

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-19/0079
of 25 August 2022

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

SECUR IPK in the versions "60-30" and "120-90"

Product family
to which the construction product belongs

Internal Partitions Kit for use as non-loadbearing walls

Manufacturer

W.M.K. GmbH
Flurstraße 3
39035 Welsberg-Taisten (BZ)
ITALIEN

Manufacturing plant

Plant 1

This European Technical Assessment
contains

25 pages including 4 annexes which form an integral part
of this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

EAD 210005-00-0505

This version replaces

ETA-19/0079 issued on 29 October 2021

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Specific Part

1 Technical description of the product

"SECUR IPK" in the versions "120-90" and "60-30", is an internal partition kit (IPK) for use as non-loadbearing walls.

The internal partitions kit "SECUR IPK" realizes internal partition systems, with opaque panels or glass panes, having different fire resistance characteristics depending on the version, whether it is "120-90" or "60-30".

The IPK "SECUR IPK" comprises elements and components which are factory-made by the manufacturer or by his suppliers. The manufacturer is responsible for the kit. In order to support the realization of the several possible lay-outs of the system "SECUR IPK", there is no modular prefabricated production. In all cases, the partition kit will be designed by the manufacturer itself based on the client specification, respecting the maximum partition height and sizes of the glass panes and opaque panels given in Annex 2.

General examples of configurations of the partition kits, its components and details regarding the structural joints and the sealing are given in Annex 3 of this ETA. Annex 4 shows drawings of the "SECUR IPK" in both versions, its components and details regarding the structural joints and the sealing.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The main function of partitions fabricated with the kit is to divide building interiors in a fire resistance compartment. The IPK "SECUR IPK" is intended to be used as an immoveable partition system for offices and public buildings, with an average air temperature range from 5 °C to 35 °C and an average relative air humidity range from 20 % R.H. to 75 % R.H (Table 1, EAD 210005-00-0505, all area Categories).

The performance given in section 3 is only valid if the internal partition kit is used in compliance with the specifications and conditions given in Annex 1-3. The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the building kit of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire (Secur IPK 60-30 and Secur IPK 120-90 with Fire-resistant glass or panels with anodized aluminium lamination) EN ISO 11925-2:2010; EN 13823:2010+A1:2014	Class B - s1, d0 according to EN 13501-1:2018* **
Resistance to fire	EI 30 or EI 60 or EI 90 or EI 120 according to EN 13501-2:2016 06 – essentially depending on the profiles used and the glass panes/opaque panels used (section A.2.2, Tab. 1 to 4)
* Paints, coatings are not permitted. ** When using panels or glass in class A2-s1, d0 according to EN 13501-1.	

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3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Content, emission and/or release of dangerous substances	No performance assessed
Water vapour permeability	No performance assessed

3.3 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Sill height	No performance assessed
Resistance to damage and functional failure from horizontal loads	Annex A.2.2
Resistance to damage and functional failure from eccentric vertical loads	No performance assessed
Resistance to horizontal linear static loads	No performance assessed
Resistance to functional failure from point loads parallel or perpendicular to the surface	No performance assessed
Rigidity of partitions to be used as a substrate for ceramic tiling	No performance assessed
Safety against personal injuries by contact	The geometry of the IPK "SECUR IPK" does not contain any sharp and cutting edges and there is no risk of abrasion or cutting people or people's clothing rising from the nature of the surfaces.
Resistance to deterioration caused by: <ul style="list-style-type: none"> - physical agents - chemical agents - biological agents 	No performance assessed

3.4 Protection against noise (BWR 5)

Essential characteristic	Performance
Airborne sound insulation	No performance assessed
Sound absorption	No performance assessed

3.5 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Thermal resistance	No performance assessed
Thermal inertia	No performance assessed

English translation prepared by DIBt

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with EAD No. 210005-00-0505, the applicable European legal act is: Decision 98/213/EC.

The system to be applied is: 3.

For uses subject to regulations on reaction to fire the applicable AVCP systems regarding reaction to fire are 1, or 3, or 4 depending on the conditions defined in the said Decision 98/213/EC.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 25 August 2022 by Deutsches Institut für Bautechnik

Anja Dewitt
Head of Section

beglaubigt:
Warns

A.1 Specification of the technical description

A.1.1 Technical description of building components

The "120-90" version (total nominal thickness: 110 mm) consists of thermally insulated aluminium structural profiles. These parts are composed of two aluminium profiles coupled by a glass-fibre reinforced plastic profile (FRP), with powder-coated or natural anodised surface, to which both opaque composite panels or glass panes with fire resistant characteristics are fixed. EPDM gasket and an intumescent seal are fitted in the gaps between opaque panels or glass panes and the supporting structure.

The opaque panels are sandwich panels composed by one mineral wool core slab, two opposite silicates and calcium sulphates boards (on each side of the core slab) and two opposed aluminium sheets on each external side. All the opaque panel components are coupled by gluing. Depending on the fire resistance rating selected EI 120 and EI 90 versions are produced.

The "60-30" version differs from "120-90" mainly in thickness of the structural profiles (total nominal thickness: 86 mm), of the glass panes and of the opaque panels (with a reduced core slab thickness). Depending on the fire resistance rating selected EI 60 and EI 30 versions are produced.

A.1.2 Specification of manufacturing and installation

Manufacturing

The manufacturing of the partition kits is done as deposited with DIBt.

Installation

General

It is the responsibility of the manufacturer to guarantee that the information about design and installation of the system "SECUR IPK" are effectively communicated to the concerned people. Besides, all the data concerning the execution shall be indicated clearly on the packaging and/or on the enclosed instruction sheets using one or several illustrations.

Only the components described in clause A.1.1 with characteristics in accordance with clause A.2 of this ETA can be used for the system "SECUR IPK".

Design

The IPK design complies with characteristics of the system "SECUR IPK". The is installed into indoor spaces with normal indoor temperature and moisture conditions according to Annex 4. In all cases, the partition kit will be designed "tailor-produced" for a specific installation.

Installation

The recognition and preparation of floor, ceiling and walls in a work, as well as the installation of the system "SECUR IPK" with respect to the peculiarities in the joints between partition and main structure and admitted tolerances of the system itself, is carried out in accordance with the current version of the manufacturer's Installation Manual.

A.1.3 Specification of Packaging, transport and storage

The packaging of the components and the ancillary materials are such that the products are protected from moisture during transport and storage, unless other measures are foreseen by the manufacturer for this purpose. The components are protected against damage and well identified as part of the system "SECUR IPK" in the two versions "120-90", "60-30".

A.1.4 Specification of Use, Maintenance and repair

Any damage (dent, crack, etc.) cannot be repaired unless permitted by the manufacturer, as well as substitutions of any component of the kit. Use and maintenance instructions are detailed in the use and maintenance manual accompanying each "SECUR IPK" system supplied.

A.2 Specification of essential characteristics

Characteristics of the system "SECUR IPK" and methods of verification

Resistance to fire

The fire resistance of the internal partition kit (IPK) system "SECUR IPK" in the two versions "120- 90" and "60-30", tested in accordance with EAD 210005-00-0505, with reference to EN 1364-1:1999-08 and EN 1363-1:2012-07, taking into account the extended application rules established in EN 15254-4:2011-07, are classified according to EN 13501-2:2016-06 as follows (see tables 1 to 4), essentially depending on the profiles used (versions "120-90" or "60-30") and the glass panes/opaque panels used.

