value of 0.020W/mK.

Fire Performance
- Reaction to Fire:
  B-s1,d0 for thickness of 40mm
  B-s1,d0 for panel thickness 60-220mm
- FM approval standard 4880 No height restriction.

Fire Resistance
The panel provides the following resistance to fire:
- EI30 for a thickness of 100mm with stitching each 300mm at the interlocking section on both sides.
- EI30 for a thickness of 120mm.
- EI60 for a thickness of 200mm.

Acoustic Performance
Panels have a predicted single figure weighted sound reduction of $R_w= 25\text{dB}$.

Airtightness
Panel achieves an air tightness of: $0.04\text{m}^3/\text{hr}/\text{m}^2$ at 50Pa.
UltraTech Versatile

Substrate
Standard
- Hot dipped S220GD + Zn zinc / aluminium coated metal to EN 10326 (continuously hot-dip coated strip and sheet of structural steels, technical delivery conditions).
- Metallic protected steel to BS EN 10346:2009.
- Nominal thickness: Interior / exterior 0.5mm or 0.6mm.

Coating
Kingspan CLEANsafe 15
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.6mm (incl coating)
- Protection film: No

Kingspan CLEANsafe 25
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.6mm (incl coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 55
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: 0.6mm (incl coating)
- Protection film: Yes (standard)

Kingspan HYGIENE safe
Kingspan HYGIENE safe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: 0.6mm (incl coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 304 (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.6mm
- Protection film: Yes (standard)

Colour Range
RAL 9010* and RAL 9002*
*Nearest match, samples available on request.
Other colours available on request.

Sustainability
- GWP: Low GWP with Zero ODP.
- Cradle to Grave: May be Green Guide A+ rating as per the BRE Global Green Guide to Specification. Subject to project specific assessment;
- End of Life: Fully recyclable through conventional shredder plants.
- Responsible Sourcing: Kingspan manufacturing plants are ISO 14001 (Environmental) accredited.

Quality and Durability
UltraTech Versatile panels are manufactured from the highest quality materials using state-of-the-art production equipment to rigorous quality control standards; ensuring long-term reliability and service life. All UltraTech Cleanroom Systems products are fully compliant with ISO 9001 (Quality), ISO 14001 (Environmental) and ISO 18001 (Health & Safety).

Packing
Standard Packing
UltraTech Versatile panels are stacked horizontally with facing sheets upward. The entire pack is wrapped in polythene. The number of panels in each pack depends on panel length, weight and thickness. Typical pack height is 1200mm, maximum pack weight is 1500kg.

Sea Freight
Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional cost. Alternatively, steel containers can be used. Special loading charges apply.

Delivery
All deliveries (unless indicated otherwise) are by road transport, to project site. Off-loading is the responsibility of the client.
Panel lengths of 13.5m-19.5m are subject to additional transport charge.
Applications
The UltraTech Versatile MF panels are designed for cleanroom environments where fire safety is important. The panels are suitable for all internal Cleanroom applications including new build and refurbishment projects. The UltraTech Versatile mineral fibre panels are typically installed vertically, also suitable for Horizontally installed applications.

Dimensions, Weight & Performance

<table>
<thead>
<tr>
<th>Overall Thickness</th>
<th>80mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulation</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td></td>
</tr>
<tr>
<td>Fire Performance</td>
<td></td>
</tr>
<tr>
<td>Acoustic Performance</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>50C</td>
<td>95</td>
<td>120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Density</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>50C kg/m³</td>
<td>95</td>
<td>120</td>
</tr>
<tr>
<td>50F kg/m³</td>
<td>120</td>
<td>120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fire Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction to fire: A2-S1,d0 according to EN 13501.</td>
</tr>
<tr>
<td>FM approval standard 4880 (2005).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acoustic Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>UltraTech Versatile MF panels have a predicted single figure weighted sound reduction $R_w = 29\text{d}B$.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fire Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>50F MF insulation core, partition and wall applications.</td>
</tr>
<tr>
<td>EI 60: 80mm or greater horizontal and vertical installation up to 4m span.</td>
</tr>
<tr>
<td>EI 90: 100mm horizontal and vertical installation up to 4m span (stitching screw obligatory every 300mm in the joint on both sides of the panel).</td>
</tr>
<tr>
<td>EI 120: 120mm or greater vertical installation up to 4m span. Horizontal installation up to 6m span.</td>
</tr>
<tr>
<td>EI 180: 300mm vertical and horizontal installation up to 4m span.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product Tolerances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length + 1.5mm - 1.5mm</td>
</tr>
<tr>
<td>Width + 2.0mm - 2.0mm</td>
</tr>
<tr>
<td>Thickness + 2.0mm - 2.0mm</td>
</tr>
<tr>
<td>Flatness (per metre) + 2.0mm - 2.0mm</td>
</tr>
<tr>
<td>End Squareness + 2.0mm - 2.0mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.6 / 0.5) (kg/m²)</td>
<td>14.93</td>
<td>16.43</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.62</td>
<td>0.67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.6 / 0.5) (kg/m²)</td>
<td>16.43</td>
<td>18.83</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.67</td>
<td>0.51</td>
</tr>
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<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.6 / 0.5) (kg/m²)</td>
<td>18.88</td>
<td>19.33</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.51</td>
<td>0.41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.6 / 0.5) (kg/m²)</td>
<td>21.23</td>
<td>21.83</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.41</td>
<td>0.35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.6 / 0.5) (kg/m²)</td>
<td>23.63</td>
<td>24.03</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.35</td>
<td>0.39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.6 / 0.5) (kg/m²)</td>
<td>25.38</td>
<td>28.03</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.28</td>
<td>0.28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.6 / 0.5) (kg/m²)</td>
<td>28.23</td>
<td>31.83</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.21</td>
<td>0.25</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.6 / 0.5) (kg/m²)</td>
<td>32.03</td>
<td>36.43</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.17</td>
<td>0.19</td>
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</table>

<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.6 / 0.5) (kg/m²)</td>
<td>37.63</td>
<td>41.83</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.13</td>
<td>0.14</td>
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</table>

<table>
<thead>
<tr>
<th>Insulation</th>
<th>50C</th>
<th>50F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (0.6 / 0.5) (kg/m²)</td>
<td>45.23</td>
<td>49.43</td>
</tr>
<tr>
<td>U-value (W/m²K)</td>
<td>0.09</td>
<td>0.11</td>
</tr>
</tbody>
</table>
UltraTech Versatile Wall & Ceiling Panel MF Core

**Biological**
UltraTech Versatile MF panels are resistant to attack from mould, fungi, mildew and vermin. No urea formaldehyde is used in the manufacture of the panels. UltraTech Versatile MF panels can incorporate project-specific HYGIENEsafe, wash and clean down facings.

**Panel Joint**
UltraTech Versatile MF panels feature a symmetric tongue and groove connection with excellent thermal and structural performance.

**Watertightness**
UltraTech Versatile MF panels are watertight to 1050Pa (Class B) according to EN 14509.

**Substrate**
- Hot dipped S220GD + Za zinc / aluminium coated metal to EN 10326 (continuously hot-dip coated strip and sheet of structural steels, technical delivery conditions).
- Metallic protected steel to BS EN 10346:2009.
- Nominal thickness: Interior/exterior 0.5mm or 0.6mm.

**Coating**

**Kingspan CLEANsafe 15**
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: Interior/exterior 0.5mm or 0.6mm (incl. coating)
- Protection film: No

**Kingspan CLEANsafe 25**
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: Interior/exterior 0.5mm or 0.6mm (incl. coating)
- Protection film: Yes (standard)

**Kingspan CLEANsafe 55**
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: Interior/exterior 0.5mm or 0.6mm (incl. coating)
- Protection film: Yes (standard)

**Kingspan HYGIENEsafe**
Kingspan HYGIENEsafe is our unique chemically inert, anti-static, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: Interior/exterior 0.5mm or 0.6mm (incl. coating)
- Protection film: Yes (standard)

**Kingspan CLEANsafe 304** (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: Interior/exterior 0.5mm or 0.6mm
- Protection film: Yes (standard)
UltraTech

Versatile Wall & Ceiling Panel MF Core

Colour Range
RAL 9010* and RAL 9002*
*Nearest match, samples available on request.
Other colours available on request.

Sustainability
- GWP: Low GWP with Zero ODP.
- Cradle to Grave: May be Green Guide A+ rating as per the BRE Global Green Guide to Specification. Subject to project specific assessment;
- End of Life: Fully recyclable through conventional shredder plants.
- Responsible Sourcing: Kingspan manufacturing plants are ISO 14001 (Environmental) accredited.

Quality and Durability
UltraTech Versatile MF panels are manufactured from the highest quality materials using state-of-the-art production equipment to rigorous quality control standards; ensuring long-term reliability and service life. All UltraTech Cleanroom Systems are fully compliant with ISO 9001 (Quality), ISO 14001 (Environmental) and ISO 18001 (Health & Safety).

Packing
Standard Packing
UltraTech Versatile MF are stacked horizontally with facing sheets upward. The entire pack is wrapped in polythene. The number of panels in each pack depends on panel length. Typical pack height is 1200mm, maximum pack weight is 1500kg.

Sea Freight
Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional cost. Alternatively, steel containers can be used. Special loading charges apply.

Delivery
All deliveries (unless indicated otherwise) are by road transport, to project site. Off-loading is the responsibility of the client.
Panel lengths of 13.5m-19.5m are subject to additional transport charge.
Kingspan UltraTech Versatile 1100mm panels have a unique de-ended panel solution, available for 80mm thickness panels only. This allows for fully flush integration with a range of cleanroom accessories.

The panel core, IPN Quadcore, ECOsafe PIR or MF is factory routered from the bottom of the Versatile wall panels. Aluminium top hat profile is placed into the de-ended panel with the panel face folded around. Patent pending.

