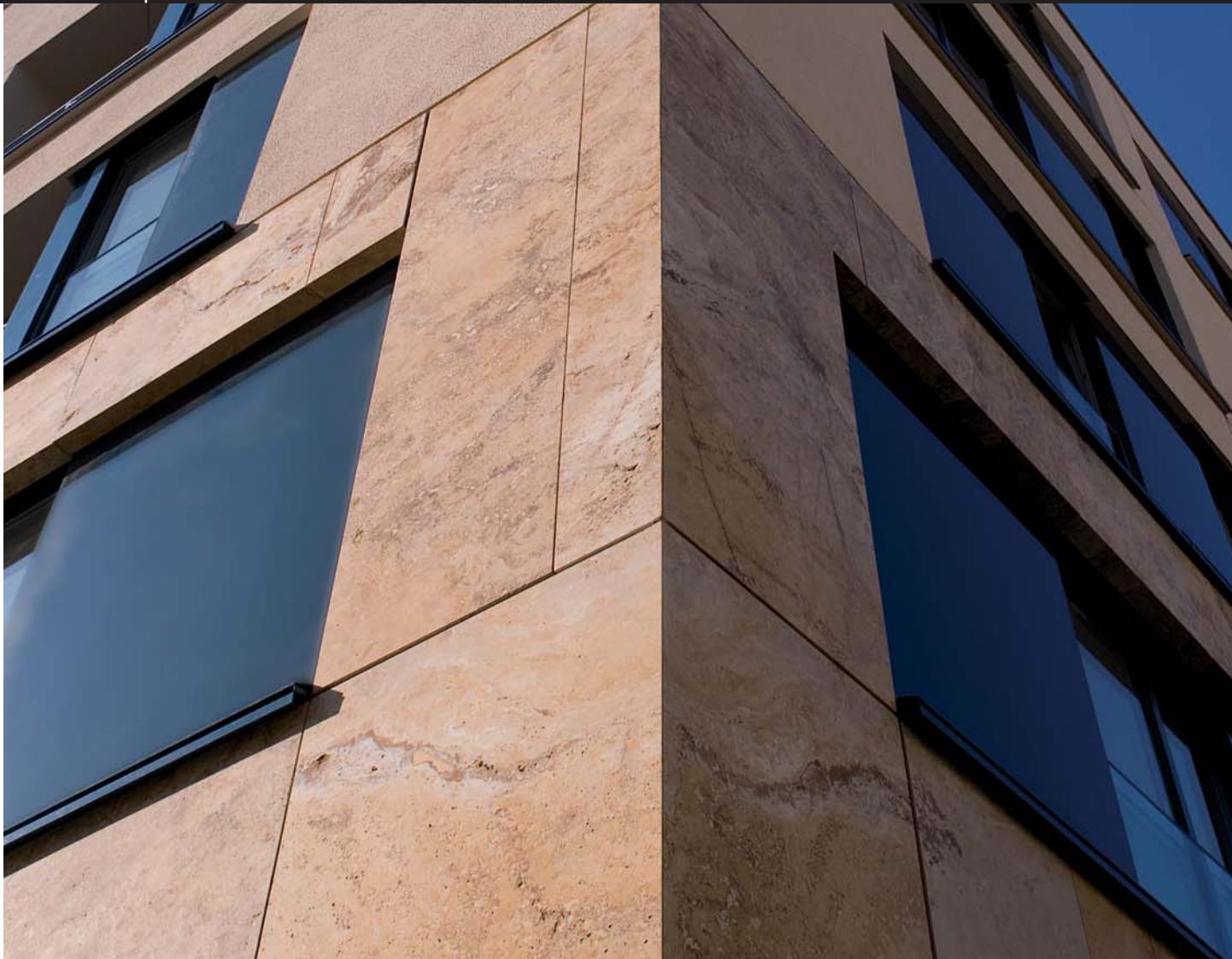




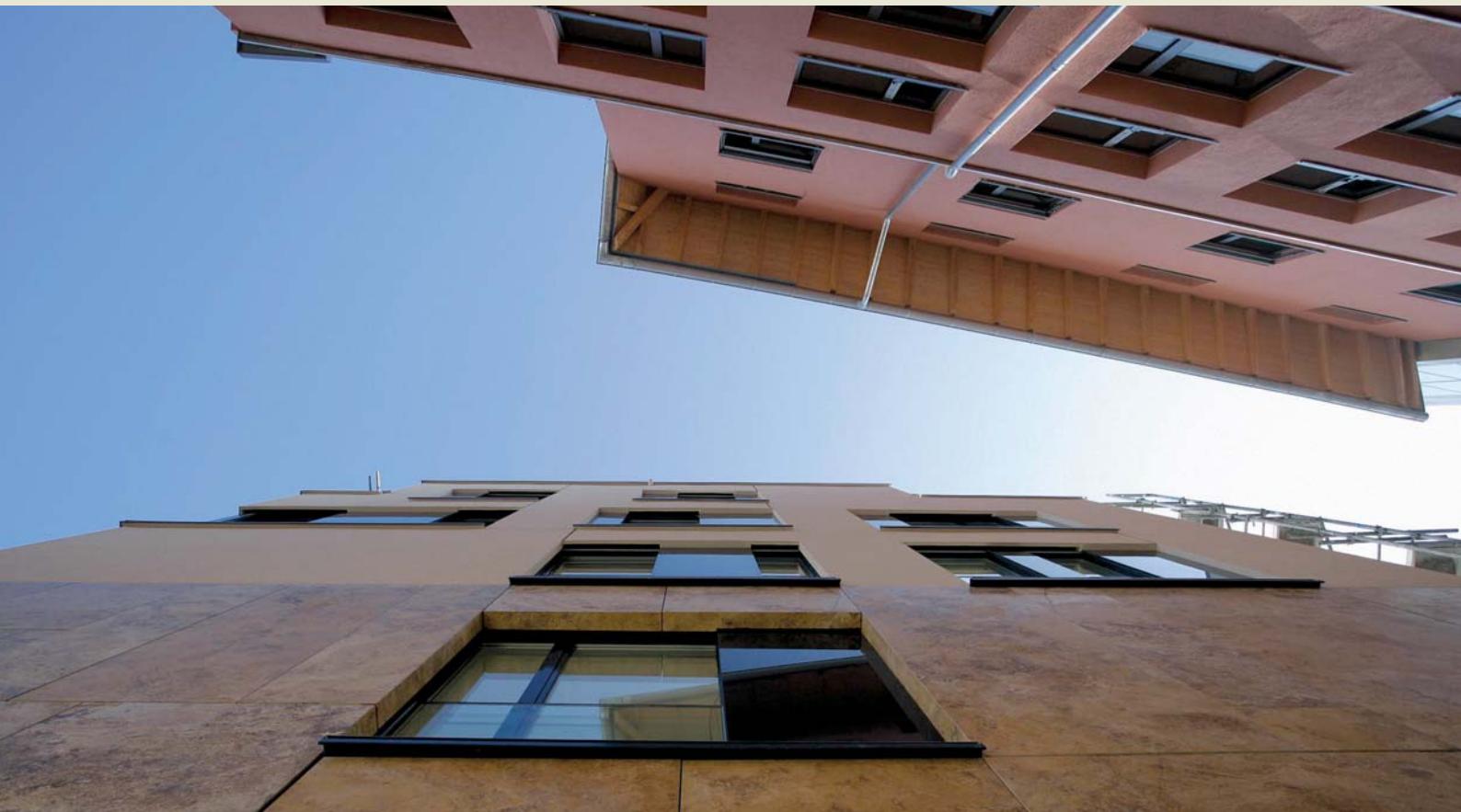
# alsecco airtec™ façades

Ventilated cavity rainscreen systems



## Lightweight façades in alsecco airtec™ natural stone

Visual elegance by modern technology



2

## Airtec Stone™ – the lighter alternative

Alongside timber, stone is the oldest construction material known to man. Its durability and monolithic elegance have provided protection and modelled landscapes worldwide for many generations.

Unsurpassed in quality, Alsecco Airtec Stone replicates the timeless beauty and substance of solid stone. Available in a wealth of shapes, colours and textures, there are very few aspirations, designs or details that cannot be achieved.

However, the most compelling advantage of Airtec Stone is to be found in its ability to overcome stones greatest disadvantage – its' weight. Solid stone façade panels weigh an average of over 100Kg/M<sup>2</sup> and to support such a vast dead-load on vertical surfaces, the sub-structure must be incredibly robust and consequently is often very expensive.

Alsecco recognised these restrictions and initiated the development of an innovative stone facade. After extensive research and development, Alsecco successfully combined the unique, patented properties of lightweight aerated clay concrete with the proven qualities of natural stone to create a product that fuses technology and history to deliver the ultimate in performance and appearance.



## alsecco natural stone façades

- Proven insulated cladding and rainscreen systems
- Robust with life long expectancy
- Extensive range of design options using individual formats, textures and colours

### alsecco façades featuring natural stone

■ Airtec Stone	Ventilated rainscreen systems with stone panels laminated to a lightweight aerated clay concrete panel. The system is mounted on an aluminium support system using secret mechanical fixings or structurally bonded
■ Alprotect Stone XL	Façade insulation system with natural stone panels on a lightweight concrete base for high impact protection to ground floor walls (bonded with fixing plate)
■ Alprotect Stone	Façade insulation system with fabric-reinforced natural stone panel bonded to an insulation slab
■ Alprotect Cerastone	Façade insulation system with ceramic façade panel in simulated natural stone effect bonded to an insulation slab

