

Parquets, LVT floors, SPC, laminates and carpets Fire-protection glass, safety glass and special glass Glass walls and doors, glass railings, shower cabins Fireproof and smokeproof doors Building and industrial stone wool Industrial, business and outdoor lighting Furniture and interior equipment





Parquet



ADMONTER is one of the world's most famous parquet manufacturers and is located in the Austrian Alps in the town of Admont. Admonter has been producing finished parquets since 1874. ADMONTER is based on the production of multi-layer finished parquet which are based on top quality and environmental protection. Admonter parquets are the favorite choice of architects all over Europe.

#### **PARQUET LAYERS**



Construction	Thickness	Top layer	Bottom	Layer Edges
Three-layers	13-15 mm	2.5-3.6 mm	solid wood	edges cut 45°

The main advantages of finished three-layer parguet are durability, longevity, quick and simple assembly, with the possibility of use immediately after installation. It is very durable and stable.

Construction	Thickness	Top layer	Bottom	Layer Edges
Two-layers	10 mm	2.5-3.6 mm	solid wood	edges cut 45°

The advantage of two-layer parquets is reflected in their greater stability in temperature difference. Because of this, as well as because of the thinner section (which enables faster temperature transmition), is very suitable for underfloor heating.

#### JOINTS

**Click system** 



Tongue & groove

The click system with locking is more stable and can be used without gluing the parquet to the base. The parquet can be installed dry over the foil.

PLANK (BOARD) LENGTH

Lengths: small 590-1200 mm, classic 1200-2400 mm, long 2400-2800 mm, extra long 3500-8000 mm. Extra long parquet of large lengths is suitable for large rooms of hotels, restaurants, offices...

#### SURFACE STRUCTURE

Surface treatment involves the structure of the wood in different ways to fit the type of building.



BRUSHED



TRADITIONAL







SCRATCHED



AUTHENTIC

#### **TYPES OF STRIPES FOR PARQUET**

1 stripe 3 stripes 6 stripes - Multibond

**KNOTS RANKING** 



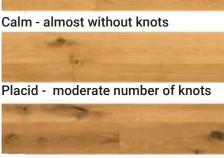
Multibond is three-layers parquet with 6 stripes

#### Filling the sapwood (hollows)

calm = brown filling (oil or matte lacquer finish) placid = brown filling (oil or matte lacquer finish) vivid = black or brown filling (oil finish)



Single-stripe parquet Eco Floor in "Basic"



Vivid - natural look with knots



brown filler



black filler

#### **TYPES OF WOOD OF PARQUET**

Hardwood contains 10 types of wood in 15 different shades. This premium parquet line has perfect stability. The diverse assortment includes oak, walnut, ash...

**Softwood** is made from the highest-quality conifer trees: larch, spruce, pine....The program is composed of four types of wood and 12 different shades. Their warm character and natural elegance fit perfectly into both modern and traditional interiors.

#### **FINAL TREATMENT**

**Oil-finished** "easy-care" parquet surface is easy to maintain. Scratches are easily repaired by applying oil.

Applies to all knots gradations (Calm, Placid, and Vivid).

The oil has open pores, enabling the wood breathes and regulates the natural humidity of the air in the room.

Admonter produces high-quality and sophisticated parquets with an oil finish that is strengthened with UV lamps in order to obtain a strong protective layer on the surface of the parquet, so that users don't have to worry if they spill water because they'll have the time to wipe it up before soaking. It's not necessary to apply additional oil to the parquet over time, but only to clean it regularly.

**The matt lacquer** surface of the parquet is easy to clean and resistant for life use. The lacker enables a beautiful and elegant look.

#### Oak parquet with good price recommendation:

Ondo - three-layer parquet 13 mm with oil finish, brushed structure, dimensions 13x158x2000 mm, Eco Floor - three-layer parquet 13 mm with lacquered surface, brushed structure, dimensions 13x158x2400 mm.



Hardwood-American walnut



Softwood-Douglas pine









### **Floors**

#### Hybrid wood+vinyl floor planks

The latest technology combination of SPC body and final layer massive wooden parquet.

Thickness: 11mm. Design: oak, walnut and ash. Dimensions: 2197x205 mm, 2197x233 mm, 2375x270 mm. Simple assembly. Edges: 4-sided micro bevels. Connection: CLICKitEASI PRO. Chair resistance: DIN EN 13329. Fire resistance: DIN EN 13501-1.

**ADVANTAGES:** Stability of the supporting core. Scratch-resistant Hamberger Hobel Resistant to water spillage. Suitable for underfloor heating. Slip resistant Cen/TS 15676:2008-02. Stain resistant 68861-1.

#### LVT vinyl floor planks

LVT floors are used for cost-effective space refurbishment when good design and resistance to water spillage are required

Thickness: 2 - 4.2 mm. Thickness of wear layer - IXPE: 0.3 - 0.55 mm. Design: oak, pine, walnut, stone, marble, concrete. Width: 152-187 mm. Length: 914-1227 mm.