UltraTech Versatile panels are available with de-ending to both top and bottom of the panel. This unique detail allows for flush integration into our adjustable floor track.
Applications
UltraTech Precision ECOsafe PIR panels are suitable for all internal cleanroom applications including new build and refurbishment projects across a variety of sectors, including pharmaceutical and bio-technology laboratories; healthcare; medical research and advanced technology facilities.

Dimensions, Weight & Performance

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Thickness</td>
<td>80mm</td>
</tr>
<tr>
<td>Standard Widths</td>
<td>500, 600, 900, 1200mm</td>
</tr>
<tr>
<td>Length</td>
<td>2000mm</td>
</tr>
<tr>
<td>Weight (0.63 / 0.63 steel)</td>
<td>18kg/m²</td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>0.019 W/mK</td>
</tr>
</tbody>
</table>

* Variable widths available in 10mm increments. Minimum width 150mm.

Airtightness
UltraTech Precision ECOsafe PIR panels achieve airtightness of less than 0.003m³/hr/m² at 50Pa in accordance with EN 14509.

Watertightness
UltraTech Precision ECOsafe PIR panels are watertight to 1050Pa (Class B) according to EN 14509.

Fire Performance
Surface Spread of Flame: The steel outer and inner facings have Class 1 surface spread of flame to BS 476-1: 1997 (Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products) and are Class 0, as defined by Building Regulations.

Acoustic Performance
UltraTech Precision ECOsafe PIR panels have a predicted single figure weighted sound reduction $R_w = 24$ dB.

Sound Reduction Index (SRI)

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>SRI (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>63</td>
<td>20</td>
</tr>
<tr>
<td>125</td>
<td>15</td>
</tr>
<tr>
<td>250</td>
<td>17</td>
</tr>
<tr>
<td>500</td>
<td>23</td>
</tr>
<tr>
<td>1000</td>
<td>18</td>
</tr>
<tr>
<td>2000</td>
<td>25</td>
</tr>
<tr>
<td>4000</td>
<td>40</td>
</tr>
<tr>
<td>8000</td>
<td>46</td>
</tr>
</tbody>
</table>

Insulation Core
UltraTech Precision ECOsafe PIR panels feature an environmentally sustainable closed-cell PIR insulation core which is non-deleterious with Zero Ozone Depletion Potential (Zero ODP).

Biological
UltraTech Precision ECOsafe PIR panels are resistant to attack from mould, fungi, mildew and vermin. No urea formaldehyde is used in the manufacture of the panels. UltraTech Precision ECOsafe PIR panels can incorporate project-specific HYGIENEsafe, wash and clean down facings.

Panel Joint
UltraTech Precision ECOsafe PIR panels feature a unique aluminium perimeter profile on all sides to create a fully flush joint. The panel side joint can accommodate a hygienic silicone seal finish. The joint created between the wall panels also allows for concealment of services.

Applications
- Pharmaceutical and bio-technology laboratories
- Healthcare
- Medical research
- Advanced technology facilities

Technical Specifications
- Overall Thickness: 80mm
- Standard Widths: 500, 600, 900, 1200mm
- Length: 2000mm
- Weight: 18kg/m²
- Thermal Conductivity: 0.019 W/mK
- Fire Performance: Class 1, Class 0
- Acoustic Performance: $R_w = 24$ dB
- Insulation Core: Environmentally sustainable closed-cell PIR insulation core
- Biological: Resistant to mould, fungi, mildew and vermin
- Panel Joint: Aluminium perimeter profile on all sides
- Airtightness: Less than 0.003m³/hr/m² at 50Pa
- Watertightness: 1050Pa (Class B)
- Frequency (Hz) SRI (dB)
- Dimensions: 300, 600, 900 and 1200mm Cover Width (1200mm cover width shown)
- Weight (0.63 / 0.63 steel): 18kg/m²
- Thermal Conductivity: 0.019 W/mK
- Fire Performance: Class 1, Class 0
- Acoustic Performance: $R_w = 24$ dB
- Insulation Core: Environmentally sustainable closed-cell PIR insulation core
- Biological: Resistant to mould, fungi, mildew and vermin
- Panel Joint: Aluminium perimeter profile on all sides
- Airtightness: Less than 0.003m³/hr/m² at 50Pa
- Watertightness: 1050Pa (Class B)
UltraTech Precision

Wall & Ceiling Panel
ECOsafe PIR

Substrate
Standard
- Hot dipped S220GD + Za zinc / aluminium coated metal to EN 10326 (continuously hot-dip coated strip and sheet of structural steels, technical delivery conditions).
- Metallic protected steel to BS EN 10346:2009.
- Nominal thickness: Interior / exterior 0.63mm.

Coating
Kingspan CLEANsafe 15
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

Kingspan CLEANsafe 25
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 55
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan HYGIENEsafe
Kingspan HYGIENEsafe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 304 (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

Colour Range
RAL 9010* and RAL 9002*
*Nearest match, samples available on request.
Other colours available on request.

Sustainability
- GWP: Low GWP with Zero ODP.
- Cradle to Grave: May be Green Guide A+ rating as per the BRE Global Green Guide to Specification. Subject to project specific assessment;
- End of Life: Fully recyclable through conventional shredder plants.
- Responsible Sourcing: Kingspan manufacturing plants are ISO 14001 (Environmental) accredited.

Quality and Durability
UltraTech Precision ECOsafe PIR panels are manufactured from the highest quality materials using state-of-the-art production equipment to rigorous quality control standards; ensuring long-term reliability and service life. All UltraTech Cleanroom Systems are fully compliant with ISO 9001 (Quality), ISO 14001 (Environmental) and ISO 18001 (Health & Safety).

Packing
Standard Packing
UltraTech Precision ECOsafe PIR panels are stacked horizontally with facing sheets upward. The entire pack is wrapped in polythene. The number of panels in each pack depends on panel length. Typical pack height is 1200mm, maximum pack weight is 1500kg.

Sea Freight
Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional cost. Alternatively, steel containers can be used. Special loading charges apply.

Delivery
All deliveries (unless indicated otherwise) are by road transport, to project site. Off-loading is the responsibility of the client.
UltraTech Precision MF Core panels are suitable for all internal cleanroom applications including new build and refurbishment projects across a variety of sectors, including pharmaceutical and bio-technology laboratories; healthcare; medical research and advanced technology facilities.

### Applications

UltraTech Precision MF Core panels are resistant to attack from mould, fungi, mildew and vermin. No urea formaldehyde is used in the manufacture of the panels. UltraTech Precision MF Core panels can incorporate project-specific HYGIENE safe, wash and clean down facings.

### Panel Joint

UltraTech Precision MF Core panels feature a unique aluminium perimeter profile on all sides to create a fully flush joint. The panel side joint can accommodate a hygienic silicone seal. The cavity created between wall panels allows for a concealment of services.

### Airtightness

UltraTech Precision MF Core panels achieve airtightness of less than 0.003m³/hr/m² at 50Pa in accordance with EN 14509.

### Watertightness

UltraTech Precision MF Core panels are watertight to 1050Pa (Class B) according to EN 14509.

### Fire Performance

- Reaction to fire: A2-S1,d0 according to EN 13501.
- Surface Spread of Flame: The steel outer and inner facings have Class 1 surface spread of flame to BS 476-1: 1997 (Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products) and are Class 0, as defined by Building Regulations.

### Acoustic Performance

UltraTech Precision MF Core panels have a predicted single figure weighted sound reduction $R_w = 31\,\text{dB}$.

### Insulation Core

UltraTech Precision MF Core panels feature a core consisting of vertically-oriented mineral fibres. As a result of this orientation, the panels provide excellent mechanical properties (high tensile and compressive strength).
### UltraTech Precision

#### Substrate
**Standard**
- Hot dipped S220GD + Za zinc / aluminium coated metal to EN 10326 (continuously hot-dip coated strip and sheet of structural steels, technical delivery conditions).
- Metallic protected steel to BS EN 10346:2009.
- Nominal thickness: Interior / exterior 0.63mm.

#### Coating
**Kingspan CLEANsafe 15**
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

**Kingspan CLEANsafe 25**
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

**Kingspan CLEANsafe 55**
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

**Kingspan HYGIENEsafe**
Kingspan HYGIENEsafe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

**Kingspan CLEANsafe 304** (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

### Colour Range
- RAL 9010* and RAL 9002*
*Nearest match, samples available on request.
Other colours available on request.

### Sustainability
- GWP: Low GWP with Zero ODP.
- Cradle to Grave: May be Green Guide A+ rating as per the BRE Global Green Guide to Specification. Subject to project specific assessment;
- End of Life: Fully recyclable through conventional shredder plants.
- Responsible Sourcing: Kingspan manufacturing plants are ISO 14001 (Environmental) accredited.

### Quality and Durability
UltraTech Precision MF Core panels are manufactured from the highest quality materials using state-of-the-art production equipment to rigorous quality control standards; ensuring long-term reliability and service life. All UltraTech Cleanroom Systems are fully compliant with ISO 9001 (Quality), ISO 14001 (Environmental) and ISO 18001 (Health & Safety).

### Packing
**Standard Packing**
UltraTech Precision MF Core panels are stacked horizontally with facing sheets upward. The entire pack is wrapped in polythene. The number of panels in each pack depends on panel length. Typical pack height is 1200mm, maximum pack weight is 1500kg.

**Sea Freight**
Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional cost. Alternatively, steel containers can be used. Special loading charges apply.

### Delivery
All deliveries (unless indicated otherwise) are by road transport, to project site. Off-loading is the responsibility of the client.
Airtightness
UltraTech Precision Aluminium Honeycomb panels achieve airtightness of less than 0.003m³/hr/m² at 50Pa in accordance with EN 14509.

Watertightness
UltraTech Precision Aluminium Honeycomb panels are watertight to 1050Pa (Class B) according to EN 14509.