3



Airtec Stone



Alprotect Stone XL

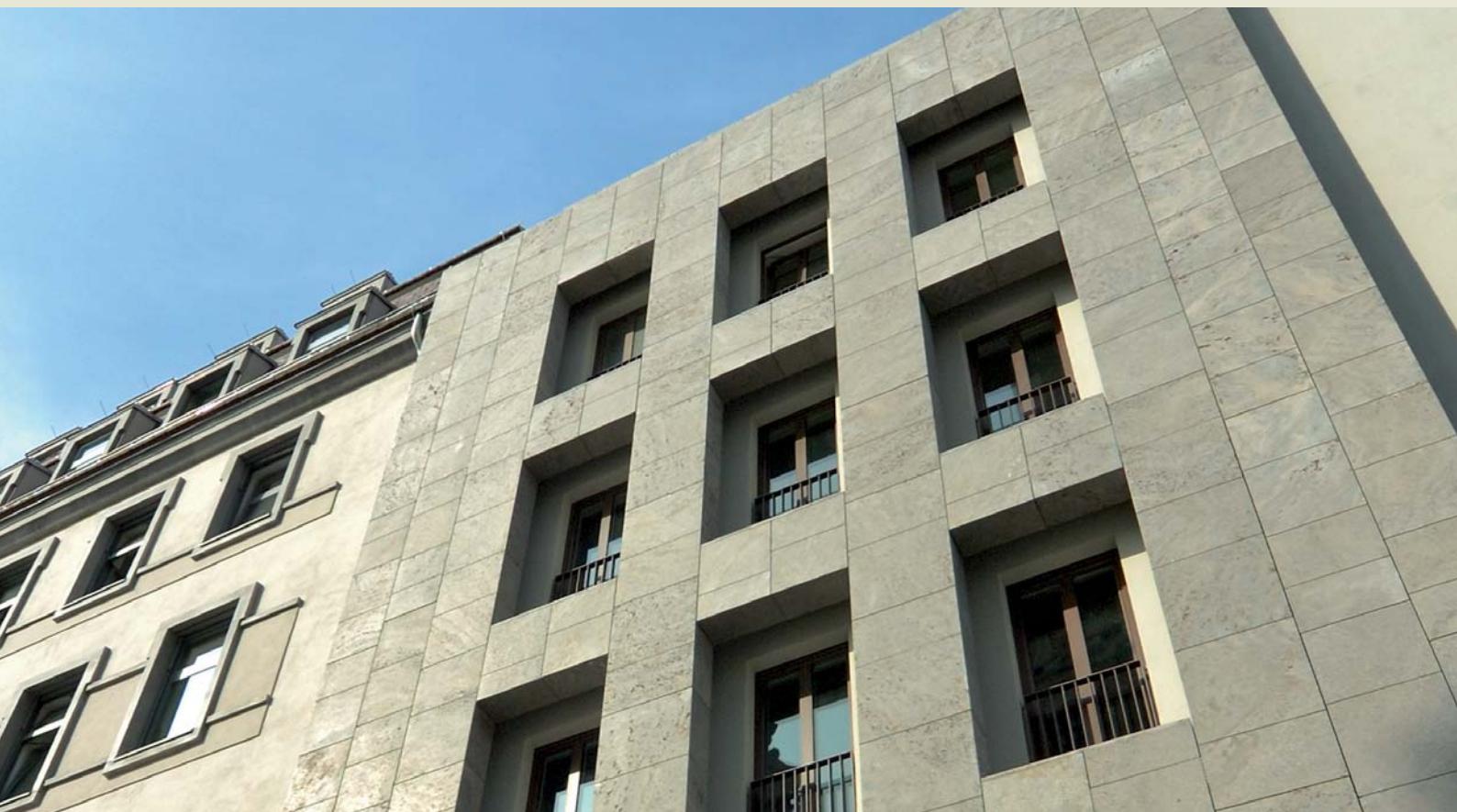


Alprotect Stone



Alprotect Cerastone

## Lightweight with monumental qualities



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## Airtec Stone™ – a rainscreen façade without limitation

Airtec™ Stone is unique in that it removes from the building designer many of the technical and structural constraints affecting natural stone due to its weight. The composite panel consists of a stone veneer that is 8 to 10 millimetres in thickness bonded to a lightweight aerated clay concrete base up to 19 millimetres thick. It is up to 50 per cent lighter than solid natural stone and is suitable for problem substrates often encountered in the refurbishment of older buildings.

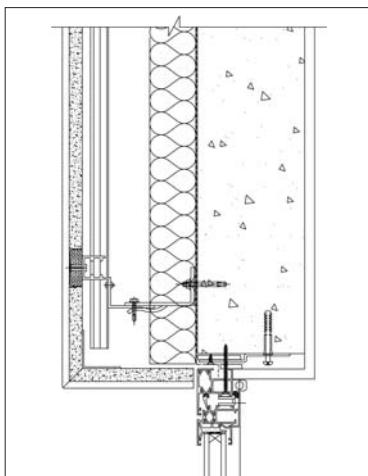
Airtec™ Stones versatility enables the design of creative stone façades that are exacting in tolerance. The variety in the types of natural stone, range of sizes and individually prefabricated elements allow features to be incorporated with relative ease. Larger panels in excess of three square metres square can be fastened on to a lightweight aluminium substructure without visible fixing elements.



### Airtec™ Stone

- Rainscreen façade with panels of natural stone on a lightweight aerated clay concrete base
- Weight up to 50 kgs/m<sup>2</sup> in panels that can exceed 3 square metres
- Highly resistant to impact

- Tested to CWCT standards at the Taylor Woodrow laboratories in December 2007 to ensure that the stone will not crack or de-bond from the panel upon impact
- Invisible fixing system
- Available in 10 standard finishes and natural stone from a specific origin



CAD drawing: Detail of a standard reveal meeting an Airtec™ Stone rainscreen panel on a concrete structure.