Edges: not beveled (angled) or 4V bevel on all 4 sides. Connection: withoutclick or click (Tongue & groove). Chair resistance (EN 425): 25,000 cycles without damage. Antistatic (requirement according to EN 1815: 2016).

#### ADVANTAGES:

**ADVANTAGES:** 

Slip resistant.

Silent floor.

Slip resistant. Resistant to water spillage. Water resistant. Warm floor - pleasant to walk on. Suitable for underfloor heating. Simple and very fast tuning.

Solid core without deformation.

Warm floor - pleasant to walk on.

Suitable for underfloor heating.

Resistant to water spillage.



### SPC composite (vinyl-stone) floor planks

SPC composite floor planks consist of vinyl and stone for using in commercial buildings, when easy maintenance, durability and water resistance are required.

Thickness: 4.5-6 mm.

Thickness of top coat layer - IXPE: 0.55 - 1.00 mm. Pattern: oak or stone. Width: 180-225 mm (specially 625 mm). Length: 1220-1830 mm (special 914 mm).

Edges: 4V bevel on all 4 sides.

Connection: click system - uniclick.

Chair resistance (EN 425): 25,000 cycles without damage. Antistatic (requirement according to EN 1815: 2016).

#### Laminate floors - Krono, Kronotex, Egger

Laminate floors are made in accordance with ecological norms, with an emphasis on achieving the natural look of wood with surface structure. They are very favorable in terms of price.

Thickness: 7-12 mm, width: 192 mm, length: 1285 - 2000 mm.

Abrasion resistance class 31-32.

Design: oak, walnut, elm, merbau, chestnut, hickory... Edges: 4V bevel on all 4 sides. Connection: click-twinclick, pure or angle2angle. Castor chair resistance (EN 425): type W. Antistatic (requirement according to EN 1815: 2016).

**ADVANTAGES:** Very good price. Warm floor. Stain resistant EN 438 (L5). Suitable for underfloor heating Easy and quick assembly.



**BASIC** Granada







Carpets

The "Go to" series has a proven track record of high performance and wear resistance. This range is a choice for users who are looking for a quick option to install quality carpets with top features, "Go to" offers two designs with flat weaves (sixteen patterns) and ribbrd weaves (four patterns).

Tile dimensions: 50 cm x 50 cm. Total thickness: 5.5 mm. Fast installation without glue. Abrasion resistance: class 33 heavy commercial use (BS EN 1307). Fire resistance: Euroclass Bfl-s1. Chair protection: BS EN 985 Pass - (continuous use). Voltage test: BS ISO 6356:2000 <2kV. Impact noise reduction: 20 dB (BS EN ISO 10140-3:2010). Impact noise reduction at 1000 Hz: 27.5 dB (BS EN ISO 10140-3:2010). VOC: Class A+.

#### ADVANTAGES:

The possibility of combining patterns. Superior design. Easy to clean. Does not absorb moisture. Excellent ratio of quality and price. Quick and easy installation. Warranty: 10 years. LEED product documentation. Special dimension: plank 25x100 cm.

#### Design and color





Office



College



5

Restaurant





### **Raised floors**

Raised floors consist of legs and support plates, which are used to carry out installations in the floor. The panels are 60x60 cm format and can be made of calcium sulfate, chipboard, metal, glass, with underfloor heating, with antistatic foil...

#### Panel:

Dimensions: 600 x 600 mm (special dimensions possible) Panel thickness: ~ 30 mm Surface: --Underside: Aluminium foil on request System weight: ~ 49 kg/m<sup>2</sup> (without floor covering, floor height 250 mm) Panel weight: ~ 16,7 kg/pc Panel material: Fibre-reinforced calcium sulphate

#### **Understructure:**

Module: 600 x 600 mm Pedestal material: Steel, galvanized Construction height: ~ 55-1800 mm FFH Stringer: --Recommendation: Use stringers generally for floor heights > 500 mm,e.g. u-type stringer

#### Load values: 1)

Point load / deflection class: 2.000 N / A Load class according to EN 12825: Class 1 Ultimate load: ≥ 4.000 N Safety factor: ≥ 2,0 Certificate of conformity: Load step 2.000 N Tested with indentor ø 80 mm: 3.000 N

#### Electrostatic: (DIN EN 1081 / DIN IEC 61340-4-1)

Depending on floor covering: R2 respectively RG > 105 Ohm Without floor covering: R2 respectively RG > 109 Ohm (conductive type possible on request)

#### **Fire protection:**

Building material class (DIN EN 13501-1): A1 Fire resistance class (DIN 4102-2): F30 possible up to FFH 1210 mm

