Kalzip® facade systems

Products and applications

Kalzip® facade systems – architectural perfection

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Kalzip® facade systems – contemporary architecture with stunning aesthetics

Designers and architects throughout the world use Kalzip® roof and facade systems to create stunning buildings. The combination of traditional materials such as glass and wood with Kalzip® aluminium profiles is already an established approach to leading-edge architectural design.

In this respect, a facade becomes so much more than a building envelope – it highlights the unique individuality and character of a building. Kalzip® facade systems provide architects with the ideal scope for creating contemporary and individual designs.

The wide range of shapes, surface finishes and colours available provides virtually unlimited opportunities for enhancing architectural design – functionality is complemented by stunning aesthetics.

The flexibility of Kalzip® facade systems creates exciting potential for pushing the boundaries of contemporary architectural design even further. Individual and future-oriented solutions highlight the unique nature of a building. The outstanding features of Kalzip® facade systems include:

- Durability
- Lightweight
- High bearing capacity
- Saltwater-resistant aluminium alloy

left: Van Vliet industrial building **Ijsselstein (NL)**
Architekt: De Fries en Verburg Stolwijk/
WM Frasa buro vor bouwkunst
Centre: Shopping centre **Cremona Po (I)**
Architect: SDS Milan
right: College of Design **Offenbach (D)**
Architects: Reuter + Werr BDA

Kalzip® TF facade system – a striking design

Combining a unique facade design with optimum functionality

The sleek profiling of this facade system enhances the sophisticated interplay of light and shade across all elevations, at the same time creating a distinct and unique overall appearance with a real sense of clarity. The Kalzip® TF facade system not only enhances the individual character of the building but also offers optimum functional benefits such as outstanding thermal insulation characteristics. This is a system which is both aesthetically appealing and highly practical.

The Kalzip® TF facade system is so much more than a building envelope – it provides planners and architects with a wealth of scope to create stunning buildings with a highly individual character.

far left: Bestwig Monastery **Bestwig (D)**
Architect: Weicken und Weicken
left: CTM Zeiss **Oberkochen (D)**
Architect: SIAT Bauplanung u. Ingenieurleistungen GmbH

above: Muva Milchwirtschaftlicher Verein
Allgäu-Schwaben **Kempten (D)**
Architect: Feuser-Clement-Glatzel
below: Hensoldt AG Wetzlar (D)
Architect: Dipl.-Ing. Fuchs + Partner

left: Kalzip® TF facade system,
featuring a gently profiled fascia between raised ribs
right: Shopping centre **Cremona Po (I)**
Architect: SDS Milan

Precision right down
to the very last detail

This is a perfectly systemised solution which is available in a range of colours and combines sophisticated, appealing aesthetics with optimum practicality. The system offers the following outstanding benefits:

- Unique, aesthetic design with a distinct “long view” visual appeal
- Lightweight and therefore economical in terms of both cost and materials
- Wide range of acoustic and thermal insulation options
- Harmonised system components and interfaces
- Available in a wide range of colours

Special system components are available which have been developed specifically for the Kalzip® TF facade system. These components provide perfect interfaces with other building elements and systems. They also add the ultimate finishing touches to the optics of the building, creating a perfectly integrated overall appearance which is distinctive and sophisticated.

Assembly and installation

The Kalzip® TF facade system is suitable for horizontal or slightly pitched building elevations. Fixing takes place within the narrow lower brace between the ribs – either inside each rib or always in line with the longitudinal joints – according to the structural requirements.

Attachment:
Fastener with JT3-FR-6-5.5xL E10 internal Torx drive, or irius® drive system SX-L12-A10-5.5xL

Technical data

Material	EN AW-3004 or EN AW-6025 High strength values, excellent formability
Dimensions	Thickness: 1.0 mm and 1.2 mm Constructional width: 800 mm Profile length: max. 6000 mm Profile height: 37 mm
Load bearing capacity	Load bearing capacity values in accordance with DIN 18807 (see table of dimensions)
Surface finishes **Colours**	AluPlusPatina RAL standard colours, TitanColor shades and anti-graffiti coatings in accordance with the Kalzip® colour chart, special colours available on request.
Substructure	Vertical girders or spacer elements.