Airtec™ Stone system design

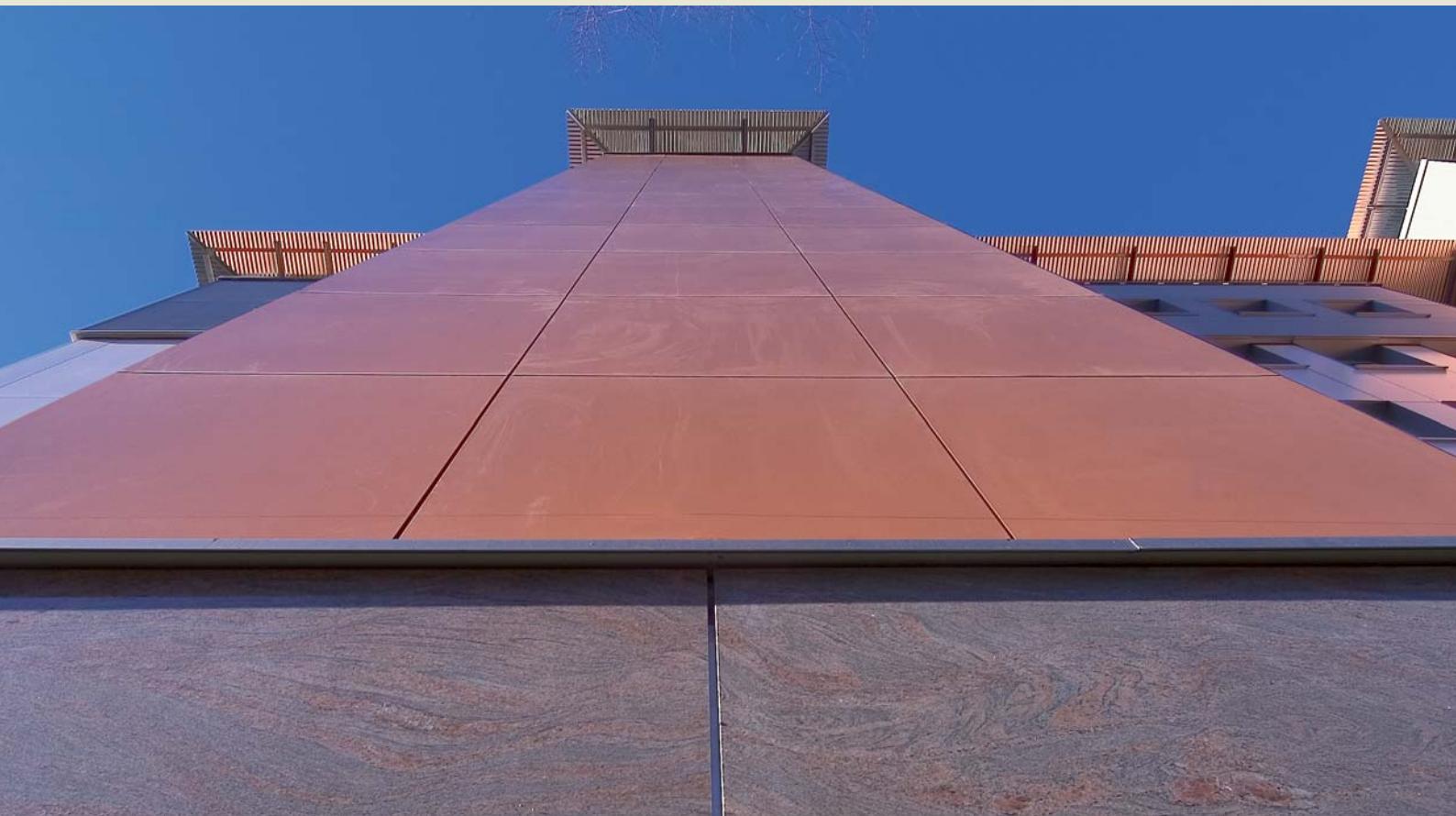


The natural stone composite panels are fastened into the special profiles of the aluminium substructure.

Individually prefabricated natural stone corner sections.



## Effective impact protection for the ground floors of a façade



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### Alprotect Stone XL – withstands extremely high impact

In combination with lightweight systems, Alprotect Stone XL is ideal for finishing and protecting the walls or plinths on the ground floor of a building which are particularly susceptible to impact damage. Alprotect Stone XL creates a stylish and functional ancillary product for the cladding of façades. The natural stone panels on a lightweight aerated clay concrete base are up to 30 millimetres thick – and can withstand most impact damage.

The Alprotect Stone XL natural stone composite panels can be bonded to the substrate with an additional fixing plate.

## Alprotect Stone XL

- Composite cladding system with natural stone, laminated to a lightweight aerated clay concrete panel for plinth and ground floor areas mechanically fixed
- High impact resistance
- 10 standard types of natural stone in panel sizes of up to 0.72 m<sup>2</sup> (specific origin natural stone available on request)
- Prefabricated reveals, corners and mouldings

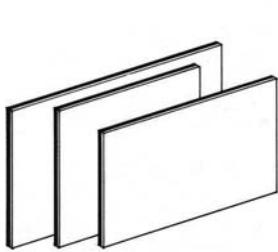
### Large format impact resistant panels

With a variety of attractive natural stones in individual formats up to a maximum size of 0.72 square metres per panel, Alprotect Stone XL offers a practical and economic solution for providing high impact resistance at the ground level of a structure. Prefabricated plate sections for reveals, corners and mouldings are accessories to compliment the range of natural stone panels.

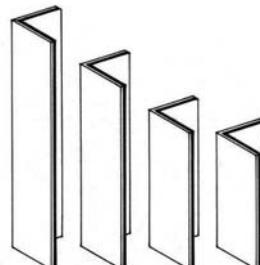


Alprotect Stone XL system design

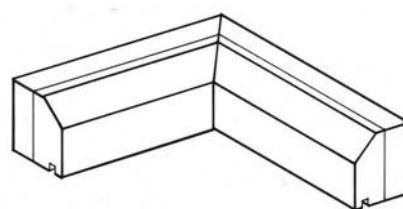
7



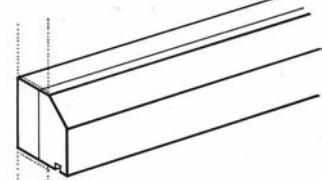
Wall base panels



Outer corners



Internal corner of moulding



End moulding

The prefabricated modules and matching accessories in the composite Alprotect Stone XL range facilitate planning and installation.

## Insulated cladding with outstanding impact and weathering resistance



## Alprotect Stone – bonded natural stone on insulated cladding systems

A unique material demands a unique solution that is as economical and efficient as possible. That was the aspiration that guided the development of the Alprotect Stone system. The natural stone panels are strengthened with a fabric reinforcement and can be bonded to the substrate without a requirement for mechanical fixings at ground floor level. At a maximum

thickness of only 12 millimetres, Alprotect Stone enables a particularly slim thickness of wall construction to be achieved. This creates economies in time and money, provides increased scope for design and limits encroachment in refurbishment. Alprotect Stone is an affordable and effective means of creating a natural stone frontage or feature plinth.



## Alprotect Stone

- External wall system with fabric-reinforced natural stone panels (bonded)
- Slim wall construction with panels as thin as 12 mm thick
- Available in 10 standard finishes and individual types of natural stone
- Individual sizes up to 0.5 square metres with a height-to-width ratio of 2:1

### Versatile design options

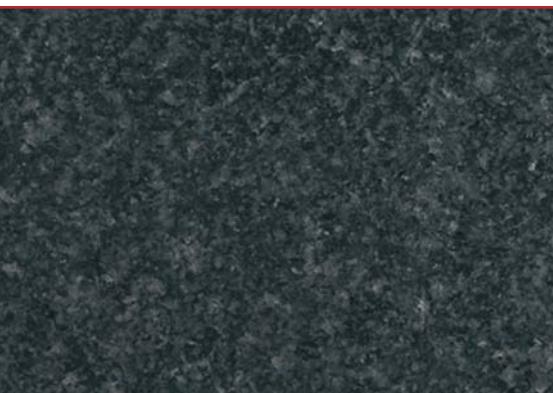
With numerous types of natural stone, individual panel formats in sizes up to 0.5 square metres, a height-to-width ratio of 2 to 1 and a complimentary range of accessory products, Alprotect Stone can fulfil most structural and architectural requirements with optimum reliability.

As an alternative finish there is the alsecco Alprotect Cerastone façade insulation system with a high-quality ceramic façade panel with a simulated effect of natural stone.



Alprotect Stone system design

Alprotect Cerastone system design  
(for use in ground floor areas)



Economical and reliable: The thin natural stone panels of the Alprotect Stone and Cerastone façade systems are bonded to the substrate without the requirement for mechanical fixing.