Insulation Core
UltraTech Precision Aluminium Honeycomb panels feature an aluminium honeycomb structure inside, providing excellent rigidity at minimal weight. Due to the efficient hexagonal configuration, compression strength of the honeycomb core is typically higher (at same weight) compared to other types of core materials.

Biological
UltraTech Precision Aluminium Honeycomb panels are resistant to attack from mould, fungi, mildew and vermin. No urea formaldehyde is used in the manufacture of the panels. UltraTech Precision Aluminium Honeycomb panels can incorporate project-specific HYGIENEsafe, wash and clean down facings.

Panel Joint
UltraTech Precision Aluminium Honeycomb panels feature a unique aluminium perimeter profile on all sides to create a fully flush joint. The panel side joint can accommodate a hygienic silicone seal finish. The joint created between the wall panels also allows for concealment of services.

### Dimensions, Weight & Performance

<table>
<thead>
<tr>
<th>Overall Thickness</th>
<th>80mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Widths*</td>
<td>300, 600, 900 and 1200mm</td>
</tr>
<tr>
<td>Length</td>
<td>300-5700mm</td>
</tr>
<tr>
<td>Weight (0.63 / 0.63 steel)</td>
<td>17kg/m²</td>
</tr>
</tbody>
</table>

* Variable widths available in 10mm increments. Minimum width 150mm.

<table>
<thead>
<tr>
<th>Length Tolerances</th>
<th>+ 1.5mm - 1.5mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>+ 1.5mm - 1.5mm</td>
</tr>
<tr>
<td>Thickness</td>
<td>+ 2.0mm - 2.0mm</td>
</tr>
<tr>
<td>Flatness (per metre)</td>
<td>+ 0.5mm - 0.5mm</td>
</tr>
<tr>
<td>End Squareness</td>
<td>+ 2.0mm - 2.0mm</td>
</tr>
</tbody>
</table>

300, 600, 900 and 1200mm Cover Width (1200mm cover width shown)
UltraTech Precision

Wall & Ceiling Panel
Aluminium Honeycomb

Substrate
Standard
- Hot dipped S220GD + Za zinc / aluminium coated metal to EN 10326 (continuously hot-dip coated strip and sheet of structural steels, technical delivery conditions).
- Metallic protected steel to BS EN 10346:2009.
- Nominal thickness: Interior / exterior 0.63mm.

Coating
Kingspan CLEANsafe 15
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

Kingspan CLEANsafe 25
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 55
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan HYGIENEsafe
Kingspan HYGIENEsafe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 304 (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

Colour Range
RAL 9010* and RAL 9002*
*Nearest match, samples available on request.
Other colours available on request.

Sustainability
- GWP: Low GWP with Zero ODP.
- Cradle to Grave: May be Green Guide A+ rating as per the BRE Global Green Guide to Specification. Subject to project specific assessment;
- End of Life: Fully recyclable through conventional shredder plants.
- Responsible Sourcing: Kingspan manufacturing plants are ISO 14001 (Environmental) accredited.

Quality and Durability
UltraTech Precision Aluminium Honeycomb panels are manufactured from the highest quality materials using state-of-the-art production equipment to rigorous quality control standards; ensuring long-term reliability and service life. All UltraTech Cleanroom Systems are fully compliant with ISO 9001 (Quality), ISO 14001 (Environmental) and ISO 18001 (Health & Safety).

Packing
Standard Packing
UltraTech Precision Aluminium Honeycomb panels are stacked horizontally with facing sheets upward. The entire pack is wrapped in polythene. The number of panels in each pack depends on panel length. Typical pack height is 1200mm, maximum pack weight is 1500kg.

Sea Freight
Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional cost. Alternatively, steel containers can be used. Special loading charges apply.

Delivery
All deliveries (unless indicated otherwise) are by road transport, to project site. Off-loading is the responsibility of the client.
Application
Extruded aluminium (6060 T5) Interface Profiles are used to provide a flush interface at Precision to Versatile (male or female) panels joints. Offering improved aesthetics and ease of cleaning in accordance with ISO 11998.

The profiles are available in powder coated RAL 9010 or RAL 9002 finish as standard to match door and window frames, with an optional anti-bacterial HYGIENEsafe coating. Patent pending.

Installation
Silicone seal is required between interface profile and Versatile or Precision panels.

Available Lengths
Standard Lengths: 3 and 4 metres. Specific profile lengths are available on request.

Flush Panel Interface Precision / Versatile female

<table>
<thead>
<tr>
<th>Part Reference</th>
<th>Weight</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface Profile - female joint</td>
<td>1.01kg/m</td>
<td>3mm</td>
</tr>
<tr>
<td>Interface Profile - male joint</td>
<td>0.92kg/m</td>
<td>3mm</td>
</tr>
</tbody>
</table>

Female Interface Profile

Male Interface Profile

Silicone seal

Silicone seal

Flush Panel Interface Precision / Versatile male

Silicone seal

Female Interface Profile and Flush Window

Female Interface Profile and Flush Door Jamb
Kingspan UltraTech Ceiling Suspension Systems are designed to suit the customer’s specific cleanroom requirements. They are offered as either a Versatile semi-flush ceiling suspension or a Precision fully-flush ceiling suspension system.

**UltraTech Versatile Ceiling Suspension System**

The UltraTech Versatile Ceiling Panels are available in three core options: IPN-QuadCore, PIR and MF Core. Refer to pages 4, 7, 10 and 12 for thickness options.

**UltraTech Precision Ceiling Suspension System**

The UltraTech Precision Ceiling Panels are 80mm thick and are available in three core options: PIR, MF Core and Aluminium Honeycomb.

**Features**

UltraTech Ceiling Systems can accommodate the flush integration of cleanroom fittings such as lighting systems, supply and return air housings, and smaller ceiling mounted services.

The UltraTech Ceiling Suspension Systems are designed and classified as ceilings accessible for installation, occasional inspection and maintenance, minor repair only.

Please contact Kingspan Technical department for confirmation of loads and ceiling panel spans.

UltraTech Ceiling Suspension Systems are not designed for material storage.

Heavier building services such as air ducts, HEPA housings, piping and cable trays should not be supported from the ceiling suspension system.

Kingspan recommends that a separate walkway zone should be installed for highly trafficked areas of the walk on ceiling during and after installation.

Please contact the Kingspan Technical Department for an individual assessment of your cleanroom ceiling requirements.

**Cut outs in panels for light fixtures**

(factory cut outs optional - available on request)
UltraTech Air Return Panels are a sealed modular, non-load-bearing wall system that have been designed to provide return air risers within the cleanroom wall panel thickness. The air return panels are easily integrated with the UltraTech partition wall system.

Each panel is pre-fabricated, consisting of two reinforced panel skin facings 0.63mm thick. The edges of the two skins are pressed to create a monobloc panel construction with smooth seamless edges. Bonded to the extruded aluminium perimeter frame to all sides.

UltraTech Air Return Panels are supplied with factory formed low level air return grilles and high level outlets eliminating both cutting and dust generation during on-site installation.

**Application**

UltraTech Air Return Panels have been specifically designed for use within cleanroom environments where the air cleanliness is stringently controlled and HEPA filtered to meet the required classification in accordance with ISO 14644-1.

**Dimensions**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Thickness</td>
<td>80mm</td>
</tr>
<tr>
<td>Lengths</td>
<td>Max length 6700mm</td>
</tr>
<tr>
<td>Cover Width</td>
<td>900mm*</td>
</tr>
</tbody>
</table>

* Other widths available on request.

**Fire Performance**

The steel outer and inner facings have Class 1 surface spread of flame to BS 476-7: 1997 (Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products) and are Class 0, as defined by Building Regulations.

**Panel Joint**

The panel joint has a unique self-supporting extruded aluminium frame to all sides. The panels are installed using an aluminium key connection profile between each panel. The key connection between the panels create a joint that can then be hygiene silicone sealed after installation.

**Airtightness**

The UltraTech panels achieved an air permeability per joint length of <0.003 m³/hr/m @ 200Pa in accordance with EN 14509.

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**Reinforcement**

UltraTech Air Return Panels are reinforced using 11.6mm polypropylene honeycomb board, firmly bonded to the panel skins and reinforced with aluminium stiffeners.

**Frame**

The frames are constructed from 2mm thick extruded 6063 aluminium alloy to form a frame to all sides. Each frame is cut to length using a computerized saw for a perfect mitred corner joints, forming a neat butt joint connection between each section.
UltraTech Precision

Substrate
Standard
- The UltraTech Air Return Panels are manufactured from 0.63mm S220GD+ZA hot-dip zinc/aluminium coated steel to EN 10346: 2009.
- Metallic protected steel to BS EN 10346:2009.

Coating
Kingspan CLEANsafe 15
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

Kingspan CLEANsafe 25
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 55
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan HYGIENEsafe
Kingspan HYGIENEsafe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 304 (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

Air Return Panel

Colour Range
RAL 9010* and RAL 9002*
*Nearest match, samples available on request.
Other colours available on request.

Guarantees
UltraTech panel system components are available with the Kingspan Guarantee on an individual project basis.

Quality and Durability
Kingspan components are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, approved to ISO 9001:2000 standard, ensuring long-term reliability and service life. Kingspan manufacturing plants are ISO 14001 (Environmentally) and ISO 18001 (Health & Safety) accredited.

Packing
Standard Packing
UltraTech panel systems are stacked horizontally with facing sheets upward. The top and bottom, sides and ends are protected with polystyrene and timber packing and the entire pack is wrapped in polythene. The number of panels in each pack depends on panel length, width and weight and thickness. Typical pack height is 1200mm. Maximum pack weight 1500kg.

Sea Freight
Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional cost. Alternatively, steel containers can be used. Special loading charges apply.

