

The company Kovove profily, spol. s r.o.

We offer:

- 1/ We choose for you the optimal roof and wallsystem from all thin metal based systems with respect to required technical characteristics, price and quality of the building.
- 2/ We calculate the static of your roof or wall, we optimize your construction.
- 3/ We save your buildings costs.
- 4/ We supply the material, we make the drawings for roof and walls, we train your building staff, we help with chief-montage.

Ing. Zbyněk Vitošek
manager
Kovové profily, spol. s r.o.

About the company Kovove profily – company policy

- Even that our company offers technical service before and after the contract , we deliver our products customers in **price level of producers**.
- § We guide ourselves to be profesional contact for our customers, pointing on customers needs with longterm positive relations and never let him "aground".
- § The business strategy rests in a focus on customers needs.
- § **Large technicaly servis** (statical calculations, drawings, losing of complicated building details etc.).
- § **The shortest delivery terms.**

We would like to give you here the information about:

§ Different types of wall and roof systems based on thin metall profiles, their characteristics and the border of their using

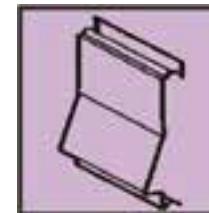
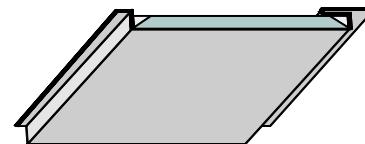
and

§ New trend in materials, technologies for anti-corossion protection of roof and wall profiles

Types of wall and roofsystems based on thin metal profiles

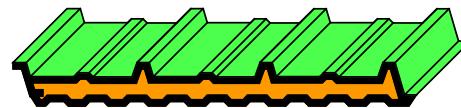
1. Systems without thermal isolation

- Trapezoidal profiles
- Sinusoidal (waves) profiles
- Siding – facade lamellas
- Large facade cassettes
- ACM plates – bonds



2. Systems with integrated thermal insulation

- Trays (C-lines) Cassette walls
- Sandwich panels







Danpal

KOVOVÉ PROFILY



DANPAL – Light architecture solutions



Danpal



Wallsystems without thermal isolation

Trapezoidal profiles

Waves profiles

Facade lamelas – siding

C-lines walls

Komposit plates – bond



We offer for you:



Trapesoidal profiles:

We choose for you the optimal profil according your construction, necessary guarancy and price. We reduce your costs.

- § A lot of types and designs, various materials, coatings, colours...
- § Perforated –profiles, acoustic profiles
- § With concrete structure combined
- § Curved profiles, design profiles (Welltec, Montana, SAB,) for interior and exterior
- § **Fire-resistant trapezoidal constructions untill the span of 7,5m!!!**
- § **The cheapest wall systém for longlife maintenance-free lifespans, the cheapest system for thermal weatherproofing**
- § **The key for economical using is the optimal choice of the profiles**



Trapezoidal profiles – construction profiles

§ For roofs and walls, in the height of the profiles 6 till 200 mm. Produced from galvanised and coil-coating painted steel.

Tab. 1 – Standard construction profiles – the part of sortiment

TRAPÉZOVÉ PROFILY					
Označení	Tvar profilu	Označení	Tvar profilu	Označení	Tvar profilu
TR 19/105		TR 40/183		TR 94/255	
TR 20/137,5 TR 20/220		TR 45/333 KD		TR 100/275	
TR 25/175		TR 50/250 TR 50R/250		TR 110/333	
TR 30/220		TR 55/250		TR 130/343	
TR 35/207		TR 56/222		TR 160/250	
TR 39/333		TR 60/235		TR 200/375	
TR 40/333		TR 70/200		TR 200/420	



Airport Hamburk



SCONTO - Praha

GLOBUS - Olomouc



OBI - Praha



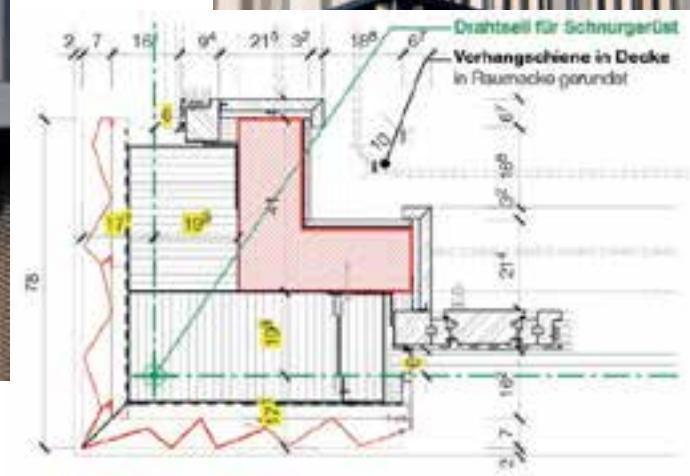
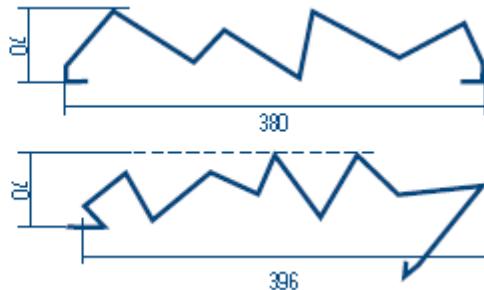
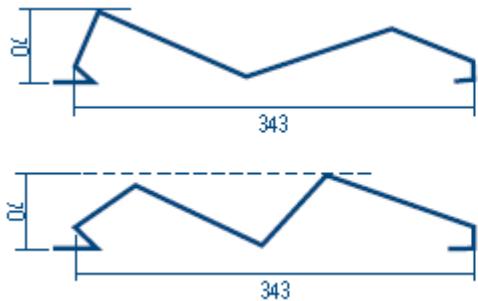


MONTAFORM design

- § Alternative to the traditional profiles
- § design / „friendly“ price
- § Hidden fixing
- § 6 types of full or part perforation
- § Different colors on 1 pc profile



ST. JOSEF FOUNDATION (CH)





MONTAFORM Design

ST. JOSEF FOUNDATION (CH)



Bus depot, GRUTZEFELD(CH)



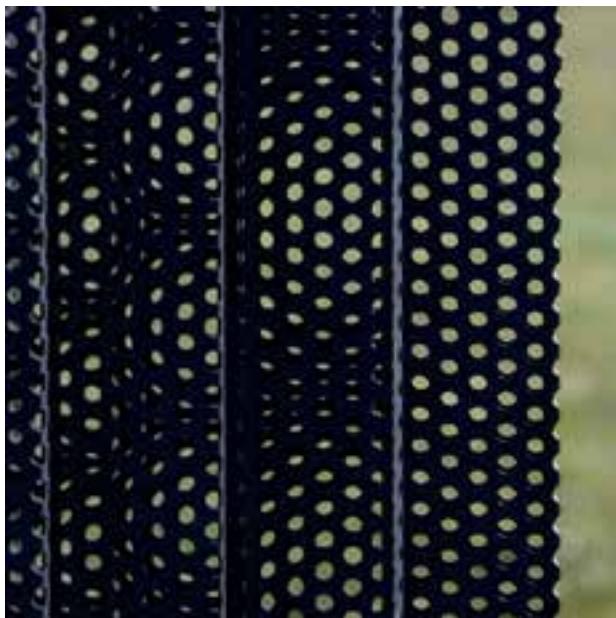
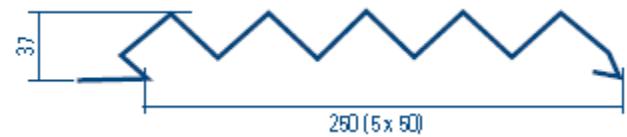
Widmi Housing, Lenzburg (CH)



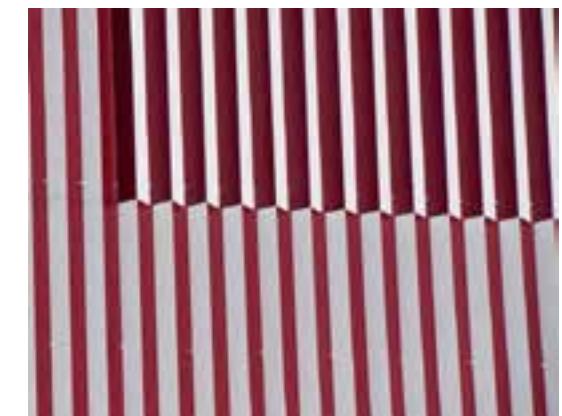
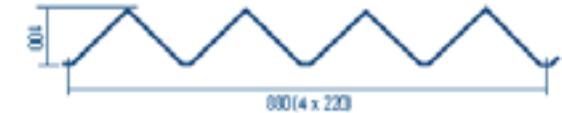


MONTAFORM Design

Riedepark, Zug (CH)



Planzer, Plattern (CH)





Design trapezoidal profiles

MN Art. No.

Sketch

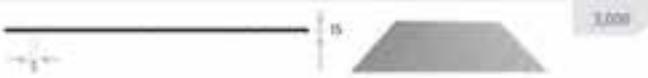
max. panel length in mm

W-1.5/3
also available in metal plates, twisted in two places



3,000

W-1.5/5
also available in metal plates, twisted in two places



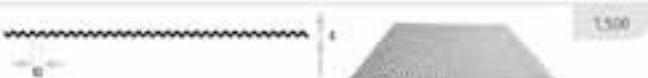
3,000

W-2.5/9
also available in metal plates, twisted in two places



3,000

W-4/10
also available in metal plates, twisted in two places



1,500

W-6/15
also available in metal plates, twisted in two places



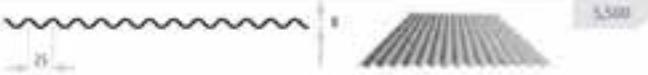
1,000

W-6/32
also available in metal plates, twisted in two places



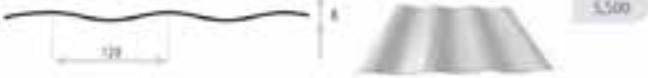
5,500

W-8/25
also available in metal plates, twisted in two places



5,500

W-8/120
also available in metal plates, twisted in two places



5,500

W-10/60
also available in metal plates, twisted in two places



5,500

MN Art. No.

Sketch

max. panel length in mm

W-15/40
also available in metal plates, twisted in two places



5,500

W-18/76
also available in metal plates, twisted in two places



5,500

W-20/50
also available in metal plates, twisted in two places



5,500

NEW

W-20/70
also available in metal plates, twisted in two places



5,500

W-27/100
also available in metal plates, twisted in two places



5,500

W-27/111
also available in metal plates, twisted in two places



5,500

W-38/125
also available in metal plates, twisted in two places



5,500

W-40/125
also available in metal plates, twisted in two places



5,500

W-42/160
also available in metal plates, twisted in two places



5,500



Design trapezoidal profiles

MW Art. No.	Sketch	max. panel length in mm
Z-10/30		3,000
Z-15/45		3,000
Z-20/60		3,000
Z-25/80		3,500
Z-30/120		3,000
Z-13/26		3,500
Z-28/40		3,500

For outdoor use MW provides these fanfold profiles with a variable screw plate (e.g. SZ-35/35-R; find more profiles in Group 5, pages 11, 12 and 13).



MW Art. No.	Sketch	max. panel length in mm
SZ-H-R		3,000 / 3,500
SW-H-R		3,000 / 3,500
SZ-H-B		3,000 / 3,500
SZ-A-R		3,000
NEW Sample 1		3,000

Flat sections can be realized nearly within every profile.



Sample 2

Varying axes can be realized nearly for every profile.



The basic forms for Group 5 can be found under Group W/T and Z. The quoted dimensions between axes are minimum.

The dimensions between axes in Group 5 can be increased variably through use of vertical plates.

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Sample of using of trapezoidal profiles 2





