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STAIR EDGINGS & FLOOR TRIMS

THE WIDEST CHOICE OF SOLUTIONS

GRADUS

Gradus Accessories Park Green Macclesfield Cheshire SK11 7LZ
For enquiries outside the UK and Eire contact Gradus International on +44 (0)1625 613780

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This catalogue supersedes and replaces all previous issues.

All products subject to minor design alterations without notice.

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All trademarks, product names and codes detailed within this catalogue are the property of Gradus Ltd.

GRADUS

GRADUS

Our products are installed in prestigious buildings in both UK and International markets. With customers ranging from designers & architects to contractors and building owners and with clients such as Marks & Spencer, Virgin and BMW you can trust Gradus to provide products that work.



The Gherkin, London, England



Wembley Stadium, London, England



Hong Kong International Airport



Marina Bay Sands Resort, Singapore



Royal Caribbean Cruise Ship



The Christie, Manchester, England



Burj Al Arab, Dubai, UAE



Eiffel Tower, Paris, France

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NEW XT™ Bronze Stair Edgings The introduction of our new XT Bronze profiles and metal castellated inserts offer premium finishes for commercial applications including hospitality, leisure, retail, commercial office and premium residential. Suitable for interior heavy traffic applications. XT Bronze Profiles, Inserts & Accessories > Choice of 14 profiles > Combine with Interior, Xtra-grip or our new XT metal castellated insert > Welded corners and nap trims also available in matching finishes See pages 32-35 **Finishes** Polished Bronze Satin Bronze

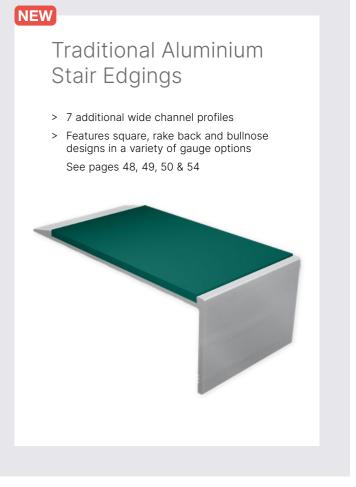
XTTM Aluminium Stair Edgings XT Aluminium profiles are also offered in a choice of premium finishes for use in hospitality, leisure, retail, commercial office, premium residential and other prestigious interior applications. > Choice of 26 profiles in 7 finishes > New metal castellated inserts, welded corners & nap trims also available in matching finishes See pages 36-41 Finishes Aluminium Polished Chrome Satin Chrome Brushed Stainless Steel

Antique Bronze

Black Anodised



Antique Brass



 $\mathbf{2}$

Why Gradus

Gradus is the market leader in contract flooring accessories and offers the widest choice in product solutions for stairs and floors.

All our products are designed to ensure the correct balance between safety, performance and aesthetics and are suitable for a wide variety of contract applications.





Gradus Springbank - Manufacturing plant for our Accessories products Macclesfield Cheshire UK

Quality

- > 10 year warranty against manufacturing defects under normal use and service, subject to materials being installed and maintained to our recommendations. Additional terms & conditions apply – details available upon request. Look out for products that carry the 10 year warranty.
- > ISO 9001 Quality Management accredited company.
- > ISO 45001 Occupational Health & Safety.

Service

- Distribution Network We deliver to the majority of distributors using our own fleet of trucks, ensuring we provide a service which is reliable and on time.
- > Measuring Service Take the hassle out of the job and let Gradus provide accurate stair edging measures, saving you time and money. Our team of trained surveyors are on hand to provide a FREE stair edging measure (UK mainland only).
- > Fabrications When projects aren't straightforward, we can help customise many of our products to ensure a solution that fits.
- FREE Samples Call Gradus or build a design board online and get all the samples you need. We aim to despatch within 24 hours.

Design

- > Safety Products are developed with safety at the forefront of design. All stair edgings and floor trims effectively contribute to a reduction in slip and trip accidents.
- > **Performance** Extensive research and testing to ensure durability and appearance retention throughout a product's life.
- > Aesthetics A variety of colours and finishes ensure harmonisation with interior designs and allow visual contrast to be achieved where relevant.
- > In-house product design and development.
- > We have a firm set of environmental objectives allowing us to focus on raw material selection, legislation, waste reduction, training and recycling. See pages 8-11.











Why Gradus

Gradus is the largest UK manufacturer of Stair Edgings & Floor Trims. Gradus controls the design of profiles from initial concept through to finished product, including specialist CAD design and the manufacture of tooling. This ensures that quality is maintained and provides customers with an efficient, flexible and fast service.





RIBA assessed CPD seminars

Knowledge

- > RIBA Assessed CPD Seminars Gradus is one of the original members of the RIBA CPD Providers Network and currently offers a full range of RIBA assessed and approved CPD seminars covering specification, legislation, safety, performance and aesthetics:
 - The Specification & Design Considerations of Stair Edgings
 - The Specification & Design Considerations of Barrier Matting Systems
 - The Specification & Design Considerations of Wall, Corner & Door Protection Systems

All seminars are part of the RIBA core curriculum syllabus and earn double CPD points for those attending the seminars. For further information contact Gradus Technical Support on 01625 428922 or use the Contact Us form on our website.

> Food for Thought - An informal opportunity for Gradus to bring an exhibition of products directly to you. Flexible and informative, they can be arranged at a date and time to suit you.



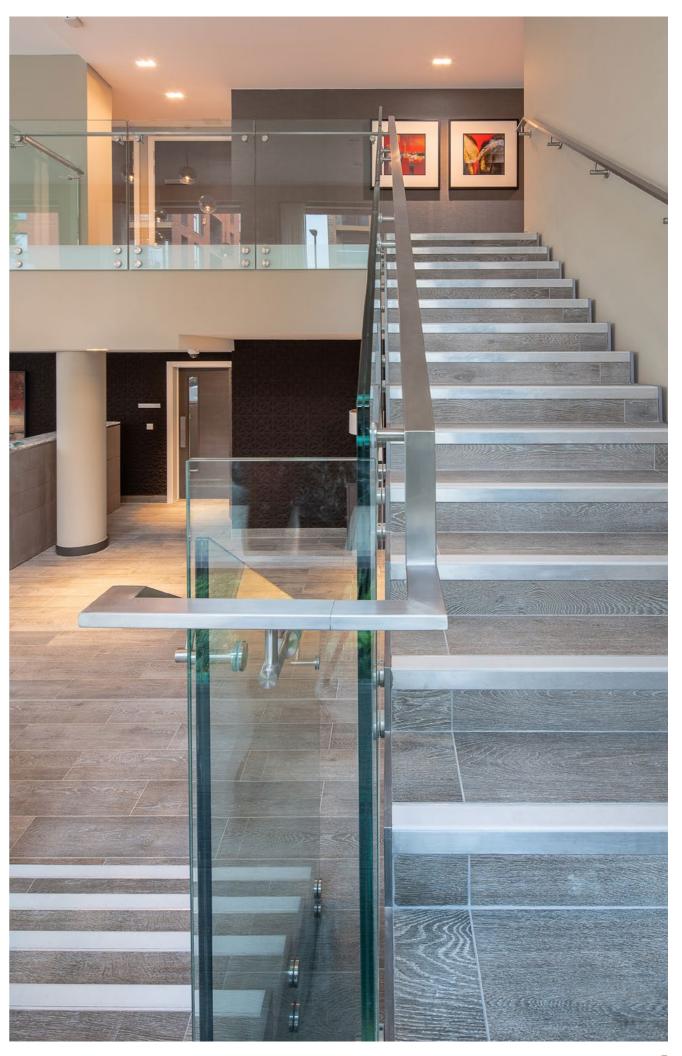
- > NBS Source Partner Find, select and specify Gradus products with ease using NBS Source. Product data is available in a standardised NBS specification format for all products, accompanied by literature downloads, case studies and 3D digital objects for selected products.
- > Technical Support A dedicated team is on hand to assist with product selection, sampling and much more. Call today on 01625 428922.
- > Trained Specification Consultants A network of Gradus specification consultants are located across the UK and Ireland to support with new and ongoing projects.
- > Member of the Contract Flooring Association (CFA) Gradus supports the work of the CFA, an established and well-respected industry body, representing the contract flooring sector in the UK.
- > DSDC Accreditation The Dementia Services Development Centre have undertaken a review of some product ranges contained within this document, and have rated their design and usability within a dementia-inclusive environment. Look out for the DSDC logo throughout this brochure or refer to pages 206-207 for more details.











Our Commitment to the Planet

Our values guide our actions

In every aspect of our activities, we take responsibility for the environment and pledge to meet our present business needs without compromising our long-term future environment.

Protecting buildings

Stair Edgings & Floor Trims prevent damage to floorcoverings caused by everyday wear and tear. This can extend the lifespan of floors and reduce the frequency of repairs. Lower amounts of repair and maintenance could result in a reduction in operational carbon emissions for many businesses.

Frequent repairs are often time consuming, costly, and disruptive, especially where floorcoverings need to be removed or replaced. Any repairs are also likely to require the use of extra resources such as adhesives.

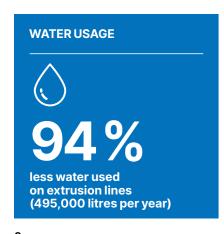


Limit our water consumption

In the interests of resource management, we set up actions to reduce our water consumption. This includes the setting of efficient closed-circuit cooling systems.

Water Usage

Our closed loop water system installed on all our extrusion production lines saves approximately 495,000 litres of water per year.





The Benefits of PVC

What is it?

PVC, or Polyvinyl Chloride to give it its full title, is a thermoplastic. It is made up from two starting materials – salt (57%) and natural gas or oil (43%). Salt is one of the world's most abundant resources. Over 50 quadrillion tonnes of salt exist dissolved in the oceans and over 200 billion tonnes are available underground. In addition, PVC uses less fossil fuels than all other commodity plastics.

Safe & Trusted

PVC is an inert, non-toxic polymer and as such is one of the few materials that is trusted for use in the storage of live human blood cells for products such as blood bags and blood tubing. In the event of a fire, PVC is flame retardant due to the high chlorine content. If removed from the fire it will self-extinguish.

Energy Consumption

PVC consumes less non-renewable primary energy resources (e.g. gas & oil) than ALL other commodity plastics including PCs (Polycarbonates), PEs (Polyethylene) and PETGs (Polyethylene Terephthalates Glycol-modified).

Recyclable

PVC can be recycled typically 6-7 times within it's lifetime. Gradus PVC-u components contain up to 100% recycled content and all surplus Gradus rigid PVC waste is granulated and sold on to third parties for use in the manufacture of products such as traffic cones and coat hangers. Start-up scrap is taken for reprocessing to be used in the construction industry e.g. roadways.

2025 GOALS 100% to retain 100% REACH compliance across all our suppliers

Recycling: Part of our DNA

Reduction in General Waste / Waste Management

All the Gradus waste streams are removed by Registered Waste Carriers. Dry Mixed Recycling (paper, cardboard, polythene, cans etc) collection points have been set up across all sites. This cleaner waste material is diverted from landfill.

Wooden pallet usage has been reduced from 15,215 in 2017 to 10,310 in 2021 which equals to a 32% reduction. A simple but effective initiative of reusing unwanted supplier pallets from our carpet manufacturing facility for customer orders in our Matting department has massively impacted this reduction.

All our non-recyclable waste is diverted from landfill by Biffa Ltd, Alwin Ltd and Elsa Waste Ltd and sent for incineration. Overall Gradus has reduced skip removal by 75% with a focus on recycling rather than landfill.



PVC WASTE

22%
total pvc waste

ALUMINIUM WASTE

12%
total aluminium
waste reduction in
past 10 years

2025 GOALS

20%
increased use of recycled PVC

PVC waste reduction

10 years

- > 22% reduction in overall waste created from production of PVC components or products
- > 1,375 tons of process waste reused since 2012
- > 10% increase in processed waste being reused in the extrusion process between 2020 and 2021
- > 151,150 Kgs of PVC waste recycled into reusable pellets for Gradus production or new 3rd party products such as traffic cones

Aluminium waste reduction

- > 12% reduction in overall waste created from production of aluminium components or products
- > 254 tons of aluminium recycled since 2012
- > 14% increase in aluminium recycled between 2020 and 2021
- > 16% reduction in contaminated aluminium since 2012 making recycling easier
- > 75% is the average amount of recycled material that the aluminium we purchase contains

RECYCLING



Gradus makes every effort to conserve the use of materials and minimise the quantity of waste generated. We maximise the recycling ability of all waste materials that we generate. We also take into consideration the environmental impacts of new product development processes and new products are developed with recyclability as a key factor.





FUNDAMENTALS

A FUSION OF PRODUCTS & VALUES

Gerflor and Gradus offer products which are ideal for use in a wide variety of applications including healthcare, commercial office, education, retail, hospitality & leisure and housing. Products can be combined to provide a complete package that balances performance, aesthetics and cost alongside environmentally responsible manufacturing processes.

A FRESH APPROACH

We believe passionately in providing the customer with the very best in terms of service. Through our combined team we can offer expert advice to help with product selection backed up with extensive UK stocks to ensure our products are delivered on-time, every-time.

A NEW LEVEL
OF INNOVATION,
QUALITY, SERVICE
& TEAMWORK









CREATION LVT
TARASAFE
TARAFLEX
TECHNICAL TILES
CARPETS









NEXT DAY SERVICE
PRODUCT EXPERTISE
WARRANTY
SUSTAINABILITY





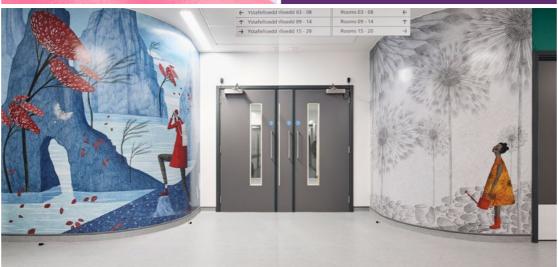
HOUSING
RETAIL
HOSPITALITY
TRANSPORT









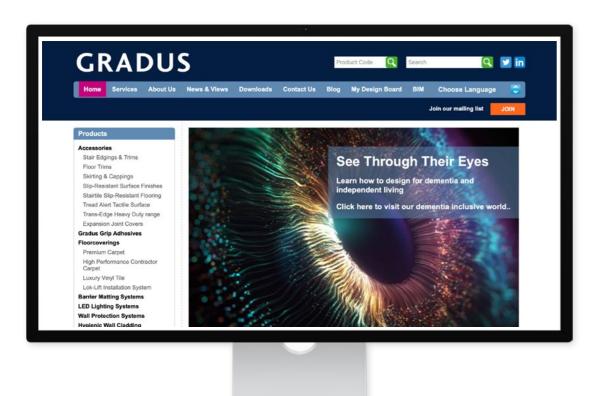




EDUCATION
HEALTHCARE
COMMERCIAL OFFICE
SPORTS

Gradus Website gradus.com

Our website is packed with useful information and documentation, intended to make the product selection and specification of our products easier.





Information

The Gradus website features a host of informative tools and documents including:

- > Latest News, Product Launches & Blogs
- Details about Additional Services we offer
- > The Gradus Knowledge & Product Sector guides
- > Gradus UK Distributor List



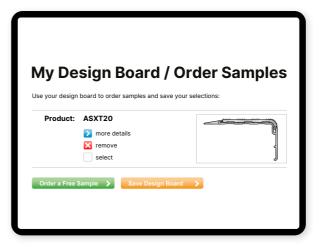
Products

Discover solutions from the wider Gradus portfolio spanning across stair edgings, floor trims, carpets, barrier matting, wall protection and LED lighting systems. Don't forget to look out for our advanced stair edgings search tool.



Downloads

Access the full suite of Gradus brochures and supporting documents including AutoCAD drawings, product data sheets, cleaning & maintenance instructions, installation guidelines and health & safety data sheets.



Free Samples

Samples of our products are readily available on request and we aim to despatch your order within 24 hours.

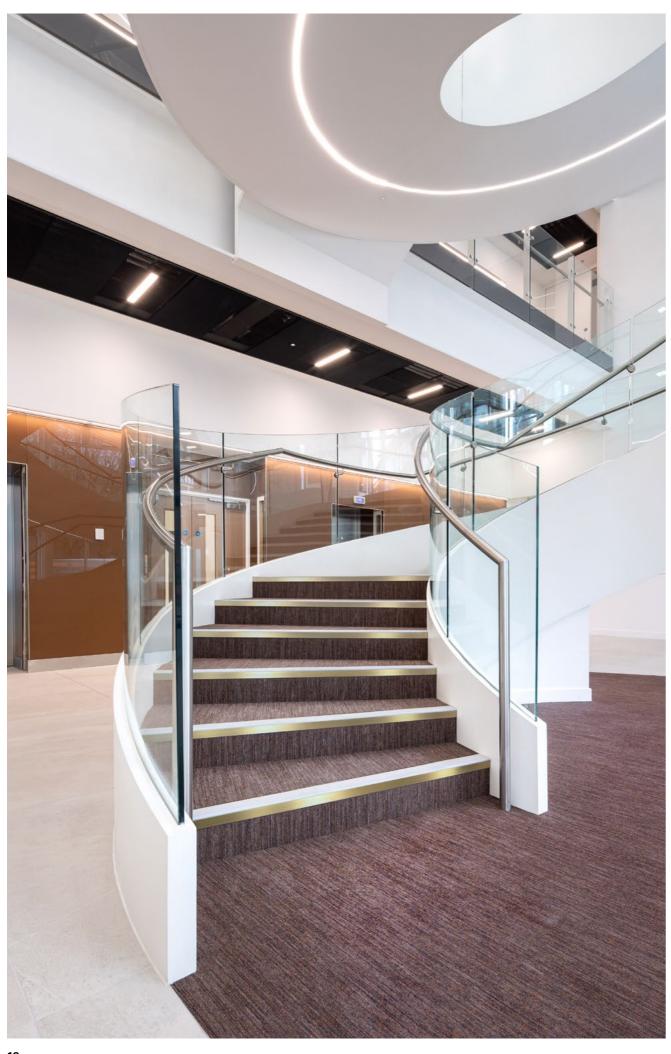
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Section 1

Stair Edgings & Complementary Trims

Providing the most extensive range in the UK, Gradus stair edgings can help reduce accidents on stairs as well as helping to provide an inclusive environment giving access to all building users.

Why use a stair edging?

✓ Reduce accidents on stairs by:

Providing slip-resistance at the edge of the step Providing a visual contrast to highlight the edge of the step

- ✓ Protect the step edge and surrounding floorcoverings
- ✓ Reduce maintenance costs
- ✓ Improve the aesthetics of a building
- ✓ Comply with the guidance in

Approved Documents K and M of The Building Regulations 2010, BS 8300-2:2018, BS 9266:2013 and BS 5395-1:2010 in line with the Equality Act 2010

Follow our 3 step guide to selecting the correct stair edging, see pages 21-25

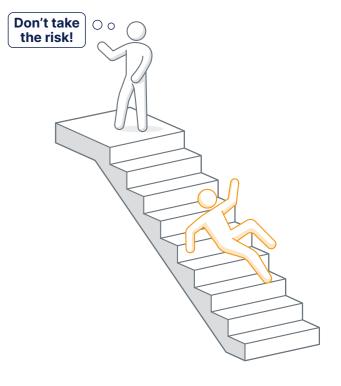
Step 1

Choose the right stair edging and fixing method for the step

Specification Guidelines

BS 8300-2:2018 refers to research undertaken by BRE. This research shows that if the depth of the tread is less than 300mm the risk of an overstep is increased. A stair nosing that wraps around the riser will reduce this risk by increasing the slip-resistance at the step edge.

Gradus stair nosings offer a wide range of profiles that satisfy all the latest building standards and guidelines and accommodate a wide range of floorcoverings.



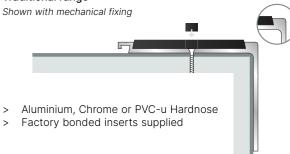
Types of Stair Nosing

XT range

Shown with Gradus Grip > Bronze, Aluminium or PVC-u Hardnose Extended insert design ensures maximum safety underfoot

Locking mechanism secures insert in place

Traditional range

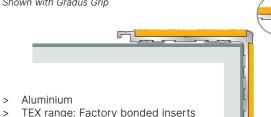


Elite range Shown with mechanical fixing

- Aluminium or Bronze Insert supplied separately to the
- channel offering a neat, concealed fixing and eliminating the need for screw head cover plugs
- Mechanical lock for insert

Trans-Edge range

Shown with Gradus Grip



- > TEX range: Factory bonded inserts

Step 1

Choose the right stair edging and fixing method for the step

Shape of Step

Select the correct stair nosing for the shape of the step - this should be a tight fit to the step to ensure that the profile does not lift or rock during use. There are four main stair nosing shapes to choose from (see below). Kinked face profiles can be used on square and some rake back stairs.





Rake Back





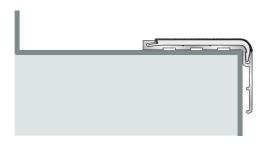
Tread (going)

The depth of the tread (going) will also have an influence on the stair nosing selected. A study conducted by BRE found that slips on stairs are often as a result of an overstep, especially on narrow treads (less than 300mm). To help reduce the risk of slips in an overstep situation, the XT stair nosing range incorporates a slip-resistant insert that extends around the leading edge of the profile in line with BRE recommendations.

Gradus offers a wide range of profiles to suit different tread sizes:

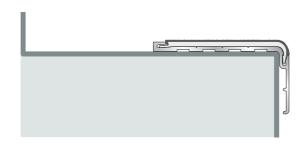
Single Channel

> Single channel - ideal for use on treads up to 300mm deep



Wide, Double & Multiple Channel

- > Wide, double and multiple channels suitable for stairs with a large going, especially if they are subject to heavy volumes of foot traffic e.g. railway stations, supermarkets, department stores, secondary and further education establishments and major hospitals.
- > When specifying double channel stair edgings, both inserts should be of the same colour and be of a contrasting colour to the surrounding floor finish.
- > When specifying multiple channel stair edgings the front insert should always be in a visually contrasting colour to the remaining inserts to ensure definition of the step edge. The remaining inserts must always be of the same colour and ideally match the surrounding floorcovering.



Gauge

The gauge (thickness) of the stair nosing should be a flush finish to the floorcovering to avoid a trip hazard being created. When used with soft floorcoverings such as carpet and carpet tile, the gauge should achieve a flush finish with the compressed thickness of the floorcovering.

Gradus offers a range of gauges to suit the majority of commercial floorcoverings (see below).

Gauge	Typically used with
Ramp back	No floorcoverings / Resilient floorcoverings – install profile on top of the floorcovering to ensure a safe fit
2mm – 3mm	Resilient floorcoverings including LVT
4mm – 5mm	Carpet / Carpet Tile / LVT / Resilient floorcoverings with a bevelled underlay (see page 82) in heavy use areas
6mm	Carpet / Carpet Tile
7mm – 10mm	Carpet / Wood / Ceramics / Other heavy duty floorcoverings
10mm – 15mm	Ceramics / Stone / Marble

Fixing Method

A secure fixing between the stair edging and the step is essential to ensuring a safe installation. The stair edging profile and insert, type and condition of the substrate and the application will affect the type of fixing method required.

Adhesive only fixing - Gradus Grip

A specialist adhesive designed to securely bond stair edgings, eliminating the need for screws and screw head cover plugs, providing a neater finish. The Gradus Grip adhesive bond is available with a 10 year warranty.

Mechanical and adhesive fixing

A combination of screw fixings, cartridge adhesive and screw head cover plugs are used to achieve a secure fixing.

To ensure the correct installation method is selected further information can be found in our installation instructions, visit www.gradus.com



- > Save money
- > Gradus 10 year warranty
- > Rapid curing
- > No more screws & plugs
- > Ultra strong bond





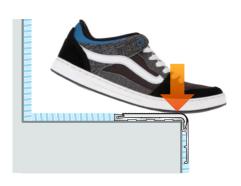
Step 2

Select the correct slip-resistance for the conditions

Specification Guidelines

BS 8300-2:2018, BS 5395-1:2010 and BS 9266:2013 refers to the slip-resistance of surface finishes on stairs. A pendulum test is used to assess slip-resistance and a Pendulum Test Value (PTV) of greater than 36 is required in both dry conditions and also when the stairs are at risk of becoming wet through walked in moisture and spillages.

Slip-resistance & Performance



An insert provides a surface that creates friction between the sole of the shoe and the step edge, hence providing slip-resistance and reducing the risk of slips on stairs. All Gradus inserts are tested for slip-resistance – see results on page 198.

Ensure the required level of slip-resistance is achieved to reduce the risk of slips and falls on stairs by **selecting the correct insert for the environment:**

- Interior installations not always dry conditions. Consider whether there is a risk of the stair nosing becoming wet and select the correct insert accordingly.
- > Safety flooring select an insert that matches or improves the slip-resistant qualities of the flooring.

Insert Type	Conditions	Applications	Material	Stair Edgings
NEW Metal Castellated	Interior Wet Interior Dry	Offers an ideal solution for luxury hospitality & prestigious residential applications	Bronze or Aluminium alloy	XT (pages 33-41)
Xtra-grip	Interior Wet Interior Dry	Increased surface roughness where the stair edging may become wet e.g. stairs close to entrances or where safety flooring is used. Areas where health and safety are a priority e.g. schools and hospitals	Pvc with mineral aggregate	XT (pages 33-45) Traditional (pages 48-63)
Xtra-grip Plus	Interior Wet Interior Dry	As Xtra-grip, with the addition of an enhanced insert bond system for areas subject to more frequent cleaning e.g. catering and food preparation areas	Pvc with mineral aggregate	Traditional (pages 48-63)
Interior	Interior Dry	Areas where there is no risk that the stairs will be contaminated by moisture	Pvc with mineral inclusion - standard or grained surface	XT (pages 33-45) Traditional (pages 48-63) Elite (pages 66-69)
Standard Exterior	Exterior	Everyday outdoor use e.g. car park entry / exit steps	Glass reinforced polyester with fused alumina	Traditional (pages 48-59)
Heavy Duty Exterior	Exterior or Interior Heavy Traffic	Extreme exterior conditions / heavy traffic environments e.g. motorway foot bridges, railway stations, airport terminals and sports stadiums	Glass reinforced polyester with fused alumina (TEX)	TEX range (page 71)

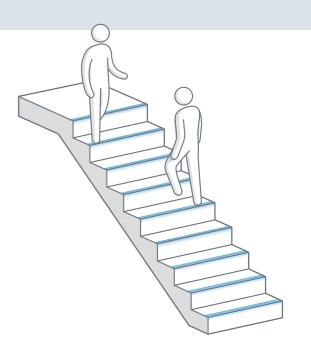
Step 3

Choose a colour that visually contrasts

Specification Guidelines

BS 8300-2:2018, BS 5395-1:2010, BS 9266:2013 & Approved Documents M (ADM) & K (ADK) of The Building Regulations 2010 highlight the need to ensure there is sufficient visual contrast at the step edge, providing a safe environment for all building users.

Project Rainbow and ADM recommend that there is at least a 30 point difference between the LRVs of the stair nosing and floorcovering to achieve a suitable contrast.



Visual Contrast

All Gradus stair nosing channel and insert colours are measured for LRVs in accordance with BS 8493:2008+A1:2010 to help achieve this difference. Gradus PVC-u Hardnose stair nosings can be selected with the channel and insert in the same colour to provide the ideal solution for creating visual contrast (picture 1), in line with Approved Documents M & K,BS 8300-2:2018, BS 5395-1:2010 and BS 9266:2013 guidelines. XT Bronze & XT Aluminium channel and insert finishes can also be matched when selected with metal castellated insert.



Good Visual Contrast Installed with Gradus Stair Nosings Picture 1



Poor Visual Contrast
No Stair Nosings – Don't Take the Risk

Tonal Contrast

It is important to achieve a tonal contrast between the floorcovering and the stair nosing as people with visual impairments may not be able to see some or all colours but can perceive light and dark. The photographs below show that colour contrast (picture 1) visible to fully-sighted people may not always offer a tonal contrast (picture 2) for partially-sighted people.



Fully-sighted People
Tonal Contrast
Picture 1

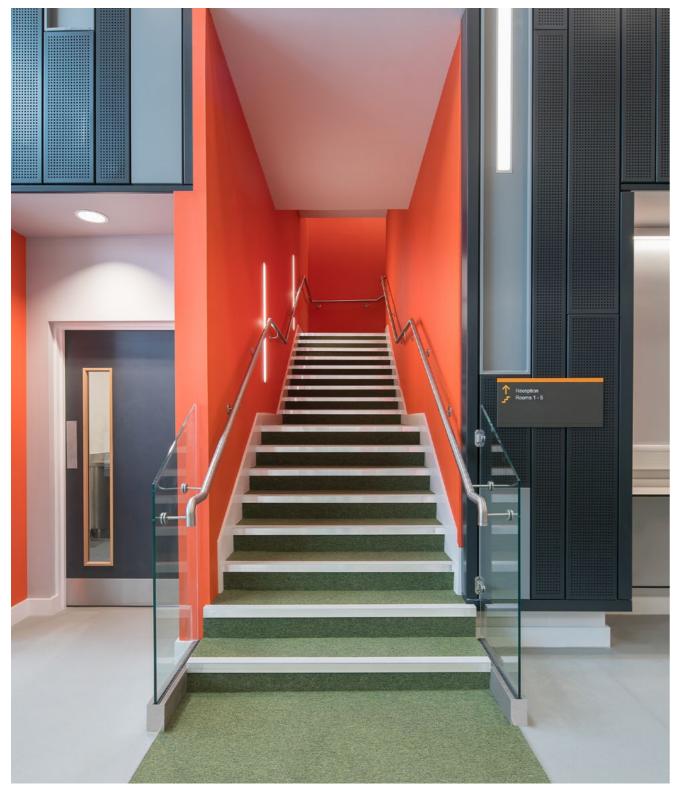


Partially-sighted People Poor Tonal Contrast Picture 2

Stair Edging Colours

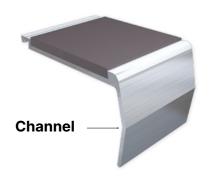
The range of stair edging colours from Gradus provides a comprehensive solution allowing specifiers and users to achieve visual contrast in line with recommendations in The Building Regulations 2010 - Approved Documents K & M, BS 8300-2:2018, BS 9266:2013 & BS 5395-1:2010 and BRE IP15/03 (see pages 200-205).

The colours have been developed to provide a wide choice of visual contrast with matching colours for both insert and Hardnose channel. All colours have been measured for light reflectance/visual contrast (LRV using the CIE Y value). For guidance on selecting matching channel and insert colours that provide visual contrast on both the tread and riser see pages 199-201. For channel and insert availability by range see individual profile pages.



Channel Colours

Note: Not all colours are available for all profiles. See individual profile pages for colour availability.



Metals

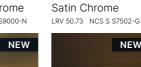
Aluminium



Polished Chrome LRV 58.17 NCS S S9000-N LRV 74.21 NCS S 4005-B80G

Satin Bronze

LRV 59.60 NCS S 2040-R20B



Antique Brass



Brushed Stainless Steel LRV 48.85 NCS S 6020-G70Y



Antique Bronze LRV 9.78 NCS S 7005-Y20R LRV 7.55 NCS S 8005-R20B



Black Anodised LRV 4.35 NCS S 8500N

Pvc-u Hardnose™ Satin Finish



Polished Bronze

LRV 66.86 NCS S 4050-G40Y

LRV 4.99 NCS S 8502-B



Bluebell Granite LRV 9.76 NCS S 5030-R90B LRV 11.69 NCS S 6502-R



Dove LRV 26.19 NCS S 5000-N

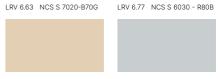
Jade

LRV 55.43 NCS S 2005-Y30R LRV 55.54 NCS S 2005-G



Linen LRV 37.50 NCS S 3010-Y30R

Wisp



Midnight

Glacier LRV 42.73 NCS S 2502-B

LRV 62.62 NCS S 1070-Y

Buttercup



Snowdrift

LRV 80.54 NCS S 0500-N

27

LRV 7.15 NCS S 6010-Y70R

Pvc-u Hardnose™ Metallic Finish



LRV 55.38 NCS S 1515-R90B

Burnt Almond Zinc

Canvas





LRV 56.62 NCS S 2000-N

Silver LRV 22.01 NCS S 4020-Y LRV 48.29 NCS S 2005-R80B

Flexible Pvc

Black



LRV 4.56 NCS S 8502-B

LRV 9.92 NCS S 7010-Y50R



LRV 15.91 NCS S 6005-R80B



Granite

Doubloon







Snowdrift LRV 83.77 NCS S 0500-N

Colour Matching

Important note: Due to the limitations of the printing process. colours within this catalogue should not be relied upon for colour matching. An accurate colour match can only be achieved by requesting the relevant product sample(s).

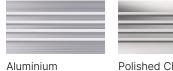
Brown

NCS Colour References

Gradus is a member of NCS (Natural Colour System) and utilises the NCS reference codes shown above each colour. For further information visit www.ncscolour.com @Property of and used under licence from the Scandinavian Colour Institute AB, SCI-Sweden se, Stockholm 2004.

Insert Colours

Metal Castellated



LRV 74.21 NCS S 4005-B80G



Polished Bronze LRV 66.86 NCS S 4050-G40Y



Satin Bronze LRV 59.60 NCS S 2040-R20B LRV 9.78 NCS S 7005-Y20R



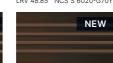
Satin Chrome LRV 50.73 NCS S S7502-G

Antique Brass

NEW



LRV 48.85 NCS S 6020-G70Y



Antique Bronze LRV 7.55 NCS S 8005-R20B LRV 4.35 NCS S 8500N



NEW

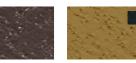
Black Anodised

Claret

Xtra-grip



Onyx LRV 4.52 NCS S 8502-B



Sepia

Tuscan

Platinum

Shark

Sandstone

Umber LRV 5.71 NCS S 8005-Y50R



Ochre LRV 49.97 NCS S 1060-Y



Ivory LRV 43.77 NCS S 3000-N

Neptune LRV 5.03 NCS S 8010-R70B

LRV 28.59 NCS S 5020-Y20R

LRV 34.86 NCS S 3010-Y40R

LRV 52.79 NCS S 2002-R50B

LRV 5.03 NCS S 8010-R70B

LRV 46.83 NCS S 2005-Y30R

NEW

NEW

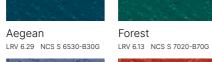
NEW



Baltic LRV 8.27 NCS S 6020-R90B



Pumice

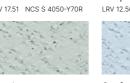


NEW

Chestnut



Bamboo



NEW

NEW

Surf



LRV 6.61 NCS S 6030-R10B



Xtra-grip Plus



LRV 4.52 NCS S 8502-B



Air LRV 43.58 NCS S 1515-R90B



LRV 43.77 NCS S 3000-N LRV 52.79 NCS S 2002-R50B LRV 66.51 NCS S 1002-G50Y



Bark



Calcite



Mercury

LRV 45.84 NCS S 2005-B80G LRV 49.97 NCS S 1060-Y



Smoke LRV 24.71 NCS S 4500-N



LRV 37.44 NCS S 2502-B

Note: Not all colours are available for all profiles. See individual profile pages for colour availability.

Interior Standard Finish





LRV 6.20 NCS S 6530-B30G

Interior Grained Finish

Teal

Glacier

Black

I RV 4.49

NEW



Quarry LRV 24.71 NCS S 4500-N

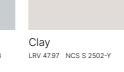
Insert



Concrete LRV 37.44 NCS S 2502-B



LRV 66.51 NCS S 1002-G50Y



LRV 28.05 NCS S 5020-Y20R

LRV 42.09 NCS S 2502-B

Bronze



Burgundy

Lead

Spice

NEW

LRV 5.70 NCS S 6030-R10B

LRV 12.77 NCS S 7005-R50B

LRV 15.37 NCS S 4050-Y70R

NEW

Brown



LRV 12.13 NCS S 6010-Y70R



LRV 13.44 NCS S 6502-R



LRV 23.40 NCS S 5000-N

Coffee

Steel

LRV 6.05 NCS S 8010-Y50R

LRV 26.99 NCS S 4500-N

Photoluminescent

LRV 57.59 - lit conditions

Canvas

Midnight

Cloud

Wisp

Jade

LRV 53.27 NCS S 2005-Y30R LRV 53.98 NCS S 2005-G

LRV 6.56 NCS S 6030-R80B

LRV 28.57 NCS S 4010-R70B

LRV 58.17 NCS S 2000-N

LRV 6.69 NCS S 7020-B70G

LRV 38.59 NCS S 3010-Y30R

Linen

Buttercup

Snowdrift

LRV 55.54 NCS S 1070-Y

LRV 83.77 NCS S 0500-N

Standard Exterior

LRV 6.47 NCS S 7502-B



Tornado



Sandstorm LRV 50.77



Hurricane LRV 30.43



Blizzard LRV 83.25



Heavy Duty Exterior



Charcoal LRV 4.07



Firestorm

LRV 43.96

Ash LRV 24.77



Avalanche LRV 73.00

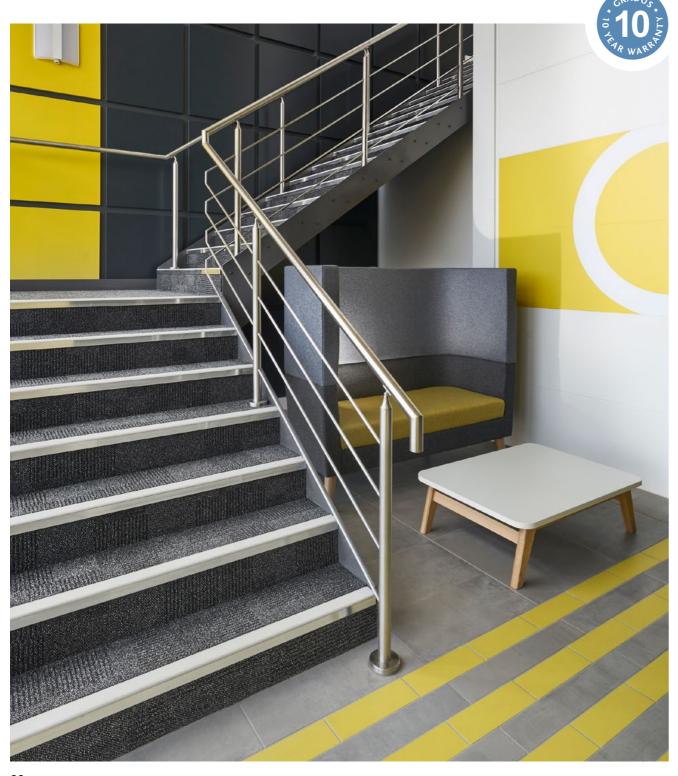
XT™ Stair Edgings

XT - the ultimate stair edging solution comprising bronze, aluminium or PVC-u Hardnose channels. A unique insert design extends around the leading edge of the stair edging to ensure maximum safety underfoot. A choice of pvc inserts are available as well as a new metal castellated insert for use with XT bronze and XT aluminium channels.

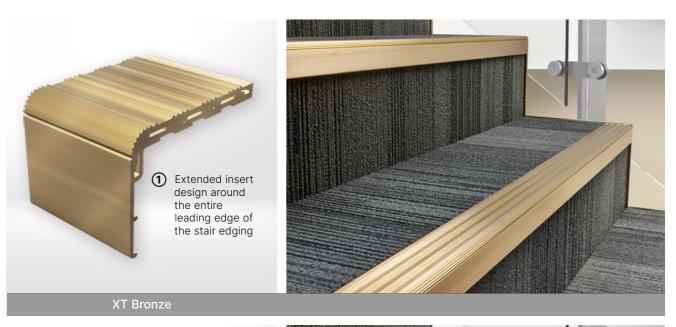
Used in conjunction with floorcoverings from all major manufacturers.

Suitable for interior use in all commercial and most industrial applications.

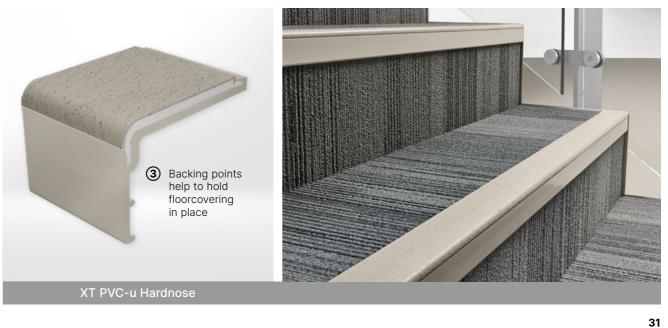
Supported by recommendations from BRE and the guidance contained within BS 8300-2:2018 and Approved Document M (ADM) of the Building Regulations 2010. Building owners and specifiers can choose XT safe in the knowledge that it offers the ultimate solution in product design and performance to protect all groups of building users. There is no equal...



XT Stair Edgings - Key Features across the range







XT™ Bronze

NEW RANGE

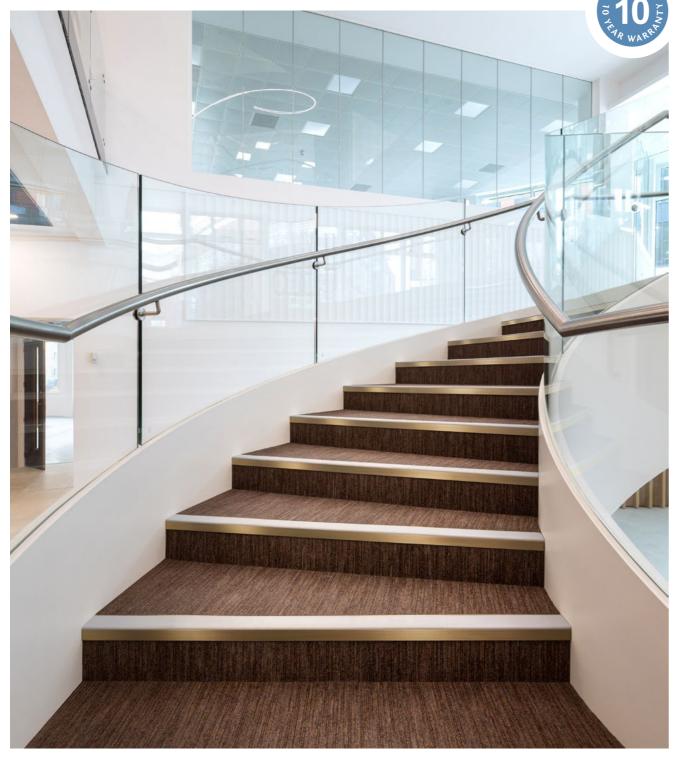
XT Bronze stair edgings offer premium finishes for commercial applications including hospitality, leisure, retail, commercial office and premium residential.

Suitable for interior heavy traffic applications.