#### Coefficient of thermal conductivity: (basic material)~ 0,44 W/mk

#### Sound absorption: (DIN EN ISO 717-1 resp. -2) 2)

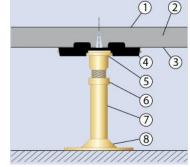
		hori	horizontal			al	
	Sound absorbing fascia	Normalized flanking impact sound pressure difference	Normalized flanking impact sound pressure level	Reduction of impact sound pressure level $\Delta L_{w,P}$ in [dB]		Sound reduction index	
		D <sub>n,f,w,P</sub> in [dB]	L <sub>n,f,w,P</sub> in [dB]	Without pads	With pads 3)	R <sub>w,P</sub>	
Textile covering	without	50 <sup>4)</sup>	48 <sup>4)</sup>	27 4)			
Surface	with			21 "			
Hard covering	without	49 <sup>4)</sup>	71 <sup>4)</sup>	- 15 <sup>4)</sup>	(22.5)	66 <sup>4)</sup>	
Surface	with			15 1		00 //	

1. The loads are depending on the test conditions, especially on the test method and the size of indentor. Distinguishes between an elementary test acc. to the rules of use of EN 12825 and a historically grown component test method with an indentor of Ø80 mm. Recommends the values acc. to the rules of use EN 12825.

2. Coverings have to be considered. The acoustic values were tested in laboratory conditions. Conditions at site have to be considered differently- see norm VDI 3762. Values derive from type 6 N28.

3. Load values can be reduced through the use of sound absorbing pads

4. According to DIN EN ISO 717-1 resp. -2



- 1. Floor covering or steel sheet 2. Calcium sulfate floor slab
- 3. Upon request, steel sheet or
- aluminum foil
- 4. Bracket
- 5. The head of the foot
- 6. Thread
- 7. Leg tube
- 8. Leg base glued to the base

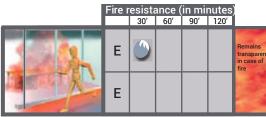




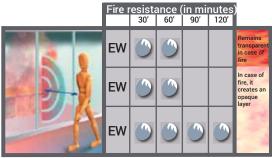


## Fireproof and safety glass

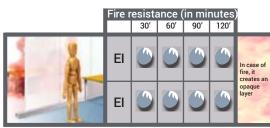
#### FIREPROOF GLASS CHOOSING THE APPROPRIATE PROTECTION



It provides physical protection against flames, hot poisonous gases and smoke. Heat radiation is higher.



Provides physical protection against flames, hot toxic gases and smoke, with reduced heat transfer.



Provides physical protection against flames, hot toxic gases, and smoke with significantly reduced heat transfer.

#### SAFETY GLASS



	Product	Туре	Thickness/type	Weight (kg/m²)	transmission	Sound insulation Rw(dB)	'n
	PYROSWISS	E30	6 PY	15	89%	32	
	PYROSWISS	E30	8 PY	20	88%	34	
emains	PYROSWISS	E30	10 PY	25	88%	36	
ransparent case of re	PYROSWISS	E30	12 PY	30	87%	37	
re	PYROSWISS SATINOVO	E30	6 PY Satinovo (Satimat)	15	1	32	
1	PYROSWISS STADIP	E30	66,2 (12,76)	31	85%	38	
	PYROSWISS CLIMAPLUS	E30	6 PY – 14 Argon – 6 PY	31	79%	33	

	VETROFLAM	EW60	6 VF	15	80%	32
	VETROFLAM STADIP	EW60	66,2 (12,76)	31	78%	35
	VETROFLAM CLIMAPLUS	EW60	6 Float – 14 Argon – 6 VF	31	73%	33
l	CONTRAFLAM LITE	EW30	13 CFL	30	87%	37
l	CONTRAFL.LITE CLIMAPLUS	EW30	6 Planitherm/14 Argon/13 CFL	45	76%	41
l	CONTRAFLAM LITE	EW60	14 CFL	31	85%	38
l	CONTRAFL.LITE CLIMAPLUS	EW60	6 Planitherm/14 Argon/14 CFL	47/46	76%	41
	CONTRAF.STRUCTURE LITE 30	EW30	20 CFS LITE	42	83%	39
ł	CONTRAF.STRUCTURE LITE 60	EW30	20 CFS LITE	42	83%	39

	CONTRAFLAM 30	EI30	16 CF	34	86%	38
	CONTRAFLAM 30	EI30	6 Planitherm/14 Argon/16 CF	49	75%	42
	CONTRAFLAM 60	EI60	25 CF	52	82%	41
	CONTRAFLAM 60	EI60	6 Planitherm/14 Argon/25 CF	67	73%	44
1	CONTRAFLAM 90	EI90	36 CF	72	80%	45
	CONTRAFLAM 120	EI120	58 CF	108	67%	46
	CONTRAFLAM STRUCTURE 30	EI30	23 CFS	52	81%	42
	CONTRAFLAM STRUCTURE 60	EI60	31 CFS	69	78%	43