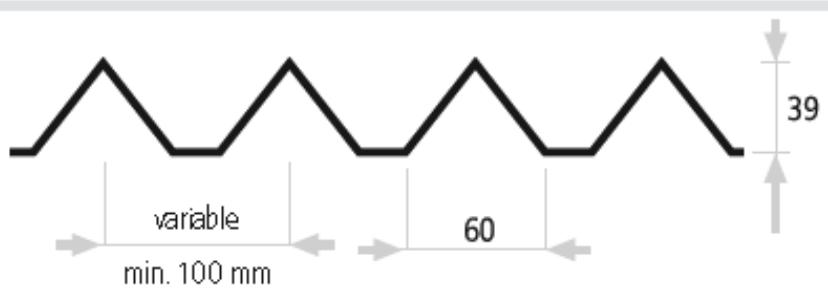


Design trapezoidal profiles

CTP – Continental, Ostrava
Construction



SZ-39/60-R



5,500

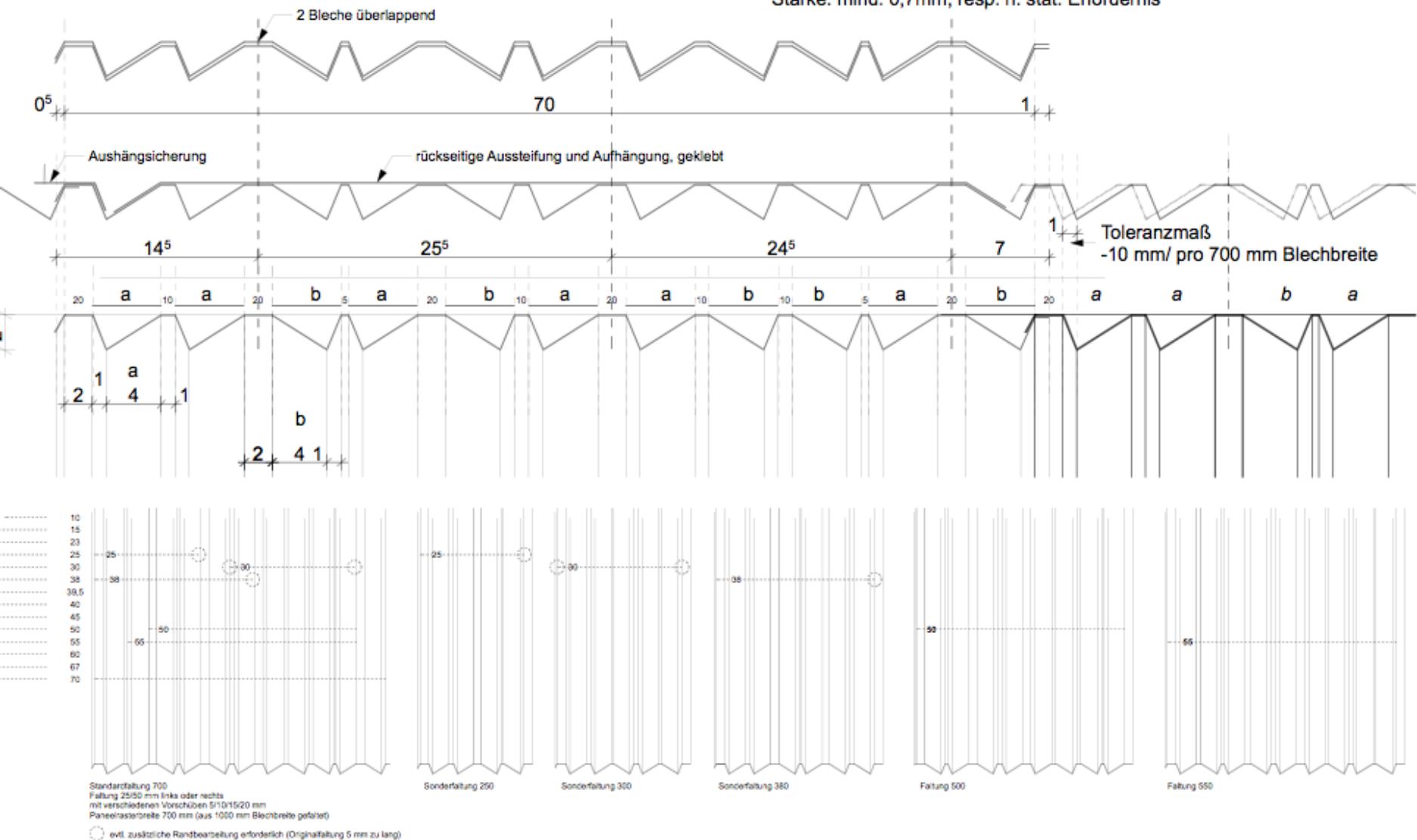


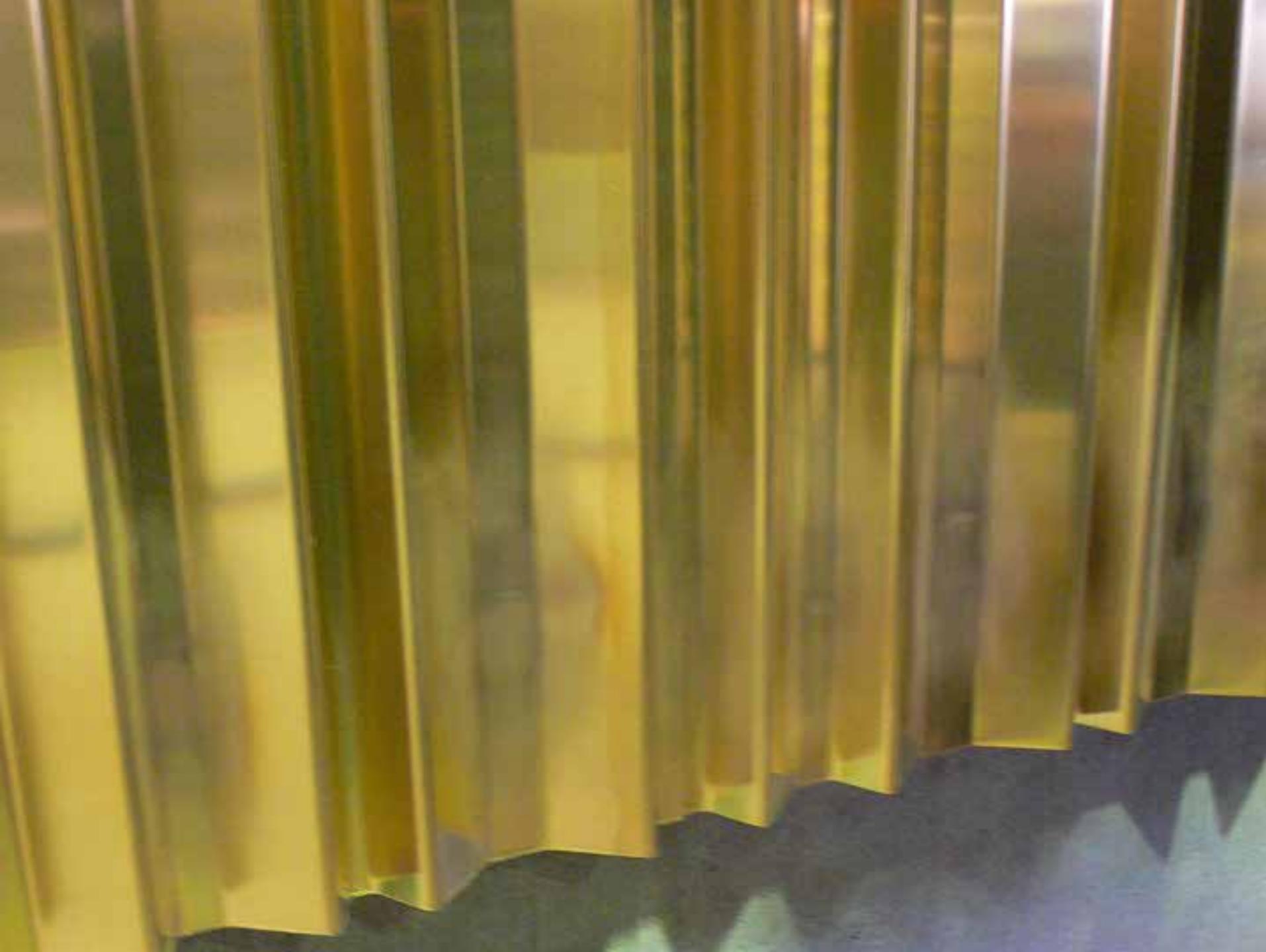


Material:

gekantetes Messingblech TECU Brass
Breite: 700 mm, Tiefe: 27 mm
Sonderprofilblech mit Sicken SZ 25/50 R
Stärke: mind. 0,7mm, resp. n. stat. Erfordernis

Faltungen für Wand- und Dachflächen







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Sample of using perforated trapezoid sheets





- § For facades, produced from galvanized and painted steel or alu. Delivered in the height of the profiles 18 till 55 mm.

Sample of using



Sipral – headquarter Prague



Agromex – Čestlice

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Sample of using with waves profiles

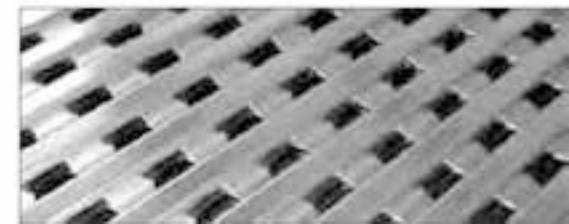
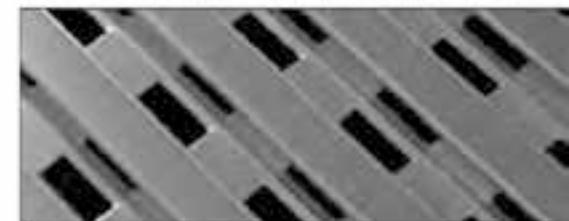
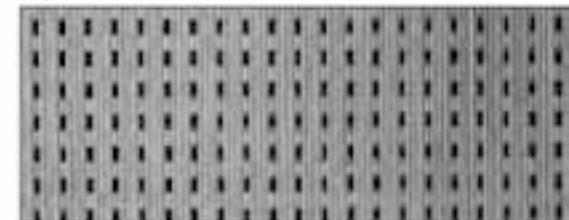
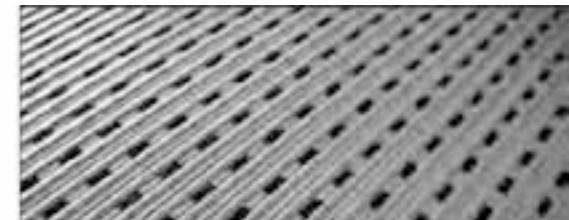
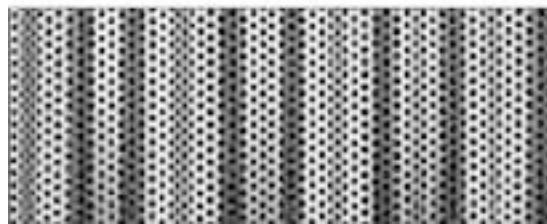
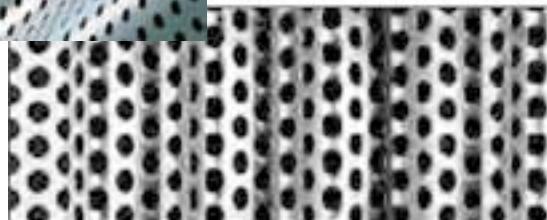
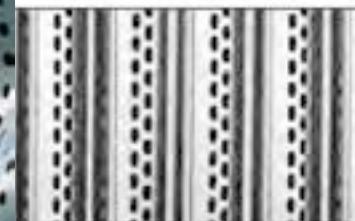
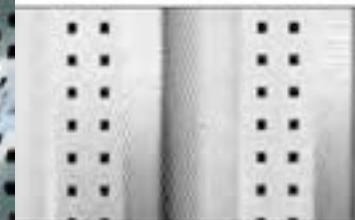
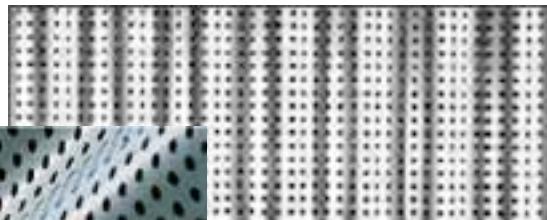


HADOVKA – OFFICE PARK – Praha

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Perforated trapezoidal and waves profiles

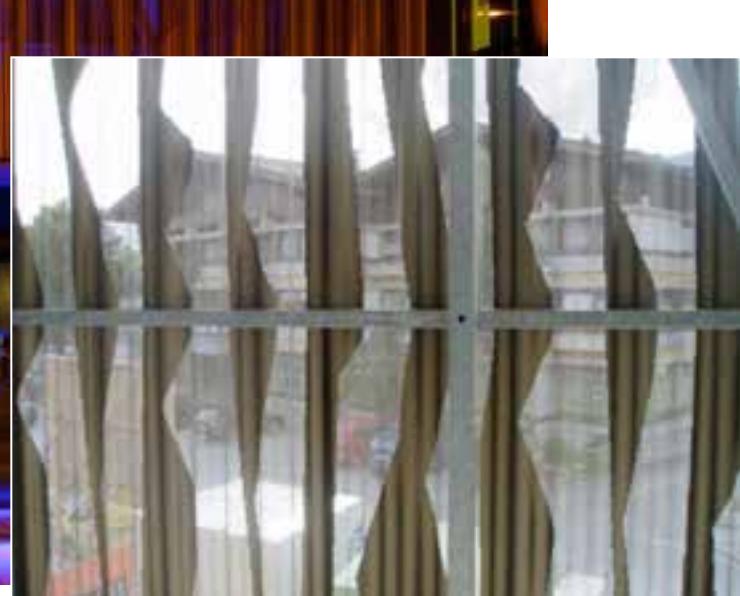


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Sample of using with perforated trapezoid pr.







Parking house - Switzerland



Shopping mall - Germany

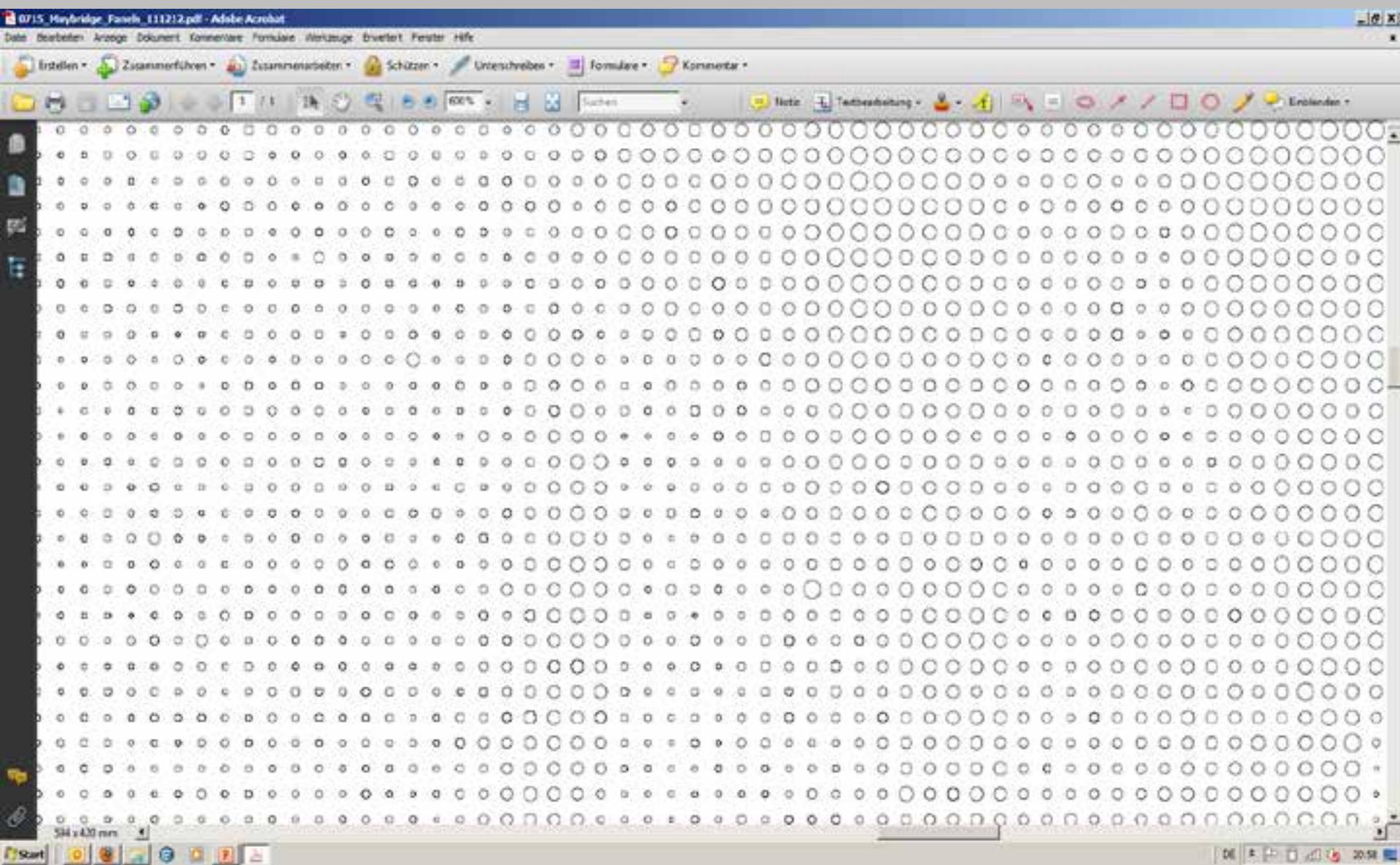


Post Finance Arena
Switzerland



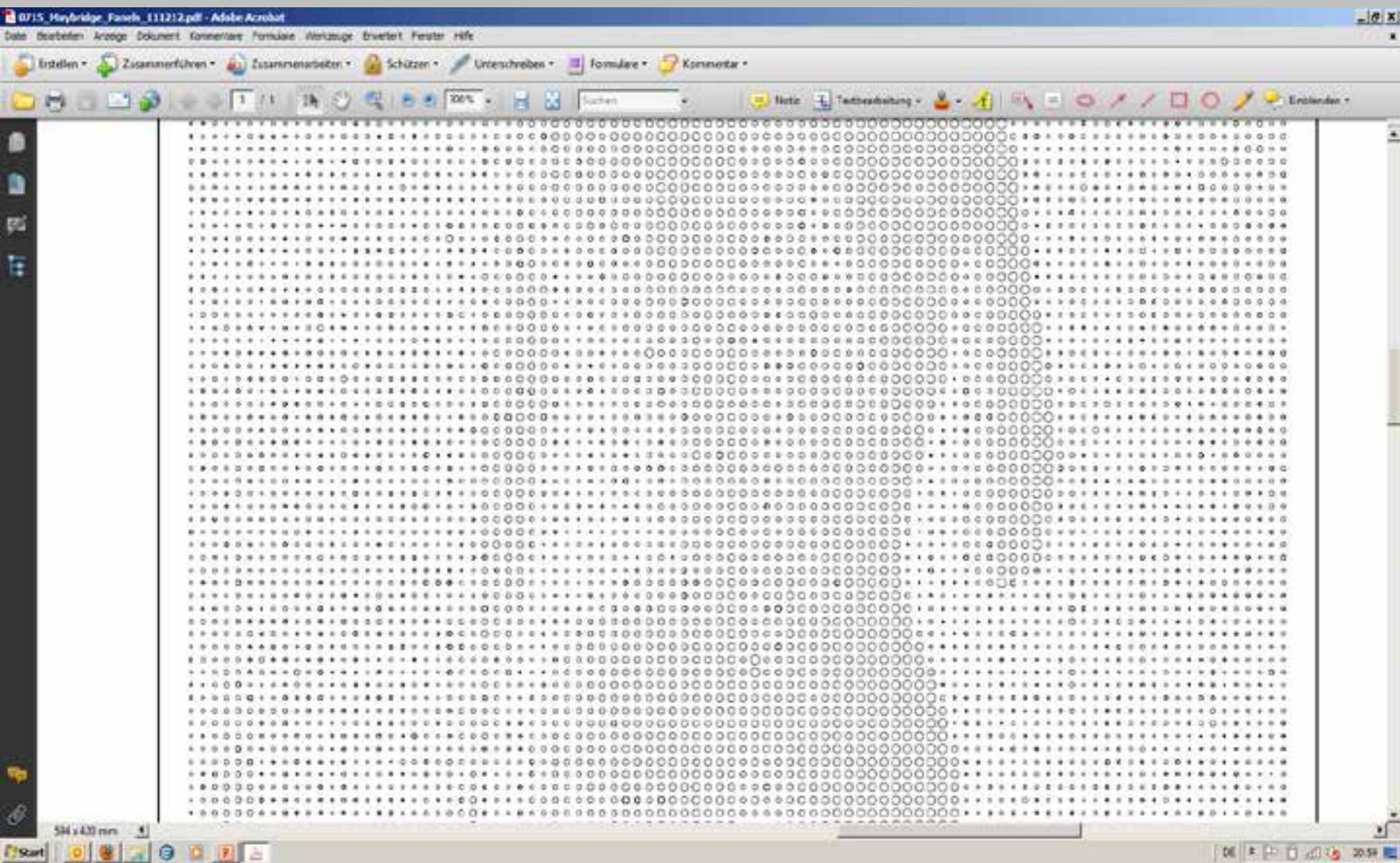


Sample of using with perofated profiles



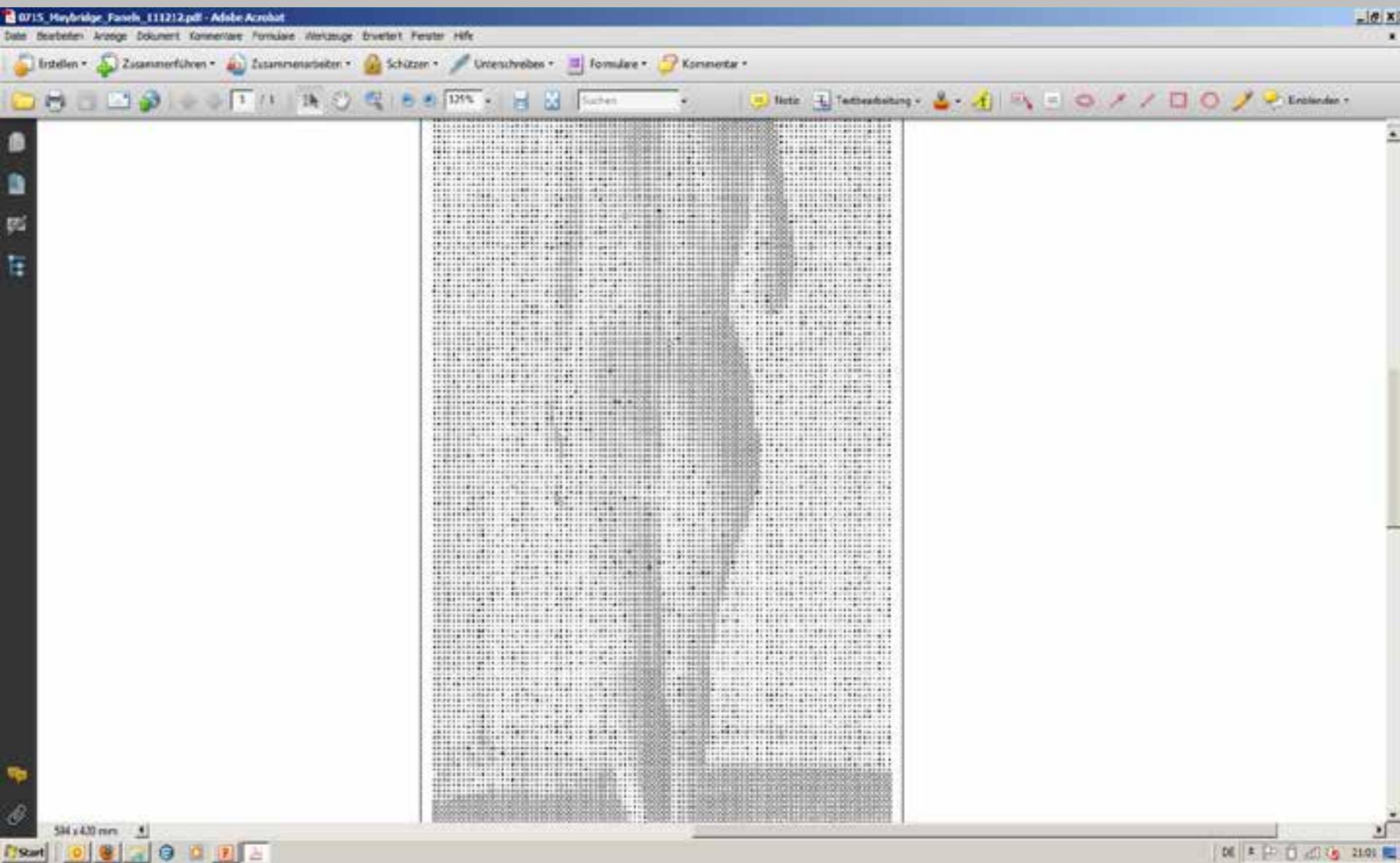


Sample of using with perofated profiles





Sample of using with perforated profiles



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Sample of using with perforated profiles



