

Jansen Art'System

Schlankes Stahlprofilssystem für nicht isolierte Fenster und Fenstertüren

Jansen Art'System

Système de profilés fins en acier pour fenêtres et portes-fenêtres non isolées

Jansen Art'System

Slim steel profile system for uninsulated windows/window doors

«Grafische Planungsdaten wie z.B. Anwendungsbeispiele, Konstruktionsdetails, Anschlüsse am Bau, die in unseren physischen oder elektronischen Dokumentationsunterlagen enthalten sind, sind schematische Darstellungen. Gleiches gilt für digitale Medien wie CAD Dateien oder BIM Modelle.

Sie sollen den ausführenden Metallbauer und/oder Fachplaner bei der Planung und Ausführung eines Projektes unterstützen. Sie sind im konkreten Anwendungsfall durch den ausführenden Metallbauer und/oder Fachplaner auf die Verwendbarkeit im konkreten betroffenen Projekt hinsichtlich rechtlichen/regulatorischen aber auch technischen objektspezifischen Anforderungen zu überprüfen und ggfs. eigenverantwortlich anzupassen. Bei der Überprüfung, der spezifischen Planung und der Umsetzung sind die objektspezifischen Rahmenbedingungen (Material der Bausubstanz, Dimension des Einbauelements, Farbe, Exposition, Lasteinwirkung, etc.) sowie der geltende Stand der Technik einschliesslich aller anwendbaren nationalen Normen und technischen Richtlinien eigenverantwortlich zu beachten.»

«Les données de planification graphiques, comme les exemples d'application, détails de construction et raccordements au bâtiment, fournies dans notre documentation physique et numérique sont des représentations schématiques. Il en va de même pour les médias numériques comme les fichiers CAD ou modèles BIM.

Leur but est de faciliter la planification et réalisation d'un projet par les constructeurs métalliques et/ou concepteurs. Concrètement, elles doivent être vérifiées par le constructeur métallique et/ou le concepteur et, le cas échéant, modifiées de son propre chef pour s'assurer qu'elles concordent avec le projet concerné et qu'elles répondent aux exigences techniques spécifiques ainsi qu'aux dispositions légales et réglementaires.

Lors de la vérification, de la planification spécifique et de la mise en œuvre, il y a lieu de tenir compte des conditions spécifiques à l'objet (matériaux du bâtiment, dimension de l'élément d'insert, couleur, exposition, effet de charge, etc.) ainsi que de l'état actuel de la technique, y compris toutes les normes nationales et directives techniques applicables.»

«Graphical planning data such as application examples, construction details, connections on site that are contained in our physical or electronic documentation components are schematic representations. The same applies to digital media such as CAD files or BIM models.

They are intended to support the metal worker and/or design engineer in planning and executing projects. In the specific case of application they are to be checked by the metal worker and/or design engineer in terms of their usability in the specific project concerned with regard to legal/regulatory and technical property-specific requirements and adjusted if necessary at the latter's own responsibility.

The property-specific underlying conditions (construction material, dimensions of installation element, colour, exposure, load effect etc.) and current state of the art including all applicable national norms and technical guidelines are to be taken into consideration at the metal worker and/or design engineer's own responsibility during the review, specific planning and implementation.»

Systemübersicht

Merkmale
Leistungseigenschaften
Systemausführungen
Typenübersicht

Sommaire du système

Caractéristiques
Caractéristiques de performance
Exécutions de système
Sommaire des types

Summary of system

Characteristics
Performance characteristic
System versions
Summary of types

2

Profilsortiment

Assortiment de profilé

Range of profiles

10

Beispiele

Schnittpunkte
Konstruktionsdetails
Anschlüsse am Bau

Exemples

Coupes de détails
Détails de construction
Raccords au mur

Examples

Section details
Construction details
Attachment to structure

14

Leistungseigenschaften

Caractéristiques de performance

Performance characteristics

48

Alle Ausführungen dieser Dokumentation haben wir sorgfältig und nach bestem Wissen zusammengestellt. Wir können aber keine Verantwortung für die Benutzung der vermittelten Vorschläge und Daten übernehmen. Wir behalten uns technische Änderungen ohne Vorankündigung vor.
Aktuelle Version auf www.jansen.com

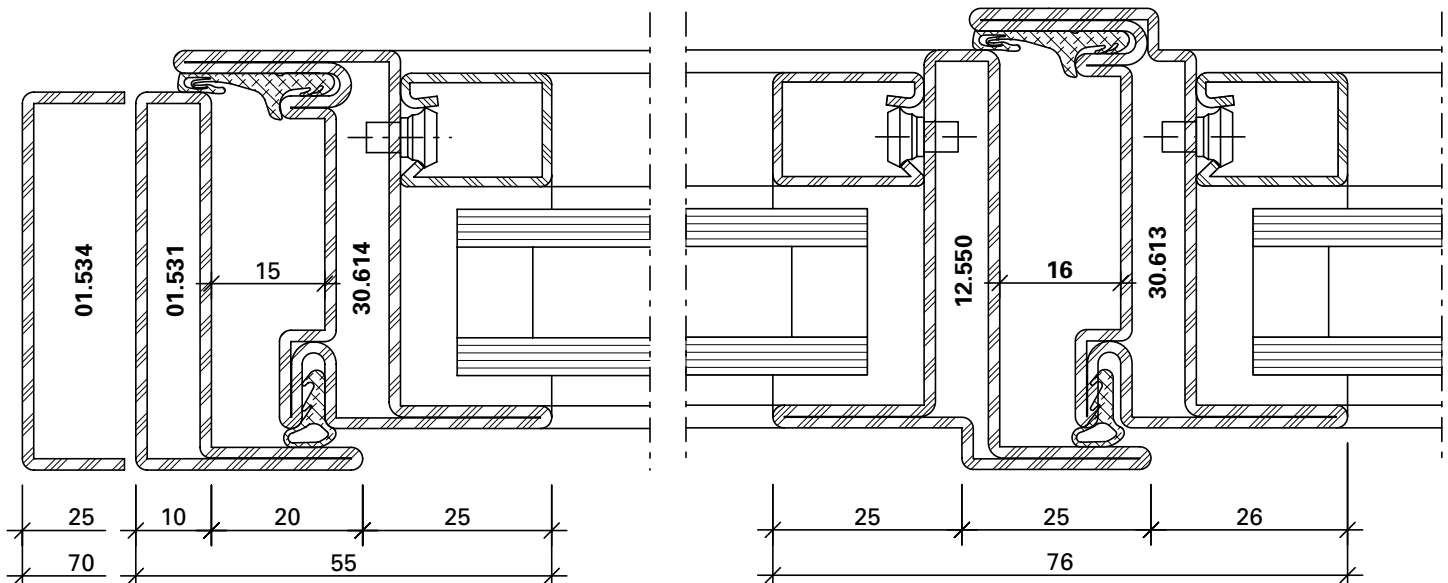
Nous avons apporté le plus grand soin à l'élaboration de cette documentation. Cependant, nous déclinons toute responsabilité pour l'utilisation faite de nos propositions et de nos données.
Nous nous réservons le droit de procéder à des modifications techniques sans préavis.
Version actuelle sur www.jansen.com

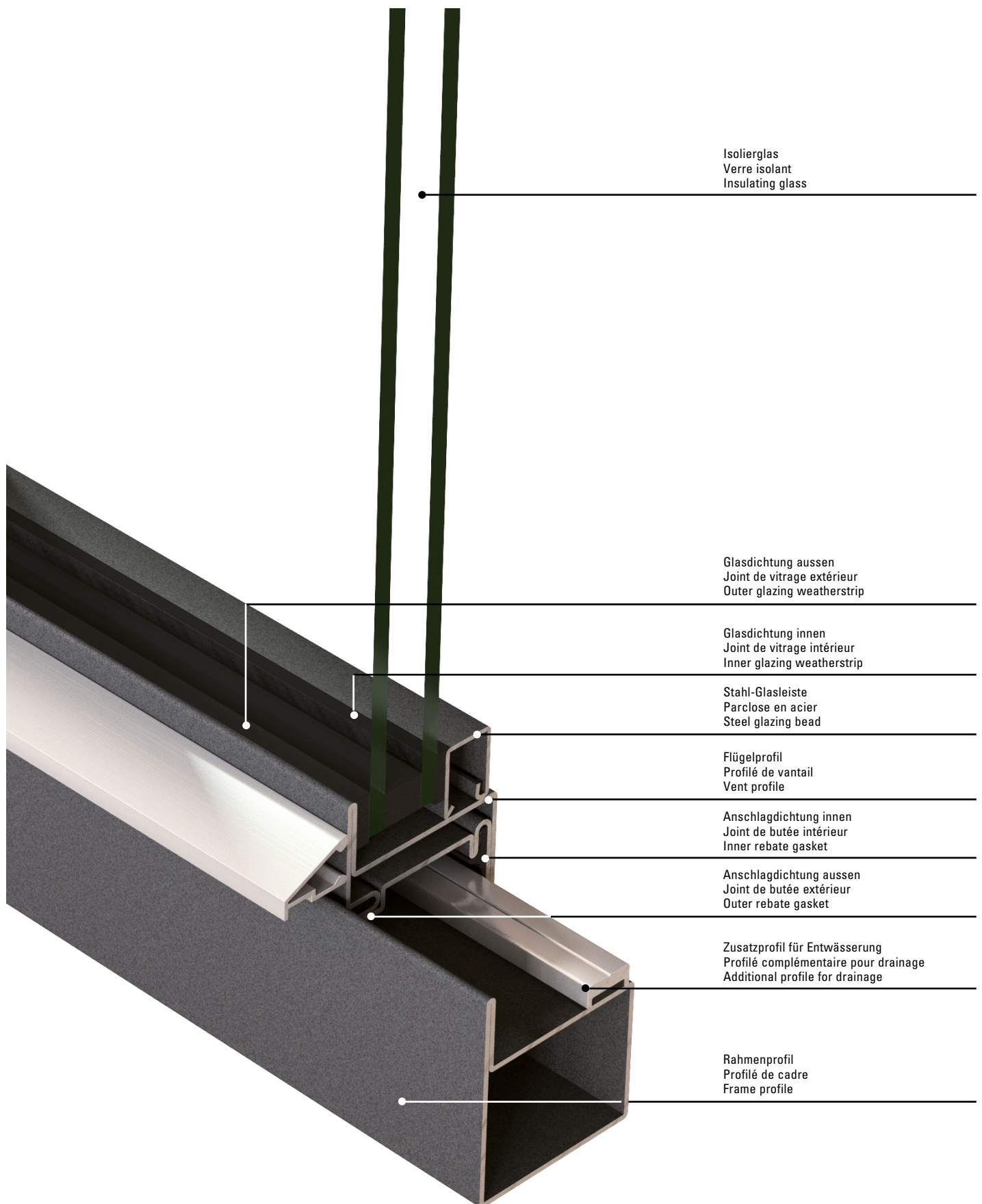
All the information contained in this documentation is given to the best of our knowledge and ability. However, we decline all responsibility for the use made of these suggestions and data.
We reserve the right to effect technical modifications without prior warning.
Current version available at www.jansen.com

- Flügelprofile mit Innen- und Aussendichtung
- Grosse Auswahl bezüglich Profile und Glasleisten
- Hohlprofile mit sehr guten statischen Eigenschaften
- Äusserst schlanke Profil-Ansichtsbreiten für Flügel und Rahmen / Sprossen
- Werkseigene Biegearbeiten für Rahmen und Flügel mit kleinsten Radien
- Verglasung mittels EPDM-Glasdichtung resp. Versiegelung praktisch unsichtbar
- Grosse Auswahl an Fensterbeschlägen, traditionell aufgesetzt oder zeitgenössisch verdeckt liegend
- Profilsystem speziell für Altbausanierungen entwickelt
- Profilsystem entspricht den technischen Vorgaben der DTU 39 in Frankreich
- Systemkonzept entspricht den Anforderungen der NF P24-351 (Oberflächenbehandlung)
- Hohe Leistungswerte bezüglich Wind-, Wasser- und Luftdichtigkeit
- Dank Doppeldichtung der Flügelprofile werden sehr gute Schallschutzwerte erreicht
- Einbau von Einfach- resp. Isolierglas von 5 bis 27 mm möglich

- Profilé de vantail avec double joint
- Grandes variété de profilés et parcloes
- Profilé tubulaire à forte résistance mécanique
- Masse vue (profilés et joints) la plus fine du marché
- Cintrage possible
- Joint de vitrage invisible
- Grand choix de crémones avec styles traditionnel et contemporain
- Gamme préconisée par les ABF
- Conforme au DTU 39 (Prise en feuillure et hauteur de feuillure)
- Conception conforme aux exigences NF P24-351 (Traitement de surface)
- Les plus hautes performances AEV en menuiserie fine acier
- Performances thermiques conformes à la RT 2005
- Grâce aux profilés avec double joints, très hautes performances acoustiques
- Vitrage simple ou isolant, de 5 à 27 mm d'épaisseur

- Vent profiles with internal and external weatherstrip
- Wide selection of profiles and glazing beads
- Hollow profiles with very good structural properties
- Extremely narrow profile face widths for vents and frames/sash bars
- In-house profile bending for frames and vents with the smallest of radii
- Glazing by means of EPDM glazing weatherstrip; sealing almost completely concealed
- Wide range of window fittings, traditionally surface-mounted or concealed in the contemporary style
- Profile system specifically developed for the renovation of old buildings
- Profile system corresponds to the technical specifications of DTU 39 in France
- System concept meets the requirements of NF P24-351 (surface treatment)
- High performance values with regard to wind, water and airtightness
- Very good sound reduction values are achieved thanks to the double weatherstrip in the vent profiles
- Single glazing or insulating glass from 5 to 27 mm can be installed





Norm	Eigenschaft Caractéristique Characteristic	Klassifizierung/Wert Classification / Valeur Classification / Value											
 EN 12210	Widerstandsfähigkeit bei Windlast Résistance à la pression du vent Resistance to wind load	npd	C1 (400)	C2 (800)		C3 (1200)		C4 (1600)		C5 (2000)		Exxx (>2000)	
 EN 12208	Schlagregendichtheit Étanchéité à la pluie battante Watertightness	npd	1A (0)	2A (50)	3A (100)	4A (150)	5A (200)	6A (250)	7A (300)	8A (450)	9A (600)	Exxx (>750)	
 EN ISO 10140	Schalldämmung R_w (C, C_{tr}) (dB) Isolation phonique R_w (C, C_{tr}) (dB) Sound insulation R_w (C, C_{tr}) (dB)	npd	bis R_w 43 dB jusqu'à R_w 43 dB up to R_w 43 dB										
 EN ISO 10077-2	Wärmedurchgangskoeffizient U_f (W/(m²·K)) Transmission thermique U_f (W/(m²·K)) Thermal production U_f (W/(m²·K))	npd	ab 5,2 W/m²·K à partir de 5,2 W/m²·K from 5,2 W/m²·K										
 EN 12207	Luftdurchlässigkeit Perméabilité à l'air Air permeability	npd	1 (150)			2 (300)			3 (600)		4 (600)		
 EN 13115	Bedienkräfte Forces de manœuvre Operating forces	npd	0					1			2		
 EN 13115	Mechanische Festigkeit Résistance mécanique Mechanical strength	npd	1			2			3		4		

npd = keine Leistung festgestellt
(no performance determined)

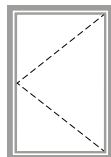
npd = Aucune performance
déterminée
(no performance determined)

npd = no performance determined

Elementgrössen
(gemäss Gutachten/CE-Kennzeichen)

Dimensions des éléments
(selon rapport/label CE)

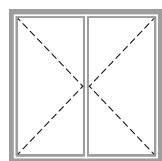
Size of elements
(according to report/CE marking)



Dreh-Fenster einflügelig
nach innen öffnend
Max. Masse:
872 x 2072 mm (FFBxFFH)
Min. Masse:
310 x 310 mm (FFBxFFH)

Fenêtre à la française
à un vantail
ouvrant vers l'intérieur
Dimensions max.:
872 x 2072 mm (FFBxFFH)
Dimensions min.:
310 x 310 mm (FFBxFFH)

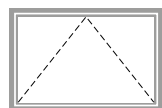
Single-vent side-hung window
inward opening
Max. dimensions:
872 x 2072 mm (FFBxFFH)
Min. dimensions:
310 x 310 mm (FFBxFFH)



Dreh-Fenster zweiflügelig
nach innen öffnend
Max. Masse:
GF = 872 x 2072mm (FFBxFFH)
SF = 872 x 2072 mm (FFBxFFH)
Min. Masse:
GF = 310 x 310 mm (FFBxFFH)
SF = 310 x 310 mm (FFBxFFH)

Fenêtre à la française
à deux vantaux
ouvrant vers l'intérieur
Dimensions max.:
GF = 872 x 2072mm (FFBxFFH)
SF = 872 x 2072 mm (FFBxFFH)
Dimensions min.:
GF = 310 x 310 mm (FFBxFFH)
SF = 310 x 310 mm (FFBxFFH)

Double-vent side-hung window
inward opening
Max. dimensions:
GF = 872 x 2072mm (FFBxFFH)
SF = 872 x 2072 mm (FFBxFFH)
Min. dimensions:
GF = 310 x 310 mm (FFBxFFH)
SF = 310 x 310 mm (FFBxFFH)



Kipp-Fenster
nach innen öffnend
Max. Masse:
2072 x 872 mm (FFBxFFH)
oder
872 x 1980 mm (FFBxFFH)
Min. Masse:
310 x 310 mm (FFBxFFH)

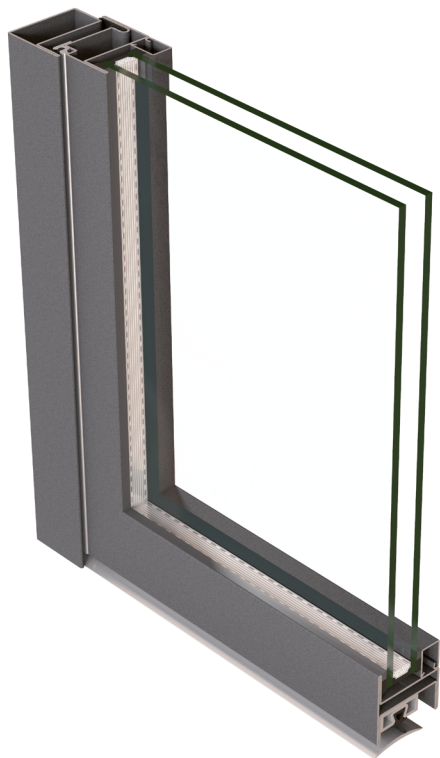
Fenêtre à soufflet
ouvrant vers l'intérieur
Dimensions max.:
2072 x 872 mm (FFBxFFH)
ou
872 x 1980 mm (FFBxFFH)
Dimensions min.:
310 x 310 mm (FFBxFFH)

Bottom-hung window
inward opening
Max. dimensions:
2072 x 872 mm (FFBxFFH)
or
872 x 1980 mm (FFBxFFH)
Min. dimensions:
310 x 310 mm (FFBxFFH)

FFB = Flügelfalzbreite
FFH = Flügelfalzhöhe
GF = Gangflügel
SF = Standflügel

FFB = Largeur de feuillure du vantail
FFH = Hauteur de feuillure du vantail
GF = Vantail de service
SF = Vantail semi-fixe

FFB = Vent rebate width
FFH = Vent rebate height
GF = Access vent
SF = Secondary vent



Fenstertüren

- Zusatzbeschläge für Fenstertüren mit Spezialschloss und Drücker
- Fenstertüren mit folgenden Beschlägen: Fallenriegelschloss, Rollfallenschloss und Mehrfachverriegelungsschloss
- Fenstertürgrößen bis Höhe 2200 mm, Gewicht 100 kg
- Einflügelige Fenstertüren, nach innen öffnend, mit Oberlicht oder Festverglasung kombinierbar

Portes-fenêtres

- Ferrures supplémentaires pour portes-fenêtres avec une serrure spéciale et une poignée
- Portes-fenêtres avec ferrures suivantes: serrure à mortaiser, serrure à rouleau et serrure à verrouillage multiple g
- Dimensions de fenêtre jusqu'à une hauteur de 2200 mm, poids 100 kg
- Fenêtres à un vantail, ouvrant vers l'intérieur et l'extérieur, combinables avec un vitrage fixe ou une imposte

Window doors

- Additional fittings for window doors with special lock and handles
- Window doors with following fittings: latch-and-bolt lock, roller latch lock and multi-point lock
- Window door sizes up to height of 2200 mm, weight 100 kg
- Single-vent window doors, inward-opening, can be combined with toplight or fixed glazing

Fensterbeschläge mit besonderer Optik

- Systemlösungen mit aufgesetztem Fensterbeschlag für Dreh- und Stulpfenster, besonders geeignet für traditionelle Renovationsfenster
- Systemlösungen mit verdeckt liegendem Fensterbeschlag für Dreh- und Stulpfenster
- Geeignet für ein- und zweiflügelige Drehfenster, nach innen öffnend

Ferrures de fenêtre à apparence spéciale

- Solutions système avec ferrure de fenêtre rapportée pour fenêtres ouvrant à la française et à deux vantaux, convenant spécialement à des fenêtres de rénovation traditionnelles
- Solutions système avec ferrure invisible pour fenêtres ouvrant à la française et fenêtres à deux vantaux
- Adaptées à des fenêtres ouvrant à la française à un et deux vantaux, ouvrant vers l'intérieur

Window fittings with special look

- System solutions with surface-mounted window fitting for side-hung and double-vent windows, particularly suitable for traditional renovation windows
- System solutions with concealed window fitting for side-hung and double-vent windows
- Suitable for single and double-vent side-hung windows, inward-opening



Jansen Docu Center

Die Plattform zum effizienten Arbeiten mit Jansen Dokumentationen. Im Jansen Docu Center stehen alle Produktinformationen jederzeit digital in der aktuellsten Version zur Verfügung: von Architekten-Informationen über Bestell- und Fertigungskatalogen bis hin zu Anleitungen und Prospekten sowie Videos.

Die Inhalte können einfach und schnell aufgerufen werden. Ein für den Anwender komfortables papierloses Arbeiten, das zahlreiche Vorteile bietet.

Jansen Docu Center

La plate-forme pour travailler efficacement avec les documentations Jansen. Le Jansen Docu Center met à votre disposition les informations sur les produits, en format numérique et dans une version actualisée: des catalogues de commande et de fabrication aux instructions et prospectus, en passant par les informations destinées aux architectes et vidéos.

Les contenus sont facilement et rapidement accessibles. Une manière de travailler confortable et offrant de nombreux avantages.

Jansen Docu Center

The platform for working efficiently with Jansen documentation. The latest version of all the product information is available digitally at any time in the Jansen Docu Center – from order and fabrication manuals to architect information, instructions and brochures and videos.

The content can be retrieved quickly and easily. The user can work conveniently without paper, which has numerous benefits.

Download CAD Daten

DXF

DWG

Sie können die Zeichnungen in den Formaten DXF und/oder DWG herunterladen. Klicken Sie auf das entsprechende Icon und der Download erfolgt.

Die Hinweise «Artikelbibliothek/Türbeschläge/Fensterbeschläge» bedeuten, dass Sie mit einem Klick die gesamte Artikelbibliothek des entsprechenden Systems herunterladen (Profile, Beschläge, Glasleisten, Zubehör etc.).

Télécharger fichiers DAO

DXF

DWG

Vous pouvez télécharger les dessins aux formats DXF et/ou DWG. Cliquez sur l'icône correspondante et le téléchargement s'effectuera.

Les indications «Bibliothèque des articles/Ferures de porte/Ferrures de fenêtres» signifie que vous téléchargez la totalité de la bibliothèque des articles du système donné (profilés, ferrures, parclores, accessoires etc.).

Download CAD files

DXF

DWG

You can download the drawings in DXF and/or DWG format. Click on the relevant icon to begin the download.

The items «Article library/Door fittings/Window fittings» means that you download the entire article library for the corresponding system with one click (profiles, fittings, glazing beads, accessories etc.).

Info und Beratung

Gerne beraten wir Sie persönlich und stehen Ihnen bei Fragen zur Verfügung. Bitte schreiben Sie uns Ihre Anliegen an: info@jansen.com

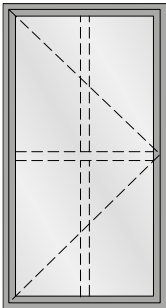
Info et conseils

Nous vous conseillerons volontiers individuellement et sommes à votre disposition si vous avez des questions à poser. Veuillez nous envoyer votre requête à: info@jansen.com

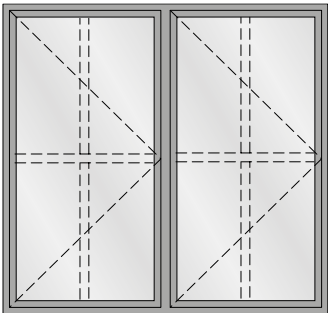
Information and advice

We would be delighted to provide you with advice in person and are available to answer any questions you may have. Please write to us with your queries at: info@jansen.com

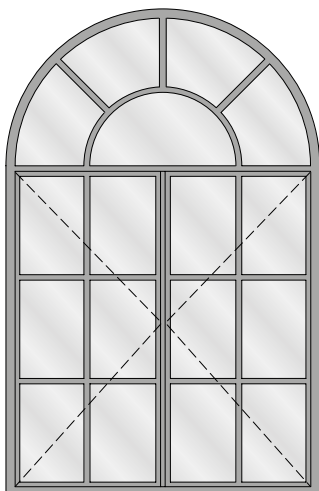
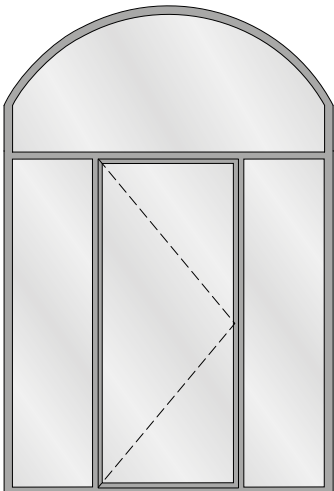
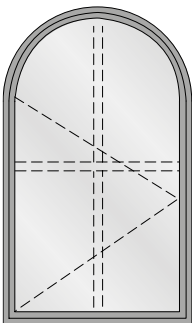
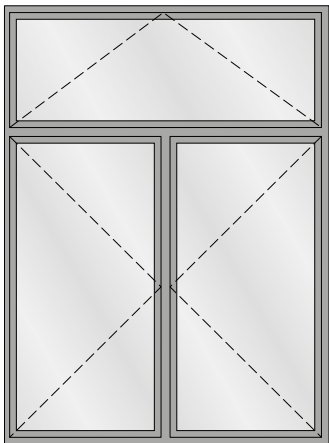
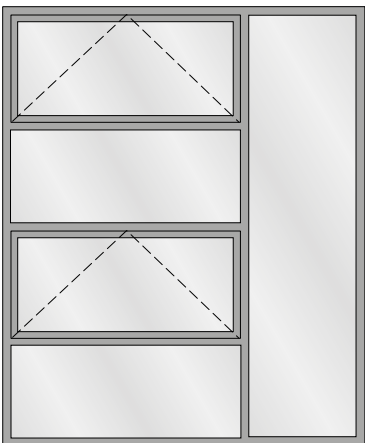
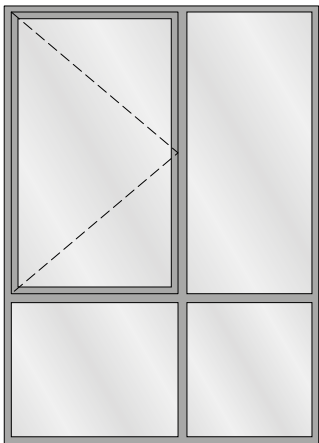
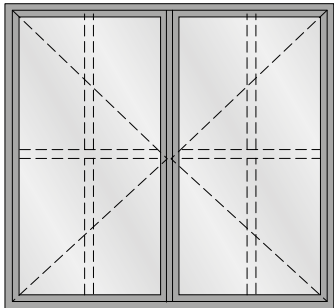
Fenster



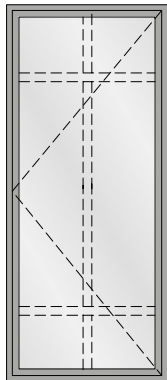
Fenêtres



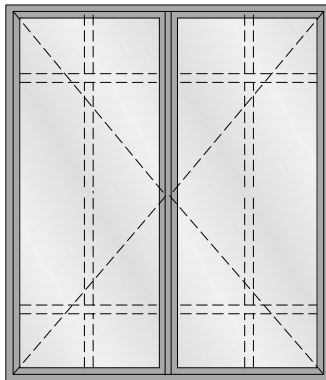
Windows



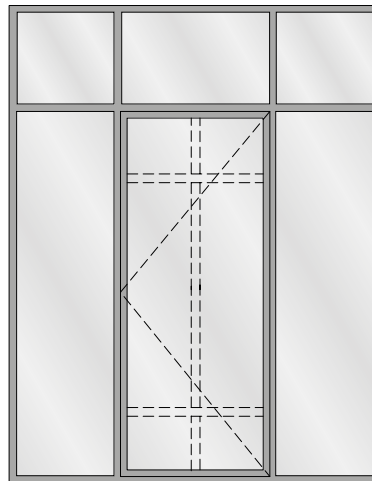
**Fenstertüren
mit Fensterbeschlag**



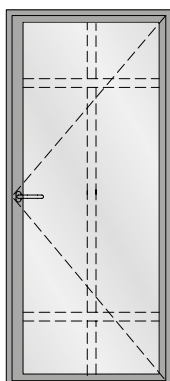
**Portes-fenêtres
avec ferrure de fenêtre**



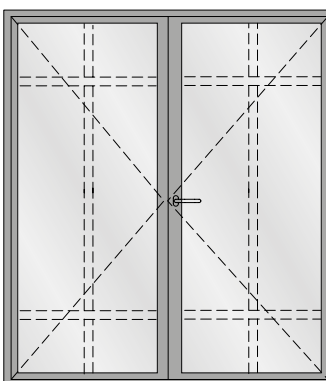
**Windows-doors
with window fitting**



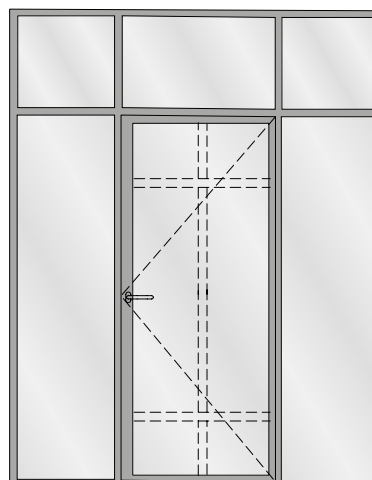
**Fenstertüren
mit Schloss und Drücker***



**Portes-fenêtres
avec serrure et poignée***



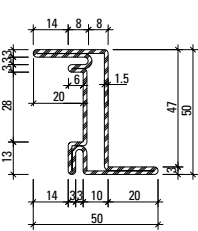
**Windows-doors
with lock and handle***



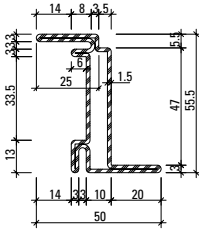
* Sonderkonstruktion
(nach Produktnorm EN 14351 nicht
geprüft)

* Construction spéciale
(non contrôlé selon la norme
produit EN 14351)

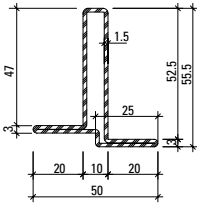
* Special construction
(not tested in accordance with
the EN 14351 product standard)



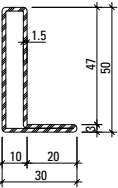
30.614 Z



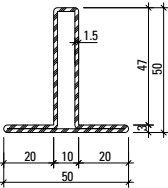
30.613 Z



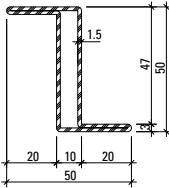
12.550 Z



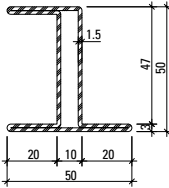
01.531
01.531 Z



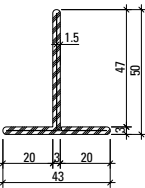
02.531
02.531 Z



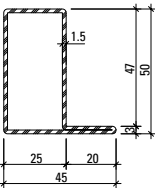
03.531
03.531 Z



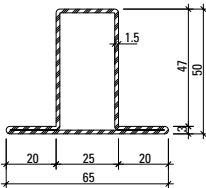
05.531 Z



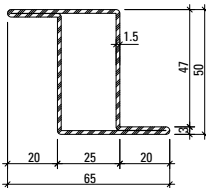
400.023
400.023 Z



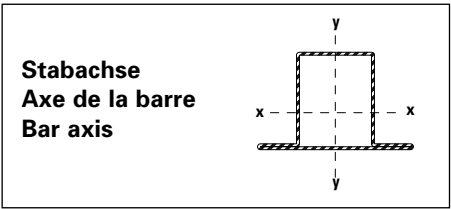
01.534
01.534 Z



02.534
02.534 Z



03.534
03.534 Z

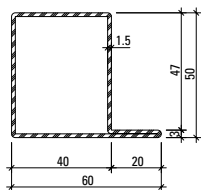


Artikelbibliothek
 Bibliothèque des articles
 Article library

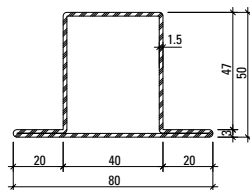
DXF
 DWG

Profil-Nr.	G kg/m	F cm ²	I _x cm ⁴	W _x cm ³	I _y cm ⁴	W _y cm ³	U m ² /m
30.614	2,710	3,45	12,61	4,79	3,65	1,38	0,234
30.613	2,820	3,60	15,98	5,44	3,66	1,38	0,244
12.550	2,340	3,00	9,49	2,58	3,27	1,30	0,205
01.531	1,881	2,26	6,55	2,11	1,42	0,67	0,155
02.531	2,240	2,86	8,00	2,31	3,26	1,30	0,195
03.531	2,240	2,85	10,63	4,25	3,25	1,30	0,194
05.531	2,700	3,44	13,37	4,61	4,53	1,64	0,234