Kalzip® TF 37/800 R

Kalzip® trapezoidal and corrugated profiles

A variety of profiles – a diversity of designs for roofs and facades

Metal and glass building envelopes characterise contemporary architectural design for all kinds of buildings. Metal building envelopes have not only become a striking feature in the design of functional industrial and commercial properties, but also in public and private residential developments.

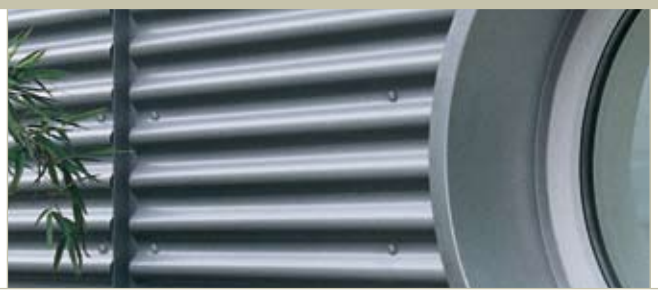
Kalzip® trapezoidal and corrugated profiles offer tremendous scope for design. The variety of different profiles available – ranging from different trapezoidal sections to classic corrugated designs - provides planners and designers with a wealth of scope to create fascinating, unique designs.

Whichever Kalzip® profiles you decide to use, this facade system creates stunning buildings with a highly individual and unique character. The highest quality of manufacture and the functional reliability of all components create a solution which is not only strong and durable but also aesthetically pleasing.

All elements – the facade and roof sheets, the corresponding connecting flanges, the end plates of the substructure, the transition sheets and the pilaster strips – are designed and manufactured for complete compatibility and fulfill the most demanding requirements stipulated by architects and planners.

In addition to the diverse selection of profiles available, there is also a wide range of Kalzip® colour and surface finish options which provides maximum freedom of design and maximum peace of mind.

Only high-quality PVdF or polyester-based enamel stove varnishes are used for coating Kalzip® trapezoidal and corrugated profiles as this ensures our products meet the high performance requirements of modern building methods. The coloured stove varnish coatings are applied in a coil-coating process, which is subject to the stringent quality control standards of the European Coil Coating Association (ECCA).



The creative refurbishment of existing buildings

Kalzip® trapezoidal and corrugated profiles are ideal for refurbishment projects. Ageing and unsightly buildings can be easily transformed to present a completely new and contemporary appearance. Existing roofs and facades can simply be over-clad with Kalzip® trapezoidal and corrugated profiles without any demolition work being required.

The system is suitable for all types of cladding and substructures such as metal, concrete and wood. Kalzip® trapezoidal and corrugated profiles provide lasting protection for the existing building structure. The flexibility of the system means that even unusual building shapes can be easily accommodated and refurbished to comply with current standards of thermal and acoustic insulation. The end result: a building which features stunning optics and has gained significantly in monetary value.

Here are just a few of the impressive benefits of using Kalzip® trapezoidal and corrugated profiles for refurbishment:

- Lightweight
- High strength
- Excellent acoustic and thermal insulation properties
- Easy installation
- Long life expectancy
- Economical solution

Intelligent fixing systems

When architects choose to use Kalzip® trapezoidal and corrugated profiles in their building projects, they know they will achieve the perfect design. The system has been developed with careful attention to every single component – aesthetics, efficiency, performance and safety are of critical importance in every case. For instance, a special drill fastener has been developed to either blend harmoniously into coloured facades or, alternatively, to provide stylish accentuating colour contrasts. What's more, the new drill fastener offers many functional benefits. Developed by SFS exclusively for use on the Kalzip® system, the drill fastener joins two thin metal sheets load bearing and securely. In comparison to the riveting process, the drill fastener saves a considerable amount of time during installation work.

