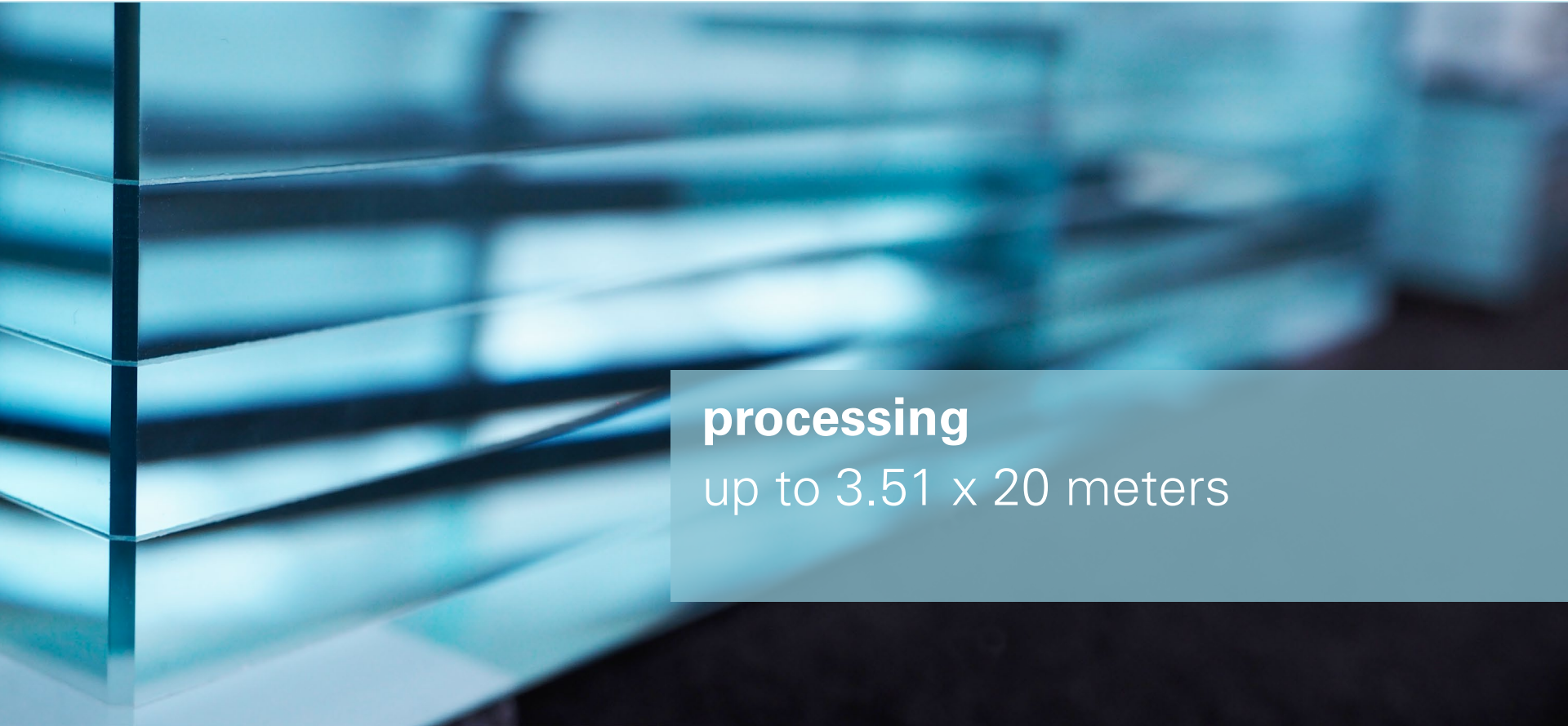
leading glass. sedak

sedak company presentation

skills and capabilities

leading glass. sedak



processing

up to 3.51 x 20 meters

sedak

processing

total glass processing

4 computer-controlled machining centers

highly automated up to 3.51m x 20m

exact edging with higher quality than required by the DIN standard when requested

precision tooling at sedak for glass processing in its final shape

sedak

processing

cutting, grinding, drilling, milling in uncompromising quality

processing

facts & figures

Cutting		
max. rough dimensions	3510mm x 20000mm	138in x 787in
max. cutting dimensions	3510mm x 20000mm	138in x 787in
thickness	4mm – 19mm	5/32in – 3/4in
max. weight	3000kg	4400lbs

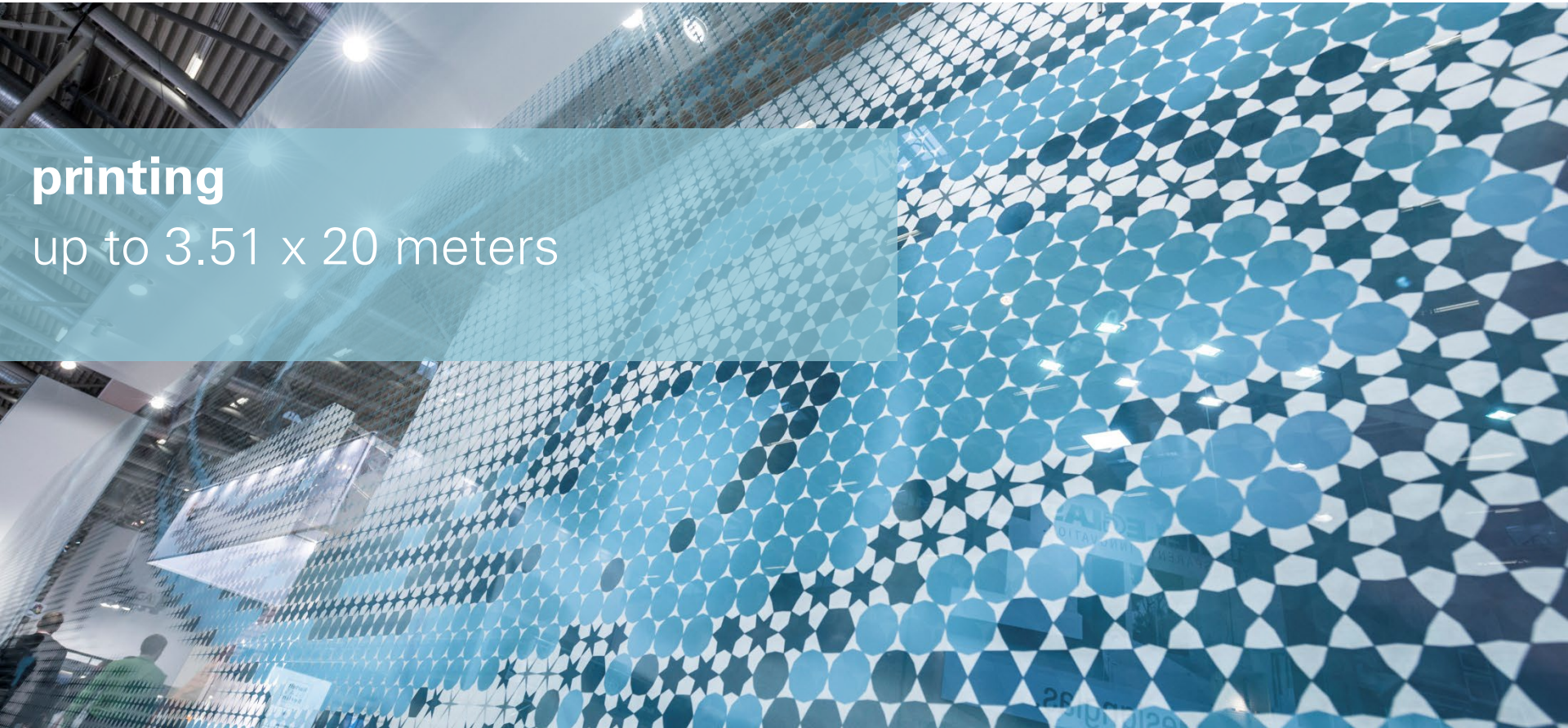
Drilling		
radius	6mm – 32mm	1/4in – 1 1/4in