Product		Type Th	nicknes (mm)	s Weight (kg/m²)	Maximum width (mm)	Maximum height (mm)
Burglow registent	Vetrogard	PB	15-27	33-58	2600	4000-5000
Burglary resistant	Polygard	PB	15-17	28-30	1500	2900
	Vetrogard	BR,SG	13-85	32-206	1500-2600	2500-5000
Bulletproof	Vetrogard Climaplus	BR	56-88	107-193	2000-2300	3600-3800
	Polygard	BR,SG	18-38	34-84	1200-1500	2900
Explosion resistant	Vetrogard	ER	10-33	22-83	2400-2600	4000-5000
	Vetrogard PRO	BR,SG,PB	35-54	80-129	2600	4000-5000
Burglary resistant+ Bulletproof	Vetrogard PRO Climaplus	BR,SG,PB	58-73	115-147	2000	3800
	Polygard PRO	BR,SG,PB	21-38	43-84	1200-1500	2900
Housebreaking resistant +	Contraflam Polygard	PB,EL	30-37	59-76	1400	2500-2800
fire resistant	Contraflam Vetrogard		po zahtevu			
Transparency control and fire resistance Priva - LITE			Т	ransparent	/Opaque op	otion

### Fire-resistant glass EI 30-EI 180 on the building



#### Fire-resistant glass without profiles between the glasses

#### BR SYSTEM - EI 30, EI 60, EI 90 & EI 120

BR fireproof glass is installed in the lower and upper profiles, and there are no vertical profiles between the glasses.

The BR system can be up to 4,800 mm high with an unlimited partition length, consisting of multiple BR fire-resistant glass panels.

The BR system can be installed in walls made of different materials, such as perforated brick or solid brick, concrete or reinforced concrete and can be combined with commercially available fire-resistant door systems.





## Fireproof doors T30, T60, T90, T120 and T180



Fireproof single-leaf doors

Fire protection is from T30-1 to T180-1. The leaf is 40 mm thick with the possibility of left and right opening. The door frame has an APTK rubber seal, grooved on four sides. The lock and hinges are fireproof. The door leaf and frame are specially protected, galvanized and plasticized. It is possible to choose colors or wood decor. Fire protection can be smoke protection and sound insulation.

Fireproof double elevator doors

Fire protection is from T30-2 to T90-2. The door leaf is specially protected, galvanized and plasticized. In addition to fire protection, smoke protection can be combined and sound insulation function of the door.



Fireproof glazed aluminum doors

Fireproof aluminum door T30-2, glazing system. Fire-resistant steel door T30, system with glazing.





Fireproof sliding fire doors

Fire protection T30 and T90, one-wing or two-wing, The possibility of installing a pedestrian passage.

Fireproof glass doors

Fire protection EI 30-180, EW 30-120, E 30.





### **Processed glass**



Glassolutions is part of the Saint Gobain company and offers finished glass products for energy-efficient, aesthetic and sustainable solutions for glass facades, as well as interior walls. Double-glazed IGU-s, triple glazed glass, treated glass and special glass would be delivered finish ready for installation.

	Glass type	Saint-Gobain Glassolutions	Light transmition LT	Solar factor g	Coefficient U (W/m2k)	
		Cool Lite Xtreme70/33 II with Easypro Cool Lite Xtreme 70/33 Cool Lite Xtreme 61/29 II with Easypro Cool Lite Xtreme 61/29 Cool Lite Xtreme 50/22 II with Easypro Cool Lite Xtreme 50/22 II	70% 70% 61% 61% 47% 47%	33 33 29 29 21 21	1 1 1 1 1	
		Cool Lite SKN 083 II with Easypro Cool Lite SKN 083 Cool Lite SKN 183 II with Easypro Cool Lite SKN 183	76% 76% 75% 75%	41 41 40 40	1 1 1	
		Cool Lite KN 075 II with Easypro Cool Lite KN 175 II with Easypro Cool Lite SKN 076 I with Easypro	71% 70% 71%	36 35 38	1	
1	Solar protection from the heat of the sun (character- sistic for DGU 6-16-4)	Cool Lite KN 076 Cool Lite SKN 176 II with Easypro Cool Lite SKN 176 Cool Lite SKN 065 II with Easypro	71% 70% 70% 62%	38 37 37 35	1 1 1	
		Cool Lite SKN 065 Cool Lite SKN 165 II with Easypro Cool Lite SKN 165	62% 61% 61%	35 34 34	1	
		Cool Lite SKN 054 II with Easypro Cool Lite KN 054 Cool Lite SKN 154 II with Easypro Cool Lite SKN 154	53% 53% 52% 52% 43%	29 29 28 28 28 23	1 1 1 1 1.1	
		Cool Lite SKN 044 II with Easypro Cool Lite SK 144 II with Easypro Cool Lite KN 177 II with Easypro Cool Lite KN 166 II with Easypro Cool Lite KN 148 II with Easypro	43% 42% 70% 61% 47%	23 23 48 39 32	1.1 1 1 1	
	Glass type	Label	Activation	Colors	Door	
2	Transparency control (transparent – non transparent)	Priva/Lite	Mobile/ remote	Milky or 12 colors	Rotating/ sliding	
	Glass type	Label	Porpose1	Porpose2	Porpose3	
3	Glass with heaters for lanterns, swimming pools, glass roofs	Eglass	Melting snow	incutci	Elimination of condensation	
	Glass type	Label	Foil	Laminates	Sound isolation	
4	Noise insulation	Stadip Silence	Silence	33.1 Sil -12.12.2Sil	40-54 dB	
	Glass type	Label		Function		
5	Anti-reflective glass	Vision Lite		o windows becau , plus better cont	se it has 8 times rast and colors.	
	Glass type	Label		Function		
6	Protection from birds	4 Bird	Specially certified glass with print on			
	Glass type	Label		Function		
7	Easy exterior maintenance of the facade	Bioclean		Bioclean Glass can be tempered or float with films SKN 183, 176, 165, 164		