Tab. 1: Fire resistance classification of the system "SECUR IPK", version "60-30" with "CONTRAFLAM 30-2" glass panes

Partition structure (maximum partition height: 3600 mm)	classification
Profiles: System version "60-30" composed by: Aluminium/FRP profiles: Art. 21.2310 (same size for frame and internal post and transom: 86 mm x12 mm). Profile connections: Screws, pins and angle connectors (see table 10)	EI 30
Glass panes: "CONTRAFLAM 30-2" (thickness: ≥ 20 mm) Max. dimension/area in <ul style="list-style-type: none"> portrait layout (width x height / area): 1222 mm x 3533 mm / 3,63 m² landscape layout (width x height / area): 2258 mm x 1800 mm / 3,42 m² 	
Opaque panels: Art. 1.1086 (thickness: 45 mm) Max. dimension in <ul style="list-style-type: none"> portrait layout (width x height): 1022 mm x 2948 mm landscape layout (width x height): 1886 mm x 1504 mm 	
Intumescent seal strip: MARVON "TECNOFLAME", Art. 1.4240 (cross section (width x thickness): 25 mm x 2,5 mm, glued to the Aluminium/FRP profiles)	
Fire resistant silicone joint sealant (for glass panes/opaque panels perimeter): TORGLER "FIRE RESISTANT SPECIAL", Art. 1.1419	
EPDM-gasket, Art. 1.4060 (between glass panes/opaque panels and glazing bead)	
Glazing system component (Art. 1.6195, for glass panes) and bead (Art. 1.6216, for opaque panels), screwed to the Aluminium/FRP profile with a maximum spacing of 400 mm (90 mm near edges)	
Glazing bead, Art. 1.3490 or 1.3434 (for glass panes), Art. 1.3410 or 1.3440 (for opaque panels), clipped on the Aluminium/FRP profile	
Silicone joint sealant, Art. 1.1420 (for inner junctions between Aluminium/FRP profile and glazing bead): TORGLER "LOW MODULUS PROFESSIONAL"	

Tab. 2: Fire resistance classification of the system "SECUR IPK", version "60-30" with "CONTRAFLAM 60-3" glass panes

Partition structure (maximum partition height: 3600 mm)	classification
Profiles: System version "60-30" composed by: Aluminium/FRP profiles: Art. 21.2310 (same size for frame and internal post and transom: 86 mm x12 mm). Profile connections: Screws, pins and angle connectors (see table 10)	EI 60
Glass panes: "CONTRAFLAM 60-3" (thickness: ≥ 27 mm) Max. dimension/area in <ul style="list-style-type: none"> • portrait layout (width x height / area): 1222 mm x 3533 mm / 3,63 m² • landscape layout (width x height / area): 2258 mm x 1800 mm / 3,42 m² 	
Opaque panels: Art. 1.1086 (thickness: 45 mm) Max. dimension in <ul style="list-style-type: none"> • portrait layout (width x height): 1022 mm x 2948 mm • landscape layout (width x height): 1886 mm x 1504 mm 	
Intumescent seal strip: MARVON "TECNOFLAME", Art. 1.4240 (cross section (width x thickness): 25 mm x 2,5 mm, glued to the Aluminium/FRP profiles)	
Fire resistant silicone joint sealant (for glass panes/opaque panels perimeter): TORGGLER "FIRE RESISTANT SPECIAL", Art. 1.1419	
EPDM-gasket, Art. 1.4060 (between glass panes/opaque panels and glazing bead)	
Glazing system component (Art. 1.6200, for glass panes) and bead (Art. 1.6216, for opaque panels), screwed to the Aluminium/FRP profile with a maximum spacing of 400 mm (90 mm near edges)	
Glazing bead, Art. 1.3395 or 1.3435 (for glass panes), Art. 1.3410 or 1.3440 (for opaque panels), clipped on the Aluminium/FRP profile	
Silicone joint sealant, Art. 1.1420 (for inner junctions between Aluminium/FRP profile and glazing bead): TORGGLER "LOW MODULUS PROFESSIONAL"	

Tab. 3: Fire resistance classification of the system "SECUR IPK", version "120-90" with "CONTRAFLAM 90-4" glass panes

Partition structure (maximum partition height: 3600 mm)	classification
<p>Profiles: System version "120-90" composed by: Aluminium/FRP profiles: Art. 22.2310 (same size for frame and internal post and transom: 110 mm x 12 mm). Profile connections: Screws, pins and angle connectors (see table 10)</p>	EI 90
<p>Glass panes: "CONTRAFLAM 90-4" (thickness: ≥ 40 mm) Max. dimension/area in</p> <ul style="list-style-type: none"> • portrait layout (width x height / area): 1222 mm x 2866 mm / 2,94 m² • landscape layout (width x height / area): 2258 mm x 1666 mm / 3,16 m² 	
<p>Opaque panels: Art. 1.1096 (thickness: 70 mm) Max. dimension in</p> <ul style="list-style-type: none"> • portrait layout (width x height): 1022 mm x 2392 mm • landscape layout (width x height): 1886 mm x 1392 mm 	
<p>Intumescent seal strip: MARVON "TECNOFLAME", Art. 1.4241 (cross section (width x thickness): 48,2 mm x 2,5 mm, glued to the Aluminium/FRP profiles)</p>	
<p>Fire resistant silicone joint sealant (for glass panes/opaque panels perimeter): TORGGLER "FIRE RESISTANT SPECIAL", Art. 1.1419</p>	
<p>EPDM-gasket, Art. 1.4060 (between glass panes/opaque panels and glazing bead)</p>	
<p>Glazing system component (Art. 1.6216, for glass panes) and bead (Art. 1.6210, for opaque panels), screwed to the Aluminium/FRP profile with a maximum spacing of 400 mm (90 mm near edges)</p>	
<p>Glazing bead, Art. 1.3391 or 1.3433 (for glass panes), Art. 1.3410 or 1.3440 (for opaque panels), clipped on the Aluminium/FRP profile</p>	
<p>Silicone joint sealant, Art. 1.1420 (for inner junctions between Aluminium/FRP profile and glazing bead): TORGGLER "LOW MODULUS PROFESSIONAL"</p>	

Tab. 4: Fire resistance classification of the system "SECUR IPK", version "120-90" with "CONTRAFLAM 120-6" glass panes

Partition structure (maximum partition height: <ul style="list-style-type: none"> • 3000 mm for a partially/fully glazed partition • 3600 mm for a partition with fully opaque panels) 	classification
Profiles: System version "120-90" composed by: Aluminium/FRP profiles: Art. 22.2310 (same size for frame and internal post and transom: 110 mm x12 mm). Profile connections: Screws, pins and angle connectors (see table 10)	EI 120
Glass panes: "CONTRAFLAM 120-6" (thickness: ≥ 60 mm) Max. dimension/area in <ul style="list-style-type: none"> • portrait layout (width x height / area): 1018 mm x 2188 mm / 2,23 m² • landscape layout (width x height / area): 1882 mm x 1088 mm / 2,05 m² 	
Opaque panels: Art. 1.1096 (thickness: 70 mm) Max. dimension in <ul style="list-style-type: none"> • portrait layout (width x height): 1022 mm x 2392 mm • landscape layout (width x height): 1886 mm x 1392 mm 	
Intumescent seal strip: MARVON "TECNOFLAME", Art. 1.4241 (cross section (width x thickness): 48,2 mm x 2,5 mm, glued to the Aluminium/FRP profiles)	
Fire resistant silicone joint sealant (for glass panes/opaque panels perimeter): ORGGLER "FIRE RESISTANT SPECIAL", Art. 1.1419	
EPDM-gasket, Art. 1.4060 (between glass panes/opaque panels and glazing bead)	
Glazing system component (Art. 1.6215, for glass panes) and bead (Art. 1.6210, for opaque panels), screwed to the Aluminium/FRP profile with a maximum spacing of 400 mm (90 mm near edges)	
Glazing bead, Art. 1.3400 or 1.3430 (for glass panes), Art. 1.3410 or 1.3440 (for opaque panels), clipped on the Aluminium/FRP profile	
Silicone joint sealant, Art. 1.1420 (for inner junctions between Aluminium/FRP profile and glazing bead): TORGGLER "LOW MODULUS PROFESSIONAL"	