processing

facts & figures

Edging		
max. length	up to 20000mm	up to 787in
max. width	up to 3510mm	up to 138in
thickness monolithic glass	6mm - 19mm	1/4in - 3/4in
max. weight	350kg/m²	
edging	grinding, seaming, high-gloss, polishing	
processing quality	KGS, KGN, KPO (higher quality levels available on request)	
standard	DIN 1249	

leading glass. sedak



printing

up to 3.51 x 20 meters

printing

sedak printing competence

Ceramic-ink digital printing, or full-coverage printing with the roller-coater technology

Ceramic inks for façades with enduring color brilliance

black and white colors side-one suitable, e.g. for preventing slipping

At more than 600°C, the ceramic inks are fired in the tempering furnace. Thus, they are permantently bonded to the surface of the glass and resistant to UV radiation.

sedak

printing

ceramic-ink digital printing

Max. resolution: 1024dpi
Comparing to a standard poster:
80 to 120dpi

variable thickness of color application

individual color mixing with up to six basic inks

design easily and cost-efficiently reproducible (≠ screen printing)

colors are resistant to scratching, UV radiation and weather influences

further processing into safety and insulating glass possible

sedak

printing

ceramic-ink digital printing

translucent and opaque printing

printing of several layers possible

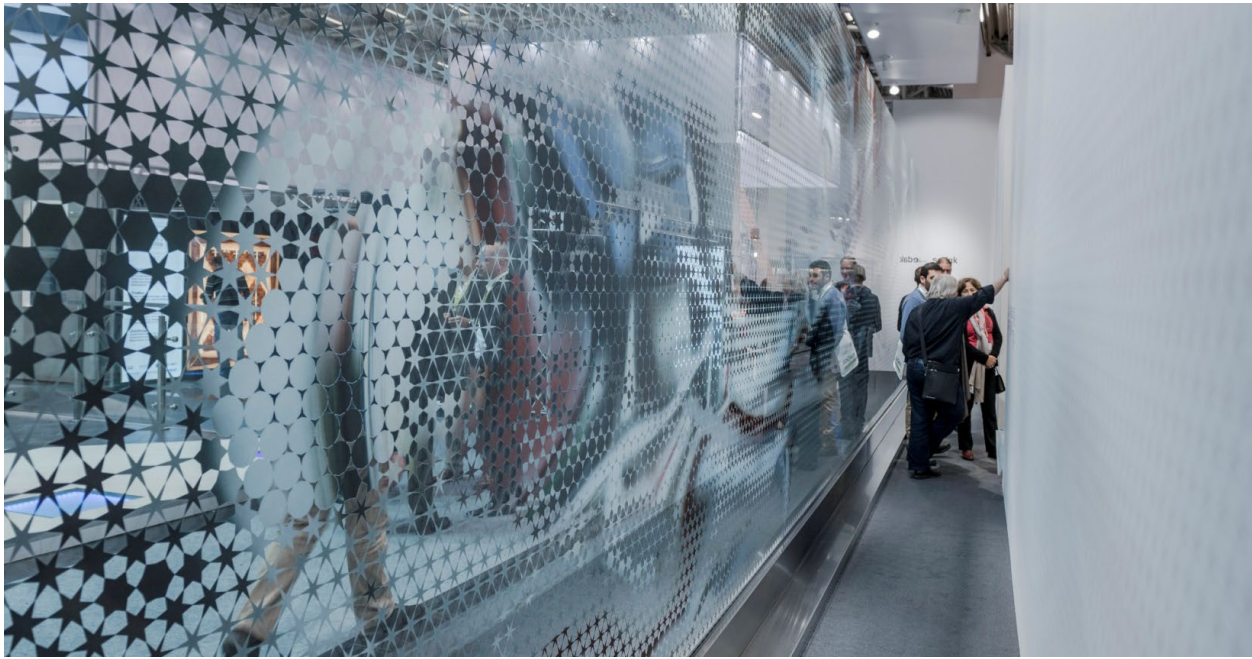
higher saturation due to counter print

color transitions

thin lines, concentric circles, dots at different levels of intensity and opaqueness

frameless prints

printing of serial numbers and barcodes



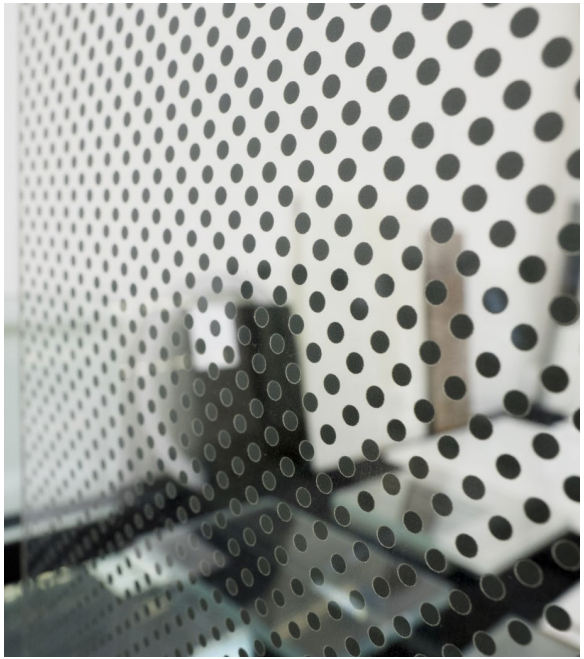
printing

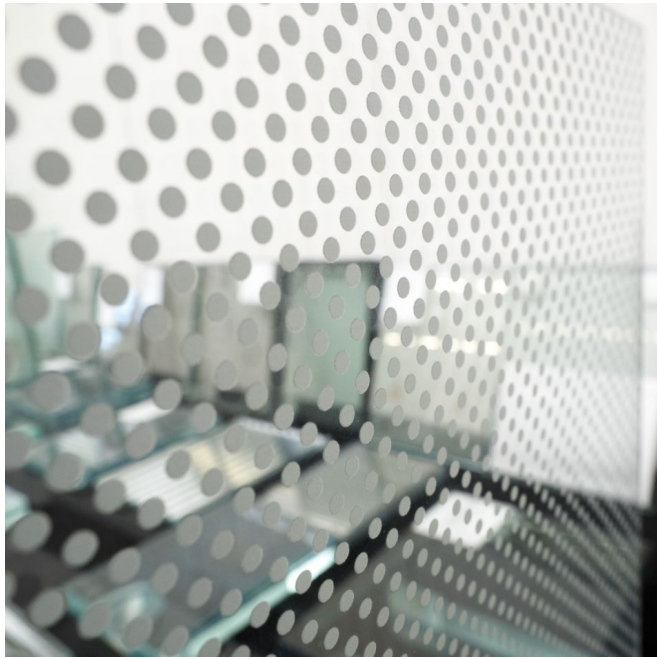
ceramic-ink digital print– Double Vision