Used in conjunction with floorcoverings from all major manufacturers.

Information

- > For guidance on the correct selection of stair edgings and inserts see pages 21-25
- > For Light Reflectance Values (LRVs) and NCS references see pages 27-29
- > XT profiles UK patent GB2433437B. UK/EU Registered Design no 9/000465950 and 9/002471599.



Channel and insert options



NEW

Bronze channel finishes

Our Polished Bronze finish creates a sleek appearance, whilst Satin Bronze offers a matt finish that features a subtle brushed effect.

Polished Bronze

Satin Bronze

3 Insert options



Interior

Conditions: Interior Dry Material: Pvc with mineral inclusion

Areas where there is no risk that the stairs will be contaminated by moisture.

Jet	Ink
Evergreen	Teal
Burgundy	Ocean
Spice	Coffee
Lead	Bronze
Steel	Linen
Glacier	Canvas
Wisp	Clay
Sky	Buttercup
Jade	Snowdrift

Xtra-grip

Conditions: Interior Dry / Interior Wet Material: Pvc with mineral aggregate

Increased surface roughness where the stair edging may become wet e.g. stairs close to entrances.



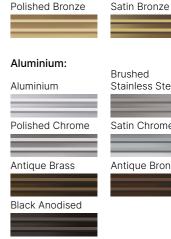


Metal Castellated

Conditions: Interior Dry / Interior Wet Material: Bronze or aluminium

Provides an all-metal solution that features a castellated design.

Bronze:

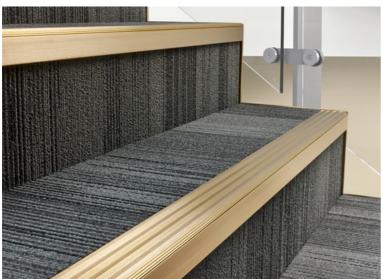


Brushed Stainless Steel Satin Chrome Antique Bronze

XT™ Bronze

NEW RANGE



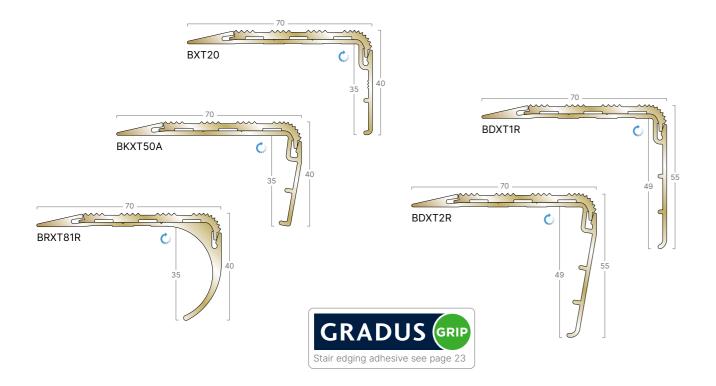


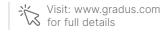
Channel & Insert options

> All XT Bronze profiles available with a choice of metal castellated, Interior or Xtra-grip insert

Gauge options

- > Ramp typically used with LVT, resilient flooring or where no surface floorcoverings are used
- > 2mm typically used with LVT or resilient flooring
- > 5mm typically used with carpet, LVT or resilient flooring with bevelled underlay

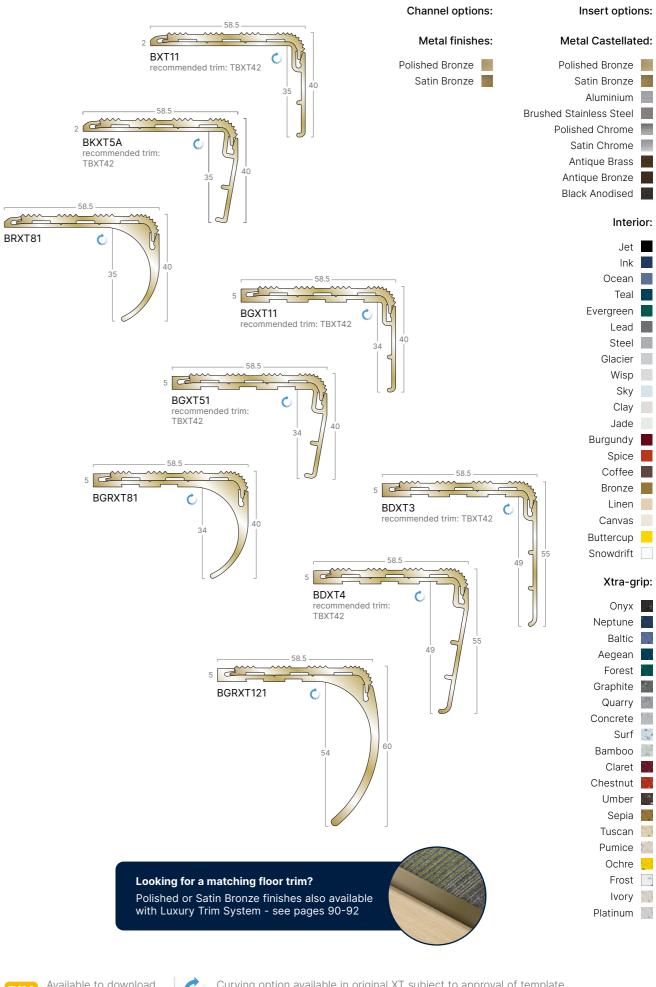




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XT™ Aluminium

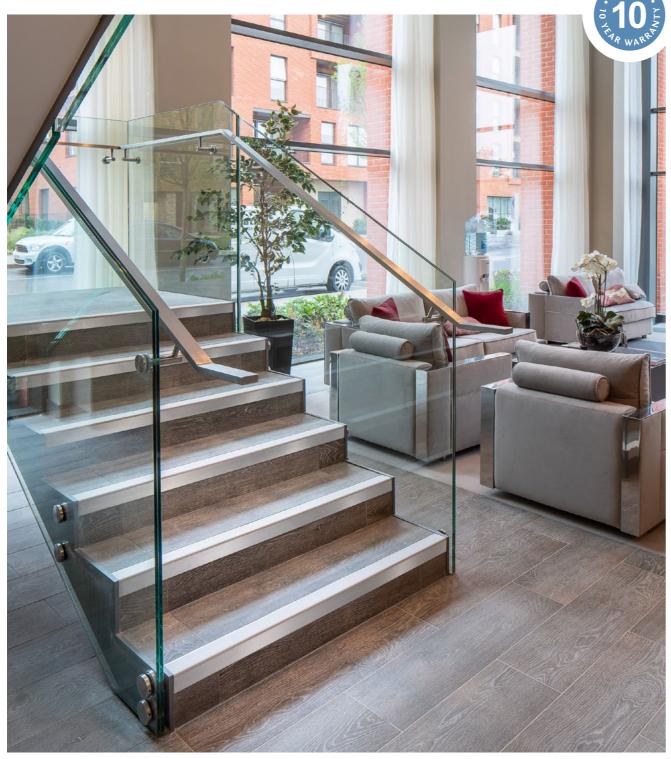
XT Aluminium stair edgings offer an ideal solution for commercial applications including offices, education and healthcare. Suitable for use in heavy traffic interior applications.

XT Aluminium is also offered in a choice of premium finishes for use in hospitality, leisure, retail, commercial office, premium residential and other prestigious medium traffic interior applications.

Used in conjunction with floorcoverings from all major manufacturers.

Information

- > For guidance on the correct selection of stair edgings and inserts see pages 21-25
- > For Light Reflectance Values (LRVs) and NCS references see pages 27-29
- XT profiles UK patent GB2433437B.
 UK/EU Registered Design no 9/000465950, 9/002471599 and 9/001102875



Channel and insert options



NEW

Aluminium channel finishes

XT Aluminium is now offered with an enhanced choice of attractive contemporary finishes, including our new Antique Brass and Antique Bronze effects.

Aluminium

Polished Chrome

Satin Chrome

Antique Brass

Antique Bronze

Black Anodised

3 Insert options



Interior

Conditions: Interior Dry Material: Pvc with mineral inclusion

Areas where there is no risk that the stairs will be contaminated by moisture.





Xtra-grip

Conditions: Interior Dry / Interior Wet Material: Pvc with mineral aggregate

Increased surface roughness where the stair edging may become wet e.g. stairs close to entrances.

Onyx	Neptune
Forest	Aegean
Claret	Baltic
Chestnut	Umber
Graphite	Sepia
Quarry	Tuscan
	12.00
Concrete	Pumice
Surf	Ochre
Bamboo	Frost
lvory	Platinum
1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 2 12 1 1



Metal Castellated

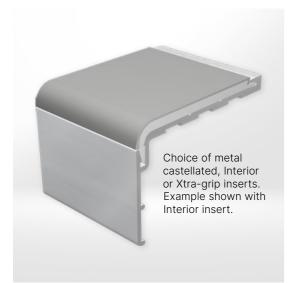
Conditions: Interior Dry / Interior Wet Material: Aluminium or bronze

Provides an all-metal solution that features a castellated design.

Aluminium: Aluminium	Brushed Stainless Steel
Polished Chrome	Satin Chrome
Antique Brass	Antique Bronze
Black Anodised	
Bronze:	
Polished Bronze	Satin Bronze

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XT™ Aluminium



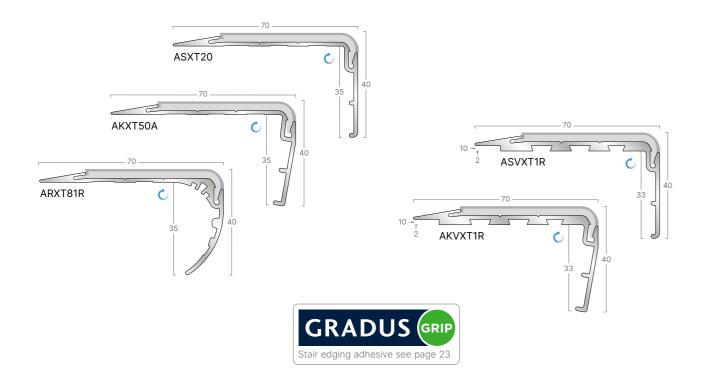


Channel & Insert options

> All XT Aluminium profiles available with a choice of metal castellated, Interior or Xtra-grip insert

Gauge options

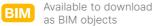
- > Ramp typically used with LVT, resilient flooring or where no surface floorcoverings are used
- > Notched Ramp Designed to overlay 2mm vinyl or LVT
- > 2mm typically used with LVT or resilient flooring

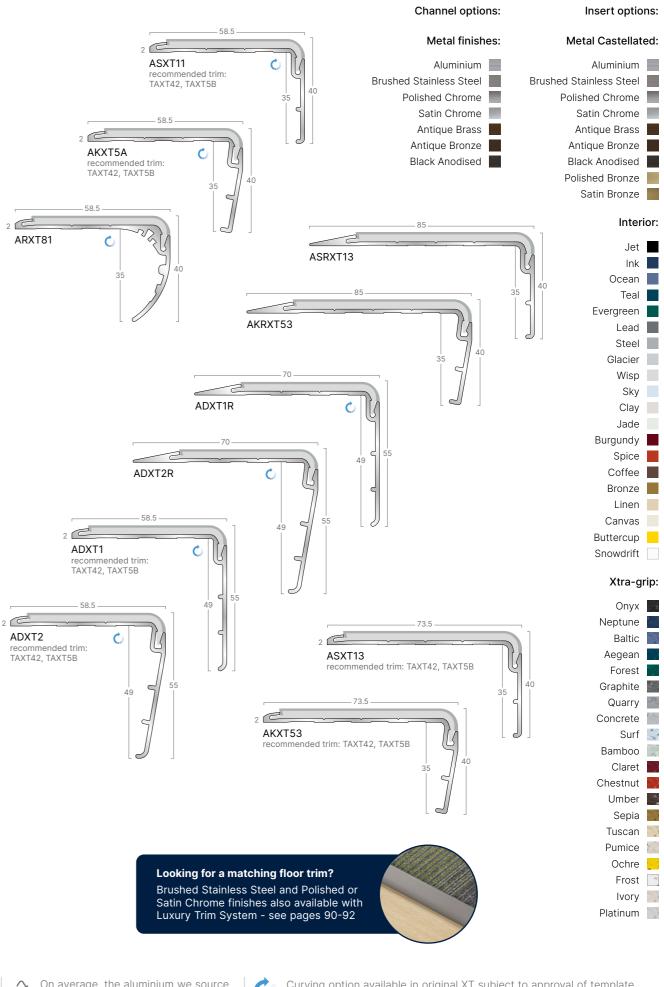












On average, the aluminium we source contains 75% recycled material



Curving option available in original XT subject to approval of template.

All metal castellated inserts and black anodised profiles cannot be curved

XT™ Aluminium



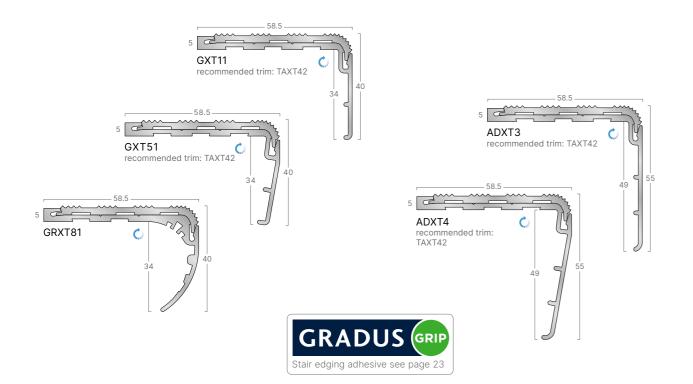


Channel & Insert options

> All XT Aluminium profiles available with a choice of metal castellated, Interior or Xtra-grip insert.

Gauge options

- > 5mm typically used with LVT, carpet or resilient flooring with bevelled underlay
- > 10mm 15mm typically used with ceramics, stone and marble











Channel options:

Insert options:

Metal Castellated:



Aluminium Brushed Stainless Steel Polished Chrome Satin Chrome Antique Brass Antique Bronze Black Anodised

Aluminium Brushed Stainless Steel Polished Chrome Satin Chrome Antique Brass Antique Bronze Black Anodised

Interior:

Polished Bronze

Satin Bronze

Jet Ocean Teal

Lead Steel

Glacier Wisp Sky

Clay Burgundy

Spice Coffee Bronze

Linen Canvas Buttercup

Snowdrift ___

Xtra-grip: Onyx

Neptune Baltic 💮 Aegean 📗

Forest Graphite **S**

Quarry Concrete

Surf 🧓 Bamboo Claret

Chestnut Umber **S**

Sepia Tuscan

Pumice Ochre 🧾

Frost Ivory

Platinum 🥛

CXT2

nended trim: TAXT523

nended trim: TAXT5212

Looking for a matching floor trim?

Brushed Stainless Steel and Polished or

Satin Chrome finishes also available with

Luxury Trim System - see pages 90-92

recommended trim: TAXT5212



CXT3

GXT13

GXT53

recommended trim: TAXT42

XT™ PVC-u Hardnose

XT PVC-u Hardnose stair edgings combine a coloured PVC-u channel with slip-resistant inserts in a range of matching colour options for commercial applications including healthcare, education and commercial office.

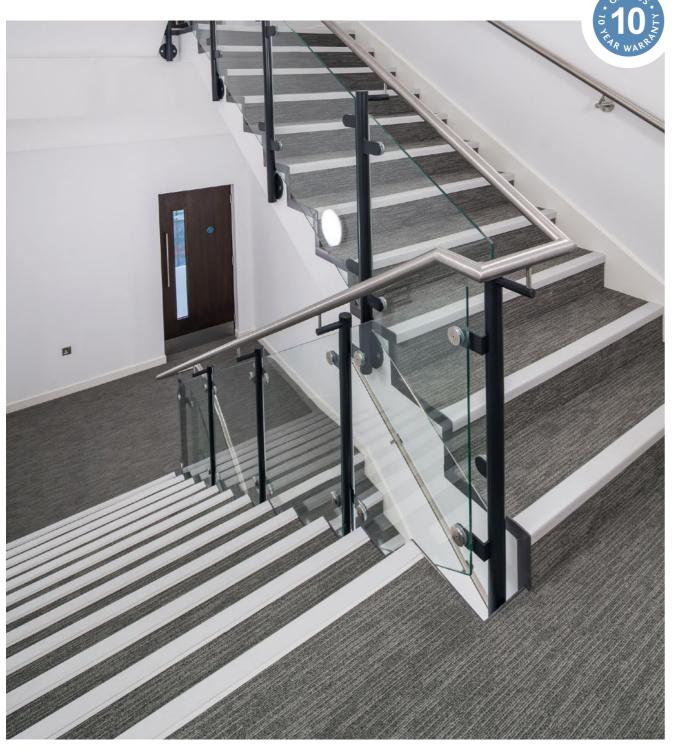
XT PVC-u Hardnose is ideal for providing a single solid band of colour that visually contrasts with the surrounding floorcovering to help define the step edge - see pages 200-205 for guidance.

Suitable for interior heavy traffic.

Used in conjunction with floorcoverings from all major manufacturers.

Information

- > For guidance on the correct selection of stair edgings and inserts see pages 21-25
- > For Light Reflectance Values (LRVs) and NCS references see pages 27-29
- > XT profiles UK patent GB2433437B. UK/EU Registered Design no 9/000465950 and 9/002471599



Channel and insert options



PVC-u channel finishes XT PVC-u Hardnose is available in an extensive range of attractive coloured

XT PVC-u Hardnose is available in an extensive range of attractive coloured PVC-u channels with matching inserts available to complement any design scheme.



Dementia Services
Development Centre

XT PVC-u Hardnose is rated as Class 1a. Finishes within these ratings can be used throughout dementia applications. We recommend a minimum contrast of 30 points LRV for critical surfaces. For further information see pages 206-207 or visit www.gradus.com

2 Insert options



Interior

Conditions: Interior Dry Material: Pvc with mineral inclusion

Areas where there is no risk that the stairs will be contaminated by moisture.





Xtra-grip

Conditions: Interior Dry / Interior Wet Material: Pvc with mineral aggregate

Increased surface roughness where the stair edging may become wet e.g. stairs close to entrances.



XT™ PVC-u Hardnose



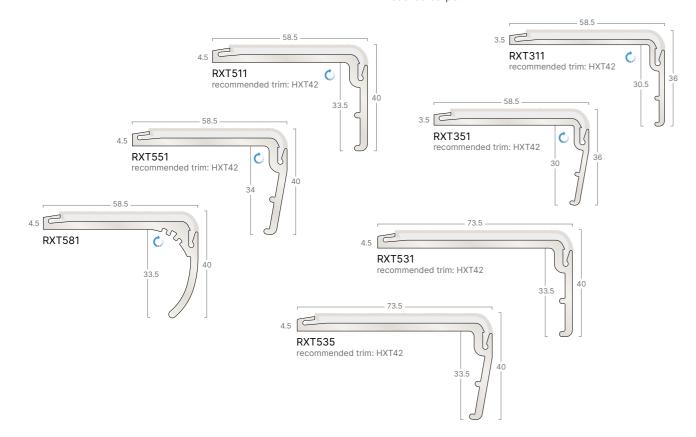


Channel & Insert options

> All XT PVC-u Hardnose profiles available with a choice of Interior or Xtra-grip insert

Gauge options

- > 3.5mm typically used with LVT or resilient flooring
- > 4.5mm typically used with carpet, LVT or resilient flooring with bevelled underlay in heavy use areas
- > 6mm typically used with carpet or LVT
- > 7.5mm 9.5mm typically used with comfort backed carpet

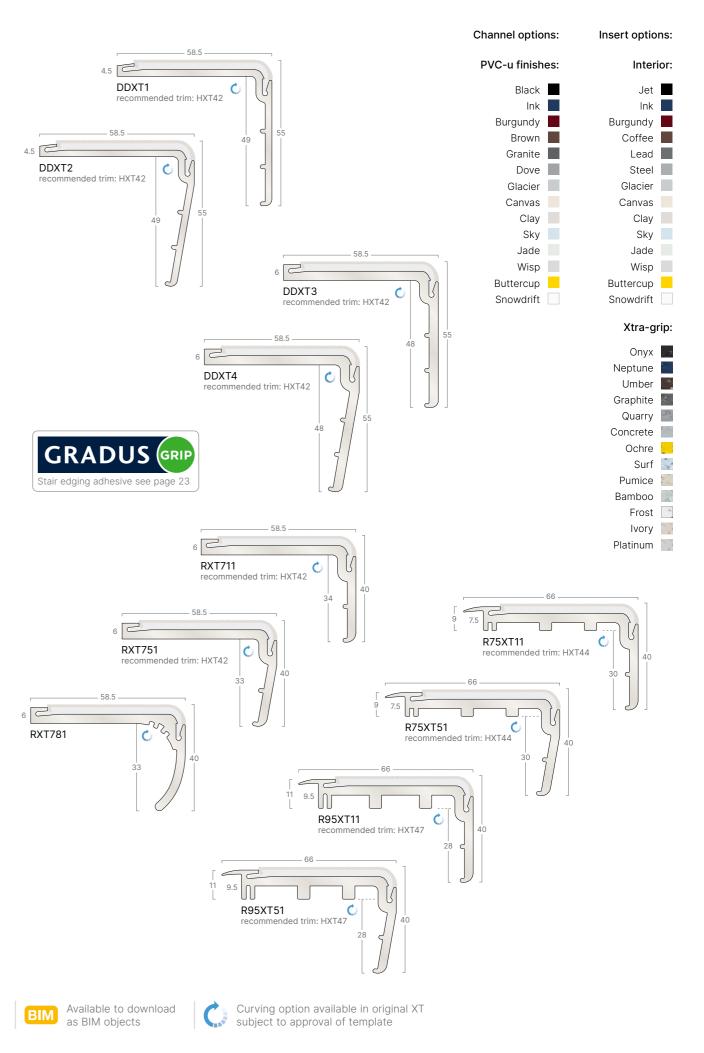




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Traditional Stair Edgings

Traditional - an extensive range of attractive and hardwearing stair edgings comprising aluminium, chrome or PVC-u Hardnose channels with factory bonded slip-resistant inserts.

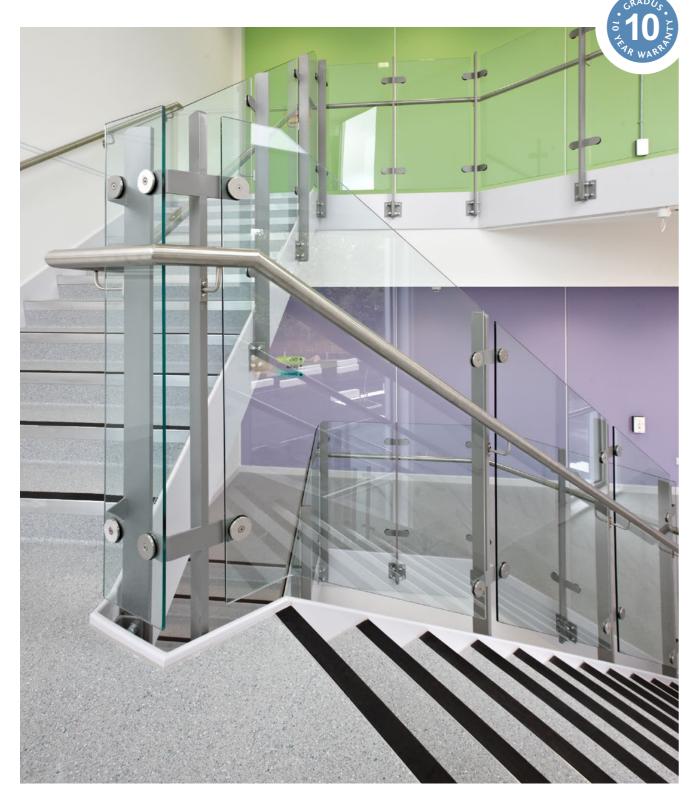
Used in conjunction with floorcoverings from all major manufacturers.

Suitable for all commercial and most industrial applications.

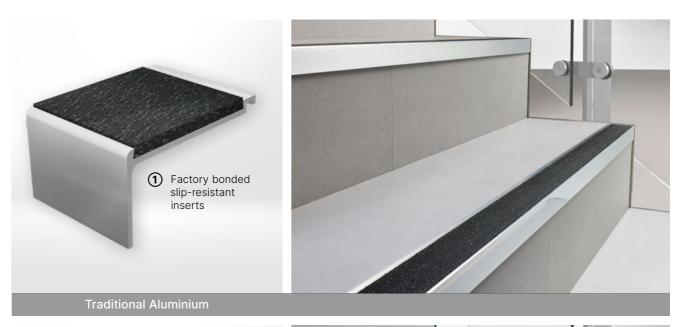
Information

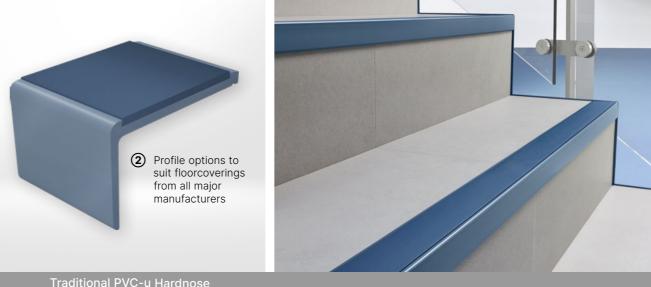
- > For guidance on the correct selection of stair edgings and inserts see pages 21-25
- > For larger colour swatches, Light Reflectance Values (LRVs) and NCS references see pages 27-29

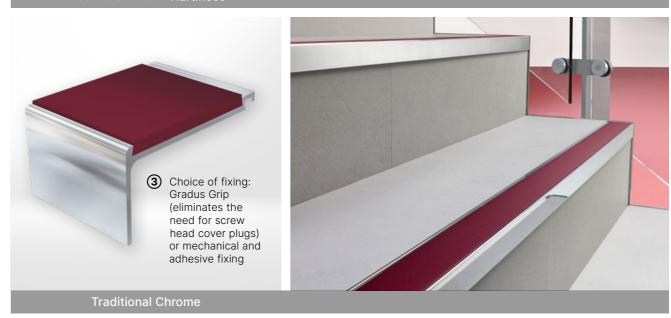
> ADM profiles - UK/EU Registered Design no 9/000113899 DDA profiles - UK/EU Registered Design no 9/000188982-0001 to 0004, 9/000732326



Traditional Stair Edgings - Key Features across the range

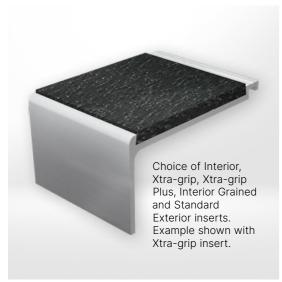






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Traditional - Aluminium A Range





Channel & Insert options

> All Traditional Aluminium A Range profiles available with a choice of Interior, Xtra-grip, Xtra-grip Plus, Interior Grained and Standard Exterior insert

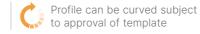
Gauge options

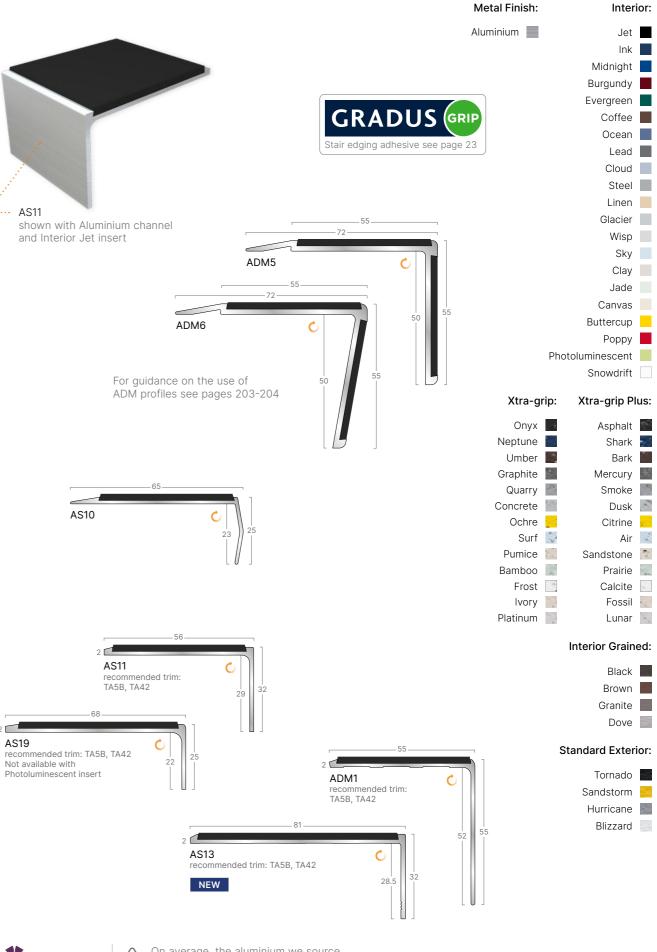
- > Ramp typically used with LVT, resilient flooring or where no surface floorcoverings are used
- > 2mm typically used with LVT or resilient flooring











Channel options:

Insert options:

49

On average, the aluminium we source contains 75% recycled material

Traditional - Aluminium A Range

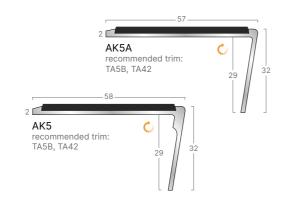
Channel & Insert options

> All Traditional Aluminium A Range profiles available with a choice of Interior, Xtra-grip, Xtra-grip Plus, Interior Grained and Standard Exterior insert

Gauge options

> 2mm - 2.5mm - typically used with LVT or resilient flooring





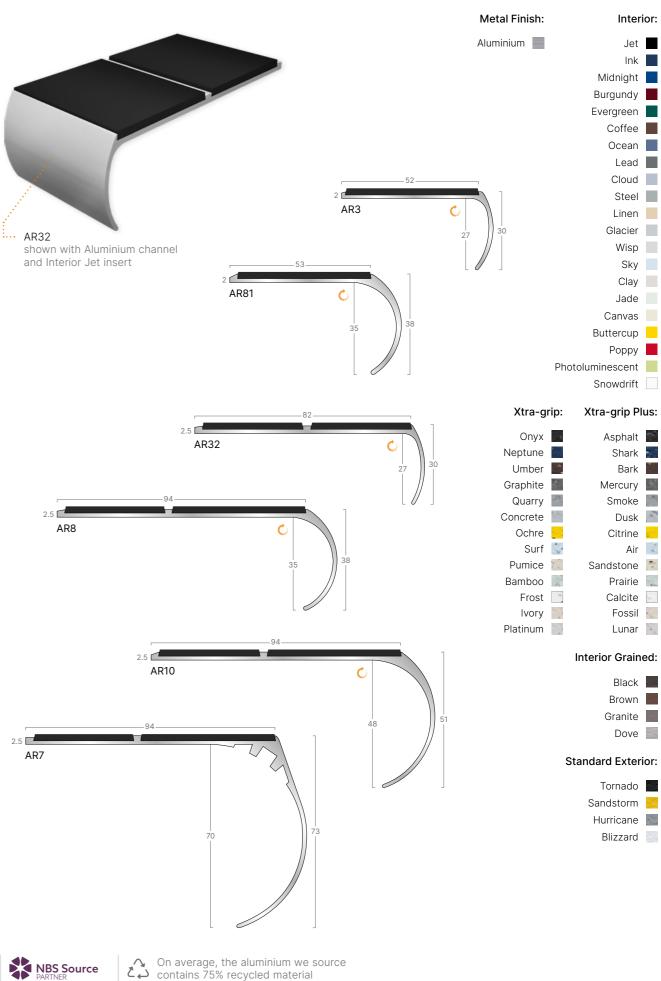




Visit: www.g.. for full details

Dimensions snown are normal.
Illustrations are 70% size in mm





Channel options:

Insert options:

Traditional - Aluminium S + H Range

Channel & Insert options

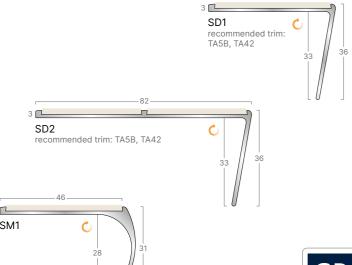
> All Traditional Aluminium S + H Range profiles available with a choice of Interior, Xtra-grip, Xtra-grip Plus, Interior Grained and Standard Exterior insert

Gauge options

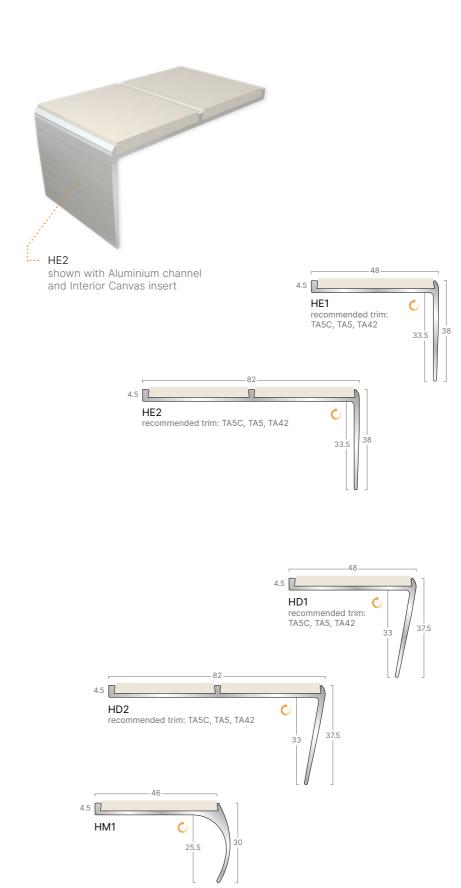
- > 3mm typically used with LVT or resilient flooring
- > 4.5mm typically used with carpet, LVT or resilient flooring with bevelled underlay in heavy use areas

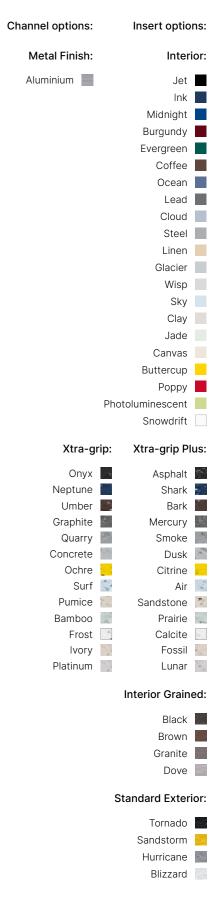












53





Dimensions sriowil are normal illustrations are 70% size in mm

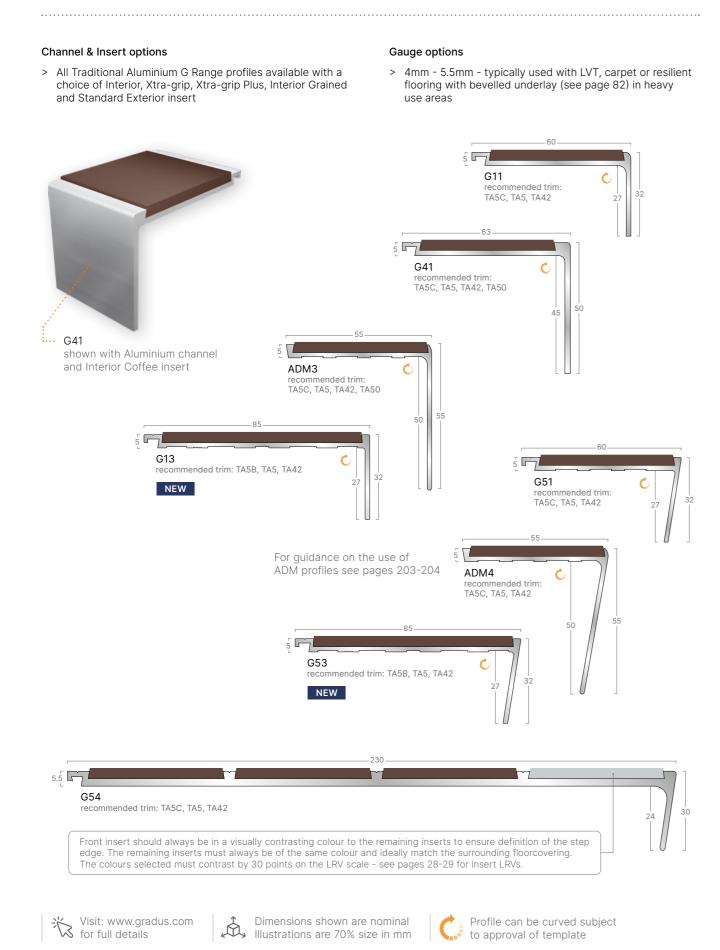


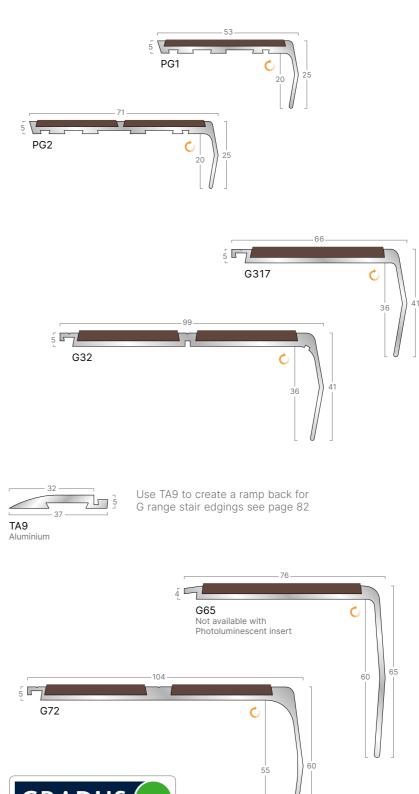


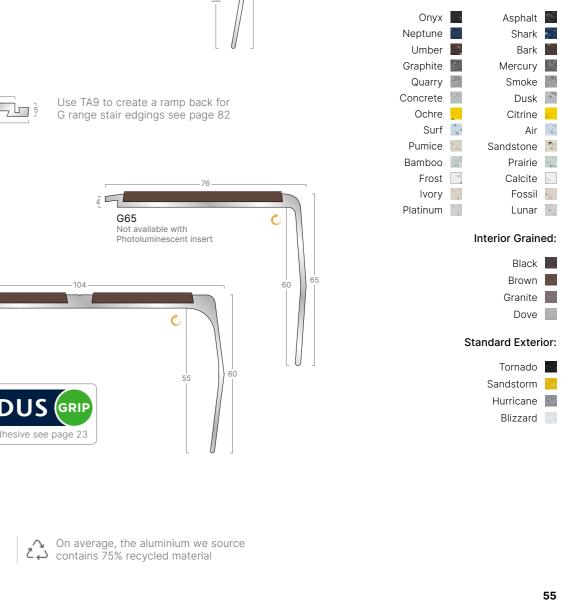


Traditional - Aluminium G Range

54







Channel options:

Metal Finish:

Aluminium

Insert options:

Interior:

Jet

Midnight

Burgundy Evergreen

Coffee

Ocean

Steel Linen

Glacier
Wisp
Sky

Jade

Canvas

Buttercup Poppy

Xtra-grip Plus:

Photoluminescent Snowdrift

Xtra-grip:



Traditional - Aluminium G Range

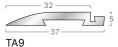
Channel & Insert options

> All Traditional Aluminium G Range profiles available with a choice of Interior, Xtra-grip, Xtra-grip Plus, Interior Grained and Standard Exterior insert

Gauge options

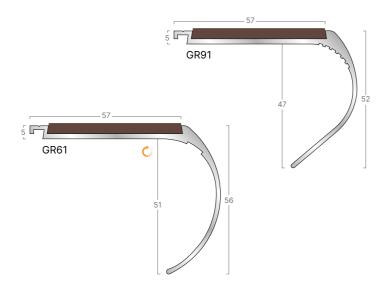
> 5mm - typically used with LVT, carpet or resilient flooring with bevelled underlay (see page 82) in heavy use areas





Aluminium

Use TA9 to create a ramp back for G range stair edgings see page 82

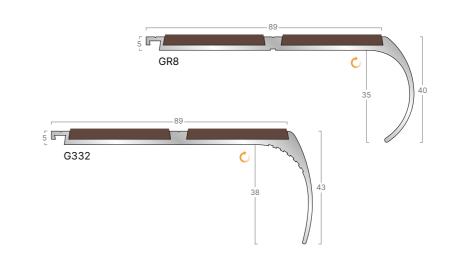


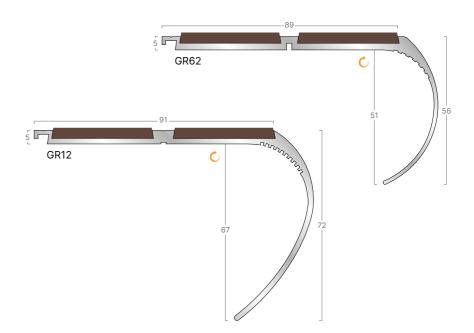
Visit: www.gradus.cor for full details

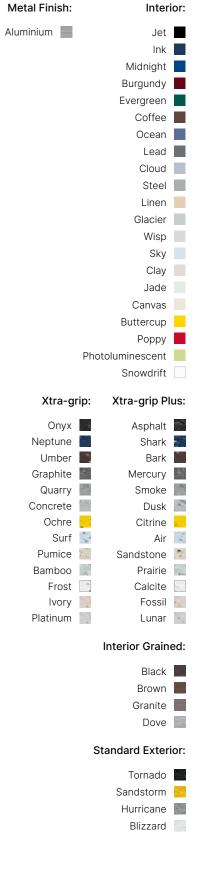












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Channel options:

Insert options:



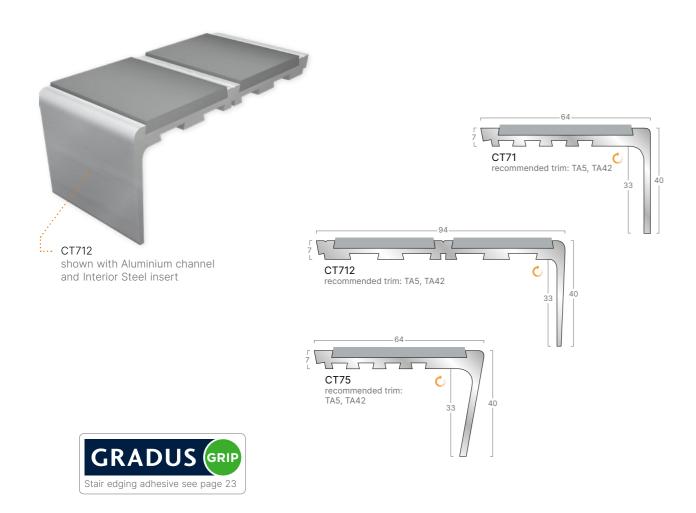
Traditional - Aluminium CT Range

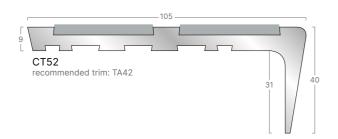
Channel & Insert options

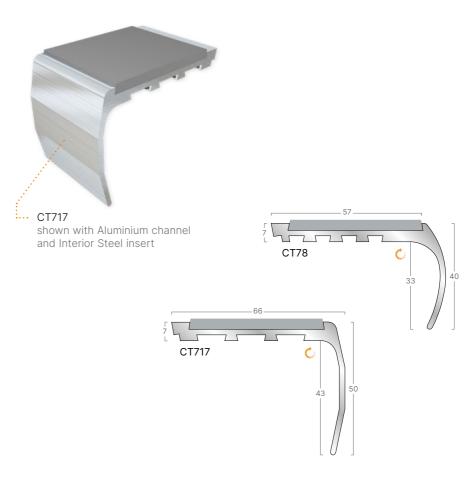
> All Traditional Aluminium CT Range profiles available with a choice of Interior, Xtra-grip, Xtra-grip Plus, Interior Grained and Standard Exterior insert

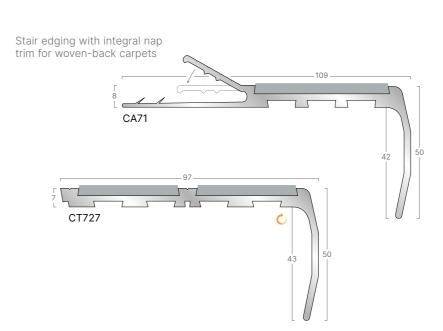
Gauge options

> 7mm - 9mm - typically used with LVT, carpet, wood, ceramics and other heavy duty floorcoverings











Granite ____ Dove

Standard Exterior:

Tornado Sandstorm | Hurricane Blizzard





Dimensions snown are normal.
Illustrations are 70% size in mm





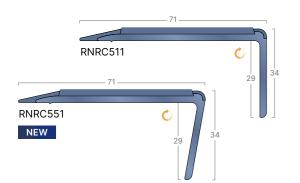
Traditional - PVC-u Hardnose™ - Satin Finish





Channel & Insert options

> All Traditional PVC-u Hardnose Satin Finish profiles available with a choice of Interior, Xtra-grip, Xtra-grip Plus and Interior Grained insert



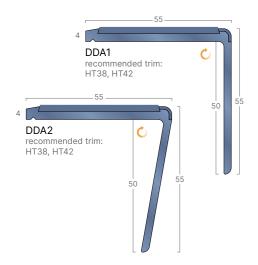
Gauge options

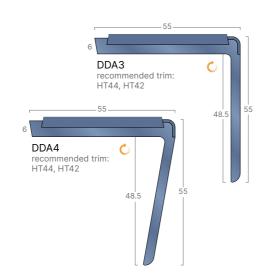
- > Ramp typically used with LVT, resilient flooring or where no surface floorcoverings are used
- > 3mm typically used with LVT or resilient flooring
- > 4mm 5mm typically used with carpet, LVT or resilient flooring with bevelled underlay (see page 82) in heavy
- > 6mm 7mm typically used with carpet



DDA + RNRC profiles feature an extended insert design to provide additional slip-resistance around the leading edge of the stair edging.