### GRUAL we create comfort

### **GSW Glass walls**

GSW are patented high-quality glass wall and fence systems that meet noise, fire and impact protection. GSW systems are certified according to EN standards for pendulum impact 1kg, pear impact 50kg and line load, for sound insulation up to 53 dB, fire resistance up to 60 minutes. Fittings and parts are tested for 200,000 openings and closings (EN 12,400 - frequent use).

						16	
		GSW Office	GSW Office Plus	GSW Office FR	GSW Office Plus FR	GSW PRO	
	Description	Single-glass partitions	Double-glass partitions	Fireproof singles-glass partitions	Fireproof double-glass partitions	Glass walls with high floor profile and extended height	
	Category applications*	III / IV	IV	IV	IV	IV	
	Max. height (mm)	3200 / 3400	3400	3000	3200	3500 (ESG10) /4500 (ESG12)	
wall	Type of glass	ESG 10, 12 VSG 55.X, 66.X, 88.2, 106.2	ESG 10, 12 VSG 55.X, 66.X, 88.2	Contraflam Structure 30 Pyrobel 16 VL, 16 EG VL, 25 VL	Pyrobel 16 VL, 16 EG VL, 25 VL, VSG 55.X, 66.X, 88.2	ESG 10, 12	
glass wall	Acoustic characteristics	$R_{_W} = 33 \div 41 \text{ dB}$ $R_{_{A1}} = 31 \div 40 \text{ dB}$	$R_{w} = 41 \div 52 \text{ dB}$ $R_{A1} = 39 \div 50 \text{ dB}$	$R_{w} = 38 \div 42 \text{ dB}$ $R_{A1} = 36 \div 41 \text{ dB}$	$R_{_{W}} = 47 \div 53 \text{ dB}$ $R_{_{A1}} = 46 \div 51 \text{ dB}$	-	
	Resistance on the fire	-	-	EI 15 / EI 30 / EI 60	EI 30 / EI 60	-	
	Max. height (mm)	3400	4000	2800 / 3000		-	
cassette)	Type of glass	ESG 10, 12 VSG 55.X, 66.X, 88.2	ESG 8, 10, 12 VSG 44.X, 55.X, 66.X, 88.2	Contraflam 30 Pyrobel 16, 16 EG	Available on	-	
s glass wall (cassette)	Acoustical characteristics	$R_w = 36 \div 41 \text{ dB}$ $R_{A1} = 35 \div 40 \text{ dB}$	$R_w = 47 \div 56 \text{ dB}$ $R_{A1} = 44 \div 54 \text{ dB}$	$R_{w} = 39 \div 41 \text{ dB}$ $R_{A1} = 38 \div 40 \text{ dB}$	request		
S	Resistance on the fire	-	-	EI 30		-	
	Certification	C€/ETA	C€/ETA	CE/ETA	C€/ETA	ETA-15/0867	
	Section						