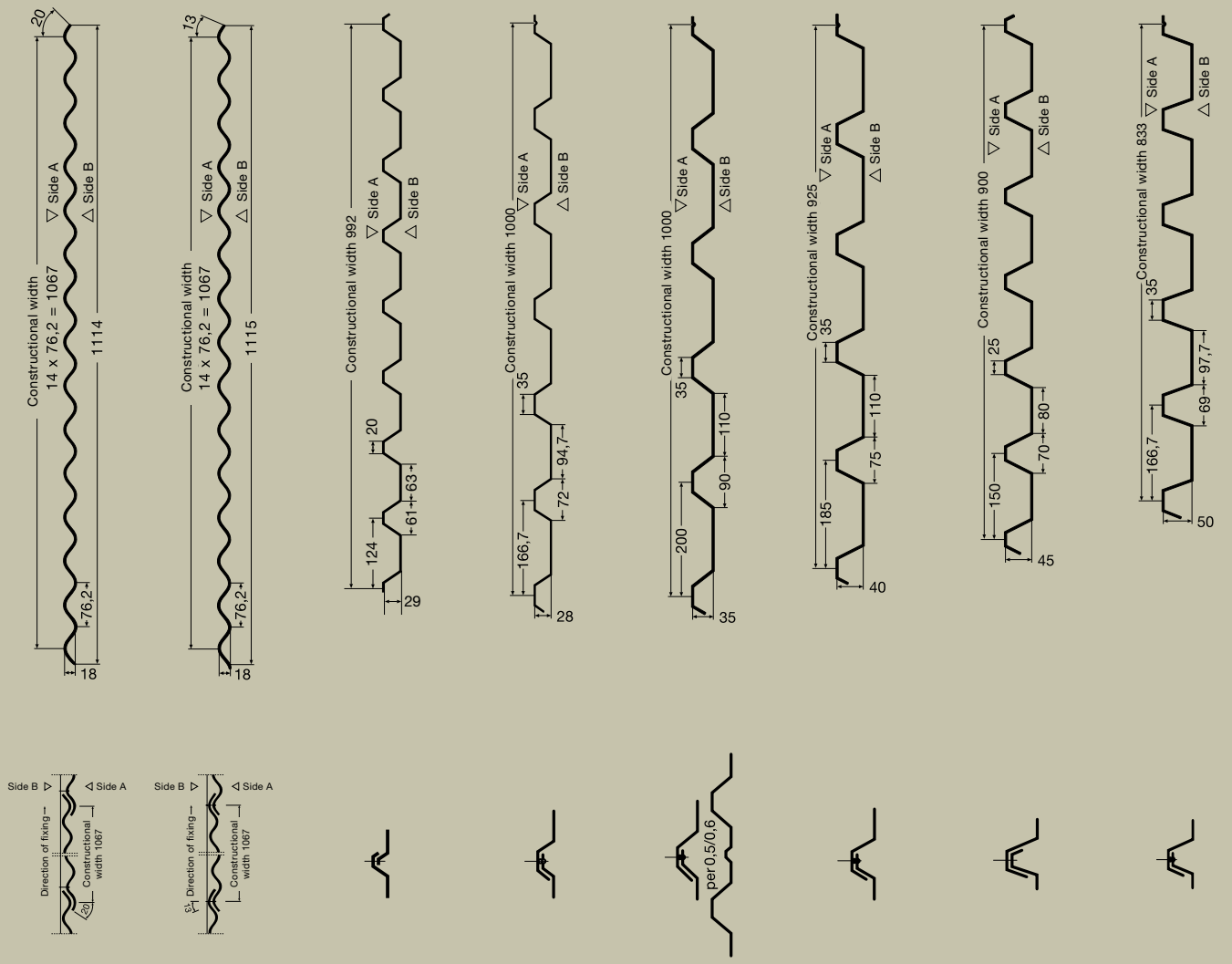
Fixing	Substructure	Maximum sheet length	Fixing method
Wall	Wood	16 m (horizontal 6 m)	In bottom flange
	Aluminium		
	Steel		
Roof	Wood	8 m	In top flange, mounting cap, sealing
	Aluminium	8 m	In bottom flange
	Steel	12 m	In top flange mounting cap, sealing
	In wood, steel and aluminium: Stainless steel self-tapping fasteners, disc with seal		

Material	Alloy
Core material	EN AW-3004 in accordance with DIN 573-3 and EN AW-6025
Plated on both sides	EN AW-7072

Page 8: Cable car station at **Col du Pillon (CH)**
Architect: Mario Botta
Page 9 right: HKW 2 Neckarwerke heat and power plant **Altbach a. Neckar (D)**
Architect: Prof. Angerer and Dipl.-Ing Gerd Fenser
above: Audi showroom **Ingolstadt (D)**
Architect: Schmidhuber & Partner Architektenbüro
right: SFS drill screws with colour coated heads.