In addition, the following conditions apply to all partitions (EI 30, EI 60, EI 90 and EI 120):

- The length of the partition is unlimited
- The glass panes/opaque panels have to be placed on the bottom edge on two setting blocks (Art. 1.1405) each
- The edge cover of the glass panes/opaque panels in the glazing system component (Art. 1.6195, 1.6200, 1.6216 and 1.6215 - for glass panes) and beads (Art. 1.6216 and 1.6210 - for opaque panels) has to be ≥ 7 mm along all edges.
- The partition's frame has to be fixed only to two of the four sides of the adjacent supporting construction (floor and ceiling) using the following fixing materials: Plastic anchors, Art. 1.7502, WÜRTH "W-UR 8" with steel screws $\varnothing 6$ mm (max. spacing of 400 mm, reduced to 60 mm near frame corners and 160 mm near internal joints)
- For filling and closing the joints between the frame perimeter and the adjacent supporting construction, the following products have to be used:
 - Intumescent foam, FISCHER "PUFS 750 B1", Art. 1.1425 and
 - Silicone joint sealant, Art. 1.1420, TORGGLER "LOW MODULUS PROFESSIONAL"

Resistance to damage and functional failure from horizontal loads

Tab. 5: Resistance to dynamic loads (damage): classification of the IPK "SECUR IPK" system versions "120-90" and "60-30".

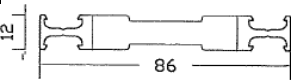
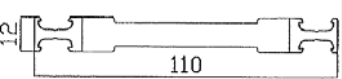
Resistance to Dynamic Loads	Resistance to damage from soft body impact load – 50 kg bag		Resistance to damage from hard body impact load – 1 kg steel ball	
	Glazed partitions	Solid partitions	Glazed partitions	Solid partitions
Use category (up to a partition height = mm 3490) and energy level	IVc 900 Nm	IVb 500 Nm	IVc 10 Nm	IVb 10 Nm

Tab. 6: Resistance to dynamic loads (functional failure): classification of the IPK "SECUR IPK" system versions "120-90" and "60-30".

Resistance to Dynamic Loads	Resistance to functional failure from soft body impact load – 50 kg bag	Resistance to functional failure from hard body impact load – 0.5 kg steel ball
Use category (up to a partition height = mm 3490) and energy level	IV 120 Nm	IV 6 Nm

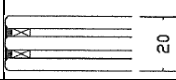
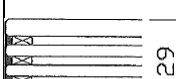


A.3 Components of the kit "SECUR IPK"

Tab. 7: Structural profiles

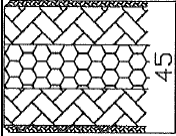
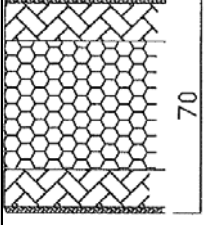
STRUCTURAL ELEMENTS			Reference code/ Drawing	Size	Material
	60 - 30	120 - 90			
60-30 version Base profile, post and transom			21.2310 	86 x 12 mm	2 external aluminium alloy (EN AW-6060, EN 15088) profiles joined by 1 core FRP profile, 1.1148 (54 x 12 mm), Exel Composites GmbH, Kapfenberg (Austria)
120-90 version Base profile, post and transom			22.2310 	110 x 12 mm	2 external aluminium alloy (EN AW-6060, EN 15088) profiles joined by 1 core FRP profile, 1.1149 (78 x 12 mm), Exel Composites GmbH, Kapfenberg (Austria)

Note: Profiles 60-30 version are used for partitions with classifications EI 30 and EI 60
Profiles 120-90 version are used for partitions with classifications EI 90 and EI 120

Tab. 8: Glass panes according to EN 14449 for glazed units

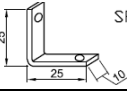
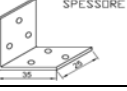
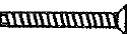


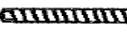
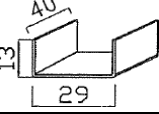
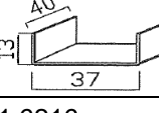
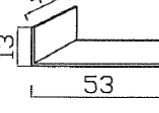
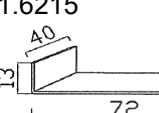
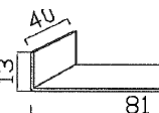
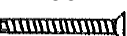
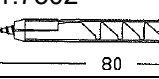

GLASS PANES	60 – 30	120 – 90	Brand-name/ drawing	Thickness	Supplier's code/name	Material
EI 30 Fire resistant safety glass			CONTRAFLAM 30-2 	20 mm	VETROTECH	3 Toughened safety glasses (TSG) with 2 intumescent interlayer (IL)
EI 60 Fire resistant safety glass			CONTRAFLAM 60-3 	27-29 mm		4 TSGs with 3 ILs
EI 90 Fire resistant safety glass			CONTRAFLAM 90-4 	40 mm		5 TSGs with 4 ILs
EI 120 Fire resistant safety glass			CONTRAFLAM 120-6 	60-64 mm		8 TSGs with 6 ILs

Tab. 9: Insulating panels for opaque units

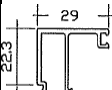
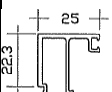
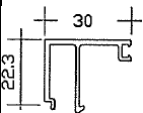
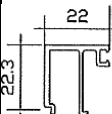
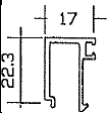
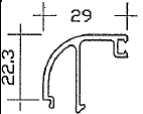
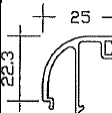
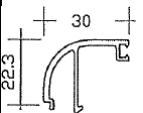
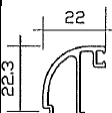
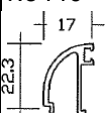
OPAQUE PANELS			Reference code / drawing	Thickness	Supplier's code/ brand name	Material				
	60 – 30	120 – 90								
EI 30/EI 60 Fire resistant insulating panels			1.1086 	45 mm	ROKU Therm (Rolf Kuhn GmbH, Seevetal, Germany)	MW core slab 270 kg/m ³ +				
				(15 mm)			LASTRE FIREGUARD 13 (EN 15283-1)	silicates and calcium sulphates insulating outer layers 10,2 kg/m ² +		
				(2x12,7mm)					AW-6060 (EN 573-3)	2 external aluminium alloy sheets
				(2x1,5 mm)						
(4x0,4 mm)										
EI 90/EI 120 Fire resistant insulating panels			1.1096 	70 mm	ROKU Therm (Rolf Kuhn GmbH, Seevetal, Germany)	MW core slab 270 kg/m ³ +				
				(40 mm)			LASTRE FIREGUARD 13 (EN 15283-1)	silicates and calcium sulphates insulating outer layers 10,2 kg/m ² +		
				(2x12,7mm)					AW-6060 (EN 573-3)	2 external aluminium alloy sheets
				(2x1,5 mm)						
(4x0,4 mm)										