## Individual façades created with a combination of finishes



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## More scope for design – edition alsecco

Stone, render, timber glass and metal on a single façade, – the ability for one manufacturer to fulfil a clients desire for their façade is hugely beneficial. With a combination façade your imagination and flair can create an individual statement whether in insulated cladding or rainscreen. Edition alsecco is a logical development of the alsecco façade systems, to make available proven and innovative design options for you.

You can combine the wide range of materials, installation methods and the extensive alsecco creative colour system to your exact specifications, thereby creating your own façade style. The variety of design options are matched by our careful attention to detail to ensure a technically sound solution.

**edition alsecco**

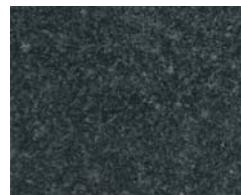
<b>Material</b>	Render, Wood, Glass, Ceramics, Brick, Natural Stone, Metal, Flexible Brick Slip, Composite Panels, Spar Dash
<b>Colour</b>	Alsecco Creative Colour System (ACCS 2.0), Glazes
<b>Decor</b>	DecoProfile, Quoins, Details
<b>Accessories</b>	Window Cills, Plant Support Systems, Reinforcing Elements



Granit Astoria



Granit Excelsior



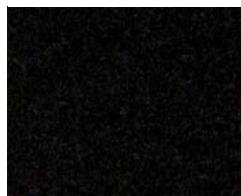
Granit Imperial



Granit Savoy



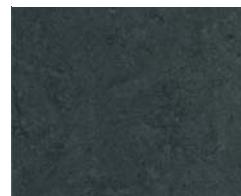
Granit Palace



Granit Luxor



Granit Palazzo



Kalkstein Maxim\*



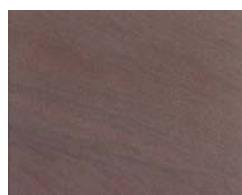
Kalkstein Palais\*



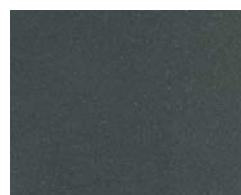
Kalkstein Mirage\*



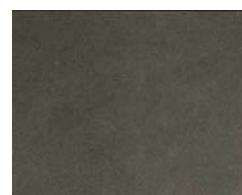
Sandstein Plaza\*



Sandstein Carlton\*



Sandstein Four Seasons\*



Sandstein Altrovandi\*



Sandstein Hesperia\*



Granit Piemonte



Granit Friuli



Granit Lazio



Granit Calabria



Granit Venetia



Granit Abruzzo



Granit Sicilia



Granit Trentino



Granit Umbria



Granit Toscana



Cerastone Venezia\*\*



Cerastone Bologna\*\*



Cerastone Roma\*\*



Cerastone Napoli\*\*



Cerastone Torino\*\*



Cerastone Rimini gelbgrau\*\*



Cerastone Rimini blaugrau\*\*



Cerastone Remini beige-grau\*\*



Cerastone Firenze\*\*



Cerastone Verona\*\*



Cerastone Milano grey-red\*\*



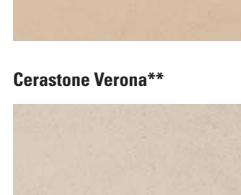
Cerastone Milano grey-white\*\*



Cerastone Milano dark grey\*\*



Cerastone Milano light grey\*\*



Cerastone Parma\*\*

\* Sandstone and limestone panels are of limited suitability for the Alprotect Stone system.

\*\* For use only on ground floor areas.

## alsecco Airtec™ Glass façades

Vivid impressions for timeless structures



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## High-tech façades – with inspiring possibilities

Immaculate quality, excellent durability and subtly elegant as a façade construction material, glass remains a trendsetter in modern architecture. Alsecco Airtec™ Glass furthers the possibilities in glass façade design. Whether vibrant colours, sharp lines or sweeping curves define your building, Airtec™ Glass continually delivers, economically fulfilling the most conceptual and complex designs and giving your building "aface".

Inspired by the success of the airtec stone system, alsecco once again adopted the unique, benefits of lightweight aerated clay concrete in the development of Airtec™ Glass. However rather than bonding a natural stone veneer, the fusion is with state-of-the-art glass façade technology.

Airtec™ Glass can safely satisfy the majority of structural and architectural demands. Combining bespoke panel sizes, a vast range of colour options, carefully co-ordinated design and intricate interface detailing, an elegant, ageless and expressive façade can be effortlessly created.



### alsecco Airtec™ Glass façades:

- Technically proven, modern and thermally efficient façade systems
- Intrinsic weathering and resistance to impact and airborne dirt
- An extensive range of formats, textures and colours enabling design concepts of individual flair
- Tested to industry UKAS laboratory standards

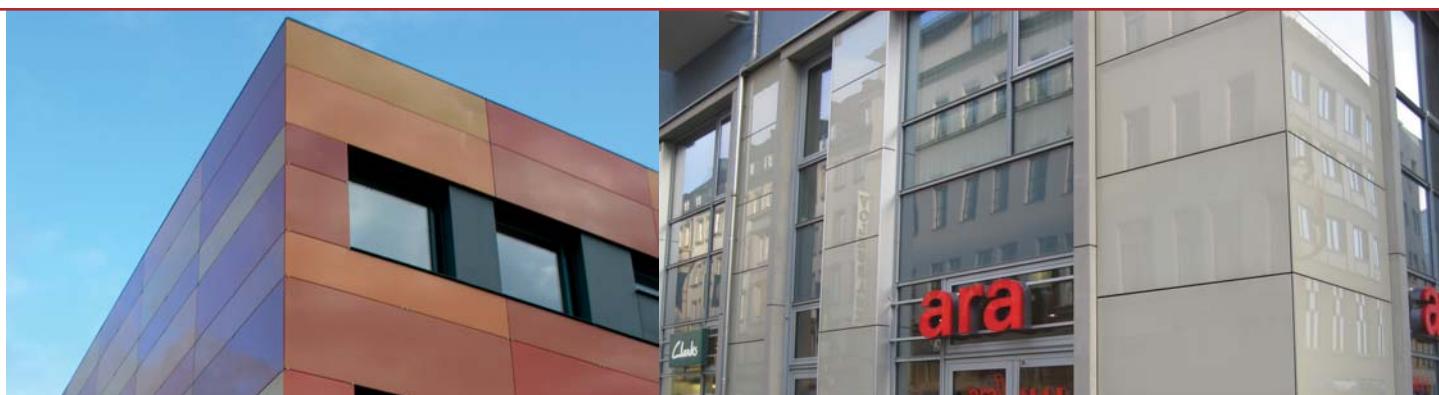
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#### alsecco Airtec™ Glass façades