Delivery
All deliveries (unless indicated otherwise) are by road transport to project site. It is the clients responsibility to check the site for restrictions (i.e. entrance to site, power lines etc.) and agree a storage area to be used, also to identify the correct type/method of off-loading facilities to be used. Off-loading is the responsibility of the client.
UltraTech Precision

Air Return Panel

Typical Technical Specification

Typical Perforation Detail
(options available on request)

Panel to Floor Track Detail

Air Panel Section

Typical Panel Perforation

Panel Cut-out for Louvred Grille

Perforation example: 200mm x 848mm area with holes of Ø8mm with perforation of 40% (1321 holes of Ø8mm = 66,400mm²)
**Product Description**

UltraTech Technical Panels are sealed modular, non-load-bearing wall panels designed to provide a maintenance accessible space within the cleanroom wall panel.

And allow for easy integration with the UltraTech Precision wall panel system.

Each panel is pre-fabricated and consists of two reinforced facings in 0.63mm thickness. The edges of the two skins are pressed to and bonded to the extruded aluminium frame to all sides creating a monobloc panel construction with smooth seamless edges.

UltraTech Technical Panels are supplied with a factory engineered demountable panel facing held to the panel frame by recessed magnets.

**Application**

UltraTech Technical Panels have been specifically designed for use within cleanroom environments where piping or cabling/wiring need to be accessible for maintenance.

**Technical Data**

<table>
<thead>
<tr>
<th>Overall Thickness</th>
<th>80mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Widths</td>
<td>300, 600, 900 and 1200mm</td>
</tr>
<tr>
<td>Length</td>
<td>300-5700mm</td>
</tr>
</tbody>
</table>

**Panel Joint**

The panel joint has a unique self-supporting extruded aluminium frame to all sides. The panels are installed using a connection profile between each panel. The visible facing gaps between panels are sealed after installation.

**Fire Performance**

The steel outer and inner facings have Class 1 surface spread of flame to BS 476-7: 1997 (Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products) and are Class 0, as defined by Building Regulations.

**Quality**

Kingspan cleanroom products are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, approved to ISO 9001:2000, ensuring long-term reliability and long lifespan. Kingspan manufacturing plants are ISO 14001 (Environmental) and ISO 18001 (Health & Safety) accredited.
Substrate
Standard
- The UltraTech Technical Panels are manufactured from 0.63mm S220GD+ZA hot-dip zinc/aluminium coated steel to EN 10346: 2009.
- Metallic protected steel to BS EN 10346:2009.

Coating
Kingspan CLEANsafe 15
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

Kingspan CLEANsafe 25
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 55
Kingspan CLEANsafe 55 is a chemically inert co-laminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan HYGIENEnsafe
Kingspan HYGIENEnsafe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 304 (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

Colour Range
RAL 9010* and RAL 9002*
*Nearest match, samples available on request.
Other colours available on request.

Reinforcement (dependent on width)
UltraTech Technical panels are reinforced using 11.6mm polypropylene honeycomb board firmly bonded to the panel skins.

Frame
The frames are constructed from 2mm thick extruded 6063 aluminium alloy to form a frame to all sides. Each frame is cut to length using a computerized saw for a perfect mitred corner joints, forming a neat butt joint connection between each section.

Packing
Standard Packing
UltraTech Technical Panels are stacked horizontally with facing sheets upward. The top and bottom, sides and ends are protected with polystyrene and timber packing and the entire pack is wrapped in polythene. The number of panels in each pack depends on panel length, width and weight and thickness. Typical pack height is 1200mm. Maximum pack weight 1500kg.

Sea Freight
Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional cost. Alternatively, steel containers can be used. Special loading charges apply.

Delivery
All deliveries (unless indicated otherwise) are by road transport to project site. It is the clients responsibility to check the site for restrictions (i.e. entrance to site, power lines etc.) and agree a storage area to be used, also to identify the correct type/method of off-loading facilities to be used. Off-loading is the responsibility of the client.
Technical Panel: Front View

Cross-section X-X
UltraTech Precision Pre-formed Corner Panels
Pre-formed corner panels provide a flush finished external corner detail (no flashing required). Pre-formed corner panels finished on 2 sides maximum width 1000mm. Pre-formed corner panels finished on 1 side maximum width 1200mm. Available in lengths up to 3.4m.

Pre-formed corner finished on two sides

UltraTech Precision Integrated Conduits
25mm diameter rigid UPVC conduits placed at 260mm from panel ends.

25mm integrated conduit options

Pre-formed corner finished on one side
UltraTech Precision

**Application**

Extruded aluminium (6060 T5) 2-way and 3-way corner profiles have been specifically designed to provide a flush interface at corner junctions with both UltraTech Versatile or Precision panels. They provide improved aesthetics and are easy to clean in accordance with ISO 11998.

**2-Way Profile** (UltraTech Precision shown)

- **Part Reference**: Extruded 3mm aluminium 2-way profile
- **Weight**: 150x150x80, 3.8 kg/m
- **Folded aluminium angle bracket**: 50x50x3mm, 32g each

**Available Lengths**

Standard lengths: 3-4 metres. Specific lengths available on request.

The profiles are available in powder coated RAL 9010 or RAL 9002 finish as standard, with an optional anti-bacterial HYGIENEsafe coating to match panel finish.

**3-Way Profile** (UltraTech Versatile shown)

- **Part Reference**: Extruded 3mm aluminium 3-way profile
- **Weight**: 80x150x200mm, 4.9 kg/m
- **Folded aluminium angle bracket**: 50x50x3mm, 32g each

**Available Lengths**

Standard lengths: 3-4 metres. Specific lengths available on request.
Application

Extruded aluminium (6060 T5) service conduit is used to provide a flush interface between UltraTech wall panels where a service cavity is required. It offers improved aesthetics and ease of cleaning in accordance with ISO 11998.

The profile is available in powder coated RAL 9002 or RAL 9010 finish as standard, with an optional anti-bacterial HYGIENEsafe coating.

<table>
<thead>
<tr>
<th>Part Reference</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>3mm thick Service Conduit profile 80x200mm</td>
<td>4.13kg/m</td>
</tr>
<tr>
<td>Interface Profile with Flush panel - female joint</td>
<td>1.01kg/m</td>
</tr>
<tr>
<td>Interface Profile with Flush panel - male joint</td>
<td>0.92kg/m</td>
</tr>
</tbody>
</table>

Available Lengths

3 and 4 metres for horizontal applications. Specific lengths available on request for vertical applications.

Vertical Application (UltraTech Versatile shown)

Service Conduit Connection to Flooring Profile

Horizontal Application (UltraTech Precision shown)
UltraTech Electrical Raceway

Application
Extruded Aluminium electrical raceway conduit is used to provide a flush interface between the UltraTech Precision and/or Versatile wall panels and an electrical services.

The electrical raceway is compatible with the Legrand Mosaic 45 (or similar) range of sockets (European, UK or US), switches, RJ45 or USB sockets, LEDs, and much more. Note those electrical accessories are not provided by Kingspan. The electrical raceway offers improved aesthetics and ease of cleaning in accordance with ISO 11998.

The profile is available in powder coated options RAL9002 or RAL9010 finish as standard, with an optional anti-bacterial HYGIENE safe coating (that can be married with Legrand Mosaic 45 anti-bacterial range).

<table>
<thead>
<tr>
<th>Part Reference</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>precraceway</td>
<td>2.5kg/lm</td>
</tr>
<tr>
<td>precracewaycap</td>
<td>0.36kg/lm</td>
</tr>
</tbody>
</table>

Available Lengths
Standard lengths: 3 and 4 metres. Specific lengths available on request.

Vertical Application (UltraTech Versatile shown)

Horizontal Application (UltraTech Precision shown)

Service Conduit Connection to Flooring Profile
UltraTech

Adjustable Flooring Profile

Application
The UltraTech adjustable aluminium flooring profile has been engineered to provide a fully flush wall panel to floor detail.

The profile is suitable for both vinyl and epoxy floor finishes. The unique feature of the profile also allows for a silicone seal finish between the wall panels and floor finishes.

Additionally, the floor profile has been engineered to provide adjustment from 100mm to 130mm. The top profile is pre-punched with slots for levelling adjustment and these slots provide access to the M10 adjustment jacks.

The recessed top section of the flooring profile provides additional space for cables / services (40 x 40mm).

The engineered design allows for a fully demountable cleanroom wall panel system that does not compromise room integrity and finish.

Table: Part Reference and Weight

<table>
<thead>
<tr>
<th>Part Reference</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium adjustable flooring profile</td>
<td>2.75 kg/m</td>
</tr>
</tbody>
</table>

Available Lengths
Standard length: 6.0 metres.
Fibre reinforced polyester profiles have been specifically selected to be used with the UltraTech wall panel system.

This floor profile is non-adjustable and is normally installed recessed (4mm each side) from the wall panel facings in order to allow for a perfect connection finish between the UltraTech wall panel system and the vinyl or epoxy flooring.

<table>
<thead>
<tr>
<th>Part Reference</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyester non-adjustable flooring profile</td>
<td>3.8 kg/m</td>
</tr>
</tbody>
</table>

Available Lengths
Standard length: 6.0 metres
UltraTech

Floor Connection Profiles

**Steel U-Profile**
- **Specification**
  - **Thickness**: 1.5mm
  - **Standard Dimensions**: 40x81x40mm*
  - **Max Length**: 3m
  - **Material**: Galvanised
  - **Finish**: Powder coated
  - **Colour**: RAL 9010 or RAL 9002
  - **Fixing**: Fixed directly to floor with hammer fixing Ø8*54mm

*Project specific dimensions available on request.