Two prints lying exactly on one another for a different appearance on each side of the glass pane

Precise positioning before each of the two printing runs

For decorative and functional usage, e.g. as sight or solar protection





printing

ceramic-ink digital print – facts & figures

Ceramic-ink digital print

max. size	3300mm x 18000mm	138in x 787in
max. thickness	6 – 19mm	1/4in - 3/4in
max. weight	2822kg	6221lbs
type of color	ceramic ink, heavy-metal free	
coating	6µm – 80µm	
precision	± 20µm/m	
tolerances printing size	± 2mm (8 – 9000mm); ± 4mm (9000 – 18000mm)	

parallelism tolerance for borderless printing	0 – 4000mm: max. 1mm ; 4000 – 9000mm: max. 2mm ; 9000 – 18000mm: max. 3mm
colors	6 basic colors: RAL 9005, RAL 9010, RAL 3009, RAL 6001, RAL 5005, RAL 1016 digital mixtures
application area	interior/exterior
picture formats	PDF, PS, EPS, AI, TIFF, BMP, JPEG, DXF
printing resolution	max. 1024 dpi

printing

ceramic-ink roller-coater print

Highly homogeneous ink application

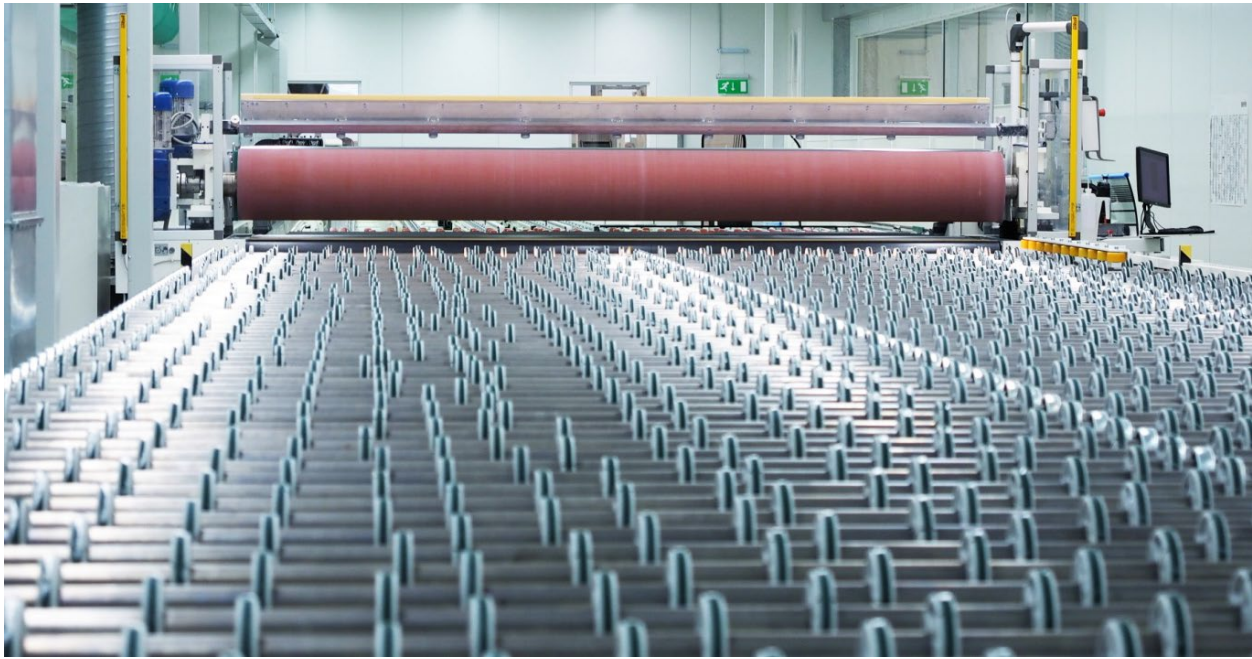
Full-coverage and single-color printing

By firing the inks, they are bonded permanently to the glass

Resitant to scratches, UV radiation, and weather influences

can be used indoors and outdoors

Applied color layer is thicker compared to screen printing



printing

ceramic-ink roller-coater print – facts & figures

roller-coater printing (Cefla Large)	
max. size	3300mm x 20000mm
thickness glass	6mm - 19mm
thickness coating	Approx. 60µm wet coating thickness
colors	ceramic ink, heavy-metal free, metallic available