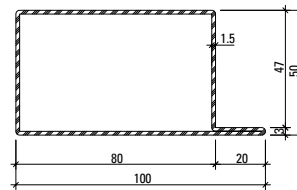
Profil-Nr.	G kg/m	F cm ²	I _x cm ⁴	W _x cm ³	I _y cm ⁴	W _y cm ³	U m ² /m
400.023	2,657	2,62	6,63	1,87	1,91	0,88	0,182
01.534	2,130	2,71	9,35	3,11	4,78	1,73	0,185
02.534	2,590	3,30	10,99	3,30	8,56	2,63	0,224
03.534	2,590	3,30	10,99	3,30	8,56	2,63	0,224



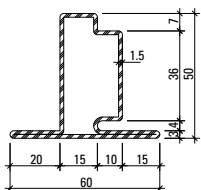
01.564
01.564 Z



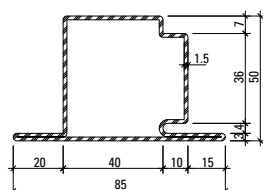
02.564
02.564 Z



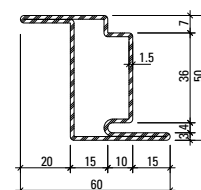
01.592
01.592 Z



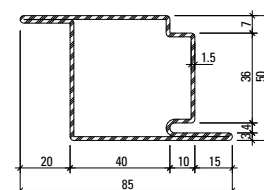
30.106
30.106 Z



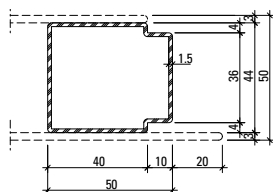
30.107
30.107 Z



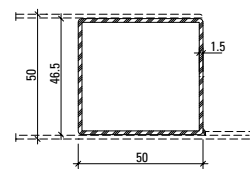
30.406
30.406 Z



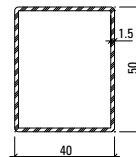
30.407
30.407 Z



81.009
81.009 Z



400.049
400.049 Z



400.048
400.048 Z

Werkstoffe

Artikel-Nr.

ohne Zusatz = blank

mit Z = bandverzinkter Stahl

Matériaux

No. d'article

sans supplément = brut

avec Z = bande d'acier zinguée

Materials

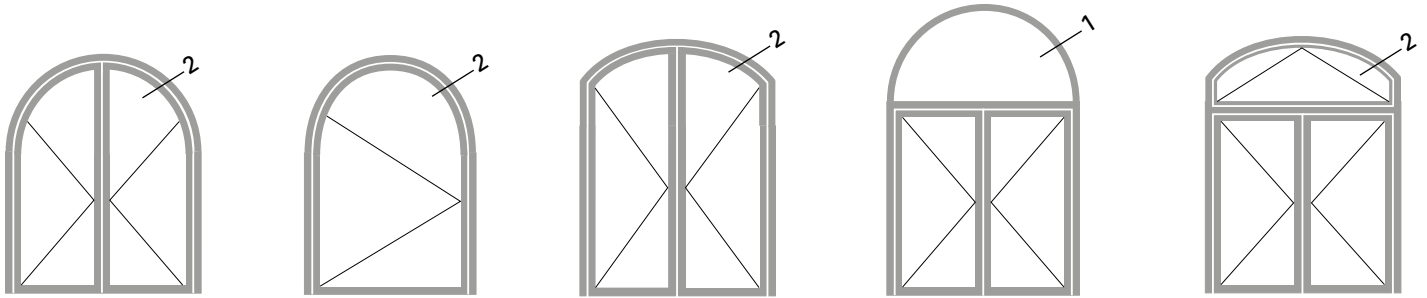
Part no.

without addition = bright

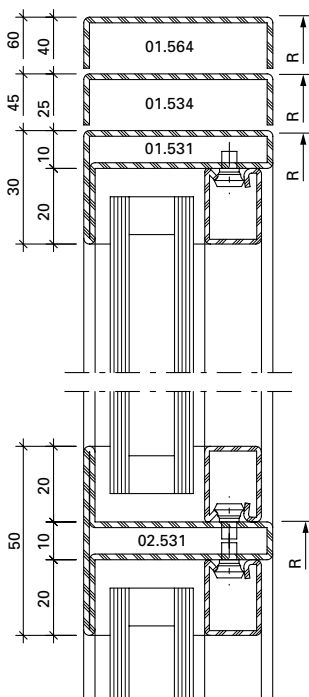
with Z = strip galvanised steel

Profil-Nr.	G kg/m	F cm ²	I _x cm ⁴	W _x cm ³	I _y cm ⁴	W _y cm ³	U m ² /m
01.564	2,490	3,17	12,10	4,12	11,20	3,25	0,216
02.564	2,950	3,75	13,90	4,31	17,60	4,40	0,255
01.592	3,430	4,37	19,30	6,86	46,9	8,80	0,296
30.106	2,830	3,60	10,87	3,19	7,52	2,41	0,230
30.107	3,450	4,40	16,09	4,97	24,97	5,64	0,280
30.406	2,830	3,60	13,79	5,31	7,52	2,41	0,230

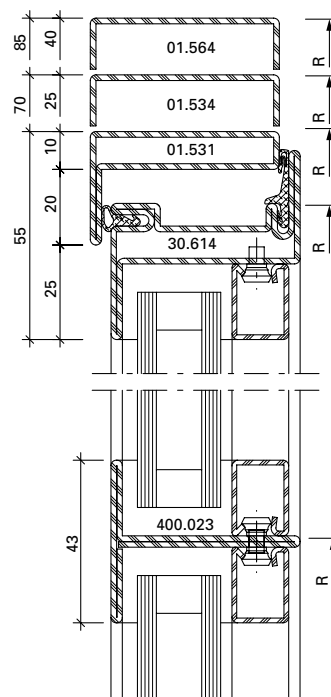
Profil-Nr.	G kg/m	F cm ²	I _x cm ⁴	W _x cm ³	I _y cm ⁴	W _y cm ³	U m ² /m
30.407	3,450	4,40	18,48	7,16	24,97	5,64	0,280
81.009	2,090	2,67	7,79	3,54	9,63	3,76	0,182
400.048	2,024	2,58	9,46	3,78	6,70	3,35	0,177
400.049	2,200	2,77	10,61	4,24	9,49	4,08	0,190



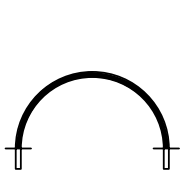
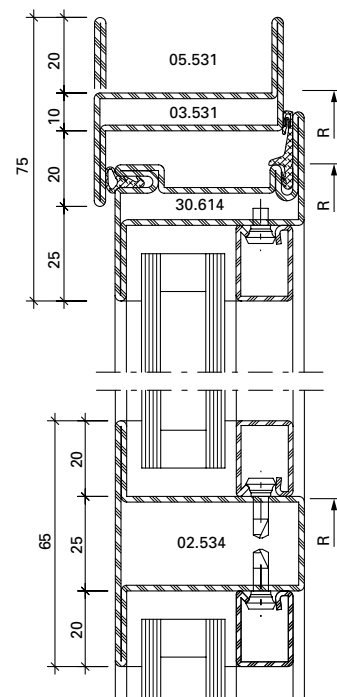
1.0



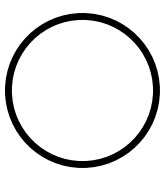
2.0



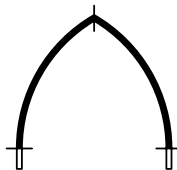
2.1



Halbrundbogen
Arc semi-circulaire
Semi-circular arch



Rundbogen
Arc en plein centre
Round arch



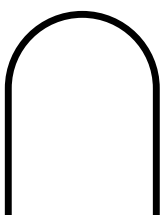
Spitzbogen
Arc en ogive
Gothic arch



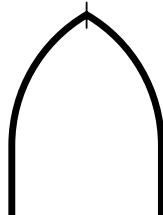
Stichbogen
Arc bombé
Segmented arch



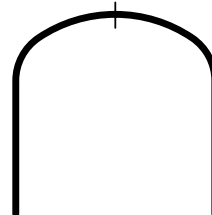
Korbbogen
Anse de panier
Oval arch



Halbrundbogen mit Schenkel
Arc surhaussé prolongée
Semi-circular arch with side extension



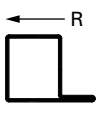
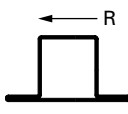
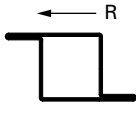
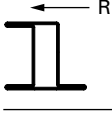
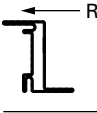
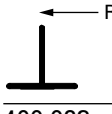
Spitzbogen mit Schenkel
Arc en ogive prolongée
Gothic arch with side extension



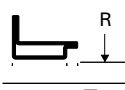
Korbbogen mit Schenkel
Anse de panier prolongée
Oval arch with side extension

Bogenfenster
Fenêtres cintrées
Arched windows

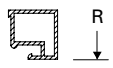
Jansen Art'System
Jansen Art'System
Jansen Art'System

Profil Profilé Profile	Min. Radius Rayon min. Min. radius R	
	blank brut bright	verzinkt zinguées galvanised
01.531	350	
01.534	400	500
01.564	500	600
		
02.531	400	400
02.534	600	700
02.564	700	800
		
03.531	600	
03.534	600	700
		
05.531		300
		
30.614		300
		
400.023	800	800
		
400.048	600	900
400.049	750	950

Stahl-Glasleisten Parcloses en acier Steel glazing beads	Min. Radius Rayon min. Min. radius R
	
402.112 Z	650 mm
402.115 Z	500 mm
402.120 Z	600 mm
402.125 Z	750 mm
402.130 Z	800 mm
402.135 Z	1500 mm
402.140 Z	

Stahl-Glasleisten Parcloses en acier Steel glazing beads	Min. Radius Rayon min. Min. radius R
	
62.507 Z	400 mm
62.508 Z	500 mm
62.509 Z	600 mm

Aluminium-Glasleisten Parcloses en aluminium Aluminium glazing beads	Min. Radius Rayon min. Min. radius R
	
404.109	400 mm
404.112	400 mm
404.115	400 mm
404.120	400 mm
404.125	450 mm
404.130	500 mm
404.135	600 mm

	
405.103	500 mm
405.106	500 mm
405.110	500 mm
405.115	500 mm
405.120	500 mm
405.125	800 mm
405.130	1000 mm
406.903	500 mm
406.905	500 mm
406.907	500 mm
406.909	600 mm

Andere Profiltypen sowie im Grundriss gebogene Profile auf Anfrage.

Autres types de profilés et profilés au tracé cintré sur demande.

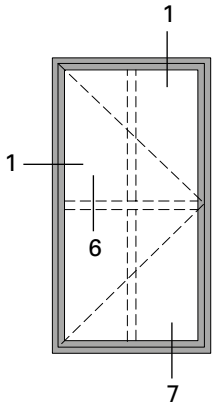
Other profile types and profiles curved in the floor plan are available on request.

Die Radien-Angaben beziehen sich auf die langjährige Erfahrung und Fertigung im Hause Jansen.

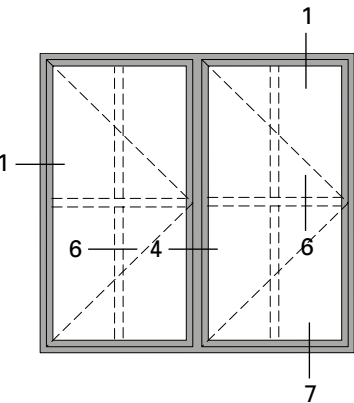
Les rayons indiqués se fondent sur la longue expérience et la fabrication au sein de la maison Jansen.

The radii specifications are based on the many years of experience Jansen has in fabrication.

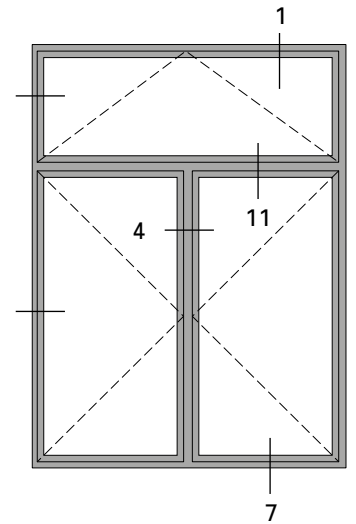
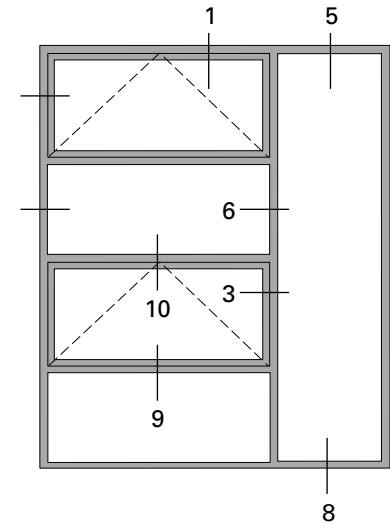
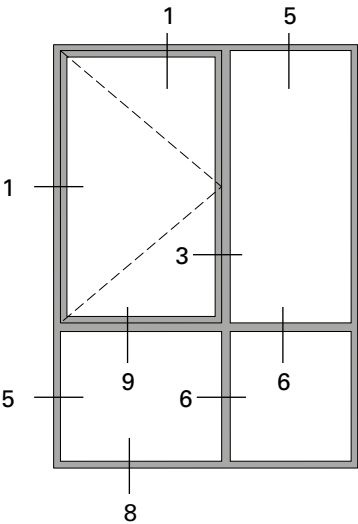
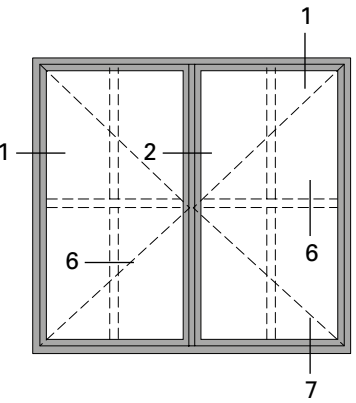
Fenster