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**PVC U-profile**
- **Specification**
  - **Thickness**: 2.5mm
  - **Standard Dimensions**: 30x80x30mm*
  - **Max Length**: 4m
  - **Material**: Extruded PVC
  - **Finish**: Pre-finished
  - **Colour**: RAL 9010 or RAL 9002
  - **Fixing**: Fixed directly to floor with hammer fixing Ø8*54mm

*Project specific dimensions available on request.
## UltraTech

### Floor Connection Profiles

**Skirting Type 1**

<table>
<thead>
<tr>
<th>Specification</th>
<th>3mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness</td>
<td>3mm</td>
</tr>
<tr>
<td>Standard Dimensions</td>
<td>150 x 3mm</td>
</tr>
<tr>
<td>Max Length</td>
<td>4m</td>
</tr>
<tr>
<td>Material</td>
<td>Grey PVC</td>
</tr>
<tr>
<td>Finish</td>
<td>Pre-finished</td>
</tr>
<tr>
<td>Colour</td>
<td>RAL9035</td>
</tr>
<tr>
<td>Fixing</td>
<td>Adhesive fixed</td>
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</tbody>
</table>

**Skirting Type 2**

<table>
<thead>
<tr>
<th>Specification</th>
<th>45mm</th>
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</thead>
<tbody>
<tr>
<td>Thickness</td>
<td>45mm</td>
</tr>
<tr>
<td>Standard Dimensions</td>
<td>10 x 45mm</td>
</tr>
<tr>
<td>Max Length</td>
<td>4m</td>
</tr>
<tr>
<td>Material</td>
<td>White PVC</td>
</tr>
<tr>
<td>Finish</td>
<td>Pre-finished</td>
</tr>
<tr>
<td>Colour</td>
<td>RAL9010</td>
</tr>
<tr>
<td>Fixing</td>
<td>Secret screw fixing</td>
</tr>
</tbody>
</table>

Additional accessories for internal / external corners and stopends are available.
Aluminium Coving Profiles
Available in both 40 and 45mm radius options, powder coated aluminium alloy internal corner coving profiles allow for a silicone seal finish. Aluminium pre-coving is screw fixed to the cleanroom ceiling and wall panels. The powder coated finished coving is clipped into the pre-coving for a silicone seal finish.

Coving profiles interface with internal 3 way corner profile and are available in powder coated RAL 9010 or RAL 9002 finish, with an optional anti-bacterial HYGIENEsafe coating.

Installation
Corner caps are fixed to the ceiling panels with self-tapping screws.

<table>
<thead>
<tr>
<th>Part Reference</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>40mm radius aluminium coving</td>
<td>1.13 kg/m</td>
</tr>
<tr>
<td>Internal corner to suit 40mm radius aluminium coving</td>
<td>51g each</td>
</tr>
<tr>
<td>45mm radius aluminium coving</td>
<td>0.61 kg/m</td>
</tr>
<tr>
<td>Internal corner to suit 45mm radius aluminium coving</td>
<td>115g each</td>
</tr>
</tbody>
</table>

Available Lengths
Standard length: 4.0 metres.
**UltraTech**

**Semi-Flush Profiles**

**PVC Coving Profile**
PVC internal corner coving has been designed to be fixed to a 3-way corner profile and to interface with a 55mm radius PVC or 45mm radius aluminium coving profiles.

PVC covings have soft edges at the wall panel junction and are available in RAL 9010 or RAL 9002 finish.

**Installation**
Corner caps are fixed to the ceiling panels with self-tapping screws. PVC covings cannot be sealed to panels.

<table>
<thead>
<tr>
<th>Part Reference</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>55mm radius PVC coving profile</td>
<td>0.67 kg/m</td>
</tr>
<tr>
<td>Internal corner to suit 55mm radius PVC coving</td>
<td>275g each</td>
</tr>
</tbody>
</table>

**Available Lengths**
Standard length: 4.0 metres.
Application

UltraTech Flush Windows are designed as 80mm fully flush mounted glazed units for the UltraTech Precision panel systems.

The glazing units consist of an aluminium frame and two panes of 6mm laminated glass, which are glued and siliconed on both sides to the frame.

The aluminium frame is available in RAL 9002 or RAL 9010 colours as standard.

The bottom of the aluminium frame is supplied with moisture-absorbing silica-gel granules in order to keep the glazing unit cavity moisture-free.

Technical Details

<table>
<thead>
<tr>
<th>Type</th>
<th>Internal flush window</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness</td>
<td>6mm laminated glass</td>
</tr>
<tr>
<td>Module</td>
<td>300mm in length and width</td>
</tr>
<tr>
<td>Width Range</td>
<td>300-1500mm</td>
</tr>
<tr>
<td>Height Range</td>
<td>300-2400mm</td>
</tr>
<tr>
<td>Options</td>
<td>Tempered glass Blinds*</td>
</tr>
<tr>
<td></td>
<td>Stainless steel</td>
</tr>
<tr>
<td></td>
<td>Protective UV film**</td>
</tr>
</tbody>
</table>

* Please refer to colour chart.
**Range of UV films available.

---

UltraTech 80mm Flush Windows

<table>
<thead>
<tr>
<th>Width (mm)</th>
<th>300</th>
<th>600</th>
<th>900</th>
<th>1000</th>
<th>1200</th>
<th>1500</th>
<th>1800</th>
<th>2100</th>
<th>2400</th>
</tr>
</thead>
<tbody>
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<td>Height (mm)</td>
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<td></td>
</tr>
<tr>
<td>300</td>
<td>3.7kg</td>
<td>6.9kg</td>
<td>10.1kg</td>
<td>11.2kg</td>
<td>13.3kg</td>
<td>16.5kg</td>
<td>19.7kg</td>
<td>22.9kg</td>
<td>26.1kg</td>
</tr>
<tr>
<td>600</td>
<td>12.8kg</td>
<td>18.7kg</td>
<td>20.7kg</td>
<td>24.6kg</td>
<td>30.5kg</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Weights do not include packaging.
UltraTech

Flush Window

De-ended UltraTech Versatile Panel

Floor track (adjustable type shown)
UltraTech Semi-Flush Windows are designed as semi-flush mounted glazed frame for 60, 80 or 100mm Versatile panel systems.

The glazing units consist of 2 aluminium frames (frame and counterframe) on which 6mm laminated glass is glued and siliconed on both sides.

The aluminium frame is available in RAL 9002 or RAL 9010 colours as standard.

The bottom of the aluminium frame is supplied with moisture-absorbing silica-gel granules in order to keep the glazing unit cavity moisture-free.

**Technical Details**

<table>
<thead>
<tr>
<th>Type</th>
<th>Internal semi-flush window</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness***</td>
<td>60, 80, and 100mm (± 1.0mm)</td>
</tr>
<tr>
<td>Module</td>
<td>300mm in length and width</td>
</tr>
<tr>
<td>Width Range</td>
<td>300-1500mm</td>
</tr>
<tr>
<td>Height Range</td>
<td>300-2400mm</td>
</tr>
<tr>
<td>Options</td>
<td>Tempered glass</td>
</tr>
<tr>
<td></td>
<td>Blinds*</td>
</tr>
<tr>
<td></td>
<td>Stainless steel</td>
</tr>
<tr>
<td></td>
<td>Protective UV film**</td>
</tr>
</tbody>
</table>

* Please refer to colour chart.
** Range of UV films available.
*** Special frame thicknesses available on request.
## UltraTech Semi-Flush Window

### UltraTech 60mm Semi-Flush Windows

<table>
<thead>
<tr>
<th>Width (mm)</th>
<th>300</th>
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<th>900</th>
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<th>1200</th>
<th>1500</th>
<th>1800</th>
<th>2100</th>
<th>2400</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
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<td>7.3kg</td>
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<td>14.0kg</td>
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<td>20.7kg</td>
<td>24.0kg</td>
<td>27.3kg</td>
</tr>
<tr>
<td>600</td>
<td>4.2kg</td>
<td>7.7kg</td>
<td>11.2kg</td>
<td>12.3kg</td>
<td>14.6kg</td>
<td>18.1kg</td>
<td>21.6kg</td>
<td>25.0kg</td>
<td>28.5kg</td>
</tr>
<tr>
<td>900</td>
<td>4.5kg</td>
<td>8.1kg</td>
<td>11.7kg</td>
<td>12.9kg</td>
<td>15.3kg</td>
<td>18.9kg</td>
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<td>26.1kg</td>
<td>29.7kg</td>
</tr>
<tr>
<td>1000</td>
<td>4.8kg</td>
<td>8.7kg</td>
<td>12.3kg</td>
<td>13.5kg</td>
<td>16.0kg</td>
<td>20.1kg</td>
<td>23.6kg</td>
<td>27.2kg</td>
<td>30.8kg</td>
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<tr>
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<td>9.4kg</td>
<td>13.1kg</td>
<td>14.3kg</td>
<td>16.8kg</td>
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</tr>
<tr>
<td>1500</td>
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<td>13.9kg</td>
<td>15.1kg</td>
<td>17.7kg</td>
<td>22.1kg</td>
<td>25.5kg</td>
<td>29.1kg</td>
<td>32.7kg</td>
</tr>
</tbody>
</table>

Weights do not include packaging.
Height and Width refer to the window order dimensions.
Cut out dimensions are the order dimensions +10mm.
Overall frame dimensions are the order dimensions +32mm.
Please contact Kingspan Technical.