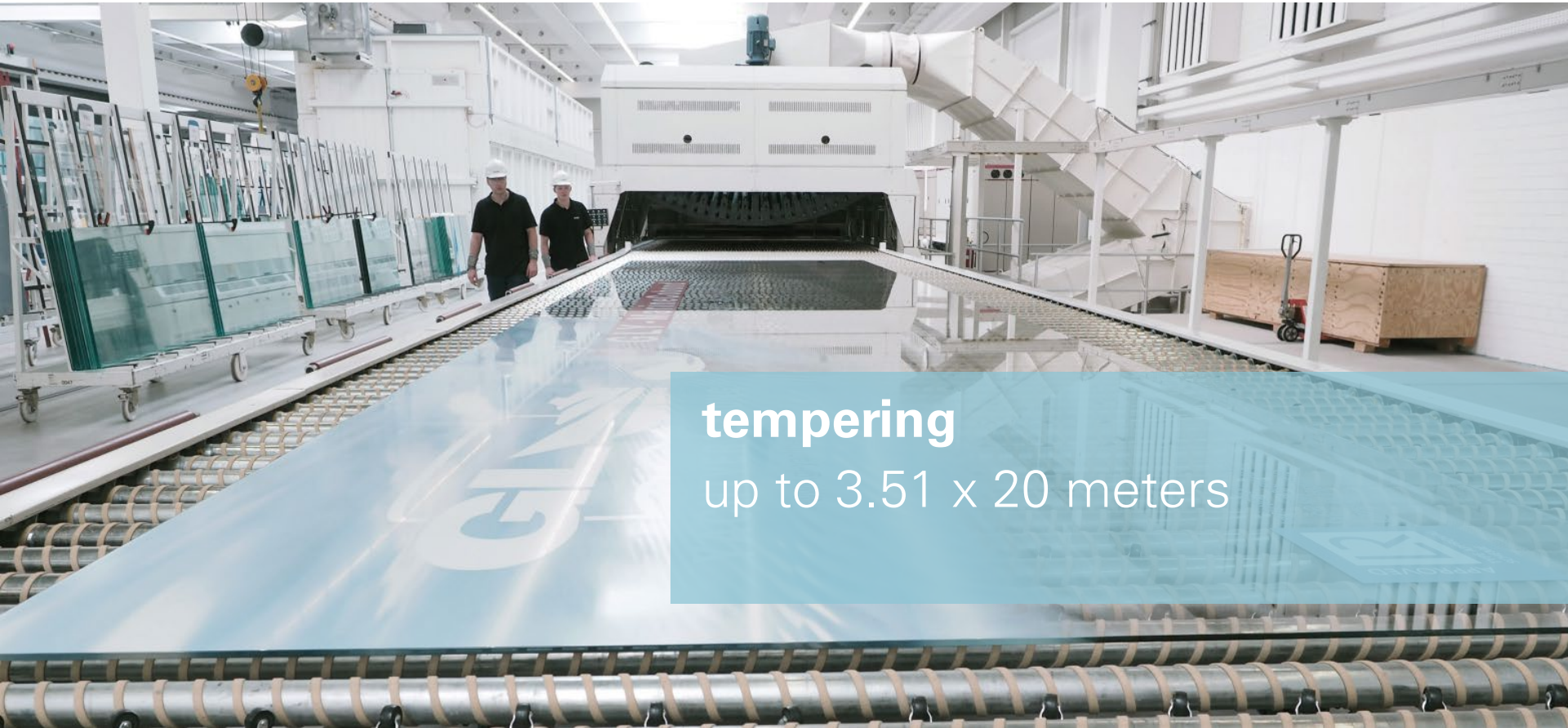
printing

ceramic-ink roller-coater print – facts & figures

roller-coater printing (Cefla Small)	
max. width	3300mm
thickness glass	6mm - 19mm
rollers	engraved roller
colors	ceramic ink, heavy-metal free, metallic possible

Edge-Coater	
max. width	600mm
thickness coating	80µm - 120µm (wet coating thickness)

leading glass. sedak



tempering

up to 3.51 x 20 meters

tempering

in highest quality

Two tempering lines for glass with an area of up to 52 sqm

Processing flatglass into heat-strengthened glass, or fully tempered glass

heat soak test for a standardized, high-quality, heat-soak-tested, fully tempered glass

sedak

tempering

tempering furnace for coated glass up to 20m

convection technology for tempering solar and low-e coatings

sedak

tempering

heat soak test

tempering

facts & figures

Heat-strengthened glass		
max. length	20000mm	787in
max. width	3510mm	138in
thickness	6mm – 12mm	1/4in – 1/2in
max. weight	1470kg/pane	3234lbs/pane
min. surface	70 Mpa	
standard	DIN EN 1863	

tempering

facts & figures

Fully tempered glass		
max. length	20000mm	787in
max. width	3510mm	138in
thickness	6mm – 19mm	1/4in - 3/4in
max. weight	2508kg/pane	5529lbs/pane
min. surface	120 Mpa	
standard	DIN EN 12150	

tempering

facts & figures

Heat Soak Test		
max. length	20000mm	650in
max. width	3510mm	126in
thickness	6mm – 19mm	1/4in - 3/4in
max. weight	12000kg	26455lbs
standard	DIN EN 14179	

chemically toughened

up to 4.9 x 2.4

chemically toughened

for more impact strength, flexural strength and cratch resistance

For the consolidation of thin glasses up to 3mm thickness

Increasing of:
- Impact strength
- Flexural strength
- Scratch resistance
- Thermal shock resistance

Other advantages:
- Increase oft he transmission
- Reduction of the weight
- Reduction of costs for frames and support structures

chemically toughened

facts

Chemically toughended	
Max. width	2400mm
Max. length	4900mm
Max. depth	1120mm
Thickness	2mm – 19mm

leading glass. sedak

bending

up to 3.51 x 20 meters

bending

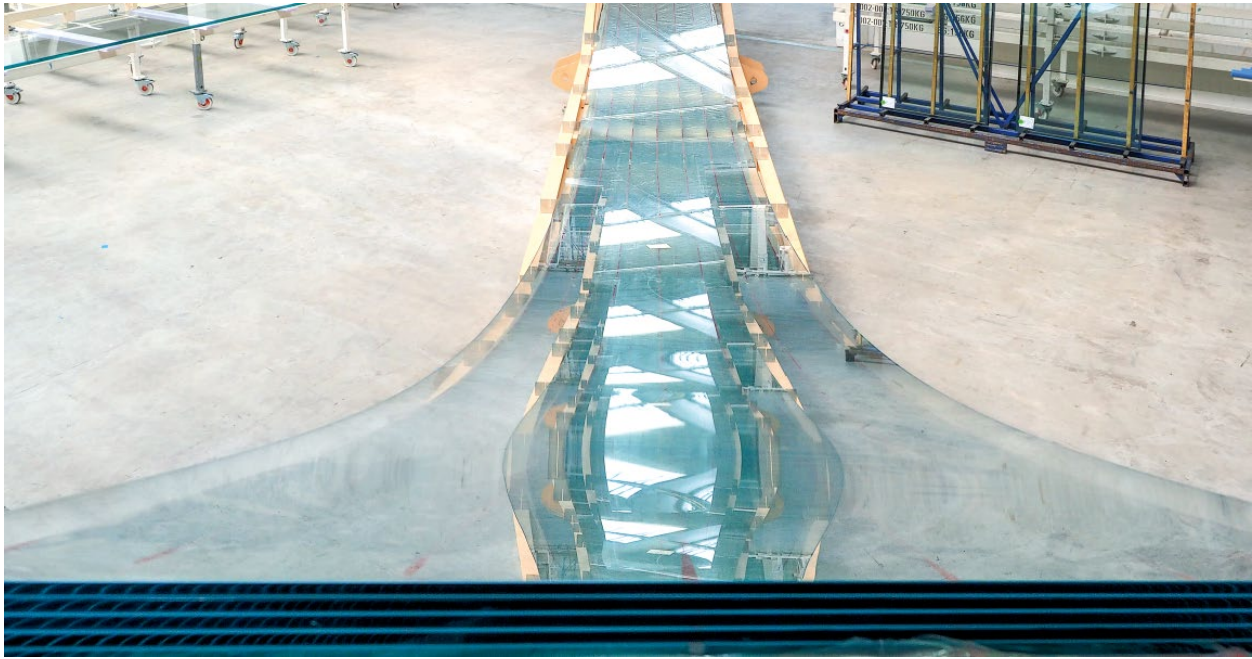
cold bending during lamination

Bending the individual panes of a glass laminate prior to laminating

need for a supporting framework to help the glass retain its shape after the autoclave

better optical quality due to fewer distortions and reflections

minimum cold-bending radius is about 1500 times the thickness of the glass (e.g. 10mm: bending radius 15m/ 590in)



bending

facts & figures

cold bending		
min. cold-bending radius	1500 x thickness	
6mm / 1/4in	9m radius	354in radius
8mm / 5/16in	12m radius	472in radius
10mm / 3/8in	15m radius	590in radius

gravity curved glass

hot bending with gravity curved glass

Especially suitable for glasses that are laminated after bending.

We produce gravity curved glass up to 3,3 x 11,5 meters.