### **Glass walls GSW Office**

		Questions	A	Olasa	Monioust	Sound insulation		
		System	Appearance	Glass	Variant	R <sub>w</sub>	R <sub>A1</sub>	
	c			ESG 10		33 dB	31 dB	
	Ictio	Γ		VSG 55.1		35 dB	33 dB	
	Without construction	00000		VSG 66.2		37 dB	35 dB	
bu	it col	GSW Office		VSG 66.2 Si *	Acoustic	39 dB	38 dB	
azii	ithou			VSG 88.2 Si *	Acoustic	40 dB	39 dB	
i g	Ň			VSG 106.2 Si *	Acoustic	41 dB	40 dB	
single glazing	ų	ſ	FIT	VSG 55.1		36 dB	35 dB	
GSW Office	Instructio	GSW Office		VSG 66.2		37 dB	36 dB	
GSW (	Aluminum construction	Grid V / VH		VSG 66.2 Si *	Akoststic	40 dB	39 dB	
	Alur			VSG 88.2 Si *	Acoustic	41 dB	40 dB	
				ESG 10 + ESG 10		41 dB	39 dB	
				VSG 55.1 + VSG 55.1		41 dB	39 dB	
		GSW Office Plus		ESG 10 + VSG 55.1		43 dB	42 dB	
				VSG 55.1 + VSG 66.2		44 dB	42 dB	
				VSG 66.2 + VSG 66.2		44 dB	43 dB	
		COW Office Flag		VSG 66.2 Si * + VSG 55.1		45 dB	43 dB	
-				VSG 66.2 Si *+VSG 55.2 Si *	Acoustic	47 dB	45 dB	
				VSG 66.2 Si * + VSG 66.2 Si *	Acoustic	48 dB	47 dB	
				VSG 66.2 Si * + VSG 66.2 Si *	Acoustic	52 dB	50 dB	
				VSG 88.2 Si *+ VSG 88.2 Si *	Acoustic	51 dB	50 dB	
		GSW Office Plus endoGrid V		VSG 66.2 + VSG 66.2		49 dB	46 dB	
azing				VSG 66.2 Si * + VSG 66.2 Si *	Acoustic	52 dB	49 dB	
ble gla	-			VSG 66.2 Si * + VSG 66.2 Si *	Acoustic	56 dB	53 dB	
Plus dou	-	GSW Office Plus		VSG 66.2 + VSG 66.2		53 dB	51 dB	
GSW Office Plus double glazing	-	endoGrid VH		VSG 66.2 Si * + VSG 66.2 Si *	Acoustic	56 dB	54 dB	
GS		GSW Office Plus		VSG 44.1 + VSG 55.1		47 dB	44 dB	
		egzoGrid V		VSG 66.2 Si *+VSG 66.2 Si *	Acoustic	51 dB	50 dB	
		GSW Office Plus egzoGrid VH		VSG 44.1 + VSG 55.1		50 dB	48 dB	
				VSG 66.2 Si *+VSG 66.2 Si *	Acoustic	53 dB	52 dB	

### Fireproof glass walls GSW Office FR

		Queters	A	Olaca	Fire	Sound insulation	
		System	Appearance	Glass	resistance	R <sub>w</sub>	R <sub>A1</sub>
				Vetrotech Contraflam Structure Lite 30	El 15	38 dB	36 dB
				Vetrotech Contraflam Structure 30	EI 30	40 dB	38 dB
	truction			Vetrotech Contraflam Structure 30 Silence	EI 30	42 dB	41 dB
	Without construction	GSW Office FR		AGC Pyrobel 16 VL	EI 30	38 dB	37 dB
	With			AGC Pyrobel 16 EG VL	EI 30	40 dB	39 dB
llazing				AGC Pyrobel 16 EG St ** VL	EI 30	41 dB	40 dB
ingle g				AGC Pyrobel 25 VL	EI 60	42 dB	40 dB
GSW Office FR single glazing		GSW Office FR Grid V / VH	Vetrotech Contraflam 30	EI 30	39 dB	38 dB	
GSW C	Aluminum construction		FII	Vetrotech Contraflam 30 Silence	EI 30	41 dB	40 dB
				AGC Pyrobel 16	EI 30	40 dB	39 dB
				AGC Pyrobel 16 EG St **	EI 30	41 dB	40 dB
				AGC Pyrobel 16 VL + VSG 55.1	EI 30	47 dB	46 dB
	E			AGC Pyrobel 16 VL + VSG 66.2 Si *	EI 30	49 dB	48 dB
glazing	Without construction			AGC Pyrobel 16 VL + VSG 88.2 Si *	EI 30	50 dB	49 dB
double	Without c	GSW Office Plus FR		AGC Pyrobel 16 VL EG + VSG 88.2 Si *	EI 30	51 dB	50 dB
lus FR				AGC Pyrobel 16 VL EG St ** + VSG 88.2 Si *	EI 30	53 dB	51 dB
GSW Office Plus FR double glazing				AGC Pyrobel 25 VL + VSG 66.2 Si *	EI 60	51 dB	50 dB
GSW	hst.	GSW Office Plus FR endoGrid		available			
	Al const.	GSW Office Plus FR egzoGrid		available			