Note: EI 60 panels are used for partitions with classifications EI 30 and EI 60
EI 120 panels are used for partitions with classifications EI 90 and EI 120

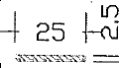
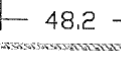

Tab.10: Fixings

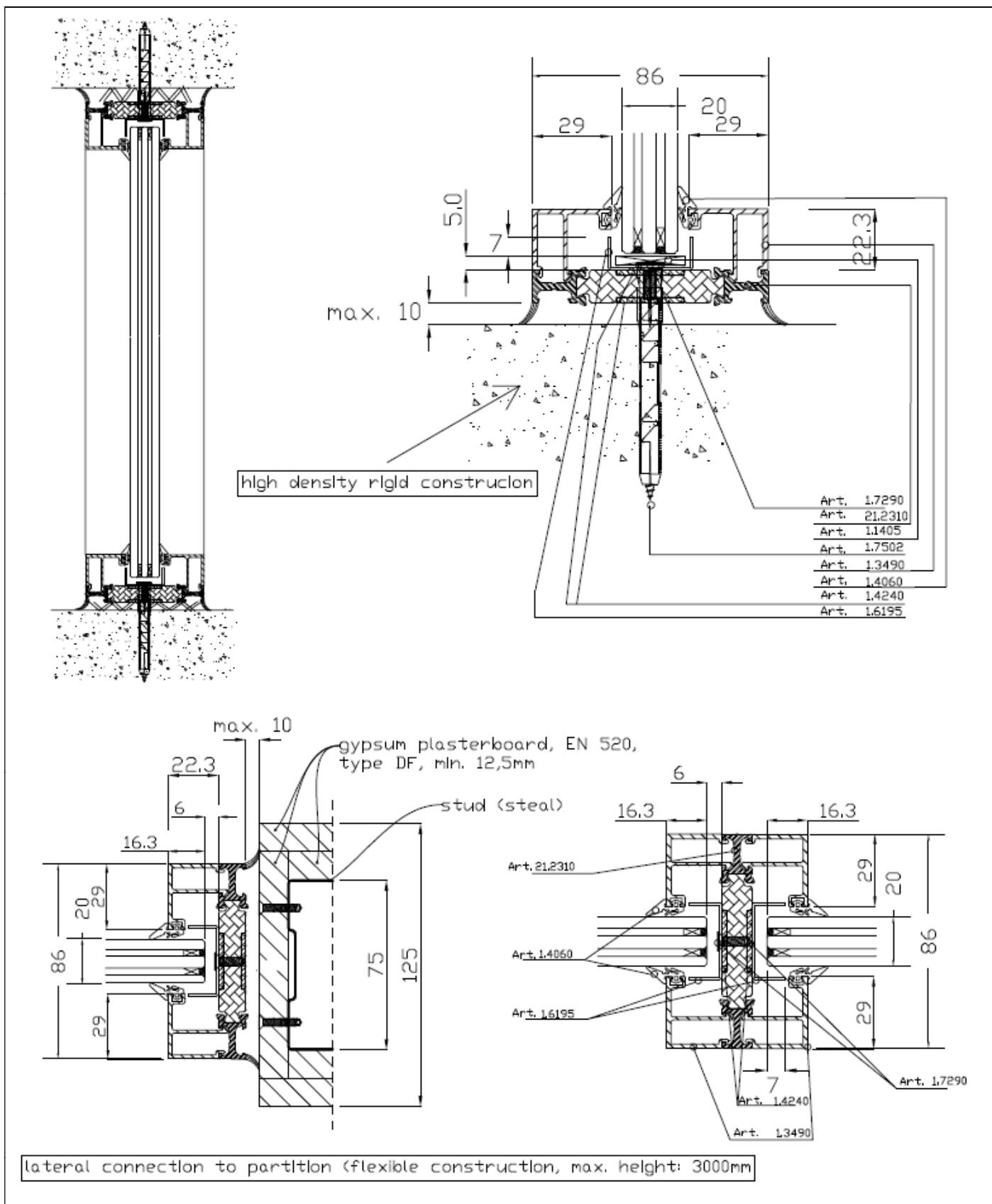
FIXINGS	60 – 30	120 – 90	Reference code / drawing	Size	Material
Angle connectors for joining perimetral profiles, posts and transoms			1.6051 	25x25x10 mm	Galvanized steel (S235JR)
Angle connectors for joining posts and transoms			1.6056 	35x35x25 mm	Galvanized steel (S235JR)
Screw for angle connector			1.7290 	SKØ3,9x13mm	Galvanized steel
Pin for angle joints			1.7332 	Ø5x25mm	Galvanized steel
Pin for angle joints			1.7333 	Ø5x50mm	Galvanized steel
Screw for angle connector			1.7281 	SKØ4,8x32mm	Galvanized steel
SECURVETRO glazing system component for EI 30 glass panes (fixed with 2 screws to the structural profiles)			1.6195 	1 mm thickness	Steel galvanised pressed profile EN 1090-1 (S235.../S355...)
SECURVETRO glazing system component for EI 60 glass panes (fixed with 2 screws to the structural profiles)			1.6200 	1 mm thickness	
SECURVETRO glazing system component for EI 90 glass panes (fixed with 4 screws to the structural profiles) SECURVETRO beads for EI 30/60 opaque panels (fixed with 2 screws to the structural profiles)			1.6216 	1 mm thickness	
SECURVETRO glazing system component for EI 120 glass panes (fixed with 4 screws to the structural profiles)			1.6215 	1 mm thickness	
SECURVETRO glazing system component for EI 120 opaque panels (fixed with 4 screws to the structural profiles)			1.6210 	1 mm thickness	
Screw for SECURVETRO glass/opaque panel beads fixing			1.7290 	SKØ3,9x13mm	
Anchor for perimetric frame fixing			1.7502 	Ø8x80 mm WURTH W-UR 8	
Setting blocks for glass panes/opaque panels			1.1405 	5 mm thickness	Hardwood (ash wood)

Tab.11: Bead decorative finishing (clipped on structural profiles)

BEAD DECORATIVE FINISHING	60 – 30	120 – 90	Reference code / drawing	Size	Material
Glazing bead and decorative cover for EI 30 glass pane			1.3490 	1 mm thickness	Aluminium alloy (EN AW-6060, EN 15088)
Glazing bead and decorative cover for EI 60 glass pane			1.3395 		
Glazing bead and decorative cover for EI 90 glass pane			1.3391 		
Glazing bead and decorative cover for EI 120 glass panes			1.3400 		
Decorative cover for all opaque panels			1.3410 		
Glazing bead and decorative rounded cover for EI 30 glass pane			1.3434 		
Glazing bead and decorative rounded cover for EI 60 glass pane			1.3435 		
Glazing bead and decorative rounded cover for EI 90 glass pane			1.3433 		
Glazing bead and decorative rounded cover for EI 120 glass pane			1.3430 		
Decorative rounded cover for all opaque panels			1.3440 		