Bending shape:
- cylindrical
- conical
- spherical
- toric
- j shape
- double bend
- irregular bend

gravity curved glass

facts

gravity curved glass

max. length (mm)	3200	6500	11500
max. width (mm)	2200	3300	3300
thickness (mm)	2 – 19	2 – 19	2 – 19

hot bent insulating glass

max. length (mm)	11500
max. width (mm)	3300

tempered curved glass

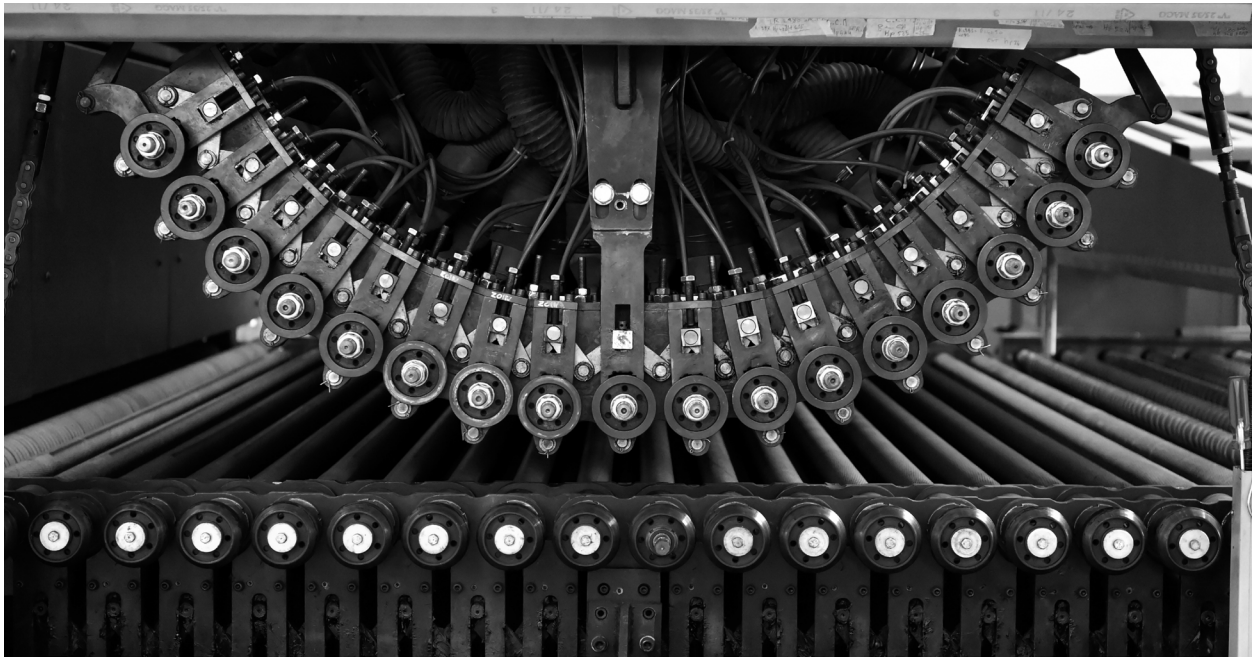
hot bending with tempered curved glass

fast, energy-saving and cost-effective variant of bending

increases resistance to mechanical pressure and shock loads

anisotropy and roller waves must be expected

bending shape:
- cylindrical
- spherical
- j shape



tempered curved glass

facts

tempered curved glass with tempering furnance

max. length (mm)	2440	4800	2440	3000	2500	5000	3300	3300
max. width (mm)	1570	2440	4500	1500	1200	3200	3600	3600
thickness (mm)	4 – 8	6 – 12	6 – 15	5 – 10	5 – 8	6 – 12	6 – 15	6 – 12
bending shape	cylindrical	cylindrical	cylindrical	cylindrical	j shape	cyl. & j shape	cylindrical	cylindrical
min. radius	1000	1500	2500	650	350	1500	1500	900
middle angle	90°	90°	90°	105°	90°	90°	90°	90°

leading glass. sedak

laminating

up to 3.51 x 20 meters

laminating

sedak know-how

Laminating glass under clean-room conditions using a vacuum method

Glass finishing in autoclaves

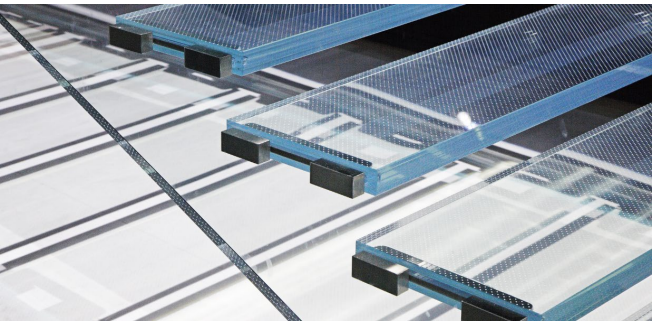
Production of laminated safety glass, also of multiple layers

Lamination with SentryGlas® interlayer for load-bearing glass like steps, or glass fins for all-glass façades

sedak

laminating

up to 3.51m x 20m



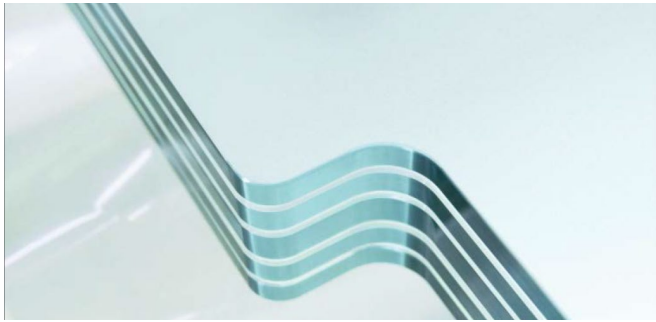
4 autoclaves | lamination in a vacuum bag | clean-room conditions

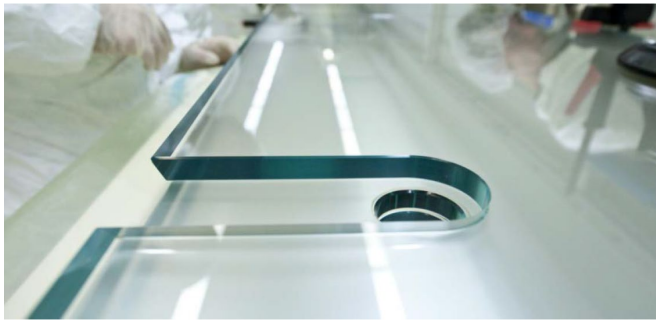
laminating

special lamination and precise edging

Exact lamination for flawless edges of the laminated glass unit

Lamination of functional elements like connecting parts in between the laminate‘s layers





laminating

facts & figures

Details

Max. length	20000mm	787in
Max. width	3510mm	138in
lamination interlayer	SG, PVB, TPU, EVA	
intermediate materials	Sefar fabrics, southwall XIR-Interlayer	

special laminations	metal, stone, projection foil, functional elements such as fasteners
standard	DIN EN 14449 DIN EN 12543-2
sedak Glascobond®	abZ: Z-70.3-175. Z-70.3-153
GLY-MarineCobond®	Certificate No. HTS/STAT 24025-14
cold-bent during lamination	National Technical Approval: Z-70.3-175