DDA profiles are available with 55mm treads and 55mm risers to meet ADM 2015, ADK 2013, BS 8300-2:2018, BS 9266:2013 and BS 5395 guidelines.



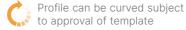


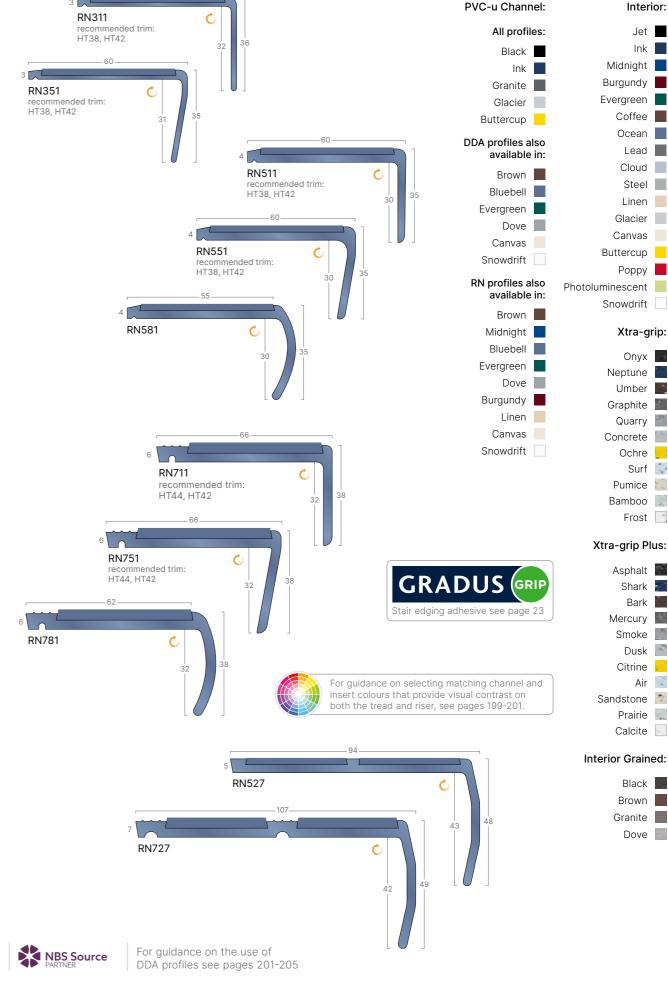




Dimensions shown are normal.

Illustrations are 70% size in mm





Channel options:

Insert options:

Interior:

Jet

Ink

Midnight

Burgundy

Evergreen

Coffee

Ocean

Lead

Cloud

Steel

Linen

Glacier

Canvas

Poppy

Xtra-grip:

Onyx

Neptune **T**

Umber

Graphite **S**

Quarry

Ochre 📒

Pumice

Bamboo

Asphalt

Shark **S**

Bark 📗

Mercury **S**

Smoke

Dusk 🦱 Citrine ___

Air

Sandstone 💆 Prairie 🚃

Calcite 💹

Black

Brown

Granite **III**

Dove

Frost

Surf 🧓

Concrete

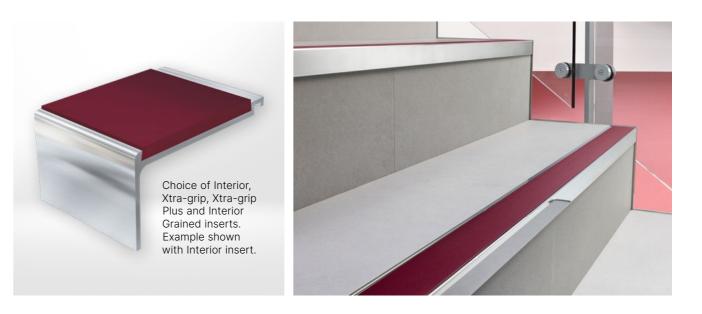
Buttercup

Snowdrift ___

Traditional - PVC-u Hardnose™ - Metallic Finish

Gauge options Channel options: Insert options: > 4mm - typically used with LVT, carpet or resilient flooring PVC-u Channel: Interior: with bevelled underlay (see page 82) in heavy use areas > 6mm - typically used with carpet Burnt Almond Doubloon Ink Channel & Insert options Silver Midnight > All Traditional PVC-u Hardnose Metallic Finish profiles Zinc Burgundy **E** available with a choice of Interior, Xtra-grip, Xtra-grip Plus Evergreen and Interior Grained insert Coffee Ocean Lead Cloud Steel Linen Glacier Canvas Buttercup MR511 mmended trim: MT42 Poppy Photoluminescent Snowdrift MR581 Xtra-grip: MR551 shown with PVC-u Burnt Almond recommended trim: MT42 Onyx channel and Interior Coffee insert Neptune ____ Umber 🌉 Graphite 💹 MR581 Quarry Page 1 Concrete Ochre 📴 Surf 💮 Pumice 🔚 MR711 Bamboo recommended trim: MT42 Frost ____ Xtra-grip Plus: Asphalt MR751 recommended trim: MT42 Shark **S** Bark Mercury Smoke Dusk MR781 Citrine ___ Air Sandstone 👣 Prairie 🚃 Calcite Interior Grained: Black Brown Granite **III** Dove Visit: www.s. for full details Dimensions sriowing are normal. Illustrations are 70% size in mm Visit: www.gradus.com Profile can be curved subject to approval of template

Traditional - Chrome



Channel & Insert options

NBS Source

- > All Traditional Chrome profiles available with a choice of Interior, Xtra-grip, Xtra-grip Plus and Interior Grained insert
- > Available cut to finished length only. Maximum continuous length 1.5 m

Gauge options

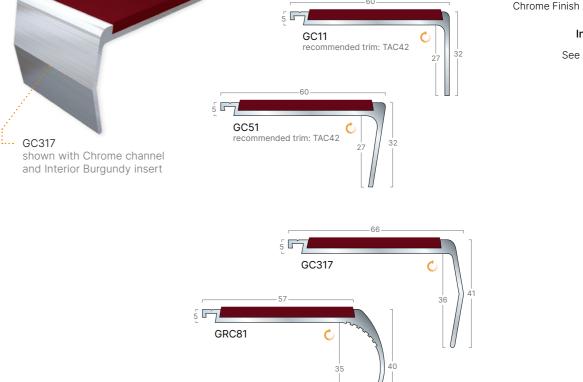
> 5mm - typically used with carpet, LVT and resilient flooring with bevelled underlay (see page 82) in heavy use areas



Insert options:

63

See page opposite



Elite™ Stair Edgings

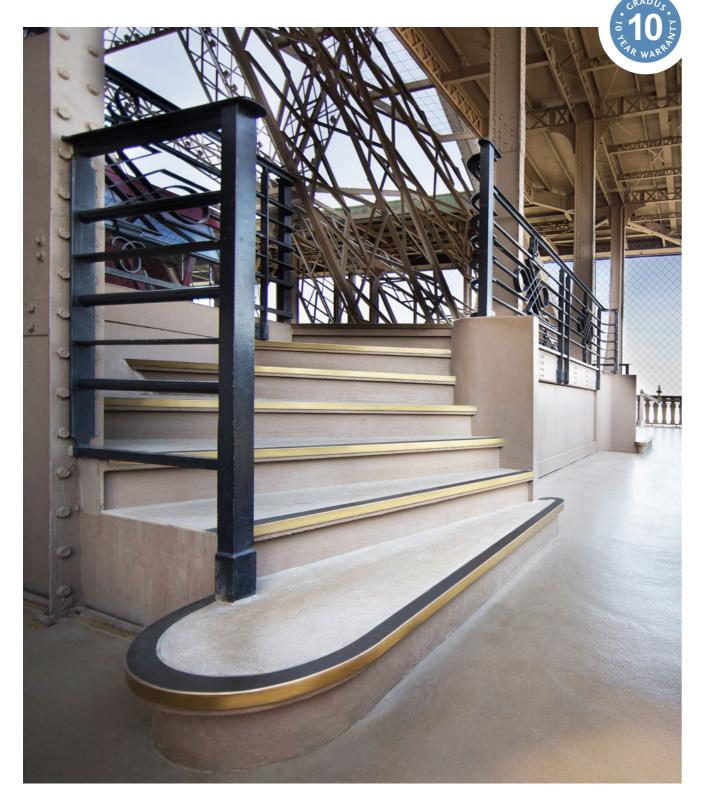
Elite - stair edgings feature bronze or aluminium channels and slip-resistant inserts that are supplied separately. The insert is fitted once the channel has been secured, this eliminates the need for screw head cover plugs.

Used in conjunction with floorcoverings from all major manufacturers.

Suitable for all interior commercial applications.

Information

- > For guidance on the correct selection of stair edgings and inserts see pages 21-25
- > For larger colour swatches, Light Reflectance Values (LRVs) and NCS references see pages 27-29



Elite Stair Edgings - Key Features across the range





Elite™ - Aluminium



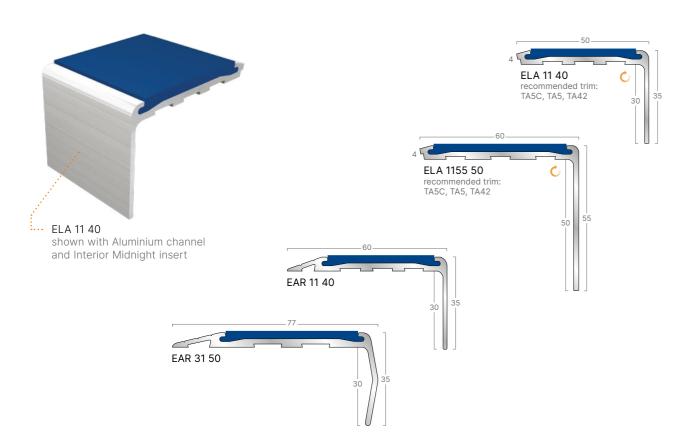


Channel & Insert options

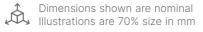
> All Elite Aluminium profiles available with a choice of Interior insert

Gauge options

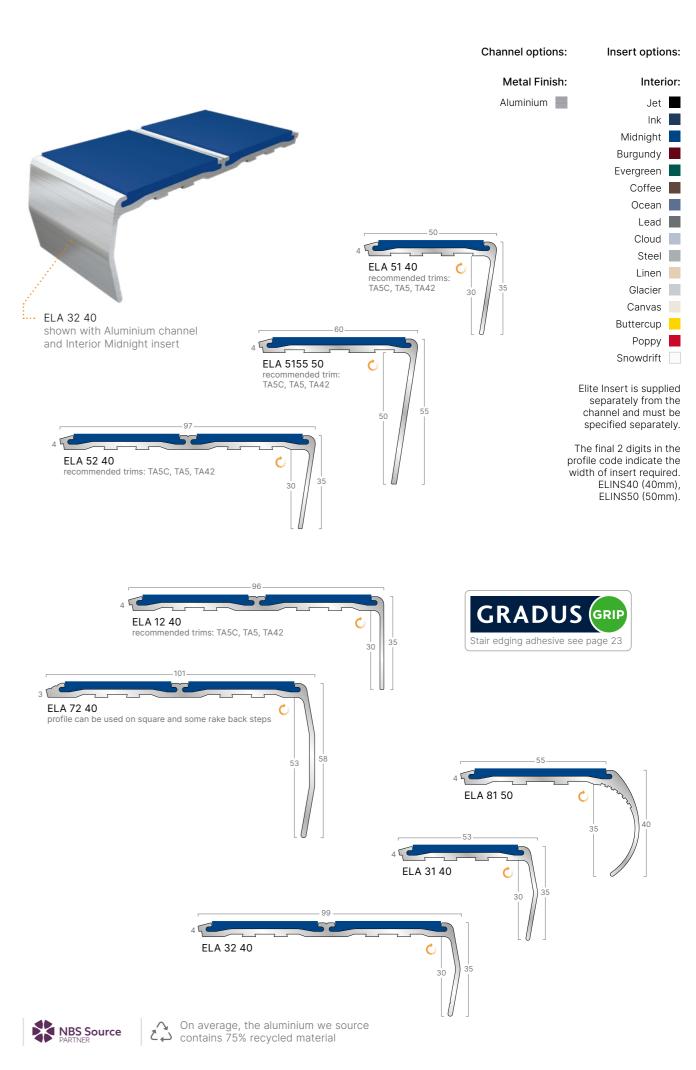
- > Ramp typically used with LVT, resilient flooring or where no surface floorcoverings are used
- > 3mm 4mm typically used with carpet, LVT and resilient flooring with bevelled underlay (see page 82) in heavy use areas







Profile can be curved subject to approval of template



Elite™ - Aluminium

Channel & Insert options

> All Elite Aluminium profiles available with a choice of Interior insert

ELA 117 50 shown with Aluminium channel

and Interior Midnight insert

Gauge options

- > 6mm typically used with carpet, LVT and resilient flooring with bevelled underlay (see page 82) in heavy use areas
- > 7mm 10mm typically used with carpet tiles with a pre-bonded underlay

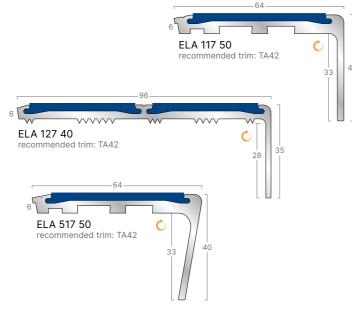
Channel options:

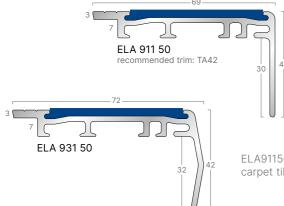
Metal Finish:

Aluminium

Insert options:

See page opposite





ELA91150 and ELA93150 for use with carpet tiles with a pre-bonded underlay





Dimensions sriowing are normal.
Illustrations are 70% size in mm Dimensions shown are nominal



Profile can be curved su to approval of template Profile can be curved subject

Elite™ - Bronze





Channel & Insert options

> All Elite Bronze profiles available with a choice of Interior insert

Gauge options

> 4mm - typically used with carpet, LVT and resilient flooring with bevelled underlay (see page 82) in heavy use areas

Channel options:

Metal Finish:

ELB 31 40

shown with Polished Bronze channel

GRADUS

and Interior Evergreen insert







Insert options:







Snowdrift ___

Elite Insert is supplied separately from the channel and must be

specified separately.

The final 2 digits in the profile code indicate the width of insert required. ELINS40 (40mm), ELINS50 (50mm).



Trans-Edge® - Stair Edgings

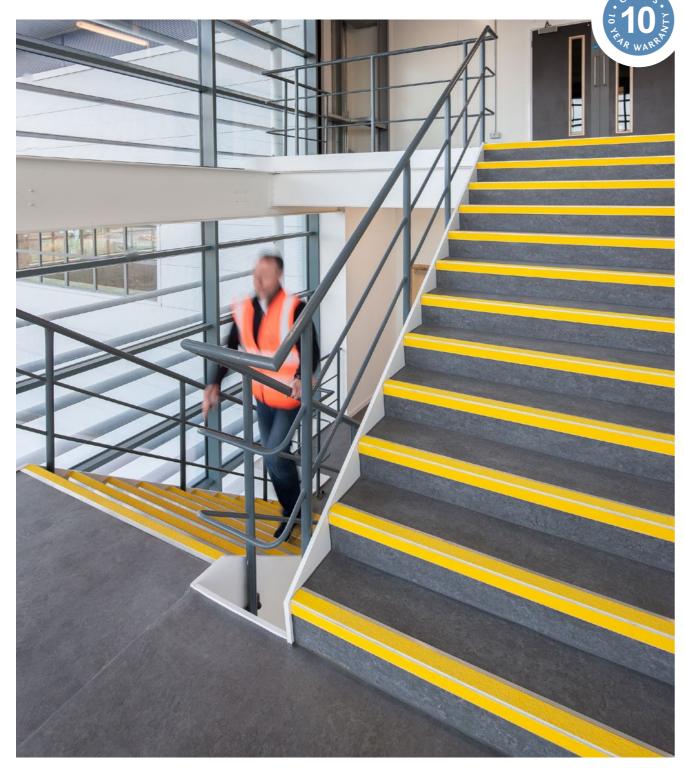
Trans-Edge - heavy-duty aluminium stair edgings incorporating an extremely durable, slip-resistant insert material

Selected TEX stair edgings can also be used with tread plates and sheet material - see pages 72-73.

Suitable for external and internal applications such as motorway foot bridges, railway stations, airports, sports stadia and heavy industry.

Information

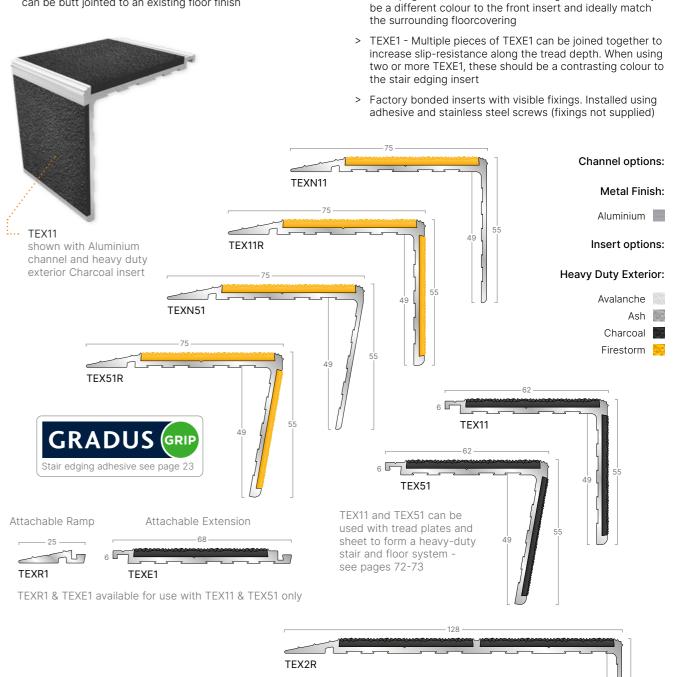
- > For guidance on the correct selection of stair edgings and inserts see pages 21-25
- > Available in cut lengths up to 2750mm and available drilled on request (surcharge applies)
- > For larger colour swatches, Light Reflectance Values (LRVs) and NCS references see pages 27-29



Trans-Edge® - TEX Range

Gauge options

- > Ramp back profiles to be surface mounted onto substrate
- > Flat back profiles can be set into the substrate in-situ or can be butt jointed to an existing floor finish



Installation Advice

> TEX3R - There should be at least 30 points LRV difference

between the front insert and the surrounding floorcovering

– see page 29 for LRVs. The remaining inserts must always

Visit: www.gradus.co

TEX3R

Dimensions shown are nominal Illustrations are 70% size in mm



Trans-Edge® - Stair & Floor System

Trans-Edge - heavy-duty stair & floor system offers a hard-wearing solution to help reduce the risk of slips and trips in the most demanding environments.

The system combines stair edgings and tread plates for use on stairs and sheet material for use on landings and walkways to provide a slip-resistant flooring solution.

Suitable for external and internal applications across both new build and refurbishment projects.

Information

- > For guidance on the correct selection of stair edgings and inserts see pages 21-25
- > For larger colour swatches, Light Reflectance Values (LRVs) and NCS references see pages 27-29



Trans-Edge® - Tread Plate & Sheet

Tread Plates, Sheet and Stair Edgings

- > Tread plates (TEXPL) are supplied cut to size (max length 2750mm). Available drilled on request (surcharge applies)
- > TEXSH (sheet) is supplied as sheet 1220mm x 2750mm or can be cut to size on request (surcharge applies). Must be drilled on site if required
- > TEX11 & TEX51 supplied in cut lengths up to 2750mm and available drilled on request (surcharge applies)

Installation Advice

- > Installed using adhesive and stainless steel screws (fixings not supplied/screw head covers not available)
- > Stair edging insert colours for TEX11 and TEX51 should be selected to provide a 30 point LRV difference with the tread plate



TEXPL & TEXSH:

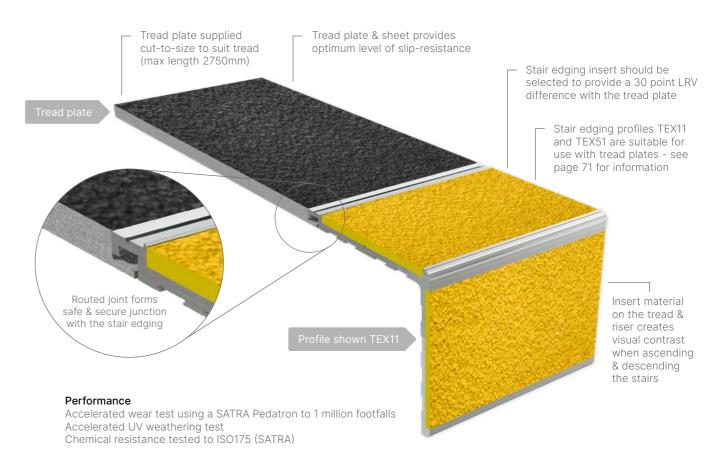
Charcoal

For stair edging colour availability see page 71

Edging Ramp

- > TEXCR1 is an aluminium edging strip used to provide a neat edge to sheet when used on landings and walkways
- > Supplied cut to size (max length 2750mm) and available drilled on request (surcharge applies)





Visit: www.gra for full details Visit: www.gradus.com



Dimensions shown are nominal Dimensions shown are 70% size in mm



Flexible pvc Stair Edgings

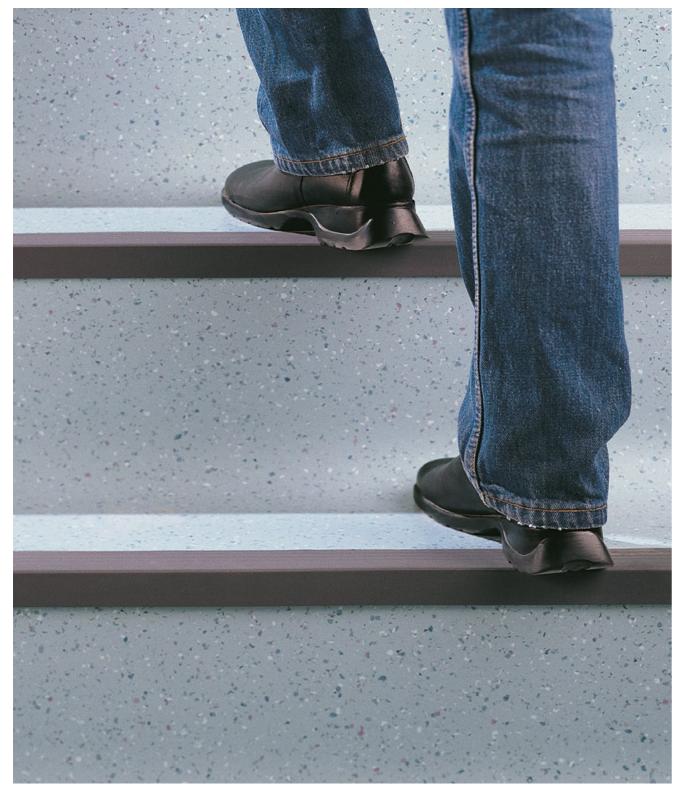
Flexible pvc - a range of one-piece, flexible pvc, slip-resistant stair edgings.

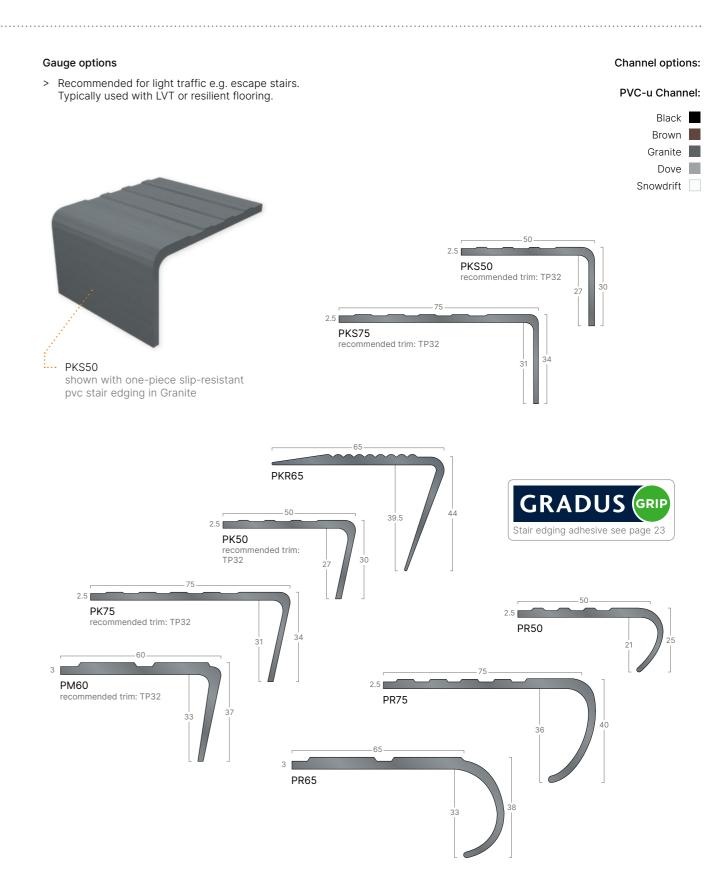
Typically used with resilient flooring.

Recommended for interior dry conditions on escape stairs and in other light traffic areas.

Information

- > Supplied in 2.75m and 3.20m stock lengths
- > For larger colour swatches, Light Reflectance Values (LRVs) and NCS references see page 27







Dimensions shown are nominal Illustrations are 70% size in mm

Guide to Stair Trims & Welded Corners

Description

Welded corners are designed to form a neat and attractive edge around the open end of a step by concealing the edge of the floorcovering and stair edging.

Welded corners are supplied pre-welded to suit the angle between the riser and tread of the step (78°-90°). They are available in a variety of gauges to suit different floorcoverings. Welded corners are available with either a fixed flange or separate fixing clips as shown on the opposite page. When selecting the appropriate welded corner, the thickness of the screed, the floorcovering and the combined thickness of the stair edging riser and floorcovering must be considered to ensure a neat finish. Profiles are also available in longer lengths to be used as trimming strips on landings etc.

In addition to welded corners a range of specialist stair trims can be found on the following pages (78-83).

Θ

0



XT range

For details on XT side trims and welded corners refer to page 80 (Bronze, Aluminium and PVC-u Hardnose)

Nap Trim

Aluminium or bronze nap trims (see page 83) are available with or without carpet gripper. Butt joint to the back edge of the stair edging to form a neat finish to the floorcovering. Ideal for use with Axminster or other woven backed carpets. The top is closed using a block of wood and a rubber mallet. Fixed with screws and adhesive.

Welded corners with TC2 clips must be mitred. TAC42 in Chrome finish or TAXT5212, TAXT523, TAXT42 in Brushed Stainless Steel, Polished & Satin Chrome, Antique Brass & Bronze and Black Anodised finishes should be mitre jointed.

Note: To achieve an optimum finish the angle between each riser and tread should be the same. Remedial work may need to be undertaken prior to installation to achieve this.

Visit: www.gradus.com

Two adjoining welded corners

can be butt jointed for all corners with TC1

Bronze and Black Anodised finishes should

and TAXT42 in Brushed Stainless Steel, Polished & Satin Chrome, Antique Brass &

clips and fixed tabs. TAC42 in Chrome finish

Type of Jointing

Butt Joint

be mitre jointed.



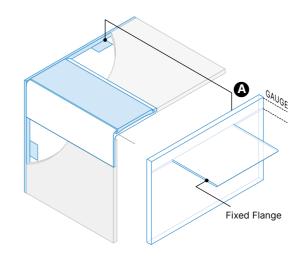
Dimensions shown are nominal Dimensions snown are normal lilustrations are 70% size in mm



4 Designs to Choose From

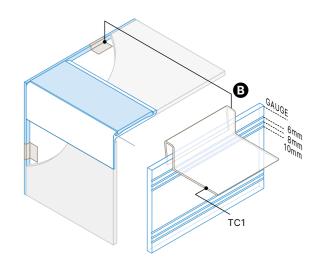
Welded Corner with Fixed Flange

Welded corners are fabricated using a trimming strip of the correct gauge to suit the thickness of the floorcovering. Different types of trimming strip can be combined on the tread and riser to accommodate the combined thickness of the floorcovering and riser of the stair edging e.g. TA5B (tread)/TA5 (riser). Welded corners are fixed with a proprietary cartridge adhesive. Note: the use of a latex screed to disguise the fixing flange may be required when using vinyl or linoleum (see page 78).



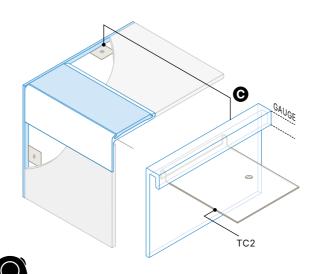
Welded Corner with TC1 Clips

HT42, HXT42, MT42, TA42, TAC42 and TAXT42 all use the TC1 clip which is adjustable to provide an upstand of 6mm, 8mm or 10mm on the tread or riser. TBXT42 also uses TC1 clip which is adjustable to provide an upstand of 3.5mm, 5.5mm, 8mm & 10mm. The clip is positioned in one of the grooves using two clips per tread and one per riser and the side trim is then fixed on with proprietary cartridge adhesive. When this has cured the clip is removed. Different clip positions can be used on the tread and riser to allow for the combined thickness of the floorcovering and riser of the stair edging (see page 79).



Welded Corner with TC2 Clips

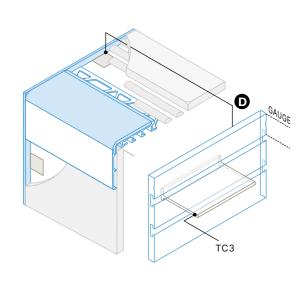
TA50 and TA66 all use the TC2 clip which is made from spring steel and is used in approximately the same positions as TC1 but is left in position after the proprietary cartridge adhesive cures (see page 79).



Welded Corner with TC3 Clips

TAXT5212 and TAXT523 utilise aluminium TC3 clips that slide on to the profile using the locating grooves to form the flange. The clips provide a gauge of either 10mm, 12.5mm or 15mm to work with CXT1, CXT2 or CXT3 stair edgings.

The TC3 fixing clips (tabs) remain in place once the side trim has been installed (see page 80).





Gradus Accessories offers a Free Measuring & Templating Service for stair edgings to ensure optimum product selection. Contact Technical Support on 01625 428922 to request your measure (terms and conditions apply).

Stair Trims

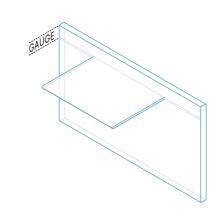


Welded Corners and Trimming Strips with Fixed Flange

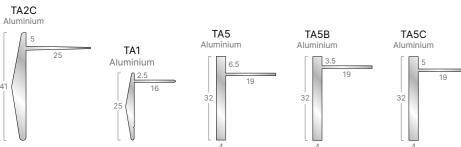
Section	Gauge	Stock Lengths	78° – 90° LH or RH	83° & 90° Universal	Fixed Tabs	Site Join
TA1	2.5mm	2.75m	-	-	~	-
TA2C	5mm	2.75m	-	-	~	-
TA5	6.5mm	2.75m	~	~	~	butt
TA5B*	3.5mm	2.75m	~	~	~	butt
TA5C	5mm	2.75m	~	-	~	butt
TP32	4mm	2.75m	-	-	~	butt
HT38	5mm	2.75m	~	~	~	butt
HT44*	10mm	2.75m	✓	~	~	butt
HT47**	12mm	2.75m	-	-	~	butt

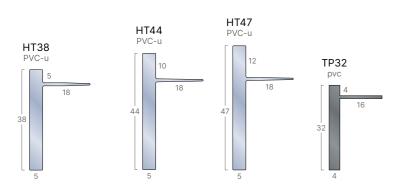
*TA5B and HT44 can be supplied as TAXT5B and HXT44 - pre-formed welded corners with a rounded edge to complement the curved edge design of the XT stair edging

**HT47 is only supplied as a pre-formed welded corner with a rounded edge to complement the curved edge design of the XT stair edging profiles - code HXT47 (see page 80).









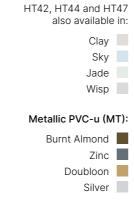
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Dimensions snown are normal lilustrations are 70% size in mm Dimensions shown are nominal







Flexible pvc (TP):

Snowdrift

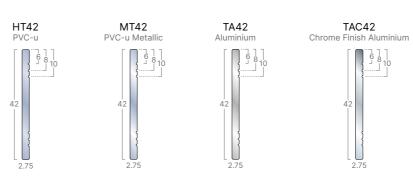
Black Brown Granite Dove

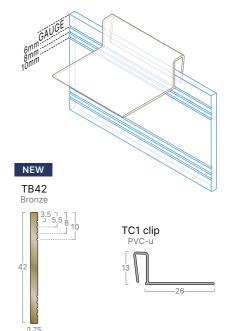


Welded Corners and Trimming Strips with TC1 Clips

Section	Gauge	Stock Lengths	78° – 90° LH or RH	83° & 90° Universal	Fixing Clips	Site Join
HT42*	6-8-10mm	2.75m	~	~	TC1	butt
MT42	6-8-10mm	2.75m	~	~	TC1	butt
TA42*	6-8-10mm	2.75m	✓	~	TC1	butt
TAC42	6-8-10mm	2.00m	✓	~	TC1	mitre
TB42*	3.5-5.5-8-10mm	2.75m	~	~	TC1	butt

*HT42, TA42 and TB42 can be supplied as HXT42, TAXT42 and TBXT42 - a pre-formed welded corner with a rounded edge to complement the curved edge design of the XT stair edging profiles (see page 80).

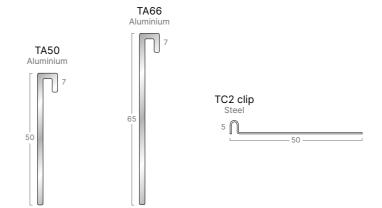


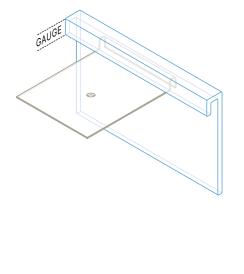




Welded Corners and Trimming Strips with TC2 Clips

Section	Gauge	Stock Lengths	78° – 90° LH or RH	Fixing Clips	Site Join
TA50	7mm	2.75m	~	TC2	mitre
TA66	7mm	2.75m	~	TC2	mitre





79





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Side Trims & Welded Corners for XT Stair Edgings



TAXT42 with contoured edge to provide a flush, neat finish to the stair edging profile

Gradus side trims TA42, TB42, TA5B, HT42, HT44 and HT47 can be ordered in straight lengths for on-site fabrication or can be supplied as pre-formed welded corners TAXT42, TBXT42, TAXT5B, HXT42, HXT44 and HXT47.

When ordered as TAXT42 / TBXT42 / TAXT5B / HXT42 / HXT44 / HXT47 the apex of the welded corner is contoured to a rounded edge to match the curved edge design of the XT stair edging profiles, providing

TAXT42 and TBXT42 are available in a choice of matching finishes to complement XT Aluminium or XT Bronze stair edgings.

Aluminium (TAXT):

Aluminium | Brushed Stainless Steel Polished Chrome Satin Chrome Antique Brass

Antique Bronze Black Anodised

Bronze (TBXT):

PVC-u (HXT): Black

Ink

Bluebell

Granite

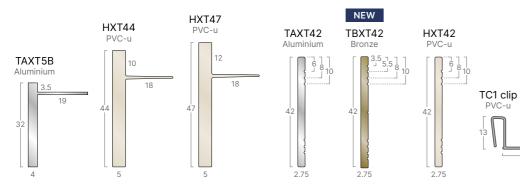
Glacier Clay Sky Canvas Jade Wisp

Buttercup Snowdrift

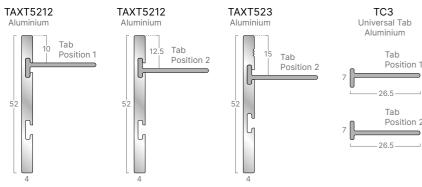
Dove

Polished Bronze Satin Bronze

Welded Corners with Fixed Flange Welded Corners with TC1 Clips



Welded Corners with TC3 Clips



Welded Corners

Trimming Strips

*Maximum lengths may vary subject to chosen finish

**TAXT42 with special finishes

Section	Gauge (mm)	78° – 90° LH or RH	83° & 90° Universal	Fixing	Site Join	Trimming Strip for use on landings	Section ref.	Stock Lengths
TAXT5B	3.5	~	~	Fixed Tab	butt	TAXT5B can be supplied as stock lengths	TA5B	2.75m
HXT44	10	~	~	Fixed Tab	butt	HXT44 can be supplied as stock lengths	HT44	2.75m
HXT47	12	~	✓	Fixed Tab	butt	HXT47 can be supplied as stock lengths	HT47	2.75m
TAXT42*	6-8-10	~	~	TC1 Clips	butt / mitre**	TAXT42 can be supplied as stock lengths	TA42*	2.75m
TBXT42	3.5-5.5-8-10	~	✓	TC1 Clips	butt	TBXT42 can be supplied as stock lengths	TBXT42	2.75m
HXT42	6-8-10	~	~	TC1 Clips	butt	HXT42 can be supplied as stock lengths	HT42	2.75m
TAXT5212*	10-12.5	~	-	TC3 Clips	mitre	TAXT5212 can be supplied as stock lengths	TAXT5212*	2.75m
TAXT523*	15	~	-	TC3 Clips	mitre	TAXT523 can be supplied as stock lengths	TAXT523*	2.75m





Dimensions shown are nominal Dimensions snown are
Illustrations are 70% size in mm



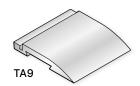
Welded Returns & Capped Ends

Most stair edgings featured in the Gradus product range can be fabricated to form a neat finish to the open side(s) of the stair in the form of welded returns or capped ends. The diagram below illustrates some examples of the fabrications that are available. The "hand" (i.e. left or right hand) of the profile is determined from the bottom Mitred Welded Return of a flight of stairs looking Single Channel up. Stair edgings are also available mitred and welded AS11 with a mitred AS11 or capped at both ends right hand welded return AS11 AS11 Mitred Welded Return **Double Channel** SE2 SE2 with a mitred SE2 right hand welded return SE2 AK5 Capped End with Side Trim AK5 with TA5B right hand welded return TA5B **GR81** Self Capped End GR81 with right hand welded end cap GR81 (self capped end)



Gradus Accessories offers a Free Measuring & Templating Service for stair edgings to ensure optimum product selection. Contact Technical Support on 01625 428922 to request your measure (terms and conditions apply).

Stair Trims

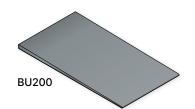


TA9 is an aluminium trimming strip used with G range stair edgings (see pages 54-57) to form a safe ramp where resilient or no floorcovering is used.

Aluminium

TA6 is an aluminium trimming strip used to form a central run of resilient floorcovering on stairs and landings. It can also be used on the riser.

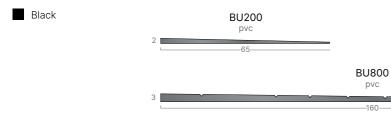




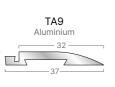
Bevelled Underlay

Bevelled underlay is a flexible pvc material used as a diminishing strip and is ideal for building up resilient floorcoverings for use with 5mm stair edgings. This is an ideal solution where a heavy-duty stair edging is required with a resilient floorcovering.