Dimensions

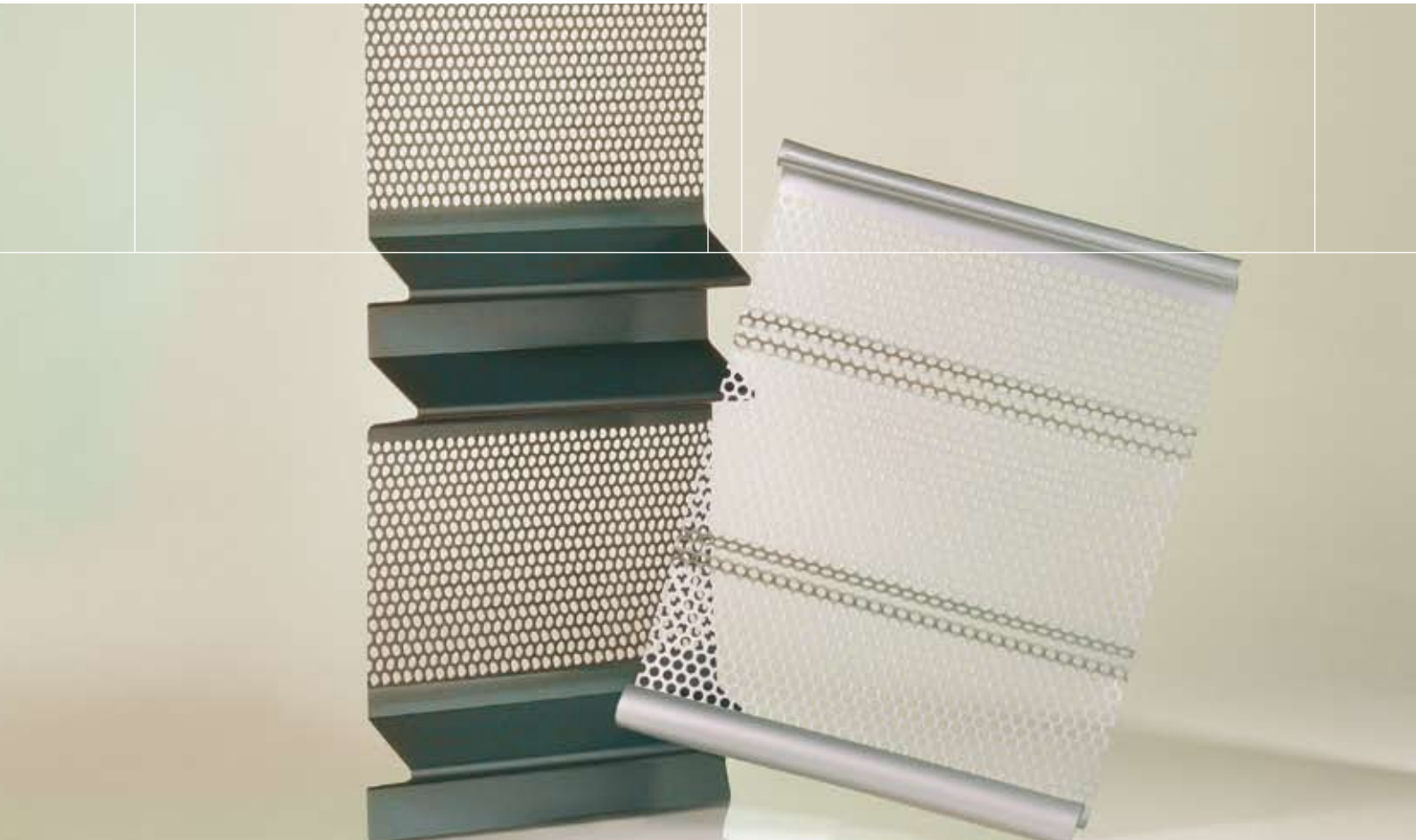
Kalzip® W 18/76 Type 1 (possible)	Kalzip® W 18/76 Type 2 (recommended)	Kalzip® TR 29/124	Kalzip® TR 30/167	Kalzip® TR 35/200	Kalzip® TR 40/185	Kalzip® TR 45/150	Kalzip® TR 50/167
Thickness:	Thickness:	Thickness:	Thickness:	Thickness:	Thickness:	Thickness:	Thickness:
0,7 mm	0,7 mm	0,7 mm	0,7 mm	0,7 mm	0,7 mm	0,7 mm	0,7 mm
0,8 mm	0,8 mm	0,8 mm	0,8 mm	0,8 mm	0,8 mm	0,8 mm	0,8 mm
1,0 mm	1,0 mm	1,0 mm	1,0 mm	1,0 mm	1,0 mm	1,0 mm	1,0 mm
		1,2 mm	1,2 mm	1,2 mm	1,2 mm	1,2 mm	1,2 mm