Therapy center
Austria





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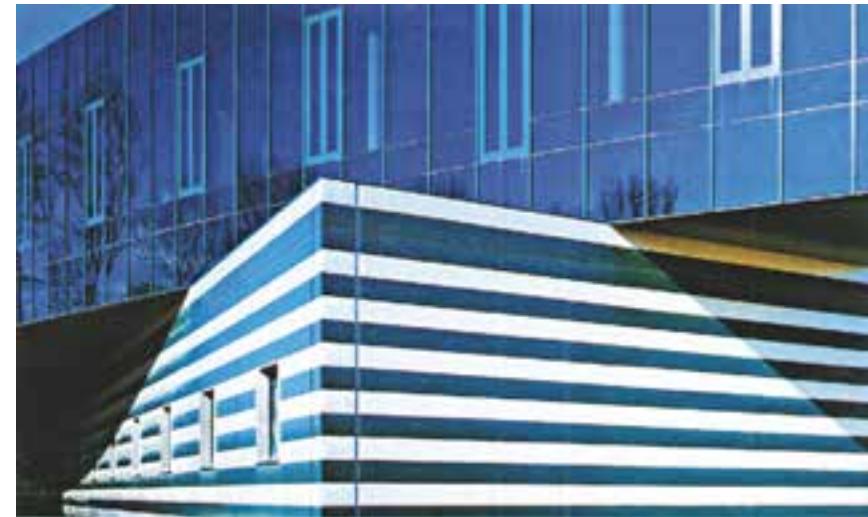
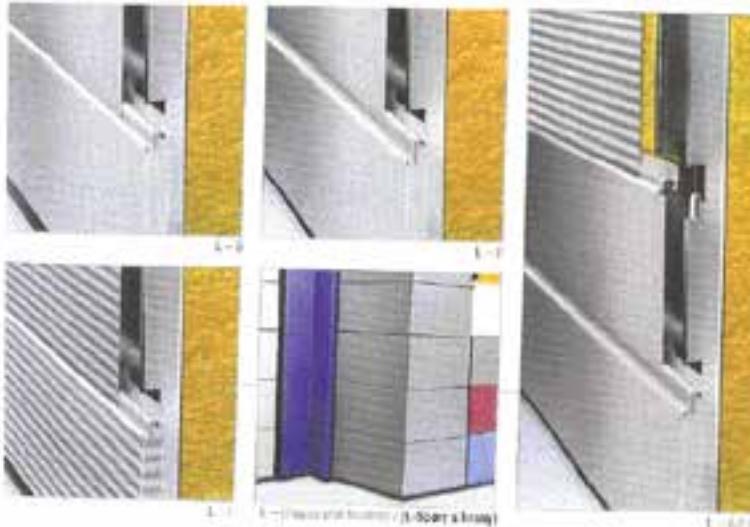
Sample of using with perforated profiles



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Facade lamelas - siding



Hoffmann



RENAULT - Praha



Facade lamelas - siding



FASÁDNÍ LAMELY

Označení	Základní údaje	Typ profilu	Evidenční číslo/výrobce			Materiál
			Model M mm	POTŘEBOVANÁ POČET	HODN.	
LINEAR	A		200 300	0,75 1,00	1,00	Pb L
LINEAR DS			200-300 300-400	0,75; 1,00 1,00	1,00	Pb L
LAMELA PS	PL		200-300 400	0,75; 1,00 1,00		Pb L
LINEAR L	A		200 300	0,75 1,00		Pb L
LINEAR SS-L			200-300	0,75; 1,00		Pb L
LAMELA PF	PL		200-300	0,75; 1,00		Pb L
LINEAR F	A		200 300	0,75 1,00	1,00	Pb L
LINEAR DS-F			200-300 300-400	0,75; 1,00 1,00	1,00	Pb L
LAMELA PW	PL		200-300 400	0,75; 1,00 1,00		Pb L
MIL-DS-G	CH		200-250 300	0,70 0,80; 1,00	0,70 0,80; 1,00	Pb L



Advantages of facade lamelas:

- § Machinely roll – production, good design and quality with low price
- § Without the risk of unregular unevenness until the modul of 400mm
- § The possibility of the delivery long and short profiles also with forehead banding – better rigidity of the plate and less risk of waves

Disadvantages of facade lamelas :

- § For even desing is necessary the absolut level supportint contruction
- § Better the thickness minimal 1,00mm, otherwise big risk not good flatness of the facade
- § Maximal recommended modul 400mm

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Sample of using of facade lamelas



INTERSPAR – Mladá Boleslav



Façade cassettes





Advantages:

- § Large formats, custom production quadrat or rhomboid forms
- § Partly hand-production, partly machine production
- § More systems KP-FORM+ production in Prague, Liberta – production in Finland, Alumetal – production in Italy, aj.)
- § **Intermediate stage between facade lamelas-siding and composit plates.**
- § **Optimal by high buildings with required fire-resistance facade**

Disadvantages:

- § It is necessary to have absolut flat supportin contruction, correct drawings and assembly staff having in order eliminate the efect of thermal expansivity of the material. Minimal thickness 1,0 or 1,25mm by steel, better 1,5mm, by Aluminium 2 or 3mm
- § modul typical 400-800 mm, length max. 3000 mm, otherwise is necessary to use special alloy

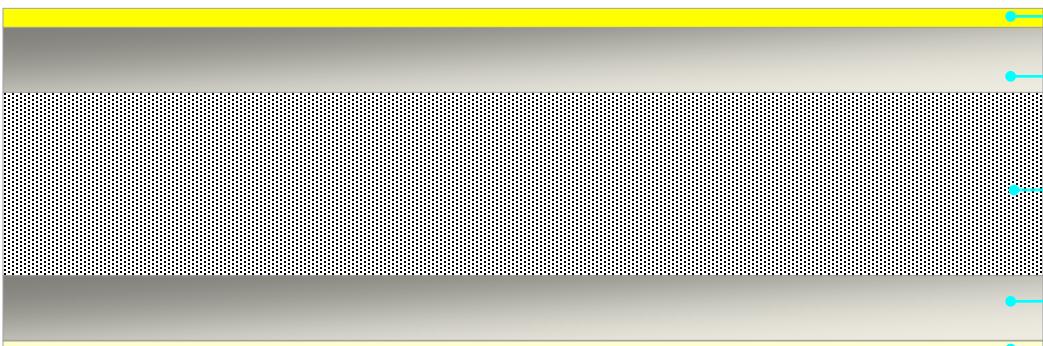
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Facade cassettes



- § Many production and qualities – high recommended to prescribe the alloy, thickness of the plates and sheets, type of core and type and thickness of event. Painting
- § Composite panels consist of two mainly (but not only – by Alpolic also other metals..) aluminium sheets connected by the core in theckness 2-6 mm
- § **Optimal for the large representativ facade walls of all types of buildings**
- § Fire-resistance from F-D (types with polyethylen core - PE), B (types „fr“) and A2
- § Composite plates not only with aluminum sheets, but by for ex. Mitsubishi production of Alpolic also with natural metals as Titanium, Inox-steel, copper or zinc).
- § Lightweight – Lighter than solid metals of equivalent rigidity
- § There are more panels with class B, it means core „fr“, but ac. CSN you can use core „B“ for the building higher than 12m only if the material passed the test according the norm ČSN ISO 13785-1. In this case is the wall-construction taken as DP1



Top coating
 Lumiflon based Fluoropolymer
 Aluminum
 Core material; Polyethylene or
 Non-combustible mineral filled
 Aluminum

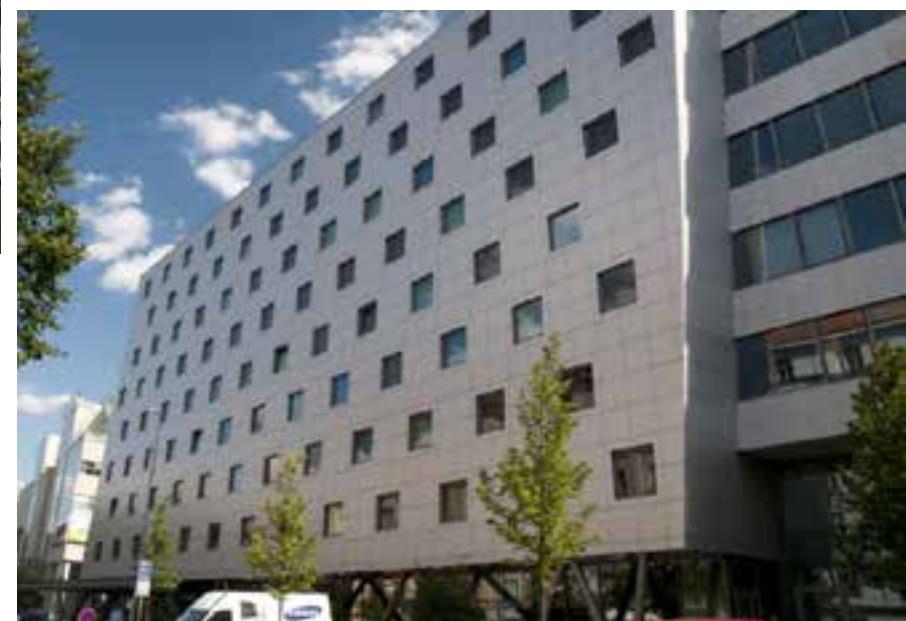
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Composite plates - bond



City Green Court



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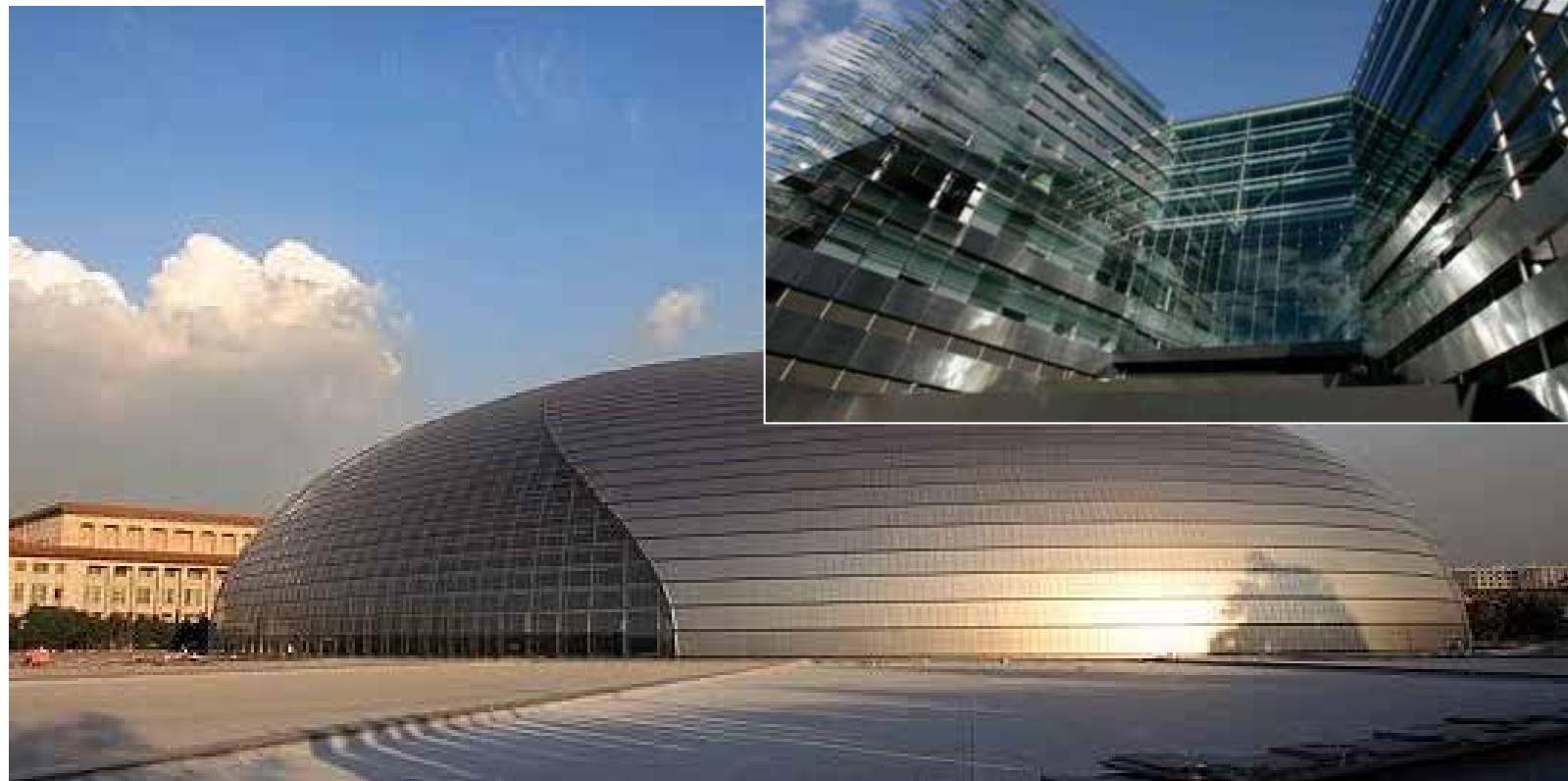


Sample of using composit plates - bond

Alpolic SCM



Alpolic TCM

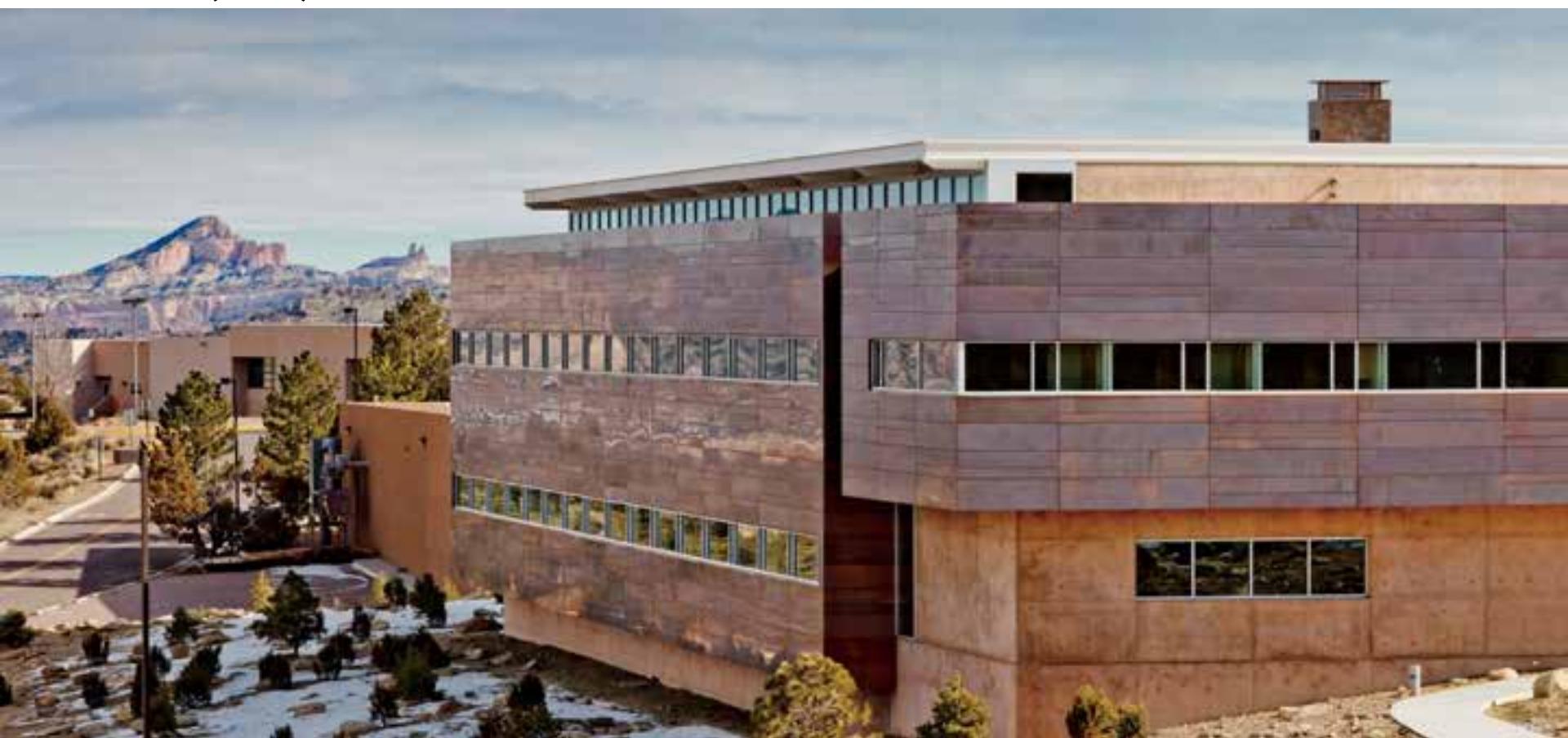




Sample of using composite plates - bond



ALPOLIC – (CCM)