Grooves along the length of the underlay provide a straight cutting edge at points where the thickness gives ideal height adjustment. Bevelled underlay is fitted with a proprietary contact adhesive and it is advisable to feather the tapered edge with a thin layer of latex cement.



Edge Trims



TA6

Diagram shows G11 (see page 54) with TA9 ramping strip providing a transition where no floorcovering is used.

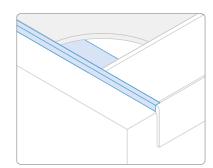


Diagram shows AS11 (see page 49) and TA6 trimming strip with a special on-site fabrication.

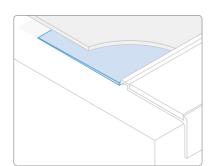


Diagram shows BU200 bevelled underlay being used to build up a 3.2mm linoleum to ensure a flush finish with the back edge of a G11 stair edging (5mm gauge - see page 54).





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Dimensions shown are nominal Dimensions shown are normal illustrations are 70% size in mm





BCTXT15

Aluminium or bronze nap trims are available with or without carpet gripper. Butt joint to the back edge of the stair edging to form a neat finish to the floorcovering. Ideal for use where an Axminster or other woven backed carpet is used. The top is closed using a block of wood and/or rubber mallet. Fixed with screws and adhesive.

Bronze (BCTXT15):

Polished Bronze Satin Bronze

Finishes to match XT Bronze stair edgings

Aluminium (ANT355):

Aluminium

Brushed Stainless Steel

Polished Chrome Satin Chrome

Antique Brass

Antique Bronze

Black Anodised

Finishes to match XT Aluminium stair edgings

Aluminium (CG1042):

Aluminium



PET276

A co-extruded PVC-u feature strip for use between carpets, resilient floorcoverings and ceramic tiles or to form an edge to a floorcovering (see diagram).

Black Brown Granite Dove

Nap Trims



Available with or without carpet gripper

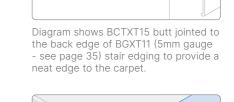




Diagram shows ANT355 butt jointed to the back edge of G11 (5mm gauge see page 54) stair edging to provide a neat edge to the carpet.

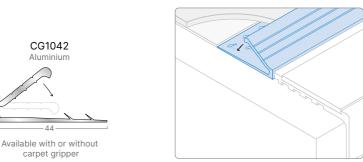


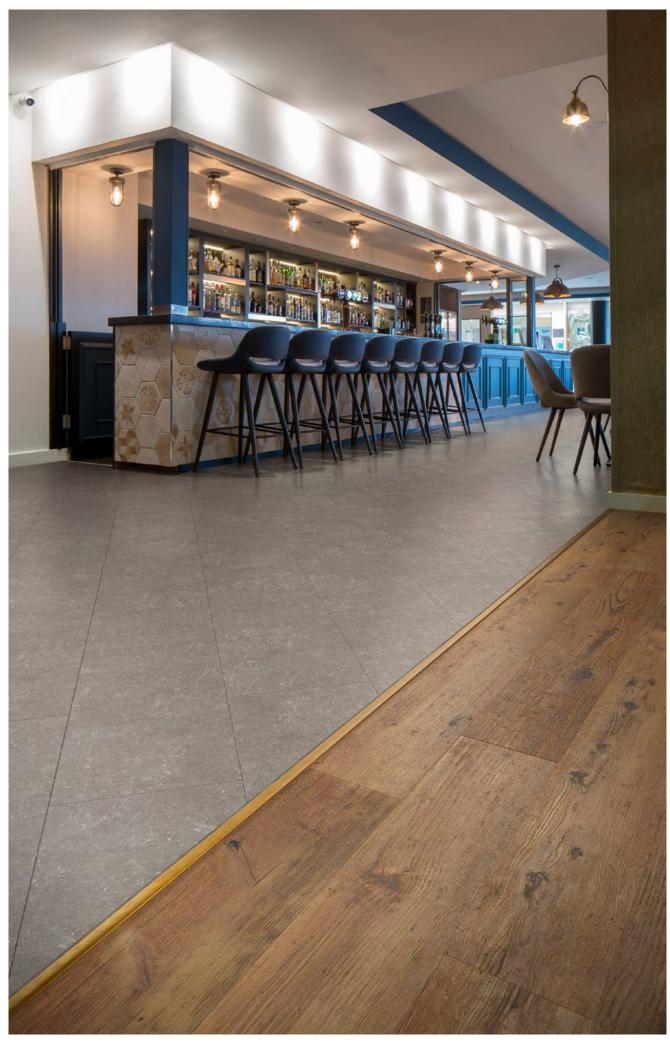
Diagram shows CG1042 butt jointed to the back edge of CT71 (gauge 7mm see page 58) stair edging to provide a neat edge to the carpet.



Diagram shows PET276 in conjunction with RN711 (gauge 6mm - see page 62) with a special on-site fabrication being used to protect the exposed edge of the carpet and form a 'carpet runner'.

Square Edge Trim

Co-extruded pvc top with PVC-u base



Section 2

Transition Strips

Information to ensure the correct selection of transition strips along with details of colour availability. Details of all Gradus transition strips and specialist floor trims can be found in this section.

Flooring Solutions for Luxury Vinyl Tile (LVT)

Luxury Vinyl Tile (LVT) flooring is one of the fastest growing flooring solutions due to its attractive appearance, durability, versatility, ease of installation and low on-going maintenance costs.

Gradus offer a comprehensive range of trims available in a choice of profile configurations, finishes and heights to complement LVT from most major manufacturers, helping you to enhance your next project.



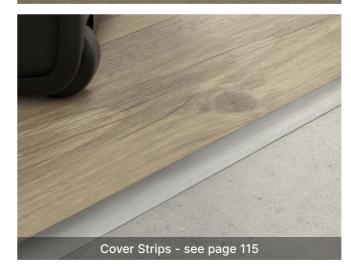
Shown are some of the popular ranges ideal for use with LVT.

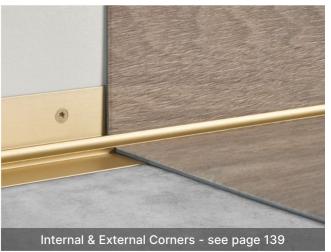
For guidance on selecting the correct profile to suit your floorcovering contact Gradus Technical Support on 01625 428922















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Transition Strip Colours

Note: Not all colours are available for all profiles. See individual profile pages for colour availability.

Bronze / Brass

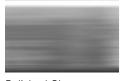








Below is a selection of specialist finishes that are applied to a polished brass material.











Polished Chrome

Satin Chrome

Brushed Stainless Steel

Pearl Nickel

Satin Nickel

Aluminium



Mill Finish / Natural



F0 Natural



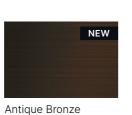
F3 Polished

Below is a selection of specialist finishes that are applied to aluminium material.











Polished Silver







F4 Silver Anodised

F5 Gold Anodised

F6 Bronze Anodised

F9 Sand Anodised

Stainless Steel





F8 Polished

F8G Matt

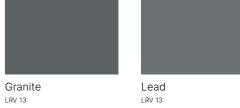
Pvc Standard















LRV 27

LRV 6



LRV 27













Canvas LRV 53

Bluebell

LRV 8

Pvc Metallics





LRV 15



LRV 21







LRV 49

Wood Finish

LRV 10









LRV 42



The above are wood effect finishes that are applied to aluminium material.

Colour Matching

Important note: Due to the limitations of the printing process, colours within this catalogue should not be relied upon for colour matching. An accurate colour match can only be achieved by requesting the relevant product sample(s).

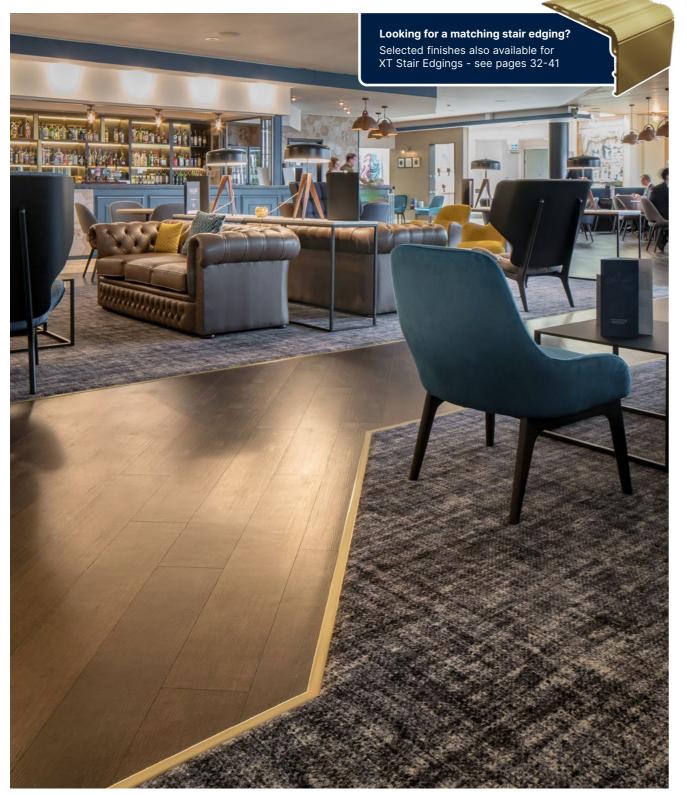
Luxury Trim System

Gradus Luxury Trim System offers a premium solution for the neat finishing of junctions between flooring materials. The solid bronze profiles are available in seven opulent finishes to complement luxury floorcoverings and the surrounding decor typically found within prestigious applications. Tops are available in ramp back or twin top configurations and clip in to a choice of bases and heights to suit a wide range of popular floorcoverings.

Typical Applications

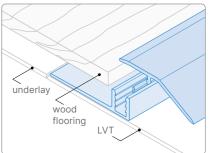
Profiles suitable for interior use in medium traffic environments:

- > Luxury hotels
- > Premium residential developments
- > Bars & restaurants
- > Shops



Information

- > Compressed thickness of carpet should always be a tight fit to the internal gauge of the combined top / base
- > When installed with natural floorcoverings e.g. ceramics or wood, a suitable gap must be left between the profile base and the flooring to allow for natural expansion
- > Bases should always be fitted on top of resilient floorcoverings when used in a ramp configuration
- > Bases should be fitted using cartridge adhesive and screw fixings
- > For larger colour swatches see pages 88-89



SFBR37/AFT398 shown with wood flooring to LVT. Also suitable for use with other floorcoverings.

Code / Profile	Material	Length	Colours / Finishes
SFBR37 / AFT398	Bronze Top with PVC-u Connector & Aluminium Base Base available with or without carpet gripper	2.715m 0.9m	Polished Chrome Satin Chrome Brushed Stainless Steel Pearl Nickel Satin Nickel Polished Bronze Satin Bronze
SFBR37 / AFT3912	Bronze Top with PVC-u Connector & Aluminium Base Base available with or without carpet gripper	2.715m 0.9m	Polished Chrome Satin Chrome Brushed Stainless Steel Pearl Nickel Satin Nickel Polished Bronze Satin Bronze
SFBR37 / AFT3916	Bronze Top with PVC-u Connector & Aluminium Base Base available with or without carpet gripper	2.715m 0.9m	Polished Chrome Satin Chrome Brushed Stainless Steel Pearl Nickel Satin Nickel Polished Bronze Satin Bronze
SFBT29 / AFT708	Bronze Top with PVC-u Connector & Aluminium Base Base available with or without carpet gripper	2.715m 0.9m	Polished Chrome Satin Chrome Brushed Stainless Steel Pearl Nickel Satin Nickel Polished Bronze Satin Bronze

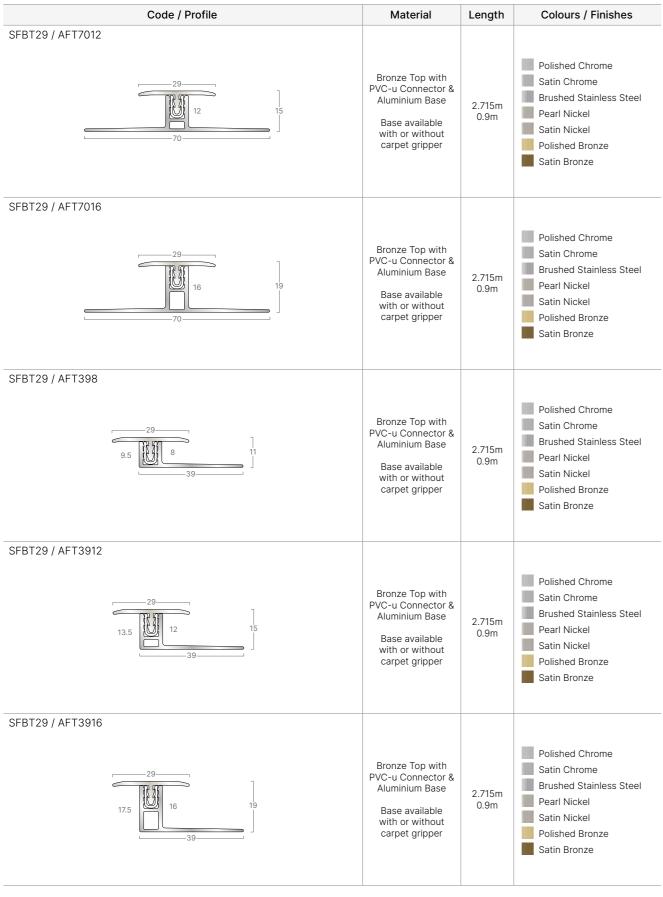




Dimensions shown are nominal Illustrations are 70% size in mm Dimensions shown are nominal



Luxury Trim System



Visit: www.grader for full details Visit: www.gradus.com



Dimensions snown are normal Illustrations are 70% size in mm



MTS Multi-Trim System™

 $\ensuremath{\mathsf{MTS}}$ Multi-Trim System is a versatile and simple solution for common interfaces between flooring materials. Tops are aluminium or PVC-u and can be clipped into the bases at different heights to accommodate various floorcoverings, offering more flexibility in use. MTS offers a neat finish to commonly found junctions in commercial applications, and is ideal for use with floorcoverings that require room for expansion such as wood, wood laminate, ceramics and terrazzo.

Typical Applications

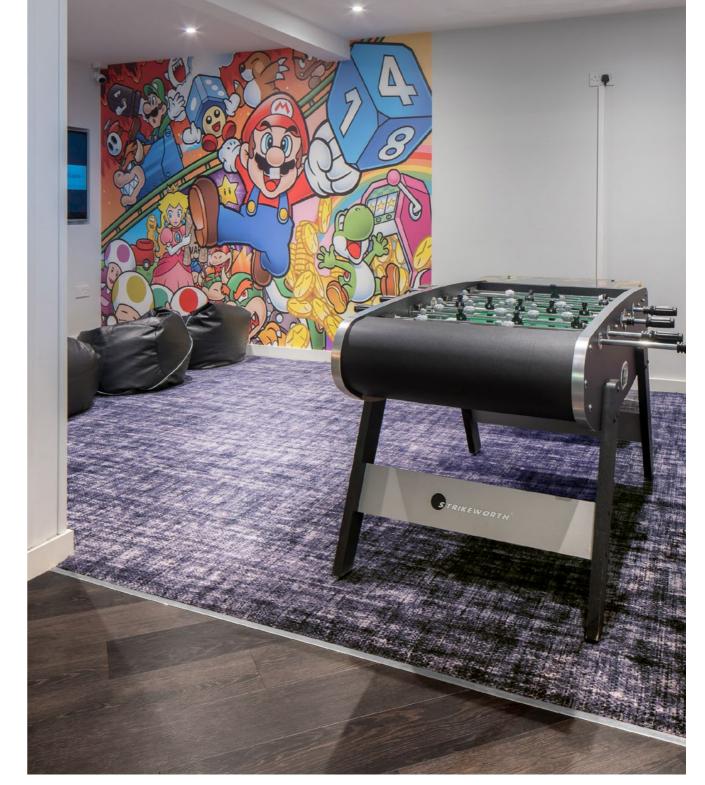
Profiles suitable for interior use in medium pedestrian and trolley traffic environments:

> High street shops

> Schools

> Hotels

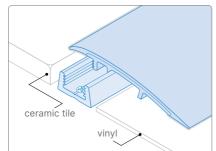
> Offices



MTS Multi-Trim System™ - PVC-u

Information

- > Compressed thickness of carpet should always be a tight fit to the internal gauge of the combined top / base
- > When installed with ceramics, wood or wood laminate flooring a suitable gap must be left between the profile base and the flooring to allow for natural expansion
- > Bases should be fitted using cartridge adhesive and screw fixings
- > For larger colour swatches and LRV readings see pages 88-89



PTR1/MPTB5 shown with ceramic tile to vinyl. Also suitable for use with other floorcoverings.







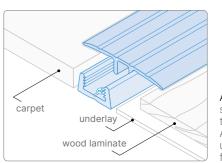
Dimensions shown are normal Illustrations are 70% size in mm Dimensions shown are nominal



MTS Multi-Trim System™ - Aluminium

Information

- > Compressed thickness of carpet should always be a tight fit to the internal gauge of the combined top / base
- > When installed with ceramics, wood or wood laminate flooring a suitable gap must be left between the profile base and the flooring to allow for natural expansion
- > Bases should be fitted using cartridge adhesive and screw fixings
- > For larger colour swatches see pages 88-89



ATT42/PBT12 shown with carpet to wood laminate. Also suitable for use with other floorcoverings.

	2			
ATT 40 / 5577	Code / Profile	Material	Length	Colours / Finishes
ATT42 / PBT12	42 Table 17.5 Self-levelling	Aluminium Top PVC-u Base	2.70m	Polished Silver Etched Silver
ATT42 / PBT16				
	42— \$\frac{1}{17.5} \tag{7} \tag{7} \tag{12-16} \tag{12-16}	Aluminium Top PVC-u Base	2.70m	Polished Silver Etched Silver
ATB33 / PBT12				
	33 T 12-16 Self-levelling	Aluminium Top PVC-u Base	2.70m	Polished Silver Etched Silver
ATB33 / PBT16				
	33 \$\frac{1}{16-20}\$ \$Self-levelling	Aluminium Top PVC-u Base	2.70m	Polished Silver Etched Silver
ATR45 / PBT12				
	Self-levelling	Aluminium Top PVC-u Base	2.70m	Polished Silver Etched Silver
ATR50 / PBT16				
	50 T Self-levelling	Aluminium Top PVC-u Base	2.70m	Polished Silver Etched Silver



Clip-Top is a two-piece product consisting of a base and a replaceable top. Tops are available in a range of finishes to suit the floorcoverings and décor of the project. Tops are designed to be removed and replaced without renewing the base or disrupting the fitted floorcovering.



For further information see pages 206-207 or visit www.gradus.com

Typical Applications

Profiles suitable for interior use within heavy pedestrian and medium trolley traffic environments:

> Department stores

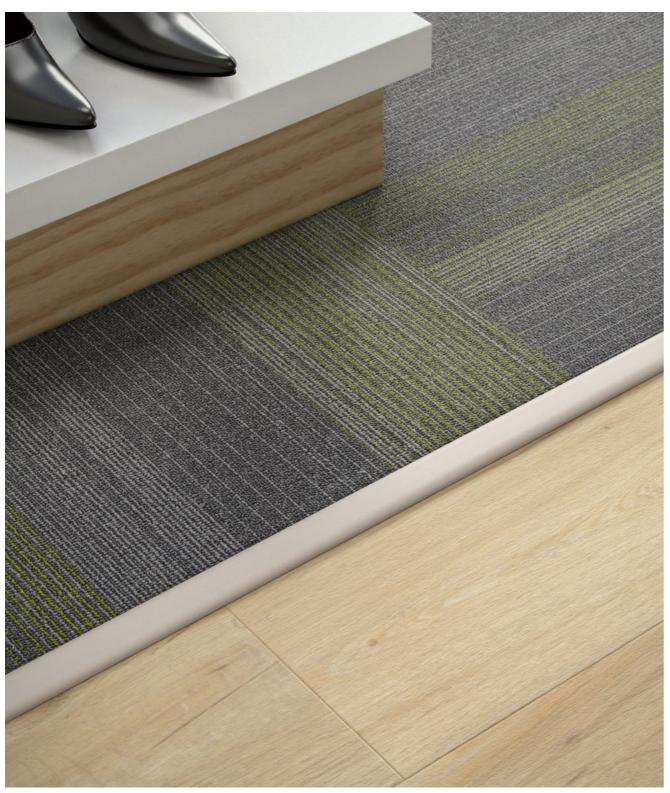
> High street shops

> Hospitals

> Schools

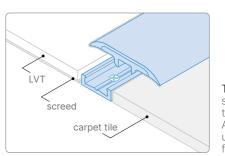
> Hotels

> Offices



Information

- > Compressed thickness of carpet should always be a tight fit to the internal gauge of the combined top / base
- > Clip-Top bases should always be fitted on top of the resilient floorcovering when used in a ramp configuration
- > Bases should be fitted using cartridge adhesive and
- > Factory fabricated curves available. Details of minimum and maximum curving radii can be found on page 99
- > For larger colour swatches see pages 88-89



TT35/AFT15 shown with LVT to carpet tile.
Also suitable for use with other floorcoverings.

Code / Profile		Material	Length	Colours / Finishes
TT35 / AFT45 UK/EU Registered Design no 9/001201941	placeable Tops	PVC-u Top Aluminium Base Base available with or without carpet gripper	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
TT35 / AFT15 UK/EU Registered Design no 9/001201941	page 99	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
TT35 / DFT80 UK/EU Registered Design no 9/001201941	placeable Tops	PVC-u Top Aluminium Base Base available with or without carpet gripper	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
TT35 / AFT17 UK/EU Registered Design no 9/001201941	page 99	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell





Dimensions shown are nonnal Illustrations are 70% size in mm



Profile can be factory fabricated to a radius shape - see page 99 for full details

Clip-Top™

Code / Profile	Material	Length	Colours / Finishes
TT35 / AFT UK/EU Registered Design no 9/001201941	PVC-u Top Aluminium Base Base available with or without carpet gripper	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
TT35 / DFT UK/EU Registered Design no 9/001201941 Replaceable Tops	PVC-u Top Aluminium Base Base available with or without carpet gripper	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
TT25M / AFT14	Metallic PVC-u Top Aluminium Base	2.50m	Burnt Almond Zinc Doubloon Platinum Silver
TT25M / AFT12	Metallic PVC-u Top Aluminium Base	2.50m	Burnt Almond Zinc Doubloon Platinum Silver
RT42 / AFT28 UK/EU Registered Design no 9/001201941 page 99 Replaceable Tops	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
RT52 / AFT28 UK/EU Registered Design no 9/001201941 page 99 Replaceable Tops	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell

Visit: www.gradus.com for full details

Dimensions shown are nominal Illustrations are 70% size in mm

Profile can be factory fabricated to a radius shape - see page 99 for full details

$\mathsf{Clip}\text{-}\mathsf{Top}^{\scriptscriptstyle\mathsf{TM}}$

	Code / Profile		Material	Length	Colours / Finishes
RT35M / AFT13	33 8 8	See below Replaceable Tops	Metallic PVC-u Top Aluminium Base	2.50m	Burnt Almond Zinc Doubloon Platinum Silver
FT27 / AFT15	27————————————————————————————————————	see below Replaceable Tops	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
FT27 / AFT45	27 10 10	Replaceable Tops	PVC-u Top Aluminium Base Base available with or without carpet gripper	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
FT27 / AFT17	9 13	See below Replaceable Tops	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
FT27 / AFT	7.5 13 5 47	Replaceable Tops	PVC-u Top Aluminium Base Base available with or without carpet gripper	2.50m	Black Granite Dove Fawn Brown Clay Bluebell

Curving Clip-Top

Curves between the minimum and maximum radii can be factory fabricated subject to approval of a template or detailed drawing (showing radius details) by the Technical Department. Curves greater than the maximum radius can be curved on-site or by Gradus on request. Curves less than the minimum radius cannot be curved.

Tops		
Profile	Min. Radius mm	Max. Radius mm
FT27	250	800
RT35M	1000	3500
RT42	1000	3500
RT52	800	3500
TT25M	500	800
TT35	250	800

Bases		
Profile	Min. Radius mm	Max. Radius mm
AFT12	250	6000
AFT13	250	6000
AFT14	250	6000
AFT15	250	6000
AFT17	250	7000
AFT28	600	9000







Clip-Top fx®

Clip-Top fx is a two-piece product allowing design flexibility in most commercial applications. Tops are PVC-u material and bases are available in aluminium for straight installations or PVC-u with pre-punched tabs and fixing holes for easy on-site curving, without the need for heat application.
Tops are available in a range of finishes to suit the floorcoverings and décor of the project. Tops are designed to be removed and replaced without renewing the base or disrupting the fitted floorcovering.

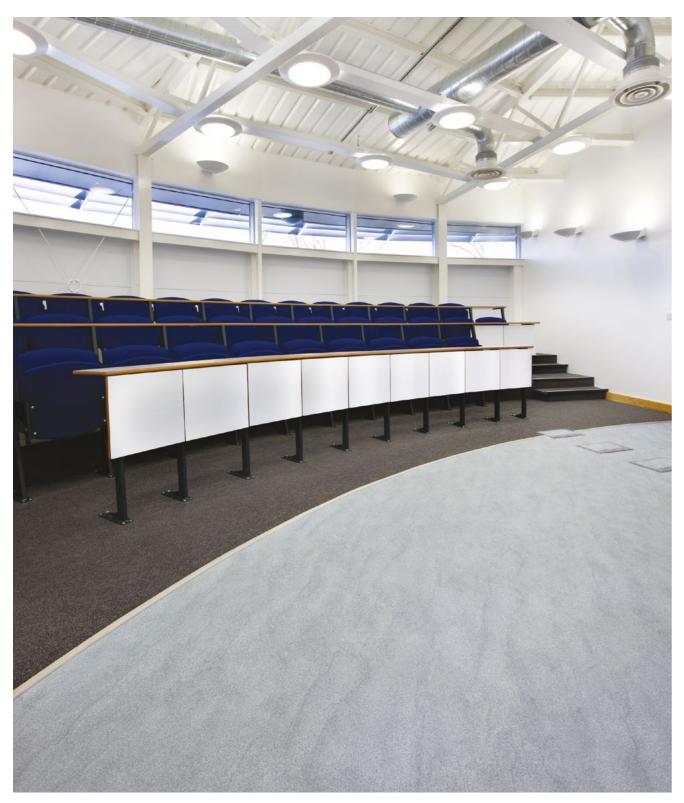
Typical Applications

Profiles suitable for interior use in medium pedestrian and trolley traffic environments:

> High street shops

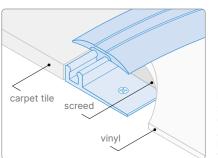
> Schools

> Hotels > Offices



Information

- > Compressed thickness of carpet should always be a tight fit to the internal gauge of the combined top / base
- > Clip-Top fx bases should always be fitted on top of the resilient floorcovering when used in a ramp configuration
- > Bases should be fitted using cartridge adhesive and
- > Latex screed should be used with resilient floorcoverings to prevent pre-punched base shadowing through
- > For larger colour swatches and LRV readings see pages 88-89
- > UK/EU Registered Design no 9/000007067-001 9/000007067-003



FXT31/FXB336 shown with carpet tile to vinyl. Also suitable for use with other floorcoverings.

Code / Profile		Material	Length	Colours / Finishes
FXT21 / FXB336	400mm min curve on-site	PVC-u Top PVC-u Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
FXT21 / AFT336	Replaceable Tops	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
FXT21 / FXB339	400mm min curve on-site	PVC-u Top PVC-u Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
FXT21 / AFT339	Replaceable Tops	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell



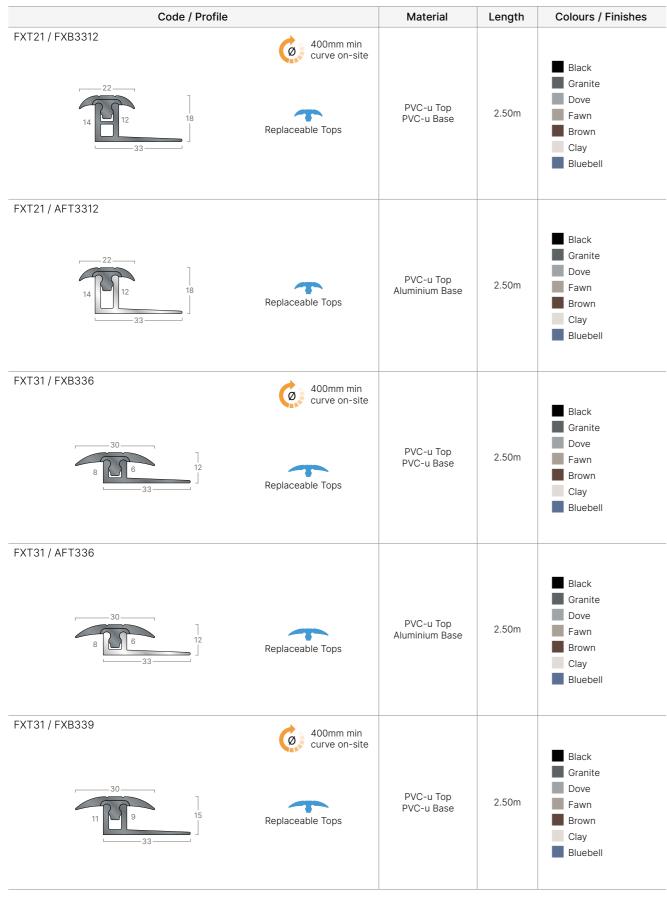


Dimensions shown are nominal Illustrations are 70% size in mm Dimensions shown are nominal



Can be easily formed on-site without the need for heat application

Clip-Top fx®



Visit: www.gradus.com for full details



Dimensions shown are nominal Illustrations are 70% size in mm

Clip-Top fx®

Code / Profile	Material	Length	Colours / Finishes
FXT31 / AFT339 Replaceable Tops	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
FXT31 / FXB3312 400mm min curve on-site Replaceable Tops	PVC-u Top PVC-u Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
FXT31 / AFT3312 Replaceable Tops	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
FXR40 / FXB336 400mm min convex curve on-site 900mm min concave Replaceable Tops	PVC-u Top PVC-u Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell
FXR40 / AFT336 Replaceable Tops	PVC-u Top Aluminium Base	2.50m	Black Granite Dove Fawn Brown Clay Bluebell





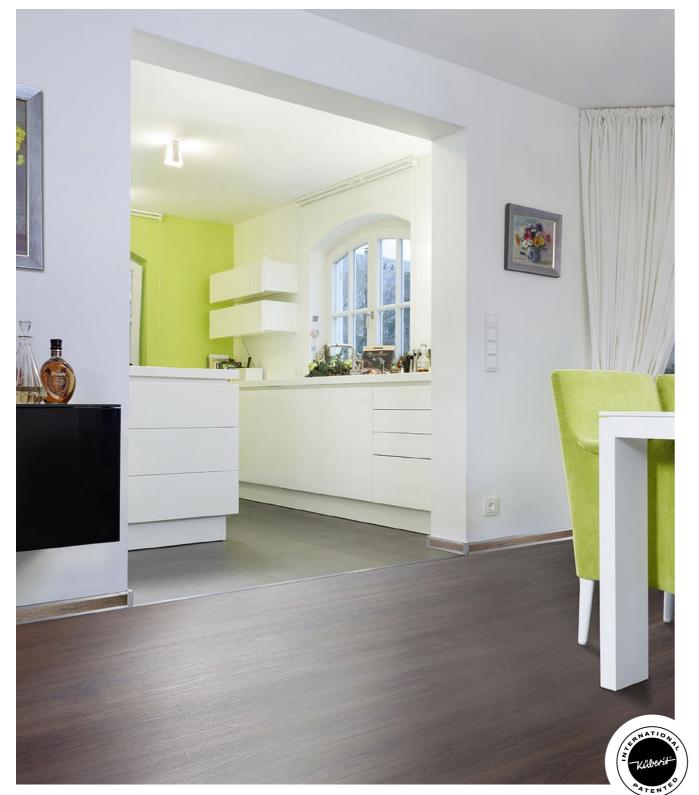
Design-Clip

Design-Clip is a two-piece profile that provides a neat finish at junctions between hard floors. Tops are clipped into bases at variable heights to accommodate floorcoverings including luxury vinyl tile, wood and wood laminate. The profiles allow for expansion in natural floorcoverings.

Typical Applications

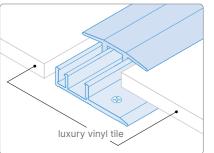
Profiles suitable for interior use in medium traffic environments:

- > High street shops
- > Restaurants
- > Hotels > Offices



Information

- > Bases are supplied pre-drilled with countersunk holes for no.4 screws
- > Bases should be fitted using cartridge adhesive and screw fixings
- When installed with floorcoverings that require room for natural expansion, a suitable gap must be left between the profile base and the floorcovering to allow for that expansion
- > For larger colour swatches see pages 88-89



KC578 shown with luxury vinyl tile to luxury vinyl tile. Also suitable for use with other floorcoverings.

	Code / Profile		Material	Length	Colours / Finishes
KA576	7 no.4 4-7 ↓ 33 27 ↓ 0-3	\$\bigs\tau\$ Self-levelling	Aluminium Top Aluminium Base	2.70m	F4 Silver Anodised
KC578	7 no.4 4-7 1 24 27 16-9	\$\frac{1}{4} \text{ Self-levelling}	Aluminium Top Aluminium Base	2.70m	F4 Silver Anodised
KB577	7 no.4 4-7 ↑ ↑ 7-10	Self-levelling	Aluminium Top Aluminium Base	2.70m	F4 Silver Anodised







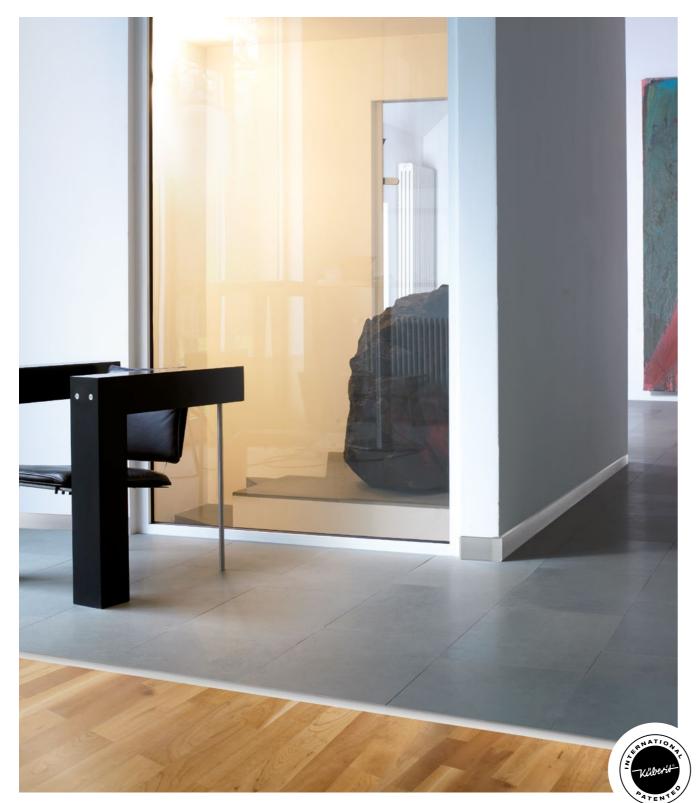
The PPS range is a two-piece anodised aluminium profile that provides solutions to junctions for flooring such as wood, wood laminate and ceramic tiles. The PPS system utilises aluminium bases and tops joined together with a unique patented linking screw which allows the height to be adjusted to suit most types of flooring. The profiles allow room for expansion of natural floorcoverings.

Typical Applications

Profiles suitable for interior use in medium traffic environments:

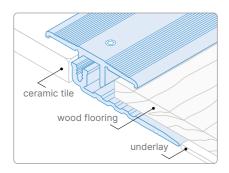
> Offices

> Restaurants



Information

- > Bases should be fitted using cartridge adhesive and screw fixings
- > When installed with floorcoverings that require room for natural expansion, a suitable gap must be left between the profile base and the floorcovering to allow for that
- > For larger colour swatches see pages 88-89



KC388AS shown with ceramic tile to wood flooring. Also suitable for use with other floorcoverings.

Code / Profile		Material	Length	Colours / Finishes
KC388AS 5-9 17-11	T10 Torx* Screw Adjustable height	Aluminium Top Aluminium Base	2.70m	F4 Silver Anodised F5 Gold Anodised
KC388XXL 7-16 9-18	T15 Torx Screw Adjustable height	Aluminium Top Aluminium Base	2.70m	F4 Silver Anodised F5 Gold Anodised
KA386AS 7-11 1-5	T10 Torx Screw Adjustable height	Aluminium Top Aluminium Base	2.70m	F4 Silver Anodised F5 Gold Anodised
KA386XXL 56 10-5	T15 Torx Screw Adjustable height	Aluminium Top Aluminium Base	2.70m	F4 Silver Anodised F5 Gold Anodised
KB387AS	T10 Torx* Screw Adjustable height	Aluminium Top Aluminium Base	2.70m	F4 Silver Anodised F5 Gold Anodised
KB387XXL 7-16	T15 Torx Screw	Aluminium Top Aluminium Base	2.70m	F4 Silver Anodised F5 Gold Anodised





Dimensions shown are nominal Illustrations are 70% size in mm



Mono-Clip® System

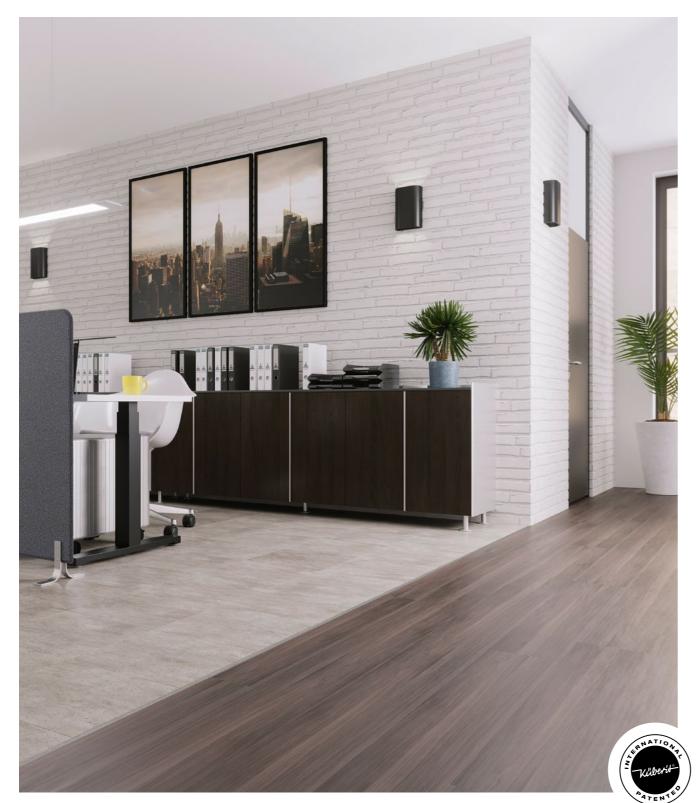
Mono-Clip is a range of two-piece profiles available in wood-effect finishes for use with wood and wood laminates. Tops are available in ramp, twin-top or border formats and are clipped into bases at varying heights to accommodate a variety of floorcoverings. Profiles allow room for expansion in natural floorcoverings.

Typical Applications

Profiles suitable for interior use in medium traffic environments:

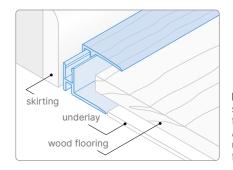
> Offices

> Restaurants



Information

- > Bases should be fitted using cartridge adhesive and screw fixings
- > When installed with floorcoverings that require room for natural expansion, a suitable gap must be left between the profile base and the floorcovering to allow for that expansion
- > For larger colour swatches see pages 88-89



KB557 / MCB555 shown with wood flooring to skirting. Also suitable for use with other floorcoverings.

Code / Profile		Material	Length	Colours / Finishes
8.5-13.5 \$\frac{31.5}{22.5}\$	\$ Self-levelling	Aluminium Top Aluminium Base	2.70m	H30 Light Oak H61 Grey Oak H64 Cream Oak H65 Light Grey Oak H81 Walnut
31.5 31.5 31.5 12-17 22.5 12-17	Self-levelling	Aluminium Top Aluminium Base	2.70m	H30 Light Oak H61 Grey Oak H64 Cream Oak H65 Light Grey Oak H81 Walnut
KA556 / MCB554 8.5-13.5 1 0-4.5	Self-levelling	Aluminium Top Aluminium Base	2.70m	H30 Light Oak H61 Grey Oak H64 Cream Oak H65 Light Grey Oak H81 Walnut
XA556 / MCB555	\$ Self-levelling	Aluminium Top Aluminium Base	2.70m	H30 Light Oak H61 Grey Oak H64 Cream Oak H65 Light Grey Oak H81 Walnut
KB557 / MCB554	Self-levelling	Aluminium Top Aluminium Base	2.70m	H30 Light Oak H61 Grey Oak H64 Cream Oak H65 Light Grey Oak H81 Walnut
KB557 / MCB555	Self-levelling	Aluminium Top Aluminium Base	2.70m	H30 Light Oak H61 Grey Oak H64 Cream Oak H65 Light Grey Oak H81 Walnut

Visit: www.gradus.com for full details

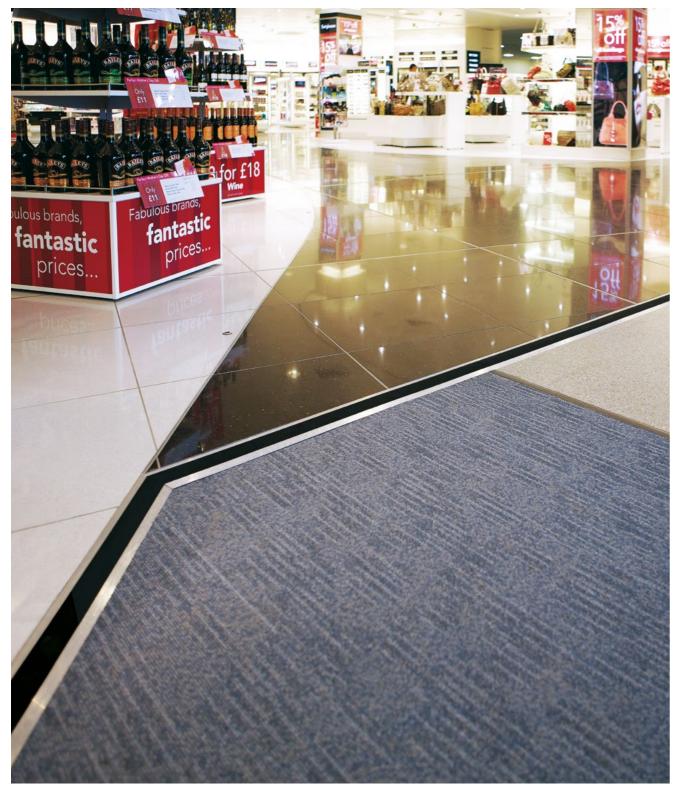
Dimensions shown are nominal Illustrations are 70% size in mm



Trans-Edge® - Trims

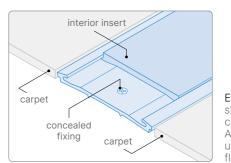
Trans-Edge trims have been designed for use in the most demanding interior environments where frequent heavy foot and wheeled traffic can be expected, e.g. railway stations, airports, transport interchanges, department stores and hospitals. Trans-Edge trims comprise an aluminium base channel with a choice of slip-resistant Elite inserts (ordered separately). Standard interior insert is available for interior dry conditions. Xtra-grip insert is available for interior areas that are at risk of becoming wet and therefore pose a higher risk of slip.