Load bearing capacity	Load bearing values: in accordance with DIN 18807 (see calculation tables)
Surface finishes	stucco-embossed, AluPlusPatina
Colours	RAL standard colours, TitanColor shades and AntiGraffiti coatings in accordance with the Kalzip® colour chart, special colours available on request.

Kalzip® perforated facade systems

– for unique architecture



A fascinating interplay of light and shade

Kalzip® perforated facade systems provide an nspirational and highly creative extension to the range of Kalzip® aluminium profiled sheets already available. Architects continue to conceive new ways of using light to create new and exciting effects for enhancing their architectural designs. However, the most inspirational design can only be successfully accomplished with the right materials. It requires the perfect combination of appealing aesthetics with the highest standards of quality and functionality. Kalzip® perforated facade systems provide planners and architects with virtually unlimited design potential – allowing them to turn their visions into a reality.

A perforated facade solution provides immense scope for design creativity and the interplay of light and shade. Creating aesthetics which change with the light.

At night, the introduction of lighting adds a totally new dimension. An inspirational building envelope can totally transform a building, making it come alive. The range of different hole diameters available means that the scope for design is virtually limitless. Kalzip® perforated facade systems are a simple, cost-effective and elegant solution for creating striking and sophisticated designs.

The strength and quality of Kalzip® is combined with the design flexibility of a perforated solution. Kalzip® perforated facade systems offer many benefits:

- Ideal for solar shading on transparent facades
- Sophisticated accentuation of facade surfaces
- Differentiates between public and semi-public areas
- Ideal for enhancing the appearance of unsightly facades
- Economic refurbishment of facades

Page 13 and above: Steba **Ottnang (A)**
Architect: Arch. Dipl.-Ing. Ivo Kux
right: University hospital (multi-storey car park) **Ulm (D)**
Architects: Scherr + Klimke

Technical data

Load bearing capacity
Load bearing values in accordance with DIN 18807, depending on the perforation pattern of the profiled sheet

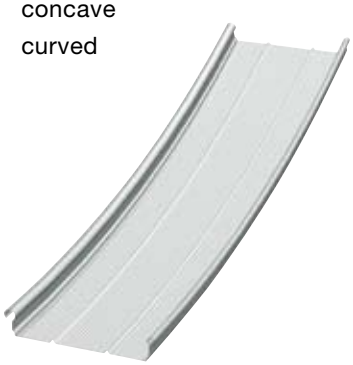
Substructure
Horizontal/vertical girders or spacing elements