Tab.12: Gaskets, sealants and adhesives

GASKETS, SEALANTS AND ADHESIVES		60 - 30	120 - 90	Reference code/ Drawing	Thickness	Supplier's code/ Brand name	Material
Intumescent seal strip with adhesive (for all glazed/opaque panels in version "60-30")				1.4240 	2,5 mm	MARVON "TECNOFLAME" (ETA-15/0350, doP from 2 May 2018)	Graphite, PVC, resin
Intumescent seal strip with adhesive (for all glazed/opaque panels in version "120-90")			1.4241 				
Gasket for glazed/opaque panels in all system versions (clipped on the decorative finishing profile)				1.4060 	--	"Saba", Trelleborg Sealing Solutions Germany GmbH	EPDM
Fire resistant silicone joint sealant (for opaque/ glazed panels perimeter)				1.1419	--	TORGGLER "FIRE RESISTANT SPECIAL" (EN 15651-1)	Neutral silicone sealant
Silicone joint sealant (for frame perimeter)				1.1420	--	TORGGLER "LOW MODULUS PROFESSIONAL" (EN 15651-1)	
Intumescent foam (for frame perimeter)				1.1425	--	FISCHER "PUFS 750 B1", Fischerwerke GmbH & Co. KG, Waldachtal (Germany)	Polyurethane foam

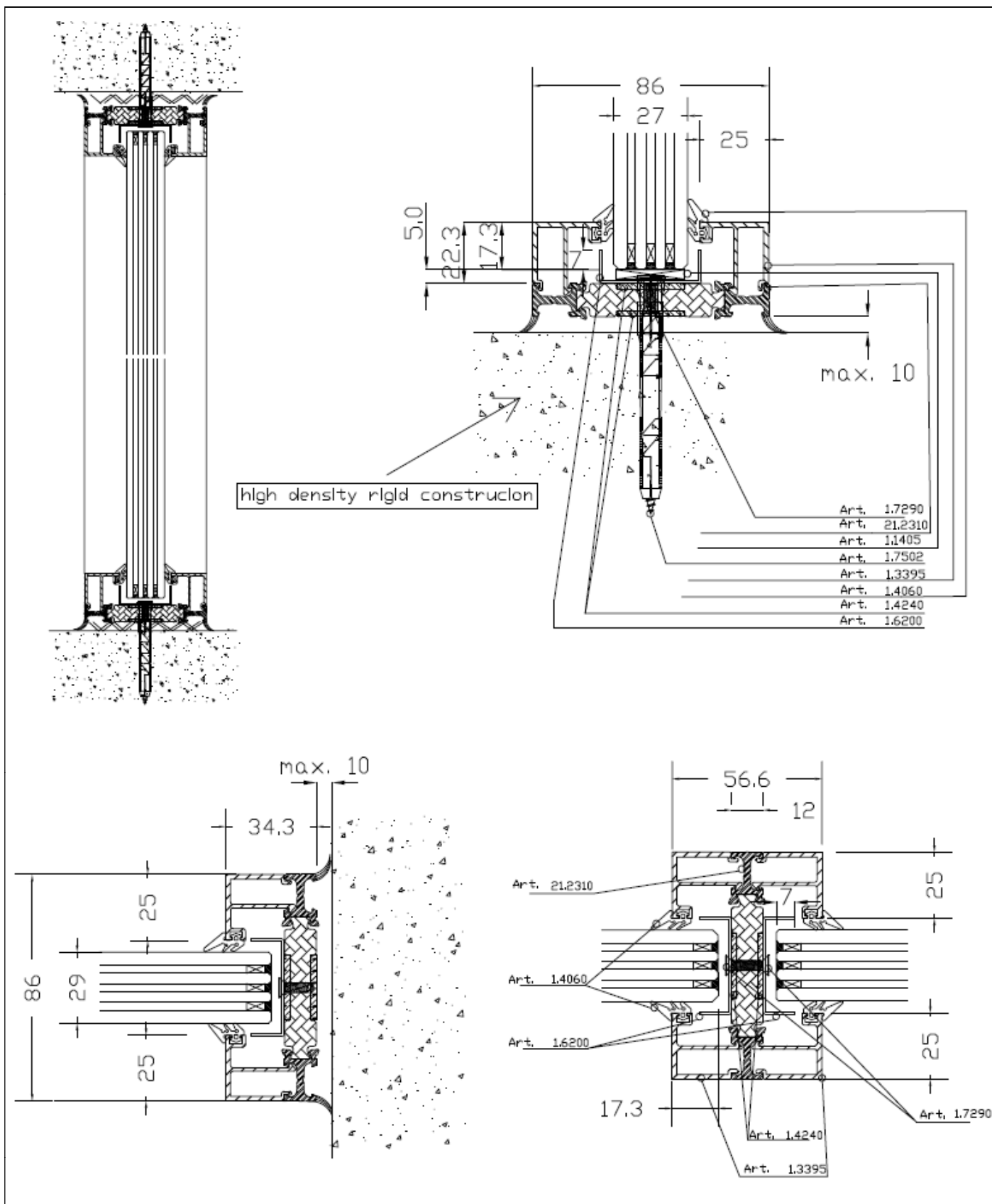


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SECUR IPK in the versions "60-30" and "120-90"

SECUR IPK 60-30 (EI 30 / EI 45 with glass panes)