Elite Insert supplied separately to channel	Coil Length
ELINS30 - Interior	15m coil
ELINS40 - Interior	25m coil
ELINS50 - Interior	25m coil
ELINSXG30 - Xtra-grip	15m coil
ELINSXG50 - Xtra-grip	15m coil



Information

- > Aluminium channels are fixed using screws and cartridge adhesive. Elite insert is then fitted into the channel to allow concealed fixings
- > If used with carpet, compressed thickness of the carpet should always be a tight fit to the internal gauge of the profile
- > When installed with ceramics, wood or wood laminate flooring a suitable gap must be left between the profile and the flooring to allow for natural expansion
- > Choice of ramp or flat design. Ramp profiles should always be fitted on top of resilient floorcoverings



ELACS5040 shown with carpet to carpet. Also suitable for use with other floorcoverings.

Code / Profile	Material	Length	Colours / Finishes
ELACS5040 77 no.6 4[Aluminium PVC-u Insert (ELINS40)	2.50m See chart opposite	Elite Xtra-grip Insert ELINSXG All ELAR profiles
ELAR530	Aluminium PVC-u Insert (ELINS30 or ELINSXG30)	2.50m See chart opposite	Onyx Graphite Quarry Ochre
FLAR830 7 no.6	Aluminium PVC-u Insert (ELINS30 or ELINSXG30)	2.50m See chart opposite	Elite Interior Insert ELINS All ELAR & ELACS profiles
ELAR950 77 no.6	Aluminium PVC-u Insert (ELINS50 or ELINSXG50)	2.50m See chart opposite	■ Jet ■ Coffee ■ Lead ■ Steel ■ Snowdrift
FLAR1250	Aluminium PVC-u Insert (ELINS50 or ELINSXG50)	2.50m See chart opposite	ELACS5040 ELAR950 ELAR1250 ELAR1550 also available with
ELAR1550	Aluminium PVC-u Insert (ELINS50 or ELINSXG50)	2.50m See chart opposite	Burgundy Midnight Evergreen Ocean Poppy Cloud Linen
ELAR1830	Aluminium 12→I PVC-u Insert (ELINS30 or ELINSXG30) ↑ 8.5	2.50m See chart opposite	Glacier Canvas Buttercup For larger colour swatches and LRV's see pages 28-29

Visit: www.gradus.com for full details

Dimensions shown are nominal Illustrations are 70% size in mm



Matwell Frames

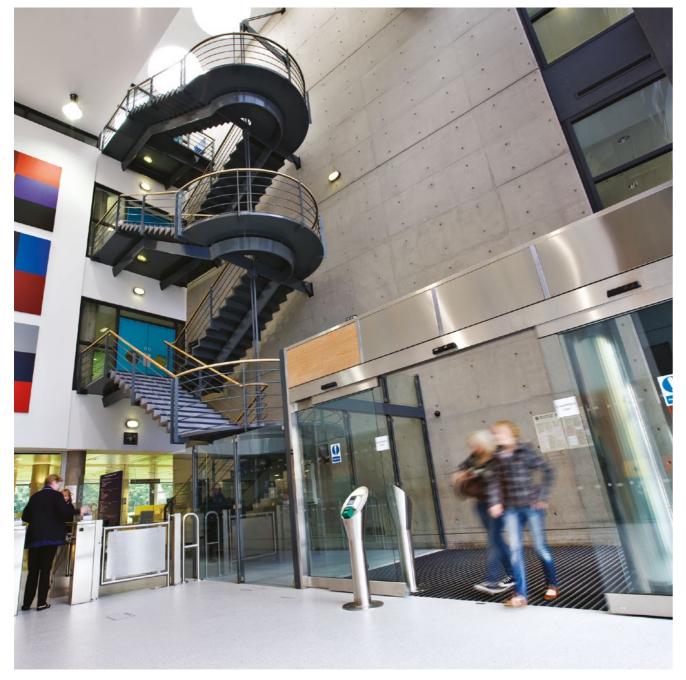
Matwell frames are available in two options:

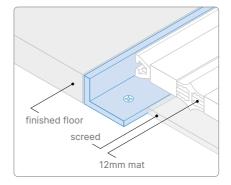
Recessed – for the creation, protection and finishing of a recess in the subfloor that is used to accommodate a primary barrier mat.

Ramped – for the creation of a surface matwell to secure and provide safe transition for a mat that is laid directly on top of the floor. Frames can be mitred or shaped subject to the provision and approval of a template.

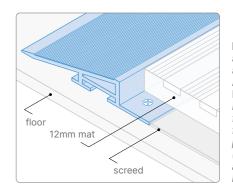
Information

- > Recessed frames should be mechanically fixed to the subfloor prior to the screed or plywood build up of the matwell base to suit the matting to be installed. Frames should be fixed to the correct levels taking into account the finished floor level and surrounding floor finish
- > Ramped frames aluminium ramps should be fixed using cartridge adhesive and screw fixings; pvc ramps are fixed with contact adhesive only
- > UMFA and FRB profiles can be supplied pre-drilled on request
- > Connectors are available for the FRB frame for secure fixing of corners
- > For larger colour swatches see pages 88-89





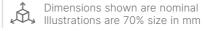
UMFA12 laid to accommodate a 12mm Gradus Topguard primary barrier mat.



RMF60 laid to accommodate a 12mm Gradus Access primary barrier mat Note: ramping frames suitable for use with 12mm primary barrier mats (not suitable in areas subject to heavy trolley traffic).

	Code / Profile	Material	Length	Colours / Finishes
UMFA12	3 \(\) \(Aluminium	2.00m	Natural
UMFA18	3 Y7 no.6 18 12 12 15 15 3	Aluminium	2.00m	Natural
UMFA25	3 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Aluminium	2.00m	Natural
FRB026	25 25 31	Brass	2.50m	Natural
RMF60	14 12 60 78	Aluminium	3.00m	Natural
RAM012	9.5	pvc	2.50m	■ Black ■ Grey







Specialist Floor Trims

The following pages offer a wide selection of specialist floor trims that provide solutions to common problems encountered where different floorcoverings are used together.

Diagrams are shown adjacent to each product family to illustrate how each particular group of profiles is commonly used.

Information

- > Many of the Gradus Trims in this section can be easily curved by hand, however some trims require a bending machine
- > To rent, buy or for more information about bending machines please contact Technical Support on 01625 428922
- > For larger colour swatches see pages 89-89

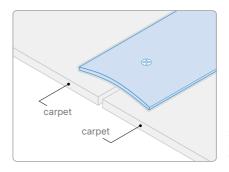


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Cover Strips

Used to join floorcoverings of the same or similar heights. Provide safe, neat joining solutions whilst protecting the edge of the floorcoverings from damage. Often used at door thresholds where floorcoverings meet. AJC profiles are side drilled and are ideal for use as expansion joint covers.



SCSM474 shown with Carpet to Carpet.

Pre-drilled with countersunk holes.

	Code / Profile	Material	Length	Colours / Finishes
SCSM471	₩ no.4	Stainless Steel	2.70m	F8G Matt
SCSP471	↑ no.4 1	Stainless Steel	2.70m	F8 Polished
SCS471SF8G	Trno.4 side drilled	Stainless Steel	2.70m	F8G Matt
SCS471SF8	₩ no.4 side drilled	Stainless Steel	2.70m	F8 Polished
SCSM451	↑ no.4 1 30	Stainless Steel	2.70m	F8G Matt





Dimensions shown are nominal Illustrations are 70% size in mm



Cover Strips

	Code / Profile	Material	Length	Colours / Finishes
SCSP451	₹ 1 30	Stainless Steel	2.70m	F8 Polished
SCS451SF8G	T no.4 side drilled	Stainless Steel	2.70m	F8G Matt
SCS451SF8	Too.4 side drilled	Stainless Steel	2.70m	F8 Polished
SCSM454	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Stainless Steel	2.70m	F8G Matt
SCSP454	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Stainless Steel	2.70m	F8 Polished
SCS454SF8G	T no.4 side drilled	Stainless Steel	2.70m	F8G Matt
SCS454SF8	Tr no.4 side drilled	Stainless Steel	2.70m	F8 Polished
SCSM455	Y no.4	Stainless Steel	2.70m	F8G Matt
SCSP455	₩ no.4	Stainless Steel	2.70m	F8 Polished

Visit: www.gradus.com for full details

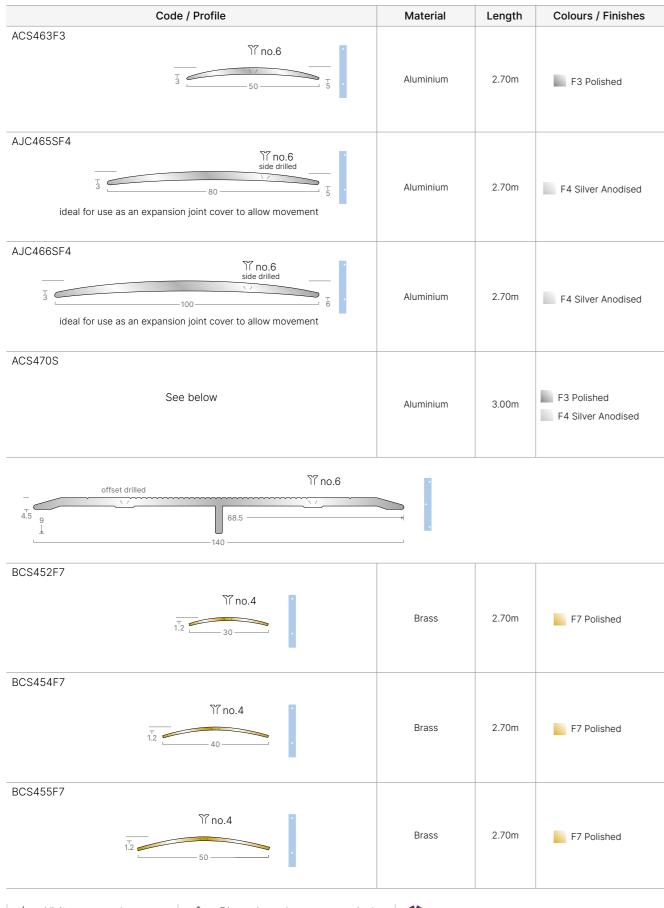
Dimensions shown are nominal Illustrations are 70% size in mm



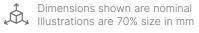
Cover Strips

Code / Profile	Material	Length	Colours / Finishes
	iviaterial	Length	Colours / I IIIIsiles
SCSM474 \[\text{\gamma} \text{\gamma} \text{\gamma} \text{\gamma} \text{\gamma} \text{\gamma} \] \[\text{\gamma} \gamm	Stainless Steel	2.70m	F8G Matt
SCS474SF8G Y no.6 side drilled	Stainless Steel	2.70m	F8G Matt
SCSM475 \[\text{Y7 no.6} \\ \frac{1}{2} \] \[\text{50} \] .	Stainless Steel	2.70m	F8G Matt
SCS475SF8G Too.6 side drilled 50 Too.6	Stainless Steel	2.70m	F8G Matt
ACS38 \[\frac{17}{10.6} \] 5 \[\frac{38}{38} \] .	Aluminium	2.50m 2.75m	Mill Finish
ACS52	Aluminium	2.50m 2.75m	Mill Finish
ACS441 Y7 no.4	Aluminium	2.70m	F3 Polished F4 Silver Anodised
ACS444 Offset drilled To no.6 To no.6	Aluminium	2.70m	F3 Polished F4 Silver Anodised
ACS462F3 \[\frac{\gamma}{3} \frac{\gamma}{40} \frac{\gamma}{5} \]	Aluminium	2.70m	F3 Polished

Cover Strips





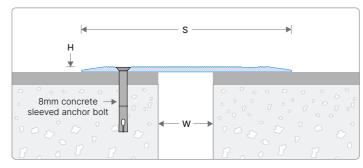


NBS Source

Expansion Joint Covers

Information

- > Bevelled edges and serrated finish provide slip-resistance for pedestrian safety
- > Economical solution for retrofit and surface mount installations between level surfaces
- > Mill finish aluminium supplied in 3m lengths, pre-drilled with countersunk holes



JC881050

expansion joint cover shown with 8mm concrete sleeved anchor bolt for illustrative purposes only.

Application	Profile	W Nominal Joint Width mm	H Frame Height mm	S Sightline mm	Sightline Point Load *	
St. St. St.	JC881025	up to 25mm	4.3mm	128mm	250kg	30%
Floor to Floor	JC881050	up to 50mm	4.3mm	168mm	250kg	30%

st Achieved using a 25mm diameter surface.



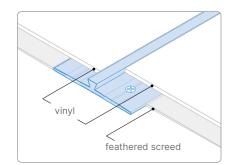


^{**} Figure calculated for maximum nominal width only.

Joint Trims

For use with floorcoverings of the same height. Allows joints to be neatly finished.







Solid base with countersunk holes for straights.

	Code / Profile		Material	Length	Colours / Finishes
JT365	5 -34 -34 -34		Aluminium	3.00m	F3 Polished F4 Silver Anodised
JT365EBF4	-4-3 -34	400mm	Aluminium	3.00m	F4 Silver Anodised
JT366	7774 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Aluminium	2.70m	F3 Polished F4 Silver Anodised
JT366EBF4	36	Ø 400mm	Aluminium	2.70m	F4 Silver Anodised





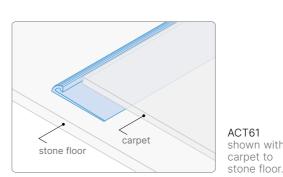
Dimensions shown are nominal Illustrations are 70% size in mm





Finishing Trims

Used to form a neat and clean finish to the edge of a floorcovering where it either finishes or meets another floorcovering. Protects the edge of floorcoverings, prevents damage and ensures that the floorcovering does not lift and become a trip hazard.



shown with carpet to

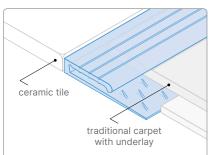


Solid base for straights. Solid base with countersunk holes for straights.

	Code / Profile		Material	Length	Colours / Finishes
ACT61	6 28 28		Aluminium	2.50m	Mill Finish
ACT81	6.5		Aluminium	2.50m	Mill Finish
ET356	3.5[2.5 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Aluminium	2.50m	F3 Polished F4 Silver Anodised
ET356EBF4	3.5[2.5	Ø 400mm Ø 800mm	Aluminium	2.50m	F4 Silver Anodised
ET359	5 Y7 no.4 .		Aluminium	2.50m	F3 Polished F4 Silver Anodised
ET359EBF4	€ <u>18</u>	Ø 400mm Ø 800mm	Aluminium	2.50m	F4 Silver Anodised

Nap Trims

Used to provide a neat edge or join between carpet and other types of floorcovering such as resilient flooring or ceramics. Certain nap trims (ANT355, CG1042 & BCTXT15) are also commonly used as 'binder' bars in conjunction with a stair edging (see page 83 for more details).



CG1042 shown with ceramic tile to carpet.

Solid base for straights.

	Code / Profile	Material	Length	Colours / Finishes
ANT27	9 6 → ↑ 2.5	Aluminium	2.44m 2.75m 3.20m	Mill Finish
ANT355	5 36	Aluminium Available with or without carpet gripper	2.44m 2.75m 3.20m Maximum lengths may vary subject to chosen finish	Mill Finish Polished Chrome Satin Chrome Brushed Stainless Steel Antique Brass Antique Bronze Black Anodised
CG1042	8	Aluminium Available with or without carpet gripper	2.44m 2.75m 3.20m	Mill Finish
BCT18	16 40	Bronze Available with or without carpet gripper	2.50m 2.75m 3.20m	Polished Bronze
BCTXT15	5	Bronze Available with or without carpet gripper	2.44m 2.75m 3.20m	Polished Bronze Satin Bronze





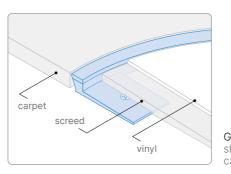
Dimensions shown are nominal Illustrations are 70% size in mm





Edge Trims

Used to edge floorcoverings and to provide a neat join between floorcoverings such as carpet, carpet tiles, wood laminate and resilient floorcoverings. TA8 is also ideal as a day joint profile for resin floors as it is suitable for on-site polishing and finishing.



GT61 shown with carpet to vinyl.



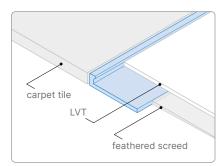
Solid base for straights.

Solid base with countersunk holes for straights.

Code / Profile	Material	Length	Colours / Finishes
TA6	Aluminium	2.75m	Mill Finish
TA8	Aluminium	3.00m	Mill Finish
ET367 6	Aluminium	2.70m	F3 Polished F4 Silver Anodised
GT61M	mm Pvc Top PVC-u Base	2.50m	Burnt Almond Zinc Doubloon Platinum Silver
GT61R	mm Pvc Top PVC-u Base	2.50m	Black Brown Granite Bluebell Dove Clay
PET276	Pvc Top PVC-u Base	2.50m	Black Brown Granite Dove

A range of profiles used to join and edge a variety of floorcoverings of heights from 2mm to 23.5mm. Three options available: pre-punched with tabs and fixing holes for on-site curving; solid base for straights; and perforated with fixing holes for straights and for use with ceramics. Can be used as a recessed matwell frame.





ETR302UF0 shown with carpet tile



Solid base for straights.



	Code / Profile	Material	Length	Colours / Finishes
ETR299F0	3.5 21 6 400mm	Aluminium	2.50m	F0 Natural
ETR299UF0	3.5 2 1 21	Aluminium	2.50m	F0 Natural
ETR299GF0	3.5 21 0	Aluminium	2.50m	F0 Natural
ETR300F0	4 2.5 4 21 400mm	Aluminium	2.50m	F0 Natural
ETR300UF0	4 2.5	Aluminium	2.50m	F0 Natural





Dimensions shown are nominal Illustrations are 70% size in mm

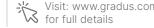




Multi-Purpose Trims

	Code / Profile		Material	Length	Colours / Finishes
ETR300GF0	4 2.5		Aluminium	2.50m	F0 Natural
ETR301F0	4.5	Ø 400mm	Aluminium	2.50m 2.715m	F0 Natural
ETR301UF0	4.5		Aluminium	2.50m 2.715m	F0 Natural
ETR301GF0	4.5 21 21		Aluminium	2.50m	F0 Natural
ETR302F0	6 21 21	Ø 400mm	Aluminium	2.50m 2.715m	F0 Natural
ETR302UF0	6		Aluminium	2.50m 2.715m	F0 Natural
ETR302GF0	6 21		Aluminium	2.50m	F0 Natural
ETR307F0	7.5 £ 22.5	Ø 400mm	Aluminium	2.50m 2.715m	F0 Natural

	Code / Profile		Material	Length	Colours / Finishes
ETR307UF0	7.5		Aluminium	2.50m 2.715m	F0 Natural
ETR307GF0	7.5		Aluminium	2.50m	F0 Natural
ETR303F0	9.5	Ø 400mm	Aluminium	2.50m 2.715m	F0 Natural
ETR303UF0	9.5		Aluminium	2.50m 2.715m	F0 Natural
ETR303GF0	9.5		Aluminium	2.50m	F0 Natural
ETR304F0	10.5	Ø 400mm	Aluminium	2.50m 2.715m	F0 Natural
ETR304UF0	10.5		Aluminium	2.50m 2.715m	F0 Natural









Multi-Purpose Trims

Code / Profile	Material	Length	Colours / Finishes
ETR304GF0	Aluminium	2.50m	F0 Natural
ETR305F0	Aluminium	2.50m	F0 Natural
ETR305UF0 [14] [12.5] [14] [12.5]	Aluminium	2.50m	F0 Natural
ETR305GF0	Aluminium	2.50m	F0 Natural
ETR306F0 16.5 16.5 22.5 400mm	Aluminium	2.50m	F0 Natural
ETR306UF0 16.5 17. 18.5 18.5 19. 10.5	Aluminium	2.50m	F0 Natural
ETR306GF0	Aluminium	2.50m	F0 Natural

	Code / Profile	Material	Length	Colours / Finishes
ETR312F0	19.5	Aluminium 50mm	2.50m	F0 Natural
ETR312UF0	19.5	Aluminium	2.50m	F0 Natural
ETR312GF0	19.5	Aluminium	2.50m	F0 Natural
ETR309F0	23.5	Omm Aluminium	2.50m	F0 Natural
ETR309UF0	23.5	Aluminium	2.50m	F0 Natural
ETR309GF0	23.5	Aluminium	2.50m	F0 Natural







Multi-Purpose Trims

	Code / Profile		Material	Length	Colours / Finishes
ETR301F7	3 🏲				
	4.5 21 21	Ø 400mm	Brass	2.50m	F7 Polished
ETR301GF7					
	4.5 21 21		Brass	2.50m	F7 Polished
ETR302F7					
	6 21	Ø 400mm	Brass	2.50m	F7 Polished
ETR302GF7					
	6 21 21		Brass	2.50m	F7 Polished
ETR307F7					
	7.5	Ø 400mm	Brass	2.50m	F7 Polished
ETR307GF7					
	7.5		Brass	2.50m	F7 Polished
ETR303F7					
	9.5	Ø 400mm	Brass	2.50m	F7 Polished
ETR303GF7					
	9.5		Brass	2.50m	F7 Polished

	Code / Profile		Material	Length	Colours / Finishes
ETR304F7	10.5	Ø 400mm	Brass	2.50m	F7 Polished
ETR304GF7	10.5		Brass	2.50m	F7 Polished
ETR305F7	14 12.5 CONTRACTOR	Ø 400mm	Brass	2.50m	F7 Polished
ETR305GF7	14 12.5 cc		Brass	2.50m	F7 Polished
ETR306F7	16.5	Ø 400mm	Brass	2.50m	F7 Polished
ETR306GF7	16.5		Brass	2.50m	F7 Polished
ETR309F7	23.5	Ø 450mm	Brass	2.50m	F7 Polished
ETR309GF7	23.5		Brass	2.50m	F7 Polished







Multi-Purpose Trims

	Code / Profile	Material	Length	Colours / Finishes
ETR301GF8	4.5	Stainless Steel	2.50m	F8 Polished
ETR302GF8	▲ 6 @ ± C C C C C C C C C C C C C C C C C C	Stainless Steel	2.50m	F8 Polished
ETR307GF8	7.5	Stainless Steel	2.50m	F8 Polished
ETR303GF8	9.5	Stainless Steel	2.50m	F8 Polished
ETR304GF8	10.5	Stainless Steel	2.50m	F8 Polished
ETR305GF8	14 12.5 22.5 2	Stainless Steel	2.50m	F8 Polished
ETR306GF8	16.5 D T C C C C C C C C C C C C C C C C C C	Stainless Steel	2.50m	F8 Polished
ETR309GF8	23.5 T	Stainless Steel	2.50m	F8 Polished

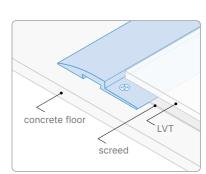
[▲] Note there is a +/- 0.5mm tolerance on the height of stainless steel multi-purpose trims.

Ramp Edges - Aluminium

Used to join floorcoverings such as carpet or resilient flooring to flooring of a lower height, e.g. stone, concrete or resilient.

> Solid base for straights.

Solid base with countersunk holes for straights.



shown with LVT to concrete floor.

	Code / Profile	Material	Length	Colours / Finishes
RT264	₹ no.4 2.5-5 28 ↑ †	Aluminium	2.70m	F3 Polished F4 Silver Anodised
RT265	₹ no.4 5-7 .	Aluminium	2.70m	F3 Polished F4 Silver Anodised
TA16	3.5	Aluminium	2.75m	Mill Finish
RT330	19 3 Y no.4 .	Aluminium	2.70m	F3 Polished F4 Silver Anodised
RT250S	17 no.6 	Aluminium	2.70m	F3 Polished F4 Silver Anodised
RT247	\$\frac{1}{1} \\ \frac{1}{1} \\ \frac{1} \\ \frac{1}{1} \\ \frac{1} \\ \frac{1} \\ \frac{1} \\ \frac{1}{1} \\ \frac{1}{1} \\ \frac{1} \\ \f	Aluminium	2.70m	F3 Polished F4 Silver Anodised
RT245	77 no.4 23 22 24	Aluminium	2.70m	F3 Polished F4 Silver Anodised



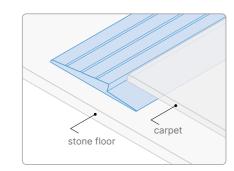


Dimensions shown are nominal Illustrations are 70% size in mm



Ramp Edges - Pvc

Used to join floorcoverings such as carpet to flooring of a lower height, e.g. stone, concrete or resilient.

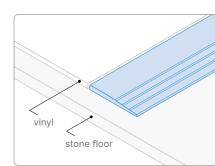


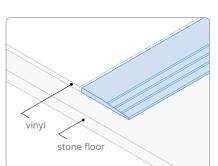
PCR632 shown with carpet to stone floor.

	Code / Profile	Material	Length	Colours / Finishes
CVT5	52————————————————————————————————————	pvc	2.00m	Black Brown Granite Dove
CTR5	42————————————————————————————————————	pvc	2.00m	Black Brown Granite Dove
PCR632	46	pvc	2.00m	Black Brown Granite Dove
PCR932	9]	pvc	2.00m	Black Brown Granite Dove
T450	4.5	pvc	2.00m	Black Brown Granite Dove
T600	6	pvc	2.00m	Black Brown Granite Dove

Feather Edges

Used to finish the raw exposed edge of resilient floorcoverings. Typically used at the junction with terrazzo or stone floors.



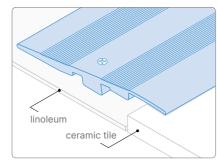


shown with vinyl to stone floor.

	Code / Profile	Material	Length	Colours / Finishes
TA25	2.5	Aluminium	2.50m	Mill Finish
T200	2	pvc	15m coil	Black Brown Granite Dove
T250	2.525	pvc	15m coil	Black Brown Granite Dove
T300	3	pvc	15m coil	Black Brown Granite Dove

Heavy-Duty Ramp

Used to provide a transition for floorcoverings with a height of between 8.5mm and 15mm. 8.5mm to 13mm - suitable for heavy wheeled traffic. 13mm to 15mm - suitable for light wheeled traffic, e.g. wheelchairs and pushchairs. Supplied pre-drilled with countersunk holes.





Code / Profile	Material	Length	Colours / Finishes
AR268 Y7 no.6 8.5mm - 15mm	Aluminium	2.70m	F0 Natural Aluminium F4 Silver Anodised



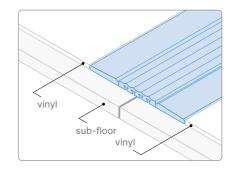


Dimensions snown are normal. Illustrations are 70% size in mm



Construction Joint Covers

Used to provide a cover for construction joints offering a neat solution that allows minor movement to occur. Profiles are adhered using contact adhesive, applied to the solid outer sections only. Note: EJC profiles are not recommended for structural expansion joints.

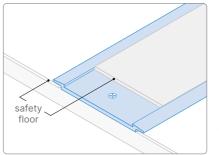


EJC50 shown with vinyl to vinyl.

Code / Profile	Material	Length	Colours / Finishes
EJC50 2 —————————————————————————————————	pvc	15m coil	Black Brown Granite Dove
EJC75	pvc	15m coil	Black Brown Granite Dove
EJC75 3.2	pvc	15m coil	Black Brown Granite Dove
EJC125	рус	15m coil	Black Brown Granite Dove

Floor Repair Trim

Used to repair resilient floorcoverings where welded joins have failed. Utilises strips of the same floorcovering to provide an unobtrusive repair. Can be used at door interfaces to provide a robust transition. Supplied pre-drilled with countersunk holes.

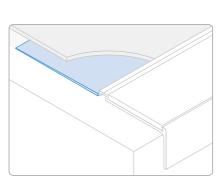


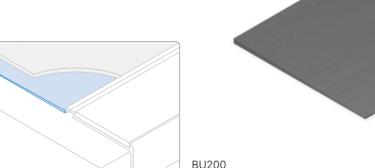


	-	Colours / Finishes
Aluminium	3.20m	Mill Finish
Α	Aluminium	Aluminium 3.20m

Bevelled Underlay

Used as a diminishing strip and is ideal for building up the height of resilient floorcoverings to meet a thicker gauge material or a stair edging. Grooves along the underside of BU800 provide a straight cutting edge at points where the thickness gives ideal height adjustment.





BU200 used to build up 3.2mm linoleum.

	Code / Profile	Material	Length	Colours / Finishes
BU200				
	265	pvc	15m coil	■ Black
BU800	see below	pvc	15m coil	■ Black

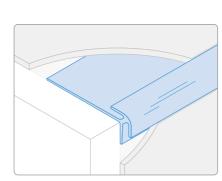




BU profiles contain up to 50% recycled content.

Dual Trim

Used to provide a neat finish to the edge of raised areas such as tiered seating in lecture theatres or display platforms in retail environments. Suitable for use with resilient floorcoverings and thin gauge carpet. Note: NOT suitable for use as a stair edging.





Code / Profile	Material	Length	Colours / Finishes
DT50 12 3.5 43 3.5 43 13 13 13 13 13 14 15 15 15 15 15 15 15	PVC-u	2.50m	Black Brown Granite Dove





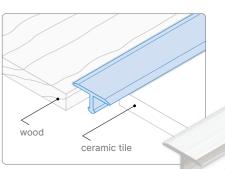
Dimensions snown are normal. Illustrations are 70% size in mm



Transition T Profiles

Used for joining different floorcoverings of the same, or slightly differing, heights. The design of the T profiles allows slight imperfections in joints and cuts to be hidden, and enables a gap between floor finishes to be incorporated during installation to allow for natural expansion in flooring materials such as ceramics and wood. Profiles can be curved on-site using a bending machine for shaped edges and inlays (see page 114).

T profiles are fitted after the floorcoverings have been installed, making them ideal for use when the installation of the floorcoverings is undertaken by different trades (e.g. ceramic contractors and flooring contractors) where the trims cannot be fixed until both floors have been completed.



TP290F4 shown with wood to ceramic tile.

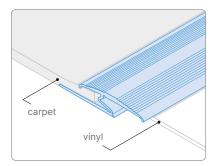
					•
	Code / Profile		Material	Length	Colours / Finishes
TP290F4	6.5 ————————————————————————————————————	Ø 500mm	Aluminium	2.70m	F4 Silver Anodised
TP290F7	6.5 — 14 — 6.5 — 7 5	Ø 400mm	Brass	2.70m	F7 Polished
TP291F4	6.5 H-12 T 1-6	Ø 1200mm	Aluminium	2.70m	F4 Silver Anodised
TP295F4	6.5 ——24 —————————————————————————————————	(Ø 1800mm	Aluminium	2.70m	F4 Silver Anodised
TP293F4	6.5 -28	Ø 4000mm	Aluminium	2.70m	F4 Silver Anodised



Threshold Trims

Used to join floorcoverings of the same height usually at door or room thresholds. Typically used at door interfaces or to define changes in area.



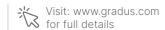


TH382 shown with carpet to vinyl. Also suitable for use with other floorcoverings.



Solid base with countersunk holes for straights.

	Code / Profile	Material	Length	Colours / Finishes
TH382	7 28 8.5 8.5 .	Aluminium	2.70m	F3 Polished F4 Silver Anodised
	dressed d	d TH383 - the top section own using a rubber malking the fit to edges of both	et after installa	ation to
TH383	15 N7no.4 16 .	Aluminium	2.70m	F3 Polished F4 Silver Anodised
TH495	22————————————————————————————————————	pvc Top PVC-u Base	2.50m	Zinc Doubloon Platinum Silver
CET5	35 5.5 10.5 7.5	pvc	2.00m	Black Brown Granite Bluebell Dove Clay





Dimensions shown are nominal Illustrations are 70% size in mm



Internal & External Corners

Coving solutions ideal for LVT and other resilient flooring to create a neat finish at internal and external junctions. Trims can be used horizontally or vertically.



CVA870 F6 Bronze Anodised



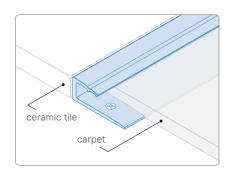
CVA870IW F9 Sand Anodised

	Code / Profile	Material	Length	Colours / Finishes
CVA927	27 H-5	Aluminium	2.50m	F4 Silver Anodised F6 Bronze Anodised F9 Sand Anodised
CVA870IW	2.5	Aluminium	2.50m	F4 Silver Anodised F6 Bronze Anodised F9 Sand Anodised
CVA870	29 NEW	Aluminium	2.50m	F4 Silver Anodised F6 Bronze Anodised F9 Sand Anodised
CVA873	32 NEW	Aluminium	2.50m	F4 Silver Anodised F6 Bronze Anodised F9 Sand Anodised

Square Edge Trims

Typically used with carpet, carpet tile, wood and wood laminate at the junction with other flooring materials such as other carpets, ceramics and wood. Provides a neat finish to floorcoverings, protecting the edges from damage and also hiding any slight imperfections in joints or cuts. Selected square edges are also available with pre-punched bases and tabs for on-site curving as indicated.





ACT48 shown with ceramic tile to carpet.



Solid base for straights.

Solid base with countersunk holes for straights.

	Code / Profile		Material	Length	Colours / Finishes
ET804	€		Aluminium	2.50m	F3 Polished F4 Silver Anodised
ET804EBF4	6 30	Ø 400mm	Aluminium	2.50m	F4 Silver Anodised
ET806	§ \frac{5}{1} \frac{5}{17} \text{ no.4}		Aluminium	2.50m	F3 Polished F4 Silver Anodised
ET806EBF4	8 30 30	Ø 500mm	Aluminium	2.50m	F4 Silver Anodised





Dimensions shown are nominal Illustrations are 70% size in mm



Square Edge Trims

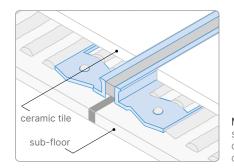
	Code / Profile		Material	Length	Colours / Finishes
ET805	7 Y7 no.4		Aluminium	2.50m	F3 Polished F4 Silver Anodised
ET805EBF4	10 7 10 0	Ø 500mm	Aluminium	2.50m	F4 Silver Anodised
ACT48	12 12 28		Aluminium Available with or without carpet gripper	3.20m	Mill Finish
ET210	7.2 - 8.2 Yr no.4		Aluminium	2.70m	F3 Polished F4 Silver Anodised
ET210EBF4	7.2 - 8.2	Ø 3000mm Ø 2000mm	Aluminium	2.70m	F4 Silver Anodised
ET212	9 - 10.2 13 Yr no.4		Aluminium	2.70m	F3 Polished F4 Silver Anodised
ET212EBF4	9 - 10.2	Ø 3000mm	Aluminium	2.70m	F4 Silver Anodised





Movement Joints

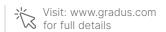
Are used to join floorcoverings where expansion up to 1.5mm is required. Designed specifically for use with flooring materials such as ceramic tile, marble, stone, terrazzo and resins only. All profiles feature a perforated base for fixing.



MJ307SF4 shown with ceramic tile to ceramic tile.



	Code / Profile		Material	Length	Colours / Finishes
MJ301SF4	-11 - 3 -48 - 4.5	+1.5 / -1.5 mm	Aluminium with grey or black silicone joint	2.50m	F4 Silver Anodised
MJ302SF4	4.5	+1.5 / -1.5 mm	Aluminium with grey or black silicone joint	2.50m	F4 Silver Anodised
MJ307SF4	6 7.5 -48	+1.5 / -1.5 mm	Aluminium with grey or black silicone joint	2.50m	F4 Silver Anodised
MJ303SF4	8 9.5	+1.5 / -1.5 mm	Aluminium with grey or black silicone joint	2.50m	F4 Silver Anodised





Dimensions shown are nominal Illustrations are 70% size in mm



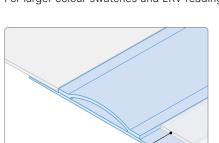
Movement Joints

	Code / Profile	Material	Length	Colours / Finishes
MJ304SF4	110 12 +1.5 / -1.5 mm	Aluminium with grey or black silicone joint	2.50m	F4 Silver Anodised
MJ305SF4	11.5 14 +1.5 -1.5 mm	Aluminium with grey or black silicone joint	2.50m	F4 Silver Anodised
MJ306SF4	15 16.5 +1.5 / -1.5 mm	Aluminium with grey or black silicone joint	2.50m	F4 Silver Anodised
MJ301SF8	▲ 4.5 ————————————————————————————————————	Stainless Steel with grey or black silicone joint	2.50m	F8 Polished
MJ302SF8	▲ 6	Stainless Steel with grey or black silicone joint	2.50m	F8 Polished
MJ307SF8	▲ 7.5 48 +1.5 / -1.5 mm	Stainless Steel with grey or black silicone joint	2.50m	F8 Polished

[▲] Note there is a +/- 0.5mm tolerance on the height of stainless steel movement joint profiles.

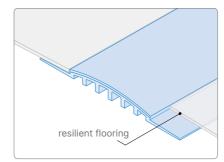
Wetroom Transition Strips

Wetroom transition strips are designed to be incorporated into the resilient flooring in wetrooms and shower areas in order to contain water and prevent it encroaching into dry areas. Gradus WTS wetroom transition strips are tested for slip-resistance in barefoot areas and are designed to be safe and comfortable underfoot whilst allowing wheelchair access. For larger colour swatches and LRV readings see page 89.



resilient flooring

WTS1 shown with resilient flooring.



WTS2 shown with resilient flooring.

Code / Profile	Material	Length	Colours / Finishes
WTS1	pvc	2.00m	Coffee Lead Steel Clay Canvas
WTS2	pvc	2.00m	Coffee Lead Steel Clay Canvas
WTS3	pvc	2.00m	Coffee Lead Steel Clay Canvas





Dimensions snown are normal. Illustrations are 70% size in mm



Feature Strip

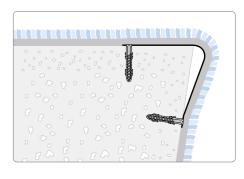
Acts as a joining strip to help define walkways or separate floorcoverings of the same height. Utilises pvc insert material to add colour and design (supplied separately - see page 29 for larger colour swatches and LRV's).



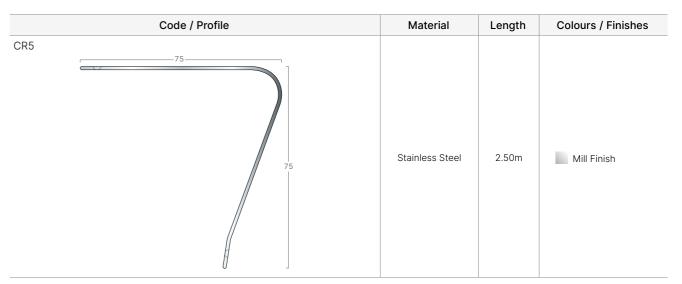
Code / Profile	Material	Length	Colours / Finishes
FCA16 + INS12 5.5	FCA16 Aluminium INS12 pvc insert Insert tape	2.50m 2.50m / 15m coil 51m coil	See above

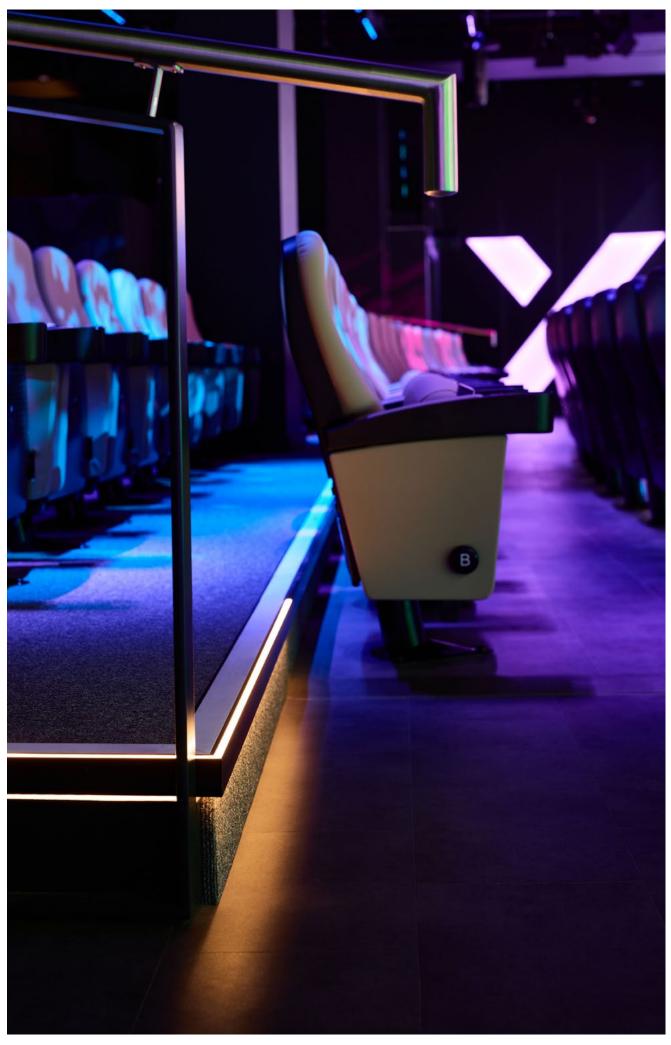
Contour Edge

Designed to be used where a stair edging is not required and the carpet is "waterfalled" from the top to the bottom of a flight of stairs, usually in domestic applications or buildings exempt from standard building guidelines e.g. heritage buildings. It also helps to reduce wear to both the floorcovering and the leading edge of the step. Supplied pre-drilled.



fitted to step edge with "waterfalled" carpet.





Section 3

Specialist LED Lighting Systems

With over 25 years experience in the design and manufacture of specialist LED lighting, Gradus offers a comprehensive range of low voltage decorative and safety LED lighting solutions ideal for use across a variety of sectors and applications.