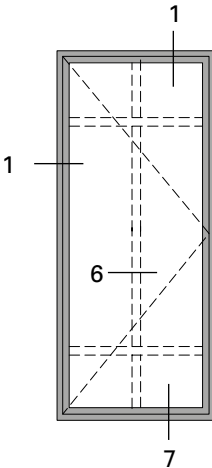
Fenêtres



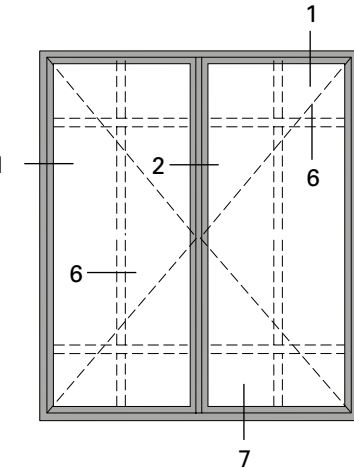
Windows



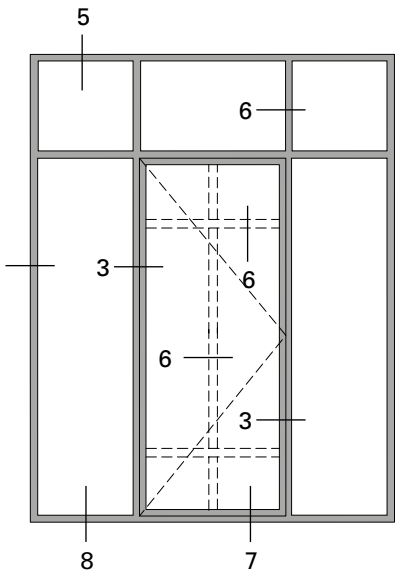
Fenstertüren
mit Fensterbeschlag



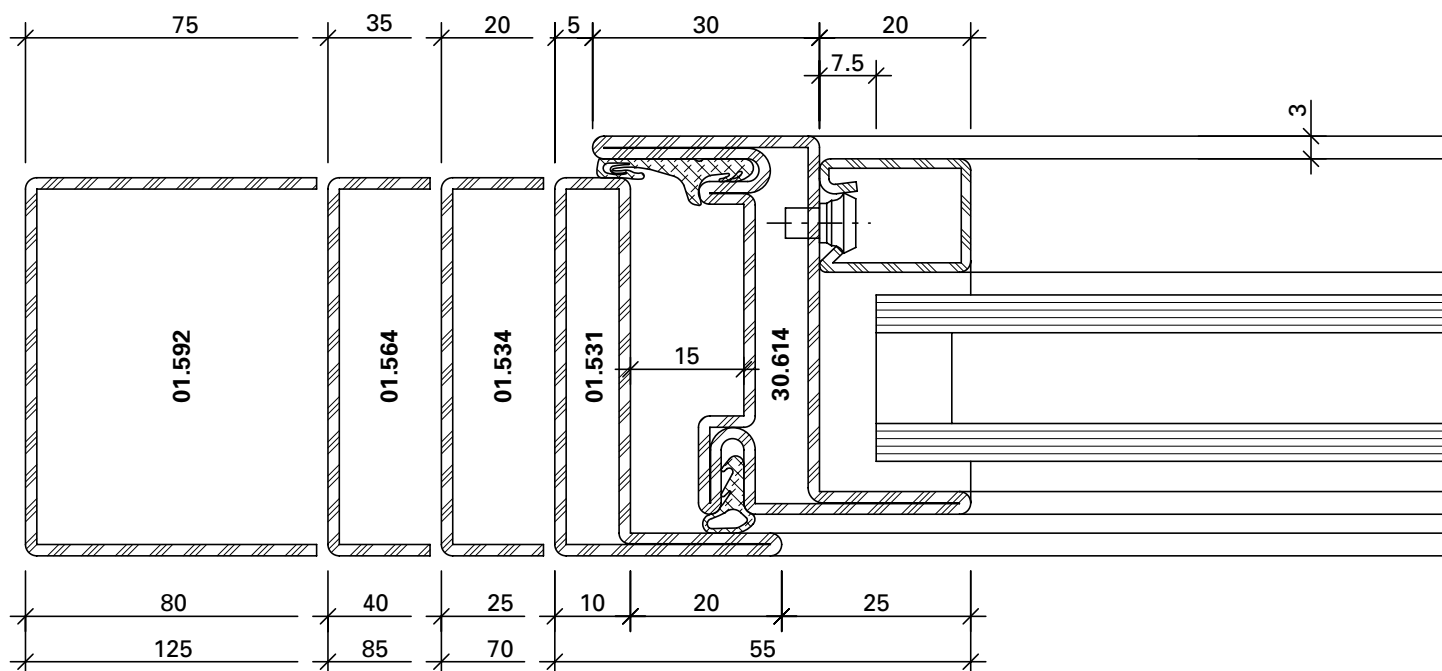
Portes-fenêtres
avec ferrure de fenêtre



Windows-doors
with window fitting

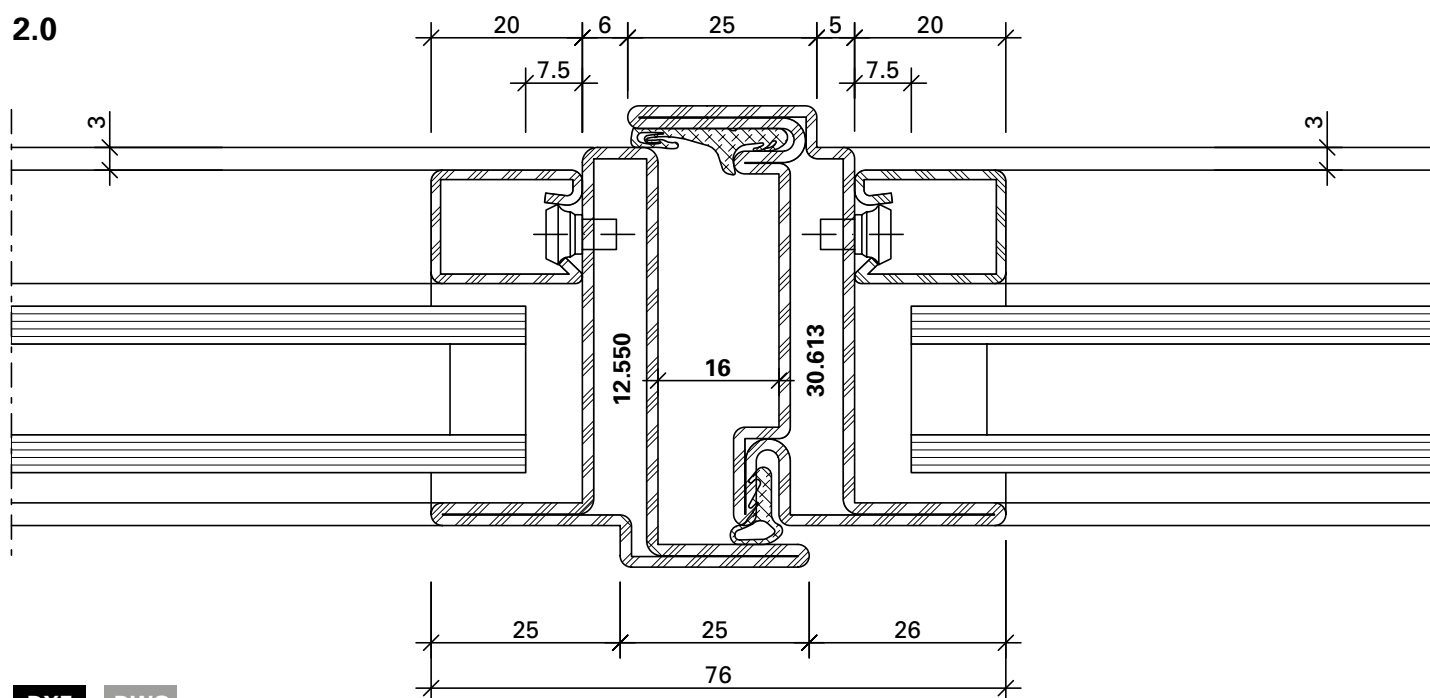


1.0



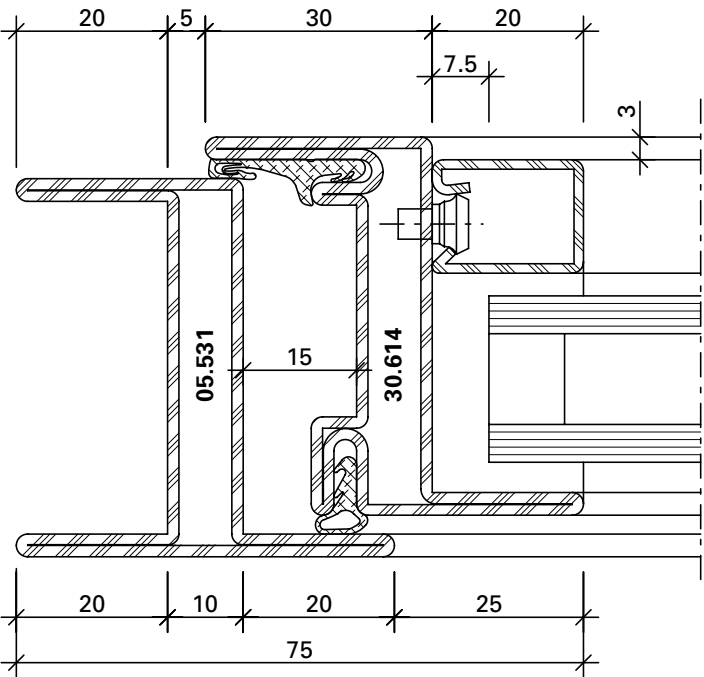
DXF **DWG** 23-0101-C-001

2.0



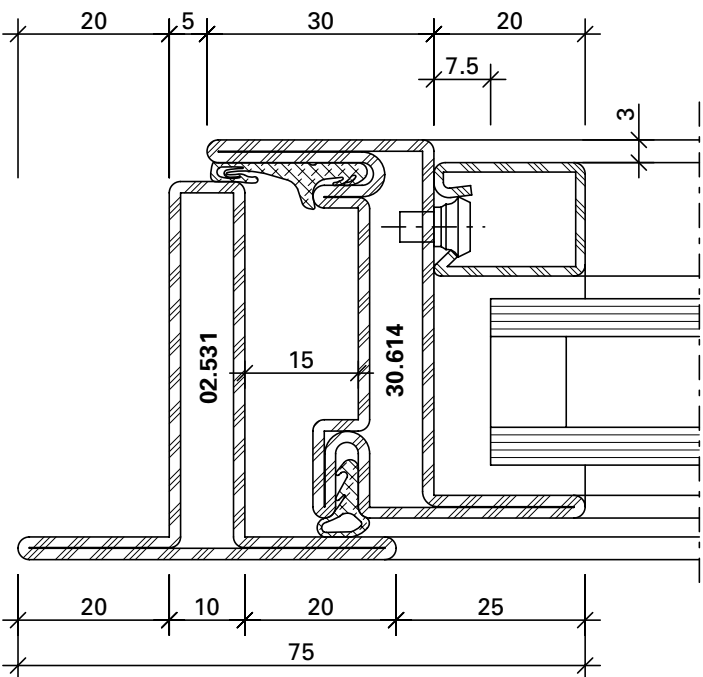
DXF **DWG** 23-0101-C-002

1.1



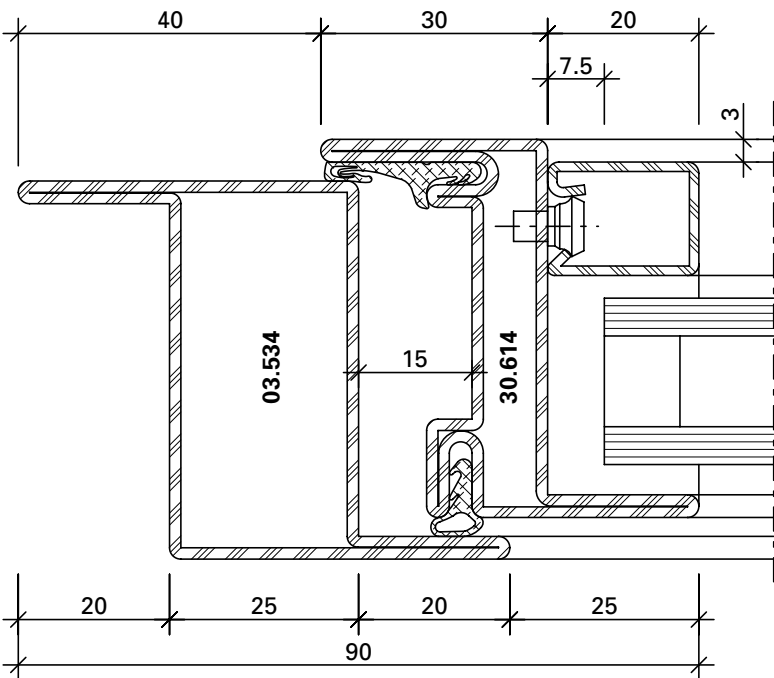
DXF DWG 23-0101-C-003

1.2



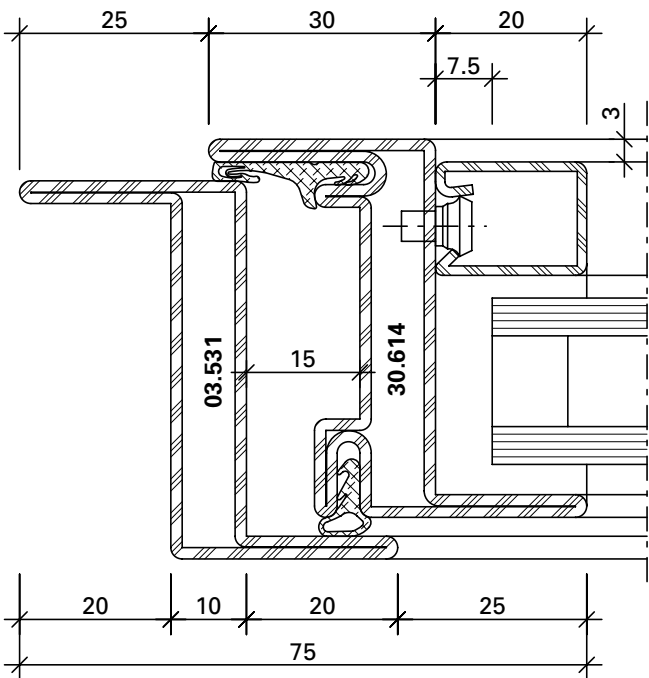
DXF DWG 23-0101-C-004

1.4

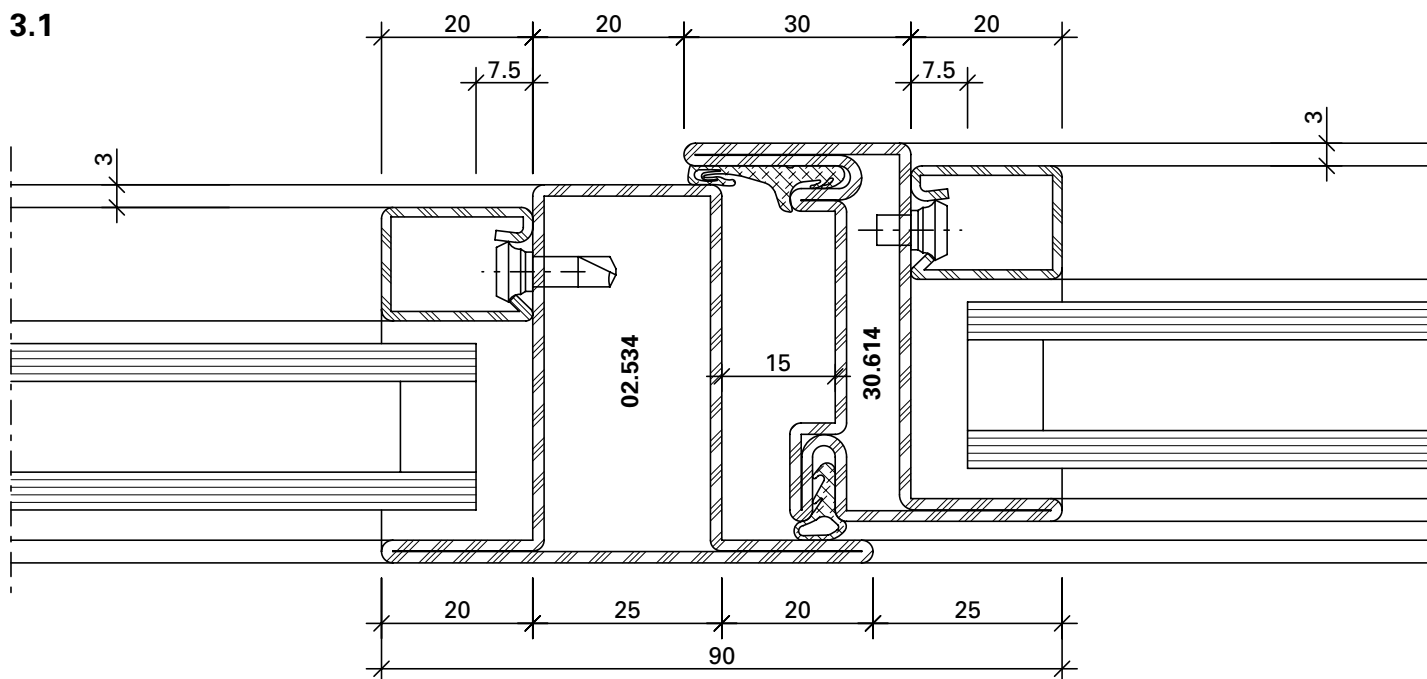


DXF DWG 23-0101-C-005

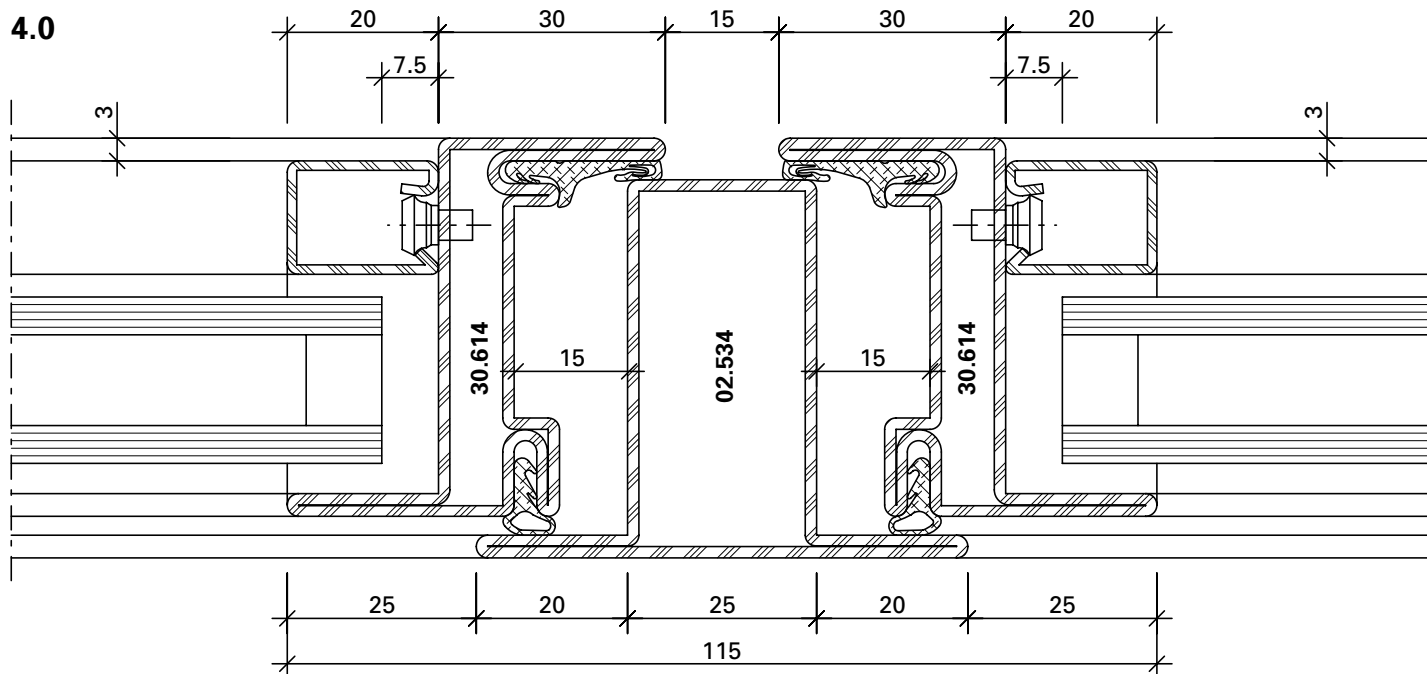
1.3



DXF DWG 23-0101-C-006

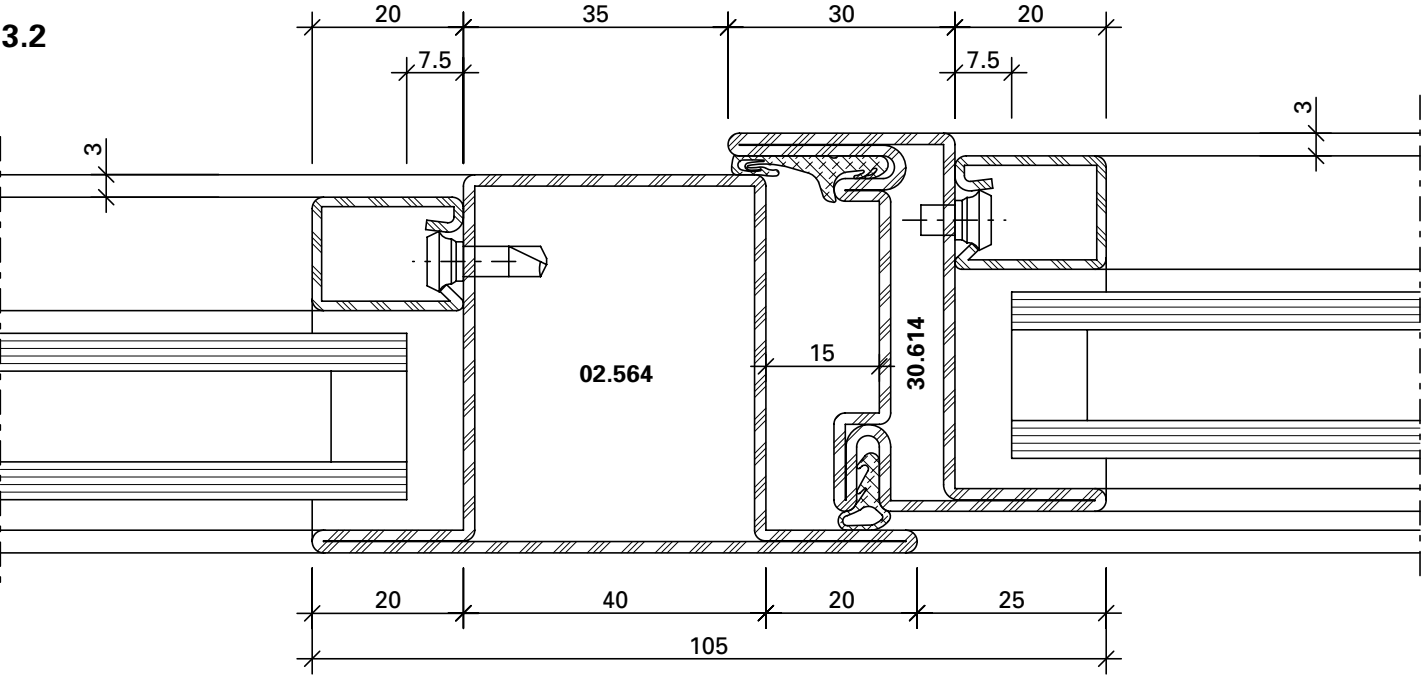


DXF **DWG** 23-0101-C-007



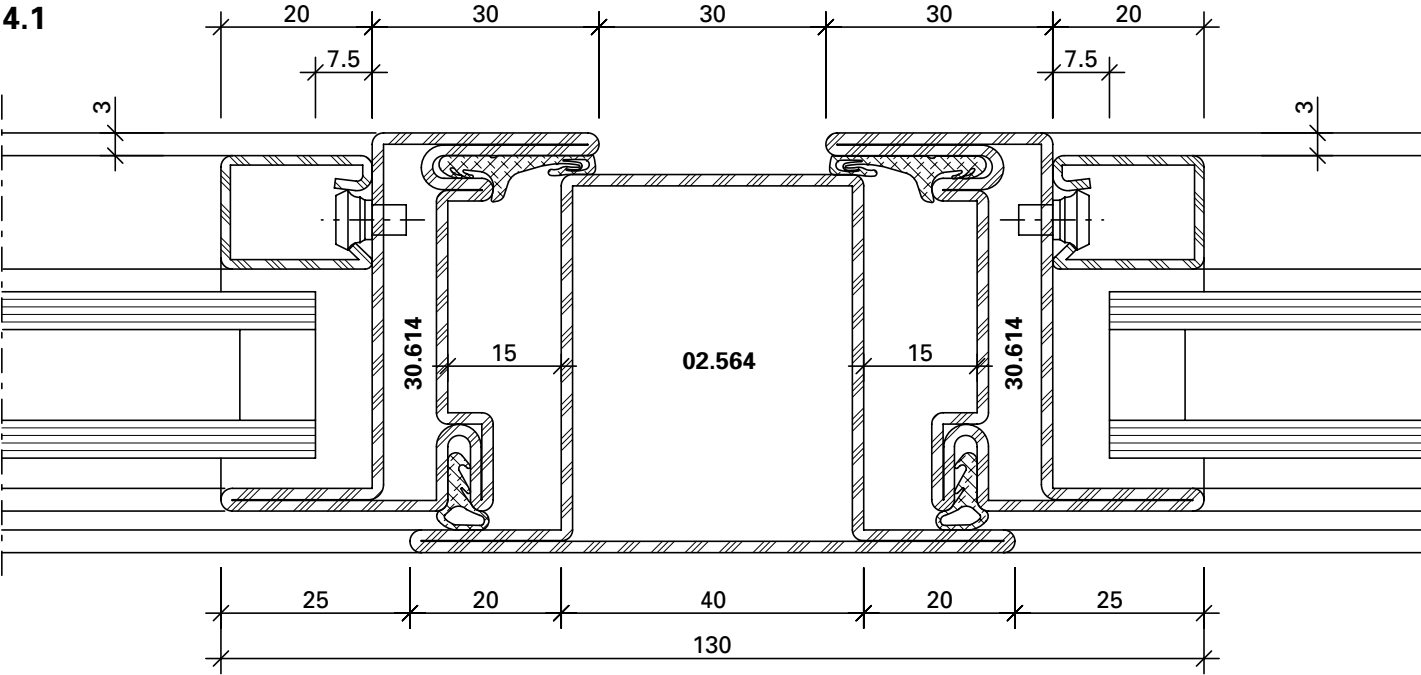
DXF **DWG** 23-0101-C-008

3.2



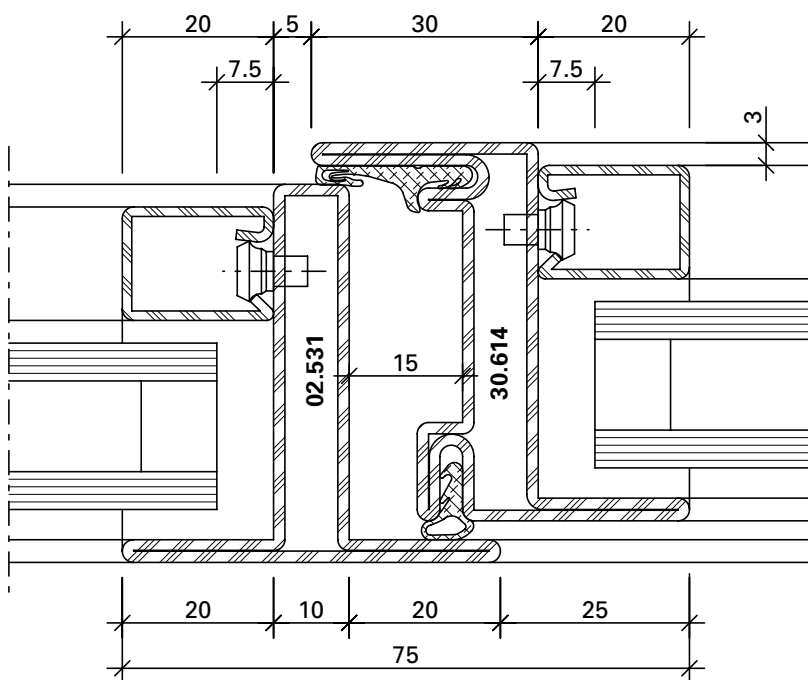
DXF DWG 23-0101-C-009

4.1



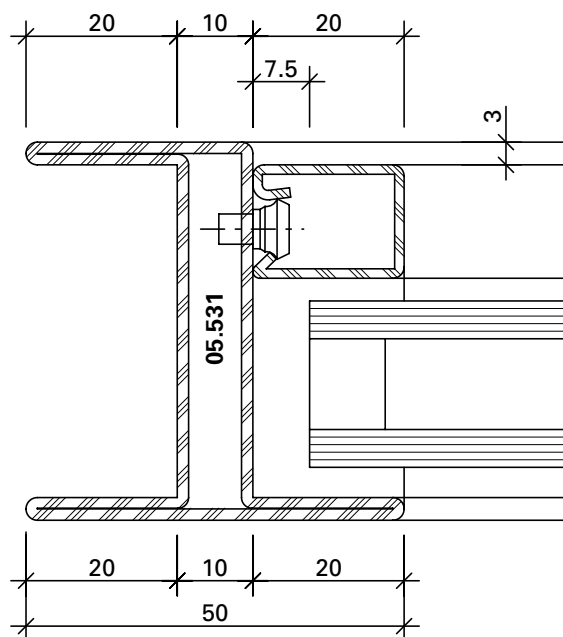
DXF DWG 23-0101-C-010

3.0



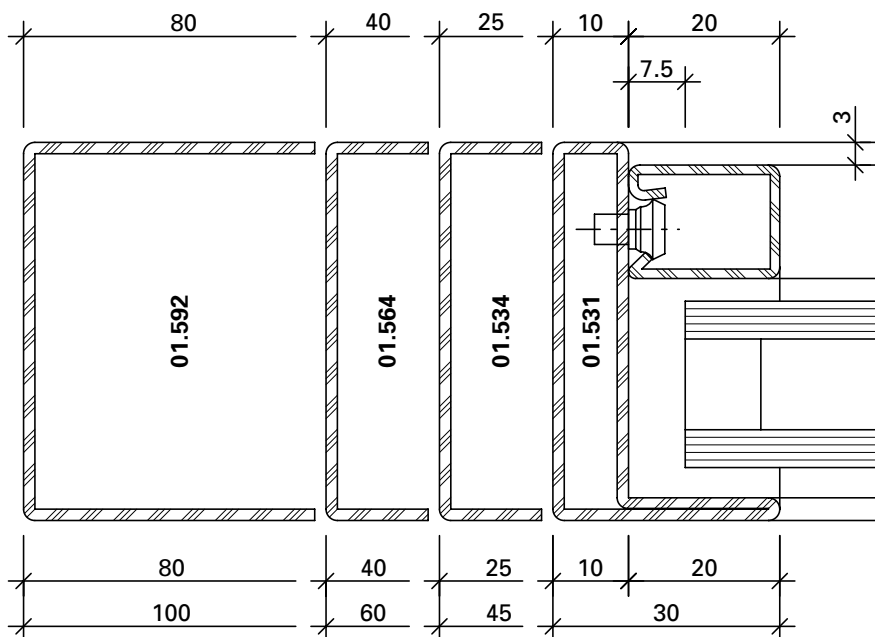
DXF DWG 23-0101-C-011

5.1



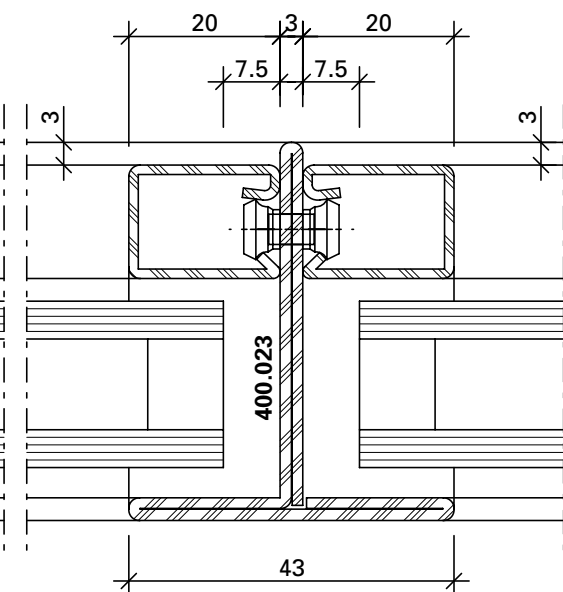
DXF DWG 23-0101-C-012

5.0

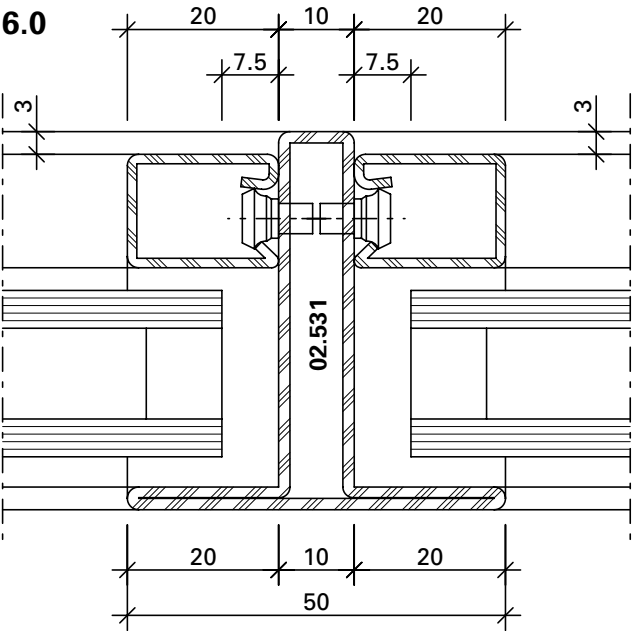


DXF DWG 23-0101-C-013

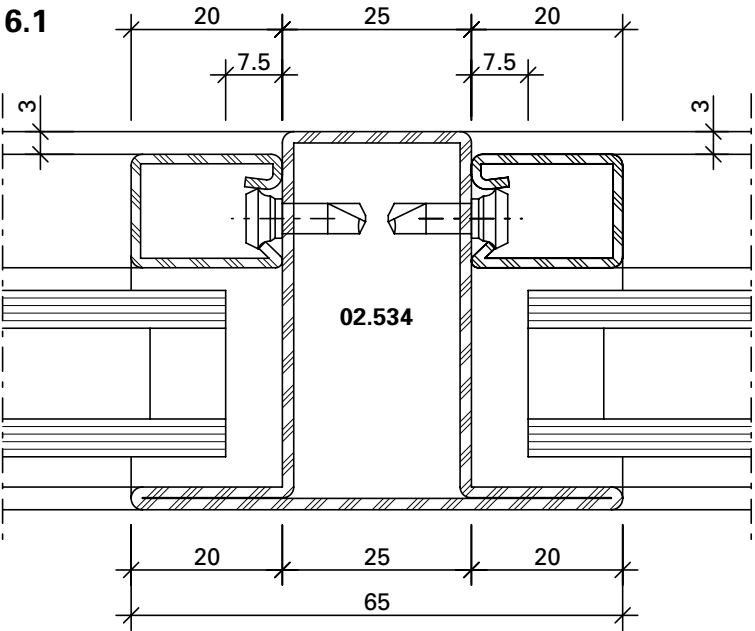
6.2



DXF DWG 23-0101-C-014

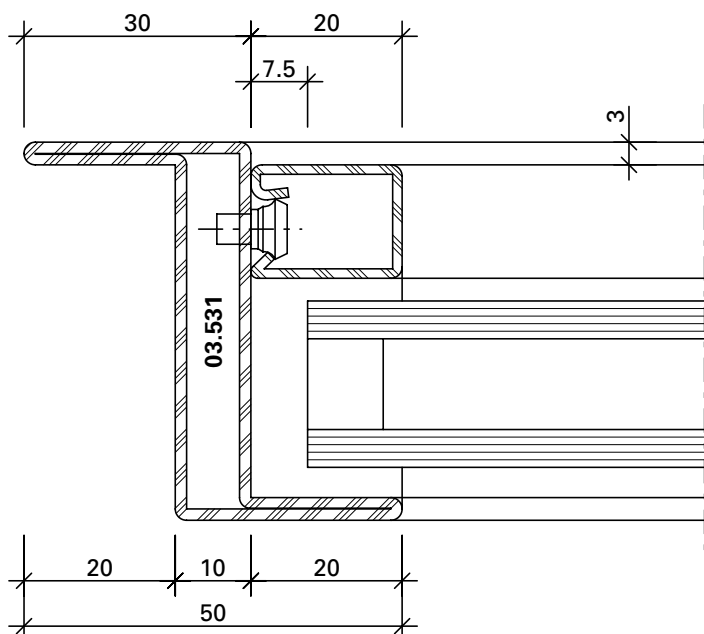


DXF **DWG** 23-0101-C-015



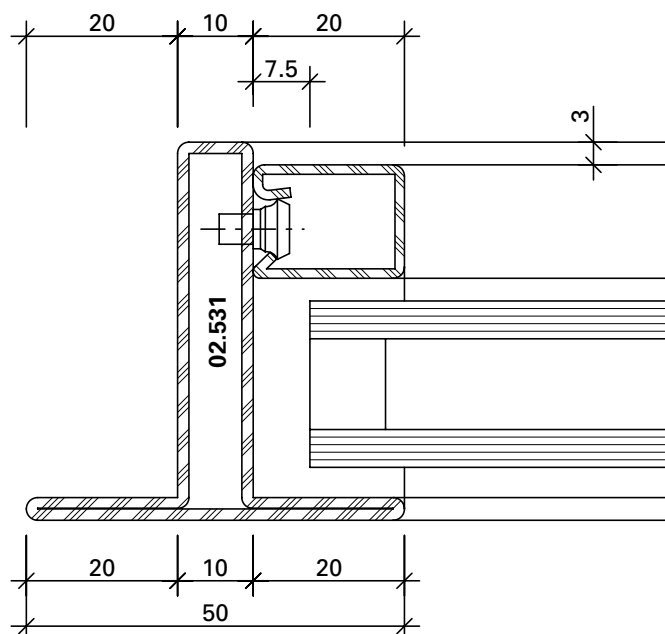
DXF **DWG** 23-0101-C-016

5.2



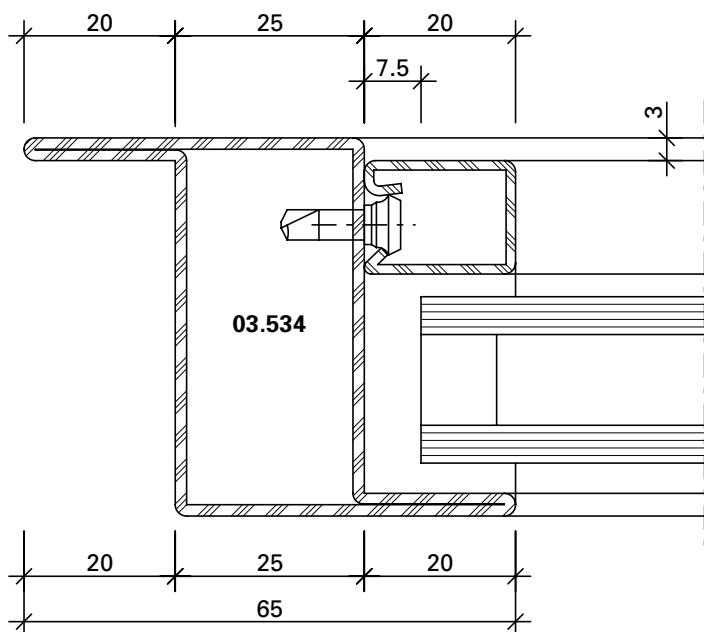
DXF **DWG** 23-0101-C-018

5.4



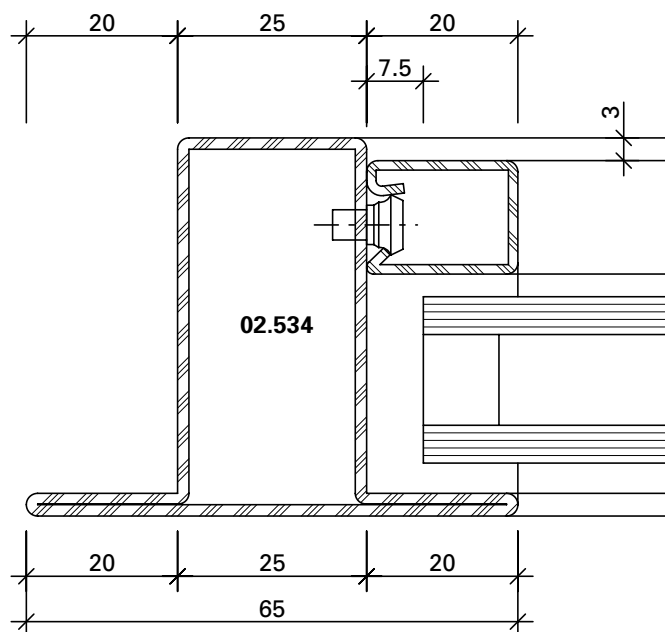
DXF **DWG** 23-0101-C-019

5.4

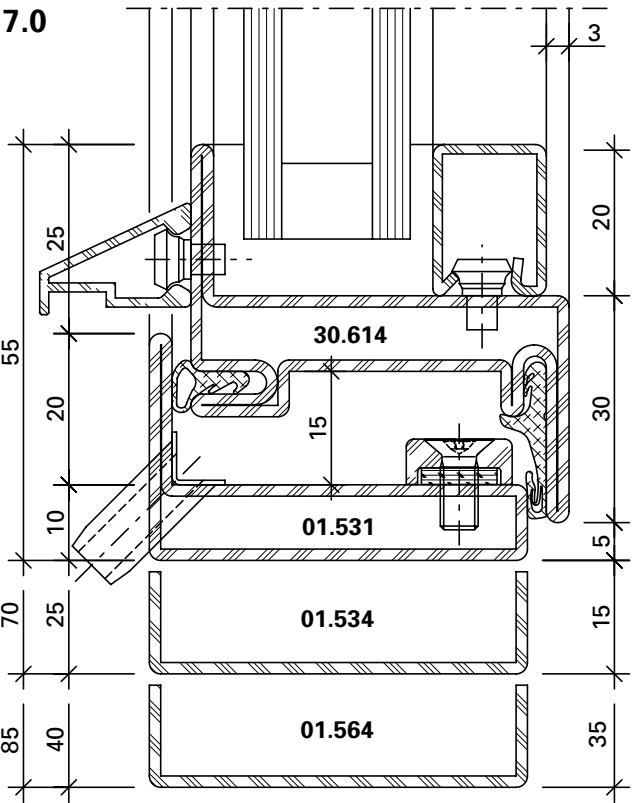


DXF **DWG** 23-0101-C-020

5.5



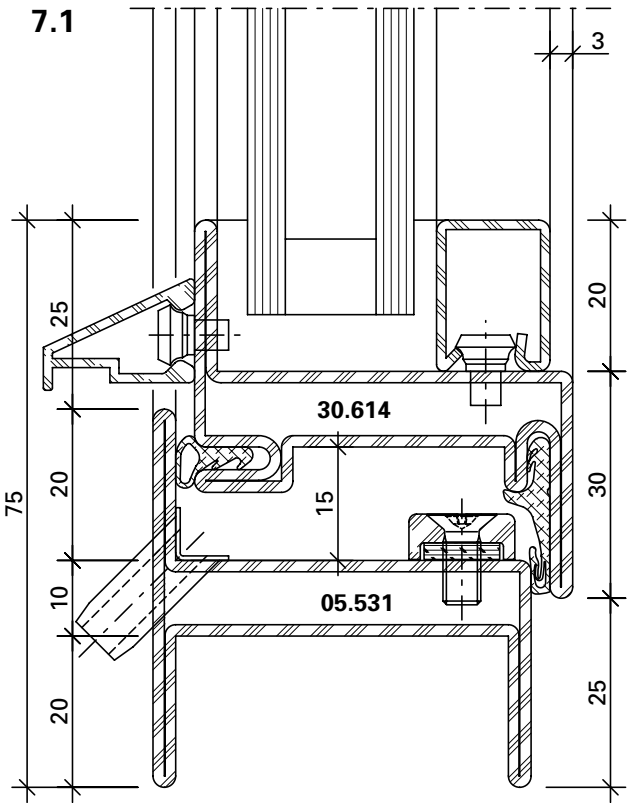
DXF **DWG** 23-0101-C-021



DWG

DXF

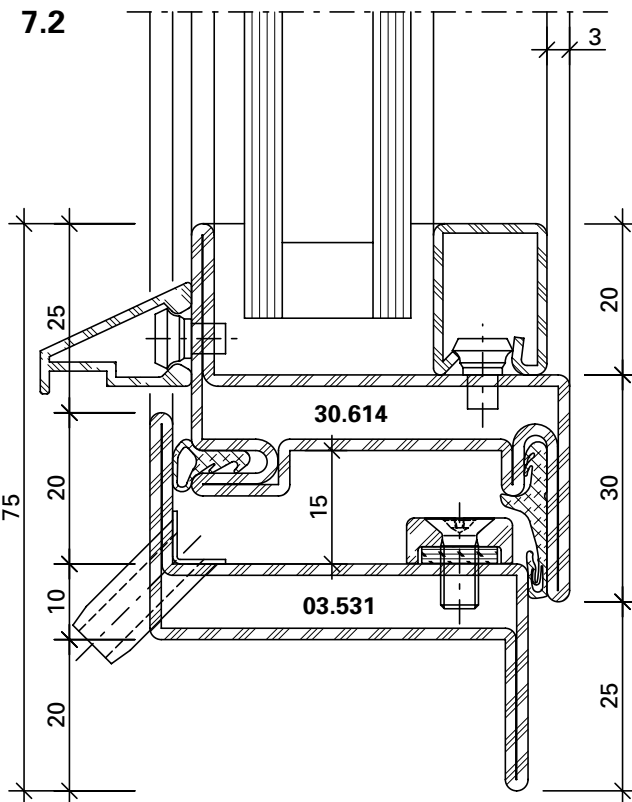
23-0101-C-022



DWG

DXF

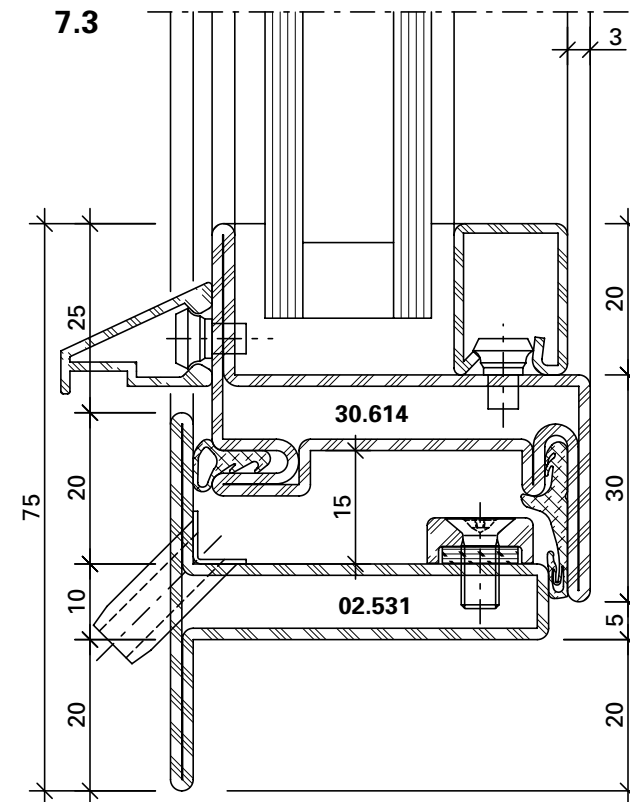
23-0101-C-023



DWG

DXF

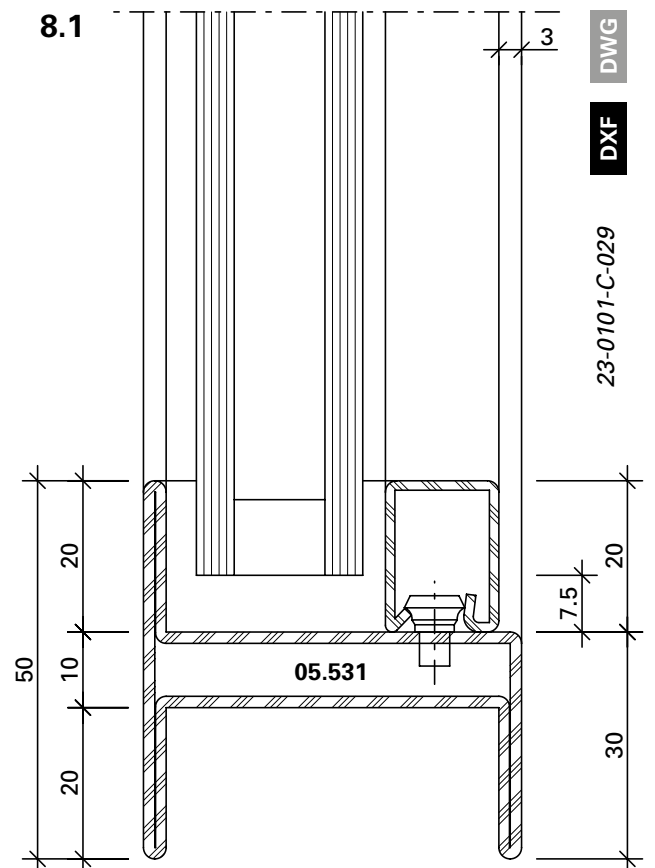
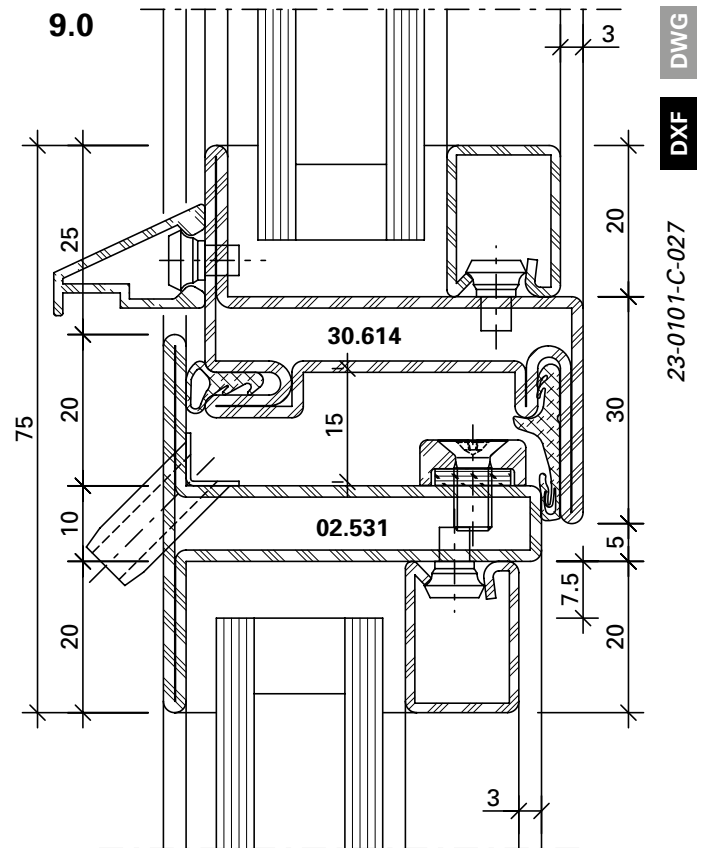
23-0101-C-024