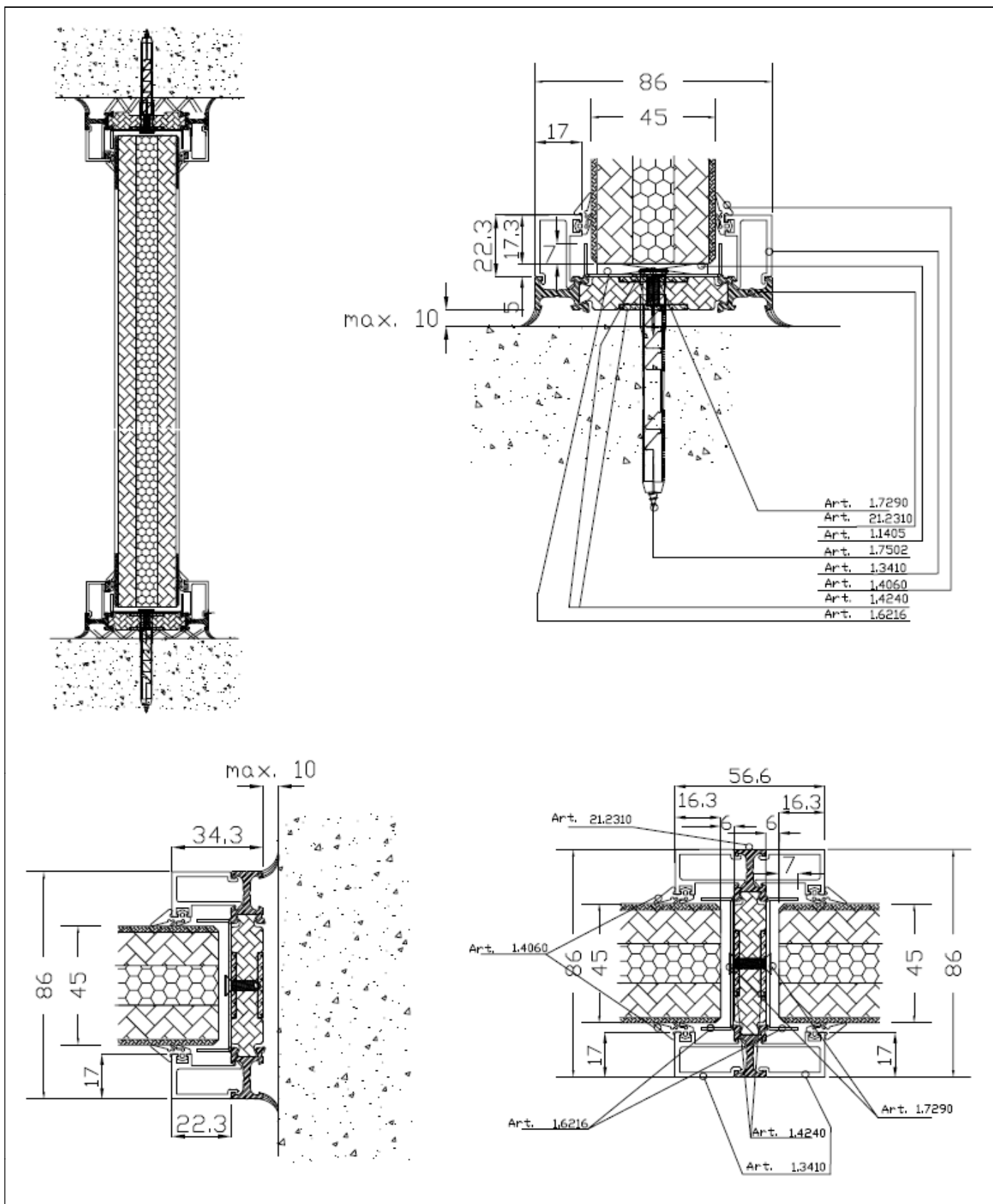
Annex 4.1



SECUR IPK in the versions "60-30" and "120-90"

SECUR IPK 60-30 (EI 60 with glass panes)

Annex 4.2

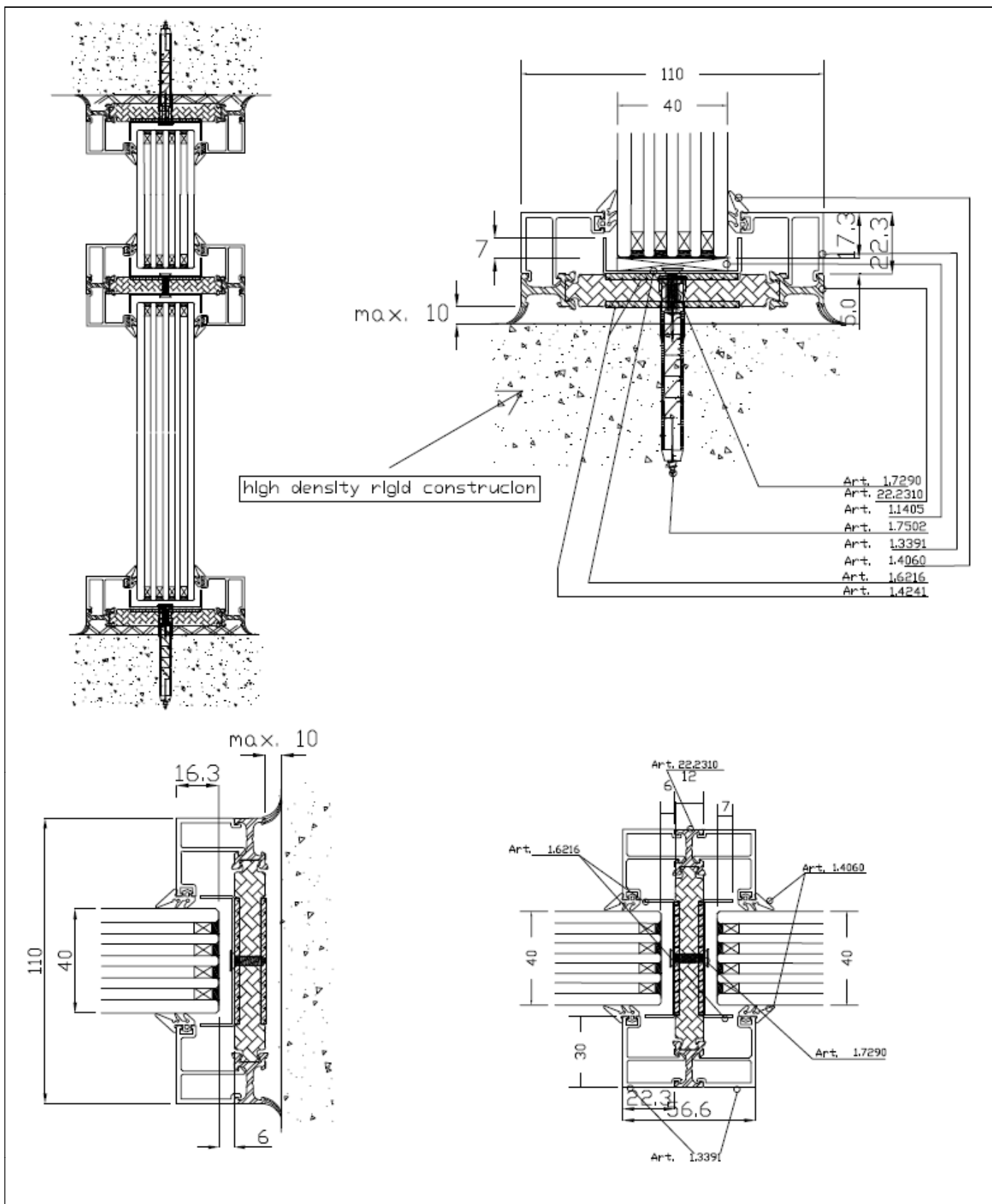


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SECUR IPK in the versions "60-30" and "120-90"

SECUR IPK 60-30 (EI 60 with opaque panels)