Range Overview



LED Lighting Systems

Gradus offers lighting systems available in multiple LED colours and brightness options suitable for most interior applications. These can be combined with profiles, control equipment and power supplies to create a complete Gradus package to meet your project needs.

- > Gradus Impression See page 152
- > Gradus Continuity See page 152
- > Gradus Interlok Advance See page 152



LED Step Lighting

A comprehensive range of profiles that, when combined with a suitable lighting system, can create both a safe and decorative lighting solution for stairs.

See pages 154-157



LED Architectural Lighting

Centred around providing clients with the ability to transform an environment with subtle accents or striking features, this range is intended for creating a decorative LED Lighting solution that will create a real "wow" factor.

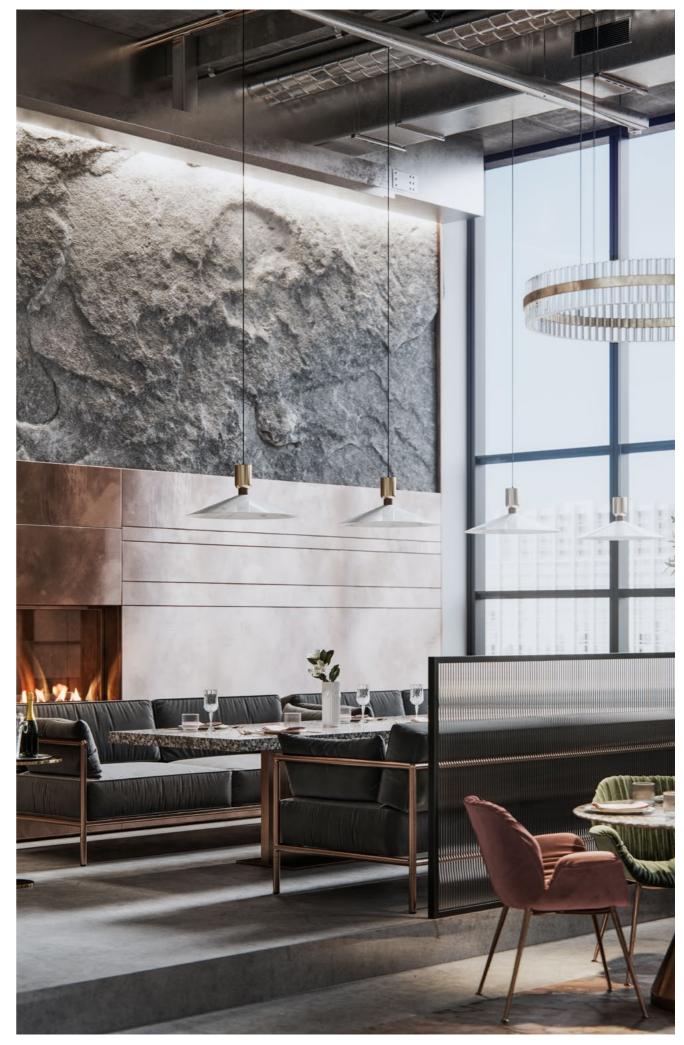
See pages 158-160



LED Lighting Solutions for Auditoria

A series of solutions ideal for use within low-light cinema, theatre and leisure environments to visually enhance the aesthetics, provide guidance to the public, whilst also helping to create a safer environment for building users.

- > LED Aisle & Floor Lighting See pages 162-164
- > LED Continuity Linear Lighting See page 166
- > LED Wall Lighting See page 167
- > LED Step Row Indicator See page 168



Cinema

Multi-screen Boutique Home





Hospitality

Bars Restaurants Nightclubs Lounges



Private Clinics Private Hospitals



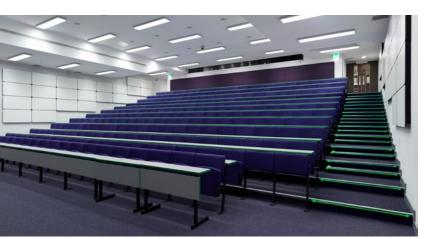


Retail

Boutique Shops
Shopping Centres
Food Courts

Education

Breakout Areas
Libraries
Lecture Theatres
Canteens





Health & Fitness

Gyms Fitness Studio Health Spa's

Leisure

Theatres
Museums & Galleries
Casinos





Residential

Luxury Developments

LED Lighting Systems



Gradus offers lighting systems available in multiple LED colours and brightness options suitable for most interior applications. These can be combined with profiles, control equipment and power supplies to create a complete Gradus package that meets your project needs.

Gradus Impression

Features LED tapes that produce a continuous lighting effect for a modern finish ideal for use within medium to well-lit applications where there is added focus on the visual appearance and overall finished effect, in addition to safety.



Gradus Continuity

A continuous linear lighting effect that clearly defines the step edge in low-light environments, created using a fibre optic rod that is end-illuminated with high intensity LEDs.



Gradus Interlok Advance

Offers a pinpoint lighting effect that is created using circuit board strips with LEDs spaced at either 50mm or 100mm intervals.





Control Equipment

Take control of your LED Lighting System

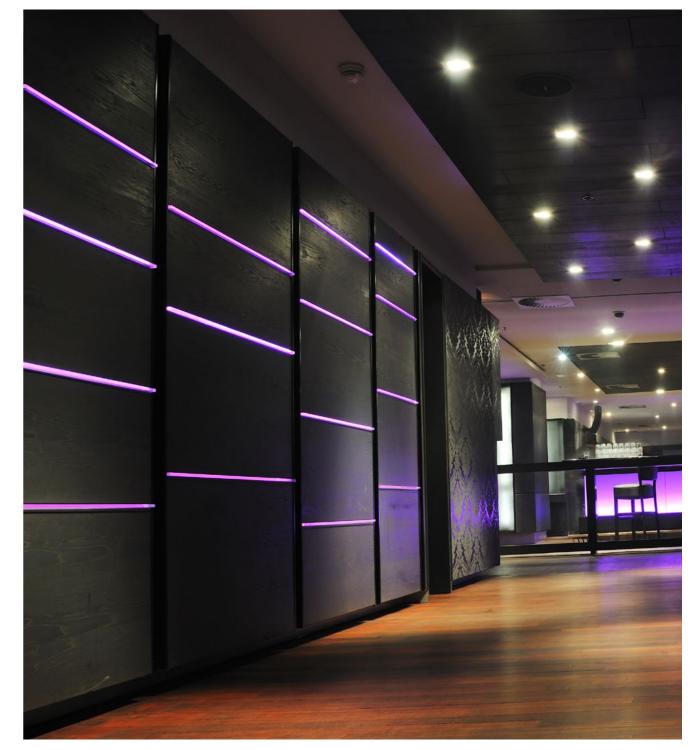
Our comprehensive range of control equipment and power supply units, coupled with our expert technical knowledge, allow us to work with you to create a tailored package that incorporates as little or as much functionality as your project requires.

Whether it's to simply switch on and off, adjust the colour and brightness at any time, or the ability to control multiple zones off a single controller, we can build this into the overall package.

For more details or to discuss your needs in more detail, call us on 01625 428922

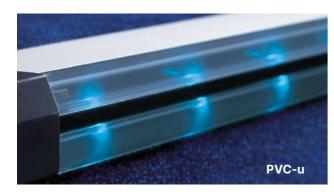




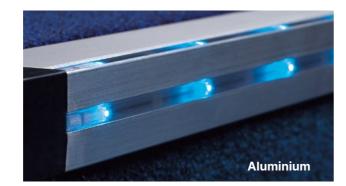


LED Step Lighting

Gradus offers a range of hard-wearing PVC-u and Aluminium stair edging profiles with a choice of slip-resistant inserts.



- > Clear PVC-u design allows light to be projected through
- > Illuminated stair edging is visible when ascending and descending the staircase.



- > Light is projected directly from the tube or diffuser cover.
- > The angle at which the illumination is visible depends on the profile design.



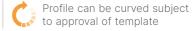
LED Step Lighting - PVC-u Profiles



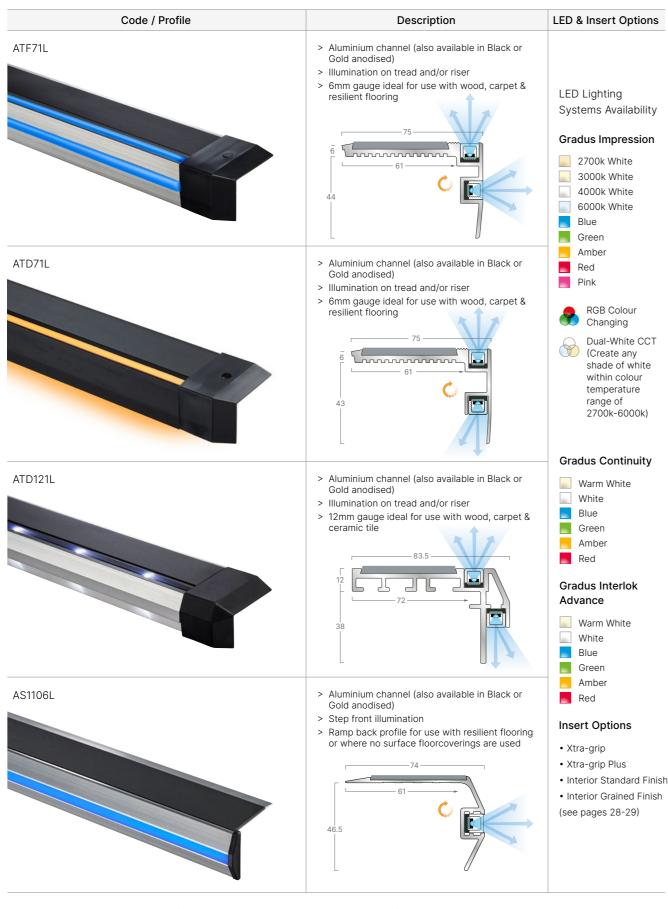
Visit: www.gradus.com for full details



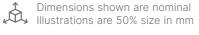
Dimensions shown are nominal Illustrations are 50% size in mm Dimensions shown are nominal



LED Step Lighting - Aluminium Profiles

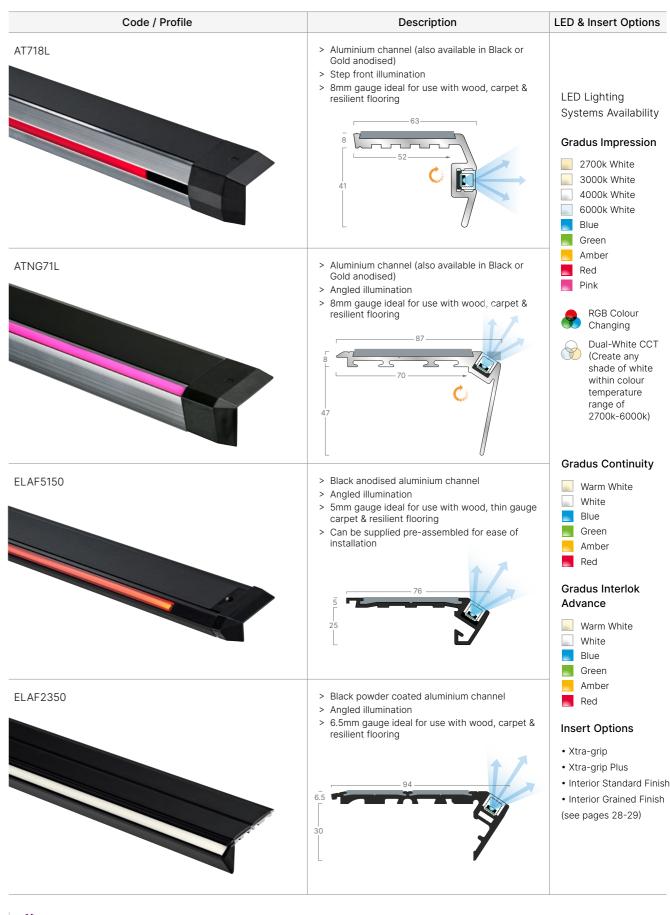


Visit: www.gradus.com for full details



Profile can be curved subject to approval of template

LED Step Lighting - Aluminium Profiles

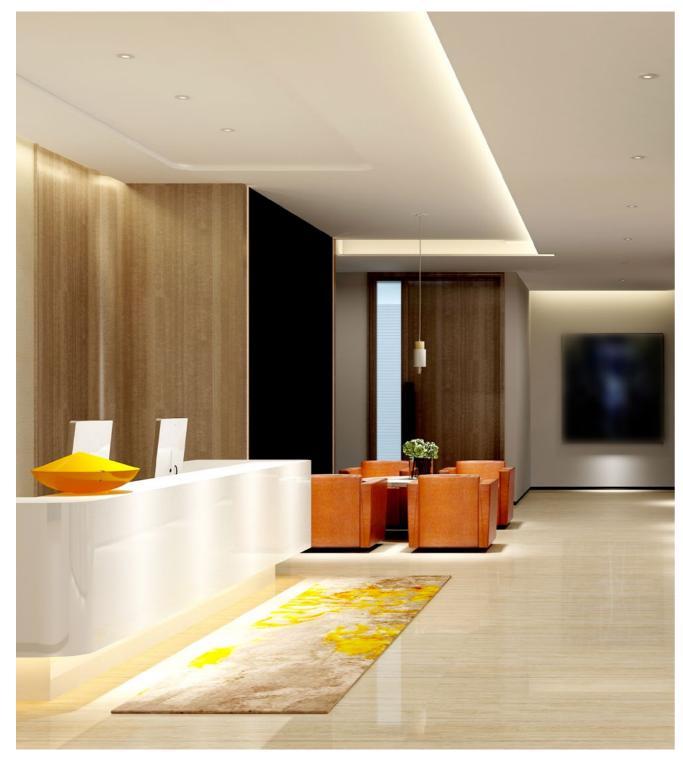




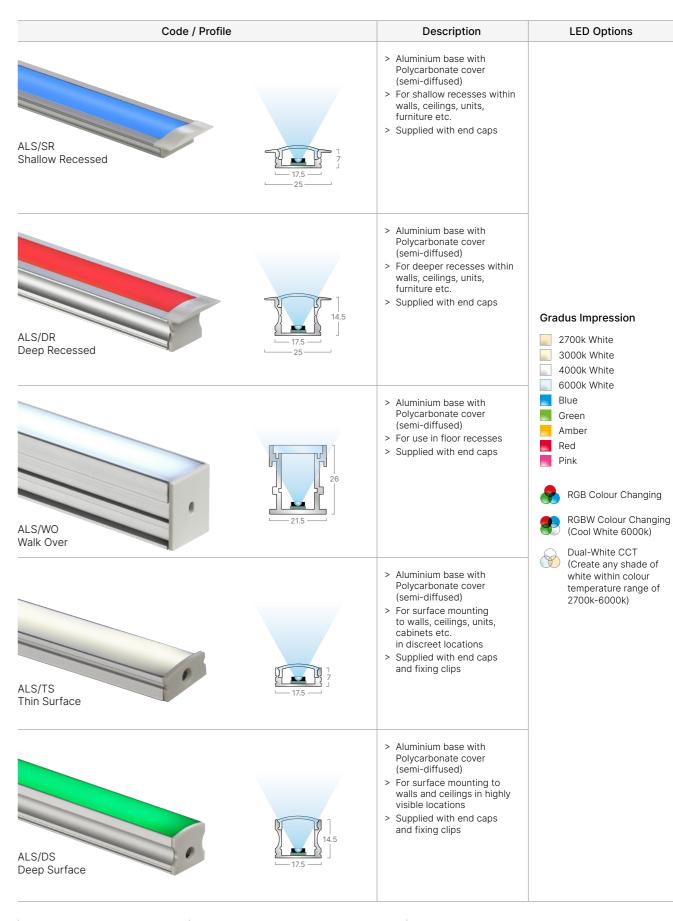
LED Architectural Lighting

Comprising of surface mounted, recessed and plaster in formats, Gradus Architectural Lighting Profiles are available in eleven configurations to suit the most common scenarios encountered within interior applications.

Designed for use with our full range of Gradus Impression LED tapes, the aluminium profiles assist with heat dissipation and feature a diffuser cover that hides the LED tape from view to create a finished look, whilst also reducing glare and protecting against damage.



LED Architectural Lighting - Aluminium Profiles



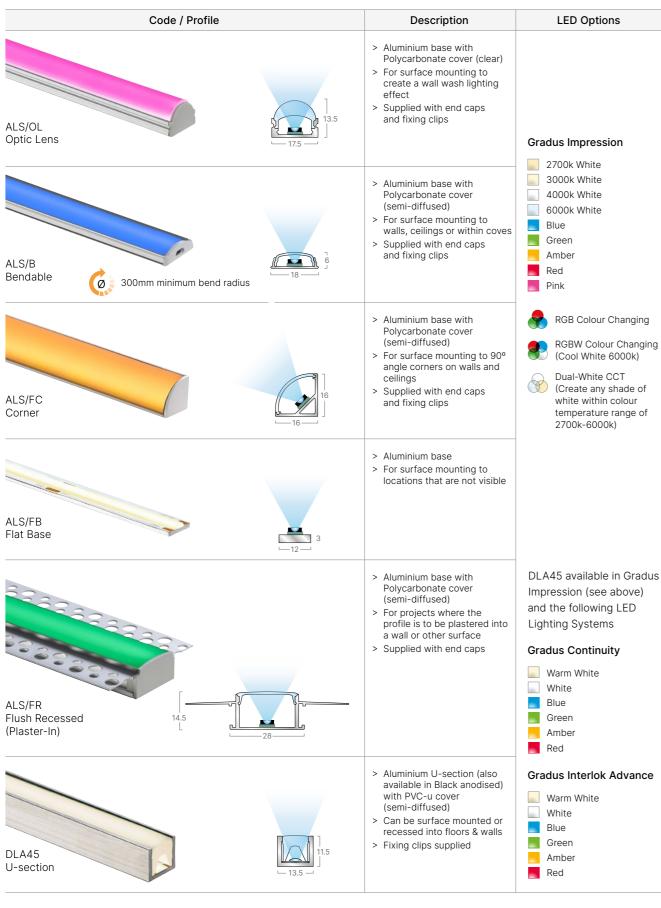
Visit: www.gra for full details Visit: www.gradus.com



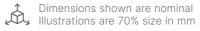
Dimensions shown are nominal Illustrations are 70% size in mm Dimensions shown are nominal



LED Architectural Lighting - Aluminium Profiles





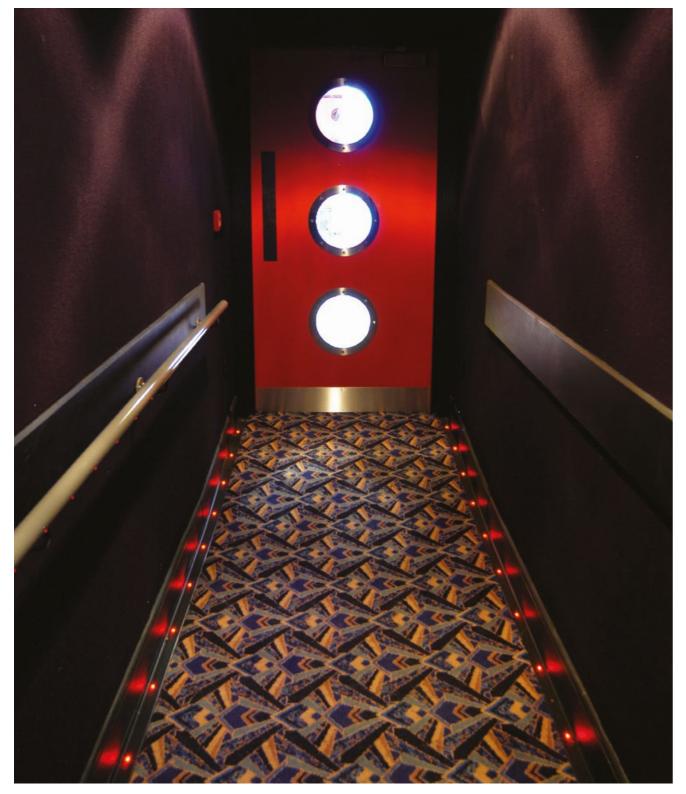






LED Aisle & Floor Lighting

Gradus offers a comprehensive range of PVC-u aisle and floor trims that are designed for internal use as cable management systems to work with illuminated stair edging profiles or to illuminate floors, walkways, aisles and exit/entrance routes.

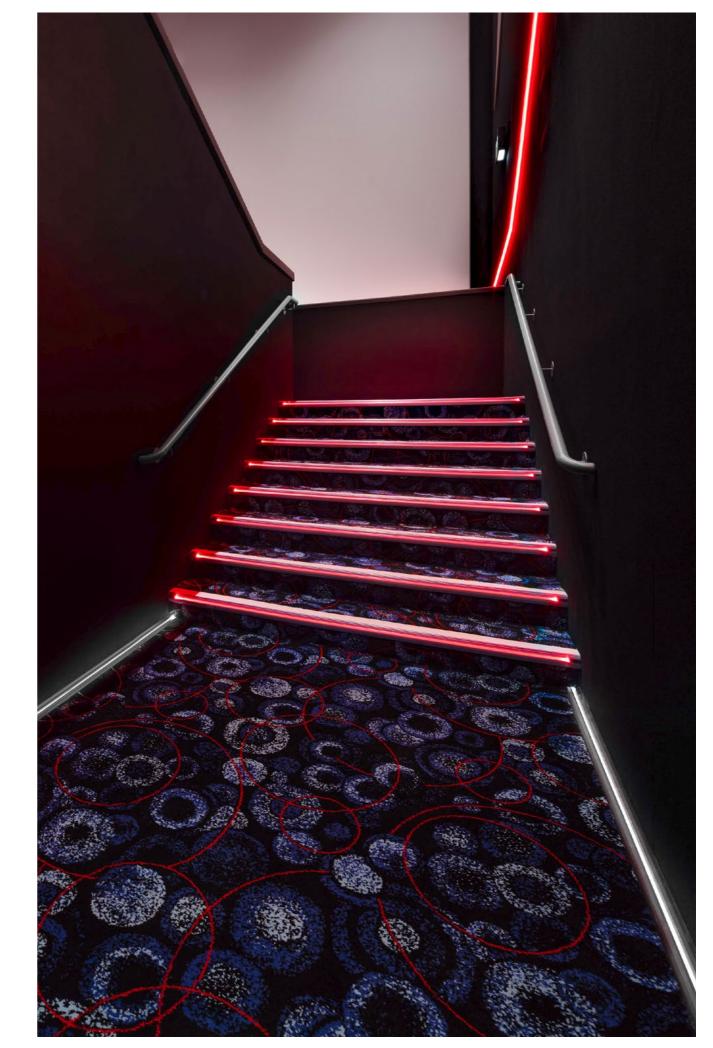


LED Aisle & Floor Lighting - PVC-u Profiles



LED Aisle & Floor Lighting - PVC-u Profiles





LED Continuity™ Linear Lighting

Continuity LED linear lighting offers an excellent alternative to neon lighting for interior applications. Utilising LED technology, this system features a similar light output and brightness to neon, whilst offering the benefits of extra low voltage, low power consumption and a long life cycle.

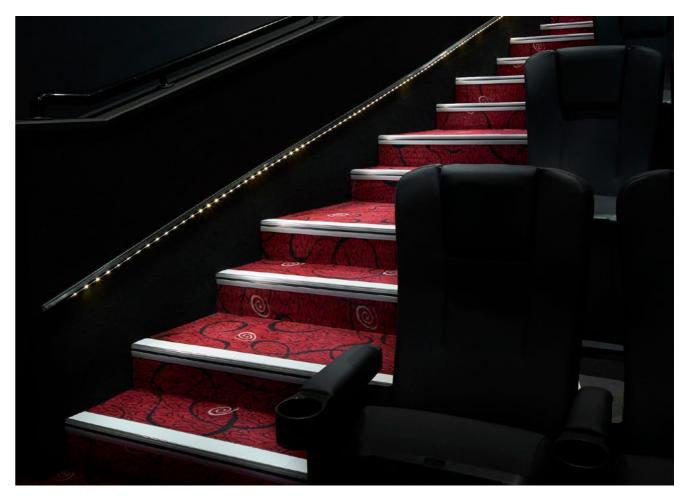
Code / Profile	Description	Length	Profile Colour	Power	LED Colour
DC2012/DLA2415	DC2012 PVC-u cover with DLA2415 Aluminium Carrier	LED 5m Cover 2m Carrier 2m	PVC-u cover available as Clear (CL) or Opaque (FR)	4.8 - 15.00 watts/metre (dependant on standard or high brightness)	Blue Green Amber Red Warm White White RGBW Colour Changing RGB Colour Changing



LED Wall Lighting

Gradus LED wall lighting has been designed to provide soft illumination way finding for auditoria access during showings or performances without distracting from the primary function of the installation. Gradus LED wall light provides 2.2 lux at 1.9m distance when mounted 300mm above the floor.

Code / Profile	Description	Length	Profile Colour	End Caps	LED Colour
WLT30/WLB45	PVC-u cover Incorporates a clear window for light to shine downwards PVC-u base	2.5m	Black Clear Translucent Window	ECWLB45 (right or left handed)	Interlok Advance 50mm spaced 12v or 24v DC Blue Green Amber Red Warm White White



LED Step Row Indicator

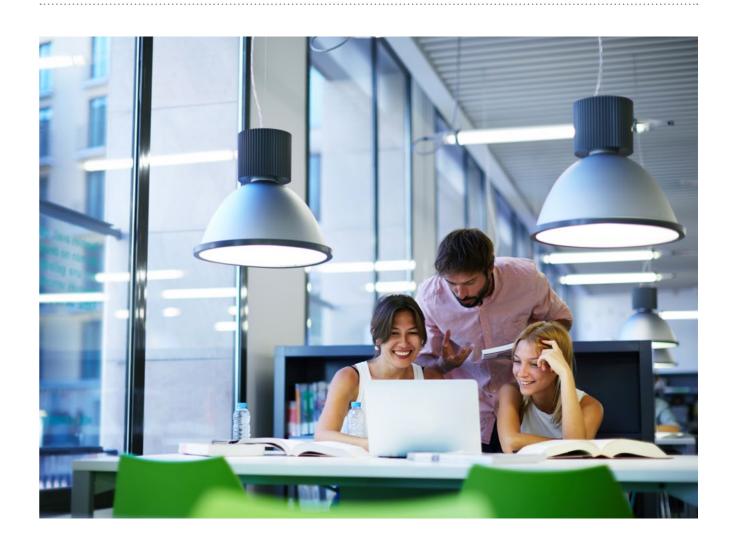
Gradus LED step row indicators are used to identify seating rows in auditoria, such as cinema, theatres and lecture theatres in darkened conditions. The profile can incorporate alphabetical or numerical formats, or can be produced in graphical format for directional signage or to denote wheelchair access points.

Suitable for use with carpets that have a compressed thickness of 12mm, the step row indicator profile can be installed into the floorcoverings on either the step tread or the riser.

PVC-u frame with window Alphabetical, numerical or Green	Code / Profile	Description	Length	Profile Colour	End Caps	LED Colour
PVC-u base Graphical format including disabled access Black 12v DC Red Warm White White	12	with window PVC-u base Indicator tile	numerical or graphical format including disabled		12v DC	Green Amber Red Warm White



LED Lighting Systems - Additional Services & Support



At Gradus one of our key business goals is to provide peace of mind for all our customers through quality, performance and a service that you can rely on. Our Contracts team manage the entire process to tailor quotations and orders to the specific needs of each individual project. Below details the additional services and customer support that Gradus can offer to clients across our full range of LED Lighting Systems.

Specification Consultants:

Provide face to face advice when specifying lighting, ensuring that the products selected are matched to the specific requirements of the environment. We also have a wealth of knowledge and experience within our Contracts Team who are more than happy to share their expertise with clients.

Dedicated Estimating Service:

Available on a supply only basis or for both supply and installation. Gradus also have online project collaboration capabilities.

Site Survey capabilities:

For supply & fit projects, Gradus can arrange a full survey and liaise with other trades to ensure complete peace of mind for the customer.

Supply and Fit package:

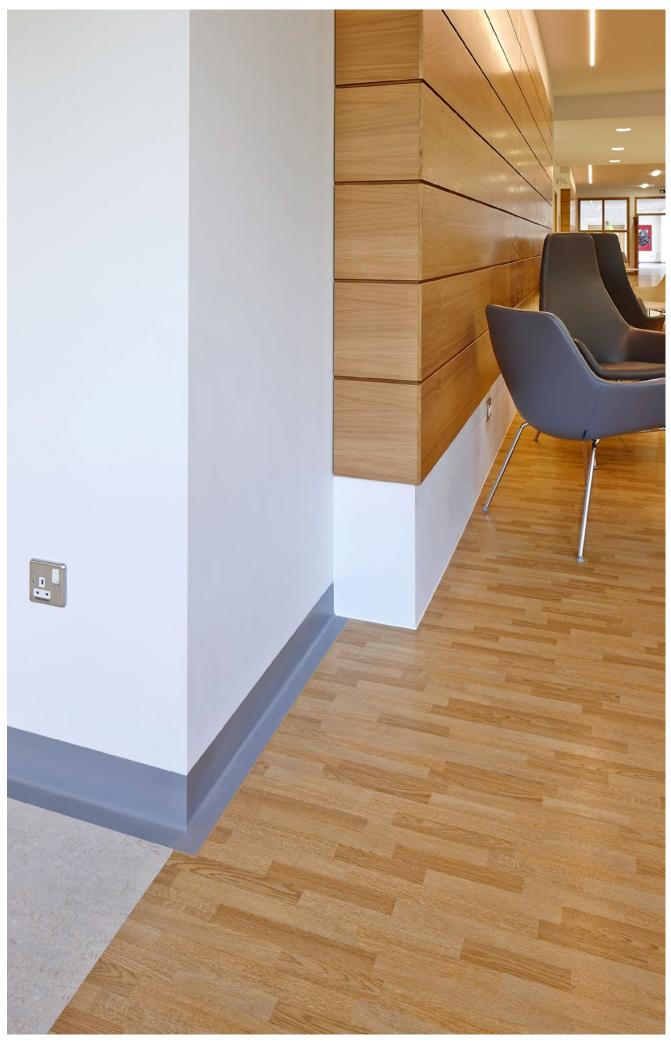
Ensures a convenient and reliable service throughout the specification, survey and installation process.

Trained and experienced technicians carry out the installations in line with Gradus quality systems, in accordance with current standards.

Electrical installations carried out and tested in accordance with BS7671 wiring regulations.

To take advantage of the supply and fit service, contact Gradus' specification consultants who will undertake an evaluation of the requirements from which a detailed quote can be prepared. Details of specification consultants are available from:

Gradus Technical Support on 01625 428922 Applicable to UK only.



Section 4

Skirtings, Capping Strips & Accessories

Information to ensure the correct selection of skirtings, capping strips and other accessories along with details of colour availability. Details of Gradus pvc skirtings, metal skirtings, cove formers and capping strips can be found in this section.

Choosing the right skirting

Area of Application

Skirtings, cove formers and capping strips are used to provide clean, neat solutions for junctions where the floor meets

Gradus offers solutions to suit most contract applications, from 'critical' clean areas where a homogeneous finish is essential such as hospital wards, treatment rooms, and food & pharmaceutical environments, through to commercial office, education or retail environments where functionality needs to be combined with aesthetics.

Healthcare, food & pharmaceutical and education environments in particular benefit from the use of pvc skirtings that can be welded to resilient floorcoverings in order to create completely impervious seals to meet cleaning and hygiene requirements.

For further guidance on the use of pvc skirtings in healthcare environments refer to: Health Technical Memorandum (HTM): Flooring 61 - 3 Design Guidance, Skirtings 3.13 - 3.19.

Materials & Profiles

Selecting the correct type of skirting profile will ensure that product performance matches the environment requirements and will result in a functional, low maintenance alternative to traditional skirtings.

Pvc Skirtings

Set-in – typically used with resilient floorcoverings, this type of skirting is welded to the floorcovering in order to create an impervious seal. Ideal for critical clean areas (e.g. treatment rooms, pharmaceutical production) or areas subject to wet cleaning (e.g. school and hospital corridors). Selected set-in skirtings are available in 15m coils in order to reduce the number of vertical joints required.

Sit-on – typically used with hard floorcoverings. Ideal for use in areas where a neat, clean finish is required but an impervious seal is not required e.g. general circulation areas in schools and hospitals.

Flat – used primarily with textile floorcoverings to form a neat, low-maintenance alternative to timber skirting.

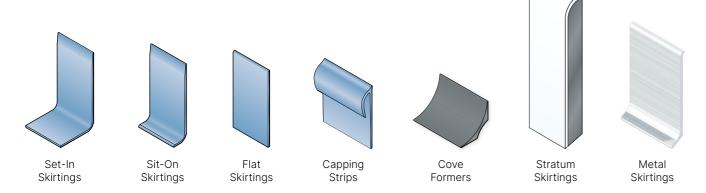
Capping Strips & Cove Formers – used when floorcoverings are continued up the wall. Cove formers ensure a consistent cove is achieved and supports the floorcovering at a weak point. Capping strips provide a neat finish where the floorcovering stops.

Stratum Pvc Skirting

An alternative to traditional timber skirting, this 10mm thick skirting provides the look of painted wood whilst offering a low maintenance solution. Ideal for creating a neat finish in non-critical clean areas, and in all contract environments where ongoing maintenance and aesthetics are important

Metal Skirtings

Modern alternative to pvc or timber skirtings. Creates a modern, hi-tech finish for environments such as commercial office, retail and leisure. Low voltage cable management system also incorporated in selected profiles.



Aesthetics

Gradus skirtings & cappings are available in a range of colours and finishes to complement most interior environments.

In addition, the use of a skirting that contrasts in colour and luminance with the floorcovering can assist visually impaired people to determine the borders of the room. As a guide, skirtings should either match the wall colour, or provide a complete contrast with both the wall and floor.

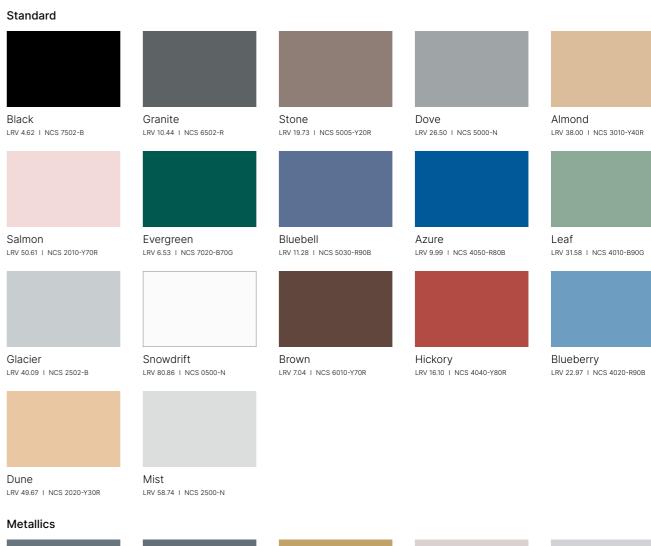
For further details on visual contrast see pages 199-200, 202.



Pvc Skirting FS 100 B profile is rated as Class 1a. Finishes within these ratings can be used throughout dementia applications. We recommend a minimum contrast of 30 points LRV for critical surfaces. For further information see page 206-207 or visit www.gradus.com

Colour Options

Note: Not all colours are available for all profiles. See individual profile pages for colour availability.





Metals



Aluminium Steel

Colour Matching

Important note: Due to the limitations of the printing process, colours within this catalogue should not be relied upon for colour matching. An accurate colour match can only be achieved by requesting the relevant product sample(s)

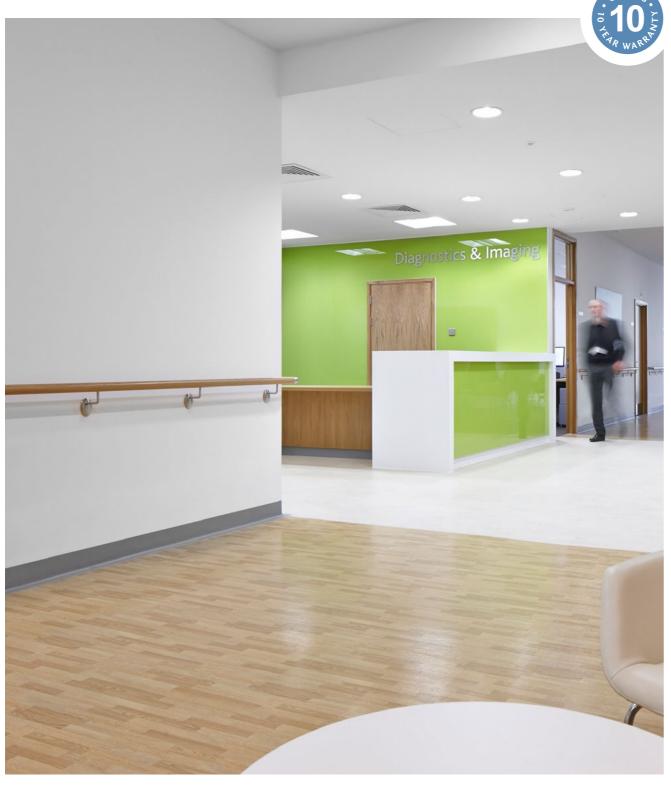
An extensive range of pvc skirtings, through-coloured for maximum performance and maintenance. Profile designs are available for use in conjunction with floorcoverings from all major manufacturers.

Typical Applications

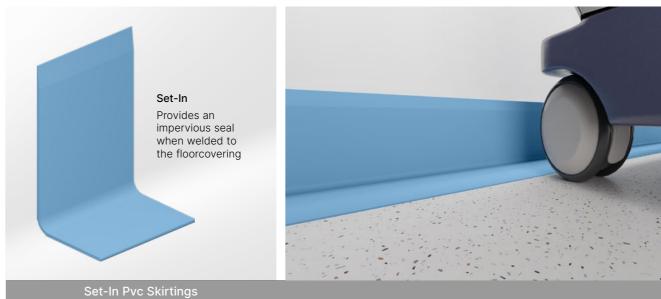
Set-In - Ideal for critical clean areas where a homogeneous finish is required e.g Treatment Areas, Hospital Wards

Sit-On - Typically used with hard floorcoverings for a neat, clean finish e.g General circulation areas in hospitals and schools

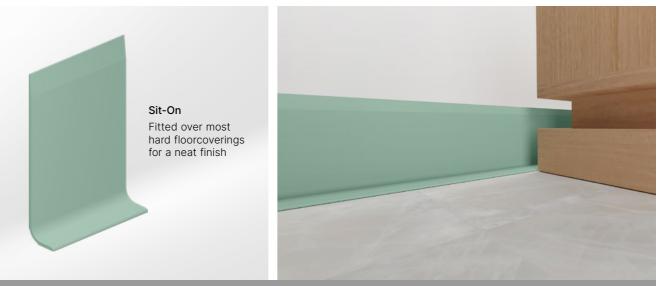
Flat - Typically used with carpet to give a neat finish



Types of pvc skirting

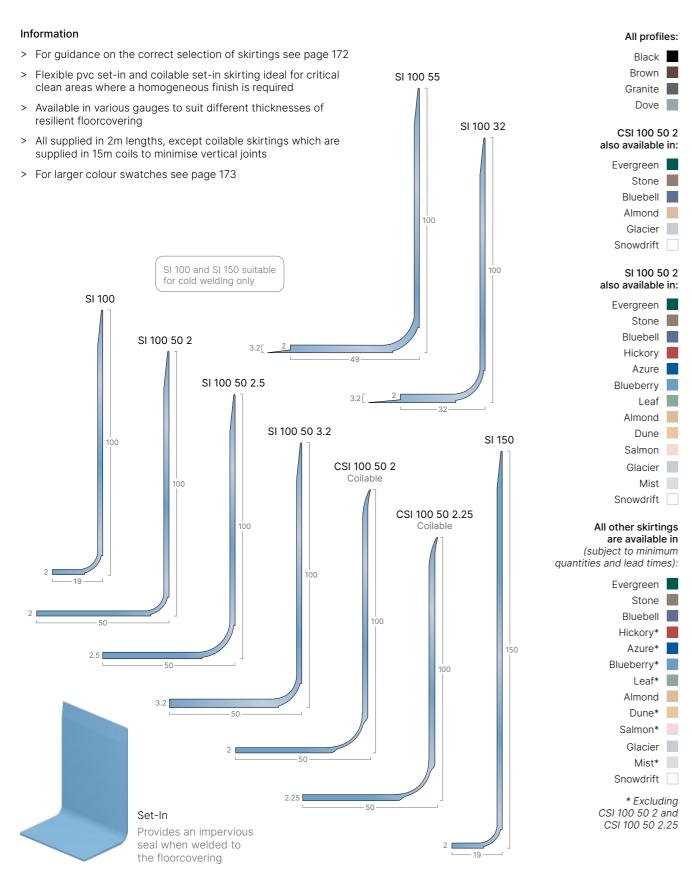




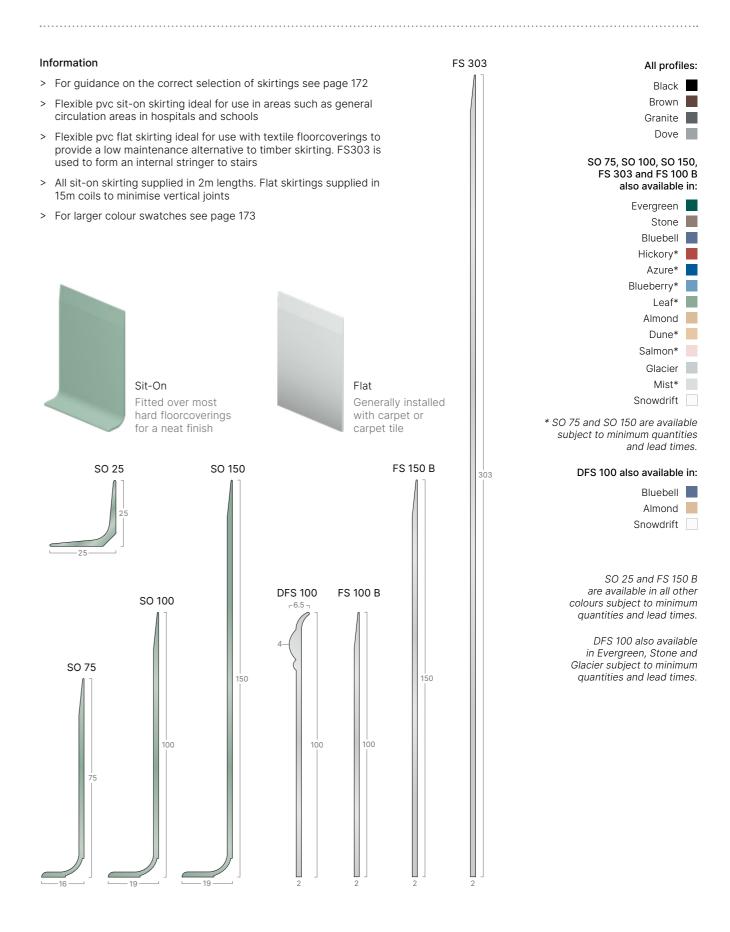




Skirtings - Set-In



Skirtings - Sit-On & Flat



Visit: www.s. for full details Visit: www.gradus.com

Dimensions shown are nominal Dimensions snown are
Illustrations are 70% size in mm

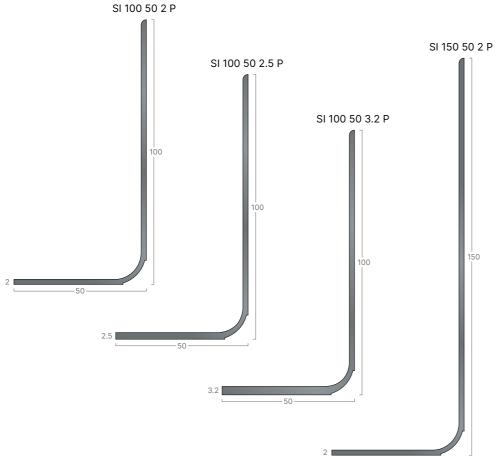


'P' Range Skirtings - Set-In, Sit-On & Flat

Information

- > For guidance on the correct selection of skirtings see page 172
- > Flexible pvc set-in, sit-on, sit-on coilable and flat skirtings ideal for use in areas where functionality is a priority
- > Set-in and sit-on skirtings supplied in 2m lengths. Flat and coilable skirtings supplied in 15m coils to minimise vertical joints
- > For larger colour swatch see page 173



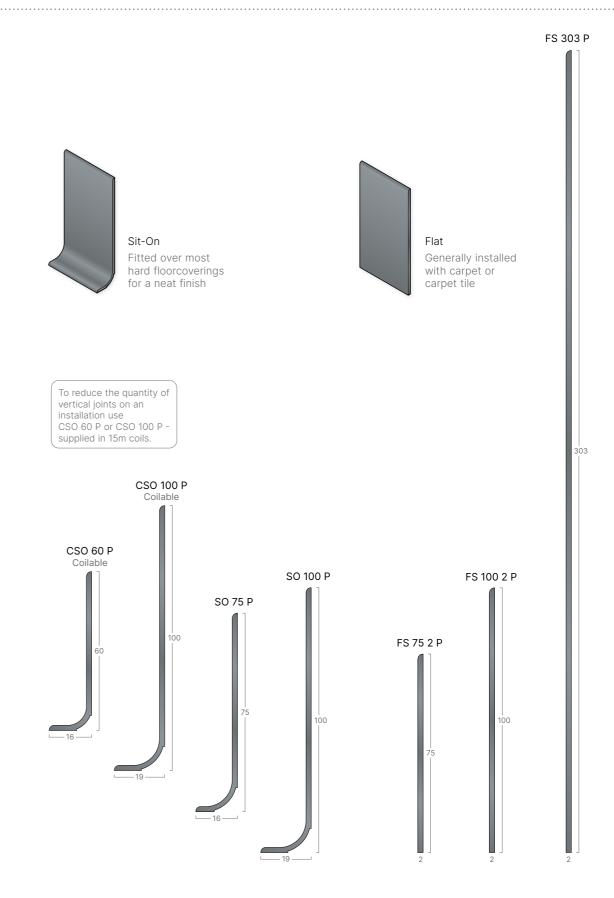




Black

All profiles are available in all other standard pvc skirting colours subject to minimum quantities and lead times.