### GSW glass and wood doors

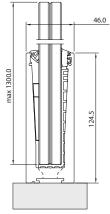
	0		<b>.</b>		Sound ir	nsulation
	System	Appearance	Dimenzije	Dimensions	R <sub>w</sub>	R <sub>A1</sub>
				ESG 8 (w/o drop-down seal)	24 dB	24 dB
	Glass door	ilass door	Max. width 1000 mm Max. height 2600 mm	ESG 8	32 dB	31 dB
		Glass door without own frame but installed in the wall aluminum frame		ESG 10	33 dB	31 dB
				VSG 44.1	35 dB	34 dB
				VSG 44.1	36 dB	35 dB
		-	Max. width 1000 mm	VSG 44.2 Si*	37 dB	37 dB
	Urban Slim door	Glass door with own frame and installed in the wall frame	Max. height 2600 mm	VSG 44.2 Si*	38 dB	37 dB
				VSG 55.1	37 dB	36 dB
				VSG 55.2 Si *	39 dB	38 dB
	Urban Plus door			VSG 44.1	35 dB	34 dB
or				VSG 44.2 Si *	38 dB	37 dB
ор се do		-	Max. width 1000 mm	VSG 55.2 Si <sup>*</sup>	39 dB	38 dB
<b>GSW Office</b> door		Glass door with double glazing with own alu frame and installed in the wall aluminum frame	Max. height 3000mm	VSG 33.1 + VSG 33.1	39 dB	37 dB
GSM				VSG 33.1 + VSG 44.2 Si *	41 dB	40 dB
				VSG 44.2 Si + VSG 44.2 Si *	43 dB	42 dB
			Max. width 1000 mm	ESG 4 + ESG 6	36 dB	35 dB
				ESG 4 + VSG 44.2 Si *	40 dB	39 dB
	Purian door		Max. height 2800 mm	ESG 4 + VSG 44.2 Si *	42 dB	40 dB
		Glass door with own aluminum frame under the glass and installed in the wall aluminum frame		ESG 4 + VSG 44.2 Si * non-transparent, lacquer	43 dB	42 dB
				VSG 44.1 wood, glazed 34 mm	33 dB	32 dB
				VSG 55.2 Si * wood, glazed 34 mm	37 dB	36 dB
	Wooder door	1	Max. width 1000 mm	Homalight D wood, thickness 34 mm	29 dB	25 dB
	Wooden door		Max. height 2800 mm	Sauerland 33 VL wood, thickness 48 mm	38 dB	37 dB
		Wooden door with glass in the middle or with full solid wood in the		Sauerland 33 VL wood ALU, thickness 48 mm	39 dB	38 dB
		wall aluminum frame		Sauerland 39S3R wood, thickness 48 mm	41 dB	40 dB

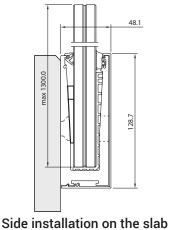
### **GSW glass balustrades**

Specifications				
Space category	A, B, C *, D			
Hardness	1,0 kN/m			
Type of glass	VSG ESG 88.2, 88.4, 1010.2, 1010.4 **			
Max. height	1300 mm			
Processing	ocessing Anodized or painted according to RAL			
Approval individual documentation on rec				

\* except C5 (public areas subject to large crowds)

\*\* other glass thickness on request





Installation on the slab

#### Safety impact test according to DIN 18008-4



#### Aluminum colors



#### Alu raw



Alu E2/C35 black anodized



Four types of basic profiles, designed for installation on the top of the flat or a side of the slab.

It is possible to "hide" the profile by side installation.

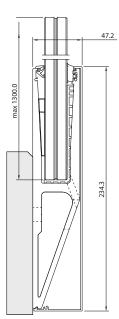
Certified stability and strength.

Quick and easy installation from the inside.

System tested at the Polish Institute of Civil Engineering research on load resistance for horizontal linear forces and impact resistance against pendulum to DIN 18008-4.

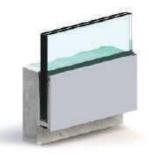
It is possible to use any type of handle on the upper edge of the glass, e.g., stainless steel, aluminum or wood.

46.0 300.0 Jax



#### Side installation with plinth







Alu E2/C-0 silver anodized

E2 - polished surface / pre-treatment according to DIN 17611

14°

700'mm

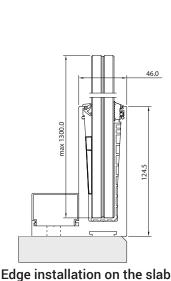
C-0, C-31, C-35 - the color of the anodized surface according to the EURAS color sample



Alu E2/C31 (inox look) silver anodized



ALU RAL painting over the raw aluminium (Alu raw)







# **Shower cabins and mobile walls**

#### Shower cabins



Folding shower screens



Glass cabins without frame



Glass screens for changing rooms

	- Bet		LIN I W
Glass cabins	with slice	ling do	ors



Glass shower screens

#### Mobile walls

Technical specification		Type 100	Туре 110		
Construction		reinforced version with horizontal and vertical aluminum profiles that can be painted	aesthetical version with hidden profiles		
Panels structure		complete freedom of choice: melamine, hard plastic, vinyl, digital print, glass, mirrors, steel sheet, acoustic panels, wood veneers.	complete freedom of choice: melamine, hard plastic, vinyl, digital print, glass, mirrors, sheet steel		
Bearing construction		< 400 kg per panel: aluminum > 400 kg per panel: steel	< 400 kg per panel: aluminum > 400 kg per panel: steel		
Sound insulation Rw	dB	39/46/50	37/41/45/50/53		
Panel thickness	mm	100	116		
Weight	kg/m2	35/55	36/60		
Maximum height	m	13	7		
Maximum opening	m	no limits	no limits		
Panel thickness	mm	550-1250	550-1250		
Jointhing pressure	kN	0,4	0,4		



Glass toilet cabins









Lighting



Luxon is a company that produces high-quality LED lamps. According to Deloitte Technology Fast 50 ranking for 2018. year. Luxon was mentioned as the fastest growing lighting manufacturer. Their offer focuses on industry, commercial facilities and outdoor lighting. As pioneers in the industry, they implement their own project support for customers and optimization of energy consumption, which enables their clients to realize greater advantages and savings, through the application of Luxon lighting on their projects.