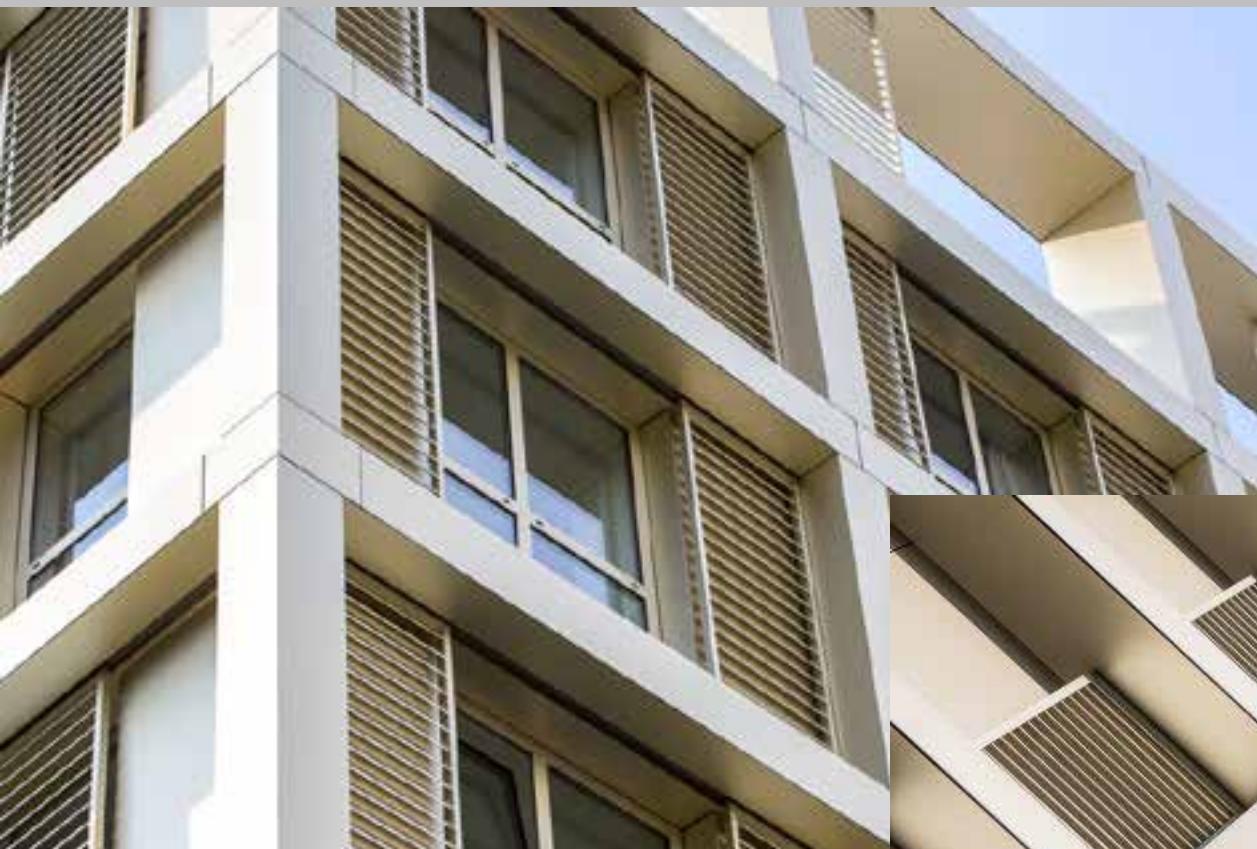


University of New Mexico

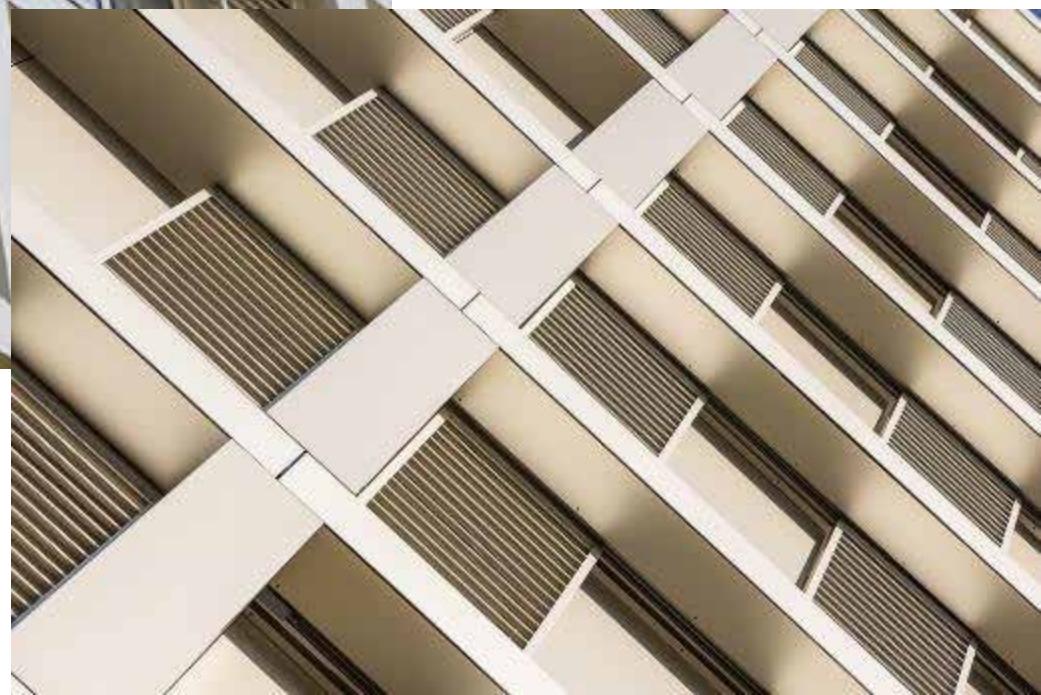


Louvre lens (Fr)
Alpolic - C-brite (real anodised)





Elterly Home, (NI)
Alpolic - Gold 10 (real anodised)







Alpolic/fr Custom white, Spain

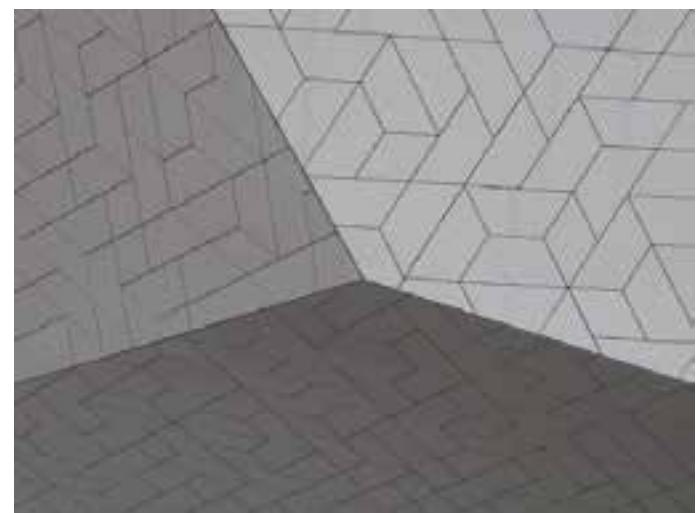




Marina Bay, Singapore
Alpolic – custom silver







Film museum - Amsterdam, NL, Alpolic

Some projects in Czech and Slovak republic

- § Prague – Vaclav Havel Airport, Terminal 2 – 25000 m²
- § Radio Free Europe, Prague – 5000 m²
- § Vitkovice arena, Ostrava – 8000 m²
- § IVG Evropská, Prague – 5000 m²
- § Masaryk university, Brno – 3700 m²
- § VUT Brno, FSI – 3000 m²
- § Vienna Point, Brno – 6000 m²
- § **City Green Court , Praha– 3000 m²**
- § Bratislava Airport, New Terminal – 700 m²
- § Žilina Aupark – 1000 m²
- § Bratislava ASKO – 750 m²



BEMO non penetrated systems for the foofs and facades



Airport Zagreb



BEMO non penetrated systems for the foofs and facades





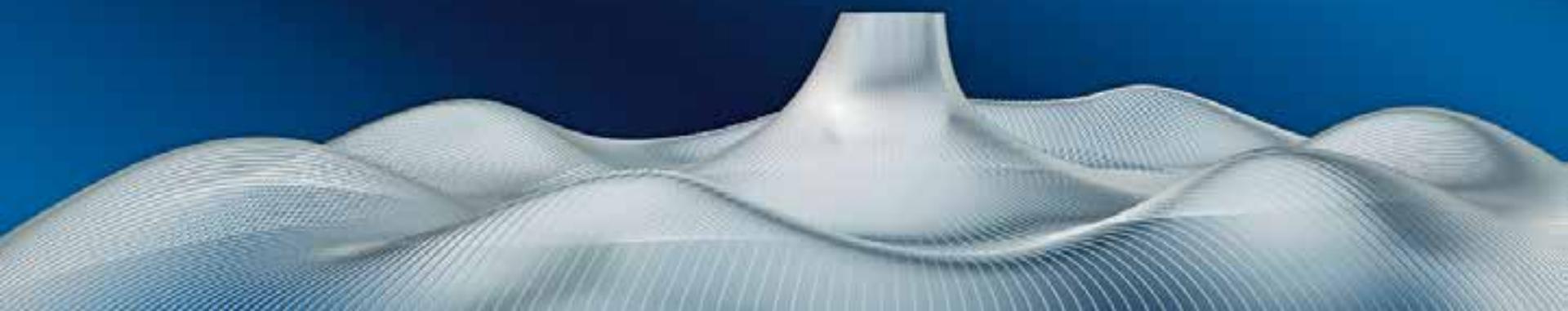
Non penetrated systems



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Non penetrated systems



Production „in site“:

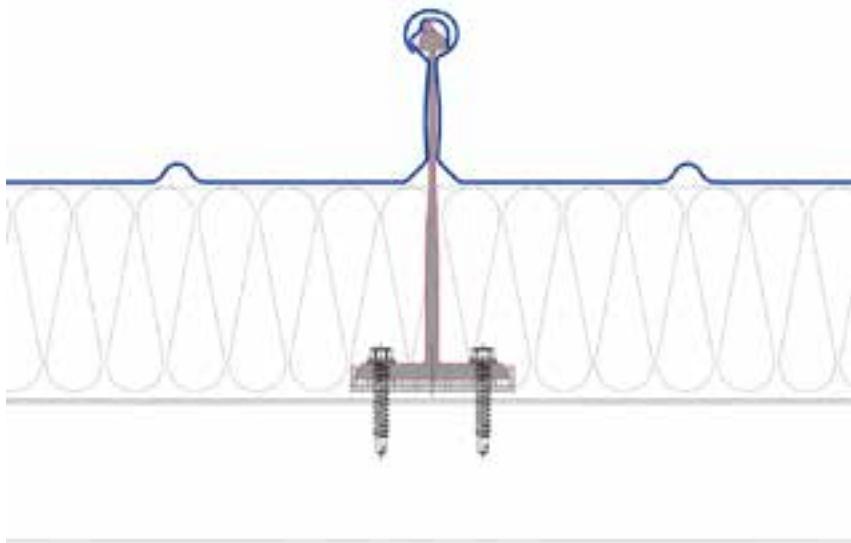


Production line on the roof level



Curving panels on site

BEMO – principle of the „standing seam“:



- With concealed, gliding halter-clips
- No mechanical penetration
- Individually shaping
- Infinite lengths and various widths
- Slight roof pitches

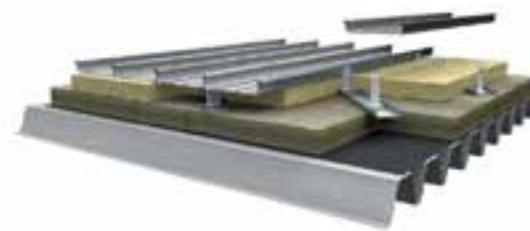


Non penetrated systems

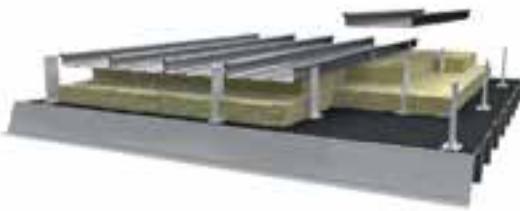
BEMO – systems types:



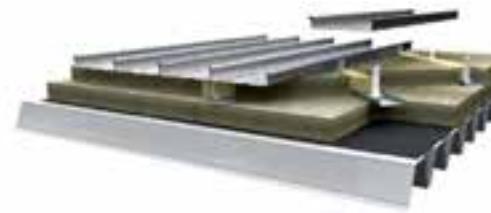
BEMO-ELEVATE



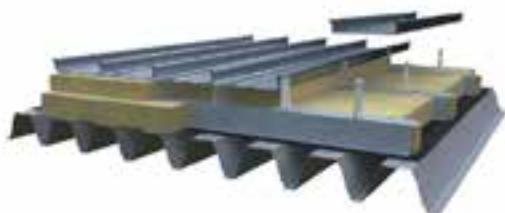
BEMO-COMBI



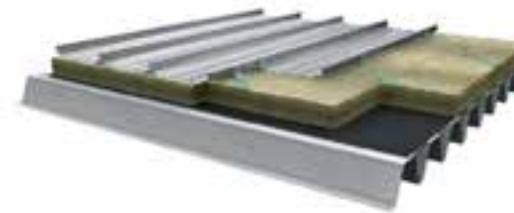
BEMO-SOFT



BEMO-COMPACT

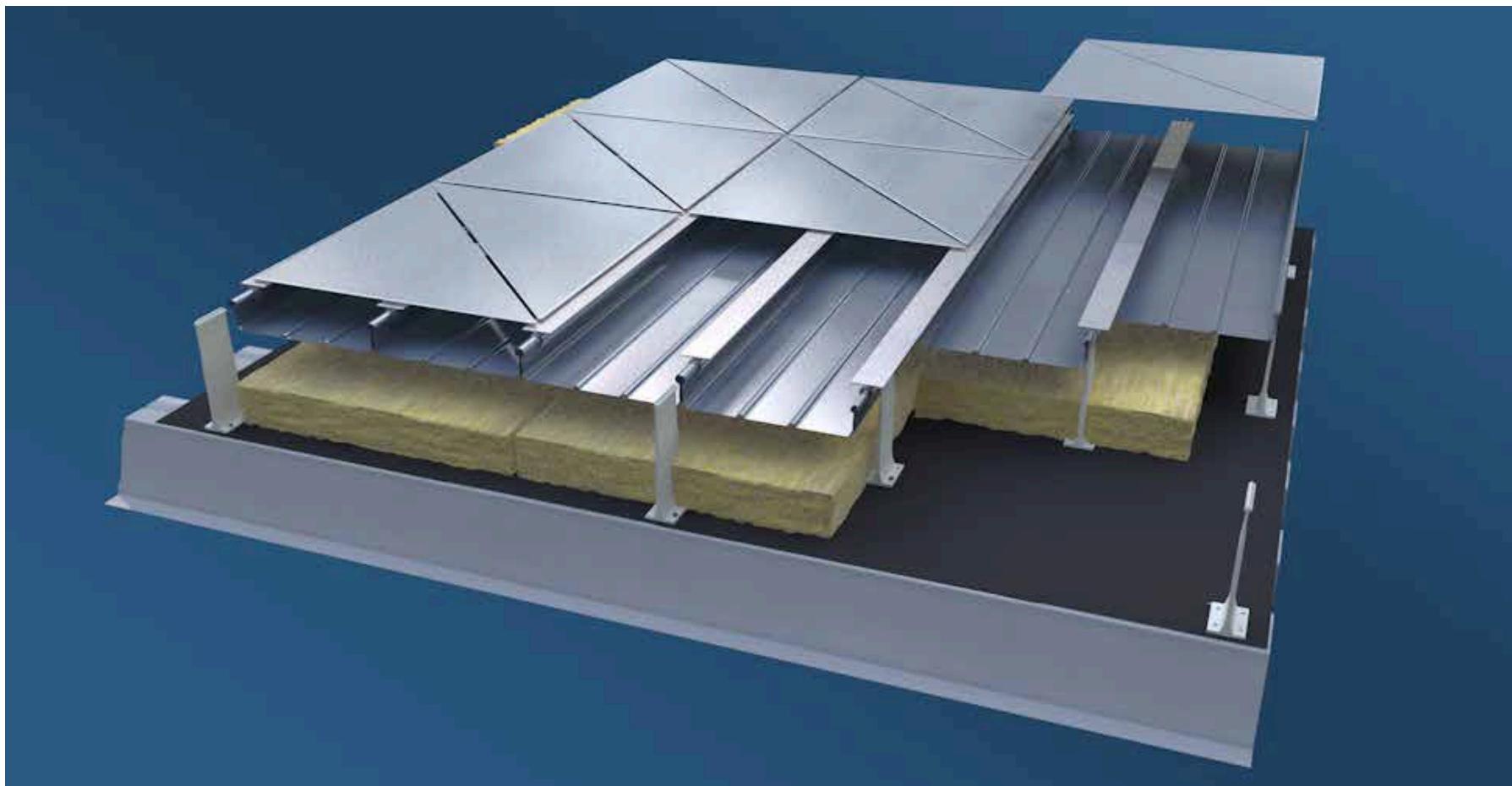


BEMO-SOFT
PLUS

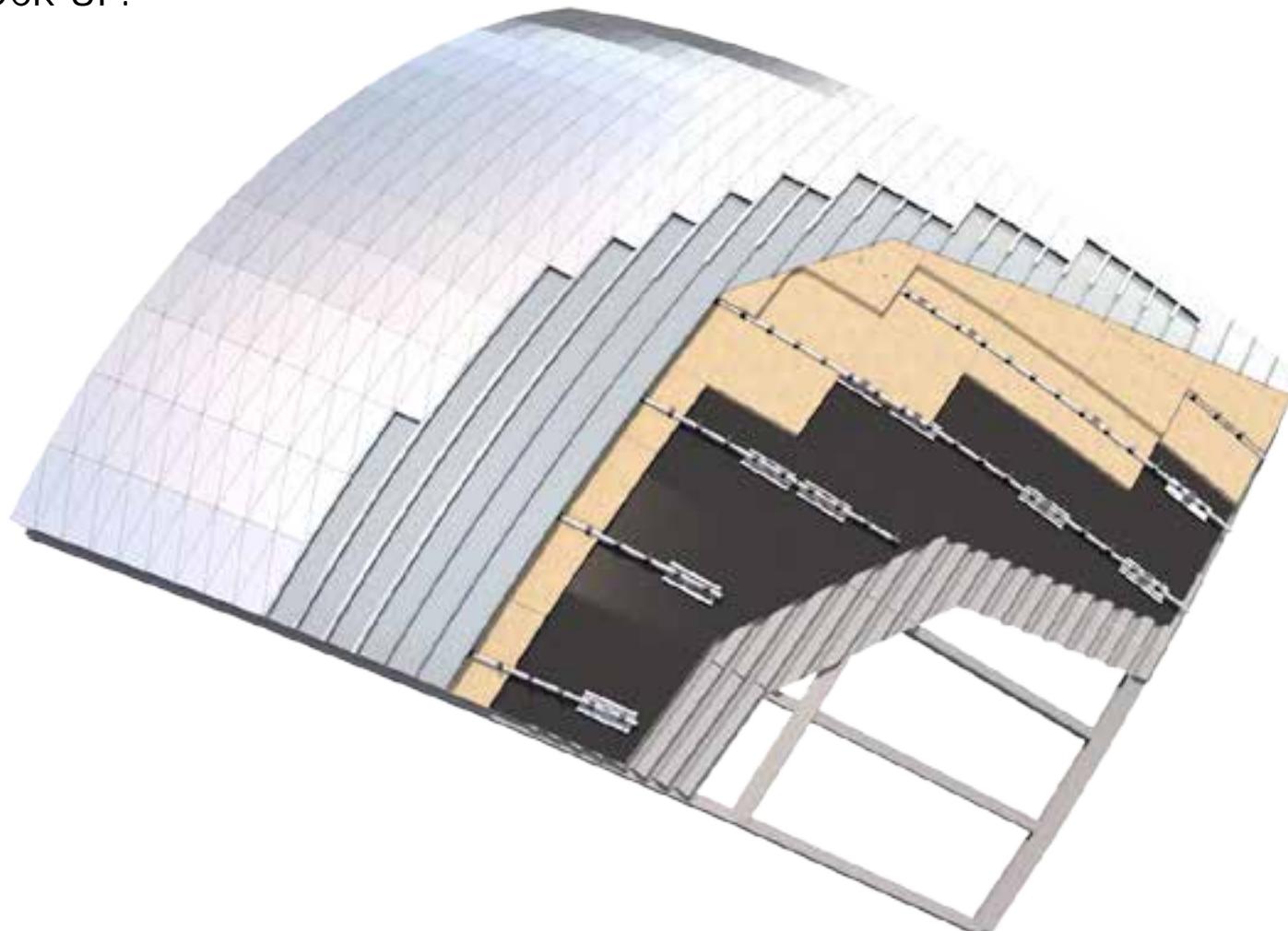


Prodach®

BEMO TOP-rail system – roof and facade covered with composite panels:



BEMO TOP-rail system – roof and facade covered with composite panels,
3D MOCK-UP:





Using BEMO profiles as roofing:

- Minimum slope 1.5° (2.6 %)
- Minimum slope 2.9°(5 %)

For roofs without horizontal joints / overlappings
For roofs with horizontal joints / overlappings and / or penetrations

Specials:

- Minimum slope 0.6° (1 %)

With rubber sealant at the small flange

Remarks: - Special details have to be considered!
- Only with a previous 3D-Scan of the roof / sub-construction!



Powerplant Singapur



BEMO systems – variety of materials:



Aluminum



Stainless steel



Steel



Copper



Titanium zinc



COR-TEN Steel



And variety of coatings:



Stucco



Brushed



Aluzinc



Eloxal



BEMO-FLON

- Natural copper, oxidized or preweathered
- Natural titanium zinc, Pigmento or Anthra
- FeZn painted or Aluzinc
- Stainless steel in many forms
- Aluminium natural, stucco, anodized
- Coatings: Polyester, HDPE, PVDF, BEMO-FLON

Halter systems :



BEMO standard aluminium
halter

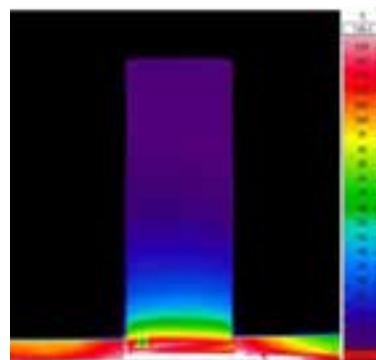


BEMO GFK-thermal
halter eliminates
thermal bridges



BEMO HOOK-
halter
for deployment in
extreme wind zones

Thermal insulation:



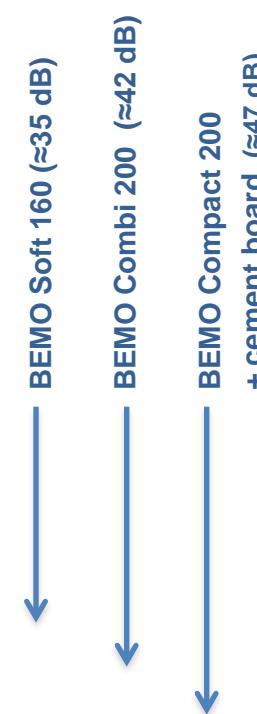
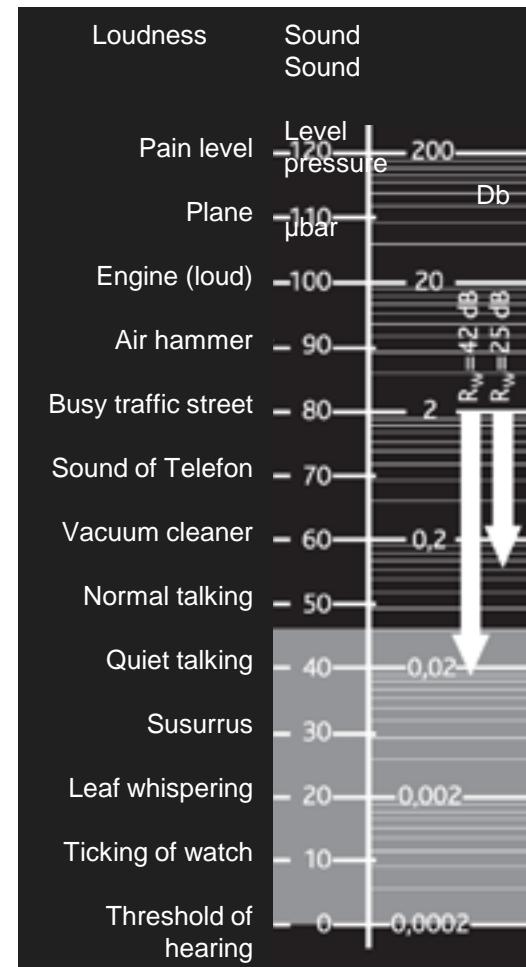
Roof Build up (with 1 Halter per m ²)	U _{insulation} [W/(m ² K)]	U _{thermal bridge} [W/(m ² K)]	U _{total} [W/(m ² K)]
BEMO Soft: Aluminium Halter Typ 220 Thermal spacer 5mm Insulation 160 mm (λ 035) soft	0,212	0,104	0,317
BEMO Soft: Omega profile Aluminium Halter Typ 160 Thermal spacer 5mm Insulation 200 mm (λ 035) soft	0,171	0,110	0,281
BEMO Combi: Hard insulation 100mm (λ 040) BEMO Combi Profile Aluminium Halter Typ 160 Thermal spacer 5mm Insulation 200 mm (λ 040) soft	0,195	0,016	0,211
BEMO Soft: GFK Halter Typ 245 Insulation 180 mm (λ 035) soft	0,189	0,001	0,190
BEMO Soft: GFK Halter Typ 165 Insulation 100 mm (λ 035) soft	0,334	0,002	0,336
BEMO Soft: GFK Halter Typ 165 Distance spacer 20mm Insulation 120 mm (λ 035) soft	0,280	0,002	0,282

Sound protection:

Sound insulation:

Reduce the sound from the outside to the inside

Raising up the sound level by **3 dB** is equivalent to **double** the loudness



BEMO-DOME Sub-construction

Adjustments in three axes and three directions

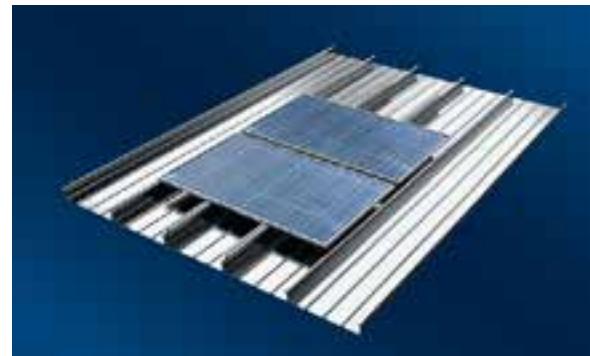


BEMO-AKKORD

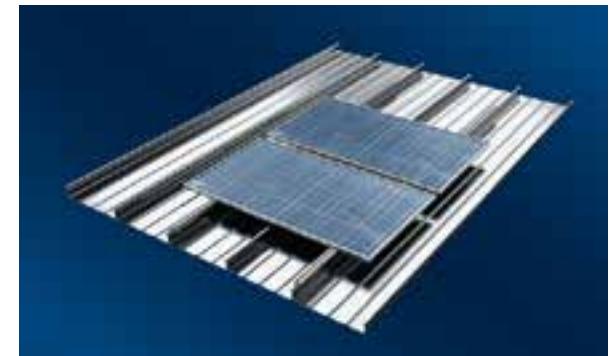
The variable roof system for each type of PV-Module



Typ 1
One photovoltaic module
installed across four
standing seam panels;
modules meet over the
standing seam.



Typ 2
One photovoltaic module
installed across three
standing seam panels;
modules meet over the
standing seam.



Typ 3
One photovoltaic module
installed across three
standing seam panels;
modules meet over the
center of the panel.



Non penetrated systems



KOVOVÉ PROFILY



Non penetrated systems



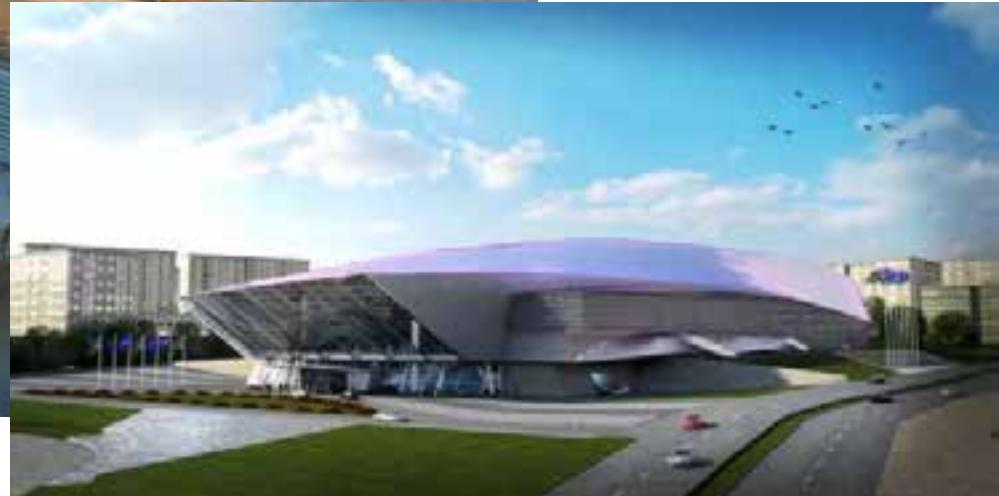
Multifunctional arena Germany



Conference hall Garland - USA



Conference hall Baku





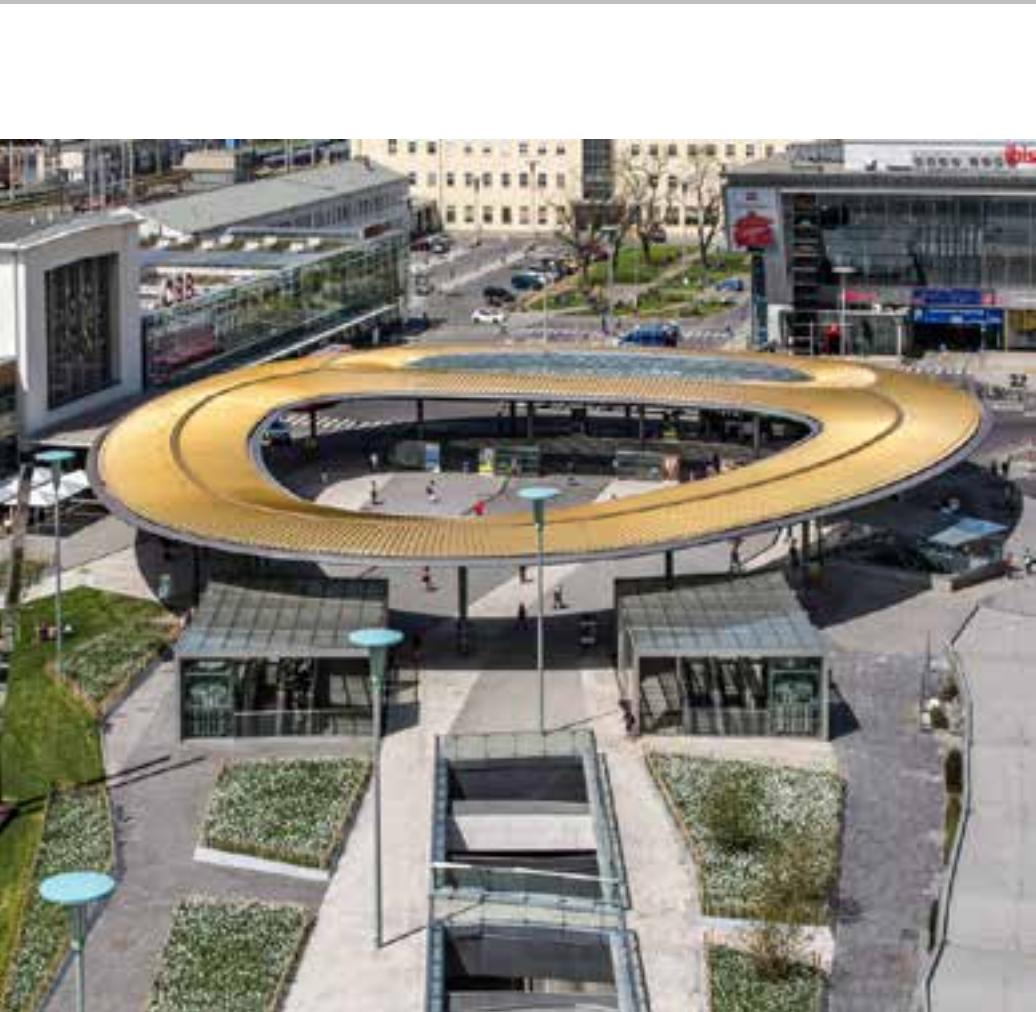
Detroit Midfield Terminal - USA



Stadium Lublin (PL)



The Squaire – Frankfurt n.M., Germany



Main station Graz



Main station Salzburg





Wall systems with thermal isolation

Sandwich panels

C-lines walls

KOVOVÉ PROFILY



Sandwich panels



PANASONIC - Plzeň



Würth – Mladá Boleslav

*Sandwich
panels
profilation
types*



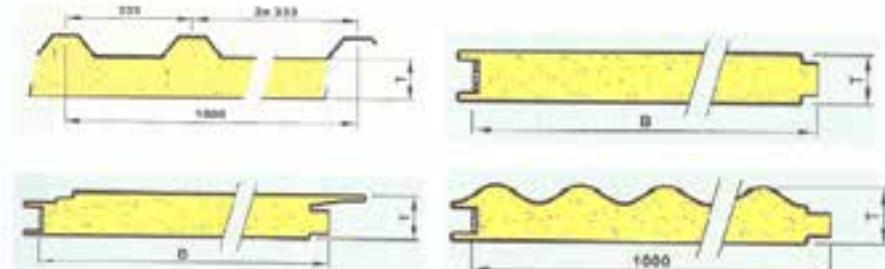


Advantages of sandwich panels +++!