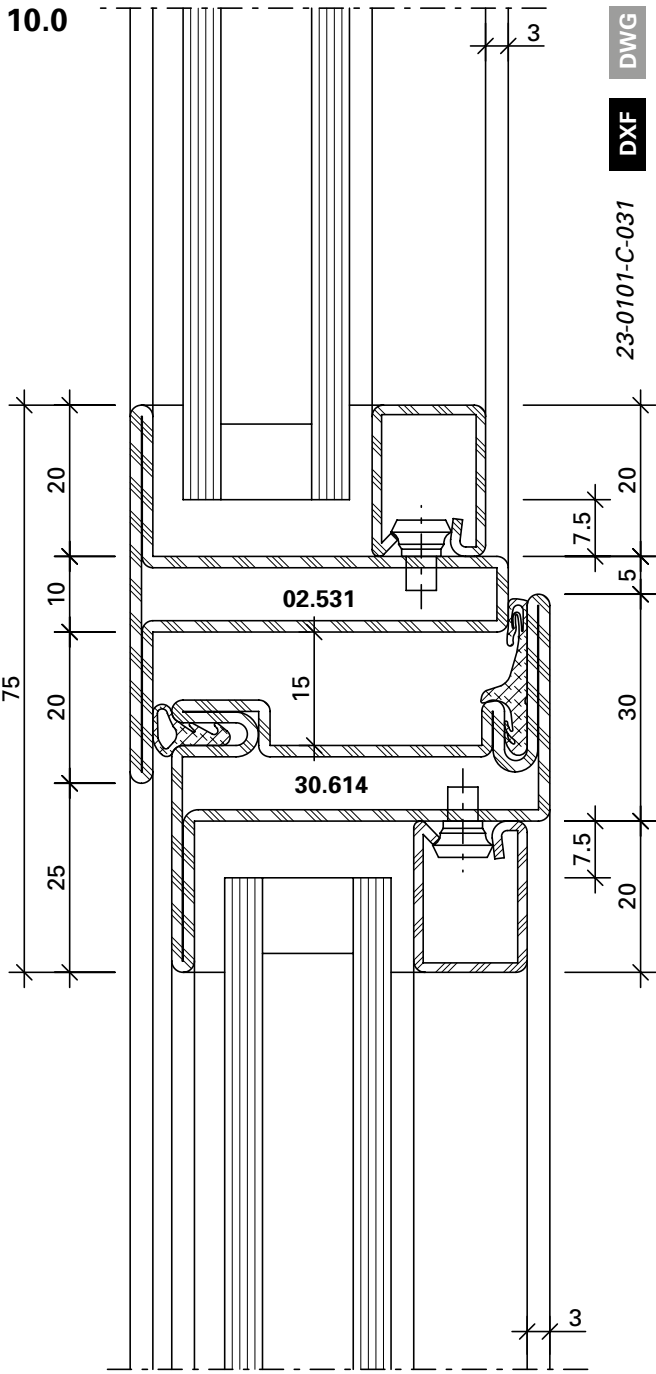
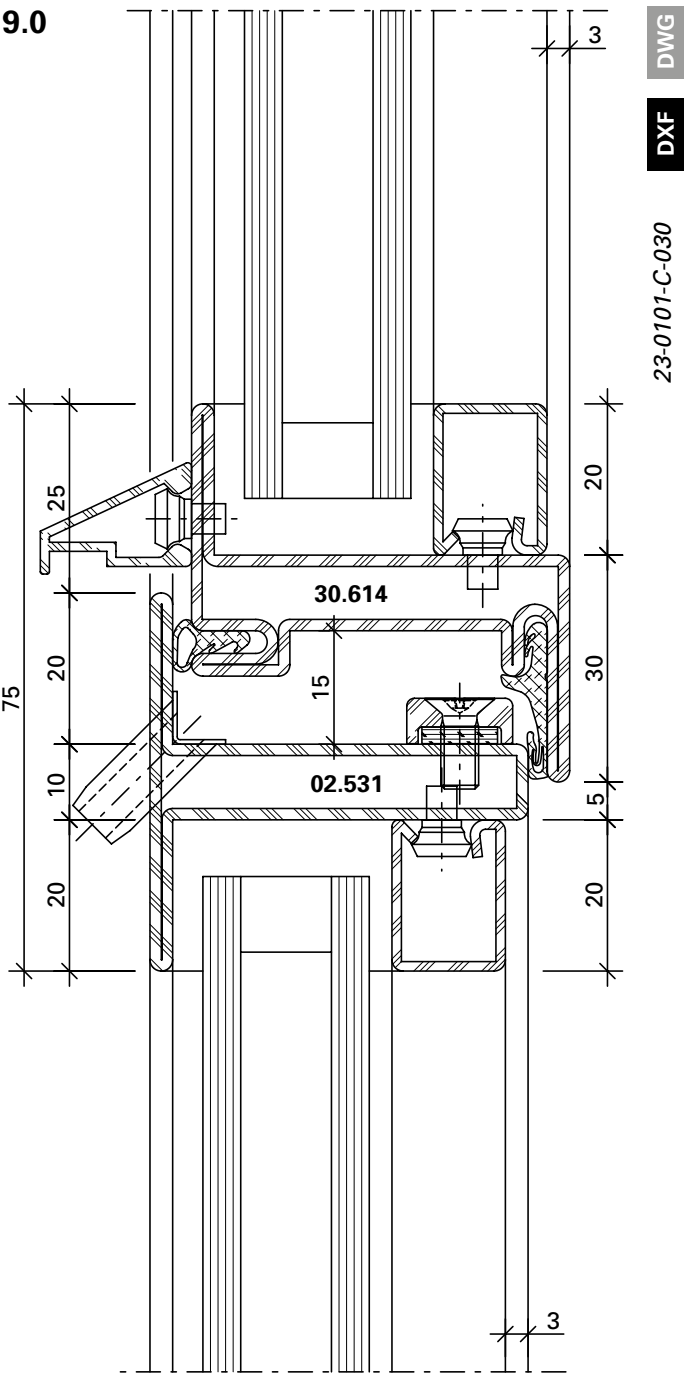


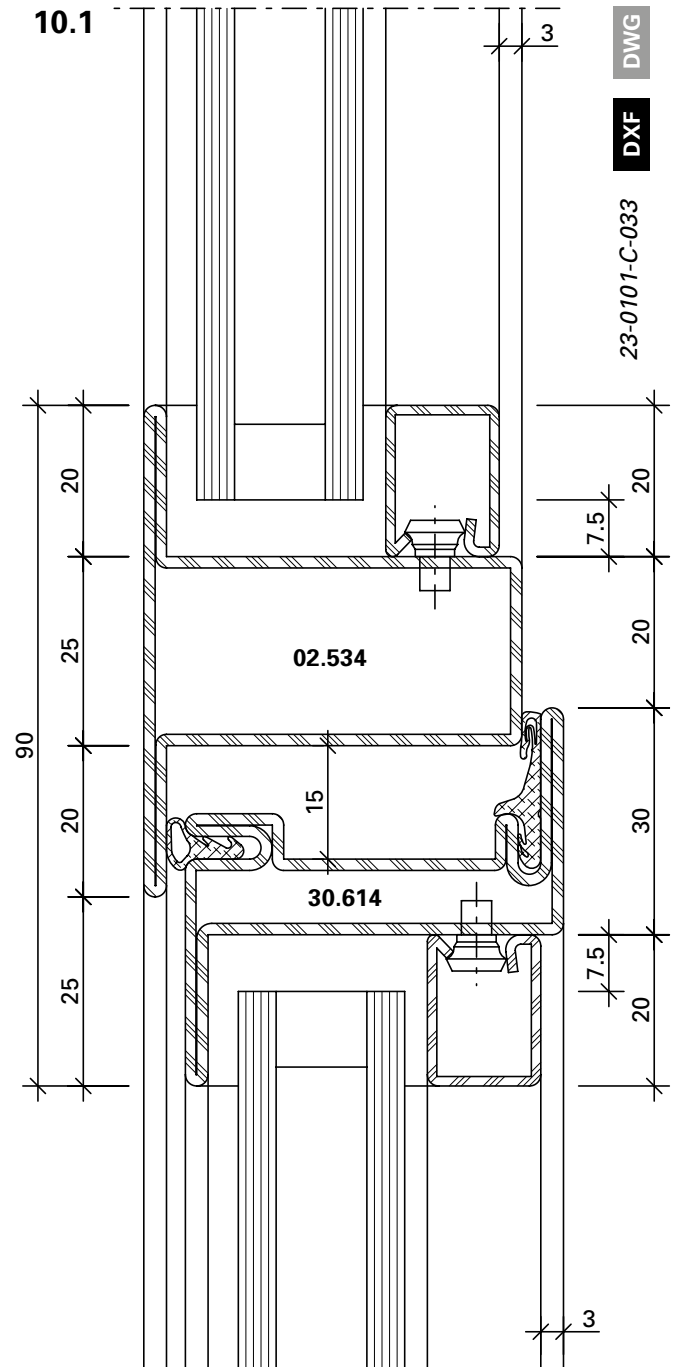
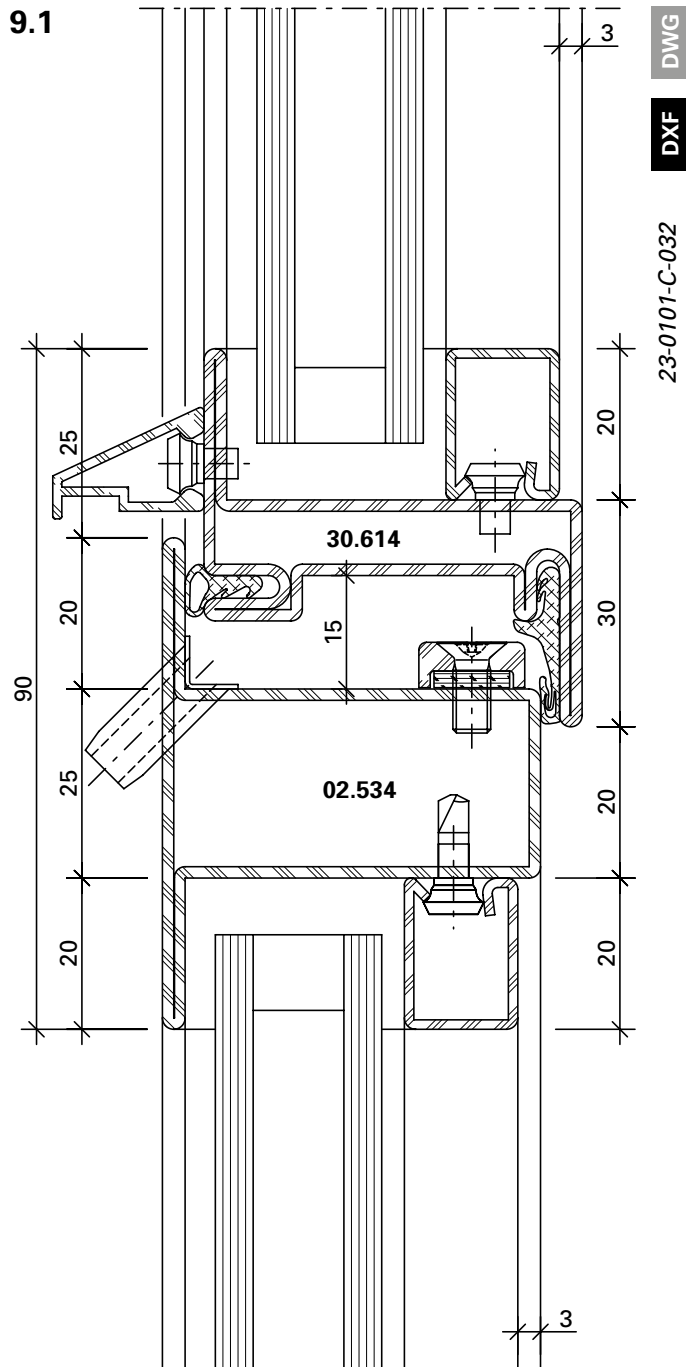
DWG

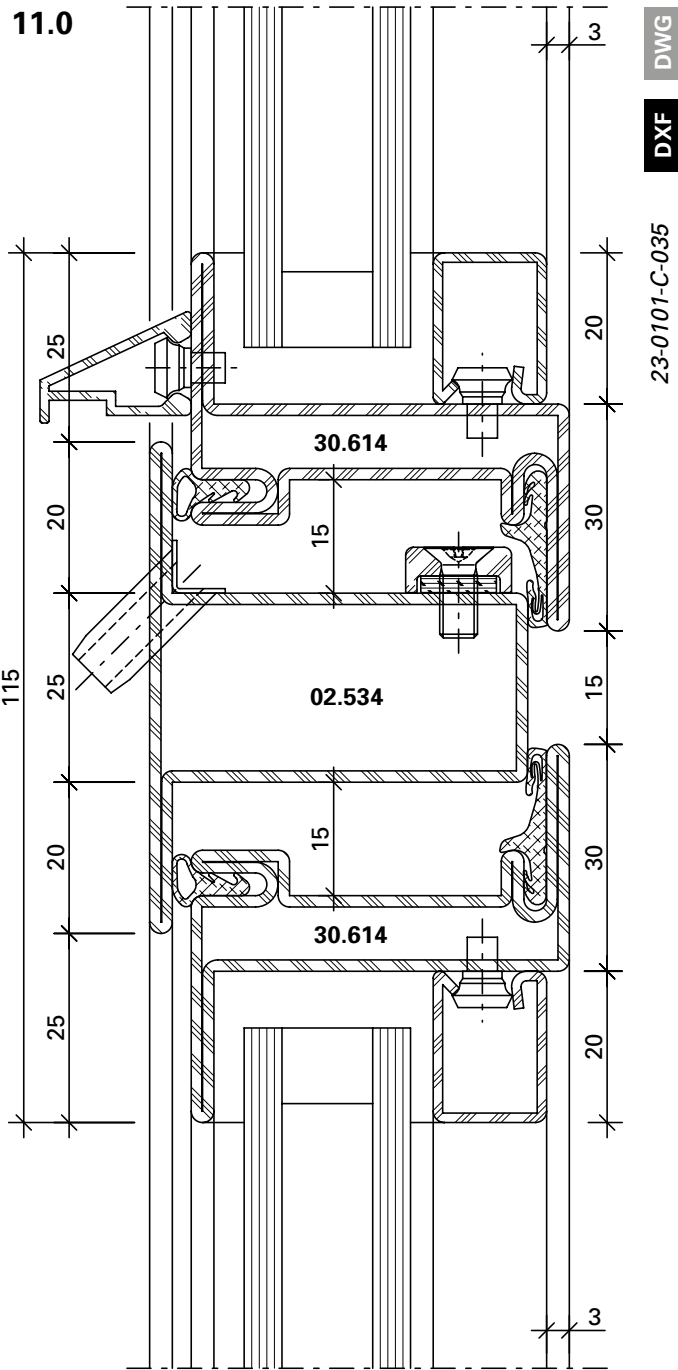
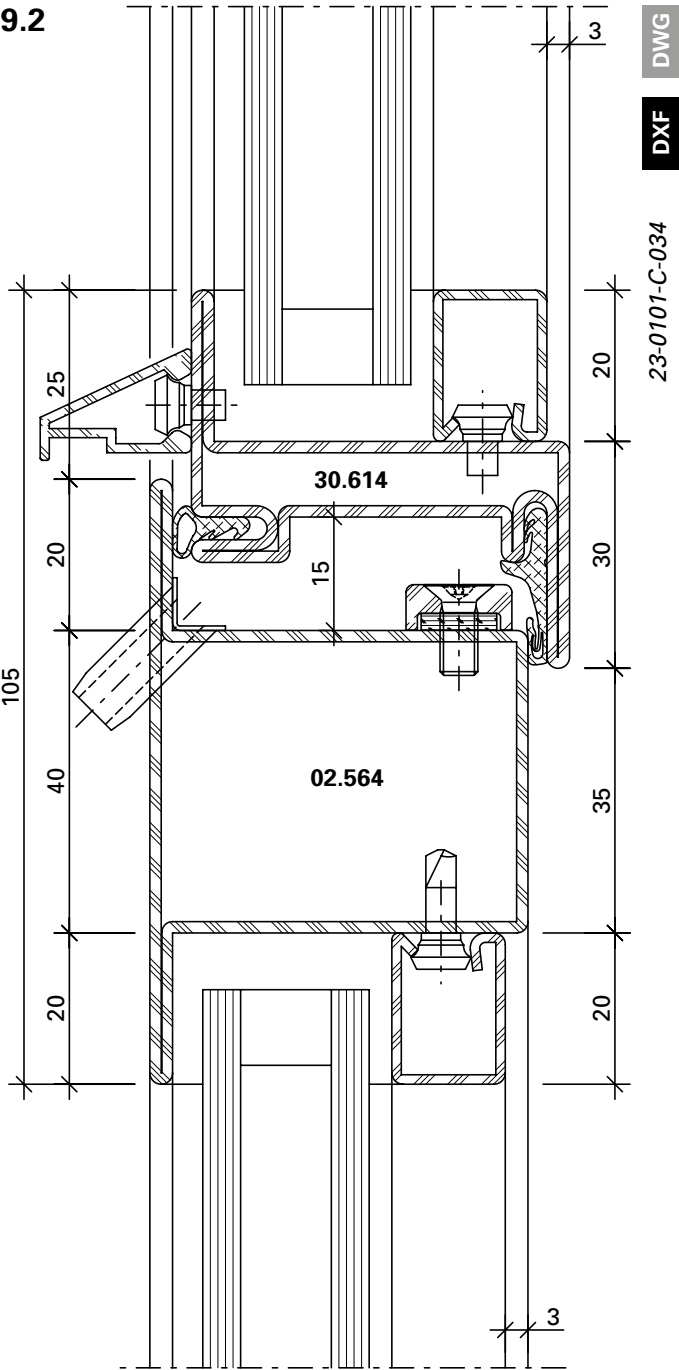
DXF

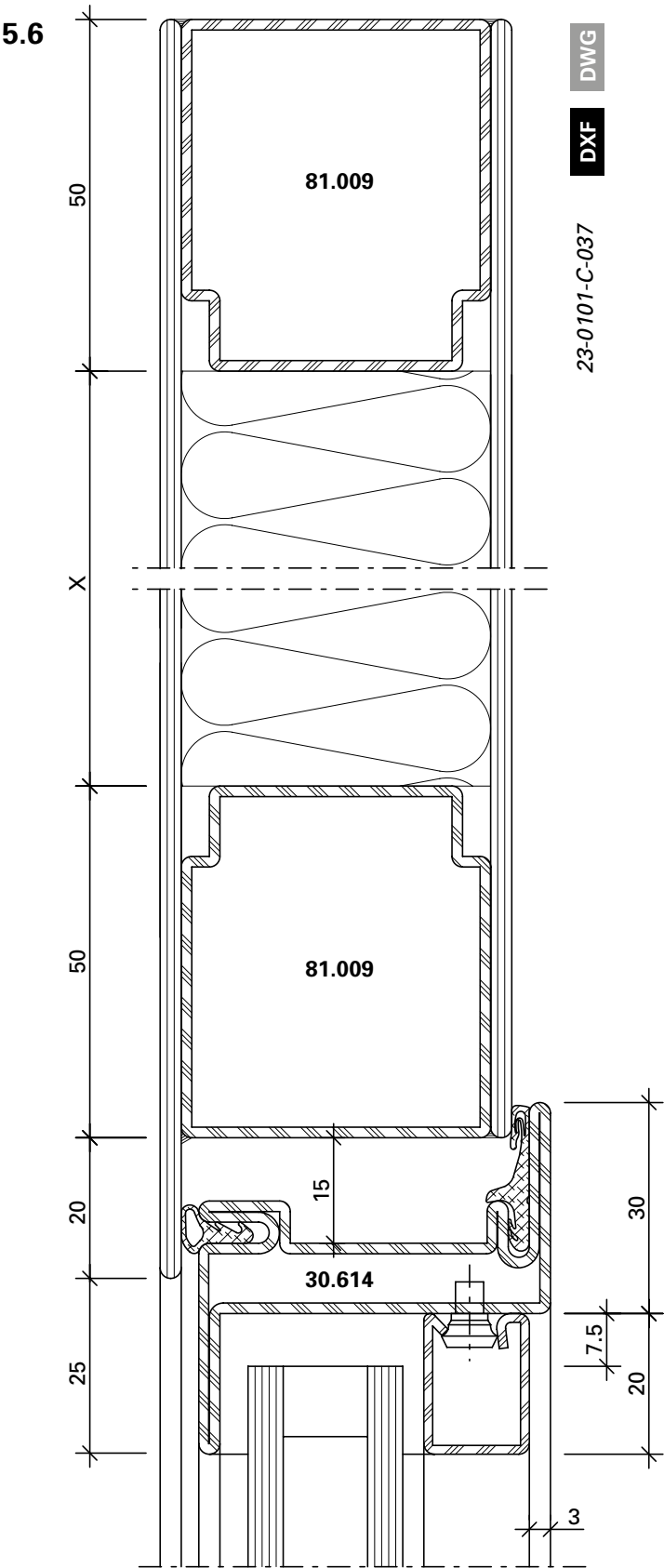
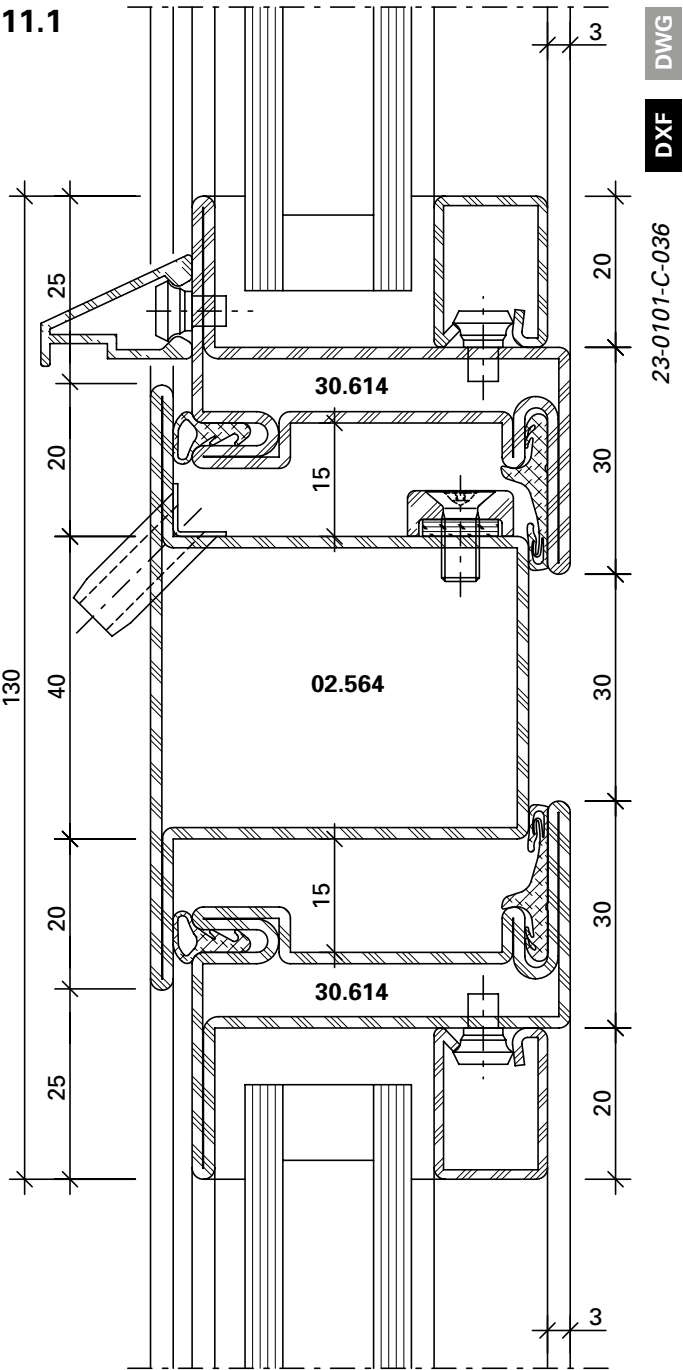
23-0101-C-025







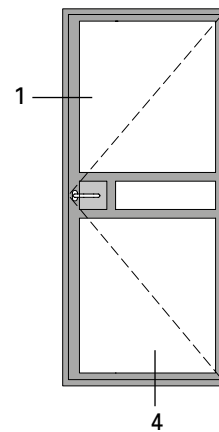
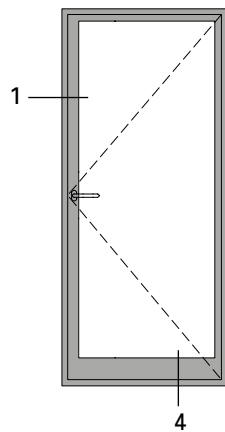
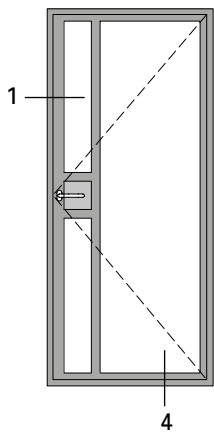
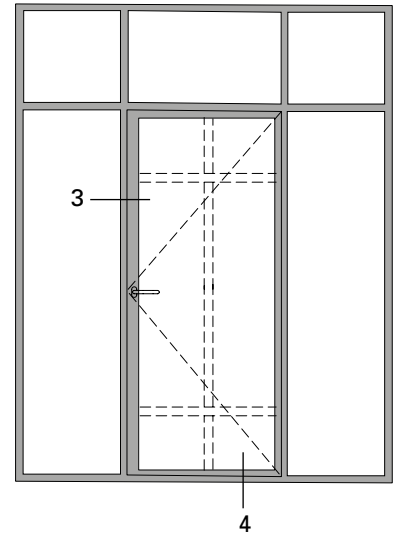
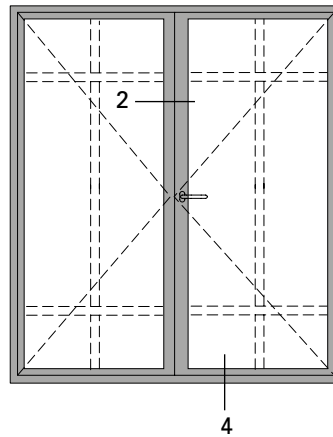
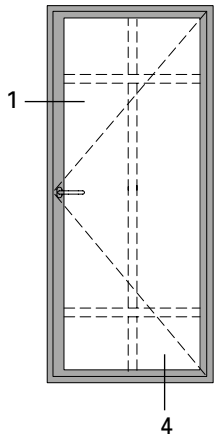




**Fenstertüren
mit Schloss und Drücker***

**Portes-fenêtres
avec serrure et poignée***

**Windows-doors
with lock and handle***

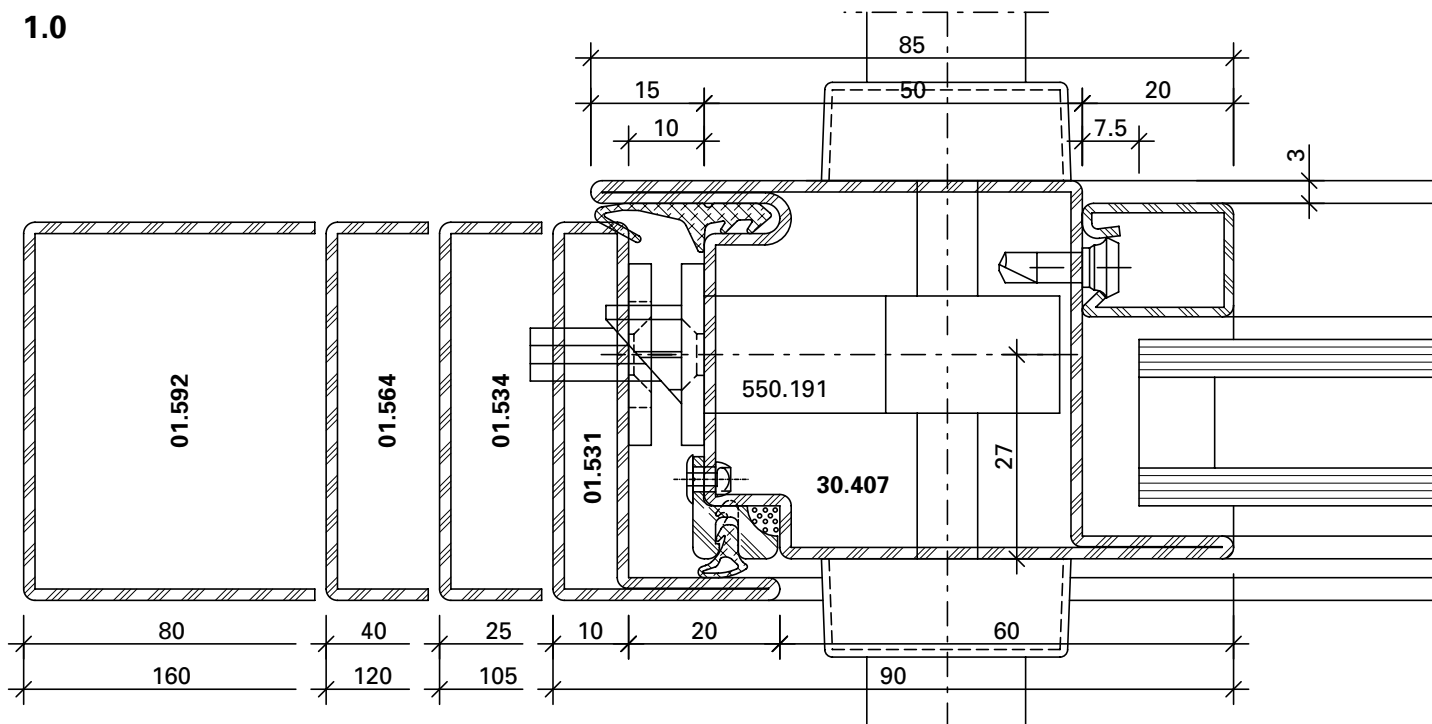


* Sonderkonstruktion
(nach Produktnorm EN 14351
nicht geprüft)

* Construction spéciale
(non contrôlé selon la norme
produit EN 14351)

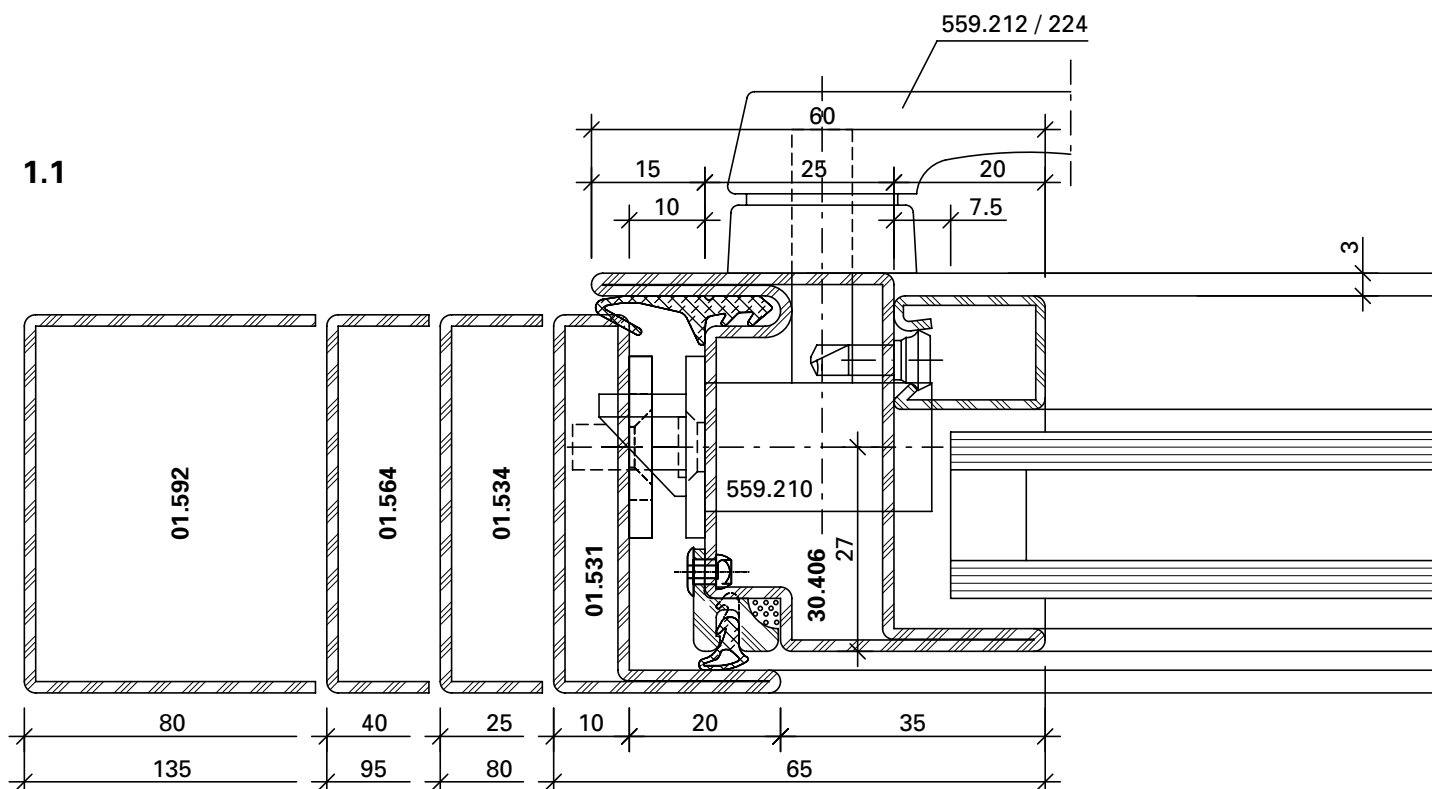
* Special construction
(not tested in accordance with
the EN 14351 product standard)