Available shapes

straight

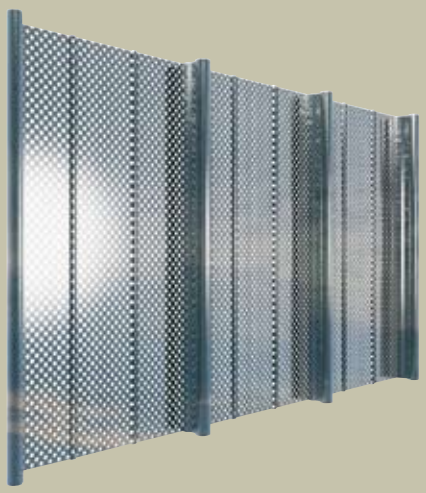
convex curved

concave curved

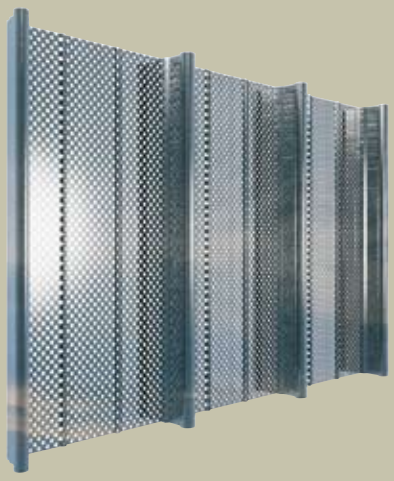


Kalzip® profiles

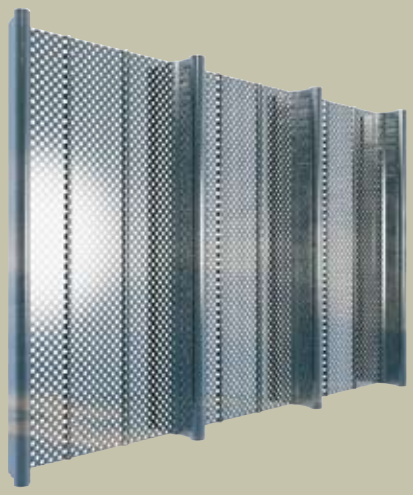
Kalzip® 50/333 P



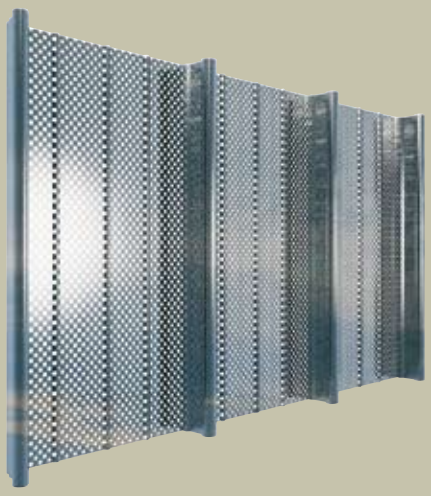
Kalzip® 65/305 P



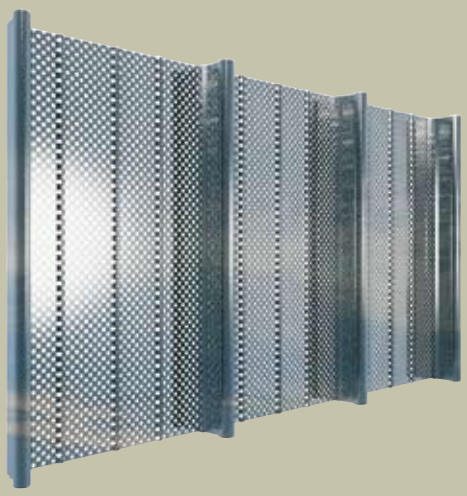
Kalzip® 65/333 P



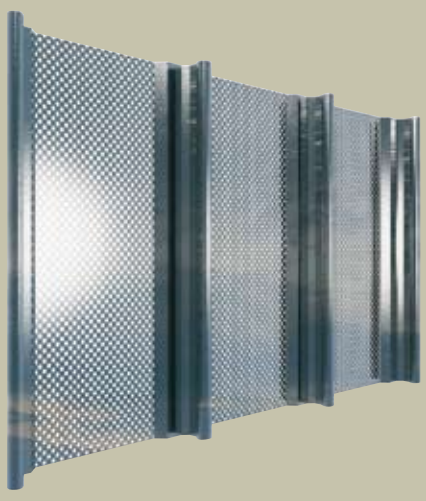
Kalzip® 65/400 P



Kalzip® 65/500 P



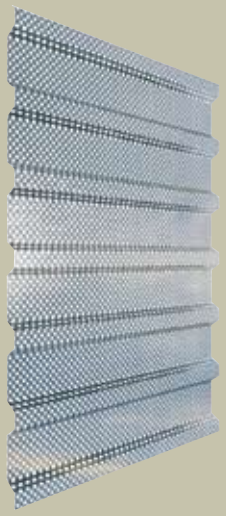
Kalzip® AF 65/434 P



Kalzip® trapezoidal and corrugated profiles

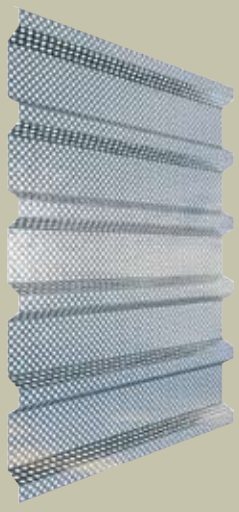
Kalzip® W 18/76 P

Kalzip® TR 30/167 P



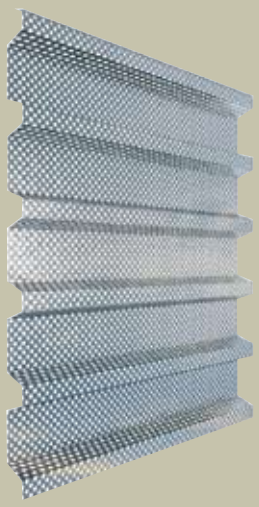
Kalzip® TR 35/200 P

Kalzip® TR 40/185 P

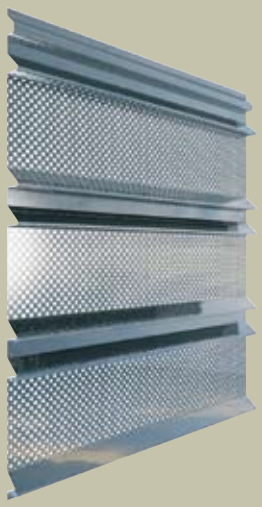


Kalzip® TR 45/150 P

Kalzip® TR 50/167 P



Kalzip® TF 37/800R P



Summary of profile variants available

Kalzip® perforated facade systems offer a wide variety of surface finishes and are available in all standard Kalzip® widths and lengths.

Material: EN AW-3004 or EN AW-6025

Kalzip® profiles

	Rv 3-5	Rv 3.5-5	Rv 3-6	Rv 4-6	Rv 6-8	Rv 6-13.86	Rv 5-12	Perforation
50/333 P					44,9%	15,0%		in lower flange
65/305 P					44,3%			in lower flange
65/333 P	28.8%				44,9%			in lower flange
65/400 P	29,7%				45,4%			in lower flange
65/500 P	29,8%							in lower flange
AF 65/434 P		32,7%	16,8%					in lower flange

right: University hospital (multi-storey car park) **Ulm (D)**
Architects: Scherr + Klimke

Kalzip® trapezoidal and corrugated profiles

	Rv 3-5	Rv 3.5-5	Rv 3-6	Rv 4-6	Rv 6-8	Rv 6-13.86	Rv 5-12	Perforation
W 18/76 P	32,7%				51,0%		15,8%	full surface
TR 30/167 P	32,7%				51,0%		15,8%	full surface
TR 35/200 P	32,7%				51,0%		15,8%	full surface