- § Easy and quick installation – one piece, lightweight
- § Excellent thermal insulation properties, visible or unvisible installation
- § Guaranteed fire-resistance until 180 min (mineral wool)
- § Choice of many designs and core materials: PUR, PIR, mineral wool

Disadvantages of sandwich panels---!

- § Relatively low load capacity can increase the costs of the construction of the building, especially by big and by high buildings.
- § Fire-resistance is limited with lower span, usually until 3-5m, exceptionally until 6m.
- § Be careful by the fixing of the thick panels to concrete construction!!
- § Minimal roof inclination 7 % (=4°)



KOVOVÉ PROFILY



Sandwich panels



Elektro Bartoš - Frenštát pod Radhoštěm

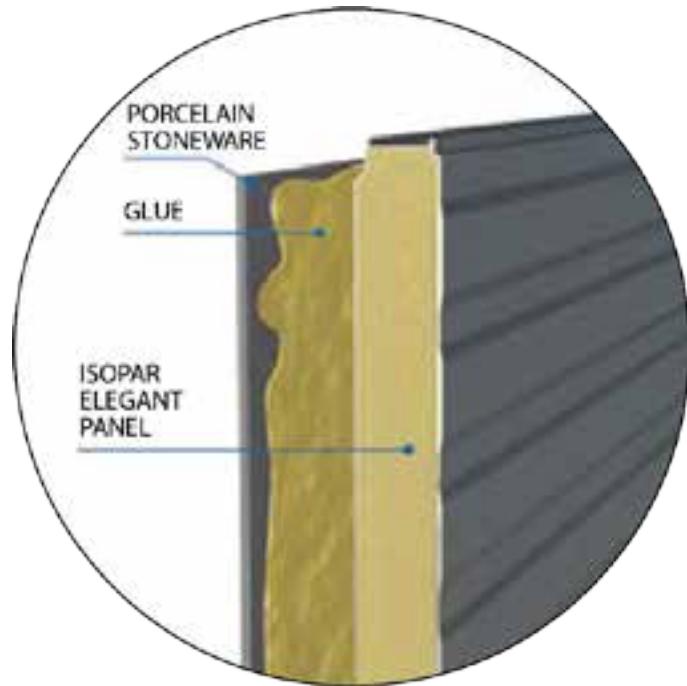


Choise of the sandwich panels core-insulation material

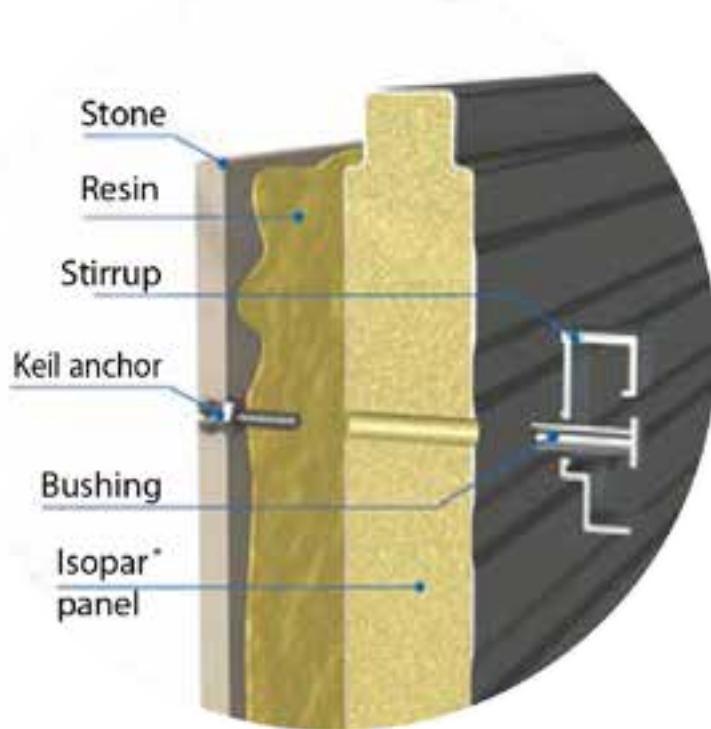
- § **POLYSTYREN** (without fire-resistance, ageing of the material)
- § **PUR** (the best isolation, stabil., fire-resistance until 15min.)
- §
- § **PIR** (technicaly characteristics like PUR, but reduced combustibility, fire-resistance until 30-60min.)
- § **MINERÁLNÍ VLNA**, good insulation together with excellent fire-resistance, acoustic resistance until 32dB.
- § **Accoustics panels** for noise-absorption – not for exterior, but excellent inside noise reduction
- § **Special panels:** Agropans for animal husbandry, single-sheet panels



Porcelain stoneware panel on the exterior



Stone on the exterior



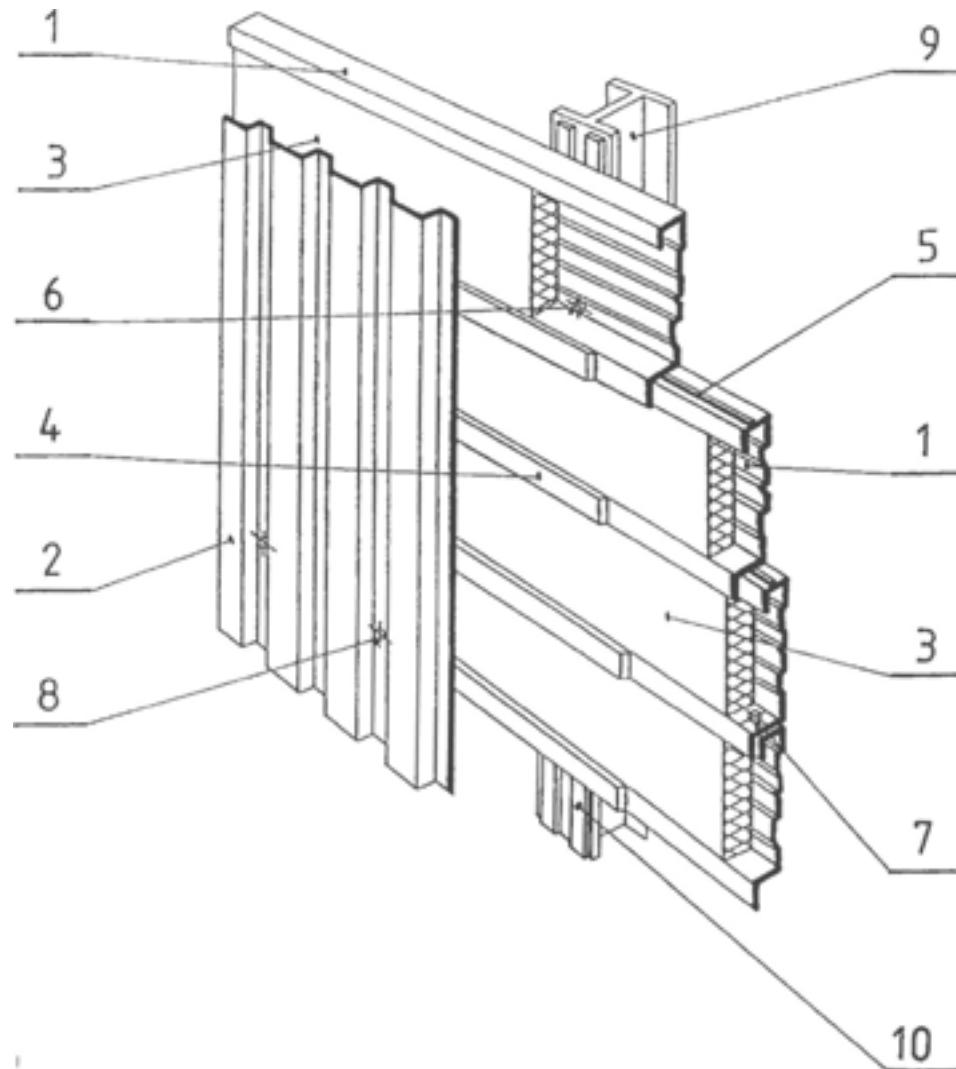
Stone on the exterior of sandwich panel



Stone on the exterior of sandwich panel



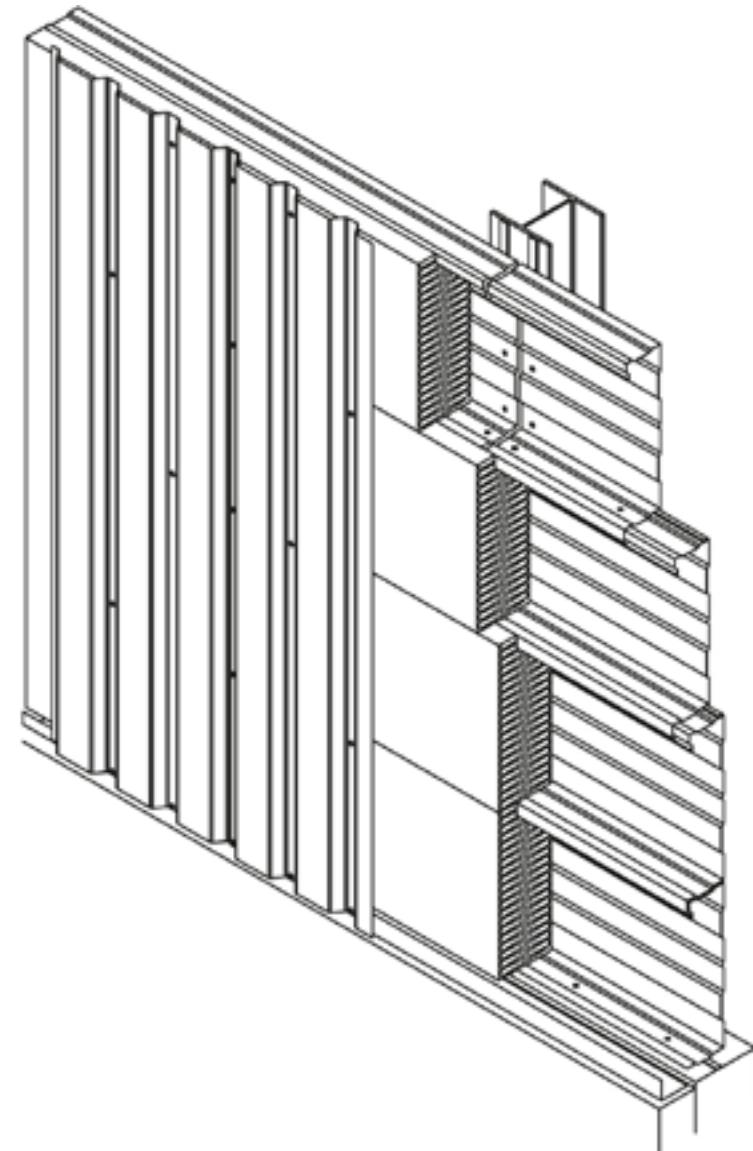
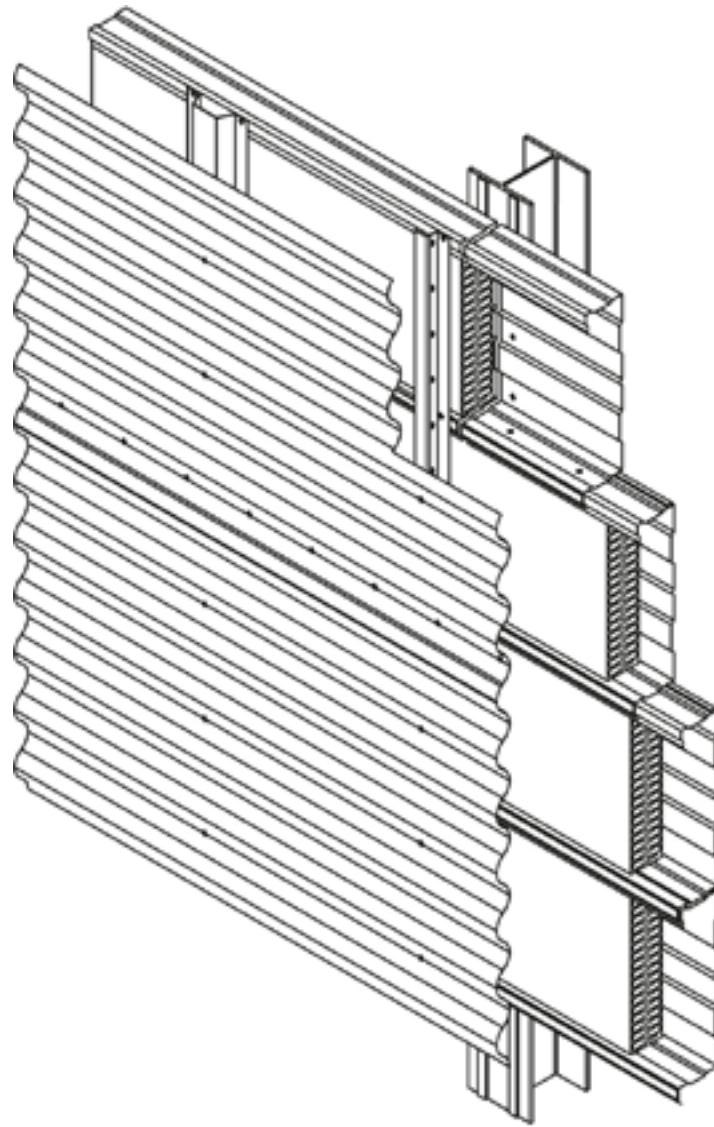
Typical c-lines wall with vertically oriented exterior trapezoid sheet



KOVOVÉ PROFILY



C-lines walls, trays walls





KOVOVÉ PROFILY



Sample of using of C-lines walls, trays walls 2





C-lines walls advantages +++!

- § Optimal for long span constructions (till 7,5m), **essential saving of the cost for supporting construction**
- § Advantageous for large buildings – it is possible to „close“ the hall with the cassettes and later go-on of the building-completion
- § Optimal for HIGH industrial, trade and logistic buildings due to possible variability of the thickness of the cassettes, that could increase the load capacity of the wall by the not changed thickness of the wall
- § **Accoustic reduction untill 53 dB**
- § **U-coefficient untill 0,175 W/m²K⁻¹**
- § **Fire-resistance untill 45 min untill the span of 7,5 m!!**
- § Free interior of the hall – without purlins or windows-bracing profiles
- § The free choise of external cladding-typy (trapezoid sheets, waves sheets, siding, facade cassettes, composit plates, sandwich panels) all with fire-resistance of the completion of the wall

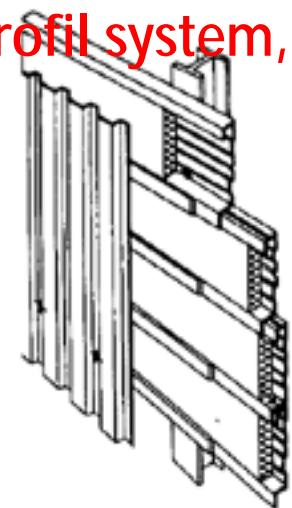


C-lines walls disadvantages---!

- § 3-steps mounting
- § By classical typical mounting problem with heat bridges. The typical construction has by the thickness of the mineral wool insulation inside U-value only $0,59 \text{ W/m}^2\text{K}^{-1}$
- § **It is necessary to use heat bridge interrupted C-line wall system with distance screws and special insulation removing the thermal bridge between a cassette and an exterior cladding profile. Rockprofil system, KI-KP Duohterm system...)**

By these systems is the value $U= 0,28$ with insulation isol. 160 mm a cassette 120/600 or

Value $U 0,195$ with insulation 195 mm and cassette 160/600.