Annex 4.3

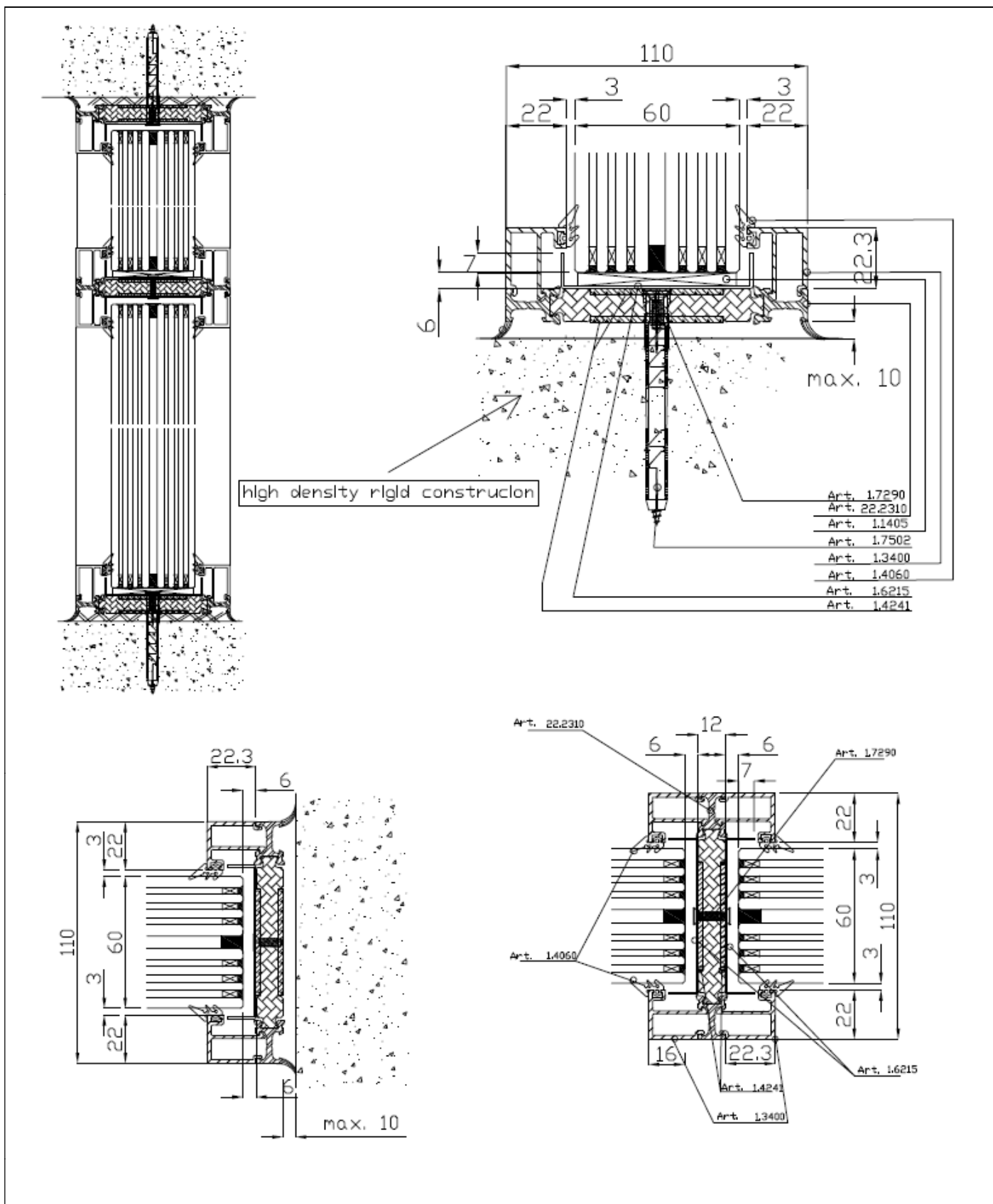


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SECUR IPK in the versions "60-30" and "120-90"

SECUR IPK 120-90 (EI 90 with glass panes)

Annex 4.4

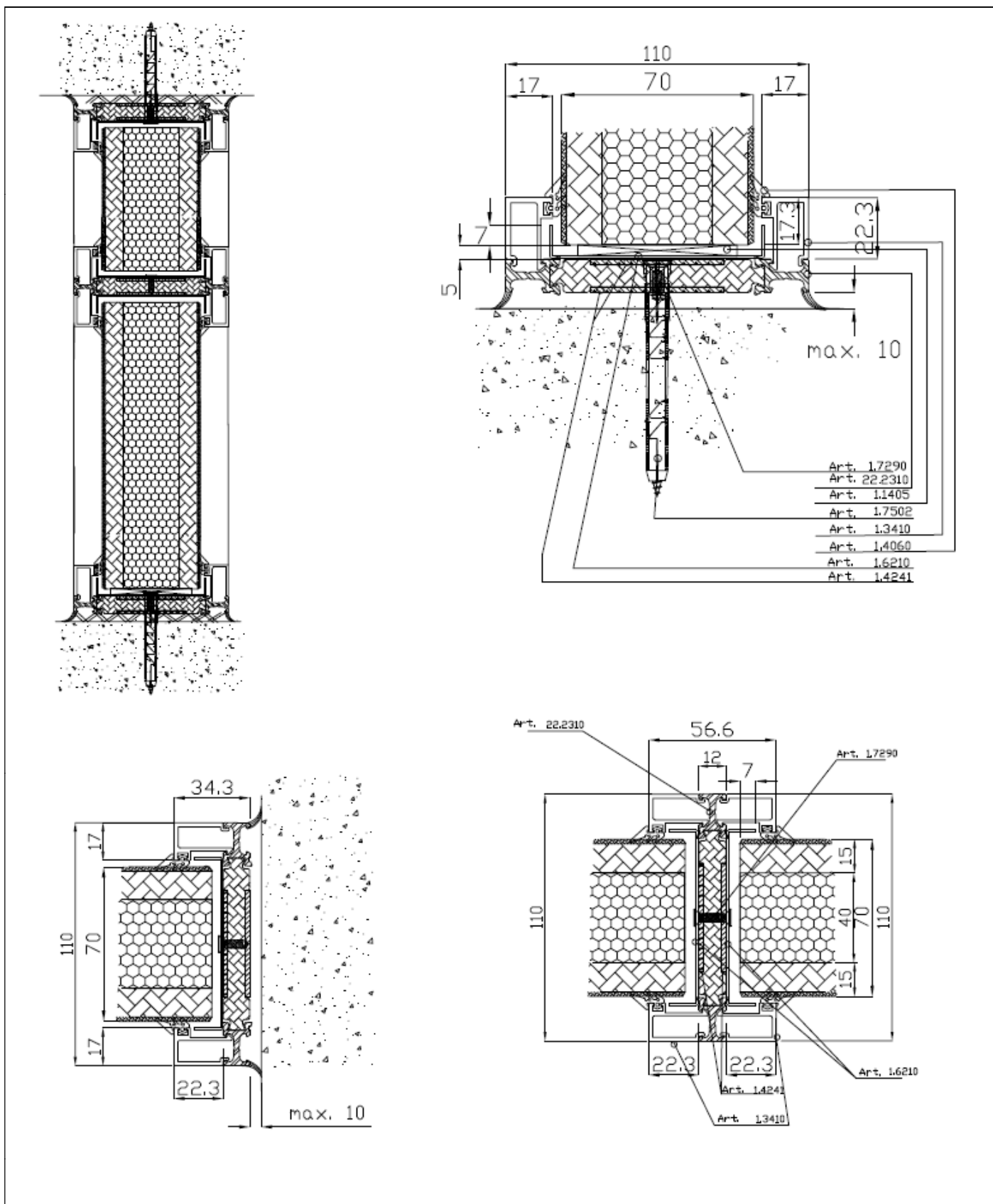


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SECUR IPK in the versions "60-30" and "120-90"

SECUR IPK 120-90 - (EI 120 with glass panes)