1.0



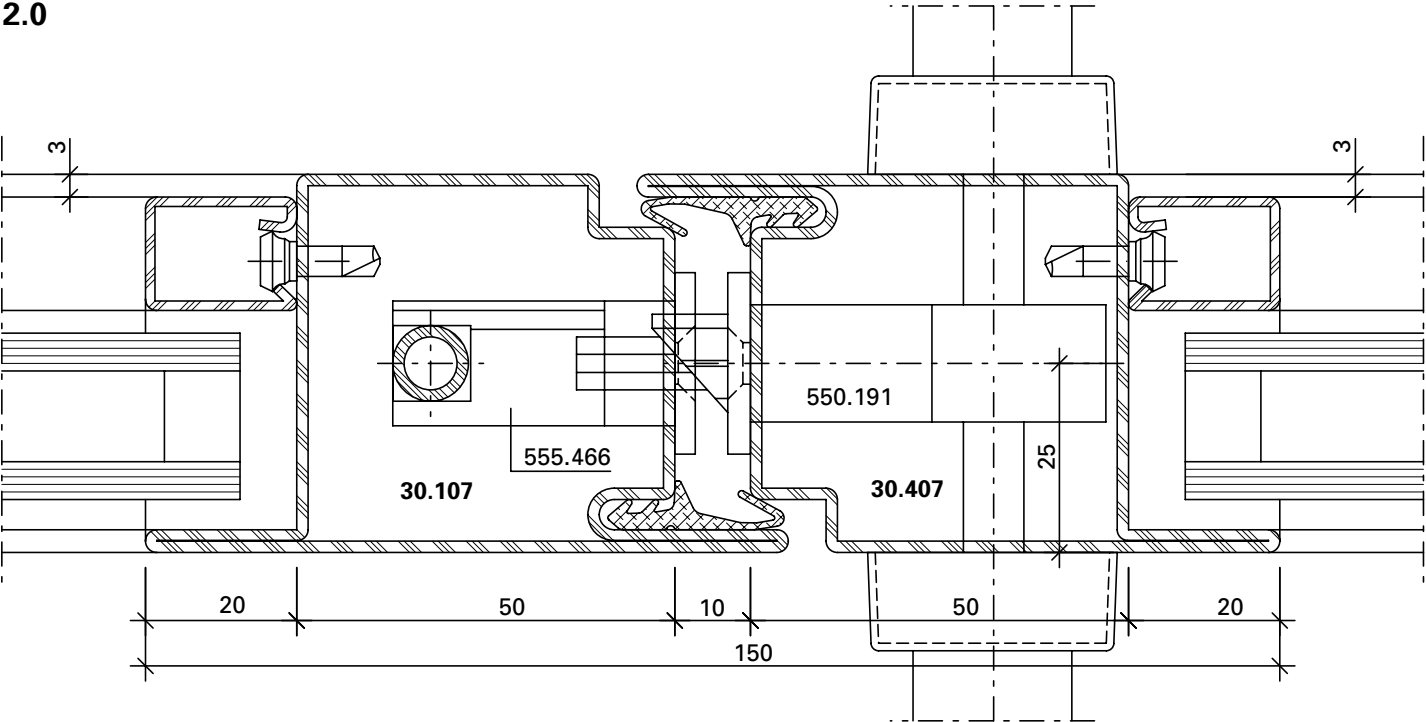
DXF **DWG** 23-0101-C-038

1.1



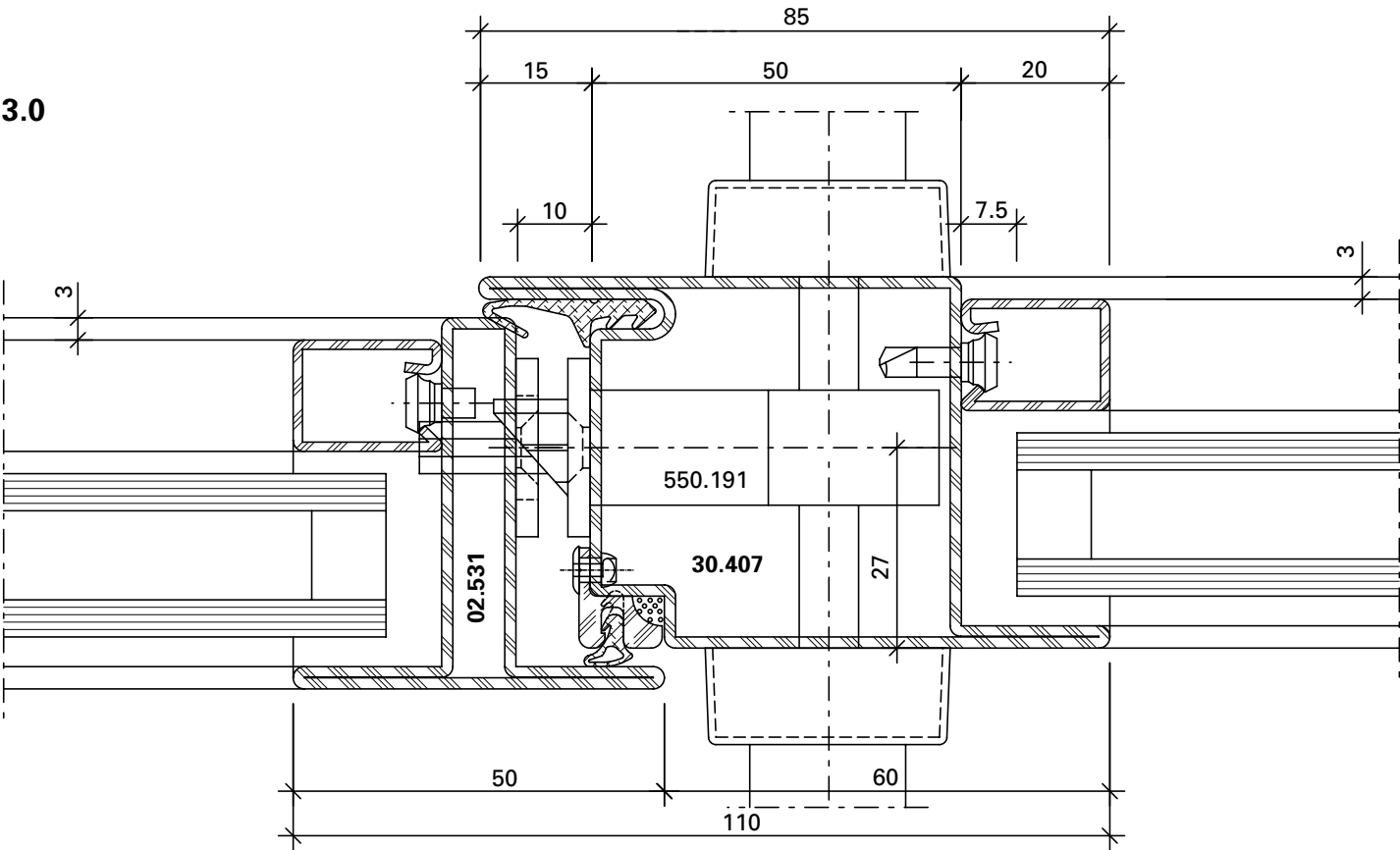
DXF **DWG** 23-0101-C-039

2.0



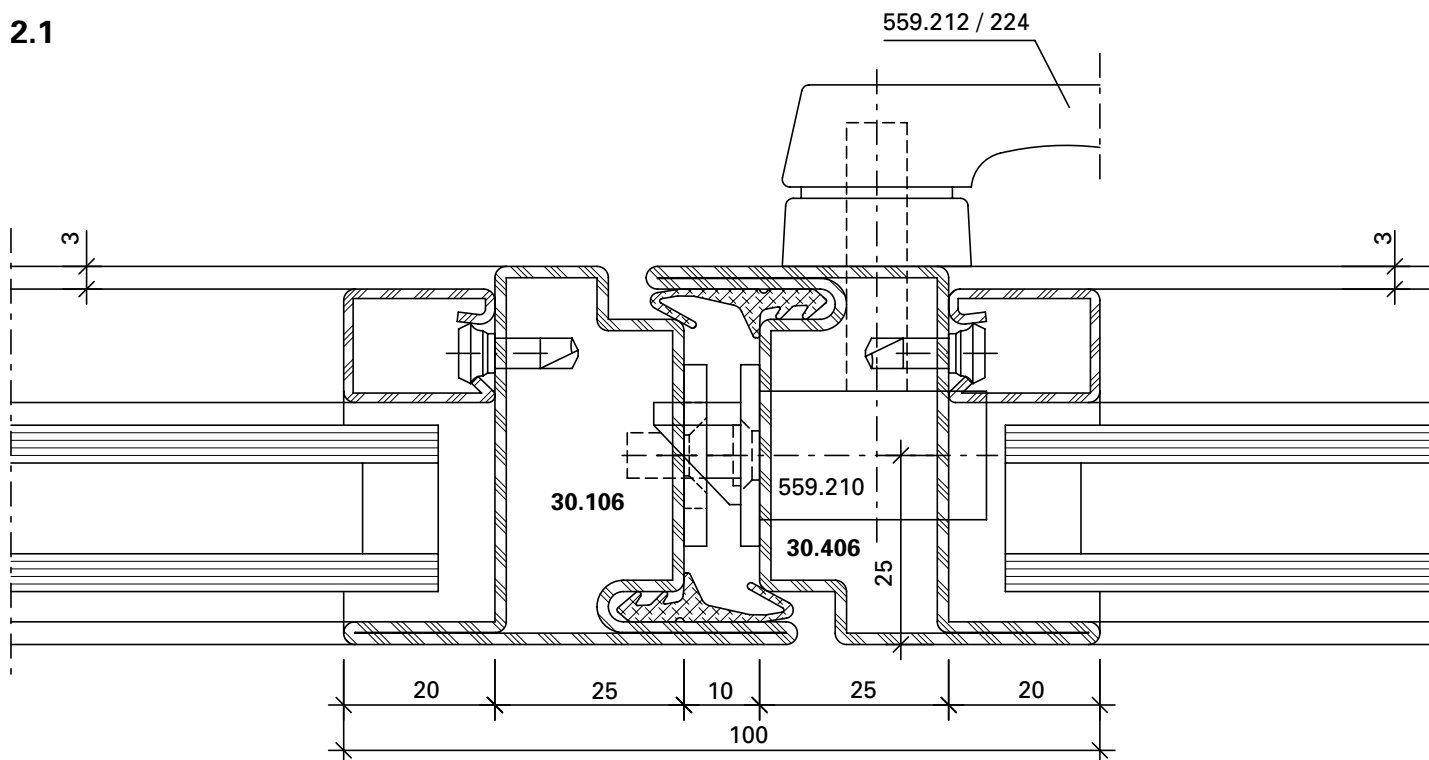
DXF **DWG** 23-0101-C-040

3.0



DXF **DWG** 23-0101-C-041

2.1

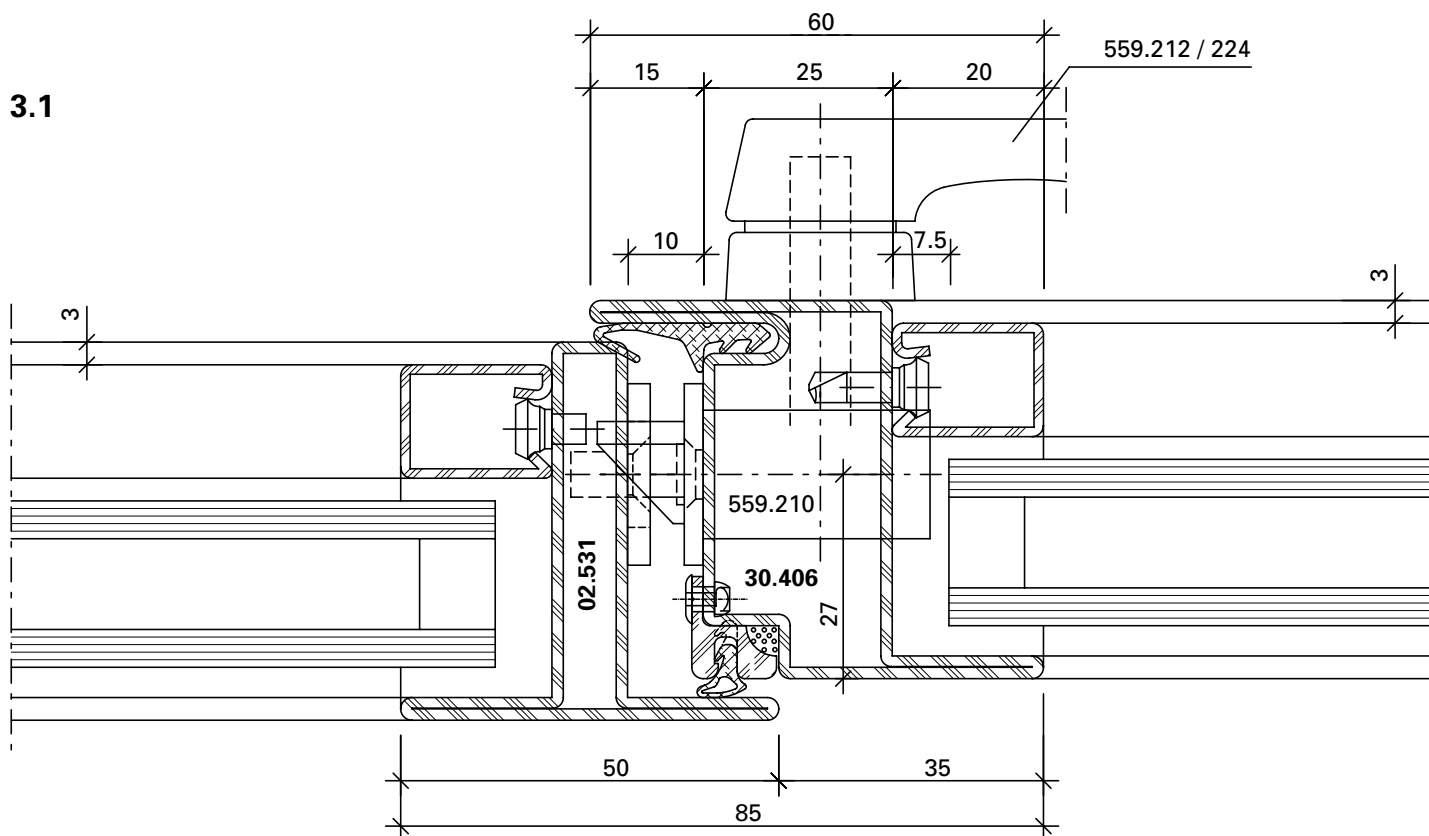


DXF

DWG

23-0101-C-042

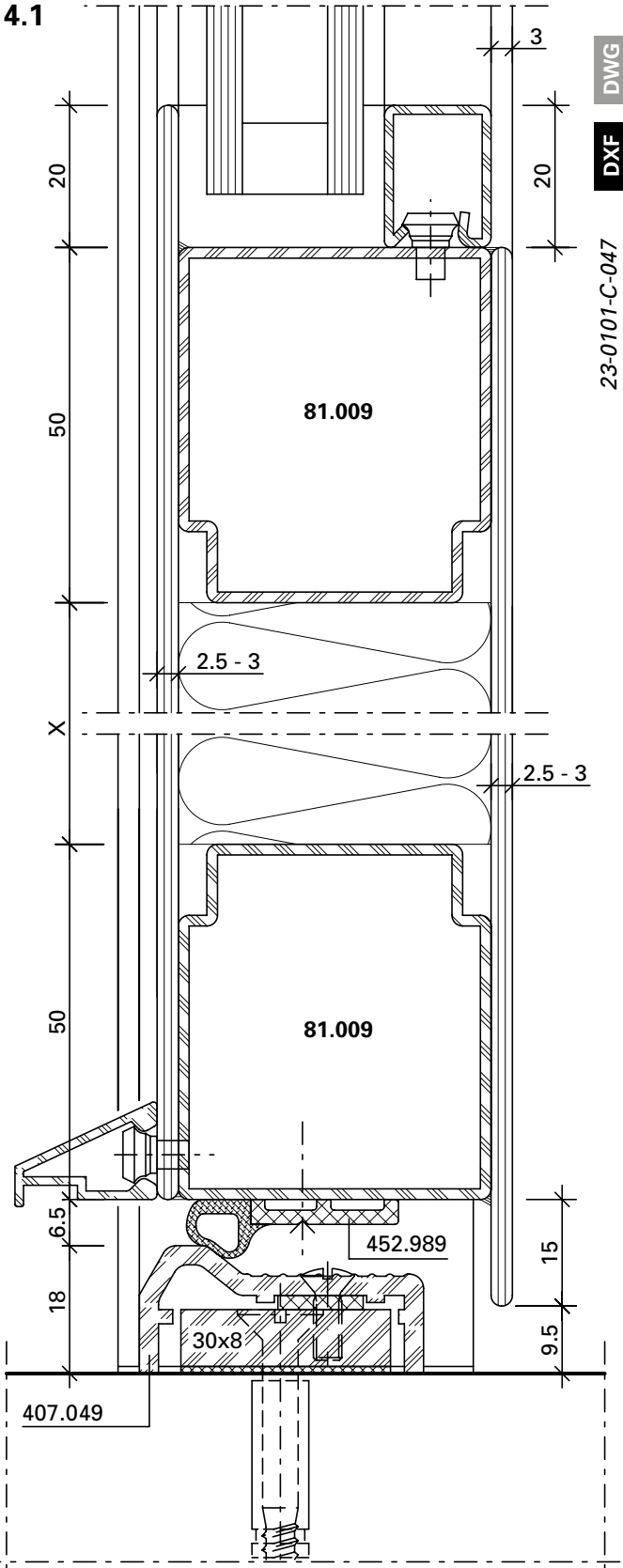
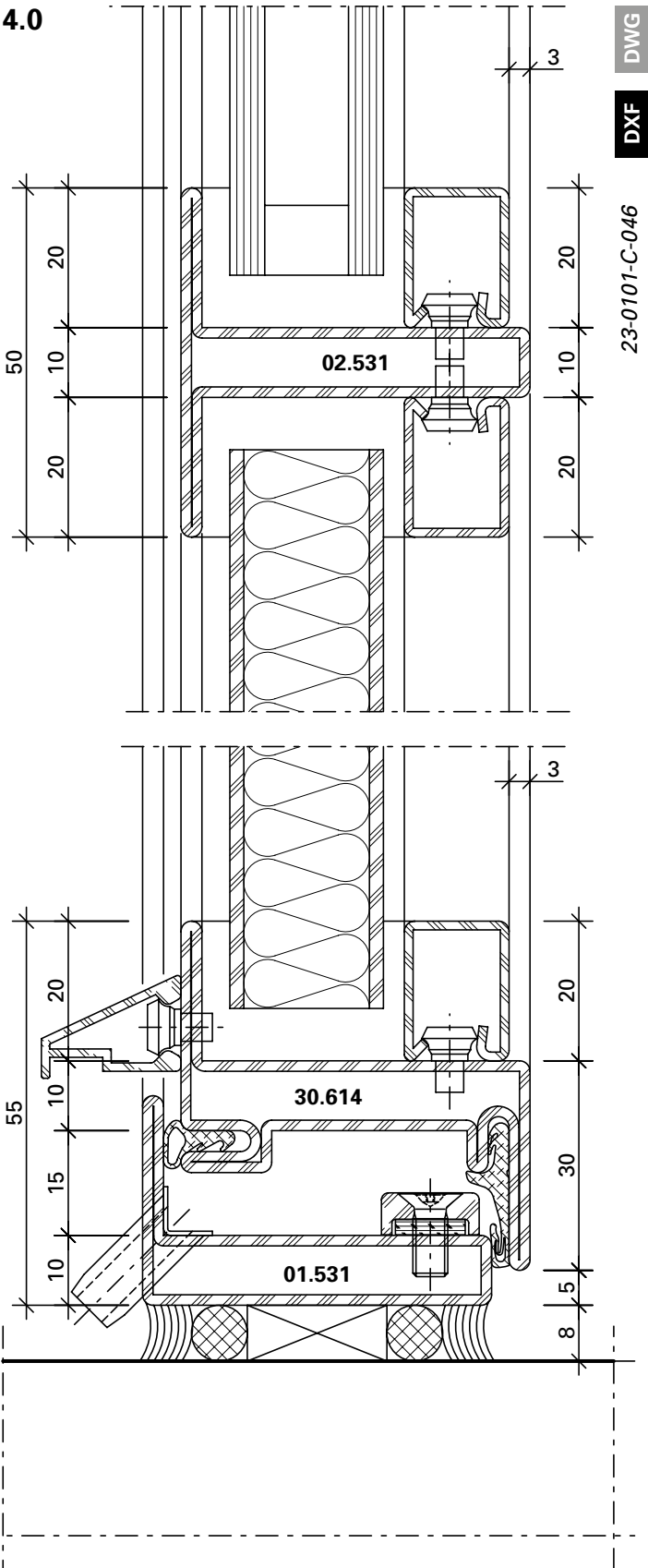
3.1



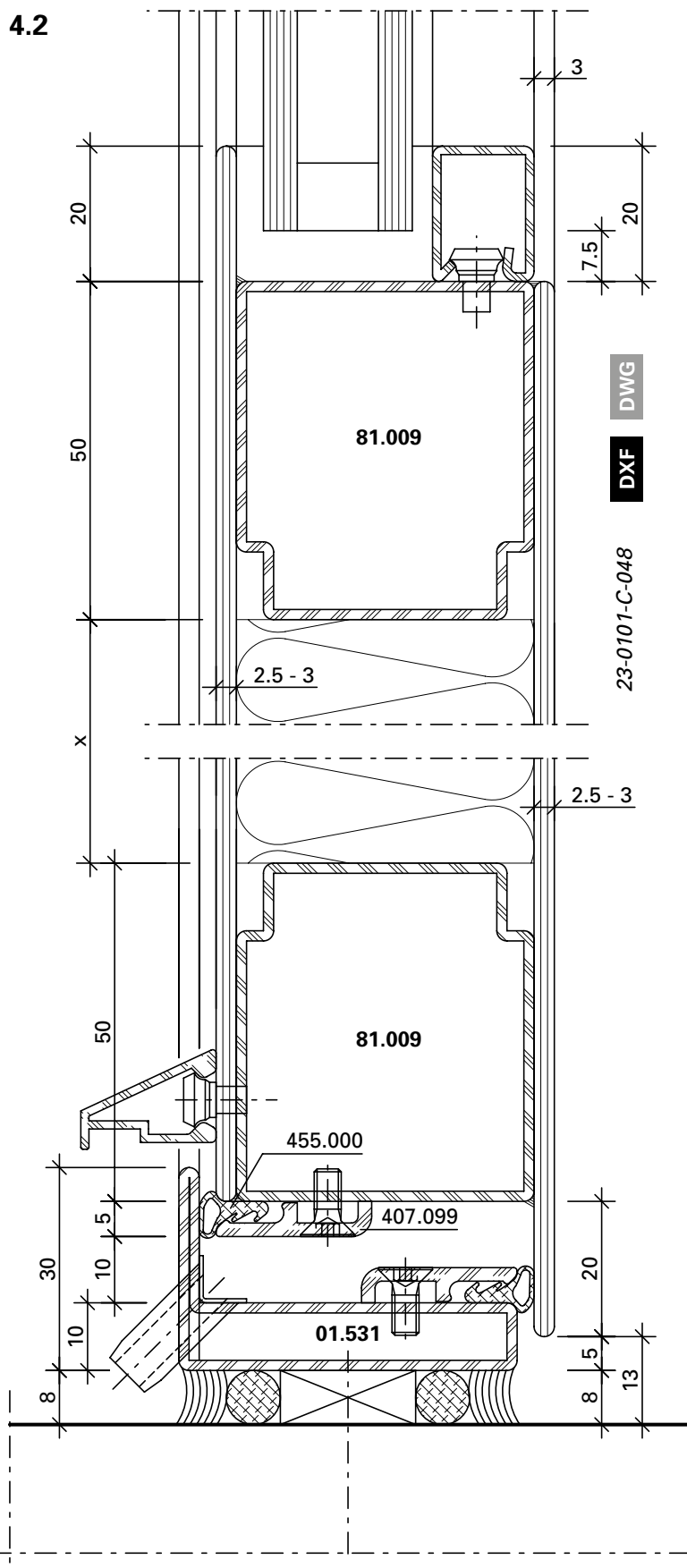
DXF

DWG

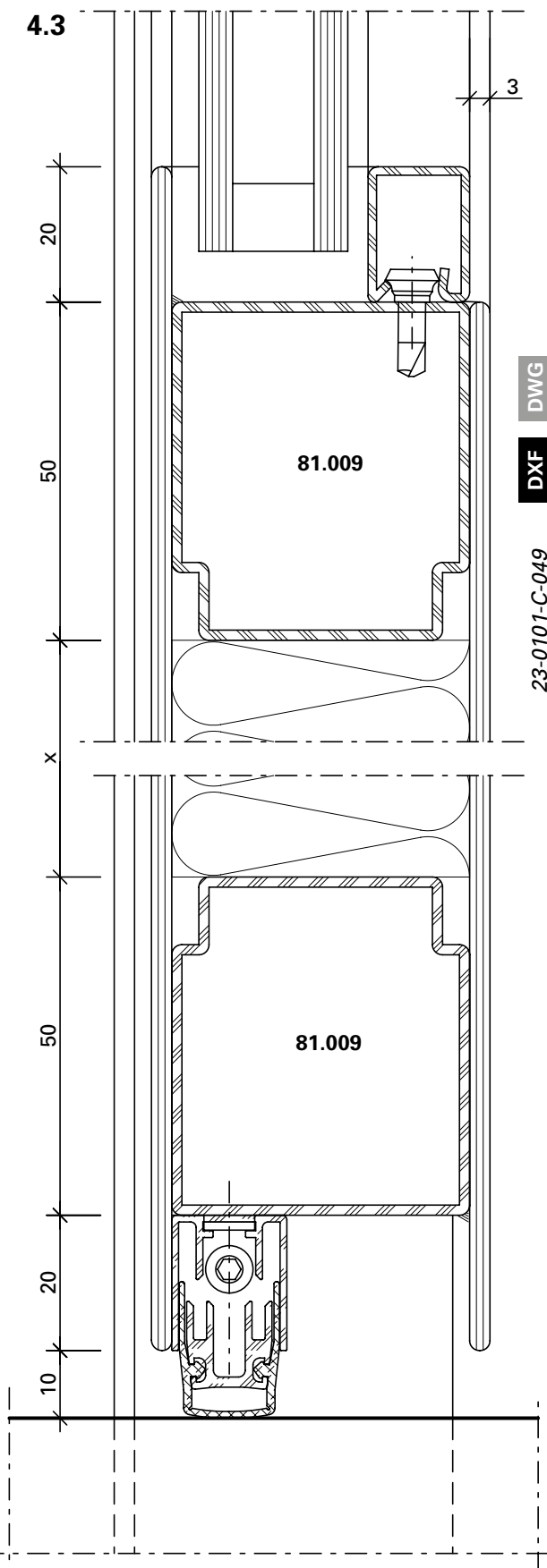
23-0101-C-043

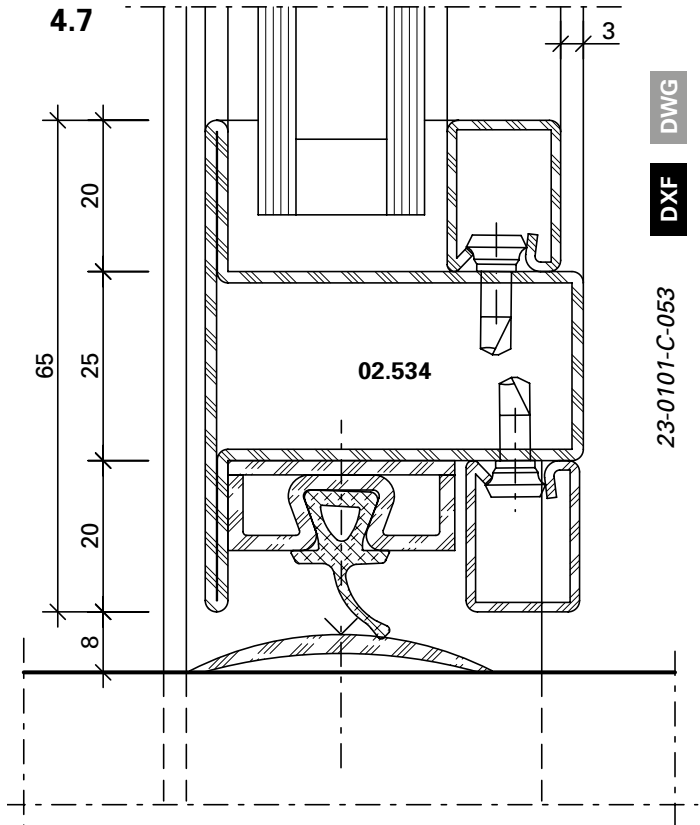
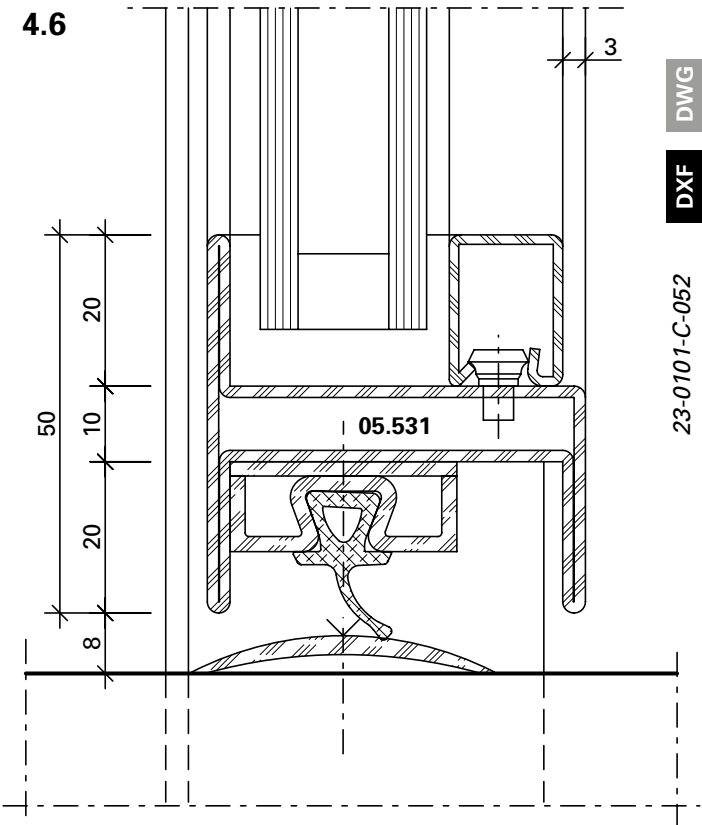
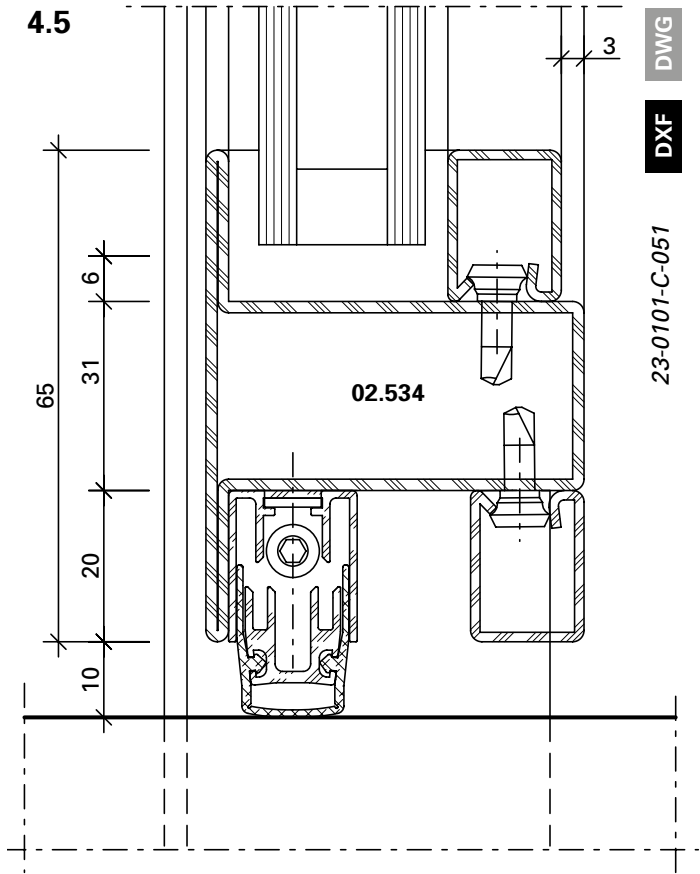
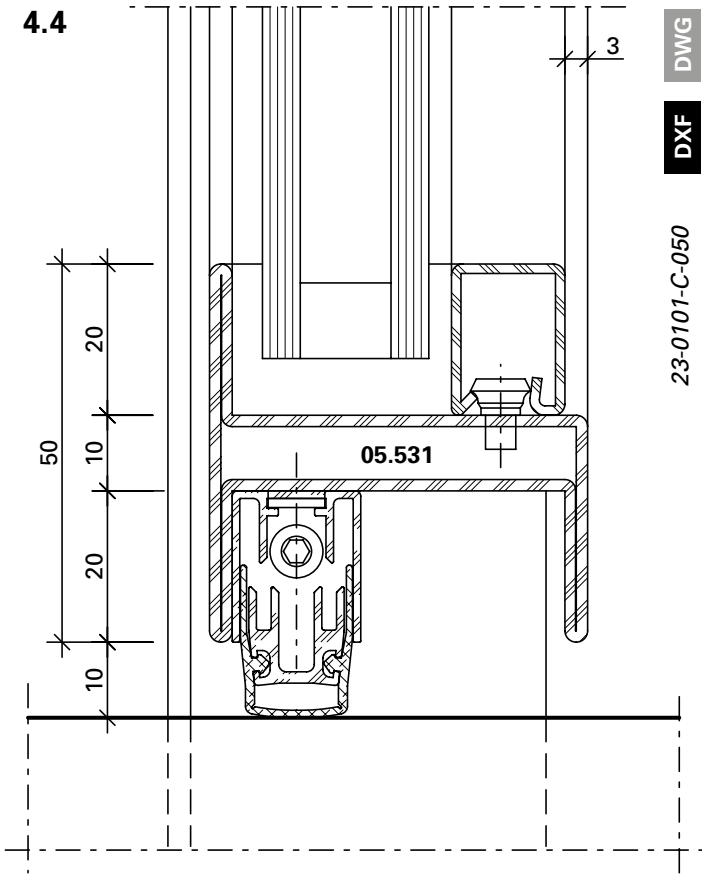