leading glass. sedak

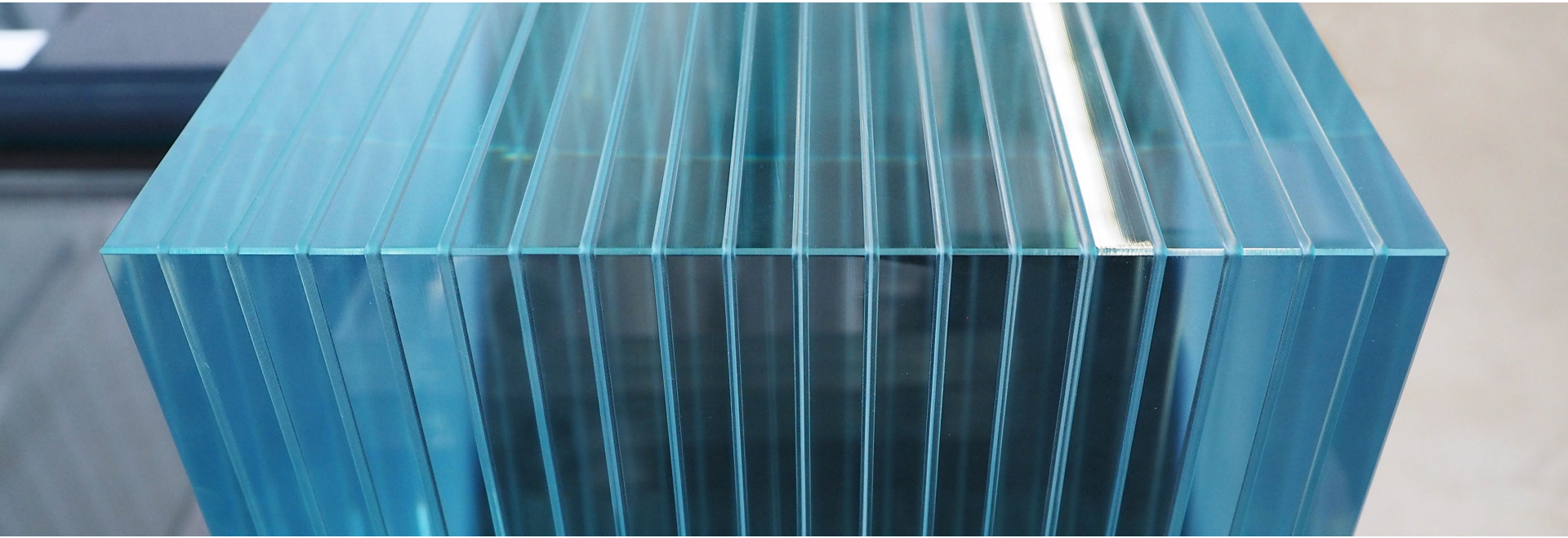
special lamination

up to 3.51 x 20 meters

sedak

extremely thick glass build-up

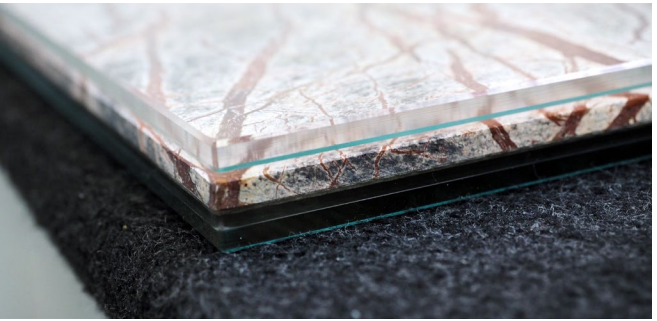
e.g. 19-layer laminate

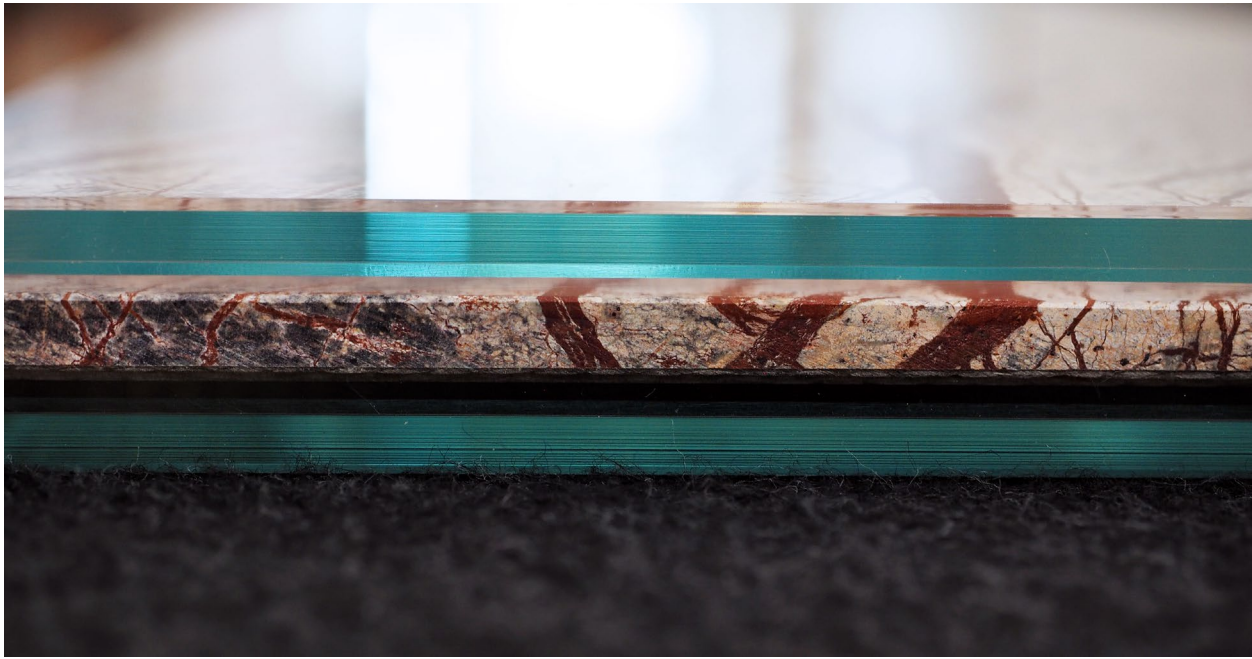


sedak

natural stone

in several thicknesses

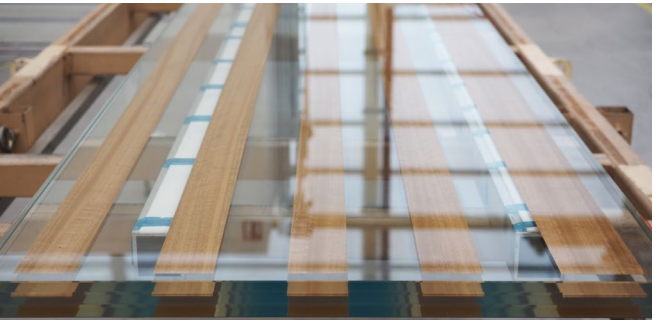


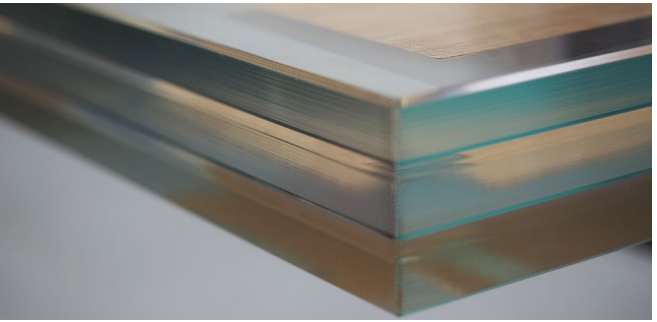


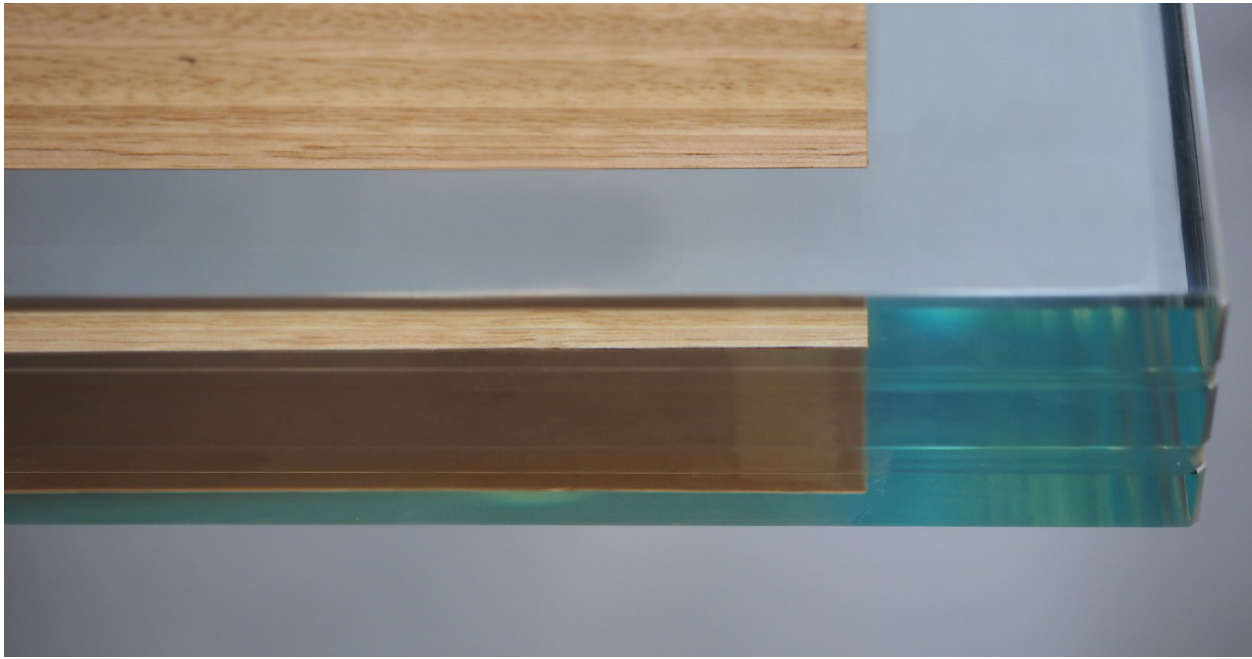
sedak

real wood

e.g. eucalyptus wood





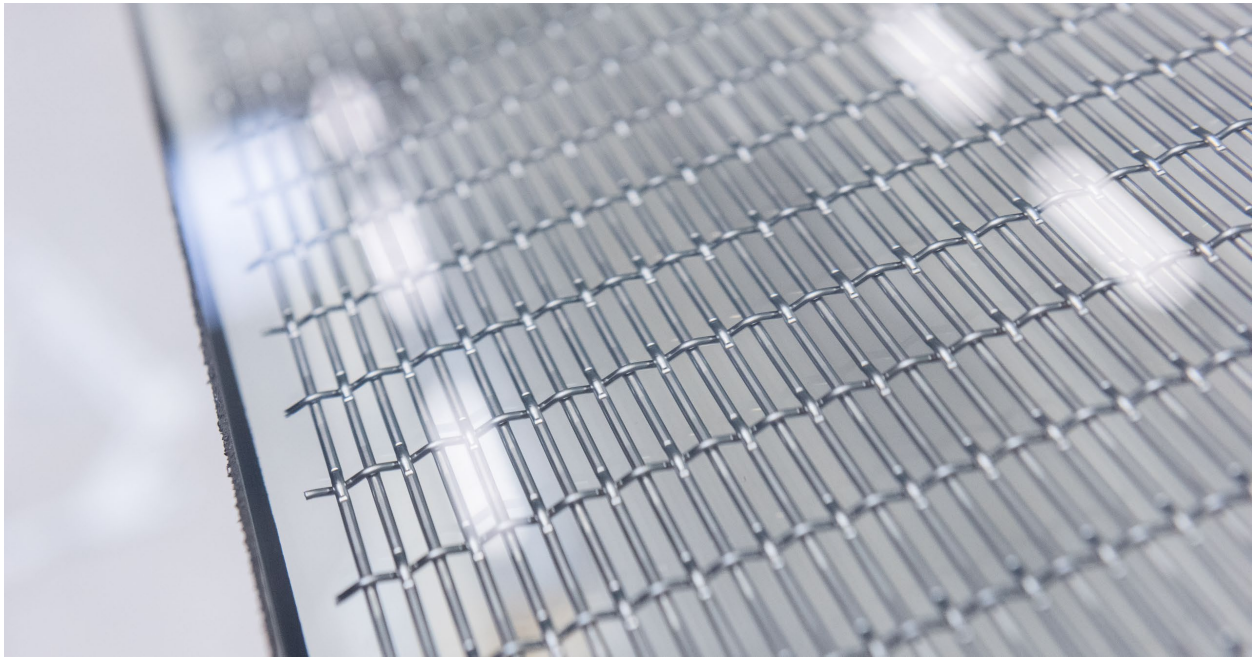


wood veneer laminated in between the layers of 7m high façade elements

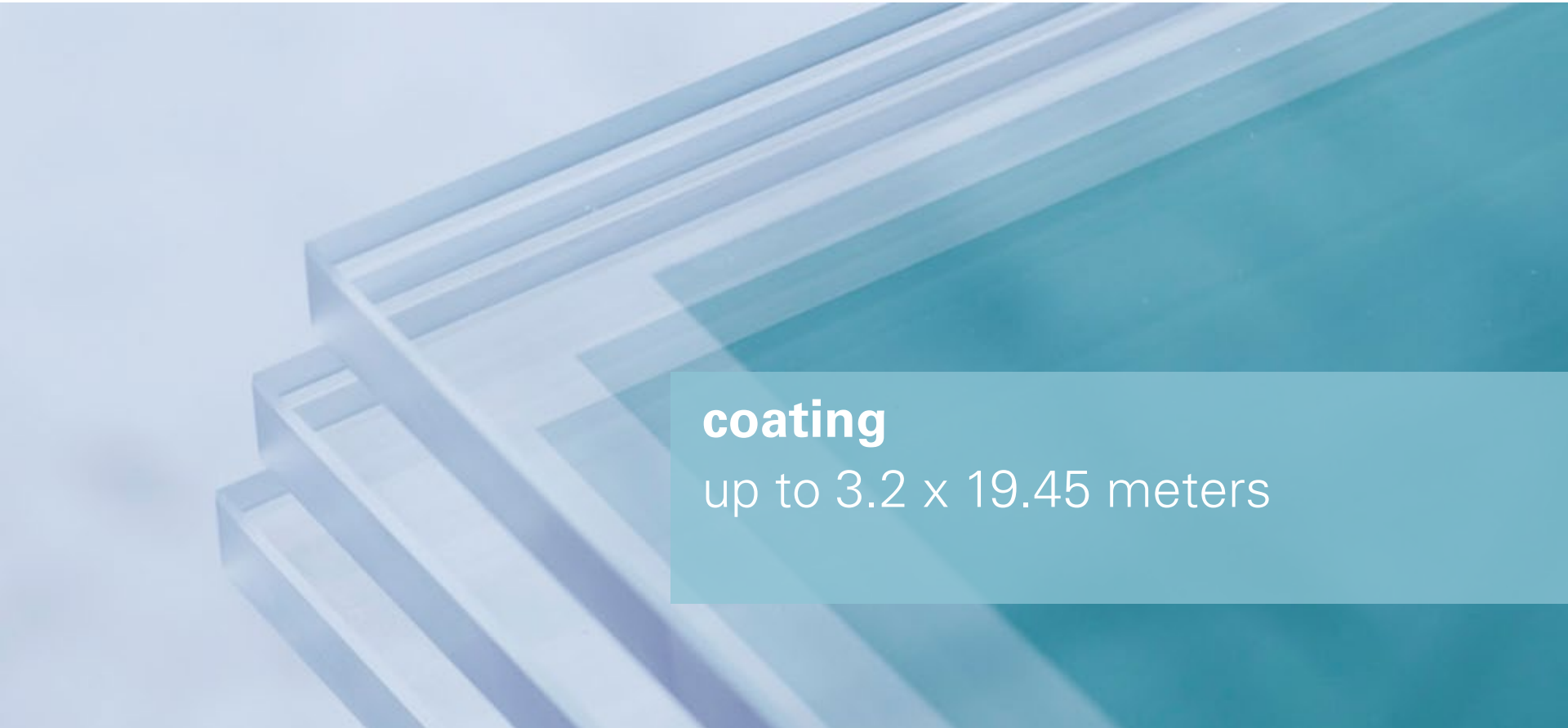
sedak

decorative metal elements

e.g. mesh & wire



leading glass. sedak



coating

up to 3.2 x 19.45 meters

coating

Functional coatings

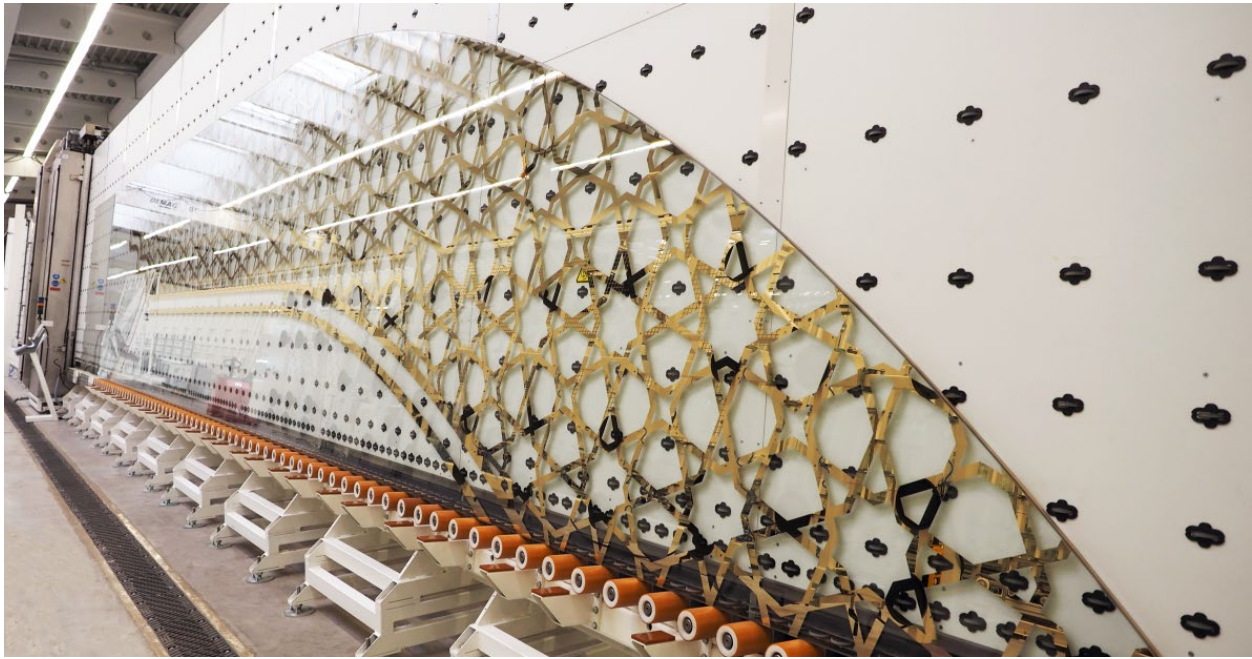
efficient solar control and low-e glasses

the g-value meets toughest specifications

coating

Decorative coatings

decorative coatings, also in gold or silver