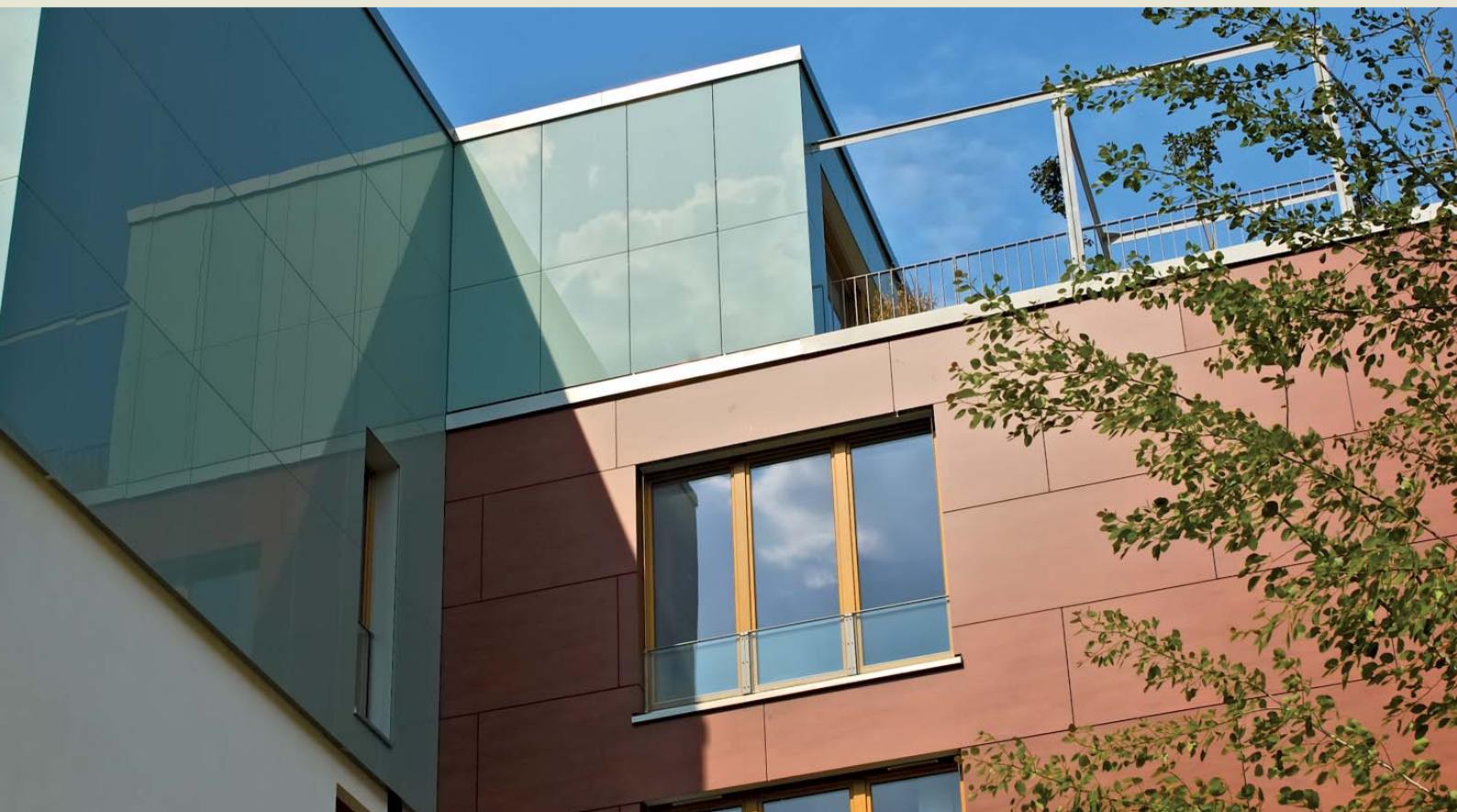
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■ Airtec™ Glass

Ventilated rainscreen systems with glass panels laminated to a lightweight aerated clay concrete panel. The system is mounted on an aluminium support system using secret mechanical fixings or structurally bonded



## Lightweight with inspiring qualities



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## Airtec™ Glass – the sophisticated rainscreen façade

alsecco's Airtec™ Glass system combines the unique qualities of glass with the innovative technology of a ventilated rainscreen façade. The robust composite panels, which can be up to 32 millimetres thick, consist of toughened safety glass bonded to a lightweight aerated concrete base. The refreshing simplicity of these natural surfaces offer compelling creativity for architectural impact.

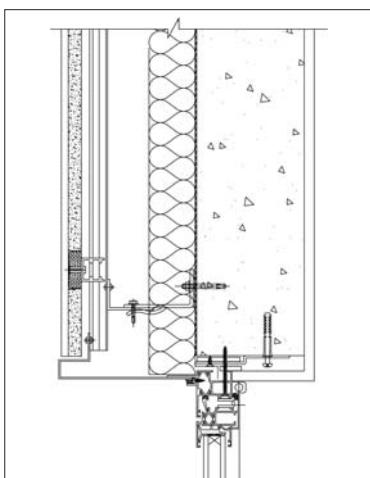
The composite panels up to 3000mm in height and 1200mm in width, are fixed with either an invisible clip design or structural adhesive to a lightweight aluminium carrier system. Each element can be adjusted both vertically and horizontally for perfect alignment. The panels of toughened glass are available in an extensive range of UV resistant colours. The systems will readily interface with other façade forms.