4.2

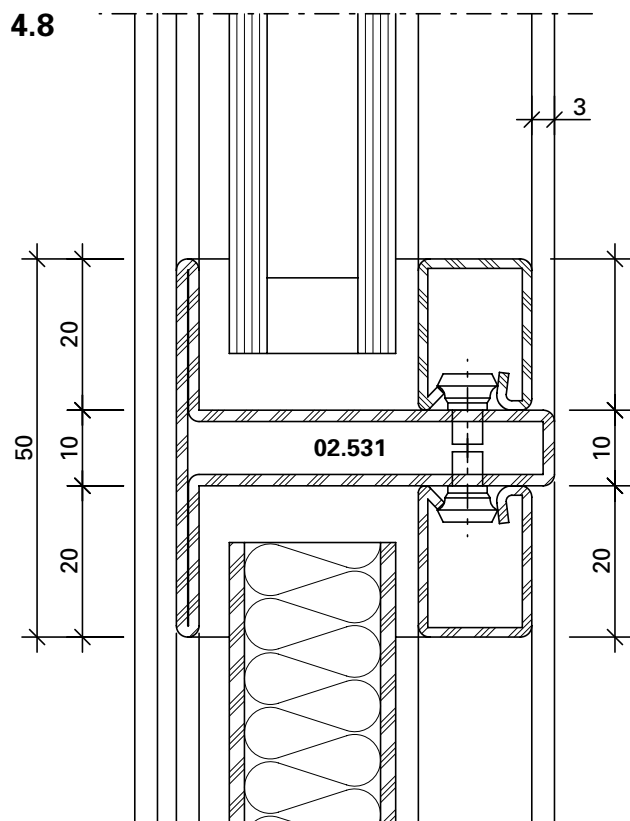


4.3





4.8

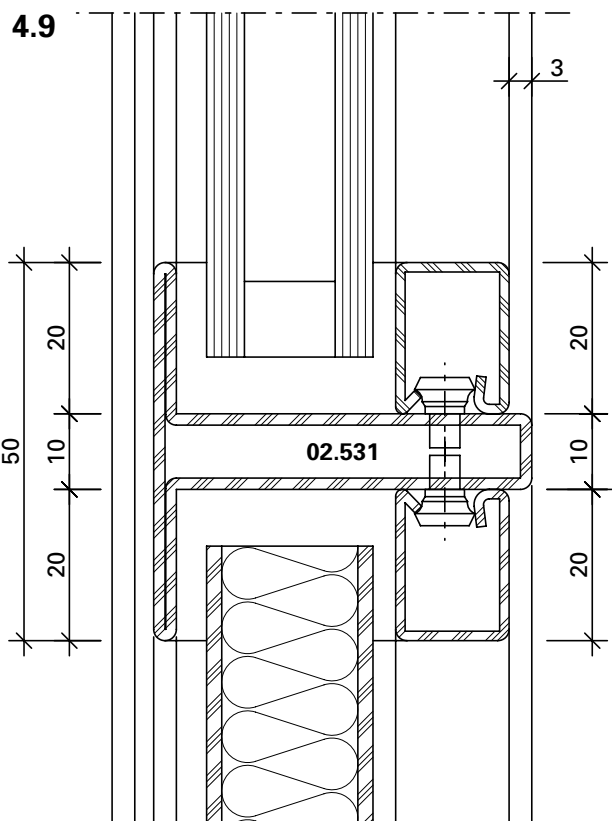


DWG

DXF

23-0101-C-054

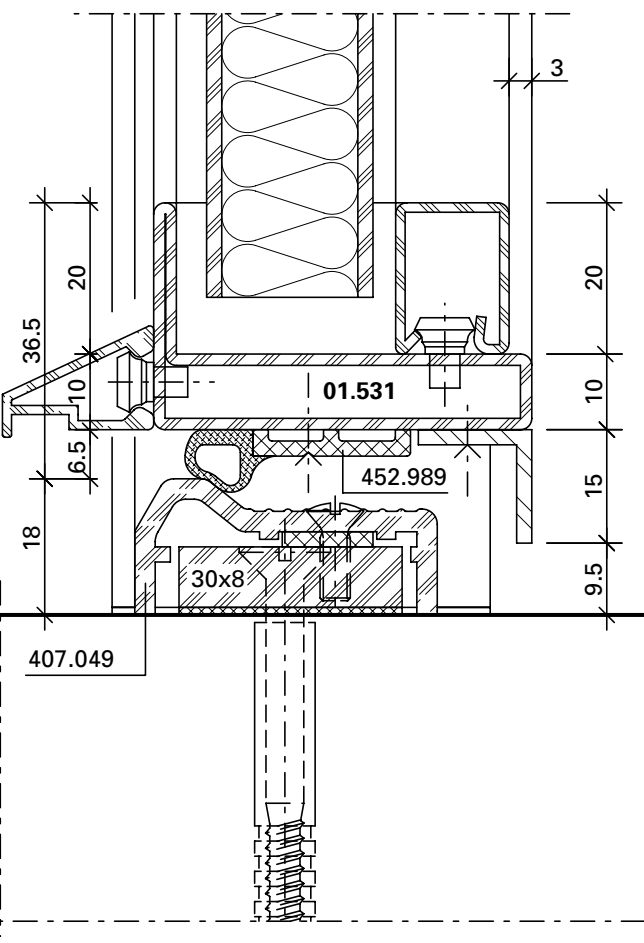
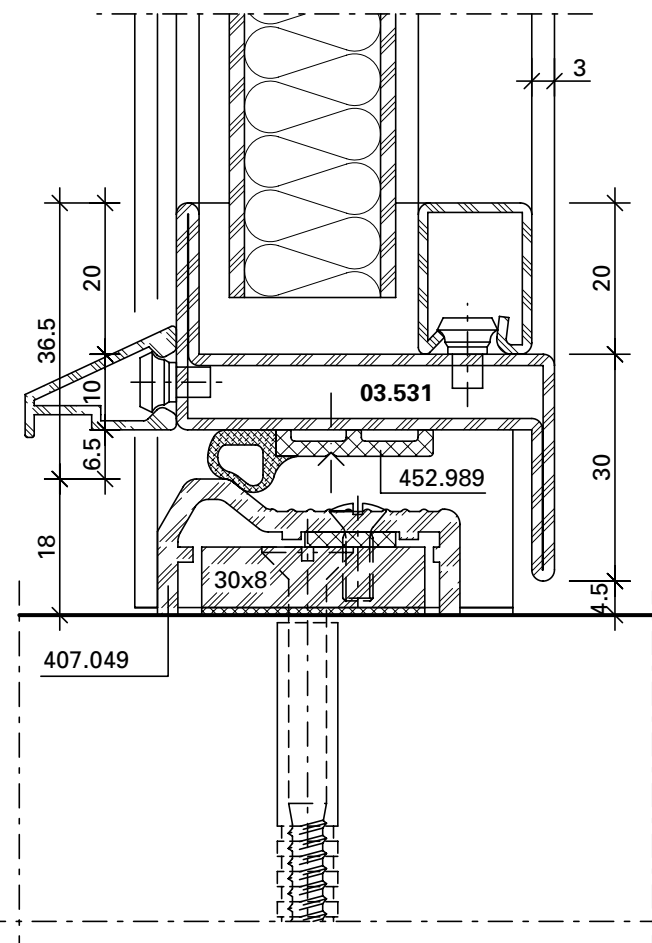
4.9

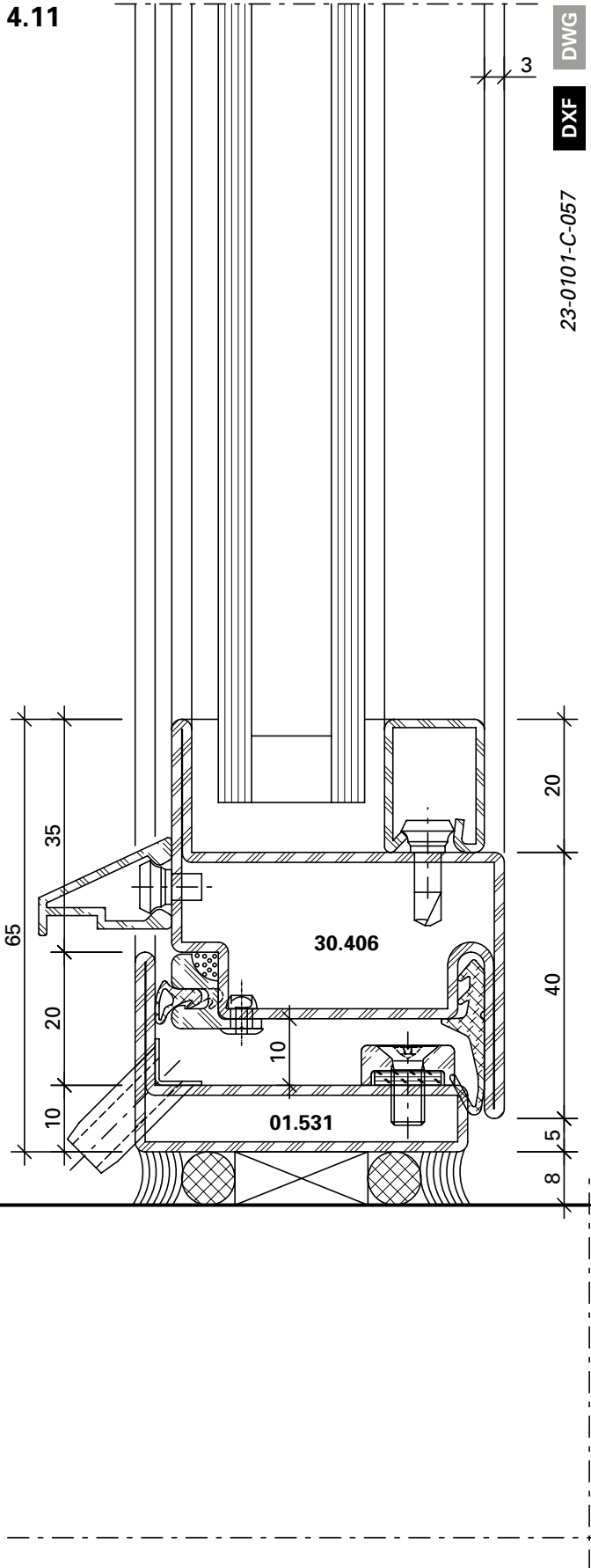
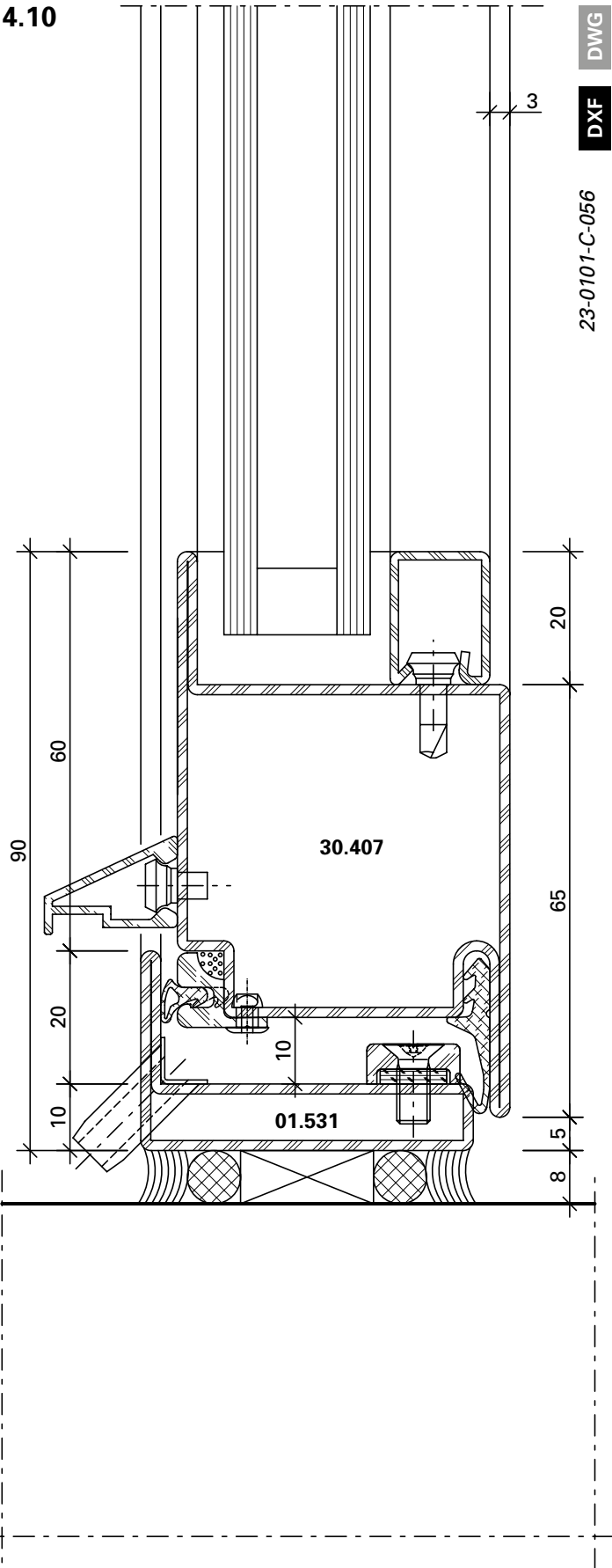


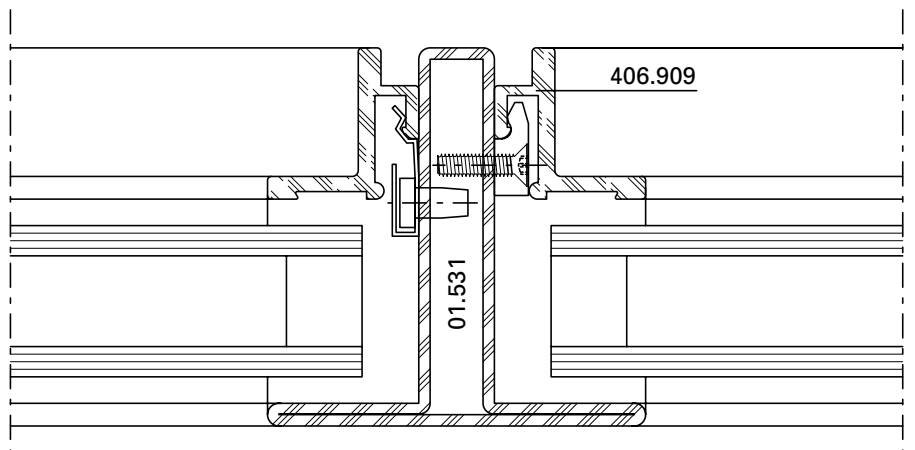
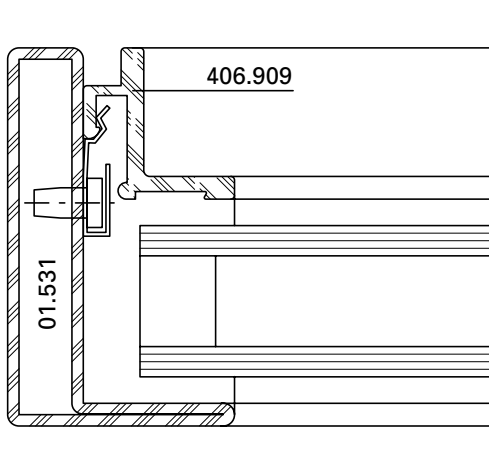
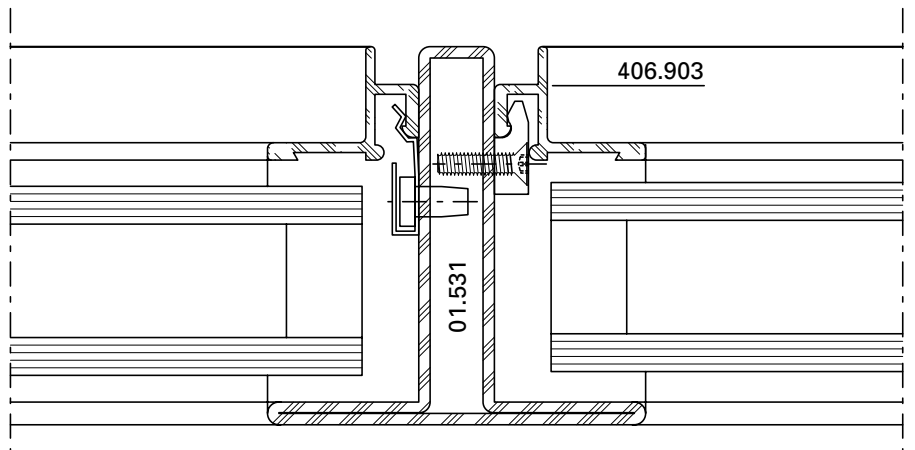
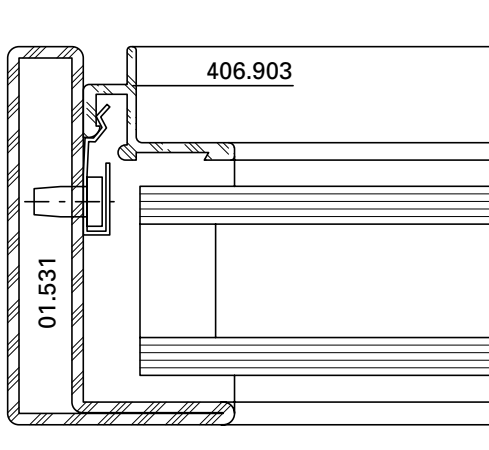
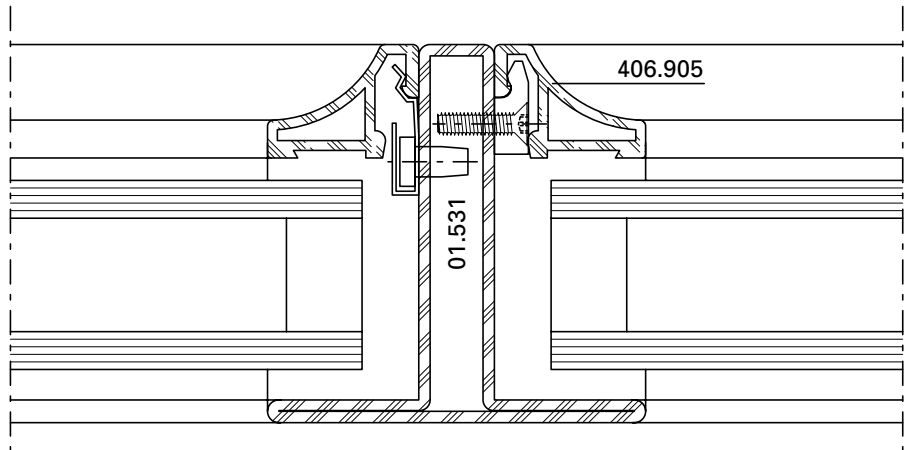
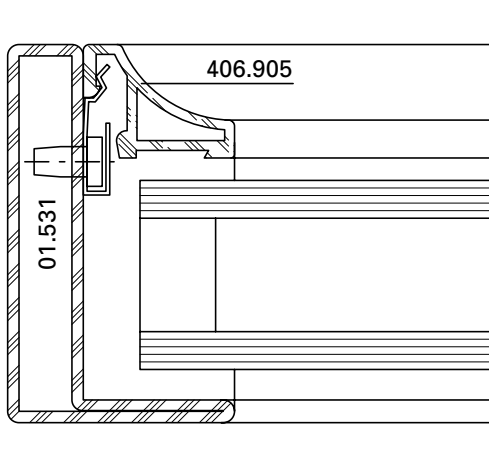
DWG

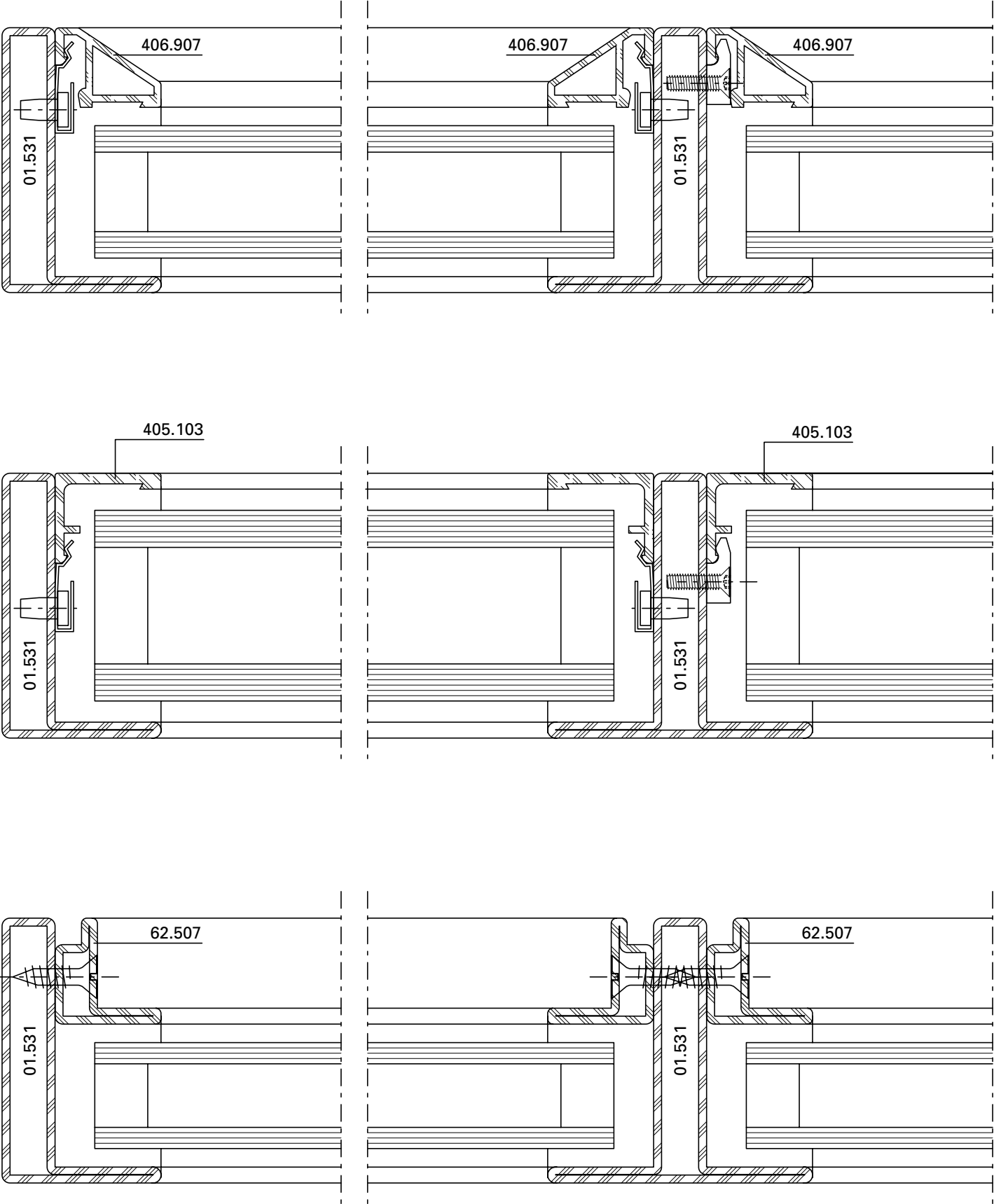
DXF

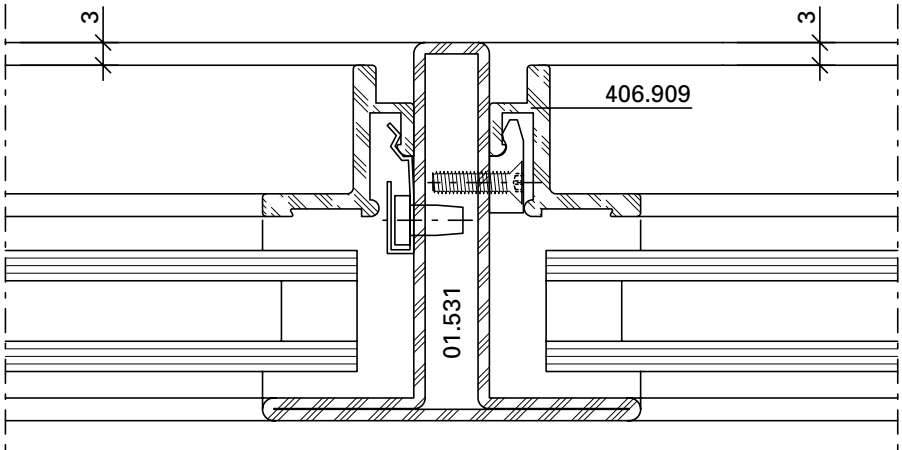
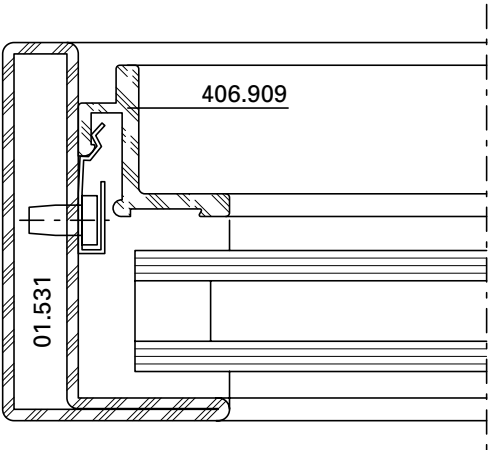
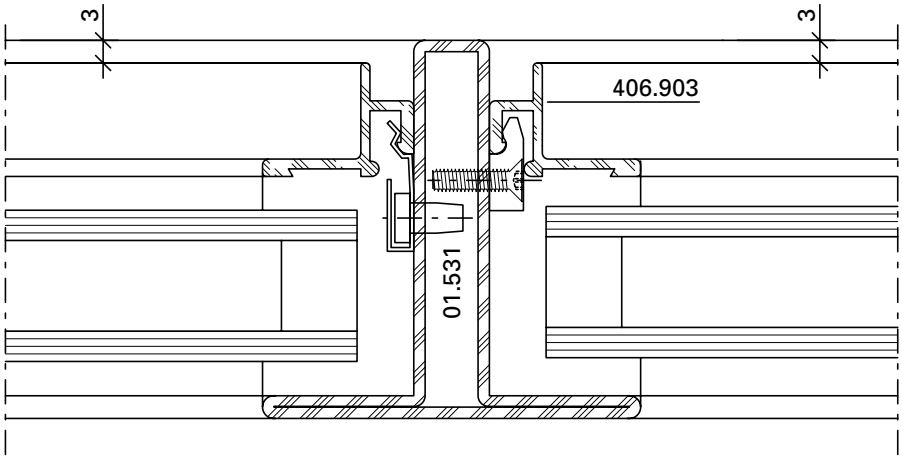
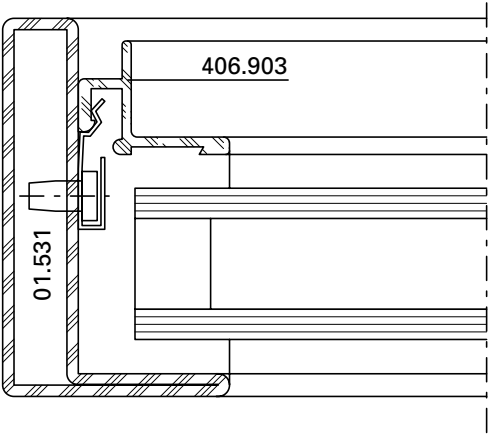
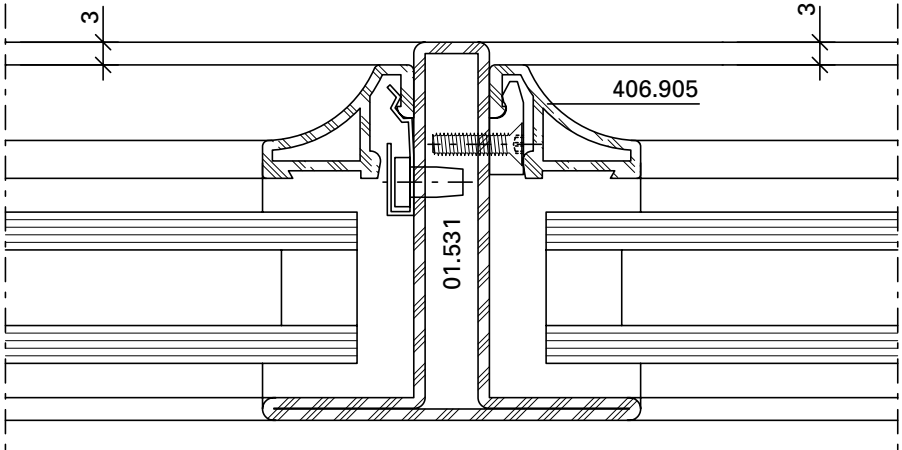
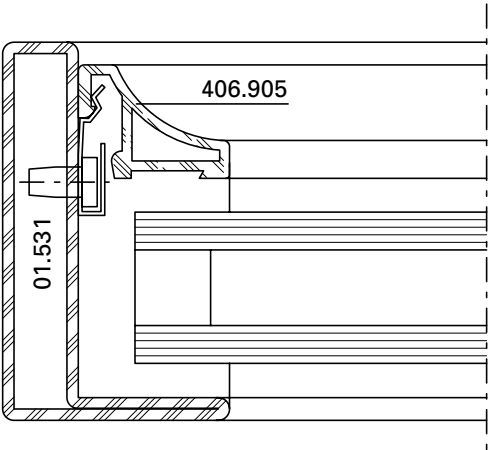
23-0101-C-055