Coilable skirtings are only available in selected colours.



179

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Dimensions shown are nominal Illustrations are 70% size in mm



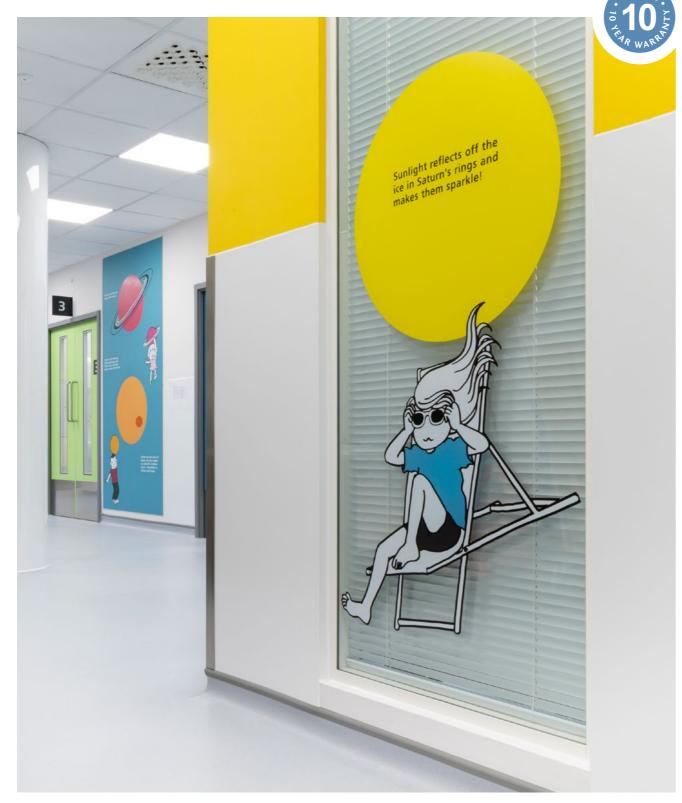
Capping Strips & Cove Formers

An extensive range of pvc, PVC-u and aluminium capping strips, cove formers and accessories used where floorcoverings are dressed up the wall to form a skirting with a neat finish, and to join floorcoverings to wall finishes. Suitable for use with carpet, resilient floorcoverings and ceramic tiles. Available in choice of colours that can be used in conjunction with floorcoverings from all major manufacturers.

Typical Applications

Suitable for a wide range of interior commercial applications:

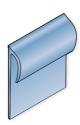
- > Hospitals
- > Schools
- > Leisure
- > Offices



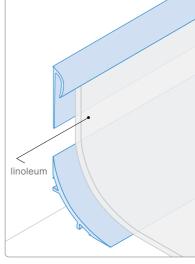
Capping Seals

Information

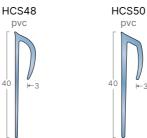
- > Capping seals provide a decorative, neat edge where resilient floorcoverings are dressed up the wall to form a skirting. Available in a choice of profiles to suit resilient floorcoverings up to 3.5mm thick
- > Capping seals are secured to wall surfaces using contact adhesive
- > For larger colour swatches see page 173

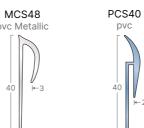


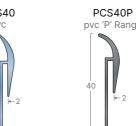
Flexible pvc capping seals are used to finish the top of a resilient floorcovering where it has been coved up the wall. Capping seals are typically used in conjunction with a cove former

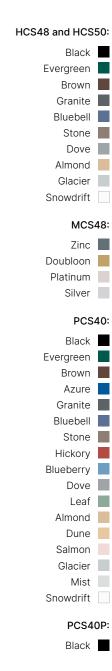












Visit: www.s. for full details Visit: www.gradus.com



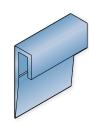
Dimensions shown are nominal Illustrations are 70% size in mm Dimensions shown are nominal



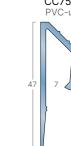
Carpet Caps

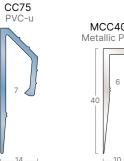
Information

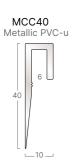
- > Carpet caps provide a decorative, neat edge where carpets are dressed up the wall to form a skirting. Available to suit carpets up to 7mm thick (compressed thickness)
- > Carpet caps are secured with screws and adhesives to wall surfaces
- > For larger colour swatches see page 173

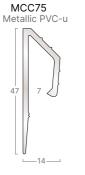


Carpet caps are used to provide a neat finish where carpet or carpet tile is continued up the wall. Available in a choice of PVC-u, Metallic PVC-u and Aluminium. Carpet caps can be combined with a cove former where required to help form a cove

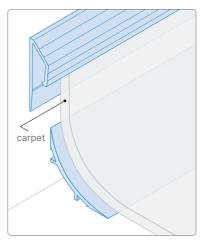








ACC40

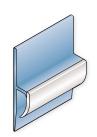


CC75 and CF38 cove former used with a broadloom carpet.

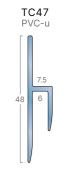
Tile Caps

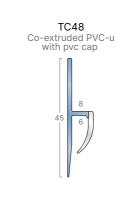
Information

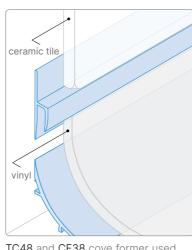
- > Tile caps are for use where ceramic wall tiles are finished against a resilient floor finish that has been dressed up the wall to form a skirting. Available to suit resilient flooring up to 6mm thick
- > Tile caps are secured to wall surfaces using contact adhesive
- > For larger colour swatches see page 173



Tile caps are used where ceramic wall tiles are finished against a resilient floor finish that has been dressed up the wall to form a skirting







TC48 and CF38 cove former used with vinyl and ceramic tile.

Visit: www.grader for full details Visit: www.gradus.com



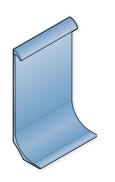
Dimensions shown are normal illustrations are 70% size in mm Dimensions shown are nominal



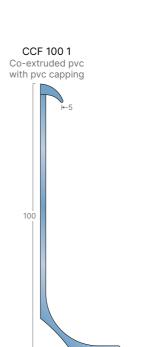
Cove Formers

Information

- > Cove formers provide a neat cove allowing floorcoverings to be dressed up the wall to form a skirting and supports the floorcovering at a weak point
- > For larger colour swatches see page 173



CCF 100 1 is a one piece pvc cove former combining a pvc capping seal



carpet

CC40 and CC75:

Brown

Granite

Bluebell

Snowdrift

Doubloon

Aluminium

Snowdrift ___

MCC40 and MCC75:

Dove

Zinc

Silver

ACC40:

TC47:

TC48:

Black

Zinc Doubloon Platinum Silver Snowdrift

CCF 100 1:

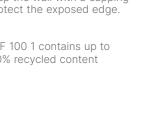
Dove Almond Glacier Snowdrift

Burnt Almond

CCF 100 1 fitted with a broadloom carpet to allow the carpet to continue up the wall with a capping seal to protect the exposed edge.



CCF 100 1 contains up to 100% recycled content

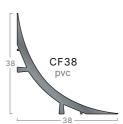


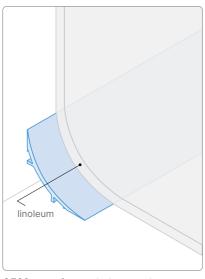


Cove formers are used to form a cove where floorcoverings are continued up the wall. Cove formers are typically used in conjunction with a capping seal or carpet cap to finish the raw edge of the floorcovering (see pages 181-182)









CF38 cove former being used to form a cove for linoleum to continue up the wall.



CF20, CF32P and CF38 contain up to 100% recycled content

Stratum™ Skirtings - Pvc

The Gradus Stratum range comprises heavy-duty pvc skirting profiles. Life cycle analysis shows Stratum is a cost effective alternative to wood skirtings. The smooth matt finish is resistant to stains, dents and scratches, and will not splinter, chip and crack like traditional wood skirtings, offering a low maintenance hygienic solution to wall base finishing. Stratum can be installed around gentle curves and can also accommodate and disguise minor irregularities in wall surfaces.

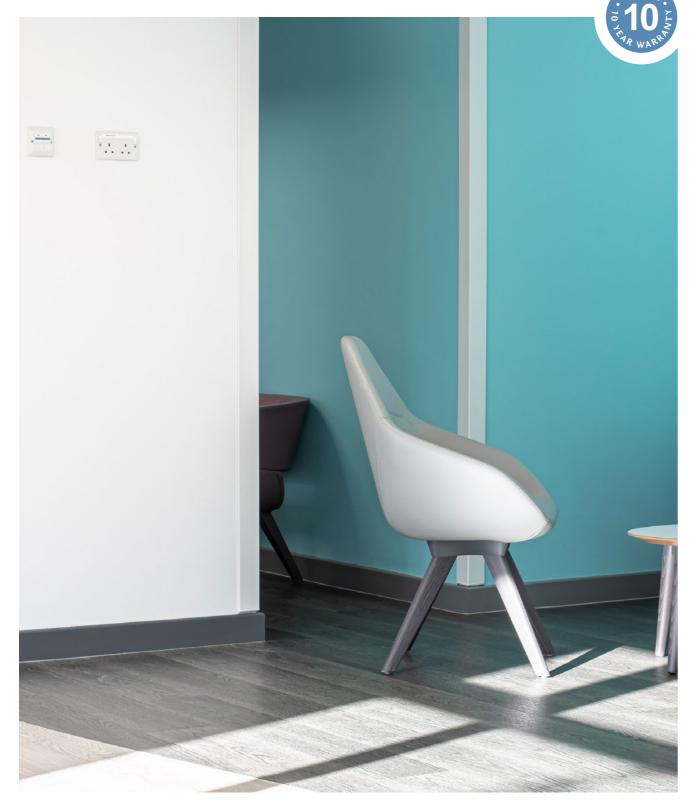
Typical Applications

Suitable for a wide range of interior contract environments including:

> Hospitals

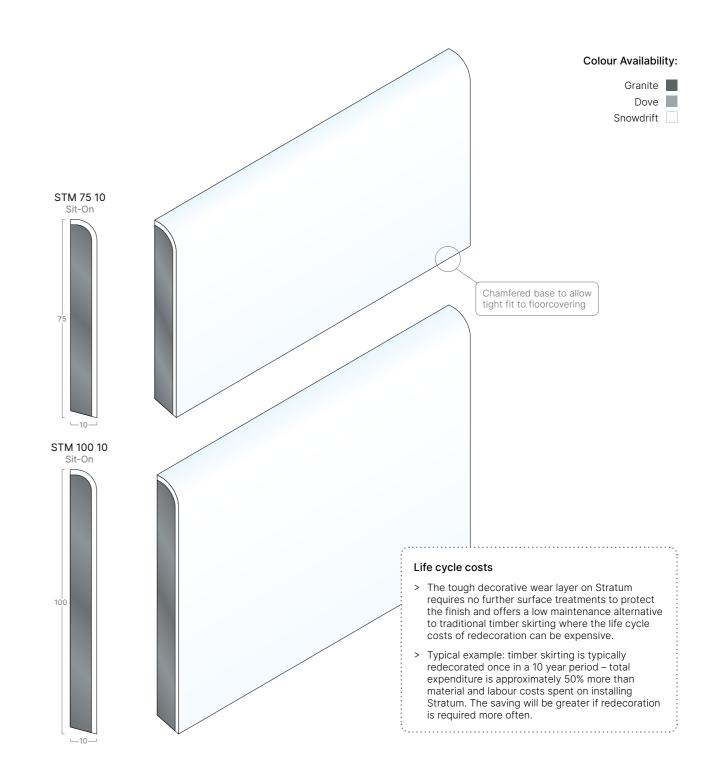
> Schools

> Offices



Information

- > For guidance on the correct selection of skirtings see page 172
- > Cost effective alternative to finished timber skirting that utilises up to 30% recycled pvc in its construction and is suitable for all areas that require a high quality finish to be maintained through the life of the building
- > Eliminates the need for processes normally associated with wood skirting such as sanding, priming, filling and painting
- > Stratum skirtings are installed to the wall using a proprietary cartridge adhesive
- > Internal/external corners can be mitred on site
- > For larger colour swatches see page 173
- > Semi-flexible pvc skirting, ideal for use in most interior areas
- > 10mm thick, 2 heights 75mm & 100mm and supplied in 2m lengths







Dimensions shown are nominal Dimensions shown are
Illustrations are 70% size in mm





Metal Skirtings

Gradus metal skirtings are available in a variety of designs and heights to suit the requirements of modern commercial environments. Profiles are available in a range of finishes including stainless steel and aluminium. MAS95 and MAS97 profiles have also been designed with a cable tidy feature where low voltage cables e.g. computer and telephone cables, can be hidden from view.

Typical Applications

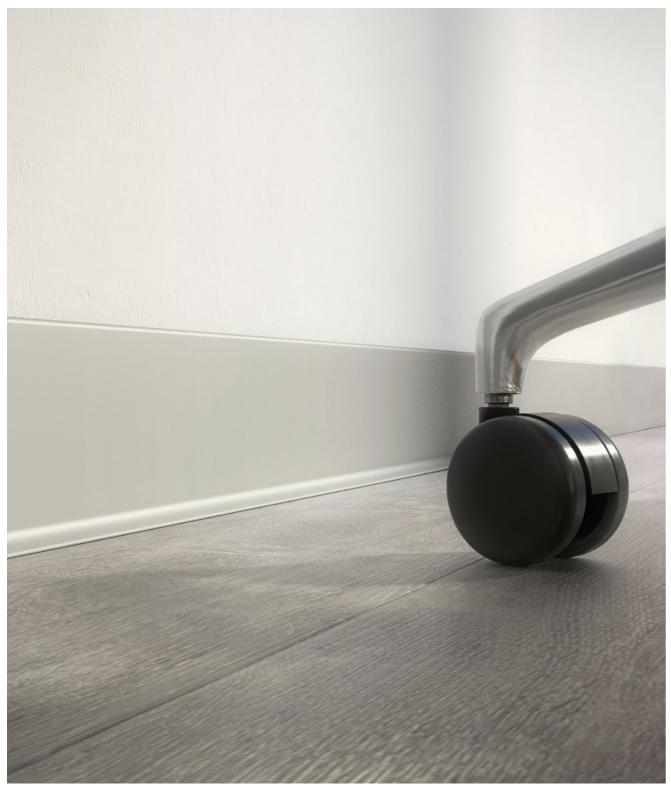
Suitable for a wide range of interior commercial applications:

> Offices

> Hospitality

> Retail

> High-end Residential



MAS90 Aluminium Skirtings

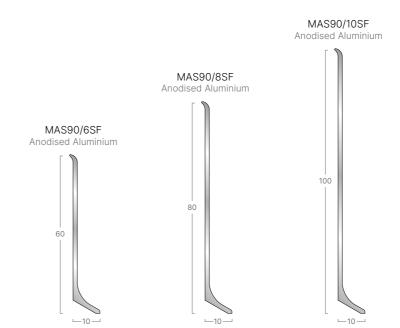
Information

- > Ideal for use in areas where a modern hi-tech finish is required. Designed to be installed on top of the floorcovering. The capped toe design of the profile allows wall-to-floor expansion gaps to be hidden when installed with tiled floorcoverings
- > For guidance on the correct selection of skirtings see page 172
- > Silver anodised aluminium*
- > Supplied in 2m lengths
- > For larger colour swatches see page 173
- > MAS90 profiles are fixed to the wall using appropriate adhesive
- > Availability maybe subject to lead times

Visit www.gradus.com for full installation instructions



MAS90/6SF





Metal accessories in a silver anodised finish are available for the MAS90 profiles for neat finishing on-site.

Skirting Profile	Height	Finish	End Caps	Junction	External Corner	Internal Corner
MAS90/10SF	100mm	Silver	MAS90/10MP	MAS90/10MG	MAS90/10ME	MAS90/10MI
MAS90/8SF	80mm	Silver	MAS90/8MP	MAS90/8MG	MAS90/8ME	MAS90/8MI
MAS90/6SF	60mm	Silver	MAS90/6MP	MAS90/6MG	MAS90/6ME	MAS90/6MI

Note: All accessories are supplied in packs of 4 except for End Caps which are supplied as 4 sets of 2 (one left hand and one right hand)

^{*} Note: Additional finishes are available on request subject to minimum quantities and lead times.







MSS790 Stainless Steel Skirtings

Information

- > Ideal for use in areas where a modern hi-tech finish is required. Designed to be installed on top of the floorcoverings. The capped toe design of the profile allows wall-to-floor expansion gaps to be hidden when installed with tiled floorcoverings
- > For guidance on the correct selection of skirtings see page 172
- > Stainless steel satin finish
- > Supplied in 2.7m lengths
- > For larger colour swatches see page 173
- > MSS790 profiles are fixed to the wall using appropriate adhesive
- > Availability maybe subject to lead times

Visit www.gradus.com for full installation instructions



MSS790/6SF





Metal accessories in a satin finish are available for the MSS790 profiles for neat finishing on-site.

Skirting Profile	Height	Finish	End Caps	Junction	External Corner	Internal Corner
MSS790/8SF	80mm	Satin	MSS790/8MPS	MSS790/8MGS	MSS790/8MES	MSS790/8MIS
MSS790/6SF	60mm	Satin	MSS790/6MPS	MSS790/6MGS	MSS790/6MES	MSS790/6MIS

Note: All accessories are supplied in packs of 4 except for End Caps which are supplied as 4 sets of 2 (one left hand and one right hand)





Dimensions shown are nominal Illustrations are 70% size in mm Dimensions shown are nominal



MAS95 & MAS97 Interlocking Aluminium Skirtings

Information

- > Ideal for use in areas where a modern finish is required. Design allows low voltage (computer & telephone) cables to be hidden behind the skirting profile
- > For guidance on the correct selection of skirtings see page 172
- > Silver anodised aluminium with interlocking aluminium fixing brackets
- > Supplied in 2m lengths. 3 fixing brackets supplied per length
- > For larger colour swatches see page 173
- > MAS95 and MAS97 profiles are fixed to the wall using screw fixings
- > Availability maybe subject to lead times

Visit www.gradus.com for full installation instructions

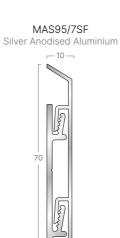


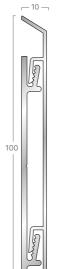
MAS95/7SF

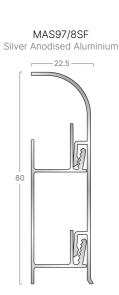


MAS97/8SF





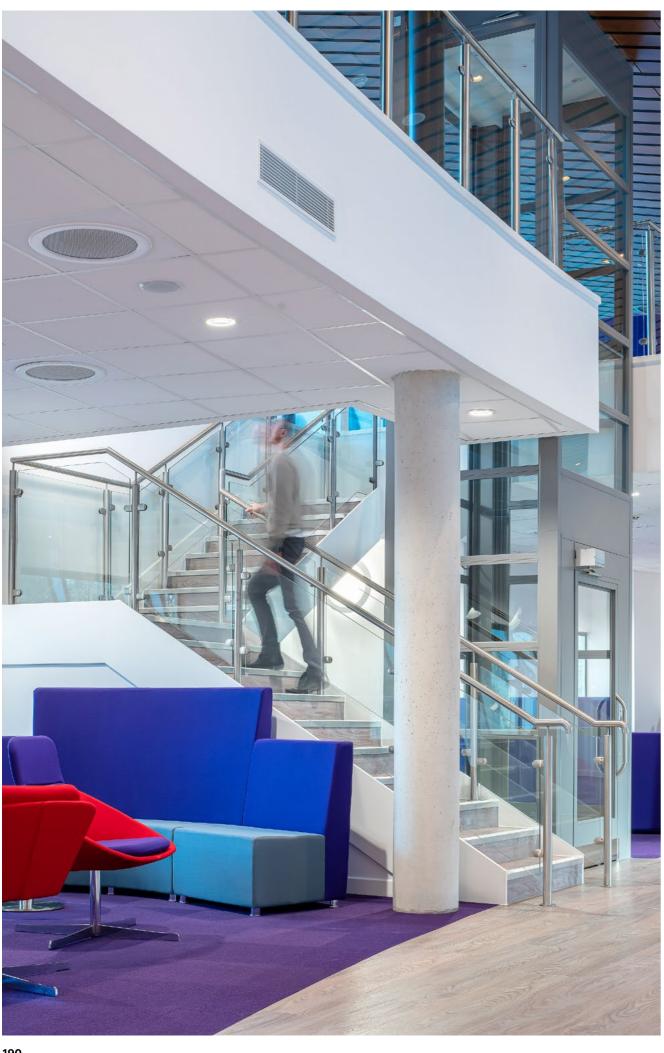




Accessories are available for both MAS95 & MAS97 profiles for neat finishing on-site. These are supplied in silver finish PVC-u to co-ordinate with the aluminium skirting profiles.

Skirting Profile	Height	Finish	End Caps	Junction	External Corner	Internal Corner
MAS95/10SF	100mm	Silver	MAS95/10P	MAS95/10G	MAS95/10E	MAS95/10I
MAS95/7SF	70mm	Silver	MAS95/7P	MAS95/7G	MAS95/7E	MAS95/7I
MAS97/8SF	80mm	Silver	MAS97/8P	MAS97/8G	MAS97/8E	MAS97/8I

Note: All accessories are supplied in packs of 4 except for End Caps which are supplied as 4 sets of 2 (one left hand and one right hand)



Section 5

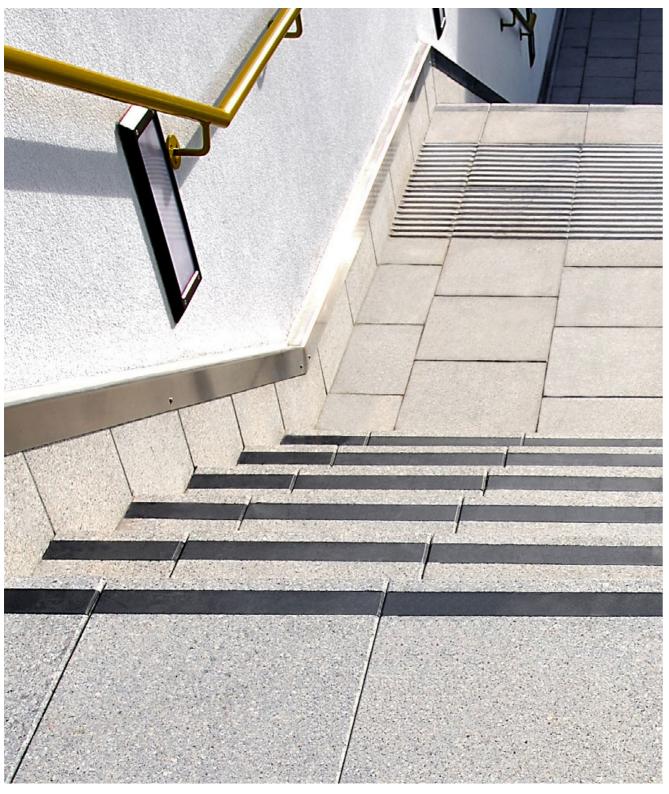
Associated Products for Stairs & Floors

Information on Gradus products that are typically associated with stairs and surrounding areas: slip-resistant surface finishes and cable ducts.

Stairtile™ - Slip-Resistant Flooring

Stairtile is a rubber composite material designed to provide a hard-wearing, slip-resistant finish for stairs and floors. It can be installed in a wide range of applications such as shopping centres, car parks and other high usage circulation areas. It can be used as a complete stair covering or as an insert set into terrazzo, wood and concrete. Stairtile is suitable for use in both internal and external applications and is available in a choice of 4 colours.

When using Stairtile strips on step edges, in order to ensure that the guidance in The Building Regulations 2010: Approved Document M is followed, Gradus recommends a minimum width (front to back) of 50mm to ensure a sufficient degree of colour contrast is achieved. Stairtile must be set as close to the leading edge of the step as possible. Discs not suitable for step edges as they do not form a solid band as



Gauge options

- > 6.5mm sanded finish typically supplied to ready-prepared floor finishes
- > 8.0mm sanded finish typically supplied where further site finishing is required



Tested using the pendulum tester (see figure 2 on page 198 for details)

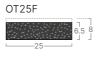
Information

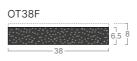
- > Rubber composite typically used with concrete, terrazzo, wood, stone and marble
- > Rebated product fitted with epoxy adhesive and screws
- > Cast-in products require no mechanical fixing
- > To ensure slip-resistant properties are maintained, any build up of contaminants such as grease must be managed using a thorough and regular cleaning regime
- > OT/F profiles are rebated into existing steps. OT/D and OT/RDG profiles are pre-cast into new steps. OT/R profiles can be rebated as a step edge
- > Can be supplied pre-drilled (minimum profile width 20mm). Screw head cover plugs supplied

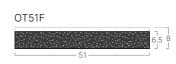
Stairtile Strips

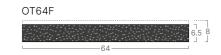


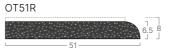


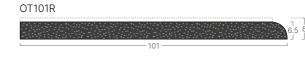


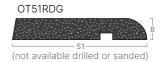












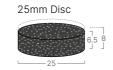
OTD, OTF, OTR and OTRDG

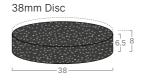
Available in any width from 12mm to 500mm (minimum width of 16mm applies to OTD) Note: minimum width for pre-drilled profiles is 20mm

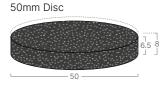




Stairtile Discs







Colour Availability











LRV: 3.70

Brown LRV: 8.99

Yellow

White LRV: 58.38

product sample should

Visit: www.s. for full details Visit: www.gradus.com



Dimensions shown are nominal Dimensions snown are normal illustrations are 70% size in mm

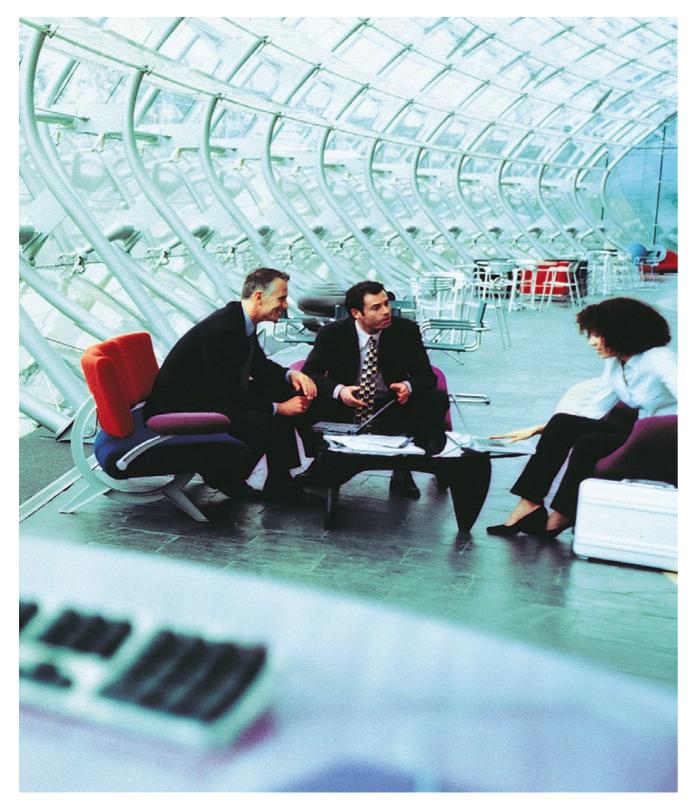
LRV: 44.92



Cable Ducts - Cable Management

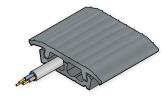
Cable Ducts combine the principle of Gradus Clip-Top functionality with the added benefit of securing loose or trailing light duty cables such as computer cables. The Workplace (Health, Safety and Welfare) Regulations 1992 recommends that "floors should be suitable, in good condition and free of obstructions. Traffic routes should be organised so that people can circulate safely".

Trailing cables should be avoided, and where appropriate the use of cable ducts can help to securely fix cables and prevent accidents, whilst also preventing damage to vital cables.



Information

- > Reduces the risk of accidents for pedestrian traffic by providing a safe link between floorcoverings
- > Cable ducts can either be set in to the carpet to achieve a flush finish (TD series) or fitted on top of the floorcovering (RD series and CD), ideal where a semi-permanent solution is required
- > All cable duct profiles, with the exception of CD65 (a one-piece flexible profile), are supplied as separate tops and bases manufactured from PVC-u which clip together to form the cable duct
- > Suitable for interior use in most light to medium pedestrian traffic applications e.g. offices



TD45/TDB45

Flush Finish (set in to carpet)

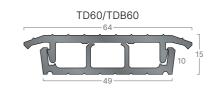
Provides transition between carpets and carpet tiles.

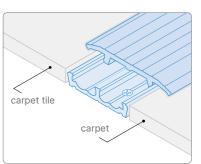


Provides transition between carpets and carpet tiles.



Provides transition between carpets and carpet tiles.

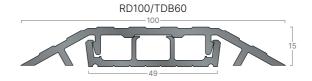




Typical example: TD45/TDB45 carpet tile to carpet.

Surface Mounted

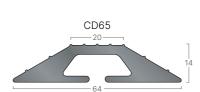
For surface fixing on top of floorcoverings.



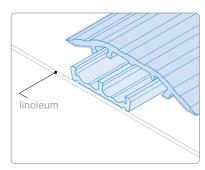
For surface fixing on top of floorcoverings.



For surface mounting on top of floorcoverings.



RD profiles are typically used with hard floorcoverings. For guidelines on use with carpet contact Technical Support.



Typical example: RD75/TDB45 surface mounted to linoleum.

Colour Availability

NCS: 7502-B



Brown NCS: 6010-Y70R





Granite NCS: 6502-R



NCS: 5000-N

For an accurate colour match a physical product sample should be requested.

Visit: www.gradus.com



Dimensions shown are nominal Dimensions shown are nominal Illustrations are 70% size in mm



Safety Track™ - Slip-Resistant Finish

Safety Track is a slip-resistant surface finish that can be used on ramps, walkways or anywhere where a risk of slip exists. Safety Track consists of a silicone carbide resin carrier with a self adhesive backing.

Availability

- > Available in wide choice of sizes and configurations including rolls, cleats, tiles and stair treads
- > Rolls are available to be cut to bespoke sizes. Cleats, tiles and stair treads are supplied cut to size with radius corners

Roll Size	25mm x 18m	1" x 60'
	51mm x 18m	2" x 60'
	102mm x 18m	4" x 60'
	153mm x 18m	6" x 60'
	305mm x 18m	12" x 60'
	609mm x 18m	24" x 60'
Cleats	153mm x 609mm	6" x 24"
Tiles	140mm x 140mm	5½" x 5½"
Stair Treads	20mm x 609mm	³/₄" x 24"
Primer	One Litre Tin	
Edge Fix	Tube (5oz)	

Profile Information

- > Suitable for interior and exterior use
- > Resistant to most common chemicals
- > Suitable for use on most substrates including concrete, stone, terrazzo, wood etc. (surfaces should be primed prior to application with Safety Track primer)
- > Available in Black (LRV: 4.58)
- > Ideal for use on:

 Ramp)S
--------------------------	----

· Plant and Machinery

Walkways

Emergency Service Vehicles

Gantries

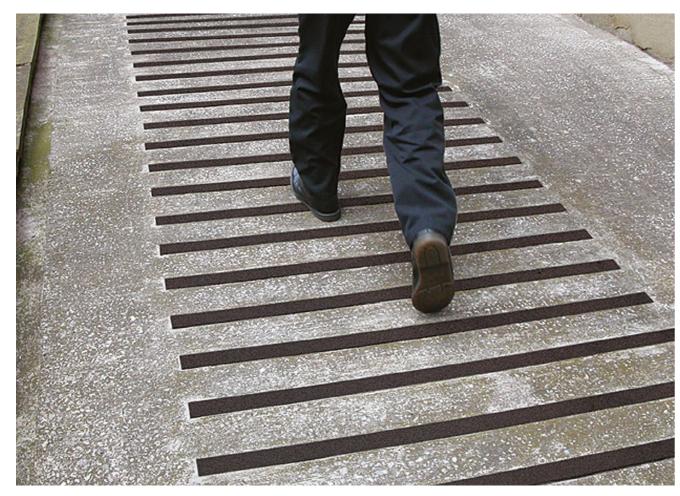
• Commercial and Agricultural Vehicles

Landings

Marine Decking

Installation Advice

- > Surfaces must be fully prepared; clean, flat, even and free from any oil, moisture or dust
- > Primer is available in 1 litre tins (approximate coverage 5sq/m per tin) to assist with surface preparation. Where there is a danger of water penetration e.g. outdoor locations or other wet areas the use of Edge Fix sealant is recommended. Edge Fix sealant is supplied in 5oz tubes. Maximum adhesive strength is reached after 48 hours. Safety Track should not be installed at temperatures below 5°
- > On steps, apply Safety Track 12mm to 15mm from the step edge to prevent edge curl and premature wear



Section 6

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Gradus Guarantee



All Gradus products are designed to meet the latest UK building regulations. Accessibility to buildings, as well as the provision of an inclusive environment for all, is now a requirement of The Building Regulations (ADM & ADK), BS 8300-2:2018, BS 9266:2013 & BS 5395-1:2010.
Gradus actively seeks the advice of RNIB Access Consultancy Services and The Centre For Accessible Environments, and

has consulted directly with Communities & Local Government (formerly the Office of the Deputy Prime Minister). Gradus is confident that all stair edgings, pvc skirtings and transition strips meet the necessary standards and, as such, building owners and specifiers can use Gradus Accessories with confidence.

Testing

- > All inserts are tested for: Slip-resistance and surface roughness.
- > Wear test independently carried out by SATRA using the Frick-Taber test and classified in accordance with the results shown in Figure 1.
- > Slip-resistance tests have been undertaken using the pendulum tester (see Figure 2). All Gradus inserts achieve a PTV of >36 to offer a low risk of slip (see Figure 1).

Figure 1.

	Composition	Environment	Slip Potential	Stair Edging Compatibility
Xtra-grip & Xtra-grip Plus	Pvc with Mineral Aggregate	Interior Dry or Wet Conditions	Dry Conditions Low Wet Conditions Low	XT & Traditional
Interior	Pvc with Natural Mineral Fillers	Interior Dry Conditions	Dry Conditions Low	XT, Traditional & Elite
Standard Exterior	Glass Reinforced Polyester with Fused Alumina	Internal or External Conditions	Dry Conditions Low Wet Conditions Low	Traditional (Aluminium)
Heavy-Duty Exterior	Glass Reinforced Polyester with Fused Alumina	Internal or External Conditions	Dry Conditions Low Wet Conditions Low	Trans-Edge TEX
Stairtile	Rubber Composite with Aggregate Fillers	Internal or External Conditions	Dry Conditions Low Wet Conditions Low	n/a
Metal Castellated	Aluminium or Bronze Alloy	Interior Dry or Wet Conditions	Dry Conditions Low Wet Conditions Low	XT (Aluminium & Bronze)
Wear Classification *	Xtra-grip, Xtra-grip Plus, Inte Group T – Class 34 – Comme Group T – Class 43 – Light Ir * Stairtile and Interior (stand requirements of BS EN 649:1 Metal Castellated, Heavy Du SATRA Pedatron	ercial Very Heavy ndustrial Heavy ard, grained, Elite) tested 997. Xtra-grip and Xtra-gr	to BS EN 660-2:1999 and ip Plus tested to BS EN 13	assessed against the 8845:2005 – 50,000 cycles.

Figure 2.

Pendulum Test Value (PTV)	Slip Potential
0 - 24	High Slip Potential
25 - 35	Moderate Slip Potential
36+	Low Slip Potential

BS 8300-2:2018 - a PTV of at least 36 is required irrespective of wet or dry conditions (see page 202)

Cleaning & Maintenance

A planned cleaning and maintenance programme is crucial to help maintain the performance and visual appearance of Gradus stair edgings and to maximise the lifespan of the products. Trained cleaning staff or a reputable contract cleaner should be used.

Gradus has worked with Selden Research to undertake extensive testing on all Gradus stair edgings. As a result, the method of cleaning and a range of cleaning products have been recommended for use with Gradus stair edgings in a variety of environments.

Cleaning and maintenance information for all Gradus stair edgings is available from: www.gradus.com

For further information about recommended cleaning products, including instructions for use and COSHH data sheets, contact:

Selden Research Limited, Staden Business Park, Buxton, Derbyshire SK17 9RZ

Tel: 01298 26226 Email: gradus@selden.co.uk Website: www.selden.co.uk

Specification Guidelines

Colour & Contrast / Light Reflectance Values

Colour and contrast within the built environment affects accessibility of all building users, in particular those with a visual impairment.

Project Rainbow

A research project carried out by Reading University in conjunction with the Royal National Institute of Blind People (RNIB), The Guide Dogs for the Blind Association (GDBA) and ICI Paints first examined the use of colour contrast to aid navigation around the building and identified that highlighting critical surfaces and special features can provide the basis for wayfinding for visually impaired people. The 'Colour Contrast & Perception' document produced by Reading University uses light reflectance values (LRVs) to measure colour and contrast in products/surfaces and determines whether or not a suitable contrast has been achieved between surfaces.

The findings from Project Rainbow identified the following:

Special Features

Identified as areas that need to be highlighted to allow a building to be used effectively by visually impaired people, i.e. stair edgings, handrails and door opening furniture.

'Special features are additional areas, smaller than critical features, that need to be highlighted to allow the building to be used more easily by visually impaired people. Such features include sanitary ware, handrails, door handles, finger plates, switches, socket outlets, and stair nosings etc, all of which should be contrasted against the background against which they will be seen. Smaller items such as these will need a greater colour difference from their surroundings in order to be identified.'

Trim

'Special attention is needed to those items used in an internal environment to improve the decorative appeal and overall finish of an interior. Such items, which include coving, skirting, architrave, dado rail etc, should be decorated in colours used on larger critical surfaces.'







Special features: Stair edgings are a different colour and luminance to the flooring to define step edges



Special features:

skirting is the same colour as the wall

Specification Guidelines

BS 8300-2:2018 and The Building Regulations 2010: Approved Document M

British Standard BS 8300-2:2018 states that light reflectance values (LRVs) are used to assess visual contrast using the method of measurement detailed in BS 8493:2008+A1:2010. Approved Documents M (ADM) & K (ADK) directly refers to colour and contrast in the definitions section, stating:

'Contrast visually, when used to indicate the visual perception of one element of the building, or fitting within the building, against another means that the difference in light reflectance value between the two surfaces is greater than 30 points.'

ADM then refers to Colour, Contrast & Perception - Design Guidance for Internal Built Environments, Reading University (Project Rainbow).

Light Reflectance Values (LRVs) explained

Reflectance is the proportion of light that a surface reflects compared to the amount of light that falls on the surface. An LRV is a value given to a surface to denote the amount of light reflected. Therefore, as many people with a visual impairment can perceive light and dark, LRVs are a suitable method to measure contrast.

LRVs are marked on a scale of 1 to 100 depending on the percentage of light reflected. Dark, matt and/or textured surfaces absorb a large amount of light and, therefore, have low reflectance values. On the other hand, light, glossy and/or smooth surfaces reflect the majority of light that falls on them and have high reflectance values.