Obr. 1 – Typical C-lines wall



KOVOVÉ PROFILY

KAZETOVÝ SYSTÉM
S PŘERUŠENÝM TEPELNÝM MOSTEM
ROCKPROFIL

JEDINÝ SYSTÉM NA TRHU
CERTIFIKOVANÝ PRO RŮZNÉ TYPY PLÁSTŮ
VIZ. TABULKA NA DRUHÉ STRANĚ

- 1 Nosná kazeta Kovové profily, typ B, F
- 2 Tepelně izolační deska Airrock ND s naříznutou délkou, s přesahem 40 mm
- 3 Vnější trapezový či vlnitý plech
- 4 Samovrtný odstupový šroub SDC2 z nerezaviljící oceli nebo uhlíkové pozinkované oceli s těsnicí podložkou

$U \leq 0,280 \text{ Wm}^{-2}\text{K}^{-1}$

j6-K 120 je Airrock ND 165 mm

E 120, EW 60, EI 45 (30)



KOVOVÉ PROFILY



C-lines walls, trays walls - Rockprofilsystem



C-lines systém Rockprofil

Is the only one in Czech Republic C-lines system with interrupt thermal bridge with **really done fire-test of the building with all types of exterior thin metall based cladding profiles** (trapezoid profiles, waves profiles, facade lamelas - siding, facade cassettes, composit plates or sandwich panels)



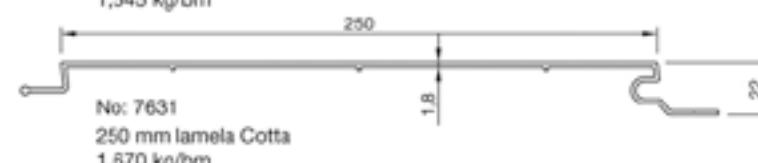
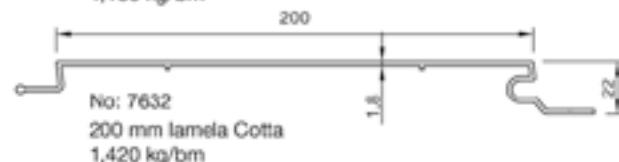


Substitution of the ceramic cladding with solid-aluminium facade system with lower price and lower weight ...

- Design of ceramic bricks facade based on solid aluminium profile thickness 1,8 mm
- Weight 6–8 kg/m²
- International guarantee exterior surface Qualicoat
- Format 150, 200, 225 a 250 mm
- 15 standard colours

SARAY COTTA is a new aluminium facade system that looks like ceramic facades. SARAY COTTA system consists of vertical supports, aluminium extrusions for paneling, corner joint parts of which angles can be adjusted to suit the building and initial extrusions to commence the installation. Before installation of SARAY COTTA, outside of the building has to be insulated to provide thermal and water tightness. Then vertical supports are mounted with 750-800 mm space between each other with L brackets. The panel joints are sealed with EPDM to prevent vibration and resonance in a way that air circulates between the panels and the building's wall. Finishes and colours – by anodising, silver or colour anodised; - by powder coating on aluminium, RAL colour range, clay coloured rough appearance, wood or stone appearance.





Saray Cotta – Analiz Örneği / Analysis Sample

(1,20 m x 3,12 m = 3,744 m² için) (1 m²-7,72 kg)

Malzemenin Cinsi	Birim	Miktar	Toplam
7601 Dikme profili	0,870 kg/m	6,240 m (3,12 m x 2 ad)	5,43 kg
7631 250'lik cotta	1,670 kg/m	14,064 m (0,586 m x 24 ad)	23,49 kg
80 x 150 Ana Braket	3 adet	1 adet	3 adet
80 x 80 Ara Braket	3 adet	1 adet	3 adet
Epil 200	2 adet	24 adet	48 adet
4,8 x 15 mm Geniş Kafa Pop Perçin	3 x 3 = 9 ad (Ana braket) 3 x 1 = 3 ad (Ara braket)	9 ad+3 ad	12 ad
Çelik Dübel (paslanmaz)	3 x 2 = 6 ad (Ana braket) 3 x 1 = 3 ad (Ara braket)	9 ad+3 ad	12 ad

Uyarr. ProfU ağırlıklarımız teorik olup; teslim anmdaki tartımız geçerlidir.



Polycarbonat systems Danpalon

Polycarbonat
roof and wall systems

Danpalon

KOVOVÉ PROFILY

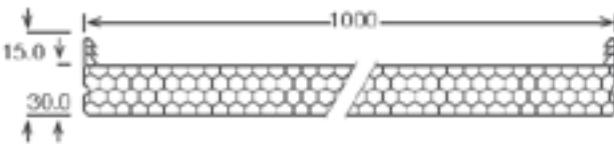


DANPAL – Light architecture solutions

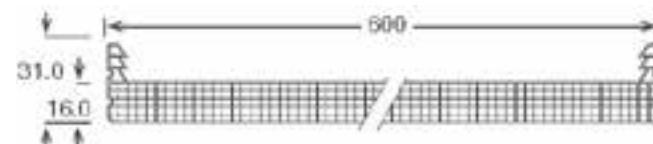


DANPALON systems – types of polycarbonate panels

§ Honeycomb



§ Multicell



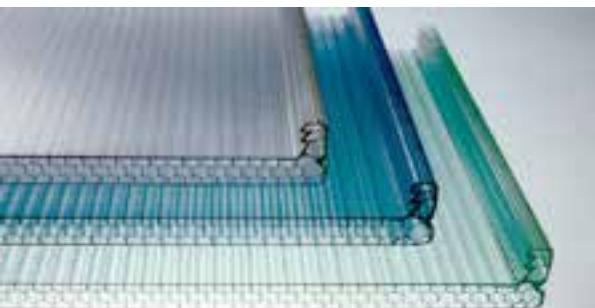
§ Compact DP4



- Honeycomb structure
- Hexagon
- 19 standard colors
- Fire resistance : b-s1,d0
- Thickness 8; 10; 12 a 30 mm
- Standard width 600; 1000 a 1040 mm

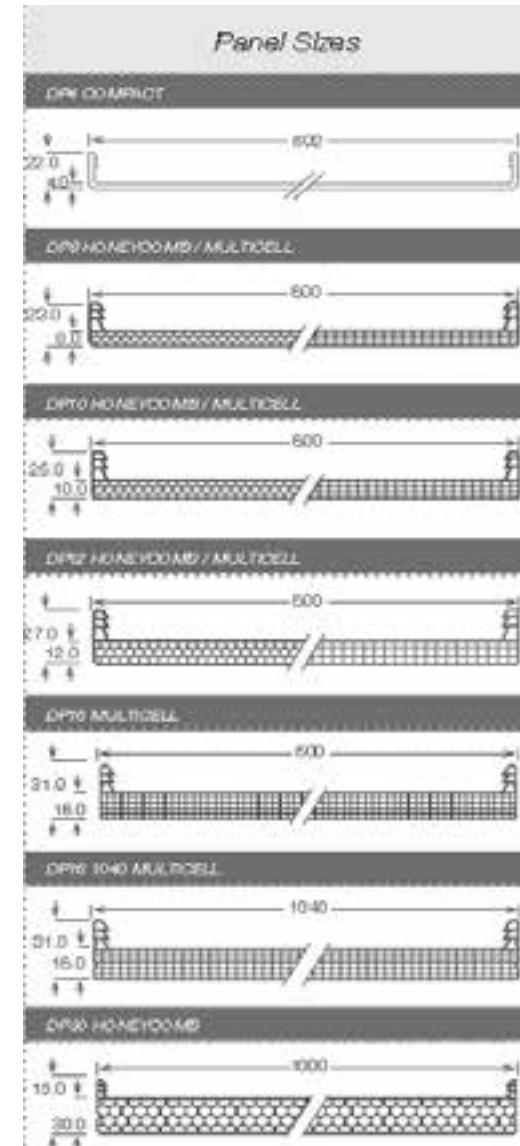
- Multicell structure
- Rectangle
- 19 standard colors
- Fire resistance: b-s1,d0
- Thickness 8; 10; 12 a 16 mm
- Standard width 600 a 1040 mm

- Solid panel th. 4 mm
- 6 standard colors
- Fire resistance: b-s1,d0
- Weight 5,14 kg/m²
- A snap-on connector + transparent space profile
- Standard width 592 mm



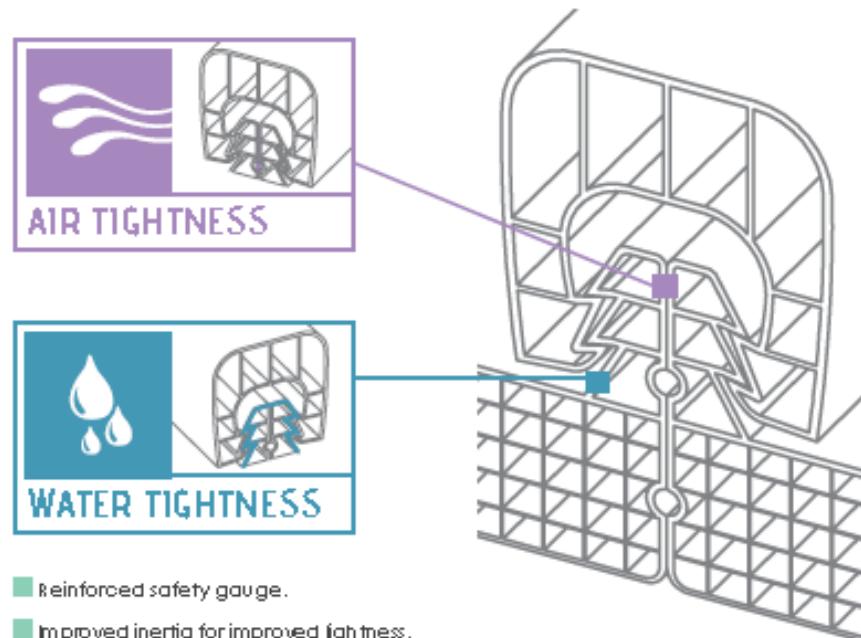
Technical features and dimensions

	DANPALON® 8 mm	DANPALON® 10 mm	DANPALON® 12 mm	DANPALON® 16 mm	DANPALON® 22 mm
Number of walls	4	4	4	6	6
Structure	Multicell (MC)	Multicell (MC)	Multicell (MC)	Multicell (MC)	Multicell (MC)
Width (mm)	600	600	600 - 900	600 - 900 - 1040	600 - 900
Length	Standard up to 12 m (longer upon request)				
Ug (W/m².K) <small>Values calculated according to EN 12667</small>	8	2.6	2.4	1.9	1.5
Fire resistance ⁽¹⁾	B-s2,d0				
Spanning <small>Aluminum corrected</small>	up to 2.5 m ⁽²⁾	up to 2.5 m ⁽²⁾	up to 2.5 m ⁽²⁾	up to 2.5 m ⁽²⁾	up to 3.2 m ⁽²⁾
Minimum slope <small>Specific case</small>	5° (or 9%) normal application				
Minimum radius for cold bending	1.6 m	2 m	2.5 m	3 m	3.5 m
Manufactured according to certification	ISO9001 - ISO14001				
Warranty	10 year manufacturer's warranty (panels)				
Soft and Hard Body Impact	01,10J - M50,300J - M50,400J				
Technical agreements	SOCOTEC Specialised reviews to EN standards CSTB Technical Agreements issued for facade, roofing. <small>(SOCOTEC: French Technical Control Office - CSTB: France's Scientific and Technical Centre for Building Industry)</small>				

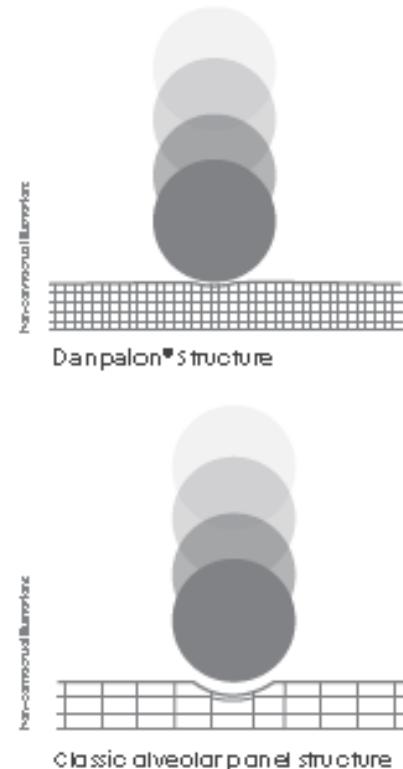


DANPALON systems

Double notching | Microcell structure



Double notching for
high-security.



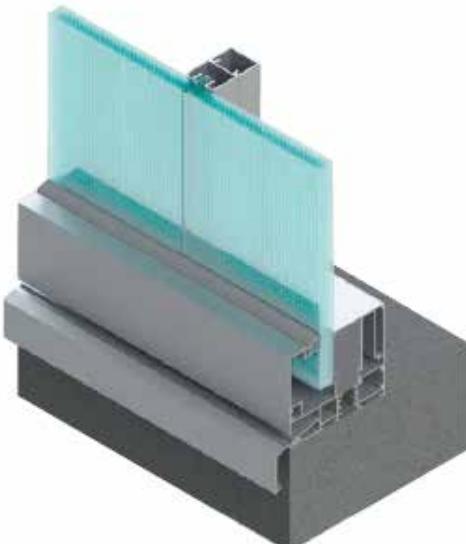
- Unique microcell structure – highest structural mechanical performance on the market
- Soft and hard body impact tested according: D1,10J-M50,300J-M50,400J

DANPALON systems

Facade

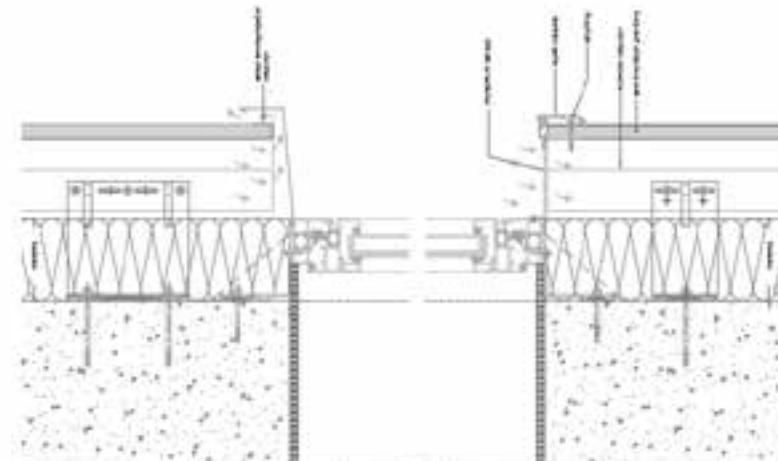
„Classic“ walls

- Great utility value / price
- All types of the panels
- FR: b-s1, d0



Ventilated rainscreen

- Aluminium subconstruction
- Full accessories
- Multicell panels
- FR: b-s1,d0



Cassettes wall

- High thermal insulation performance
- Completely factory assembled



DANPALON systems

Façade – Cassette wall

Kazetové systémy K7 / K12

- Fire resistance B-s2,d0
- U value = from 1,2 to 0,39 W/m²K
- Light transmission – 19 % to 46 %
- Span between supports 3000 mm
- Colored and illuminated facades
- Extremely quick and easy to install



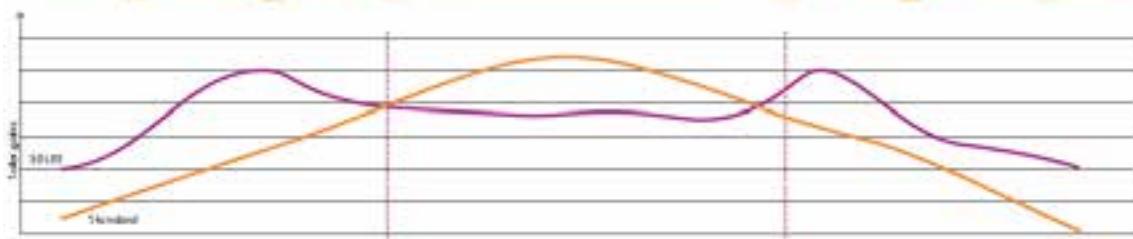
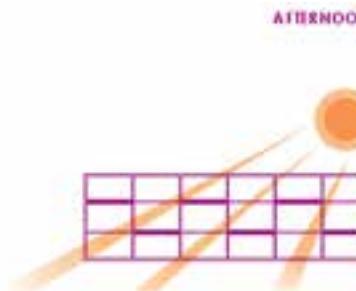
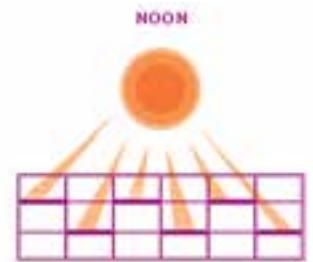


DANPALON – polycarbonat systems COLOURS



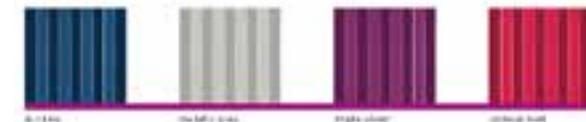
DANPALON – polycarbonat systems

3D LITE



3D lite – harmonisation of solar gain throughout the day

Benefits of 3DLite : Astounding 3D light effect, easy installation, large spans, wide range of colors



3D lite standard colors



DANPALON – polycarbonat systems

DECORATION: PRINTING – LED LIGHTS



On all types of the panels applicable.

UV resistant printing.

LED lights in DANPALON facade systems.