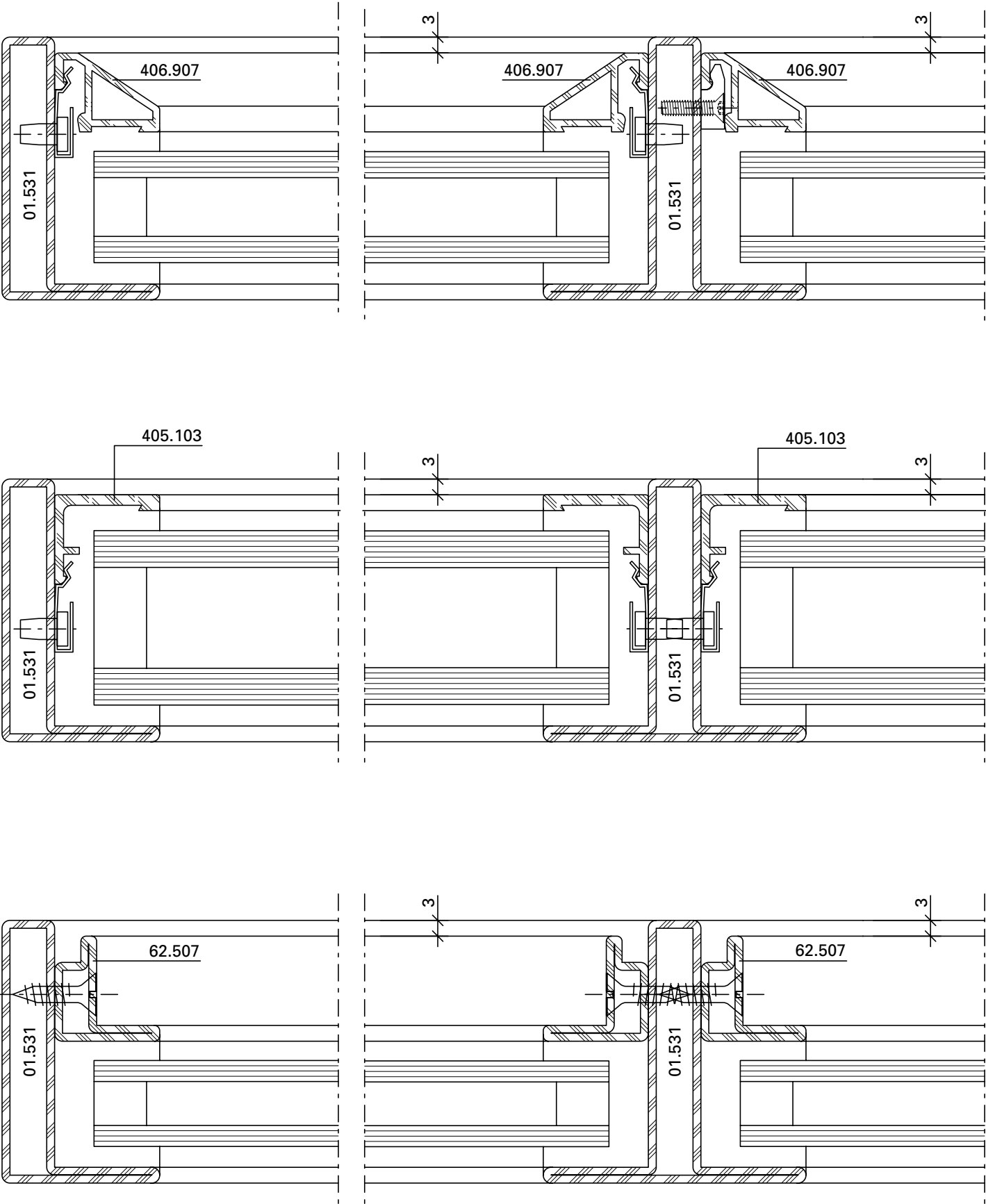


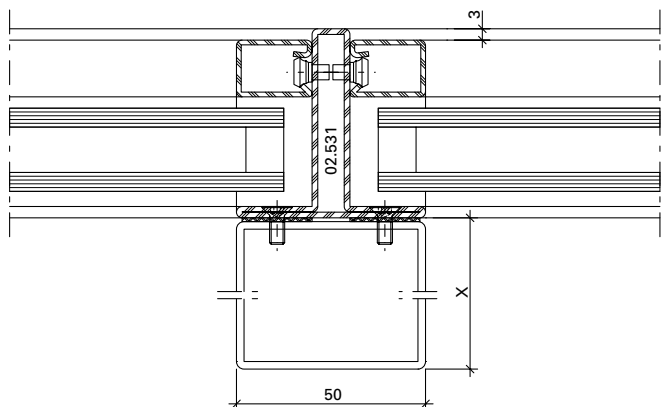




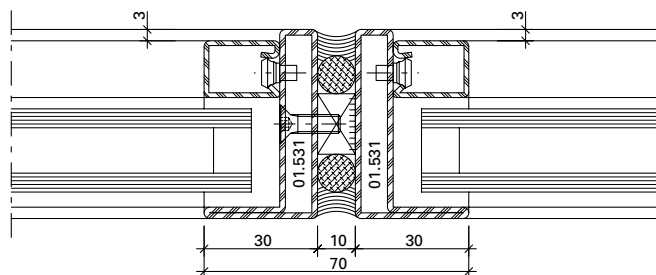




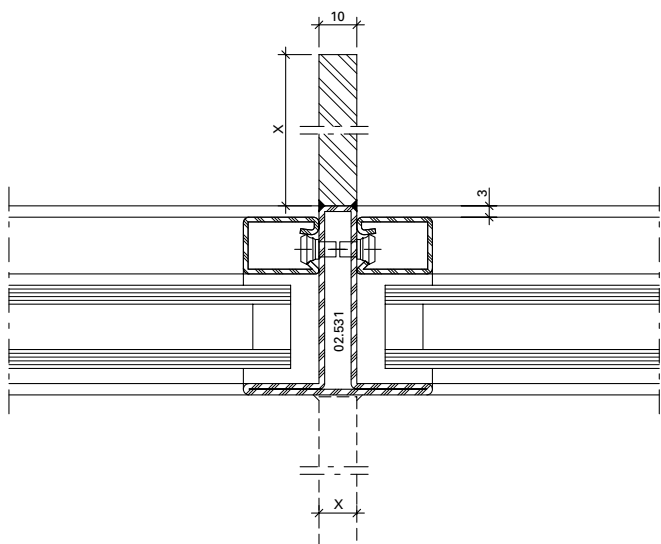




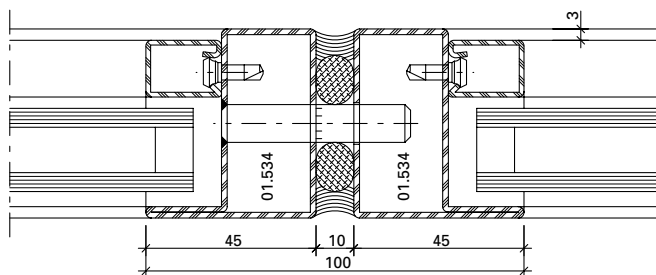
DXF DWG 23-0101-K-006



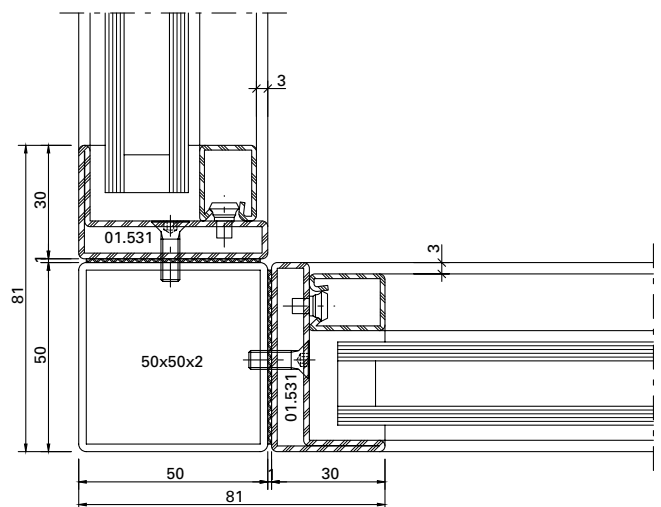
DXF DWG 23-0101-K-002



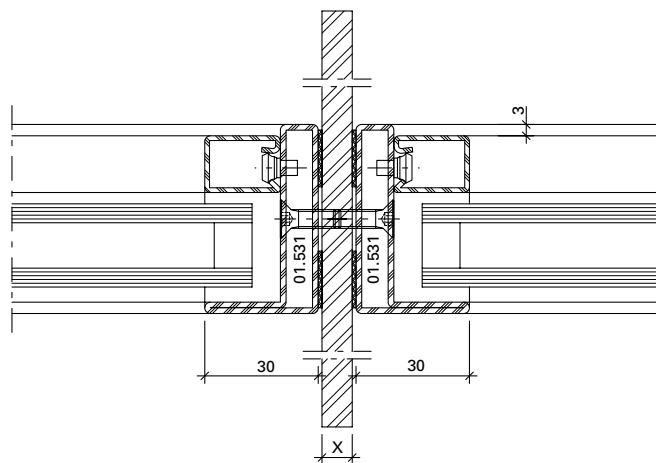
DXF DWG 23-0101-K-005



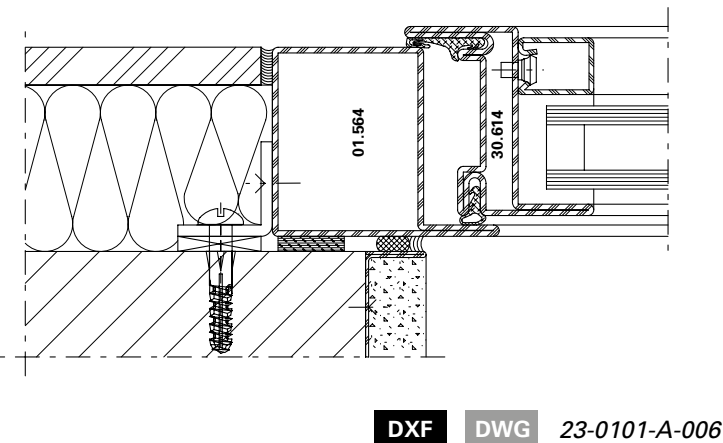
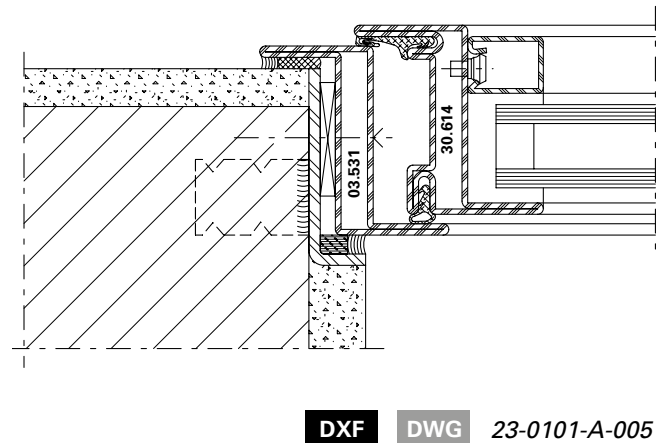
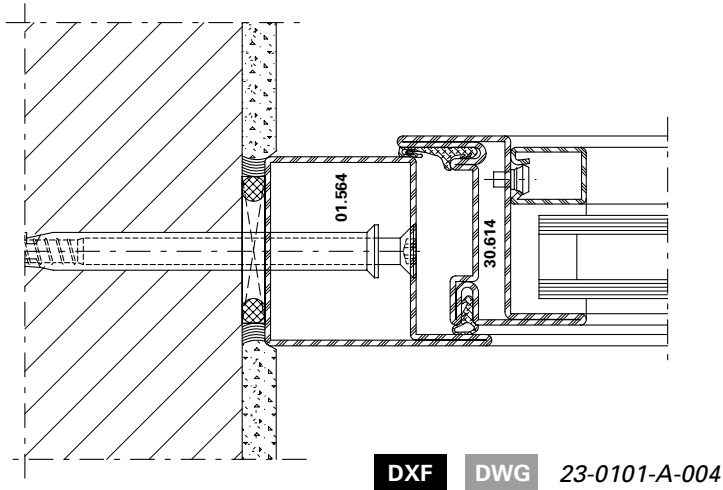
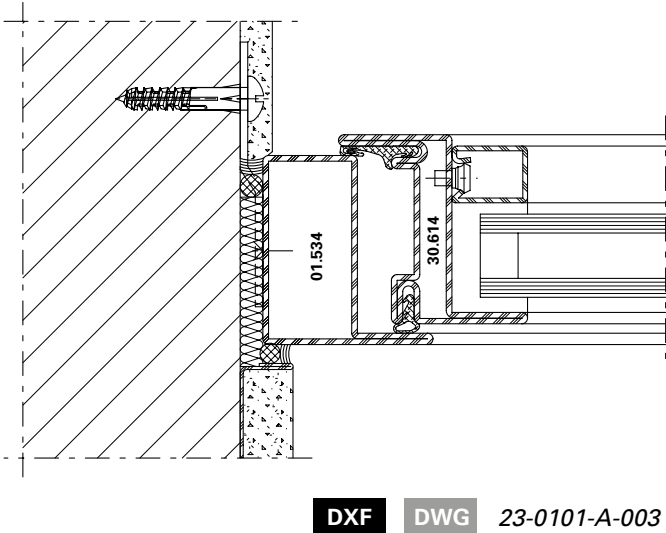
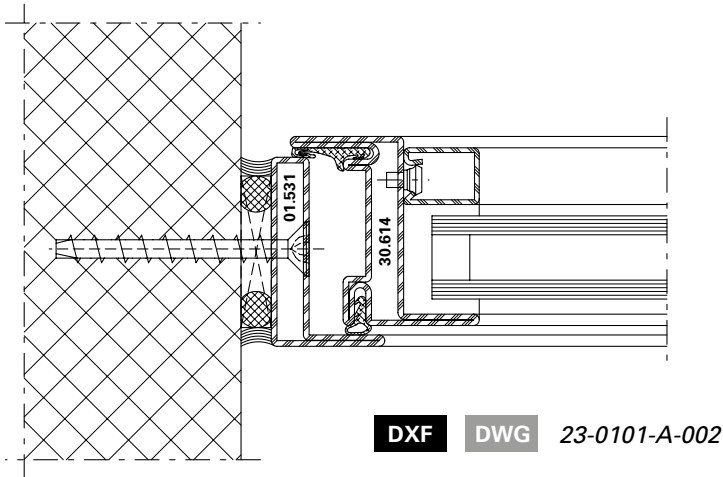
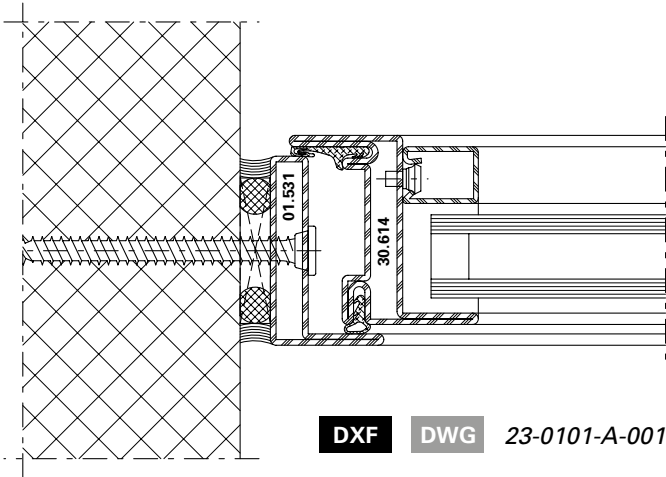
DXF DWG 23-0101-K-003

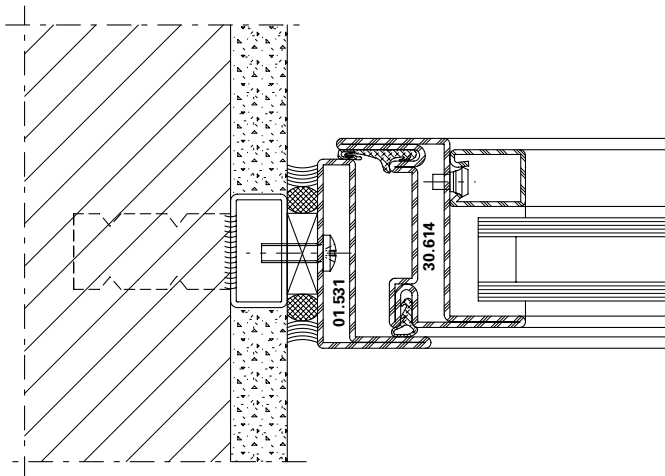


DXF DWG 23-0101-K-001

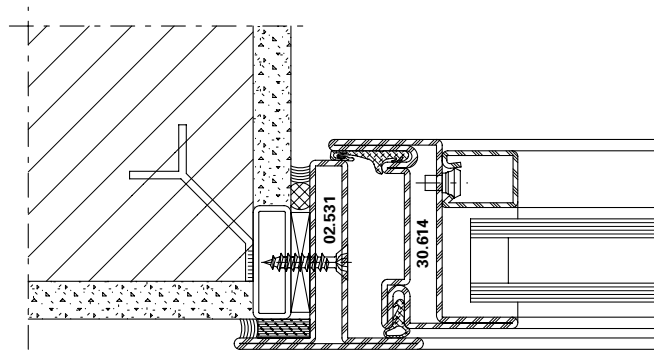


DXF DWG 23-0101-K-004

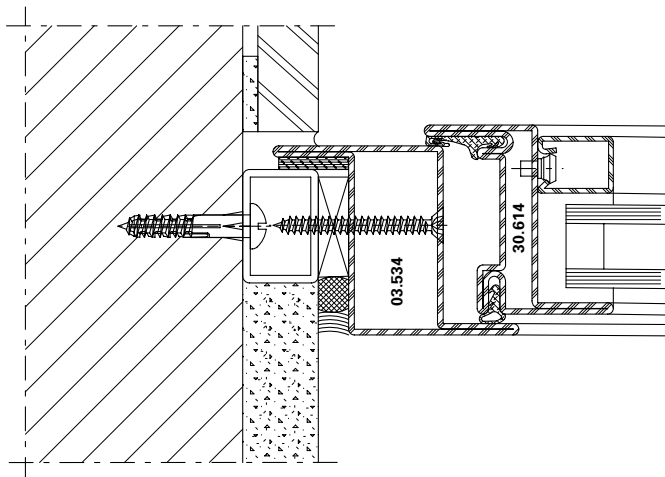




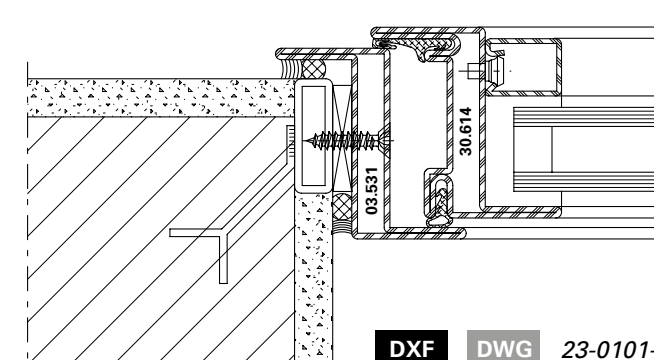
DXF **DWG** 23-0101-A-007



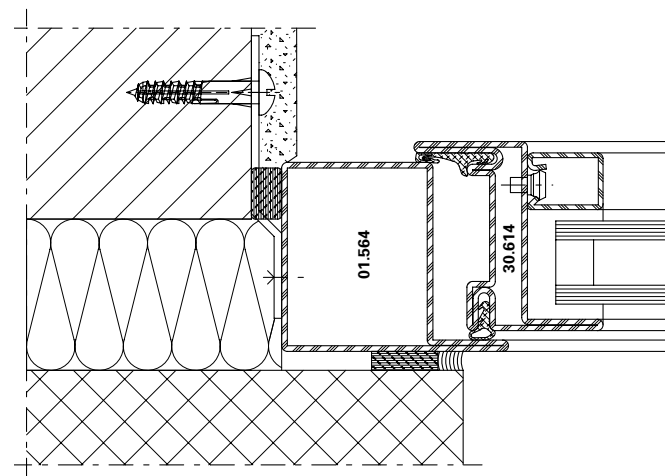
DXF **DWG** 23-0101-A-008



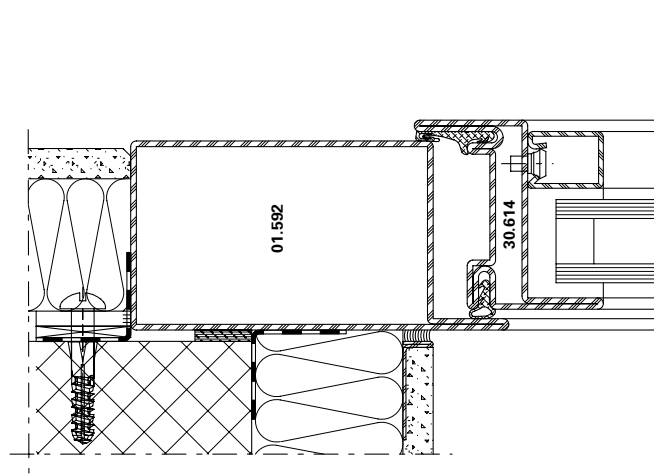
DXF **DWG** 23-0101-A-009



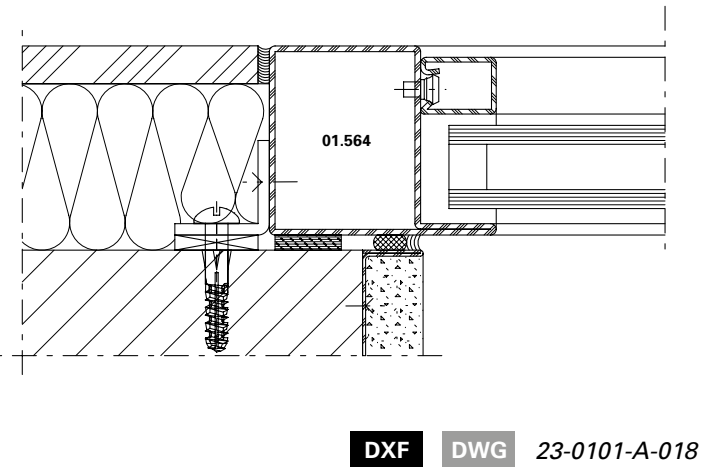
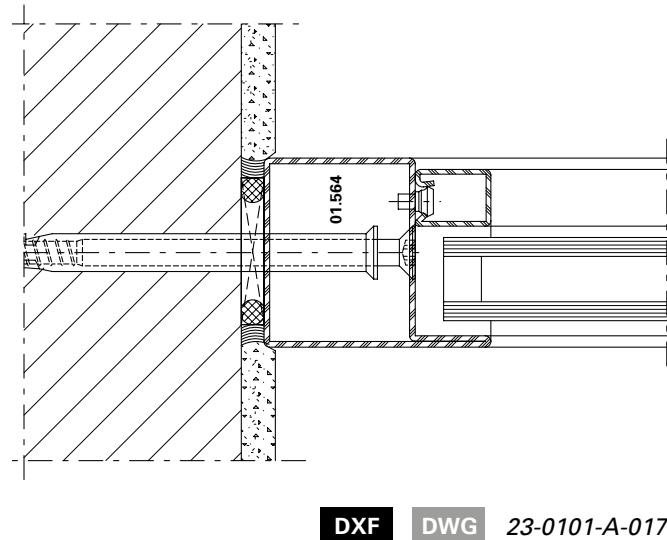
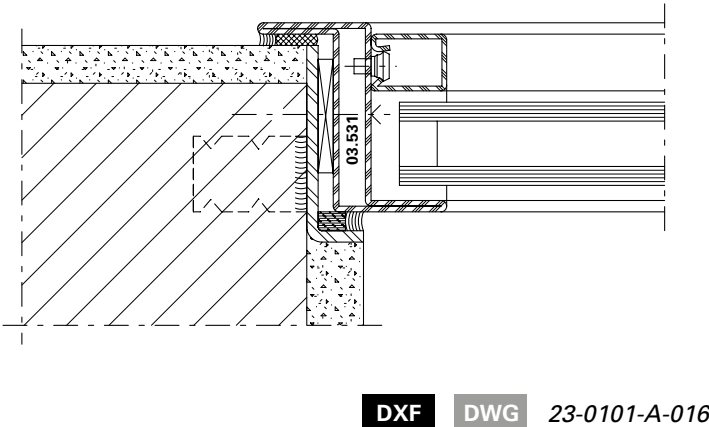
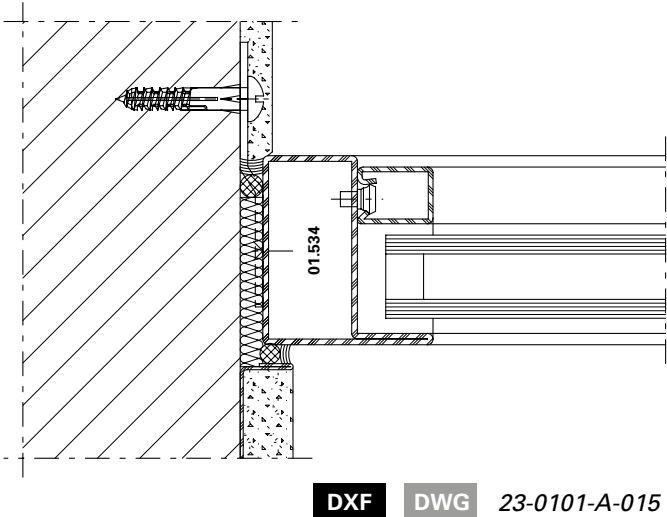
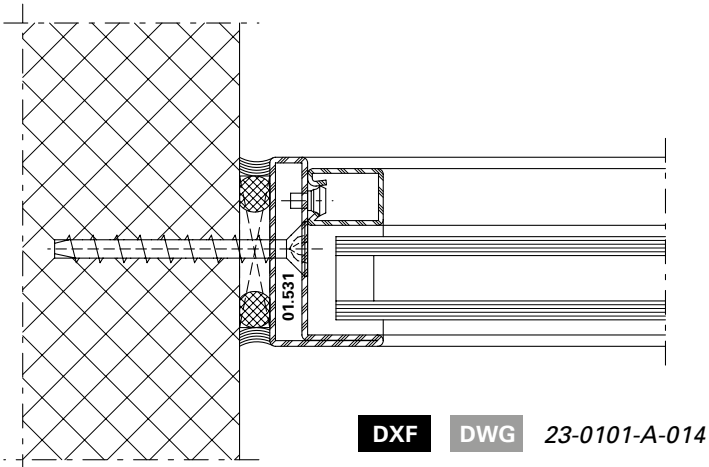
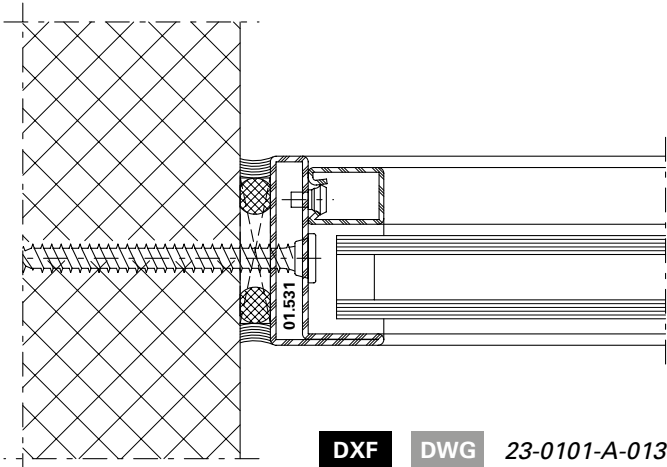
DXF **DWG** 23-0101-A-010

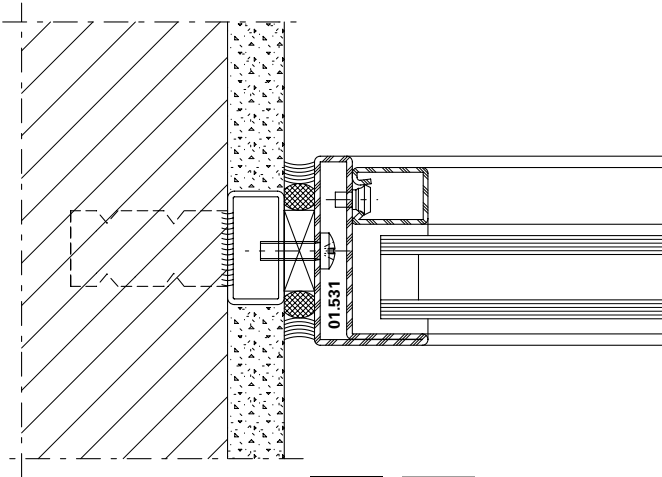


DXF **DWG** 23-0101-A-011

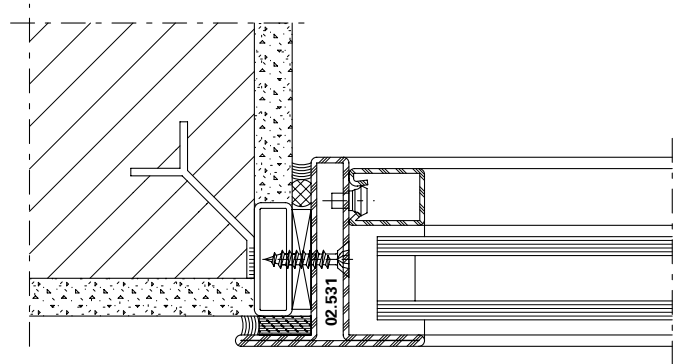


DXF **DWG** 23-0101-A-012

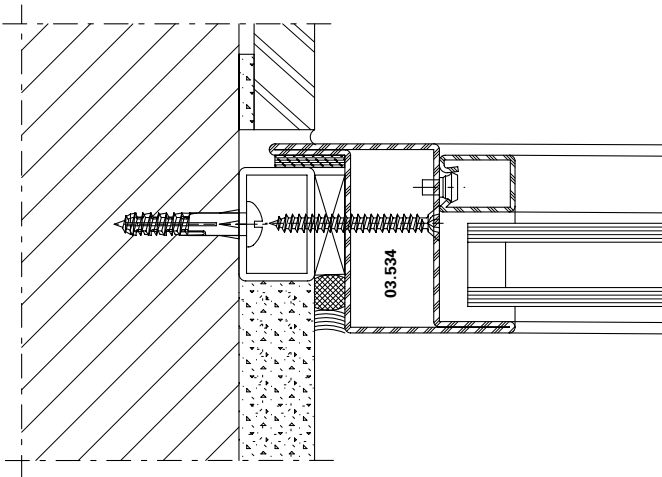




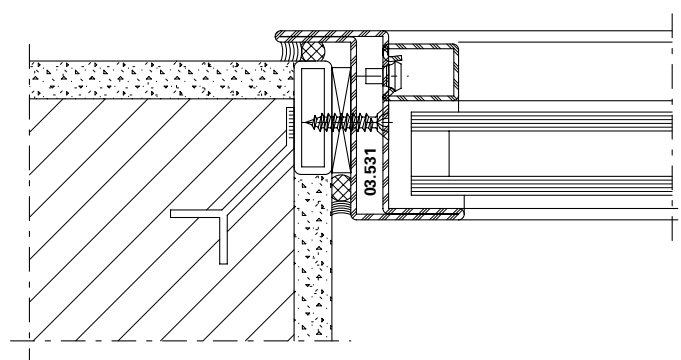
DXF **DWG** 23-0101-A-019



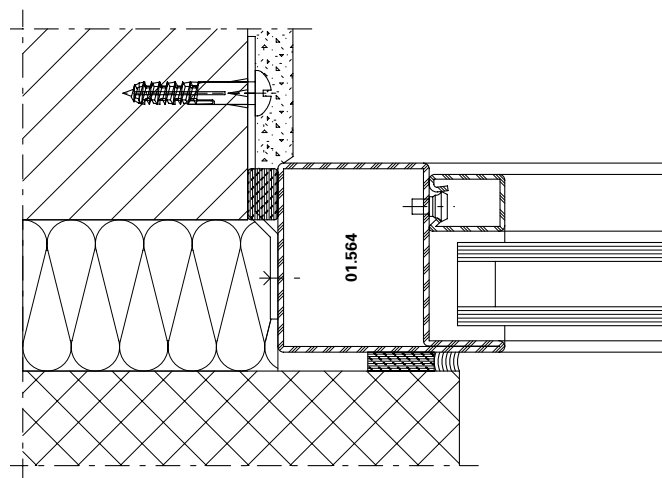
DXF **DWG** 23-0101-A-020



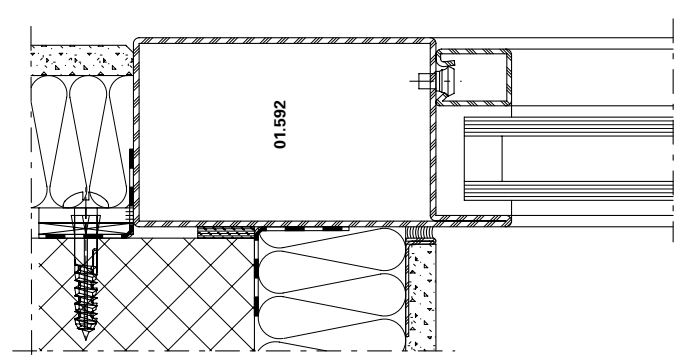
DXF **DWG** 23-0101-A-021



DXF **DWG** 23-0101-A-022



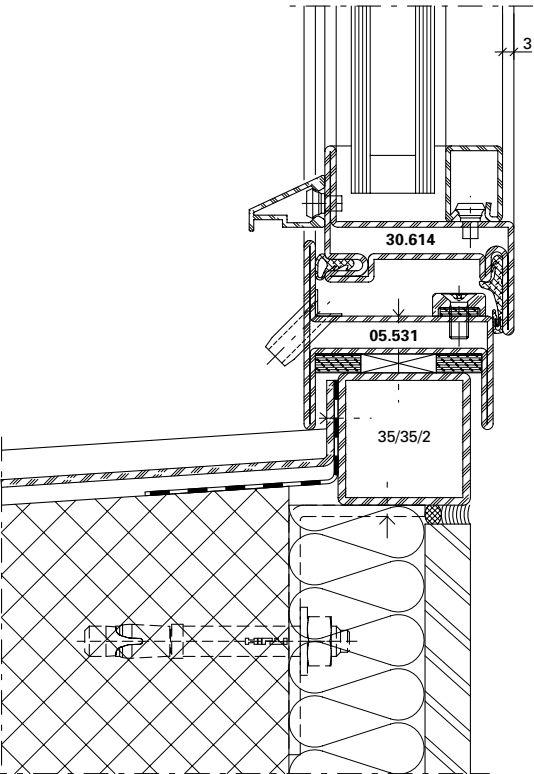
DXF **DWG** 23-0101-A-023



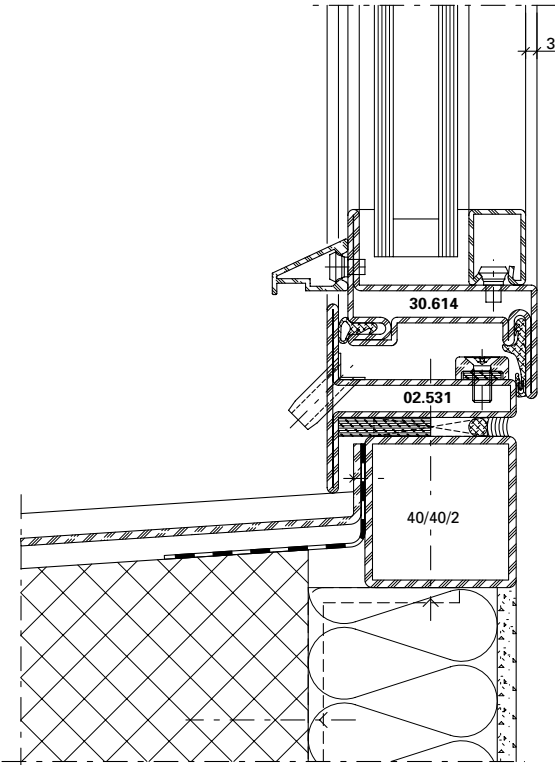
DXF **DWG** 23-0101-A-024

Anschlüsse am Bau im Massstab 1:2
Raccords au mur à l'échelle 1:2
Attachment to structure on scale 1:2