Light Reflectance Scale

In order to achieve a suitable contrast between different surfaces, Project Rainbow and ADM recommend that there is at least a 30 point (not 30%) difference in the LRVs of the two surfaces.

Black 0 White 100

How to Measure LRVs

The British Standard BS 8493:2008+A1:2010 specifies the method of test to determine the light reflectance value (LRV) of different surfaces of materials, including preparation of specimens in standardised conditions and results put into a test report.

All relevant Gradus products have been measured using the CIE Y value and a test report is available upon request.

Previous to this standard being published, two widely used methods of measurement had been used - the CIE L value (fluorescent light) and the CIE Y value (natural daylight), causing confusion and potentially dangerous specifications. This standard has adopted the CIE Y value as the single consistent method of measurement for LRVs that is to be used across all industries.

What the colour & contrast guidelines mean for Gradus flooring accessories:

Stair Edgings

BS 8300-2:2018: 'Each step nosing should incorporate a durable permanently contrasting continuous material for the full width of the stair on both the tread and the riser to help people who are blind or partially sighted appreciate the extent of the stair and identify individual treads. The contrasting material should extend 50mm to 65mm in width from the front edge of the tread and 30mm to 55mm from the top of the riser, and should contrast visually with the remainder of the tread and riser.'

ADM: 'All nosings are made apparent by means of a permanently contrasting material 55mm wide on both the tread and the riser.'

Colour, Contrast & Perception (Project Rainbow): 'The nosing of every step in a flight of stairs should be adequately colour or luminance contrasted with the remainder of the step and the floor coverings adjacent to the top and bottom of the flight.

Skirtings

BS 8300-2:2018: 'To avoid giving the wrong impression about the size of a room, skirtings should have the same LRV as the wall so that the junction between the skirting and the floor marks the extent of the room.'

Colour, Contrast & Perception (Project Rainbow): 'Skirting should be either decorated the same colour as the wall, the same colour as the floor or, if different to one or the other or both, must be decorated in a colour which highlights even further the junction.

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Guide to matching PVC-u Hardnose channel to insert colours for visual contrast

Hardnose					Insert Av	ailability			
Channel	LRV	Xtra-grip	LRV	Xtra-grip Plus	LRV	Interior Standard	LRV	Interior Grained	LRV
Black	4.99	Onyx	4.52	Asphalt	4.52	Jet	4.56	Black	6.47
Ink	5.40	Neptune	5.03	Shark	5.03	Ink	4.96	-	-
Burgundy	5.89	-	-	-	-	Burgundy	5.70	-	-
Evergreen	6.63	_	-	-	-	Evergreen	6.69	_	-
Midnight	6.77	-	-	-	-	Midnight	6.56	-	-
Brown	7.15	Umber	5.71	Bark	5.71	Coffee	6.05	Brown	12.13
Bluebell	9.76	-	-	-	-	Ocean	8.00	-	-
Granite	11.69	Graphite	12.56	Mercury	12.56	Lead	12.77	Granite	13.4
Dove	26.19	Quarry	24.71	Smoke	24.71	Steel	26.99	Dove	23.40
Linen	37.50	_	-	-	-	Linen	38.59	-	-
Glacier	42.73	Concrete	37.44	Dusk	37.44	Glacier	42.09	-	-
Clay	51.53	Ivory	43.77	Fossil	43.77	Clay	47.97	-	-
Sky	55.38	Surf	43.58	Air	43.58	Sky	52.63	-	-
Canvas	55.43	Pumice	46.83	Sandstone	46.83	Canvas	53.27	_	-
Jade	55.54	Bamboo	45.84	Prairie	45.84	Jade	53.98	-	-
Wisp	56.62	Platinum	52.79	Lunar	52.79	Wisp	58.17	-	-
Buttercup	62.62	Ochre	49.97	Citrine	49.97	Buttercup	55.54	-	-
Snowdrift	80.54	Frost	66.51	Calcite	66.51	Snowdrift	83.77	-	-

The Building Regulations and British Standards specifying the right Gradus product

The Building Regulations and British Standards are designed to ensure the optimum specification of products through a combination of legislative requirements and guidance. The following extracts have been taken from The Building Regulations 2010 and British Standard BS 8300-2:2018, BS 9266:2013, BS 5395-1:2010 and show how Gradus products can be used to help satisfy these requirements, and help achieve an inclusive environment in line with the Equality Act 2010. For further details on this or any other aspect of The Building Regulations and British Standards contact Gradus Technical Services on 01625 428922. Guidance varies internationally, please refer to the relevant countries' building standards (or equivalent) before specification.

Extracts shown below represent examples of good practice

BS 8300-2:2018

Design of an accessible and inclusive built environment Part 2 : Buildings - code of practice

Guidance on Stair Edgings

10 Vertical movement

10.1 Steps and stairs

10.1.4 Identification and slip resistance of nosings

Each step nosing should incorporate a durable, permanently contrasting continuous material for the full width of the stair on both the tread and the riser to help people who are blind or partially sighted appreciate the extent of the stair and identify individual treads ①. The contrasting material should extend 50 mm to 65 mm in width from the front edge of the tread and 30mm to 55mm from the top of the riser, and should contrast visually with the remainder of the tread and riser ②.

NOTE 1 Particular care is needed to ensure that there is adequate contrast between nosings and landings 1.

NOTE 2 Nosing that wraps around the riser might assist people who are blind or partially sighted 3.

NOTE 3 A proprietary nosing can provide a durable solution that satisfies both visual contrast and slip resistance criteria (see BRE IP 15/03).

The whole tread or the nosing should incorporate a slip-resistant material

NOTE 4 Guidance on slip resistance of surfaces is given in Annex C.

Surface material tread and risers should be free from patterning.

NOTE 5 It is beneficial that surface material at landings and floors contrasts with surface material of stairs, subject to maintaining visual contrast at top and bottom nosings.

• All Gradus stair edging colours have been measured to provide Light Reflectance Values (LRVs)* in order to provide the specifier with information to ensure that suitable contrast is achieved with the surrounding stair material. PVC-u Hardnose stair edgings (see pages 42-45, 60-62) can provide an ideal solution as channel and insert colours can be matched to contrast with the tread and riser. XT Bronze (see pages 32-35) and XT Aluminium (see pages 36-41) can also be selected with matching metal castellated insert finish.

* These values have been determined using the CIE Y value, in accordance with BS 8493:2008+A1:2010 – see page 200 for further details

2 The profile dimensions stated are guidance only and other factors should be taken into consideration when specifying stair edgings such as step dimension and type and frequency of traffic. However, a large proportion of Gradus stair edgings fall between the dimensions stated, including the XT range (see pages 30-45).

Continued...

Specification Guidelines

3 The XT range of stair edgings features a slip-resistant PVC insert or metal castellated insert that extends around the leading edge of the profile to ensure that foot contact is always made with the slip-resistant element of the stair edging, providing the ideal solution for reducing the risk of slips, trips and falls on stairs in line with BRE recommendations. The XT range is available in Bronze (see pages 32-35), Aluminium (see pages 36-41) and PVC-u Hardnose (see pages 42-45).

10 Vertical movement

10.1 Steps and stairs

10.1.7 Surface materials

The surface materials used for internal steps and stairs should be chosen to be easy to maintain and as slip-resistant as possible, especially if surfaces are likely to become wet due to location or use, or if spillage occurs. NOTE 1 Advice and further references on slip resistance of surfaces are given in Annex C.

A choice of slip-resistant insert materials are available for all Gradus stair edgings. Xtra-grip and Xtra-grip Plus inserts have been specifically designed to reduce the risk of slip in internal wet areas or where spillages are likely to occur (see page 24 for advice on specifying the most suitable insert).

Annex C Slip potential characteristics of treads, ramp surfaces and floor finishes

C.2 Slip resistance

The following indices are used to indicate the slipperiness of surfaces:

a) pendulum test values (PTVs) obtained using a pendulum tester in line with BS 7976-2;

b) surface micro roughness (Rz) measurements using a stylus instrument in accordance with BS 1134.

Detailed information on assessing slip resistance, together with a table illustrating common surface materials and their dry and wet slip resistance values (SRV), also known as pendulum test values (PTV), can be found in BS 5395-1:2010, Clause 7.

NOTE Depending on the precise nature of the wearing surface, seemingly similar products made from the same material can be totally different in terms of their slip potential characteristics.

C.4 Step nosings

Where slip resistance is required for nosings and treads, the slip resistance needs to be equivalent to that expected for level surfaces. A PTV greater than 36 is considered to be suitable, as pushing and turning are unlikely on stairs. On existing nosings, the slip resistance of step nosings are generally expressed by their Rz roughness value as PTV is difficult to measure. In such cases a roughness Rz value of 20 µm is considered to be suitable.

All Gradus stair edging inserts are tested for slip-resistance using the pendulum tester – all inserts have a low slip potential (inserts measured in dry conditions – PTV of >36; inserts measured in wet conditions – PTV of >36).

All inserts are also tested for wear, surface roughness, chemical resistance and bacterial/fungal resistance (see page 198 for further details).

Guidance on Skirtings

11 Surface finishes

1.1 Visual characteristics

The LRV of a wall should be 30 points different from that of the ceiling and of the floor. To avoid giving the wrong impression about the size of a room, skirtings should have the same LRV as the wall so that the junction between the skirting and the floor marks the extent of the room, except

where coved skirtings are used, where the skirting should have the same LRV as the floor and should extend not more than 100mm above finished floor level.

All Gradus skirting colours have been measured to provide Light Reflectance Values* in order to provide the specifier with information to ensure that the skirting can be matched to the wall and contrast with the floor.

* These values have been determined using the CIE Y value, in accordance with BS 8493:2008+A1:2010 – see page 200 for further details.

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BS 9266:2013

Design of accessible and adaptable general needs housing - Code of Practice.

The requirements of a dwelling's occupants can change as a result of accident, illness or ageing, giving rise to reduced mobility or increasing sensory loss. In order to meet these changing requirements, homes need to be accessible and adaptable; accessible for both visitors and residents and adaptable to meet residents' changing needs both temporary and longer term.

The standard outlines recommendations for design features which can be incorporated when the dwelling is first built, or have provision made at the outset for their future adaptation. This helps reduce the need for expensive or disruptive alterations or substantial adaptations in the future.

This British Standard gives recommendations for methods of selection, planning, installation and maintenance for both stair nosings and barrier matting. Gradus advice and recommendations are shown in blue text.

Guidance on Stair Edgings

- 6 External access routes
- 6.8 Steps on access routes

6.8.1 Stepped access routes to individual houses

All step nosings should incorporate a permanently contrasting continuous material for the full width of the stair on both the tread and the riser. The material should contrast visually with the remainder of the tread and riser 1.

• All Gradus stair edging colours have been measured to provide Light Reflectance Values (LRVs)* in order to provide the specifier with information to ensure that suitable contrast is achieved with the surrounding stair material. PVC-u Hardnose stair edgings (see pages 42-45, 60-62) can provide an ideal solution as channel and insert colours can be matched to contrast with the tread and riser. XT Bronze (see pages 32-35) and XT Aluminium (see pages 36-41) can also be selected with matching metal castellated insert finish.

*These values have been determined using the CIE Y value, in accordance with BS 8493:2008+A1:2010 - see page 200 for further details.

NOTE 2 A contrasting nosing at the junction between tread and riser might assist people with a visual impairment.

NOTE 3 Further information on the design of steps, and on visual contrast, refer to BS 8300-1:2018, BS 8300-2:2018

6.8.2 Stepped access routes to blocks of flats

All step nosings should incorporate a permanently contrasting continuous material for the full width of the stair on both the tread and the riser, to help people with a visual impairment appreciate the extent of the stair and identify individual treads 1.

① All Gradus stair edging colours have been measured to provide Light Reflectance Values (LRVs)* in order to provide the specifier with information to ensure that suitable contrast is achieved with the surrounding stair material. PVC-u Hardnose stair edgings (see pages 42-45, 60-62) can provide an ideal solution as channel and insert colours can be matched to contrast with the tread and riser. XT Bronze (see pages 32-35) and XT Aluminium (see pages 36-41) can also be selected with matching metal castellated insert finish.

*These values have been determined using the CIE Y value, in accordance with BS 8493:2008+A1:2010 - see page 200 for further details.

The material should be 50 mm to 65 mm wide on the tread and 30 mm to 55 mm on the riser, and should contrast visually with the remainder of the tread and riser 2.

The profile dimensions stated are guidance only and other factors should be taken into consideration when specifying stair edgings such as step dimension and type and frequency of traffic. However, a large proportion of Gradus stair edgings fall between these dimensions stated, including the XT range (see pages 30-45) for internal use and the TEX range of heavy duty stair edgings (see page 71) suitable for external use.

The whole tread and the nosing should incorporate a slipresistant material, starting as close as practicable to the front edge of the nosing and extending the full width and depth of the tread 3.

3 Gradus offer a Heavy-Duty Stair & Floor system suitable for heavy traffic exterior and interior environments (see pages 72-73). The system features stair edgings and tread plates for use on stairs and sheet material for use as a floorcovering on landings and walkways to help reduce the risk of slips and trips in the most demanding environments.

NOTE 1 A proprietary nosing can provide a durable solution that satisfies both visual contrast and slip resistance criteria (see BRE IP 15/03 [12]).

NOTE 2 Further information on slip resistance is given in BS 8300-1:2018, BS 8300-2:2018

8 Communal areas within blocks of flats

3.2 Design of common steps and stairs

The design of common steps and stairs should conform to 6.8.2

Guidance on light reflectance values

8.5 Visual contrast between surfaces or building elements

Differences in light reflectance value (LRV) should be used to assess the degree of visual contrast between surfaces such as floors, walls, doors and ceilings, and between key fittings/fixtures and surrounding surfaces.

Note

Relevant LRV differentials and methods of LRV measurement are provided in BS 8300-1:2018, BS 8300-2:2018 - Annex B.

Visual contrast is used to indicate the visual perception of one element of the building, or fitting within the building, against another to ensure the difference in light reflectance value between the two surfaces is greater than 30 points. All Gradus stair edging colours have been measured to provide Light Reflectance Values* in order to provide the specifier with information to ensure that suitable contrast is achieved with the surrounding stair material. *These values have been determined using the CIE Y value, in accordance with BS 8493:2008 - see page 200 for further details.

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The Building Regulations 2010 - Approved Document K 2013 edition

Protection from falling, collision and impact

This approved document takes effect on 6th April 2013 for use in England. Current building standards should be checked at time of specification for Wales, Scotland and Northern Ireland.

Approved documents are intended to provide guidance. The main points relating to stairs that are detailed in Approved Document K are shown below with supporting recommendations by Gradus shown in blue text.

K1 Stairs and ladders

Construction of steps

For buildings other than dwellings

- 1-7 For steps apply the following guidance.
 - a. Make step nosings apparent: use material that will contrast visually, a minimum of 55mm wide, on both the tread and the riser.

For common access areas in buildings that contain flats

- 1-10 Provide a stair with steps that comply with the following quidance.
 - a. Make step nosings apparent: use material that will contrast visually, 50mm to 65mm wide on the tread and 30mm to 55mm on the riser.

All Gradus stair edging colours have been measured to provide Light Reflectance Values (LRVs)* in order to provide the specifier with information to ensure that suitable contrast is achieved with the surrounding stair material. PVC-u Hardnose stair edgings (see pages 42-45, 60-62) can provide an ideal solution as channel and insert colours can be matched to contrast with the tread and riser. XT Bronze (see pages 32-35) and XT Aluminium (see pages 36-41) can also be selected with matching metal castellated insert finish.

*These values have been determined using the CIE Y value in accordance with BS 8493:2008+A1:2010 - see page 200 for further details.

The profile dimensions stated are guidance only and other factors should be taken into consideration when specifying stair edgings such as step dimension and type and frequency of traffic. However, a large proportion of Gradus stair edgings fall within the dimensions stated, including the XT range (see pages 30-45).

Source: Building Regulations - Protection from falling, collision and impact - Approved Document K - 2013 Edition. Crown Copyright material is reproduced with the permission of the Controller of HMSO and the Queen's Printer for Scotland.

The Building Regulations 2010 - Approved Document M "Access to and use of buildings"

(2015 edition incorporating 2020 amendments – for use in England)

The latest version of Approved Document M is stated 'for use in England'. Current building standards should be checked at time of specification for Wales, Scotland and Northern Ireland.

Approved Document M is split into two parts:

- Volume 1: Dwellings
- · Volume 2: Buildings other than dwellings

Specification Guidelines

Volume 1 refers to Approved Document K for specific guidance notes on stair edgings (detailed on page 203). The below abstracts of guidance are taken from Volume 2.

Building owners have a legal duty to ensure all people can gain access to and use a building and its facilities.

Approved documents are intended to provide guidance and much of the guidance in Approved Document M is based on BS 8300. The main points relating to stair and stepped access that are detailed in Approved Document M are shown below, with supporting recommendation by Gradus shown in blue text.

Stepped Access

1-27 People with impaired sight risk tripping or losing their balance if there is no warning that steps provide a change in level

Use of a stair edging that contrasts with the surrounding tread/riser material will help to clearly define the step edge and warn of a change in level.

1-29 Materials for treads should not present a slip hazard, especially when the surface is wet.

Gradus provides a range of inserts for use in interior (dry and wet) and exterior conditions (see page 24).

1-30 People should easily be able to appreciate where to place their feet by highlighting nosings and avoiding open rises.

Use of a stair edging that contrasts with the surrounding tread/riser material will help to clearly define the step edge. Both the insert and channel of the stair edging should be of a suitable contrast to the surrounding floor finishes. ADM directly refers to colour contrast in the definitions section stating that:

'Contrast visually, when used to indicate the visual perception of one element of a building, or fitting within the building, against another means that the difference in light reflectance value between the two surfaces is greater than 30 points.'

All Gradus stair edging colours have been measured to provide Light Reflectance Values* in order to provide the specifier with information to ensure that suitable contrast is achieved with the surrounding stair material.

*These values have been measured using the CIE Y value in accordance with BS 8493:2008+A1:2010. See page 200 for further details.

1-33 (i) All nosings are made apparent by means of a permanently contrasting material 55mm wide on both the tread and

The 55mm dimension detailed is guidance only and other factors should be taken into consideration when specifying stair edgings such as step dimension, type and frequency of traffic. Communities and Local Government (formerly The Office of the Deputy Prime Minister) also acknowledges that advice given by other expert bodies should be taken into consideration, for example the RNIB Access Consultancy Services who state that the ideal dimension for a stair edging is 55mm on the tread and 30-50mm on the riser, which takes into account lower risers where a 55mm stair edging may take up a large proportion of the riser surface and therefore could be confusing for partially sighted people. If 55mm profiles are required they are available in the Gradus range (see pages 34, 35, 39, 40, 41, 45, 49, 50, 54 & 60).

Entrance Lobbies

2-29 (e) floor surface materials within the lobby do not impede the movement of wheelchairs e.g. not coir matting, and changes in floor materials do not create a potential trip hazard.

The majority of Gradus mats are suitable for use with

2-29 (f) the floor surface helps to remove rainwater from shoes and wheelchairs.

A combination of Gradus primary and secondary barrier matting will help prevent the ingress of rainwater.

2-29 (g) where matwells are provided, the surface of the mat is level with the surface of the adjacent floor finish.

Gradus offers a range of matwell frames and primary barrier mats designed to work together to provide a smooth transition to the surrounding floor finish.

Corridors and Passageways

3-12 In order to help people with visual impairment to appreciate the size of a space they have entered, or to find their way around, there should be a visual contrast between the wall and floor.

Gradus skirting profiles are available in a wide choice of colours and will provide a suitable colour contrast, helping define where the floor ends and the wall begins.

Source: Building Regulations - Access to and use of buildings - Approved Document M - 2015 edition incorporating 2020 amendments. Crown Copyright material is reproduced with the permission of the Controller of HMSO and the Queen's Printer for Scotland.

BS 5395-1:2010

Stairs - Part 1:

Code of practice for the design of stairs with straight flights and winders

This standard provides guidance or good practice in the design of stairs with straight flights and winders. Gradus advice and recommendations are shown in blue text

4 Safety

4.7 Marked nosings

On a normal-use stair, each step or landing nosing should incorporate a permanently contrasting material for the full width of the stair on both the tread and the riser to help blind and partially sighted people appreciate the extent of the stair and identify individual treads. The material should be 50 mm to 65 mm wide on the tread and 30 mm to 55 mm on the riser, and should contrast visually with the remainder of the tread and riser.

NOTE Advice on visual contrast can be found in BS 8300-1:2018, BS 8300-2:2018 - Annex B.

All Gradus stair edging colours have been measured to provide Light Reflectance Values (LRVs)* in order to provide the specifier with information to ensure that suitable contrast is achieved with the surrounding stair material. PVC-u Hardnose stair edgings (see pages 42-45, 60-62) can provide an ideal solution as channel and insert colours can be matched to contrast with the tread and riser. XT Bronze (see pages 32-35) and XT Aluminium (see pages 36-41) can also be selected with matching metal castellated insert finish

*These values have been determined using the CIE Y value, in accordance with BS 8493:2008+A1:2010 – see page 200 for further details.

The profile dimensions stated are guidance only and other factors should be taken into consideration when specifying stair edgings such as step dimension and type and frequency of traffic. However, a large proportion of Gradus stair edgings fall between these dimensions stated, including the XT range (see pages 30-45).

7 Slip resistance

Treads and landings should have a surface (and proprietary nosing, if provided) that does not become slippery in use.

Assessments in slip resistance should be undertaken using a combination of the following:

a) Pendulum test value (PTVs) obtained using a pendulum tester in line with BS 7976-2; and

b) Surface micro roughness measurements using a stylus instrument in accordance with BS 1134-1.

NOTE 1 Attention is drawn to the information found in the UK Slip Resistance Group Guidelines [6].

NOTE 2 Any flooring material providing sufficient slip resistance for use on the level, typically with a PTV greater than 36, is suitable for use on stairs.

PTV should be measured in the conditions to which the stair is likely to be exposed.

If strips or inserts are used to improve the slip resistance of steps and stairs, they should be fitted as close possible to the leading edge of the tread and should be of a contrasting colour/brightness. An Rz roughness of 20 um or more is recommended. Such strips or inserts should be firmly fixed.

NOTE 9 For further information on proprietary nosings see BRE IP 15/03 [7].

All Gradus stair edging inserts are tested for slip-resistance using the pendulum tester – all inserts have a low slip potential (inserts measured in dry conditions – PTV >36; inserts measured in wet conditions – PTV >36). All inserts are also tested for wear, surface roughness, chemical resistance and bacterial/fungal resistance (see page 198 for further details).

The XT range of stair edgings features a slip-resistant pvc insert that extends around the leading edge of the profile to ensure that foot contact is always made with the slip-resistant element of the stair edging, providing the ideal solution for reducing the risk of slips, trips and falls on stairs in line with BRE. The XT range is available in Bronze (see pages 32-35), Aluminium (see pages 36-41) and PVC-u Hardnose (see pages 42-45).

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UK Slip Resistance Group



Gradus is a key contributor to the UK Slip Resistance Group, the leading independent authority on slip resistance in the UK that aims to promote greater understanding of the causes of and solutions to slips.

A new guide is now available entitled "What Makes Stairs Safer?" that offers an overview of the key aspects involved in creating safe internal stairs and aims to provide valuable, independent advice to anyone involved in the design, specification, construction, installation, fitting or maintenance of stairs.

For more information and to keep up-to-date with the latest developments, visit: www.ukslipresistance.org.uk

BRE - Research and Guidelines

BRE has published an information paper (ref. IP15/03) entitled "Proprietary nosings for non-domestic stairs". This paper provides guidance to designers and building managers on the best way to assess the types of proprietary nosings that should be provided on non-domestic stairs.

Gradus has combined the key findings of this report with in-house research and development, and as a result has developed the XT range of profiles.

Detailed below is an overview and summary of the key findings in the BRE information paper.

Overview

The study considered the dynamics of pedestrian stair use. Previous studies have shown that 80% of slips on stairs are likely to occur when users are descending the stairs. This usually occurs as a result of an overstep (i.e. when a substantial portion of the foot overhangs the tread). Therefore as the going (tread width) becomes narrower the likelihood of a slip incident becomes greater. Where the going is less than 300mm the risk of slip is increased. Most non-domestic stairs have a going of between 250mm and 280mm. The risk of slip is further increased if the tread surface is smooth, becomes wet or there is a lack of clear colour contrast at the step edge.

Conclusion

The application of a proprietary nosing may reduce the risk of slipping against the factors highlighted above. The proprietary nosing should incorporate a slip-resistant material that should extend to the point at which it meets the vertical face to minimise the risk of slip in descent. Proprietary nosings should all offer a colour contrast to clearly highlight the step edge.



Gradus recommendation

The XT range of stair edgings (see pages 30-45) offers a new edge in safety for stairs and has been developed to take into account the latest guidance contained in the BRE information paper IP15/03, BS 8300-2:2018 and in The Building Regulations 2010 - Approved Document M.



Extracts from BRE Information Paper IP15/03, Proprietary nosings for non-domestic stairs, copyright BRE, reproduced by permission. IP15/03 is available from IHS BRE Press, Bracknell RG12 8FB, www.ihsbrepress.com

See through their eyes



A guide to inclusive design for independent living

People with dementia may see the world differently. What may look 'normal' to us could potentially disorientate a person living with dementia, causing distress or even injury. As a result, the buildings we create must be designed with a deep understanding of the ways in which those with dementia will experience them – from the types of materials used to the interplay of different colours and tones. Furthermore, designing to support people living with dementia is also supportive of an ageing population, which has never been more important.

Why is designing for independent living important

The ONS in 2018 highlighted that the UK has an aging population.

Age UK estimate that:

- There are currently 12 million people aged 65 and over
- 5.5 million aged 75+
- 1.6 million aged 85+
- By 2030 it is anticipated that over 21% of the population will be over 65

The number of years of life expected to be spent without a disability or in good health is commonly referred to as disability-free life expectancy or healthy life expectancy (ONS, 2018). The likelihood of being disabled and / or experiencing multiple chronic and complex health conditions increases with age (ONS, 2018).

In general, a person living with dementia tends to be older - age is the biggest risk factor for developing a disease that causes dementia. It is important therefore that designers consider the needs of the older generation and start to plan and design for independent living for today, tomorrow and the future.

We teamed up with the Dementia Services Development Centre (DSDC) at the University of Stirling, an international organisation with more than 30 years' experience in improving the lives of people with dementia through the development of research-led design principles.

As a result of this work, the DSDC has certified an extensive range of our products as suitable for use in buildings used by people living with dementia.





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ACC40182	AR268134	CET5	ELA 51 4067	ETR305F7130
ACS38 117	AR351	CF20183	ELA 5155 5067	ETR305GF0127
ACS441 117	AR3251	CF32P 183	ELA 517 5068	ETR305GF7130
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ACS52 117	AR83R48	CLS13/LBS45163	ELA 931 5068	ETR306GF0127
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ADM250	AS11 49	CLC20/TDB45164	ELAR1550 111	ETR307F7129
ADM354	AS1106L156	CR5145	ELAR1830 111	ETR307GF0126
ADM454	AS1349	CSI 100 50 2 176	ELAR530 111	ETR307GF7129
ADM549	AS1949	CSI 100 50 2.25 176	ELAR830 111	ETR307GF8131
ADM649	AS250	CSO 100 P 179	ELAR950 111	ETR307UF0126
ADXT139	AS2048	CSO 60 P179	ELB 11 40 69	ETR309F0 128
ADXT1R39	AS2150	CT5258	ELB 31 4069	ETR309F7 130
ADXT2	AS2348	CT7158	ET210141	ETR309GF0128 ETR309GF7130
ADXT2R40	ASRXT13	CT71258	ET210EBF4 141	ETR309GF7130 ETR309GF8131
ADXT4 40	ASXT1139	CT717	ET212141 ET212EBF4141	ETR309GF8131 ETR309UF0128
AFT98, 99	ASXT11	CT75	ET356	ETR312F0128
AFT1298	ASXT2038	CT7859	ET356EBF4 121	ETR312GF0 128
AFT1399	AT718L157	CTR5	ET359 121	ETR312UF0 128
AFT1498	ATB3395	CVA870 139	ET359EBF4 121	L11101201 0 120
AFT1597, 99	ATD121L156	CVA870IW 139	ET367123	F
AFT1797, 99	ATD71L156	CVA873 139	ET804 140	FCA16145
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AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92	ATR5095	CXT2	ET806	FS 150 B 177 FS 303 177 FS 303 P 179
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AFT3312	ATR5095 ATT4295 AVR5020135 B BCS452F7118 BCS454F7118	CXT2	ET806	FS 150 B
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AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118	ATR50	CXT2	ET806	FS 150 B
AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118	ATR50	CXT2	ET806	FS 150 B
AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AK5 50	ATR50	CXT2	ET806	FS 150 B
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AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AK5 50 AK50 48	ATR50	CXT2	ET806	FS 150 B
AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AK5 50 AK5A 50	ATR50	CXT2	ET806	FS 150 B
AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AK5 50 AK5A 50 AK50A 48 AK53 50	ATR50	CXT2	ET806	FS 150 B
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AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AK5 50 AK5A 50 AK5OA 48 AK53 50 AK53A 48 AKRXT53 39	ATR50	CXT2	ET806	FS 150 B
AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AK5 50 AK5A 50 AK5A 50 AK50A 48 AK53 50 AK53A 48 AKRXT53 39 AKVXT1R 38	ATR50	CXT2	ET806	FS 150 B
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AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AJC466SF4 118 AK5 50 AK5A 50 AK5A 50 AK5A 48 AK53 50 AK53A 48 AKXT53 39 AKVXT1R 38 AKXT5A 39 AKXT5A 39 AKXT5OA 38 AKXT5A 39 ALS/B 160 ALS/DR 159 ALS/FB 160	ATR50	CXT2	ET806	FS 150 B
AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AJC466SF4 118 AK5 50 AK5A 50 AK5A 50 AK5A 48 AK53 50 AK53A 48 AKXT5A 39 AKVXT1R 38 AKXT5A 39 AKXT5A 39 AKXT5OA 38 AKXT5A 39 ALS/B 160 ALS/DR 159 ALS/FB 160 ALS/FC 160	ATR50	CXT2	ET806	FS 150 B
AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AJC466SF4 118 AK5 50 AK5A 50 AK5A 50 AK5A 48 AK53 50 AK53A 48 AKXT53 39 AKVXT1R 38 AKXT5A 39 ALS/B 160 ALS/DR 159 ALS/FB 160 ALS/FC 160 ALS/FC 160 ALS/FC 160	ATR50	CXT2	ET806	FS 150 B
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AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AJC466SF4 118 AK5 50 AK5A 50 AK5A 50 AK5A 48 AK53 50 AK53A 48 AKXT53 39 AKVXT1R 38 AKXT5A 39 ALS/B 160 ALS/DR 159 ALS/FB 160 ALS/FC 160 ALS/FC 160 ALS/FR 160 ALS/FR 160 ALS/SR 159	ATR50	CXT2	ET806	FS 150 B
AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AJC466SF4 118 AJC466SF4 18 AK5 50 AK50 48 AK53 50 AK53A 48 AKXT53 39 AKVXT1R 38 AKXT5A 39 AKXT5A 39 AKXT5OA 38 AKXT5A 39 AKXT5A 39 ALS/B 160 ALS/DR 159 ALS/FB 160 ALS/FC 160 ALS/FC 160 ALS/FR 160 ALS/FR 160 ALS/SR 159 ALS/WO 159	ATR50	CXT2	ET806	FS 150 B
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AFT3312 102, 103 AFT398 91, 92 AFT3912 91, 92 AFT3916 91, 92 AFT45 97, 99 AFT708 91 AFT7012 92 AFT7016 92 AJC465SF4 118 AJC466SF4 118 AJC466SF4 118 AK5 50 AK5A 50 AK5A 50 AK5A 48 AK53 50 AK53A 48 AKXT53 39 AKVXT1R 38 AKXT5A 39 AKXT5A 39 AKXT5OA 38 AKXT5A 39 AKXT5A 39 ALS/B 160 ALS/DR 159 ALS/FB 160 ALS/FC 160 ALS/FC 160 ALS/FR 160 ALS/SR 159 ALS/WO 159 ALS/WO 159 ALS/WO 159 ALS/TS 159	ATR50	CXT2	ET806	FS 150 B

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HE153	MR51162	RT265132	T
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HT4778	MSS790/6SF188	RXT31144	TA178
HXT42	MSS790/8SF188	RXT35144	TA16132
HXT4480	MT42 79	RXT51144	TA25134
HXT4780	0	RXT53144	TA2C78
1		RXT535	TA4279
1	OT/D193	RXT55144	TA578
INS12 145	OT/F 193	RXT58144	TA5079
1	OT/R193	RXT71145	TA5B78
J	OT/RDG193	RXT75145	TA5C78
JC881025 119	D	RXT78145	TA682, 123
JC881050 119	P		TA682, 123
JC881050 119 JT365	P PBT1295	S	TA66
JC881050		Safety Track 196	TA66
JC881050 119 JT365	PBT12	S	TA66
JC881050	PBT1295 PBT1695	Safety Track 196	TA66
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120	PBT12	S Safety Track 196 SCS451SF8 116	TA66
JC881050 119 JT365 120 JT365EBF4 120 JT366 120	PBT12 95 PBT16 95 PCR632 133 PCR932 133	S Safety Track 196 SCS451SF8 116 SCS451SF8G	TA66
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120	PBT12	Safety Track	TA66 .79 TA8 .123 TA9 .55, 56, 82 TAC42 .79 TAXT42 .80 TAXT5B .80
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120 K	PBT12	\$ Safety Track	TA66 .79 TA8 .123 TA9 .55, 56, 82 TAC42 .79 TAXT42 .80 TAXT5B .80 TAXT5212 .80
JC881050	PBT12 95 PBT16 95 PCR632 133 PCR932 133 PCS40 181 PCS40P 181 PET276 83, 123	\$ Safety Track	TA66 .79 TA8 .123 TA9 .55, 56, 82 TAC42 .79 TAXT42 .80 TAXT5B .80 TAXT5212 .80 TAXT523 .80
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120 K KA386AS 107 KA386XXL 107	PBT12 95 PBT16 95 PCR632 133 PCR932 133 PCS40 181 PCS40P 181 PET276 83, 123 PG1 55	\$ Safety Track 196 SCS451SF8 116 SCS451SF8G 116 SCS454SF8 116 SCS454SF8G 116 SCS471SF8 115 SCS471SF8G 115	TA66 .79 TA8 .123 TA9 .55, 56, 82 TAC42 .79 TAXT42 .80 TAXT5B .80 TAXT5212 .80 TAXT523 .80 TB42 .79
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120 K KA386AS 107 KA386XXL 107 KA556 / MCB554 109	PBT12 95 PBT16 95 PCR632 133 PCR932 133 PCS40 181 PCS40P 181 PET276 83, 123 PG1 55 PG2 55	\$ Safety Track 196 SCS451SF8 116 SCS451SF8G 116 SCS454SF8 116 SCS454SF8G 116 SCS471SF8 115 SCS471SF8G 115 SCS474SF8G 117	TA66
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120 K KA386AS 107 KA386XXL 107 KA556 / MCB554 109 KA556 / MCB555 109	PBT12 95 PBT16 95 PCR632 133 PCR932 133 PCS40 181 PCS40P 181 PET276 83, 123 PG1 .55 PG2 .55 PK50 .75	\$\ Safety Track	TA66
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120 K KA386AS 107 KA386XXL 107 KA556 / MCB554 109 KA556 / MCB555 109 KA576 105	PBT12 95 PBT16 95 PCR632 133 PCR932 133 PCS40 181 PCS40P 181 PET276 83,123 PG1 .55 PG2 .55 PK50 .75 PK75 .75	\$\ Safety Track 196 \$C\$451\$F8 116 \$C\$451\$F8G 116 \$C\$454\$F8 116 \$C\$454\$F8G 116 \$C\$471\$F8 115 \$C\$471\$F8G 115 \$C\$474\$F8G 117 \$C\$475\$F8G 117 \$C\$M451 115	TA66
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120 K KA386AS 107 KA386XXL 107 KA556 / MCB554 109 KA556 / MCB555 109 KA576 105 KB387AS 107	PBT12 95 PBT16 95 PCR632 133 PCR932 133 PCS40 181 PCS40P 181 PET276 83, 123 PG1 .55 PG2 .55 PK50 .75 PK75 .75 PKR65 .75	\$\ Safety Track 196 \$CS451\$F8 116 \$CS451\$F8G 116 \$CS454\$F8 116 \$CS454\$F8G 116 \$CS471\$F8 115 \$CS471\$F8G 115 \$CS474\$F8G 117 \$CS475\$F8G 117 \$CSM451 115 \$CSM454 116	TA66 .79 TA8 .123 TA9 .55, 56, 82 TAC42 .79 TAXT42 .80 TAXT5B .80 TAXT5212 .80 TAXT523 .80 TB42 .79 TBXT42 .80 TC1 .79, 80 TC2 .79 TC3 .80
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120 K KA386AS 107 KA386XXL 107 KA556 / MCB554 109 KA556 / MCB555 109 KA576 105 KB387AS 107 KB387XXL 107	PBT12 95 PBT16 95 PCR632 133 PCR932 133 PCS40 181 PCS40P 181 PET276 83, 123 PG1 .55 PG2 .55 PK50 .75 PK75 .75 PKR65 .75 PKS50 .75	\$\ Safety Track 196 \$C\$451\$F8 116 \$C\$451\$F8G 116 \$C\$454\$F8 116 \$C\$454\$F8 116 \$C\$471\$F8 115 \$C\$471\$F8G 115 \$C\$471\$F8G 117 \$C\$475\$F8G 117 \$C\$475\$F8G 117 \$C\$M451 115 \$C\$M454 116 \$C\$M455 116	TA66 .79 TA8 .123 TA9 .55, 56, 82 TAC42 .79 TAXT42 .80 TAXT5B .80 TAXT5212 .80 TAXT523 .80 TB42 .79 TBXT42 .80 TC1 .79, 80 TC2 .79 TC3 .80 TC47 .182
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120 K KA386AS 107 KA386XXL 107 KA556 / MCB554 109 KA576 105 KB387AS 107 KB387XXL 107 KB557 / MCB554 109	PBT12 95 PBT16 95 PCR632 133 PCR932 133 PCS40 181 PCS40P 181 PET276 83,123 PG1 .55 PG2 .55 PK50 .75 PK75 .75 PKR65 .75 PKS50 .75 PKS75 .75	\$\ Safety Track \ 196 \$C\$451\$F8 \ 116 \$C\$451\$F8G \ 116 \$C\$454\$F8 \ 116 \$C\$454\$F8 \ 116 \$C\$471\$F8 \ 115 \$C\$471\$F8G \ 115 \$C\$474\$F8G \ 117 \$C\$475\$F8G \ 117 \$C\$475\$F8G \ 117 \$C\$M451 \ 115 \$C\$M455 \ 116 \$C\$M471 \ 115	TA66 .79 TA8 .123 TA9 .55, 56, 82 TAC42 .79 TAXT42 .80 TAXT5B .80 TAXT5212 .80 TB42 .79 TBXT42 .80 TC1 .79, 80 TC2 .79 TC3 .80 TC47 .182 TC48 .182
JC881050 119 JT365 120 JT365EBF4 120 JT366 120 JT366EBF4 120 K KA386AS 107 KA386XXL 107 KA556 / MCB554 109 KA576 105 KB387AS 107 KB387XXL 107 KB557 / MCB554 109 KB557 / MCB555 109	PBT12 95 PBT16 95 PCR632 133 PCR932 133 PCS40 181 PCS40P 181 PET276 83,123 PG1 .55 PG2 .55 PK50 .75 PK75 .75 PKR65 .75 PKS50 .75 PKS75 .75 PKS75 .75 PKS75 .75 PKS75 .75 PKS75 .75	\$\ Safety Track \ 196 \$C\$451\$F8 \ 116 \$C\$451\$F8G \ 116 \$C\$454\$F8 \ 116 \$C\$454\$F8 \ 116 \$C\$454\$F8 \ 116 \$C\$471\$F8 \ 115 \$C\$471\$F8G \ 117 \$C\$475\$F8G \ 117 \$C\$475\$F8G \ 117 \$C\$M451 \ 115 \$C\$M454 \ 116 \$C\$M471 \ 115 \$C\$M474 \ 117	TA66
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JC881050 119 JT365 120 JT365EBF4 120 JT366EBF4 120 K KA386AS 107 KA386XXL 107 KA556 / MCB554 109 KA576 105 KB387AS 107 KB387XXL 107 KB557 / MCB554 109 KB557 / MCB555 109 KB577 105 KC388AS 107 KC388XXL 107 KC558 / MCB554 109 KC558 / MCB555 109 KC578 105 L LED Row Indicator 168 M MAS90/10SF 187	PBT12 95 PBT16 95 PBT16 95 PCR632 133 PCR932 133 PCS40 181 PCS40P 181 PET276 83,123 PG1 55 PG2 55 PK50 75 PK75 75 PK75 75 PKR65 75 PKS50 75 PKS75 75 PKS75 75 PM60 75 PR50 75 PR50 75 PR50 75 PR50 75 PR1 94 PTT1 94 R R75XT11 45 R95XT51 45 R95XT51 45 R95XT51 45 R95XT51 45 RAM012 113	\$\frac{\text{S}}{\text{Safety Track}}\$ \$\text{Safety Track}\$ \$196 \$\text{SC\$451\$F8}\$ \$116 \$\text{SC\$451\$F8}\$ \$116 \$\text{SC\$454\$F8}\$ \$116 \$\text{SC\$454\$F8}\$ \$116 \$\text{SC\$471\$F8}\$ \$115 \$\text{SC\$471\$F8}\$ \$117 \$\text{SC\$474\$F8}\$ \$117 \$\text{SC\$474\$F8}\$ \$117 \$\text{SC\$474\$F8}\$ \$117 \$\text{SC\$474\$F8}\$ \$117 \$\text{SC\$474\$F1}\$ \$115 \$\text{SC\$474\$F1}\$ \$116 \$\text{SC\$474\$F1}\$ \$116 \$\text{SC\$474\$F1}\$ \$116 \$\text{SC\$474\$F1}\$ \$117 \$\text{SC\$475\$F1}\$ \$116 \$\text{SC\$474\$F1}\$ \$117 \$\text{SC\$475\$F1}\$ \$116 \$\text{SC\$475\$F1}\$ \$116 \$\text{SC\$475\$F1}\$ \$116 \$\text{SC\$45\$F2}\$ \$116 \$\text{SC\$475\$F2}\$ \$117 \$SC\$5\$\$F2\$\$F35\$F2 \$117 \$\text{SC\$475\$F2 \$117 \$\text{SC\$5\$50 \$\text{SC\$475\$F2 \$\text{SC\$475	TA66
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