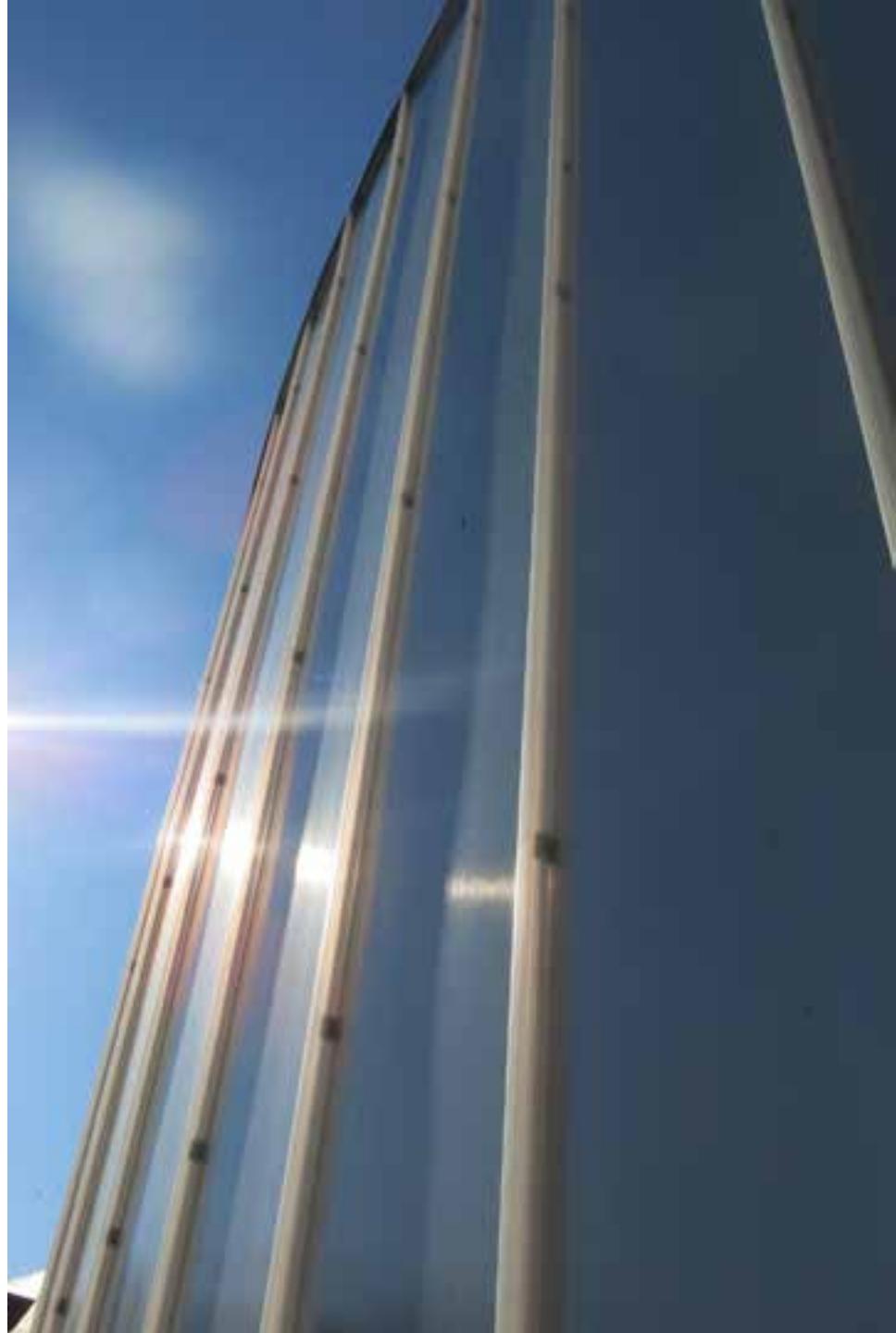


DANPALON ®

- Representation exclusivity CZ/SK
- Roofs, walls and interiors full systems
- Fire resistance tested according EN 13501 for all types of panels
- Weathering, water penetration, air infiltration, impact and other tests are available
- Warranty 10 years
- Aluminium or transparent polycarbonate accessories
- Small projects available (from 1 sqm)

















Darpalon®

DANPAL – Light architecture solutions





Datapalon



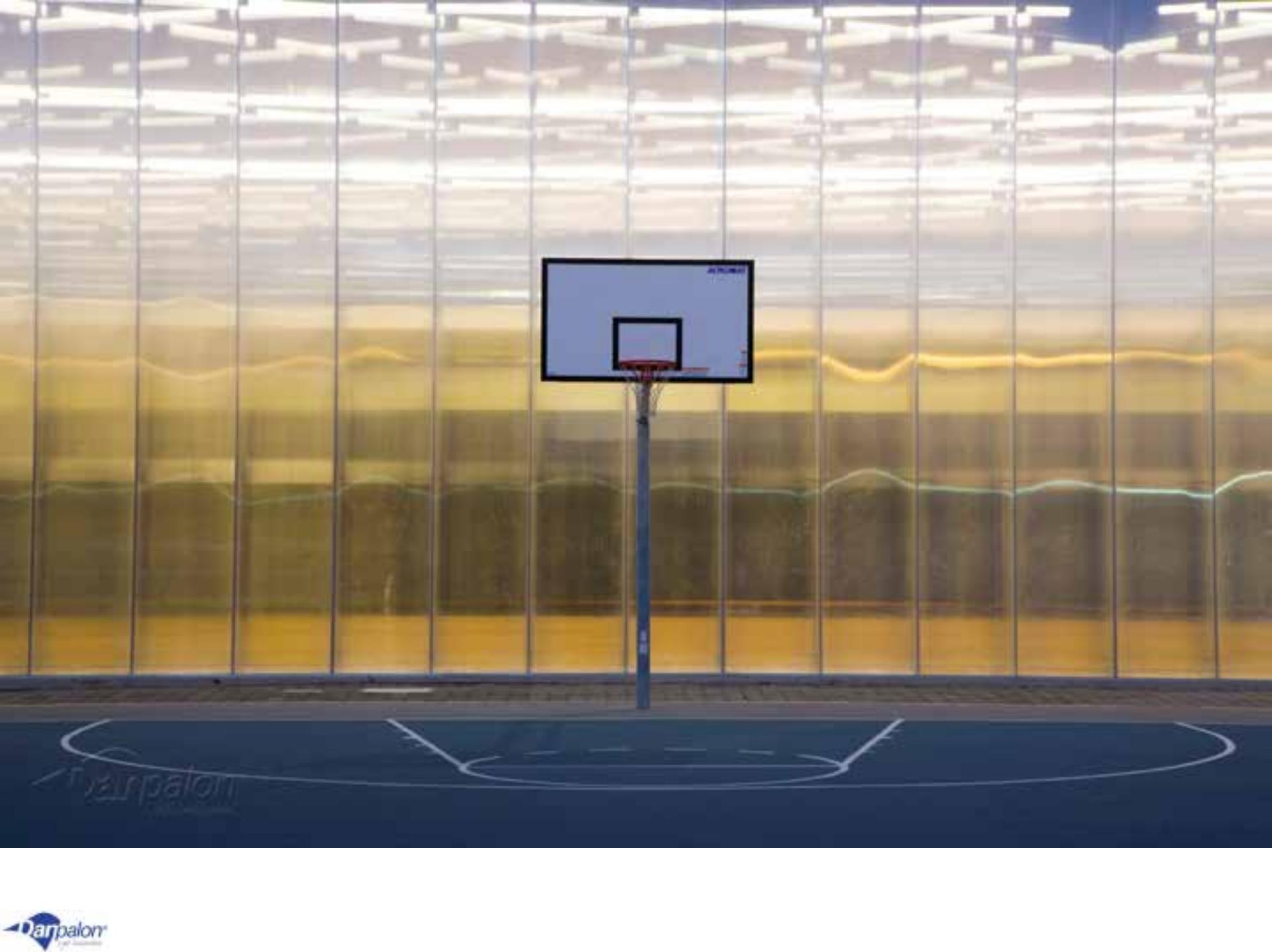




Darpalon















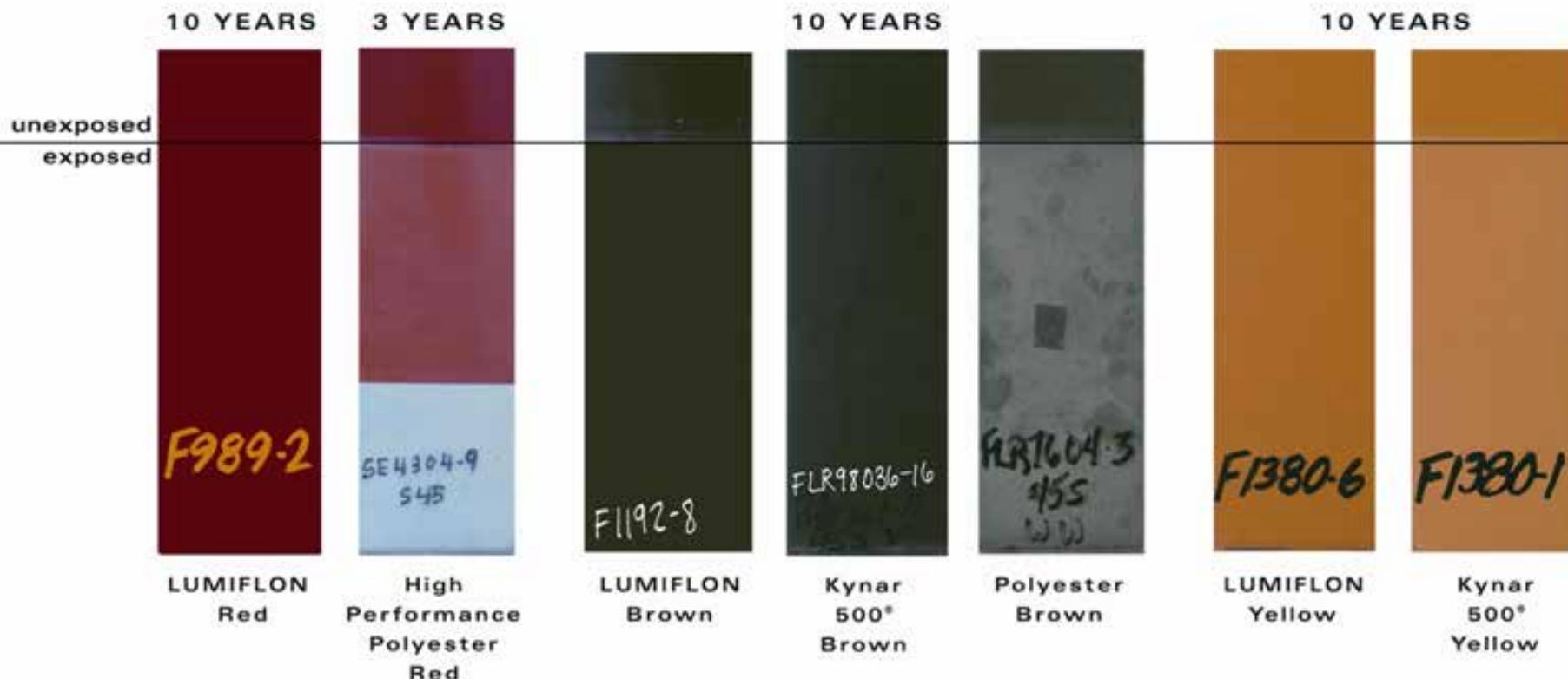
- Anticorossion protection
of thin metal profiles
 - And
 - Confidex guarancy
the only really long life
guarancy

Coating of lightweight profiles

- § A lot of types of metals for cladding, for example stainless steel, exceptionally titan, titanium zinc, copper, mill finish aluminium or coating aluminium, due the high loading capacity and lower price is most used **steel with corrosion protection**
- § **Good ratio between price and use value**
- § Most used corrosion protection of the steel is **galvanizing** (a lot of types) and **duroplastics coating** (a lot of types and thicknesses)



UV resistance of different coatings



Duroplastics coatings - types and characteristics

Colorcoat® products									
Characteristics/ units			DU	Polyester	PVDF	Armatec® 35 µm	Armatec® 50 µm	Prisma®	
1	Material		Z 275 according ČSN EN 10346:2009 (100% of Zinc)					ZA 265 according ČSN EN 10346: 2009 (95% Zinc, 5% Aluminium)	
2	Back side coating		service coating (OL, RSL)						
3	Thickness of coating	µm	15	25	25	35	50	50	200
4	Max. temperature	°C	90	80	100	90	90	120	60
5	Min. processing temp.	°C	16	16	16	15	15	16	16
6	UV resistance		Ruv2	Ruv3	Ruv4	Ruv4	Ruv4*	Ruv4	
7	Gloss (60°)	%	20-40	10.90	10.35	30-50	30-50	30-40	20-40
8	Cohesion (100%)		2T	1T	1T	0,5T	0T	0T	0T
9	Elasticity, minimum bending radius	T	4-5T	3-4T	1-2T	1,5T in 15°C 3T in 10°C	1T in 15°C 3T in 10°C	0,5T	0T in 16°C 2T in 0°C
10	Abrasion resistance		limited	good	very good	very good	very good	excellent	excellent
11	Class of the corrosion resistance		RC2	RC3	RC3	RC4	RC4	RC5	RC5**
12	Maximum guarantee - exterior	years	-	5	10	10	15	25	40

* Prisma® - visible higher UV resistance than class RUV4, no higher class according DIN standards

** HPS200® Ultra - visible higher corrosion protection than class RC5, no higher class according DIN standards

Confidex Guarantee max. 40 years

- § For all types of mentioned coating on the top:
- § Colorcoat Prisma 50 my (30 years)
- § Colorcoat HPS Ultra 200 my (40 years)
- § Direct guarantee from TATA steel to the investor (registration of the building is necessary)





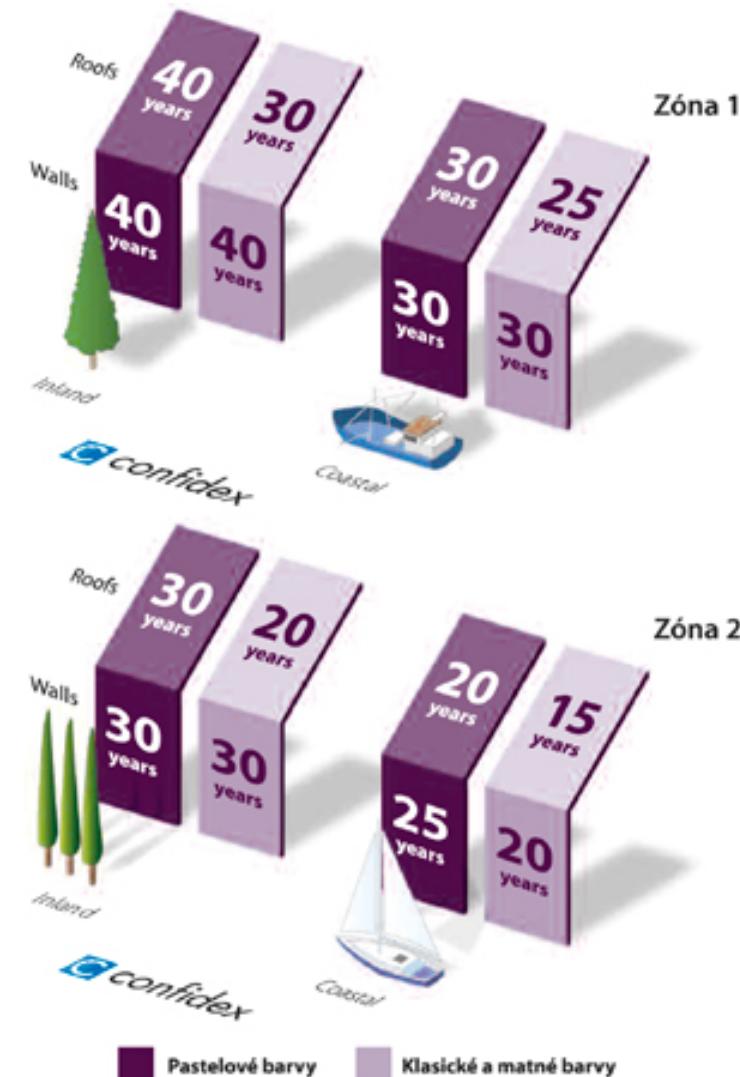
Confidex Colorcoat® Guarantee

- § Is longest, 100% functionally, guarantee for the coating steel profiles with guarantee up to 40 years for facades and roofs
- § Covers cut edges for the entirety of the Confidex® Guarantee period
- § 2 guarantees for the all colors
- § Does not distinguish between different roof pitches down to 1°
- § Is offered directly to the building owner
- § Is fully transferable should the building ownership change



Colorcoat HPS200® Ultra

- § 200 µm coating thickness
- § Up to 40 years Confidex® guarantee
- § The color chart - Repertoire® Colour Consultancy for custom colors
- § The embossed trademark for Scintilla® color is easy visible for checking the authenticity of the product
- § Great corrosion protection thanks plating Galvalloy® according ČSN EN 10346:2009 (95 % Zn/5 % Al) with duroplastic coating





Colorcoat® Prisma

- § Colorcoat Prisma 50 µm coating thickness
- § The best combination of the price, esthetics and long lasting
- § Very good corrosion protection thanks plating Galvalloy® according ČSN EN 10346:2009 (95 % Zn/5 % Al) with duroplastic coating
- § Up to 30 years Confidex® guarantee
- § Excellent abrasion resistance of the coating
- § Great color with long with gloss retention



The philosophy of our company:

- § Not enforce to one product, one system or one producer, but:
- § To know exactly all the systems and products, and choose the right one for each building, to provide the best aesthetic, economic and long lasting solution.



We provide:

- § **Statical calculations** and optimization
- § **Recommendations of the appropriate cladding type** for the investors and architects/engineers
- § The processing and installation drawings and implementation documentation
- § Solutions for difficult or non-standard requirements and details, etc..

§ **THANK YOU FOR YOUR ATTENTION**

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