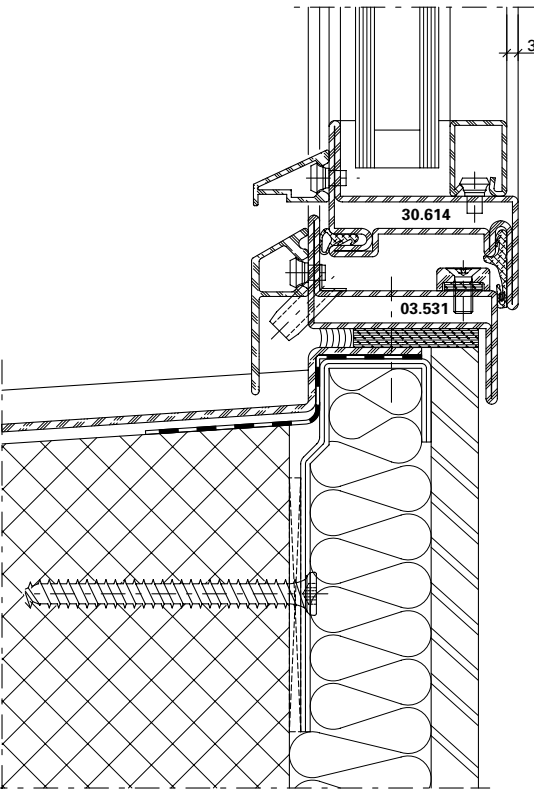
Jansen Art'System
Jansen Art'System
Jansen Art'System



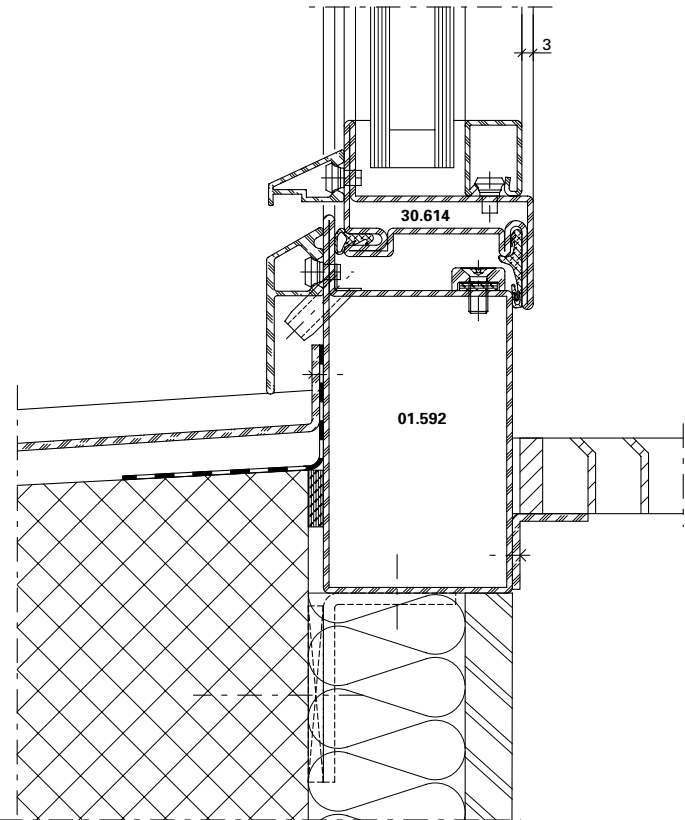
DXF **DWG** 23-0101-A-025



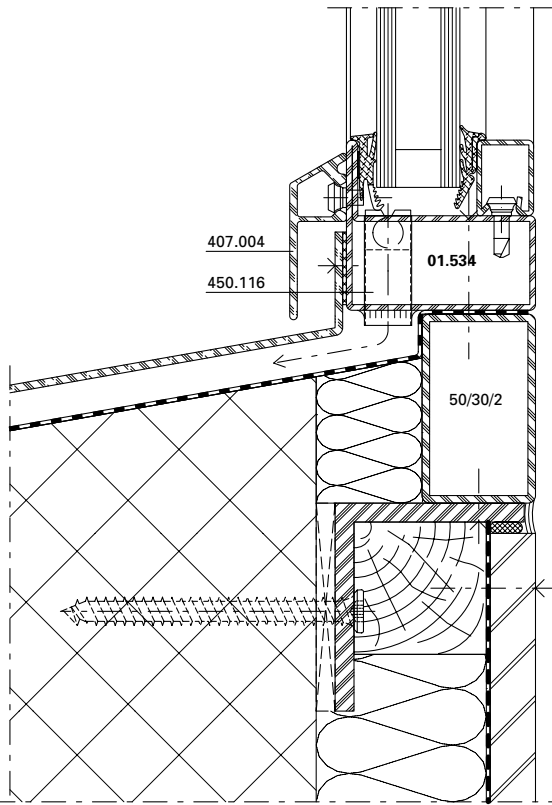
DXF **DWG** 23-0101-A-026



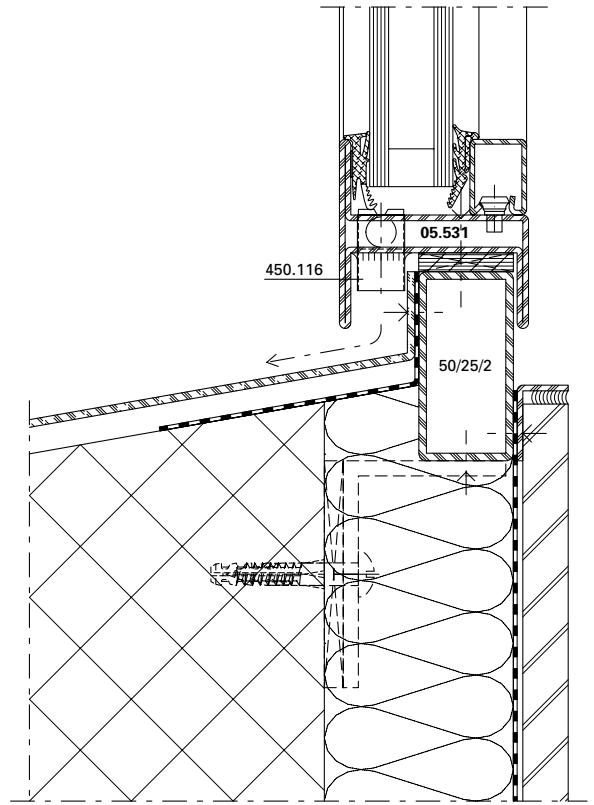
DXF **DWG** 23-0101-A-027



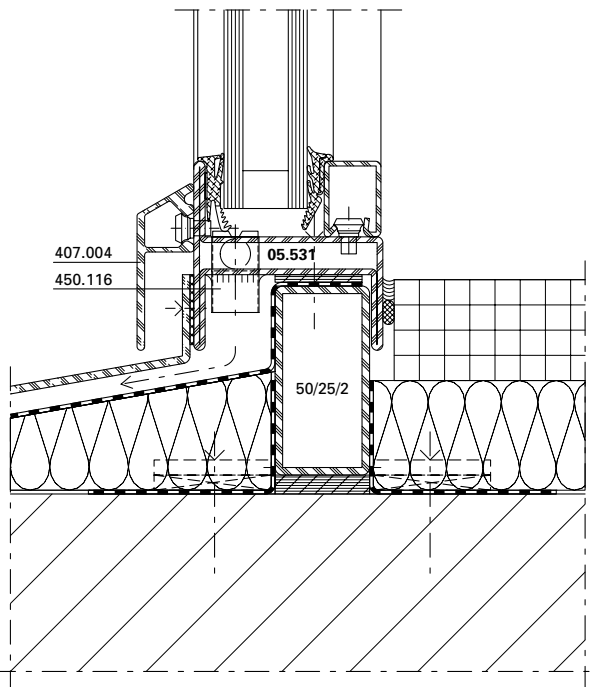
DXF **DWG** 23-0101-A-028



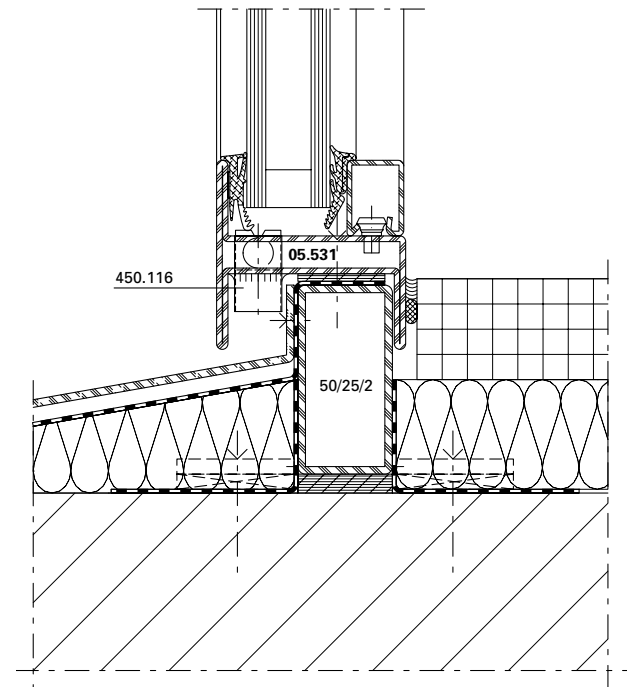
DXF **DWG** 23-0101-A-031



DXF **DWG** 23-0101-A-032



DXF **DWG** 23-0101-A-033



DXF **DWG** 23-0101-A-034

**Schlagregendichtheit
 Luftdurchlässigkeit
 Widerstand bei Windlast**

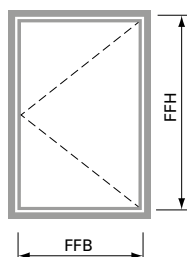
**Etanchéité à la pluie battante
 Perméabilité à l'air
 Résistance à la pression du vent**

**Watertightness
 Air permeability
 Resistance to wind load**

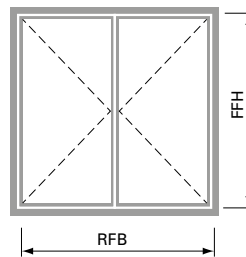
Fenster nach innen öffnend

Fenêtre ouvrant vers l'intérieur

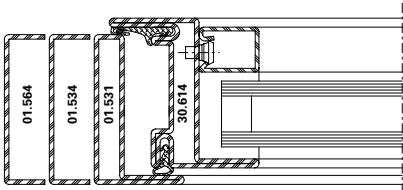
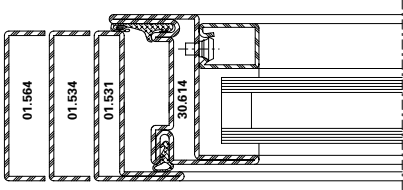
Inward opening window



FFB = 310 - 872 mm
 FFH = 310 - 2072 mm



RFB = 665 - 1789 mm
 FFH = 310 - 2072 mm

	 EN 12208	 EN 12207	 EN 12210	 EN 12208	 EN 12207	 EN 12210
FFB bis 772 mm / FFH bis 1572 mm FFB jusqu'à 772 mm / FFH jusqu'à 1572 mm FFB up to 772 mm / FFH up to 1572 mm 	Klasse 7A Classe 7A Class 7A	Klasse 4 Classe 4 Class 4	Klasse C5/B5 Classe C5/B5 Class C5/B5	Klasse 7A Classe 7A Class 7A	Klasse 4 Classe 4 Class 4	Klasse C3/B3 Classe C3/B3 Class C3/B3
FFB bis 872 mm / FFH bis 2072 mm FFB jusqu'à 872 mm / FFH jusqu'à 2072 mm FFB up to 872 mm / FFH up to 2072 mm 	Klasse 7A Classe 7A Class 7A	Klasse 4 Classe 4 Class 4	Klasse C3/B3 Classe C3/B3 Class C3/B3	Klasse 7A Classe 7A Class 7A	Klasse 4 Classe 4 Class 4	Klasse C3/B3 Classe C3/B3 Class C3/B3

Schlagregendichtheit
Luftdurchlässigkeit
Widerstand bei Windlast

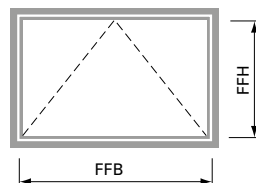
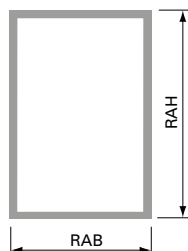
Étanchéité à la pluie battante
Perméabilité à l'air
Résistance à la pression du vent

Watertightness
Air permeability
Resistance to wind load

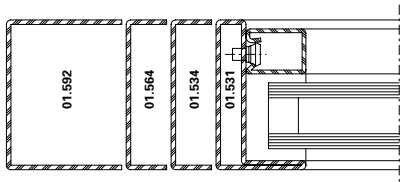
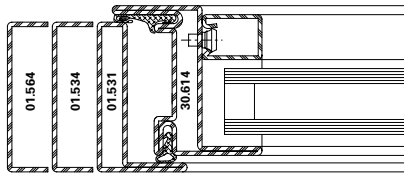
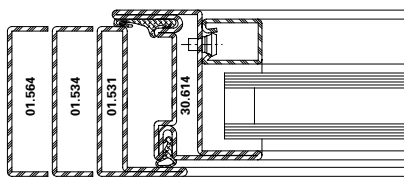
Fenster nach innen öffnend

Fenêtre ouvrant vers l'intérieur

Inward opening window



Max.:
 1572x772 mm / 772x1572 (FFBxFFH)
 oder/ou/or
 2072x872 mm / 872x1980 (FFBxFFH)

	 EN 12208	 EN 12207	 EN 12210	 EN 12208	 EN 12207	 EN 12210
	Klasse 7A Classe 7A Class 7A	Klasse 4 Classe 4 Class 4	Klasse C5/B5 Classe C5/B5 Class C5/B5			
	Mehrpunktverschluss verdeckt liegend Verrouillage multipoints non apparente Multi-point wlocking concealed FFBxFFH 1572x772 mm			Aufgesetzter Beschlag Ferure plaquée Surface-mounted fitting FFBxFFH 1572x772 mm / 772x1572 mm		
	Klasse 6A Classe 6A Class 6A	Klasse 4 Classe 4 Class 4	Klasse C5/B5 Classe C5/B5 Class C5/B5	Klasse 6A Classe 6A Class 6A	Klasse 4 Classe 4 Class 4	Klasse C5/B5 Classe C5/B5 Class C5/B5
	FFBxFFH 2072x872 mm			FFBxFFH 1980x872 mm / 872x1980 mm		
	Klasse 6A Classe 6A Class 6A	Klasse 4 Classe 4 Class 4	Klasse C3/B3 Classe C3/B3 Class C3/B3	Klasse 6A Classe 6A Class 6A	Klasse 4 Classe 4 Class 4	Klasse C3/B3 Classe C3/B3 Class C3/B3

U_f-Werte

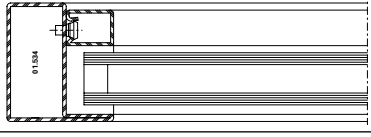
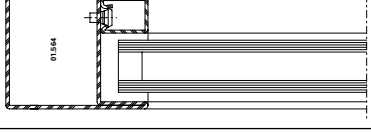
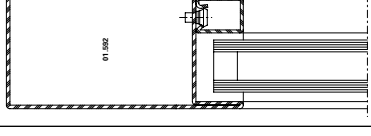
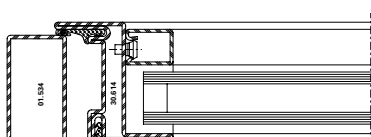
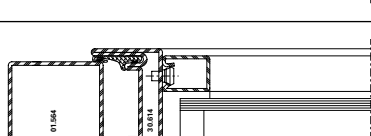
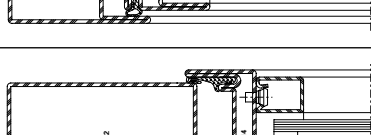
(nach EN ISO 10077-2:2018-01)

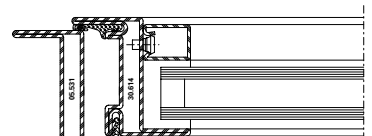
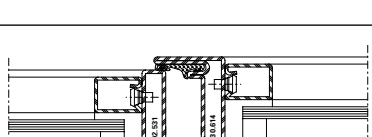
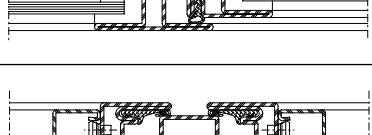
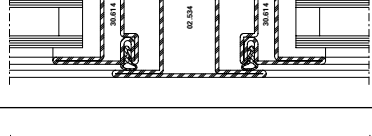
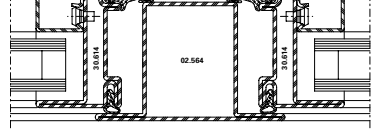
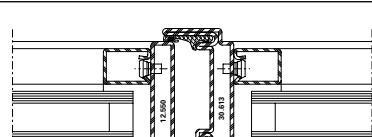
Valeurs U_f

(selon EN ISO 10077-2:2018-01)

U_f values

(according to EN ISO 10077-2:2018-01)

	Füllelementstärken Elements de remplissages Infill elements ≥ 22 mm
	7,2 W/m²K
	6,2 W/m²K
	6,0 W/m²K
	5,2 W/m²K
	6,3 W/m²K
	6,1 W/m²K
	6,0 W/m²K
	5,4 W/m²K

	Füllelementstärken Elements de remplissages Infill elements ≥ 22 mm
	6,1 W/m²K
	6,7 W/m²K
	6,2 W/m²K
	6,2 W/m²K
	6,1 W/m²K
	6,8 W/m²K

Die Werte gelten für Trockenverglasung mit Stahl-Glasleisten
 Les valeurs sont valable pour vitrage à sec avec parcloles en acier
 The values are valid for dry glazing with steel glazing beads

U_f-Werte

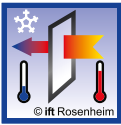
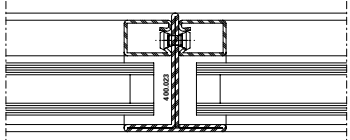
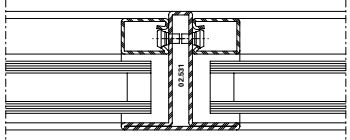
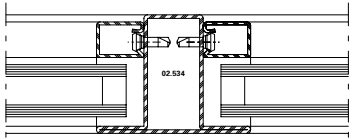
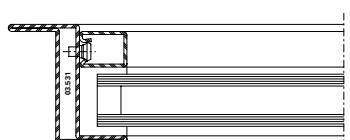
(nach EN ISO 10077-2:2018-01)

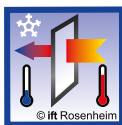
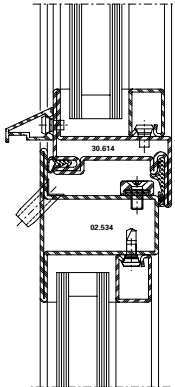
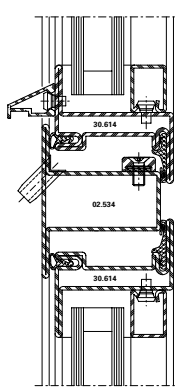
Valeurs U_f

(selon EN ISO 10077-2:2018-01)

U_f values

(according to EN ISO 10077-2:2018-01)

	Füllelementstärken Elements de remplissages Infill elements ≥ 22 mm
	7,6 W/m²K
	7,2 W/m²K
	6,6 W/m²K
	5,7 W/m²K

	Füllelementstärken Elements de remplissages Infill elements ≥ 22 mm
	6,8 W/m²K
	6,2 W/m²K

Die Werte gelten für Trockenverglasung mit Stahl-Glasleisten
 Les valeurs sont valable pour vitrage à sec avec parcloles en acier
 The values are valid for dry glazing with steel glazing beads

Die hier dargestellten U_f-Werte basieren auf internen
 Berechnungen (EN ISO 10077-2), welche mit
 Prüfnachweisen vom ift Rosenheim korrelieren.

Les valeurs U_f ici illustrées se basent sur des calculs
 internes (EN ISO 10077-2) en corrélation avec les preuves
 d'essai de l'ift Rosenheim.

The U_f values illustrated here are based on internal
 calculations (EN ISO 10077-2), which correlate with test
 certificates from ift Rosenheim.



Schalldämmung

Ausführungsvarianten

Die nachfolgende Typenübersicht ergibt einen Überblick über die beurteilten Varianten.

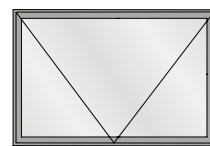
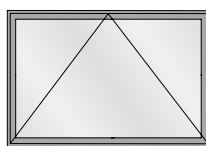
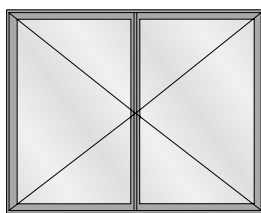
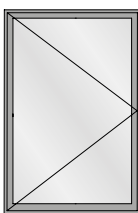
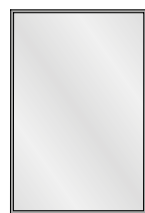


Tabelle A1

Korrekturtabelle für Art'System
 Fenster mit Mehrscheibenisiererglas

Tableau A1

Tableau de correction pour les
 fenêtres Art'System avec vitrage
 isolant multi-vitres



Sound insulation

Design range

The following overview of types provides an overview of the evaluated designs.

	1	2	3	4	5	6	7	8	9	10
	Fenster Fenêtre Window	Isolierglaseinheit Unité d'isolation Insulating glass unit	Korrekturen Corrections Corrections							
	R_W (C, Ctr) dB	R_{W, P, Glas} dB	K_{RA} dB	K_{RA+} dB	K_{RA++} dB	K_S dB	K_{G 0,4} dB	K_{G 2,1} dB	K_{G 2,9} dB	K_{G 3,7} dB
1	31 (-1; -5)	31	-1	0	0	0	0	-1	-2	-3
2	32 (-1; -5)	32	-1	0	0	0	0	-1	-2	-3
3	33 (-1; -5)	33	-1	0	0	0	0	-1	-2	-3
4	34 (-1; -5)	34	-1	0	0	0	0	-1	-2	-3
5	34 (-1; -5)	35	-1	0	0	0	0	-1	-2	-3
6	35 (-1; -5)	36	0	0	0	0	0	-1	-2	-3
7	36 (-1; -5)	37	0	0	0	0	0	-1	-2	-3
8	36 (-1; -5)	38	0	0	0	0	0	-1	-2	-3
9	37 (-1; -5)	39	0	0	0	0	0	-1	-2	-3
10	38 (-1; -5)	40	0	0	0	0	0	-1	-2	-3
11	39 (-1; -5)	41	0	0	0	0	-1	-1	-2	-3
12	40 (-2; -6)	42	0	0	-1	0	-2	-1	-2	-3
13	40 (-2; -6)	43	0	0	-1	0	-2	-1	-2	-3
14	41 (-2; -6)	44	0	0	-1	0	-2	-1	-2	-3
15	42 (-2; -6)	45	0	-1	-2	0	-2	-1	-2	-3
16	43 (-2; -6)	46	0	-1	-2	-1	-2	-1	-2	-3

Das bewertete Schalldämm-Mass $R_{W, Fenster}$ einer Ausführungsvariante unter Berücksichtigung der Korrekturen für besondere Ausführungsmerkmale nach Tabelle A1, Spalten 3-10 beträgt:

La cote d'isolation acoustique du vitrage évalué $R_{W, fenêtre}$ d'une variante prenant en compte les corrections pour caractéristiques particulières selon le tableau A1, colonnes 3 à 10 est la suivante:

The weighted sound reduction index $R_{W, Window}$ of a design option taking into consideration the corrections for special design features in accordance with table A1, columns 3-10, is:

$$R_{W, Fenster} = R_W + K_{RA} + K_{RA+} + K_{RA++} + K_S + K_{G 0,4} + K_{G 2,1} + K_{G 2,9} + K_{G 3,7} \text{ dB}$$

R_W bewertetes Schalldämm-Mass der Basisausführung in Abhängigkeit von der Schalldämmung $R_{W,P, Glas}$ der Verglasung (nach Tabelle A1, Spalte 1)

R_W bewertetes Schalldämm-Mass der Basisausführung in Abhängigkeit von der Schalldämmung $R_{W,P, Glas}$ der Verglasung (nach Tabelle A1, Spalte 1)

R_W Weighted sound reduction index of the basic version depending on the sound reduction $R_{W,P, Glass}$ of the glazing (in accordance with table A1, column 1)

$R_{W,P, Glas}$ bewertetes Schalldämm-Mass der Verglasung (Prüfwert nach EN ISO 10140-2, mit Prüfnachweis einer anerkannten PÜZ-Stelle). Alternativ können Tabellenwerte nach DIN EN 12758, Abschnitt 6 verwendet werden.

$R_{W,P, Glas}$ bewertetes Schalldämm-Mass der Verglasung (Prüfwert nach EN ISO 10140-2, mit Prüfnachweis einer anerkannten PÜZ-Stelle). Alternativ können Tabellenwerte nach DIN EN 12758, Abschnitt 6 verwendet werden.

$R_{W,P, Glass}$ Weighted sound reduction index of the glazing (test value in accordance with EN ISO 10140-2, with test certificate from a recognised testing, monitoring and certification body). Alternatively, the table values in accordance with DIN EN 12758, section 6 can be used.

K_{RA}	Korrekturwert für Rahmenanteil $p < 10\%$ ¹⁾ . K _{RA} gilt gleichermassen für Elemente mit beweglichen Flügeln und für festverglaste Wandelemente (Seiten-/Oberteile).
K_{RA+}	Korrekturwert für Rahmenanteil $25\% \leq p \leq 35\%$ ¹⁾ . K _{RA+} gilt gleichermassen für Elemente mit beweglichen Flügeln und für festverglaste Wandelemente (Seiten-/Oberteile).
K_{RA++}	Korrekturwert für Rahmenanteil $p > 35\%$ ¹⁾ . K _{RA++} gilt gleichermassen für Elemente mit beweglichen Flügeln und für festverglaste Wandelemente (Seiten-/Oberteile).
K_S	Korrekturwert für zweiflügelige Fenster mit Stulp.
K_{G 0.4}	Korrekturwert für Einzelscheiben mit einer Glasfläche $\leq 0,4 \text{ m}^2$. Die Korrektur gilt auch für Konstruktionen mit glasteilenden Sprossen (verfügbare Glasabmessungen ab $b \times h \geq 400 \text{ mm} \times 400 \text{ mm} = 0,16 \text{ m}^2$).
K_{G 2.1}	Korrekturwert für Einzelscheiben mit einer Glasfläche $\geq 2,1 \text{ m}^2$
K_{G 2.9}	Korrekturwert für Einzelscheiben mit einer Glasfläche $\geq 2,9 \text{ m}^2$
K_{G 3.7}	Korrekturwert für Einzelscheiben mit einer Glasfläche $\geq 3,7 \text{ m}^2$ (verfügbare Glasabmessungen bis maximal $b \times h \leq 5,2 \text{ m}^2$).

¹⁾ Der Rahmenanteil p ergibt sich aus der die Gesamtfläche A_{ges} des Elements (Rahmenaussenmass) und der sichtbaren Scheibengröße A_{Glas} (Summe aller sichtbaren Glasflächen): $p = 100 \times (A_{\text{ges}} - A_{\text{Glas}}) / A_{\text{ges}}$

K_{RA}	Valeur de correction pour la part afférente au châssis $p < 10\%$ ¹⁾ . K _{RA} est de la même façon valable pour les éléments à vantaux mobiles et pour les éléments muraux à vitrage fixe (éléments latéraux/impôstes).
K_{RA+}	Valeur de correction pour la part afférente au châssis $p \leq 35\%$ ¹⁾ . K _{RA+} est de la même façon valable pour les éléments à vantaux mobiles et pour les éléments muraux à vitrage fixe (éléments latéraux/impôstes).
K_{RA++}	Valeur de correction pour la part afférente au châssis $p > 35\%$ ¹⁾ . K _{RA++} est de la même façon valable pour les éléments à vantaux mobiles et pour les éléments muraux à vitrage fixe (éléments latéraux/impôstes).
K_S	Valeur de correction pour fenêtres à deux vantaux avec recouvrement.
K_{G 0.4}	Valeur de correction pour vitres individuelles d'une surface vitrée $\leq 0,4 \text{ m}^2$. La correction s'applique aussi aux constructions avec petits bois séparant les carreaux (dimensions vitrées disponibles à partir de $l \times h \geq 400 \text{ mm} \times 400 \text{ mm} = 0,16 \text{ m}^2$).
K_{G 2.1}	Valeur de correction pour vitres individuelles d'une surface vitrée $\geq 2,1 \text{ m}^2$
K_{G 2.9}	Valeur de correction pour vitres individuelles d'une surface vitrée $\geq 2,9 \text{ m}^2$
K_{G 3.7}	Valeur de correction pour vitres individuelles d'une surface vitrée $\geq 3,7 \text{ m}^2$ (dimensions vitrées disponibles jusqu'à $l \times h \leq 5,2 \text{ m}^2$).

¹⁾ La part afférente au châssis p résulte de la surface totale A_{tot} de l'élément (dimensions hors-tout du châssis) et de la taille visible du vitrage A_{verre} (total de toutes les surfaces vitrées visibles):
 $p = 100 \times (A_{\text{tot}} - A_{\text{verre}}) / A_{\text{tot}}$

K_{RA}	correction value for frame ratio $p < 10\%$ ¹⁾ . K _{RA} applies also to units with moving casements and fixed lights installed in walls (sidelights/toplights).
K_{RA+}	correction value for frame ratio $25\% \leq p \leq 35\%$ ¹⁾ . K _{RA+} applies also to units with moving casements and fixed lights installed in walls (sidelights/toplights).
K_{RA++}	correction value for frame ratio $p > 35\%$ ¹⁾ . K _{RA++} applies also to units with moving casements and fixed lights installed in walls (sidelights/toplights).
K_S	correction value for double windows of overlapping design.
K_{G 0.4}	correction value for individual panes of glass area $\leq 0,4 \text{ m}^2$. Correction applies also to designs with glass dividing bars (available glass dimensions from $w \times h \geq 400 \text{ mm} \times 400 \text{ mm} = 0,16 \text{ m}^2$).
K_{G 2.1}	correction value for individual panes of glass area $\geq 2,1 \text{ m}^2$
K_{G 2.9}	correction value for individual panes of glass area $\geq 2,9 \text{ m}^2$
K_{G 3.7}	correction value for individual panes of glass area $\geq 3,7 \text{ m}^2$ (available glass dimensions up to max. $w \times h \leq 5,2 \text{ m}^2$).

¹⁾ The frame ratio is evaluated with the total area A_{total} of the unit (overall frame dimensions) and the visible pane size A_{glass} (total of all visible glass areas):
 $P = 100 \times (A_{\text{total}} - A_{\text{glass}}) / A_{\text{total}}$