### UltraTech 80mm Semi-Flush Windows

<table>
<thead>
<tr>
<th>Width (mm)</th>
<th>300</th>
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<th>900</th>
<th>1000</th>
<th>1200</th>
<th>1500</th>
<th>1800</th>
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<th>2400</th>
</tr>
</thead>
<tbody>
<tr>
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<td>4.2kg</td>
<td>7.7kg</td>
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<td>12.3kg</td>
<td>14.6kg</td>
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<td>21.6kg</td>
<td>25.0kg</td>
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</tr>
<tr>
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<td>12.6kg</td>
<td>15.0kg</td>
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<td>25.4kg</td>
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<td>900</td>
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<td>11.9kg</td>
<td>13.1kg</td>
<td>15.5kg</td>
<td>19.1kg</td>
<td>22.6kg</td>
<td>26.1kg</td>
<td>29.7kg</td>
</tr>
<tr>
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<td>5.0kg</td>
<td>8.8kg</td>
<td>12.3kg</td>
<td>13.5kg</td>
<td>15.9kg</td>
<td>20.4kg</td>
<td>23.9kg</td>
<td>27.5kg</td>
<td>31.1kg</td>
</tr>
<tr>
<td>1200</td>
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<td>9.4kg</td>
<td>12.7kg</td>
<td>14.0kg</td>
<td>16.4kg</td>
<td>21.0kg</td>
<td>24.5kg</td>
<td>28.1kg</td>
<td>31.7kg</td>
</tr>
<tr>
<td>1500</td>
<td>5.6kg</td>
<td>10.1kg</td>
<td>13.2kg</td>
<td>14.5kg</td>
<td>16.9kg</td>
<td>21.4kg</td>
<td>24.9kg</td>
<td>28.5kg</td>
<td>32.2kg</td>
</tr>
</tbody>
</table>

Weights do not include packaging.
Height and Width refer to the window order dimensions.
Cut out dimensions are the order dimensions +10mm.
Overall frame dimensions are the order dimensions +32mm.
Please contact Kingspan Technical.

### UltraTech 100mm Semi-Flush Windows

<table>
<thead>
<tr>
<th>Width (mm)</th>
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<th>900</th>
<th>1000</th>
<th>1200</th>
<th>1500</th>
<th>1800</th>
<th>2100</th>
<th>2400</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>4.5kg</td>
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<td>11.7kg</td>
<td>12.9kg</td>
<td>15.3kg</td>
<td>18.9kg</td>
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<td>26.1kg</td>
<td>29.7kg</td>
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<tr>
<td>600</td>
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<td>8.4kg</td>
<td>11.9kg</td>
<td>13.1kg</td>
<td>15.5kg</td>
<td>19.1kg</td>
<td>22.6kg</td>
<td>26.1kg</td>
<td>29.7kg</td>
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<tr>
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<td>12.3kg</td>
<td>13.5kg</td>
<td>15.9kg</td>
<td>20.4kg</td>
<td>23.9kg</td>
<td>27.5kg</td>
<td>31.1kg</td>
</tr>
<tr>
<td>1000</td>
<td>5.3kg</td>
<td>9.4kg</td>
<td>12.7kg</td>
<td>14.0kg</td>
<td>16.4kg</td>
<td>21.0kg</td>
<td>24.5kg</td>
<td>28.1kg</td>
<td>31.7kg</td>
</tr>
<tr>
<td>1200</td>
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<td>10.1kg</td>
<td>13.2kg</td>
<td>14.5kg</td>
<td>16.9kg</td>
<td>21.4kg</td>
<td>24.9kg</td>
<td>28.5kg</td>
<td>32.2kg</td>
</tr>
<tr>
<td>1500</td>
<td>5.9kg</td>
<td>10.8kg</td>
<td>13.7kg</td>
<td>15.0kg</td>
<td>17.4kg</td>
<td>22.0kg</td>
<td>25.5kg</td>
<td>29.1kg</td>
<td>32.7kg</td>
</tr>
</tbody>
</table>

Weights do not include packaging.
Height and Width refer to the window order dimensions.
Cut out dimensions are the order dimensions +10mm.
Overall frame dimensions are the order dimensions +32mm.
Please contact Kingspan Technical.
Application
Emergency Escape Panels provide a quick and simple means of escape for personnel from a cleanroom environment in the event of an emergency. Emergency Escape Panels are sealed and provide a flush or semi-flush, easy clean surface to the cleanroom facility.

Specification
The Emergency Escape Panel assembly consists of two parts - frame and glazing.

Frames
Depending on the frame profile used, a Emergency Escape Panel can be applied to different wall thicknesses.

Glazing
Emergency Escape Panels are supplied with single tempered glazing as standard for both semi-flush and flush applications. Double-glazed units are available on request.

Standard Equipment
Emergency Escape Panels are supplied with a window hammer tool, fixing bracket, instructions and self-adhesive ‘Emergency Exit’ label.

Options
Emergency Escape Panels can be supplied featuring a stainless steel frame and/or sand blasted glazing. Alternative window breaking tools can be supplied. Cut out dimensions are the order dimension +10mm.
UltraTech

Emergency Escape Panels

Semi-Flush Emergency Escape Panel
(single glazing shown)

1000mm (typical)

80mm

2200mm (typical)
UltraTech

Flush Single Door Leaf

Technical Details
Type: Flush single door leaf and frame.
Core: ECOsafe PIR / MF Core.
Thickness: 80 mm (Tol. ± 1.0 mm) doorleaf.

Door openings:
Height: 2133mm (clear internal height) for frame height of 2200mm
Width: 1067mm (clear internal width) for a frame width of 1200mm
Other sizes available on request.

Door hardware: Stainless steel hinges; stainless steel door handle; stainless steel pull handle; door lock with keys; and recessed drop-seal.

Coating
Kingspan CLEANsafe 15
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

Kingspan CLEANsafe 25
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 55
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan HYGIENEsafe
Kingspan HYGIENEsafe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)
Kingspan CLEANsafe 304 (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

Colour Range
RAL9010, RAL9002.
Other colour options are available on request.

Product Data
Door Leaf
The UltraTech hinged door leafs are constructed from two facings 0.63mm thick hot-dip zinc coated metal to EN 10147, folded to form a 80mm thick door leaf. The edges of the two skins are pressed to create a monobloc cassette construction with smooth folded edges.

The UltraTech hinged door features an environmentally-sustainable closed cell ECOsafe PIR insulation core which is non-deleterious with Zero Ozone Depletion Potential (Zero ODP).

Frame
The UltraTech hinged door frames are constructed from 6mm thick extruded 6063 aluminium alloy. Each frame is cut to length using a computerized saw for a perfect mitred corner joint, to form a neat butt joint connection between jambs and heads. The door frames are Polyester powder coated, colour to match face of door leaf unless stated otherwise.

Gaskets
The UltraTech hinged door frame incorporates a smooth, continuous uPVC gasket fitted to the internal rebate of the frame for ease of maintenance and to ensure that the door leaf seals to the frame.

The UltraTech hinged door leafs incorporates a recessed drop-seal (optional) which automatically lowers upon closing to ensure an airtight seal between the bottom of the door and the flooring.

Hinges
Four recessed stainless steel lift-off hinges are provided. The number of hinges is calculated based on the physical door leaf size, leaf weight and additional equipment fitted to the door.

Vision Panels
The UltraTech hinged door leafs are available with or without a flush vision panel. Each vision panel is constructed from two 6mm laminated safety glass. Standard size is 300 x 600mm, other sizes are available on request.

Available Options:
- Double-glazed Flush vision panel 300mm wide x 600mm high (6mm laminated glass), other sizes available on request
- Built in electromagnetic lock (24V)
- Electrical lock (24V)
- Sash lock / latch / night latch / deadlock / escape sashlock / roller bolt
- Flush or semi-flush stainless steel kick-plates
- PVC semi-flush kick-plates
- Stainless steel push-pllate and pull handle
- Emergency door with panic bar
- Door stop
- Interlocking system
- Door closer
- Recessed drop seal

Technical Performance:
- Air permeability according to EN 12426: Class 3
- Leakage at +50Pa positive pressure 3.2m³/h/m²
- Leakage at -50Pa negative pressure 4.1m³/h/m²
- Resistance to water penetration according to EN12425: Class 0
- Resistance to windload according to EN 12424: Class 4
UltraTech

Flush Single Door Leaf

Single Door Leaf and Connecting Panels

Single Door Leaf with Flush Glazing (Vision Panel)

300 x 600mm

Recessed drop seal

Single Door Leaf

Single Door Leaf with Flush Glazing (Vision Panel)

Recessed drop seal

Kingspan Insulated Panels
Technical Details

**Type:** Flush double door leaf and frame.

**Core:** ECOsafe PIR / MF Core.

**Thickness:** 80 mm (Tol. ± 1,0 mm) doorleaf.

**Door openings:**
- Height: 2133mm (clear internal height) for frame height of 2200mm
- Widths:
  - 1067+300mm (clear internal width) for a frame width of 1500mm,
  - 1067+600mm (clear internal width) for a frame width of 1800mm,
  - 1067+900mm (clear internal width) for a frame width of 2100mm
- Other sizes available on request.

**Door hardware:** Stainless steel hinges; stainless steel door handle; stainless steel pull handle; door lock with keys; and recessed drop-seal.

**Coating**

**Kingspan CLEANsafe 15**
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

**Kingspan CLEANsafe 25**
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

**Kingspan CLEANsafe 55**
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

**Kingspan HYGIENEsafe**
Kingspan HYGIENEsafe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)
**UltraTech**

**Kingspan CLEANsafe 304** (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

**Colour Range**
RAL9010 and RAL9002. Other colour options are available on request.

**Product Data**

**Door Leaf**
The UltraTech hinged door leaves are constructed from two facings 0.63mm thick hot-dip zinc coated metal to EN 10147, folded to form a 80mm thick door leaf. The edges of the two skins are pressed to create a monobloc cassette construction with smooth folded edges.

The UltraTech hinged features an environmentally-sustainable closed cell ECOsafe PIR insulation core which is non-deleterious with Zero Ozone Depletion Potential (Zero ODP).

**Frame**
The UltraTech hinged door frames are constructed from 6mm thick extruded 6063 aluminium alloy. Each frame is cut to length using a computerized saw for a perfect mitred corner joint, to form a neat butt joint connection between jambs and heads. The door frames are Polyester powder coated, colour to match face of door leaf unless stated otherwise.

**Gaskets**
The UltraTech hinged door frame incorporates a smooth, continuous uPVC gasket fitted to the internal rebate of the frame for ease of maintenance and to ensure that the door leaf seals to the frame.