Annex 4.5

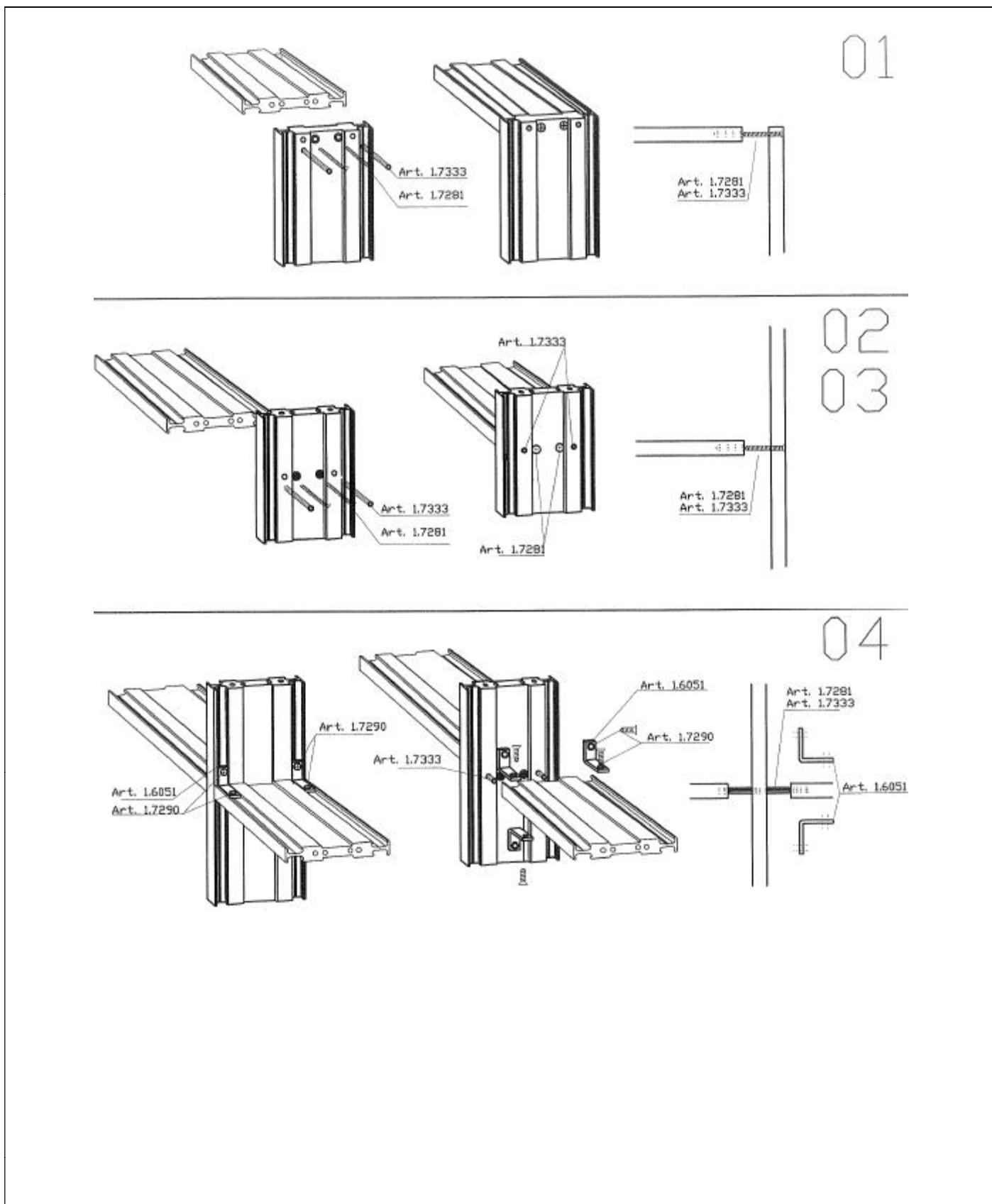


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SECUR IPK in the versions "60-30" and "120-90"

SECUR IPK 120-90 (EI 120 with opaque panels)

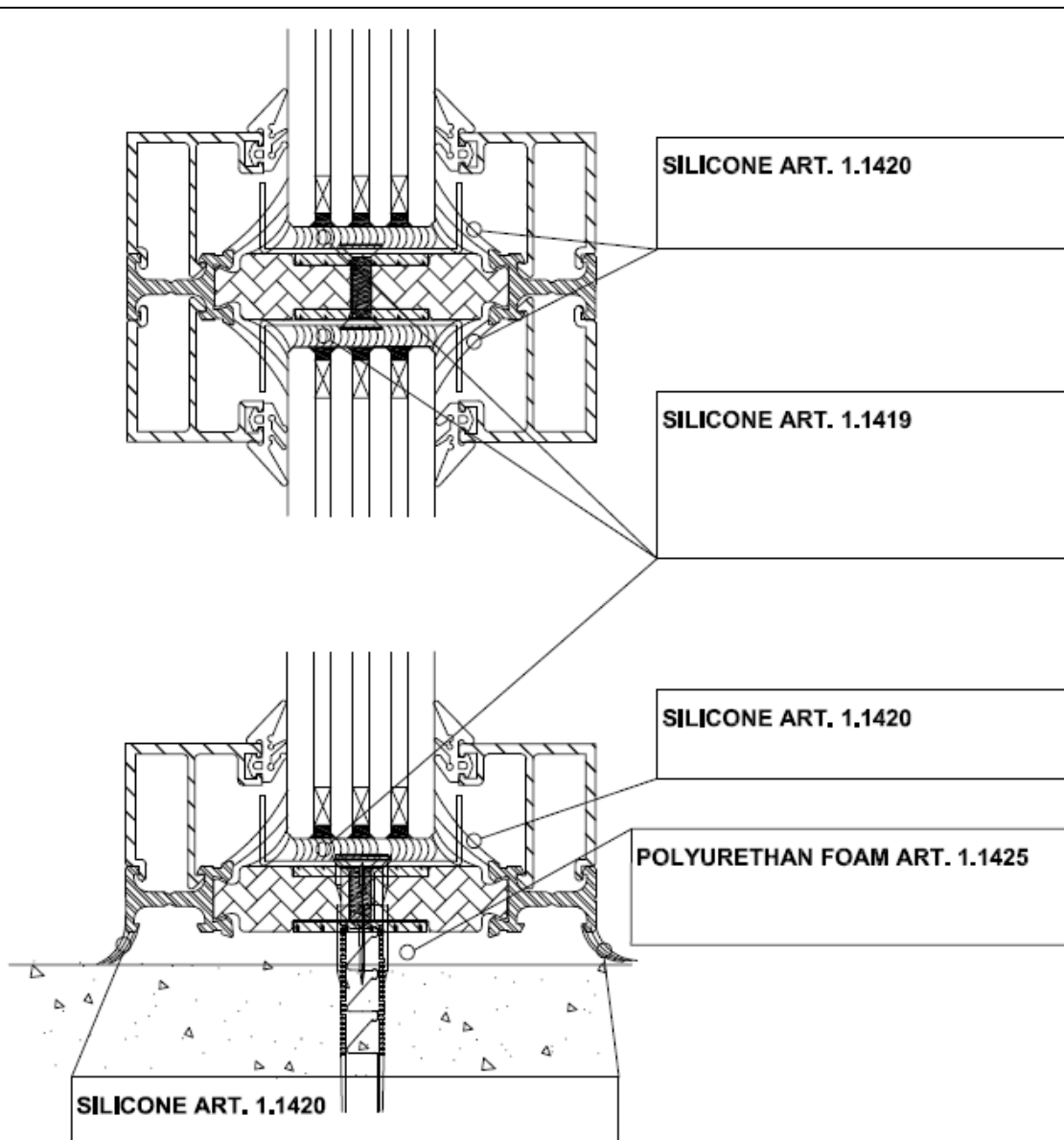
Annex 4.6



SECUR IPK in the versions "60-30" and "120-90"

SECUR IPK (any version) - framework elements - angle-joints

Annex 4.7



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SECUR IPK in the versions "60-30" and "120-90"

SECUR IPK (any version) - sealing details

Annex 4.8