coating

facts & figures

Coating		
max. size	3200mm x 19450mm	126in x 766in
thickness	4mm – 19mm	5/32in - 3/4in
max. weight	up to 1500kg	3300lbs
standard	DIN EN 1096-4	

leading glass. sedak

insulating glass

up to 3.51 x 20 meters

insulating glass

Fully automated production up to 15m

Double and triple IGUs

Laminate thickness up to 102mm

Steps up to 700mm (27½in)

Special thickness or dimension > 3.2m x 15m possible on request

Fully automated production of angles < 20°

Length of 145m (475ft)

Handles weight of up to 450kg per linear meter (303lbs/ft)

insulating glass

facts & figures

Insulating glass units

max. size	3510mm x 20000mm	138in x 787in
min. size	680mm x 300mm	26 3/4in x 11 3/4in
full length production line	145m	475ft
weight/meter	450kg/lm	992lbs/lm
min. glass thickness	3mm	1/8in
max. thickness laminate	52mm	2in
min. thickness unit	20mm	3/4in
max. thickness unit	102mm	4in
step processing	steps on all 4 sides	
steps on the bottom edge	60mm – 700mm	2 3/8in – 27 1/2in
max. adjustable spacer setback	30mm	1 3/16in (secondary seal)
gas types	argon, krypton or mixed gas	
standard	DIN EN 1279-5	

leading glass. sedak

logistics

up to 3.51 x 20 meters

logistics

Safe and reliable

Coordinating the entire logistics chain, i.e., the transport itself, all customs documents, and compliance with local regulations

Cooperation with logistics partners throughout the world

growing fleet of special vehicles since 2013

logistics

Safe and reliable

wooden crates with rigid frames | specially designed suction cups

logistics

Special inloader

Inloader for glass up to 16m

Steerable rear axle allows the truck to drive through narrow curves

No escort vehicle is required thanks to a space-saving interior concept

Time-efficient and secure: loading and unloading glass on the glass rack

leading glass. sedak

Thank you for your attendance.

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