### Airtec™ Glass:

- Rainscreen façade with panels of toughened safety glass mounted on a lightweight aerated clay concrete base
- Can be supplied with a graffiti-resistant coating

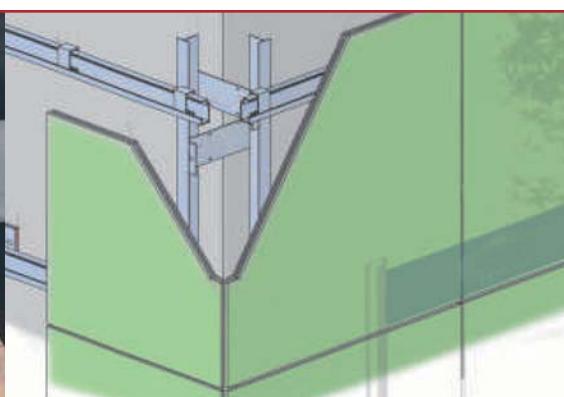
- Tested to CWCT standards at the Taylor Woodrow laboratories in December 2007 to ensure that the glass will not de-bond from the panel upon impact
- Highly resistant to impact
- Available in panel sizes of up to 3000mm in height and 1200mm in width



CAD drawing: Detail of a standard reveal meeting an Airtec™ Glass rainscreen panel on a concrete structure.



Airtec™ Glass system design



Airtec™ Glass system design: The fixing elements are not visible and importantly the backing panel is not visible through the edge of the glass at joints or external corners.

## alsecco's Airtec Stone™ – technical data

### alsecco façades featuring natural stone

■ Maximum Board Size	3.00 M <sup>2</sup> (3.00 x 1.00 dependant upon stone qualities)
■ Bending Strength	Mean value >740Nm/m Min value >680Nm/m
■ Weight	33-45 kg/m <sup>2</sup>
■ Thickness - nominal	25-29mm
■ Tolerance	1mm in thickness, length & width
■ Flatness	+/- 1-2mm/m
■ Flexural Strength	4.5N/mm <sup>2</sup> min
■ Wind Load	2.4 kN/m <sup>2</sup> (Actual test to 3.6 kN/m <sup>2</sup> for 50% factor of safety)
■ Height	100 m max (restrictions apply to panel sizes and fixing configurations)
■ Max support centres	Vertical 1250mm Horizontal 1200mm
■ Minimum Joint Width	6mm
■ Impact - Test Passes	500Nm - soft body 10Nm - hard body - no damage to sample (22Nm actual test)
■ UK Test Data	Taylor Woodrow CWCT test certificate N950/0713988 anchor support
■ UK Test Data	Taylor Woodrow CWCT test certificate N950/0714004 adhesive mounting
■ Germany Test Data	DiBT Z_32.2_632 (Equivalent standard to the UK's BBA)

GERMAN INSTITUTE OF CONSTRUCTION ENGINEERING

Public Institution

D-1090 Berlin  
10<sup>th</sup> December 2004  
Kolonnenstrasse 30 L  
Tel.: 0049 (0) 30 78730-394  
Fax: 0049 (0) 30 78730-320  
Ref.: II 13-1.33.2-632/2

General approval by the building inspectorate

Approval number: **Z-33.2-632**

Applicant: alsecco GmbH & Co KG  
Kupferstrasse 59  
D-36208 Wilsdeck-Richelsdorf

Object approved: "tec Naturstein" ventilated external curtain wall cladding

Valid until: 31<sup>st</sup> December 2006

The above-mentioned object is herewith awarded general building I approval". This general building inspectorate approval consists of e five appendices.

\* This general building inspectorate approval replaces the general building inspectorate approval no. Z-33.2-632 of 9<sup>th</sup> December 2002.

Page 9 of the general approval by the building inspectorate no. Z-33.2-632 of 10<sup>th</sup> December 2004

Board formats and position of fixing points

Distance of flanges from edge: 150 mm ± a. ± 200 mm; it may be reduced to 100 mm for the narrow boards with a breadth b > 300 to 400 mm

Composition of façade board N

alsecco GmbH & Co. KG  
Kupferstrasse 59  
D-36208 Wilsdeck-Richelsdorf  
Tel: +49 (0)36208 86-0  
Fax: +49 (0)36208 86-370

Façade board N

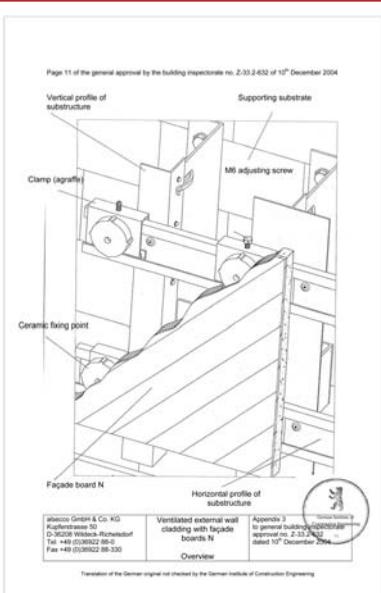
Appendix I  
to general building inspectorate approval no. Z-33.2-632  
dated 10<sup>th</sup> December 2004

Translation of the German original not checked by the German Institute of Construction Engineering

# alsecco's Airtec™ Glass – technical data

## alsecco façades featuring glass

■ Bending Strength	Mean value >740Nm/m Min value >680Nm/m
■ Weight	40 kg/m <sup>2</sup>
■ Thickness - nominal	25-29mm
■ Tolerance	1mm in thickness, length & width
■ Flatness	+/- 1-2mm/m
■ Flexural Strength	4.5N/mm <sup>2</sup> min
■ Wind Load	2.4 kN/m <sup>2</sup> (Actual test to 3.6 kN/m <sup>2</sup> for 50% factor of safety)
■ Height	100 m max (restrictions apply to panel sizes and fixing configurations)
■ Max support centres	Vertical 1250mm Horizontal 1200mm
■ Minimum Joint Width	6mm
■ Impact - Test Passes	500Nm - soft body 10Nm - hard body - glass shattered but no delamination
■ UK Test Data	Taylor Woodrow CWCT test certificate N950/0713988 anchor support
■ UK Test Data	Taylor Woodrow CWCT test certificate N950/0714004 adhesive mounting