### Stone wool



Terrawool is very famous stone wool processor with modern facilities and excellent quality. The assortment is very wide and includes construction and industrial stone wool.

	BUILDING STONE WOOL TERRAWOOL					
	Wool type	Usage	Label	Thickness (mm)	Density ( <b>kg/m³)</b>	Dimensions (mmxmm)
1	Stone wool boards for partition walls and dry construction systems	Insertion in plasterboard walls, suspended ceilings, attics, cladding of elevator shafts, staircases, and fire protection systems, and construction of prefabricated houses.	TWABL	30-120	40-70	600x1200
2	Stone wool in rolls for roofing	Installation in suspended ceilings, roofs, attics and fire safety protection systems.	TWCS	100-140	40	1200x3000 1200x5000
3	Stone wool boards for interior wall cladding	Thermal insulation on the inside of building walls, on stairs, elevators, garages lamination on OSB or plasterboards.	TWIDIYL	30-50	110	600x1200
4	Stone wool floor board	Laying on surfaces where fire protection, vibration, noise reduction and compressive strength are required.	TWYDL	20-30	150	600x1200
5	Stone wool board for facade cladding with impact and pressure resistance	Covering the facade of buildings with heat, sound and non-combustible insulation suitable for facade plastering.	TWML	20-150	120-150	600x1200
6	Stone wool panels for external use in stone and glass facades with metal construction	Cladding in bearing construction of facade (granite, marble, aluminum, glass) and sutible for ventilated facades, facade elements for achiving noise, heat and fire insulation.	TWDCL	30-120	50-110	600x1200
7	Stone wool boards for facade panels and roof panels	Production of sandwich panels for roof and facade positions in industrial buildings and warehouses.	TWPL	75-100	90	1200x1200
8	Stone wool panels for covering terraces and flat roofs	Installing on terraces and flat roofs where walking is possible.	TWTCL	30-120	150	600x1200
9	Stone wool panels for fireproof doors	Insertion in the fireproof door construction.	ТѠҮКР	60	150	950x2100





CE

EN standard certificate







Fire protection and safety

 $\left( \begin{array}{c} \widetilde{\phantom{a}} \\ \widetilde{\phantom{a}} \end{array} \right)$ 

Water vapor permeability

	INDUSTRIAL STONE WOOL TERRAWOOL						
	Wool type	Usage	Label	Thickness (mm)	Density (kg/m³)	Dimensions (mmxmm)	
1	Industrial boards of stone wool	Coating of steel structures, industrial facilities, and process equipment for protection against high temperatures.	TWSL	30-120	70-110	600X1200	
2	Industrial stone wool in rolls	Cladding of steel structures, chimneys, industrial equipment with high temperatures, air conditioning ducts and heating boilers.	TWSS	80-140	80	1200X3000 1200X5000	
3	Industrial stone wool in rolls with rabic mesh	Lining of furnaces, large-diameter heating pipes, steel structures, industrial facilities, process equipment.	TWRTSS	40-100	80-125	1200X3000 1200X5000 1200X8000	
4	Industrial stone wool boards for ovens with and without aluminum foil	Furnace lining.	TWFL	30-50	40	600X1200	
5	Stone wool panels for solar collectors	Production of solar collectors.	TWGKL	30-50	40	1100X1700	
6	Stone wool board for air conditioners	Lining of air conditioning ducts.	TWKL	30-50	70	600X1200	
7	Stone wool boards with foil for air conditioners	Covering and insulating air conditioners and air conditioning ducts with aluminum foil, with yellow or black fiberglass felt.	TWFL	30-50	70	600X1200	
8	Stone wool panels for ships with high temperature resistance	It is used for elements of ships, fireproof doors and walls, as well as interior work in cabins.	TWMFGL	30-60	45-150	600X1200	
9	Stone wool for ships in rolls with resistance to high temperatures	It is used for elements of ships, fireproof doors and walls, as well as interior work in cabins.	TWGS	50-100	32	1200X500 1200X3000	
10	Stone wool for ships in a roll with rabic mesh, resistant to high temperatures	It is used for elements of ships, fireproof doors and walls, as well as interior work in cabins.	TWMFRT	30-60	125	1000X5000 1000X8000	
11	Stone wool in large quantities, or fibers for inserting into cavities that need to be thermally insulated	It is used for wall cavities, attics, laboratory equipment, white goods, installation channels.			40 in average		





### Furniture and interior equipment



Hotel furniture



Office furniture



Room doors



Restauraunt furniture



Home furniture





Wall panels



**Kitchen furniture** 

Stair elements

July 2023

CEO Mobilni: 063 20 88 82 Mail: aleksandar.grujic@grual.rs Sales manager Mobile: 063 7 32 74 16 Mail: nemanja.grujic@grual.rs Project support Mobile: 064 14 17 290 Mail: prodaja@grual.rs

Grual d.o.o. Bulevar Zorana Đinđića 68, 11 070 Belgrade www.grual.rs