The UltraTech hinged door leaves incorporates a recessed drop-seal (optional) which automatically lowers upon closing to ensure an airtight seal between the bottom of the door and the flooring.

**Hinges**
Four recessed stainless steel lift-off hinges are provided.

The number of hinges is calculated based on the physical door leaf size, leaf weight and additional equipment fitted to the door.

**Vision Panels**
The UltraTech hinged door leaves are available with or without a flush vision panel. Each vision panel is constructed from two 6mm laminated safety glass. Standard size is 300 x 600mm, other sizes are available on request.

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**Flush Double Door Leaf**

**Available Options:**
- Double-glazed Flush vision panel 300mm wide x 600mm high (6mm laminated glass), other sizes available on request
- Built in electromagnetic lock (24V)
- Electrical lock (24V)
- Sash lock / latch / night latch / deadlock / escape sashlock / roller bolt
- Flush or semi-flush stainless steel kick-plates
- PVC semi-flush kick-plates
- Stainless steel push-plate and pull handle
- Emergency door with panic bar
- Door stop
- Interlocking system
- Door closer
- Recessed drop seal

**Technical Performance:**
- Air permeability according to EN 12426: Class 1
- Leakage at +50Pa positive pressure 13m³/h/m² (4.8m³/h/m)
- Leakage at -50Pa negative pressure 21m³/h/m² (7.3m³/h/m)
- Resistance to water penetration according to EN12425: Class 0
- Resistance to windload according to EN 12424: Class 4
UltraTech
Flush
Double Door Leaf

Technical drawings
Door Elevation

Double Door Leaf and Connecting Panels

Double Door Leaf with Flush Glazing (Vision Panel)

Door Head Section

Silicone seal joint finish
Door gasket
Head of door frame
Door leaf

Dimensions:
- 2200mm x 2148mm x 2133mm
- 1500, 1800 or 2100mm (2100mm shown)
- 1050mm x 1600mm x 1067mm
- 2148mm x 2133mm x 1067mm
- 300, 600 or 900mm (900mm shown)
- 1997mm x 1667mm x 1067mm

Connection profile 80mm
UltraTech

Flush Double Door Leaf

Double Door Leaf

Double Door Leaf with Flush Glazing (Vision Panel)

Recessed drop seal

Recessed drop seal
**UltraTech**

**Semi-Flush Single Door Leaf**

### Technical Details

**Type:** Semi-Flush single door leaf and frame.

**Core:** ECOsafe PIR / MF Core.

**Thickness:** 40 mm (Tol. ± 1.0 mm) doorleaf.

**Door openings:**
- Height: 2133mm (clear internal height) for frame height of 2200mm
- Width: 1067mm (clear internal width) for a frame width of 1200mm
- Other sizes available on request.

**Door hardware:** Stainless steel hinges; stainless steel door handle; stainless steel pull handle; door lock with keys; and recessed drop-seal.

### Coating

**Kingspan CLEANsafe 15**

Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.

- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

**Kingspan CLEANsafe 25**

Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.

- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

**Kingspan CLEANsafe 55**

Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.

- PET film: 55µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

**Kingspan HYGIENEsafe**

Kingspan HYGIENEsafe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.

- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)
**UltraTech**

**Kingspan CLEANsafe 304** (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

**Colour Range**
RAL9010 and RAL9002. Other colour options are available on request.

**Product Data**

**Door Leaf**
The UltraTech hinged door leaves are constructed from two facings 0.63mm thick hot-dip zinc coated metal to EN 10147, folded to form a 40mm thick door leaf. The edges of the two skins are pressed to create a monobloc cassette construction with smooth folded edges.

The UltraTech hinged features an environmentally-sustainable closed cell ECOsafe PIR insulation core which is non-deleterious with Zero Ozone Depletion Potential (Zero ODP).

**Frame**
The UltraTech hinged door frames are constructed from 5mm thick extruded 6063 aluminium alloy. Each frame is cut to length using a computerised saw for a perfect mitred corner joint, to form a neat butt joint connection between jambs and heads. The door frames are Polyester powder coated, colour to match face of door leaf unless stated otherwise.

**Gaskets**
The UltraTech hinged door frame incorporates a smooth, continuous uPVC gasket fitted to the internal rebate of the frame for ease of maintenance and to ensure that the door leaf seals to the frame.

The UltraTech hinged door leaves incorporates a recessed drop-seal (optional) which automatically lowers upon closing to ensure an airtight seal between the bottom of the door and the flooring.

**Hinges**
Four recessed stainless steel lift-off hinges are provided. The number of hinges is calculated based on the physical door leaf size, leaf weight and additional equipment fitted to the door.

**Vision Panels**
The UltraTech hinged door leaves are available with or without a flush vision panel. Each vision panel is constructed from two 6mm laminated safety glass. Standard size is 300 x 600mm, other sizes are available on request.

**Available Options:**
- Double-glazed Flush vision panel 300mm wide x 600mm high (6mm laminated glass), other sizes available on request
- Built in electromagnetic lock (24V)
- Electrical lock (24V)
- Sash lock / latch / night latch / deadlock / escape sashlock / roller bolt
- Flush or semi-flush stainless steel kick-plates
- PVC semi-flush kick-plates
- Stainless steel push-plate and pull handle
- Emergency door with panic bar
- Door stop
- Interlocking system
- Door closer
- Recessed drop seal

**Technical Performance:**
- Air permeability according to EN 12426: Class 3
- Leakage at +50Pa positive pressure 31m³/h/m²
- Leakage at -50Pa negative pressure 43m³/h/m²
- Resistance to water penetration according to EN12425: Class 0
- Resistance to windload according to EN 12424: Class 4
Typical cut out sizes are:
Clear opening height +35mm.
Clear opening width +70mm.

UltraTech

Semi-Flush
Single Door Leaf
UltraTech

Semi-Flush Double Door Leaf

Technical Details

Type: Semi-Flush double door leaf and frame.
Core: ECOsafe PIR / MF Core.
Thickness: 40 mm (Tol. ± 1.0 mm) doorleaf.

Door openings:
Height: 2133mm (clear internal height) for frame height of 2200mm
Widths:
1067+300mm (clear internal width) for a frame width of 1500mm,
1067+600mm (clear internal width) for a frame width of 1800mm,
1067+900mm (clear internal width) for a frame width of 2100mm
Other sizes available on request.

Door hardware: Stainless steel hinges; stainless steel door handle; stainless steel pull handle; door lock with keys; and recessed drop-seal.

Coating

Kingspan CLEANsafe 15
Kingspan CLEANsafe 15 is a basic polyester coating suitable for standard internal environments, providing reasonable chemical and humidity corrosion resistance.
- Polyester coating: 15µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: No

Kingspan CLEANsafe 25
Kingspan CLEANsafe 25 is a polyester coating suitable for moderately aggressive internal environments, providing good chemical and humidity corrosion resistance.
- Polyester coating: 25µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan CLEANsafe 55
Kingspan CLEANsafe 55 is a chemically inert colaminated polyethylene terephthalate (PET) film and polyester (PE) paint, applied to pre-treated metal, suitable for humid and chemically aggressive internal environments.
- PET film: 55µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)

Kingspan HYGIENEsafe
Kingspan HYGIENEsafe is our unique chemically inert, anti-bacterial coating. A rigid polyvinylchloride (PVC) phthalate-free coating applied to pre-treated metal and suitable for humid and chemically aggressive internal environments.
- PVC Rigid film: 120µm
- Nominal thickness: 0.63mm (incl. coating)
- Protection film: Yes (standard)
**UltraTech**

**Kingspan CLEANsafe 304** (316 available on request)
CLEANsafe 304 is cold rolled annealed austenitic stainless steel, suitable for corrosive internal environments.
- Mill finish stainless steel – grade 304
- Finish 2B
- Nominal thickness: 0.63mm
- Protection film: Yes (standard)

**Colour Range**
RAL9010 and RAL9002.
Other colour options are available on request.

**Product Data**

**Door Leaf**
The UltraTech hinged door leaves are constructed from two facings 0.63mm thick hot-dip zinc coated metal to EN 10147, folded to form a 40mm thick door leaf. The edges of the two skins are pressed to create a monobloc cassette construction with smooth folded edges.

The UltraTech hinged features an environmentally-sustainable closed cell ECOsafe PIR insulation core which is non-deleterious with Zero Ozone Depletion Potential (Zero ODP).

**Frame**
The UltraTech hinged door frames are constructed from 5mm thick extruded 6063 aluminium alloy. Each frame is cut to length using a computerized saw for a perfect mitred corner joint, to form a neat butt joint connection between jambs and heads. The door frames are Polyester powder coated, colour to match face of door leaf unless stated otherwise.

**Gaskets**
The UltraTech hinged door frame incorporates a smooth, continuous uPVC gasket fitted to the internal rebate of the frame for ease of maintenance and to ensure that the door leaf seals to the frame.

The UltraTech hinged door leaves incorporates a recessed drop-seal (optional) which automatically lowers upon closing to ensure an airtight seal between the bottom of the door and the flooring.

**Hinges**
Four recessed stainless steel lift-off hinges are provided.
The number of hinges is calculated based on the physical door leaf size, leaf weight and additional equipment fitted to the door.

**Vision Panels**
The UltraTech hinged door leaves are available with or without a flush vision panel. Each vision panel is constructed from two 6mm laminated safety glass. Standard size is 300 x 600mm, other sizes are available on request.