**H92 RAINSCREEN CLADDING:**  
To be read with Preliminaries/General conditions.

**TENDERING:**

**10 INFORMATION TO BE PROVIDED WITH TENDER:**

Submit the following cladding particulars:

- Typical plan, section and elevation drawings at suitable scales.
- Typical detailed drawings at large scales, including:
- Technical information and certification demonstrating compliance with specification of proposed cladding.
- Certification, reports and calculations demonstrating compliance with specification of proposed cladding.
- Proposals for connections to and support from the primary support structure.
- Proposals for primary support structure additional to that shown on preliminary design drawings.
- Schedule of building work, special provisions and special attendance by others.
- Estimated costed documentation from which project quality plan will be prepared.
- Preliminary fabrication and installation method statements and programme.
- Proposals for replacing damaged or failed products.
- Areas of non-compliance with specification.

**TYPE(S) OF RAINSCREEN CLADDING:**

**12B Alsecco Airtec™ RAINSCREEN CLADDING:**

Rainscreen cladding system:  
- Distributor: Telling Architectural Limited, Principe Avenue, Fendhouses, Wolverhampton, WV1 5LW, Tel: 01902 289777 / FAX: 01902 298777.

- Installation: To be carried out in accordance with manufacturers requirements, and relevant testing certification, by an approved installation contractor

- Type: Alsecco Airtec™ Stone / Glass.

Building type:  
- Manufacturer: Alsecco UK Ltd, Whitebridge Way, Stone, Staffs.

Product reference: Alsecco Airtec™ Stone / Glass.

Material: Natural stone/lightweight concrete & natural stone / glass.

- Thickness: 26mm.

- Finish: Various

- Colour: various available

## Notes

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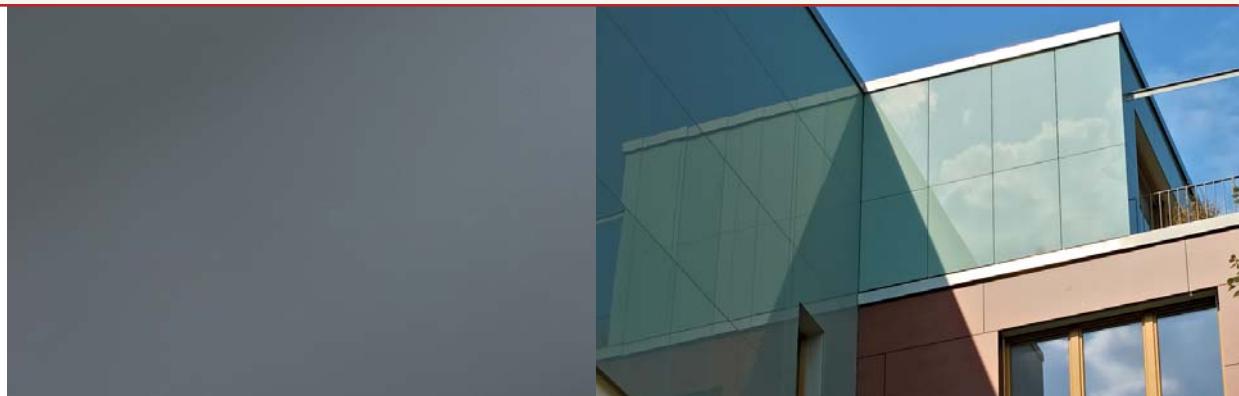
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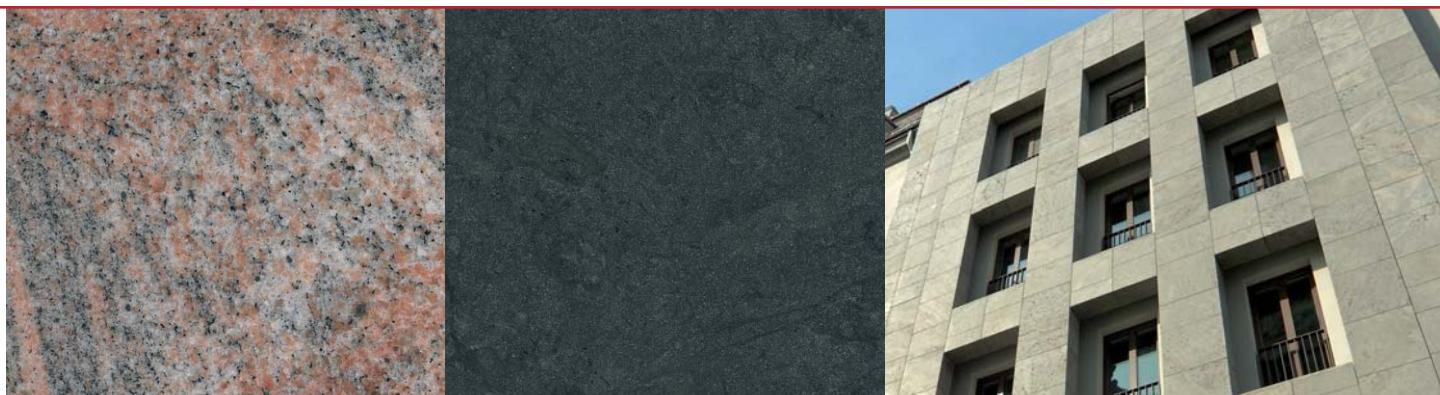


## alsecco airtec™ – technical data CD



Please contact Tellings Architectural Ltd for your technical data CD Tel: 01902 789777

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**Telling Architectural Ltd**

Primrose Avenue

Fordhouses

Wolverhampton

West Midlands

WV10 8AW

Tel: 01902 789777

Fax: 01902 398777

Internet: [www.telling.co.uk](http://www.telling.co.uk)



ARCHITECTURAL FAÇADES