TR 40/185 P	32,7%				51,0%		15,8%	full surface
TR 45/150 P	32,7%				51,0%		15,8%	full surface
TR 50/167 P	32,7%				51,0%		15,8%	full surface
TF 37/800R P				19,5%	25,2%			in lower flange

The ratios (%) outlined above refer to the percentage perforation ratio in the finished Kalzip®.

Take advantage of our wealth of experience and the comprehensive range of Kalzip® services available

The installation of more than 70 million square metres of Kalzip® profiled sheets worldwide speaks for itself. As the market leader in the field of industrially produced aluminium standing seam systems, Corus Bausysteme GmbH has independent companies in Germany, Great Britain, France, Spain, Portugal, Belgium, Singapore and China. In addition to this, more than 25 representative offices and sales offices throughout the world provide comprehensive advice and support. DIN ISO 14001 and DIN ISO 9001:2000 certification, along with the internationally recognised DNV safety certification ISRS level 8, guarantee reliability and ensure that our customers have the utmost confidence in our products. Renowned architects throughout the world greatly value the advantages and virtually limitless design opportunities offered by the Kalzip® system.

Our technical service department can provide you with:

- Tender documentation relating specifically to your project
- Technical support in finding detailed solutions
- Help and support in all matters relating to Kalzip®

At our own seminar centre we organise:

- Practice-oriented seminars for architects
- Installation training
- Training courses on aluminium sheet welding (WIG), in collaboration with local chambers of trade

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