**Semi-Flush Double Door Leaf**

**Available Options:**
- Double-glazed Flush vision panel 300mm wide x 600mm high (6mm laminated glass), other sizes available on request
- Built in electromagnetic lock (24V)
- Electrical lock (24V)
- Sash lock / latch / night latch / deadlock / escape sashlock / roller bolt
- Flush or semi-flush stainless steel kick-plates
- PVC semi-flush kick-plates
- Stainless steel push-plate and pull handle
- Emergency door with panic bar
- Door stop
- Interlocking system
- Door closer
- Recessed drop seal

**Technical Performance:**
- Air permeability according to EN 12426: Class 1
- Leakage at +50Pa positive pressure 9.5m³/h/m²
- Leakage at -50Pa negative pressure 19m³/h/m²
- Resistance to water penetration according to EN12425: Class 0
- Resistance to windload according to EN 12424: Class 4
UltraTech
Semi-Flush
Double Door Leaf

Technical drawings
Door Elevation

Typical cut out sizes are:
Clear opening height +35mm.
Clear opening width +70mm.

Double Door Leaf and Connecting Panels

Door Head Section

Double Door Leaf with Flush Glazing (Vision Panel)
UltraTech Semi-Flush Double Door Leaf

Double Door Leaf

Double Door Leaf with Flush Glazing (Vision Panel)

Recessed drop seal

Recessed drop seal
**Technical Details**

**Type:** Airtight sliding door.

**Core:** PUR / MF.

**Thickness:** 60 mm (Tol. ± 1.0 mm) doorleaf.

**Door openings:**
- Height: 2000mm or 2200mm (clear internal height) for an overall height of 2375mm or 2575mm.
- Width: 900, 1200, 1500 or 1800mm (clear internal width) for an overall width of 1000, 1300, 1600 or 1900mm.
- Other sizes available on request.

**Door hardware:** stainless steel door handle.

**Standard coatings:**
- Polyester coating RAL1015, RAL5008, RAL5010, RAL6011, RAL7032, RAL9002 and RAL9010.
- Anti-bacterial HYGIENEsafe coating RAL9010 or RAL9002 available on request.

**Product Data**

**Door Leaf**

The UltraTech sliding door leafs are constructed from two facings of 0.63mm thick hot-dip zinc coated metal to EN 10147, folded to form a 60mm thick door leaf. The edges of the two skins are pressed to create a monobloc cassette construction with smooth seamless edges.

The UltraTech sliding door leaf features an environmentally-sustainable closed-cell IPN-QuadCore insulation core which is non-deleterious with Zero Ozone Depletion Potential (Zero ODP).

**Frame**

The UltraTech sliding door frames are constructed from 3mm thick extruded 6063 aluminium alloy to form a wraparound frame. Each frame is cut to length using a computerized saw for a perfect mitred corner joint, to form a neat butt joint connection between jambs and heads. The door frames are Polyester powder coated, colour to match face of door leaf unless stated otherwise.

**Gaskets**

The UltraTech sliding door frame incorporates a smooth, continuous EPDM rubber gasket fitted to the internal rebate of the frame for ease of maintenance and to ensure that the door leaf hermetically seals to the frame.

**Rail System**

The FERMOCLEAN 2920 rail system features aluminium cover for cleanroom applications, anti-derailment system, bottom guide fixed to the underside of the doorleaf. The product is in compliance with European directives and standards.
**Vision Panels**
The UltraTech hinged door leaves are available with or without a flush or semi-flush vision panel. Each vision panel is constructed from two 6mm laminated safety glass. Standard size is 300 x 600mm, other sizes are available on request.

**Available Options:**
- Double-glazed flush or semi-flush vision panel 300mm wide x 600mm high (6mm laminated glass), other sizes available on request
- Built in electromagnetic lock (24V)
- Interlocking system
- Manual or automatic operation

**Technical Performance:**
- Air permeability according to EN 12426: Class 3
- Leakage at +50Pa positive pressure 5.2m³/h/m²
- Leakage at -50Pa negative pressure 5.3m³/h/m²
- Resistance to water penetration according to EN12425: Class 2
- Resistance to windload according to EN 12424: Class 4
Kingspan UK Interlock Push Buttons

An integral part of the Kingspan door interlocking solution are the Push Button / LED Indicator units, which are integrated into the frame of each door.

Each door frame contains a Master and a Slave push button unit. The units both have one push button which includes red and green LEDs for indicating door status. Each set of Master and Slave buttons connects directly to the interlock controller with one RJ45 patch cable which can be up to 10m long.

Pressing the button on either side of the door, will unlock the door as long as no other door in the interlock is open. The push button units include connections for green Emergency Release call points, for emergency escape purposes.

The units fit completely flush into the door frame with no visible fixings. They have highly durable polyester fascias and are sealed into the frame to IP65. Whilst being sealed into the frame, they can be removed without damage for any service requirements.

- Flush fitting
- No fixing screws
- Highly durable materials
- Sealed to IP65
- Red and green LED indications

### Specification

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational voltage</td>
<td>12v DC</td>
</tr>
<tr>
<td>Material</td>
<td>Polyester fascia, aluminium chassis</td>
</tr>
<tr>
<td>Dimensions</td>
<td>135mm x 28mm</td>
</tr>
<tr>
<td>Weight</td>
<td>0.14 kg (master and slave)</td>
</tr>
<tr>
<td>IP Rating</td>
<td>IP65</td>
</tr>
<tr>
<td>Approvals</td>
<td>CE marked and RoHs compliant</td>
</tr>
</tbody>
</table>

![Button pillow embossed to 15mm](image1)

- Grey RAL9006
- Dark grey

![Clear through for LED](image2)

![135mm x 28mm dimensions](image3)
Kingspan European Interlock Push Buttons

An integral part of the Kingspan door interlocking solution are the Push Button / LED Indicator units, which are integrated into the frame of each door.

Each door frame contains a Master and a Slave push button unit. The units both have two push buttons, one of which includes red and green LEDs for indicating door status. Each set of Master and Slave buttons connects directly to the interlock controller with one RJ45 patch cable which can be up to 10m long.

Pressing either of the buttons will unlock the door, as long as no other door in the interlock is open. Pressing both buttons simultaneously initiates the emergency release function which will unlock a locked door regardless of the status of other doors.

The units fit completely flush into the door frame with no visible fixings. They have highly durable polyester fascias and are sealed into the frame to IP65. Whilst being sealed into the frame, they can be removed without damage for any service requirements.

- Flush fitting
- No fixing screws
- Highly durable materials
- Sealed to IP65
- Red and green LED indications
- Emergency release function

### Specification

<table>
<thead>
<tr>
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<tr>
<td>Operational voltage</td>
<td>12v DC</td>
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<tr>
<td>Material</td>
<td>Polyester fascia, aluminium chassis</td>
</tr>
<tr>
<td>Dimensions</td>
<td>145mm x 28mm</td>
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<tr>
<td>Weight</td>
<td>0.14 kg (master and slave)</td>
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<tr>
<td>IP Rating</td>
<td>IP65</td>
</tr>
<tr>
<td>Approvals</td>
<td>CE marked and RoHs compliant</td>
</tr>
</tbody>
</table>

![Diagram of UltraTech Door Interlocking System](image)
Kingspan Door Interlock Controller

The IG-KS-04 Door Interlock Controller is capable of interlocking up to 4 doors. It can also be linked to additional identical controllers to enable the interlocking of as many doors as necessary.

Out of the box, the controller operates such that if any door is in use, then no other doors can be opened. However, the controller can also be programmed on-site to allow different combinations of doors to be interlocked.

The controller works in conjunction with the Push Button / Indicator plates which must be installed at each door. Each set of push buttons is simply linked to the controller with one RJ45 patch cable which can be up to 10m long.

Additional programming features include:
- Each door can be configured to be ‘Normally Closed’ or ‘Normally Open’.
- Dwell time, the time the door lock is unlocked after pressing a button, can be adjusted. The default time is 5 seconds.
- A ‘Door Open Too Long’ alarm is incorporated in the system, the time delay for this can be programmed, the default is 1 minute.

Access control systems can easily be integrated with the system and push buttons can be disabled when access control is in use. In this scenario the LED indicators on the buttons still function to indicate the status of the door.

Powered doors such as automatic opening doors and roller shutters can also be integrated with the system.

The controller with its Power Supply Unit which also powers the door locks, is housed in a IP67 rated Polycarbonate enclosure which includes 5 cable entry glands.

- Interlocks up to 4 doors
- Expandable to any number of doors
- Programmable combinations of interlocking
- Normally Open and Normally Closed doors catered for within one system
- Integration with access control systems
- Integration with powered doors
- Simple installation and configuration
- IP67 enclosure
- Integral Power Supply Unit

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**Kingspan Door Interlock Controller**

- Interlocks up to 4 doors
- Expandable to any number of doors
- Programmable combinations of interlocking
- Normally Open and Normally Closed doors catered for within one system
- Integration with access control systems
- Integration with powered doors
- Simple installation and configuration
- IP67 enclosure
- Integral Power Supply Unit

**Specification**

- **Power Output**: 230v AC mains
- **Integral Power Supply**: 12v DC 5A
- **Material**: Polycarbonate
- **Dimensions**: 280mm x 280mm x 130mm
- **Weight**: 2.3 kg
- **IP Rating**: IP67
- **Approvals**: CE marked and RoHS compliant
**Kingspan Shearlock**

The Kingspan Shearlock delivers a fully flush compact and reliable locking solution.

Achieving up to 1000kg of shear holding capability, this shearlock also has improved door tolerance alignment.

The lock fully monitors the door position and switches a clean change over relay when the lock is confirmed to be locked.

A secondary magnetic reed contact is also integral to the Shearlock. This contact allows the lock to be used in ‘normally open’ doors as well as ‘normally closed’ doors within interlocking systems, without the need for a separate door contact to be fitted to the door and frame.

- Compact 30mm wide x 100mm long
- Up to 1000kg shear force
- No loss of headroom
- Operates on 12v DC
- 1.5A pull in for 2 seconds
- 0.5A continuous hold
- Monitored as standard
- Secondary integral reed contact
- Improved door tolerance alignment